

SANITARY SEWER IMPROVEMENTS

to serve

Willow Place Addition

Project Number
1051 PPS 607861

CITY OF WICHITA, KANSAS

Michael E. Lindebak, P.E. City Engineer

GENERAL NOTES:

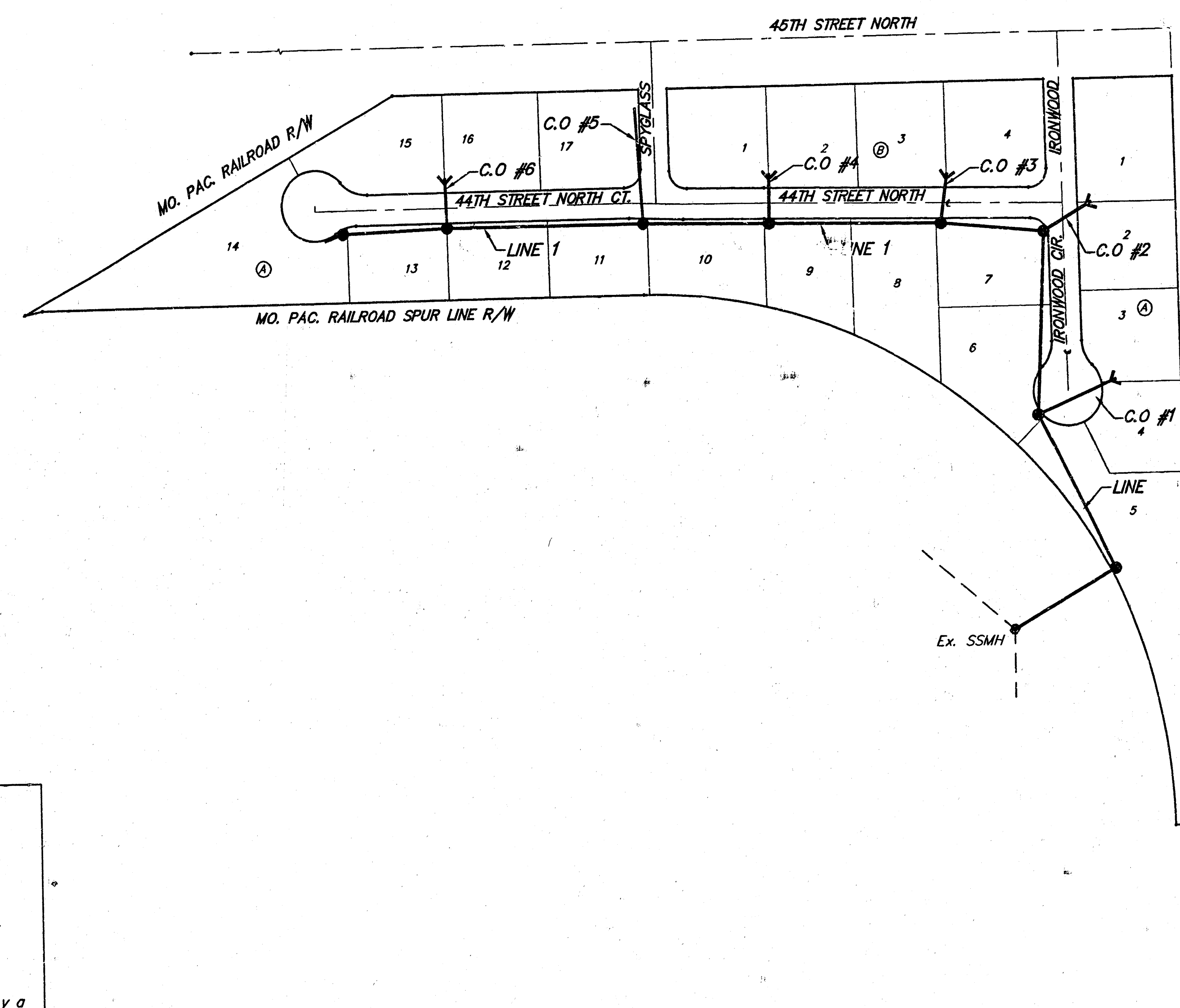
- Contractor will be required to provide notice to utility companies a minimum of twenty-four (24) hours prior to any excavation, as follows:

Kansas One-Call 687-2470

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

Cox Communications	262-0661
K.P.L. Gas Service Company	383-8550
Kansas Gas & Electric Company	383-8600
Peoples Gas Company	942-8350
Southwestern Bell Telephone Company	1-800-344-7233
City of Wichita Water Dept.	268-4908
City of Wichita Traffic Engineering	269-4446

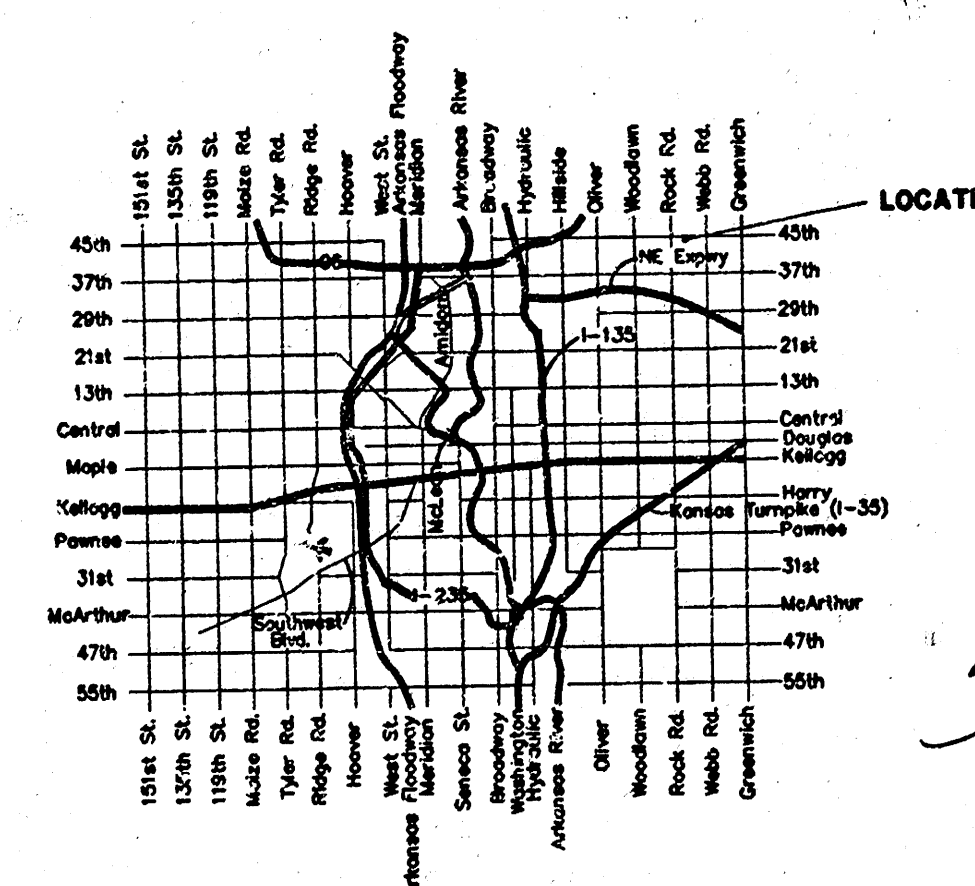
- Underground utility service lines and overhead utility pole lines are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.
- 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.
- 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.
- Contractor shall grade around exposed manholes at a 1:1 slope. Cost of dirt, labor, equipment, etc. to be incidental to cost of manhole.



Scale: 1" = 100'

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Title Sheet	1
Line 1	2,3
Standard Manhole Detail	4
Ring & Cover Detail	5
Copy of Plat	6



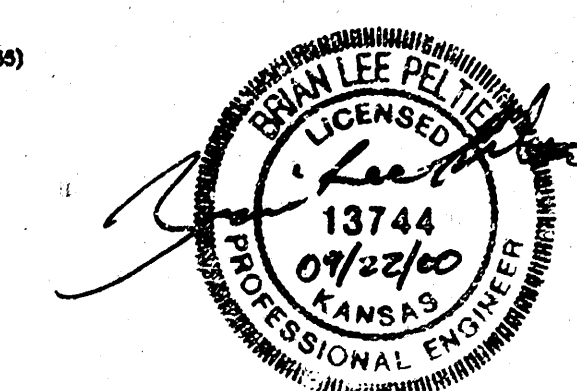
Vicinity Map

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Sanitary Sewer UR # 9/22/00

NOTE TO CONTRACTORS

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 performed by a Licensed Professional Engineer. No work shall be certified 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).

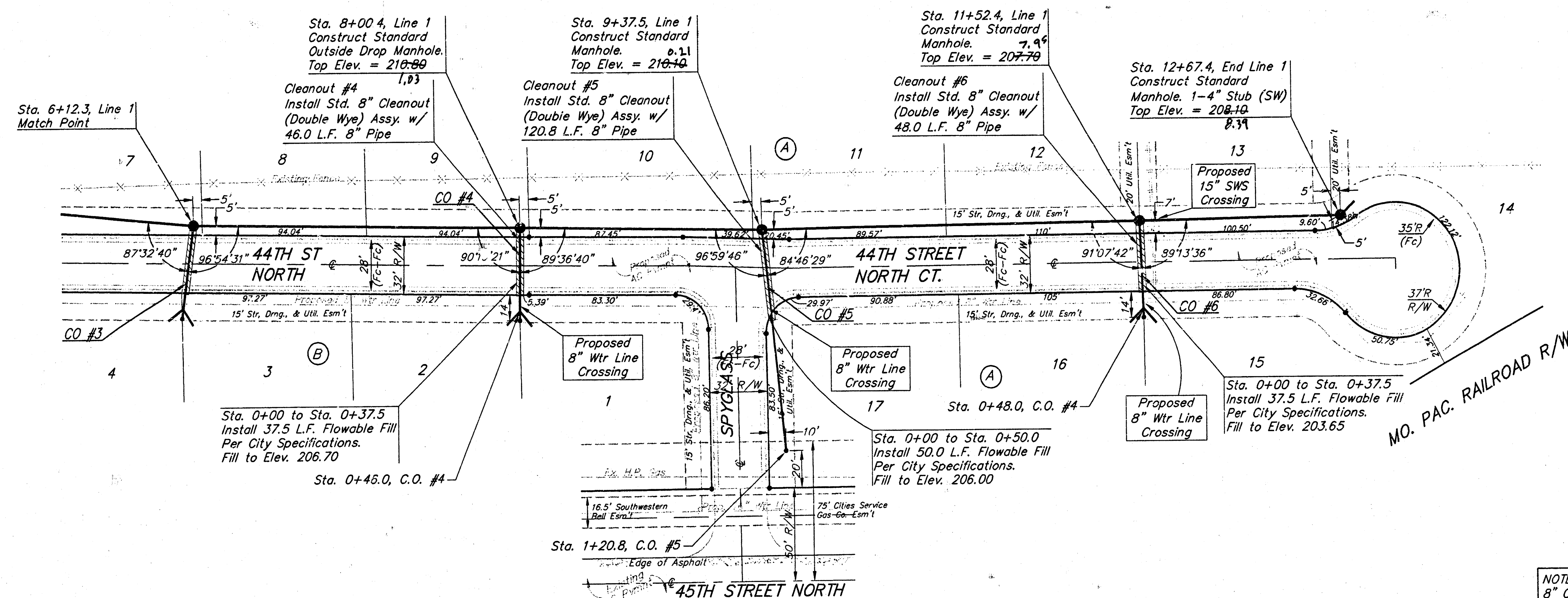


Booked
P-162
12-1-00
RDL

As Built 11/00 KK

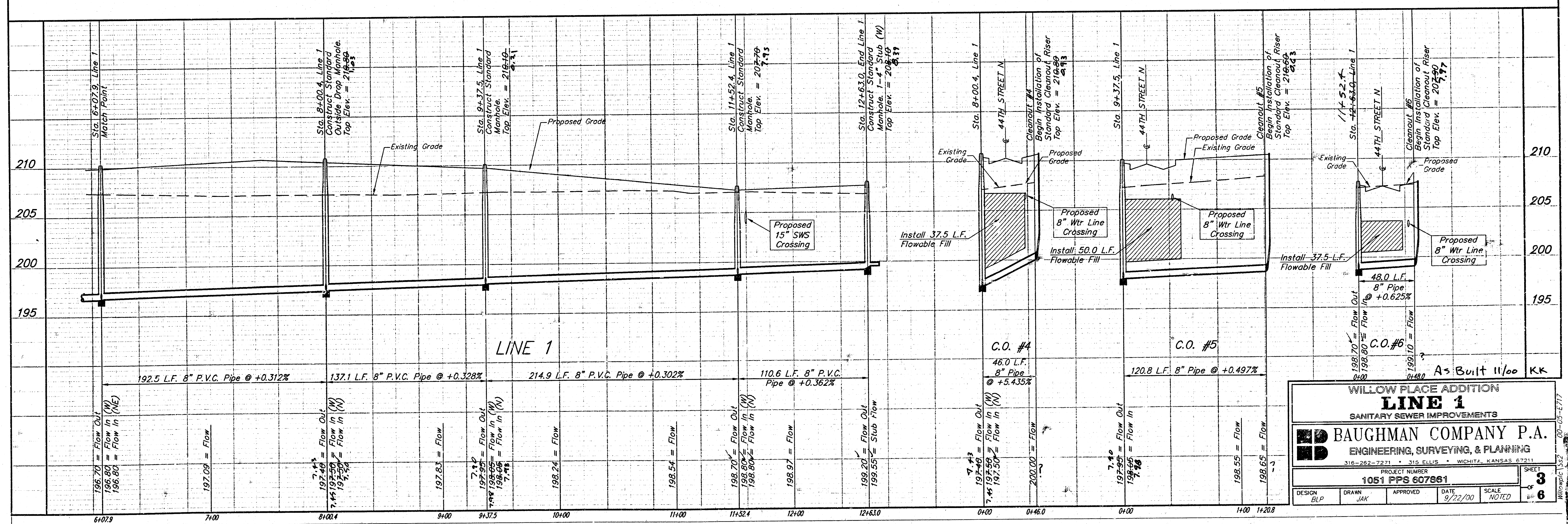
BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

16-04-01-16



SCALE:
 1" = 40' HORIZONTAL
 1" = 5' VERTICAL
 • = IRON

NOTE:
 8" Cleanout Assy. shall be bid per each.
 8" Pipe from manhole to cleanout riser
 shall be bid as L.F. 8" Pipe.



WILLOW PLACE ADDITION
LINE 1
 SANITARY SEWER IMPROVEMENTS

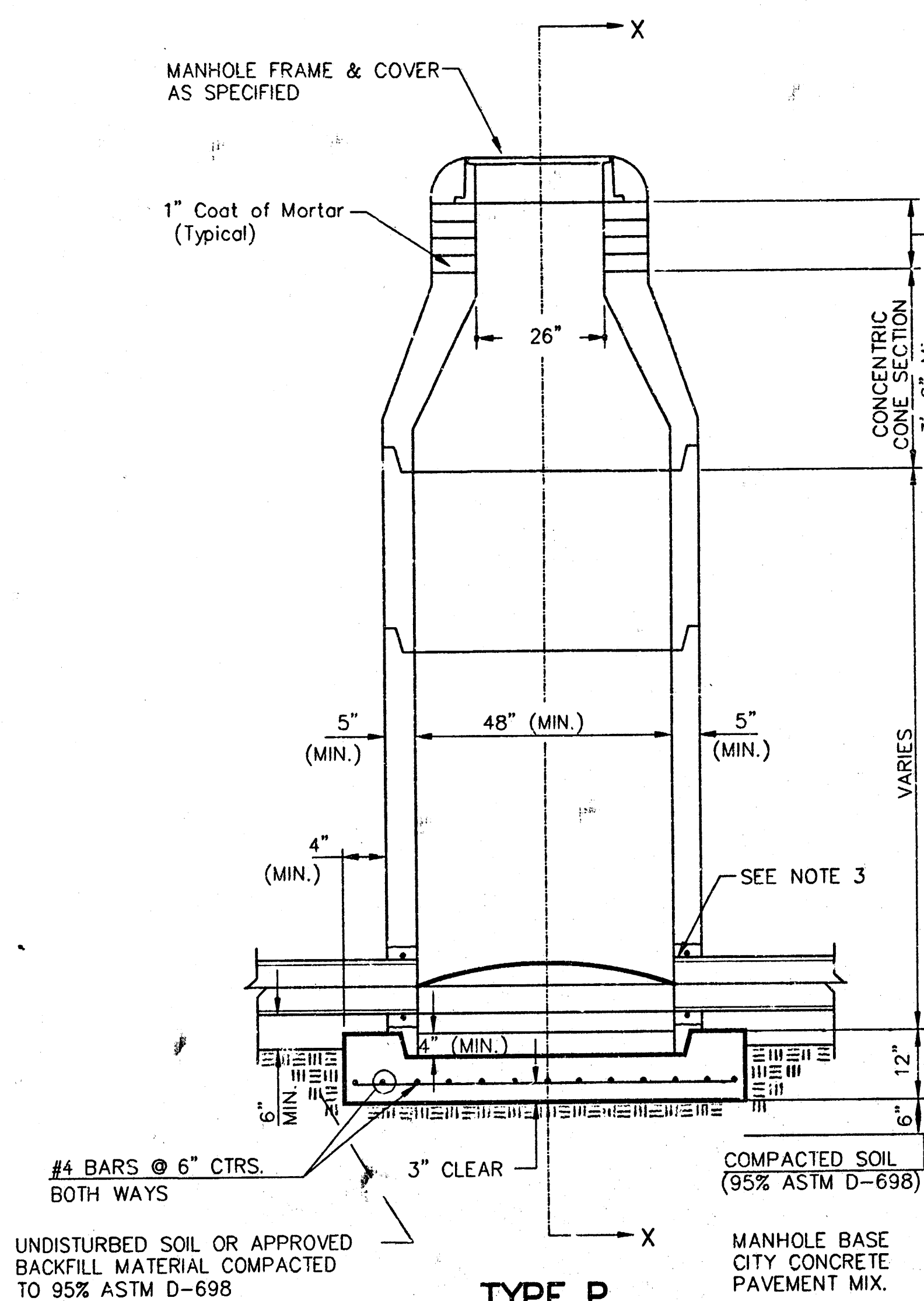
ED BAUGHMAN COMPANY P.A.
 ENGINEERING, SURVEYING, & PLANNING
 316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER
1051 PPS 607861

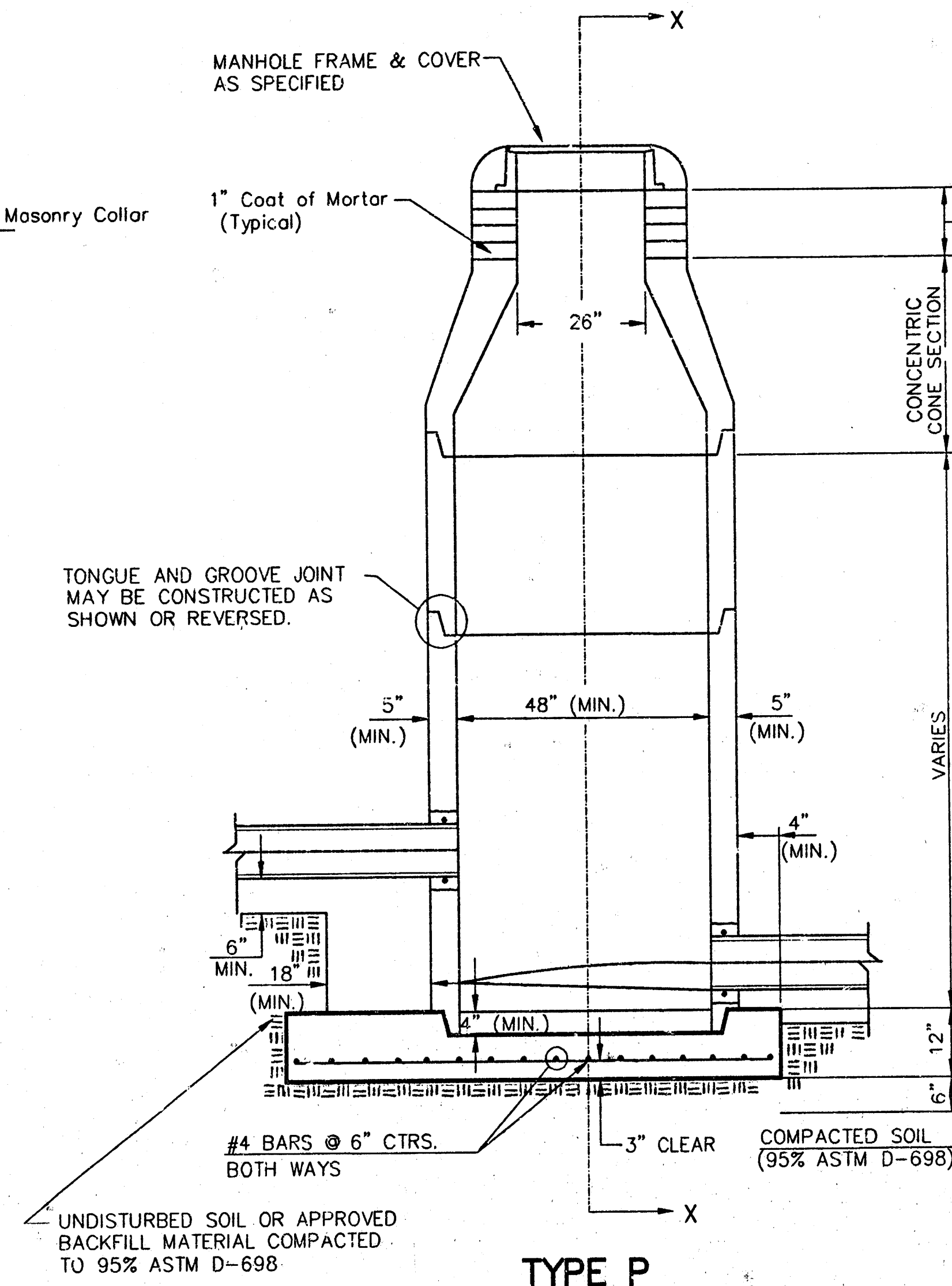
DESIGN: BLP DRAWN: JAK APPROVED: [Signature] DATE: 9/22/00 SCALE: NOTED

SHEET **3** OF **6**

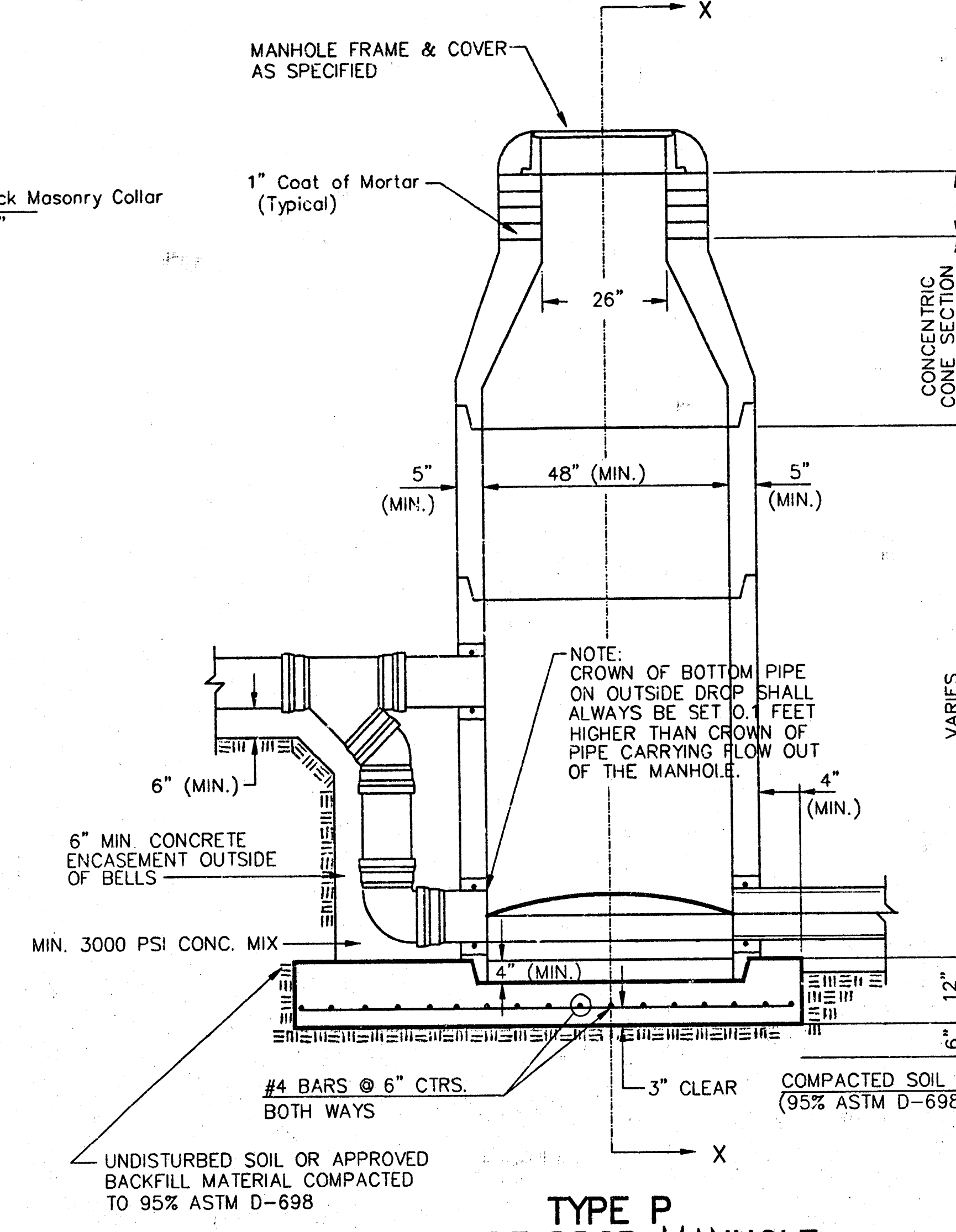
SEWER APPURTENANCES DETAILS



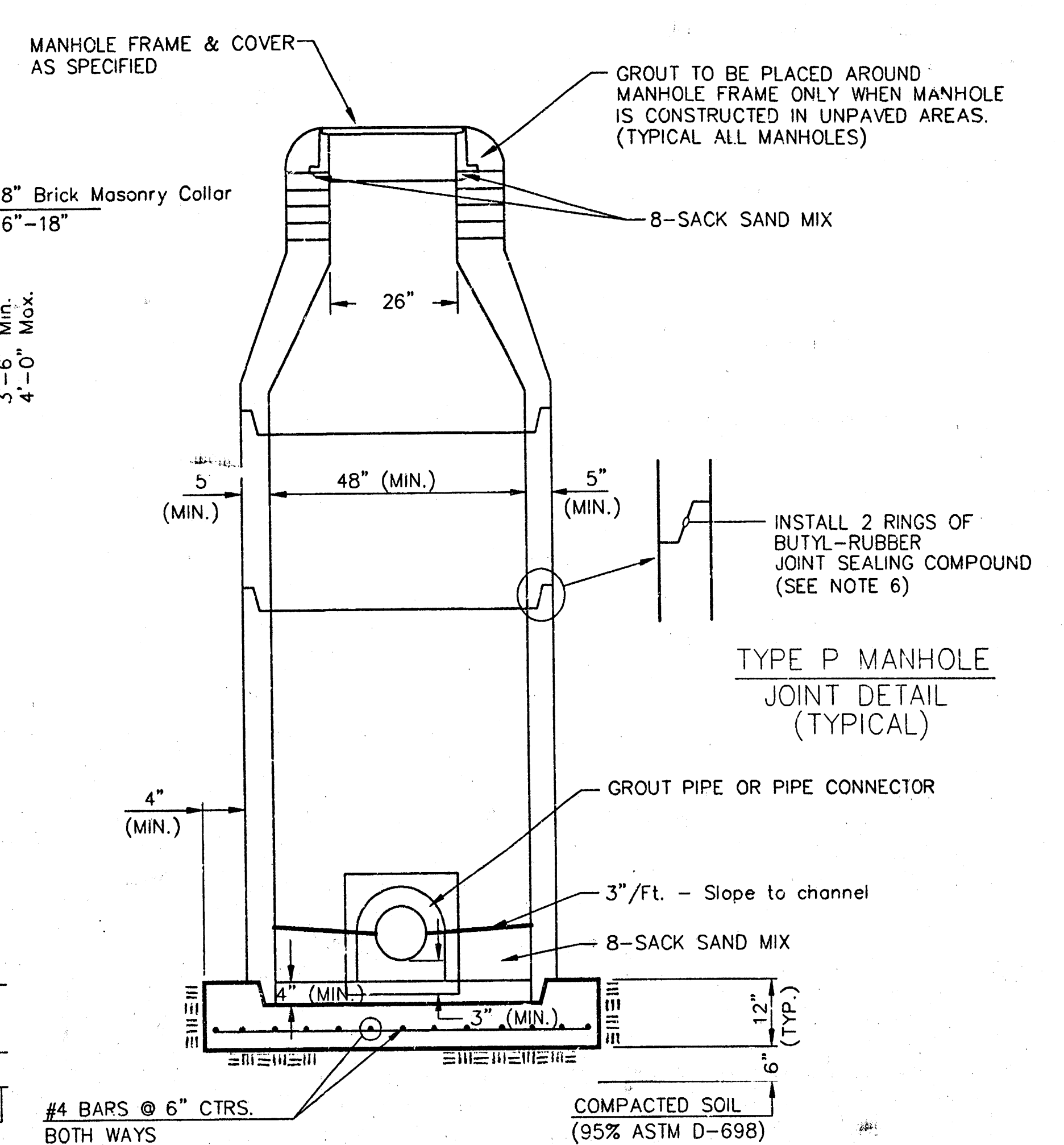
**TYPE P
STANDARD MANHOLE**



**TYPE P
INSIDE DROP MANHOLE**



**TYPE P
OUTSIDE DROP MANHOLE**



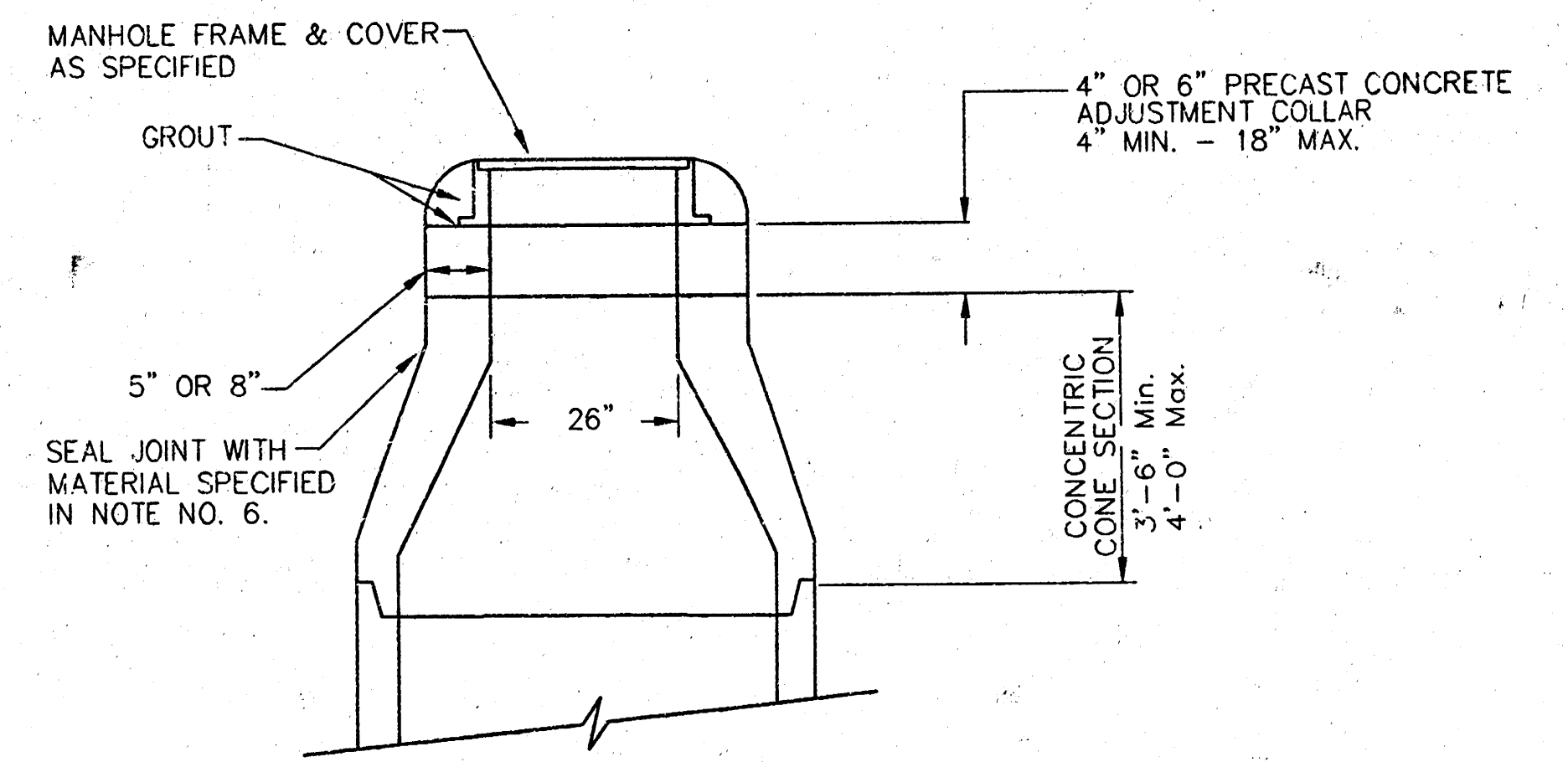
**SECTION X
(TYPICAL)**

GENERAL 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 PIPE SHALL BE GROUDED IN PLACE WITH NON-SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASUREMENT 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 TNEPEC 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 GROUDED 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 GROUDED 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.

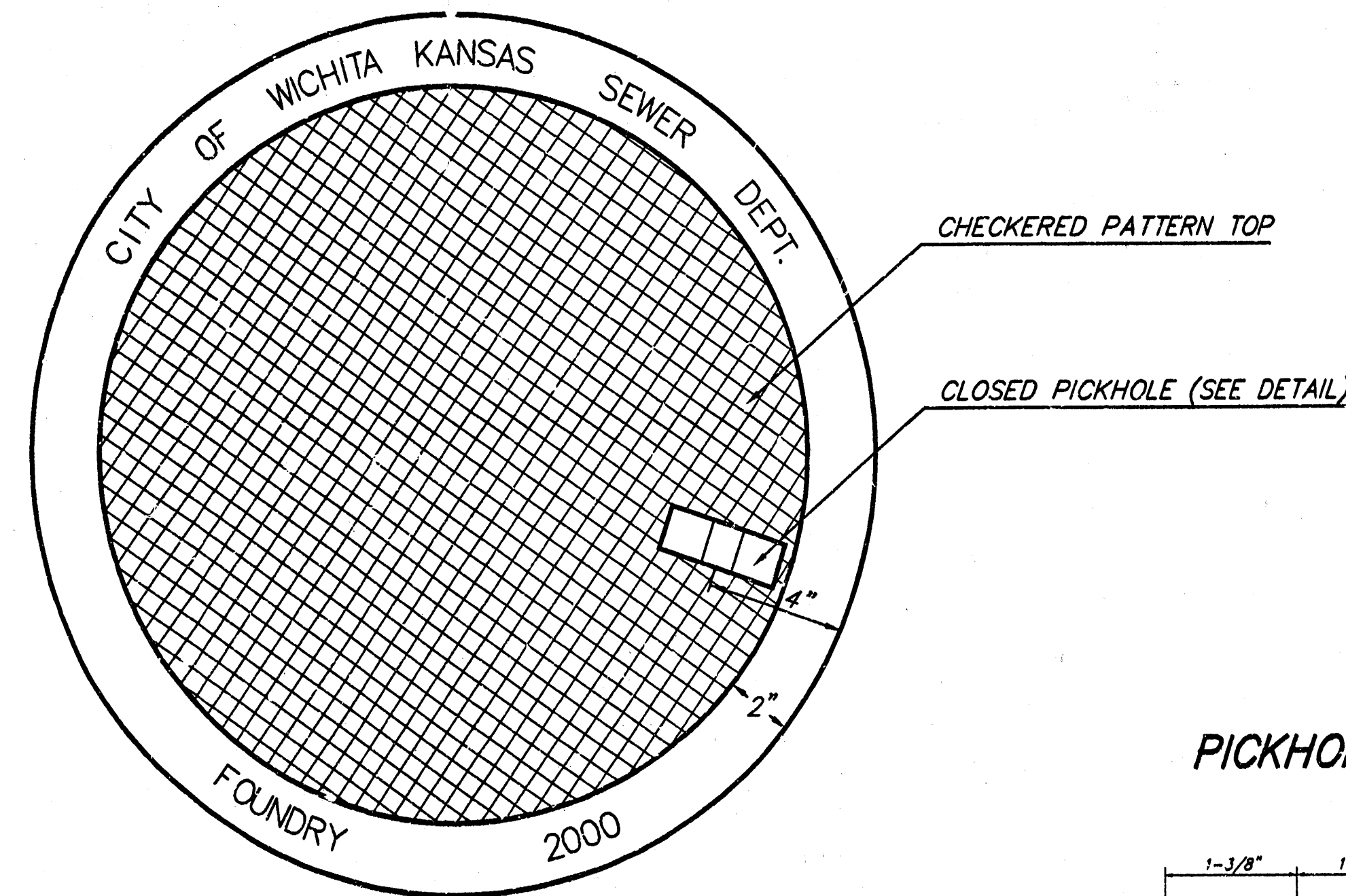
15. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
16. THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 2' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING 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.



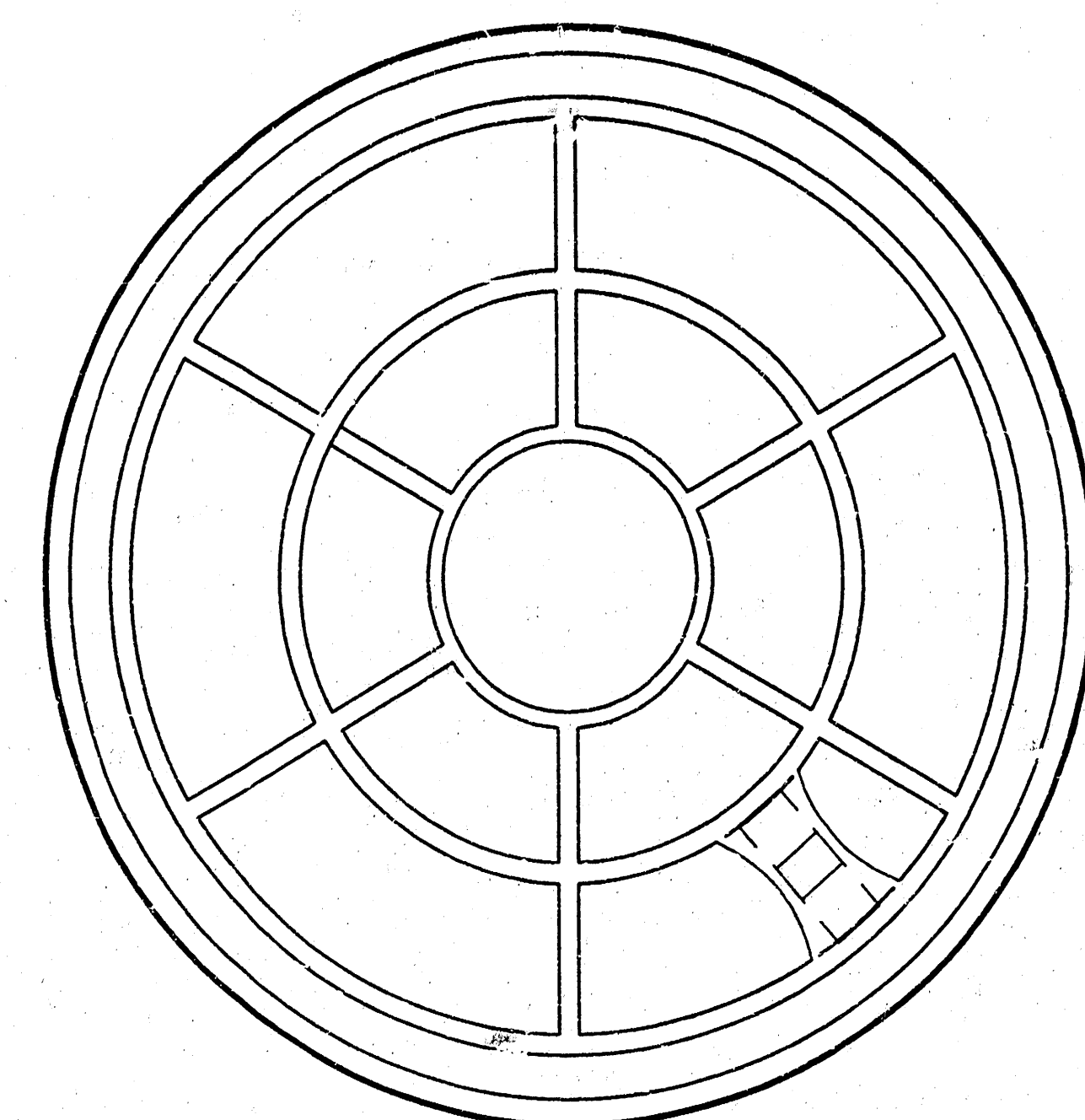
**ALTERNATE CONSTRUCTION
IN UNPAVED AREAS**

CITY OF WICHITA			
STD. MANHOLE DETAILS			
SEWER APPURTENANCES			
BAUGHMAN COMPANY P.A.			
ENGINEERING, SURVEYING, & PLANNING			
316-262-2721 • 316 ELLIS • WICHITA, KANSAS 67211			
PROJECT NUMBER		SHEET	
1051 PPS 607881		4	
DESIGN	DRAWN	DATE	SCALE
STAFF	STAFF	9/22/00	NONE
		OF 6	

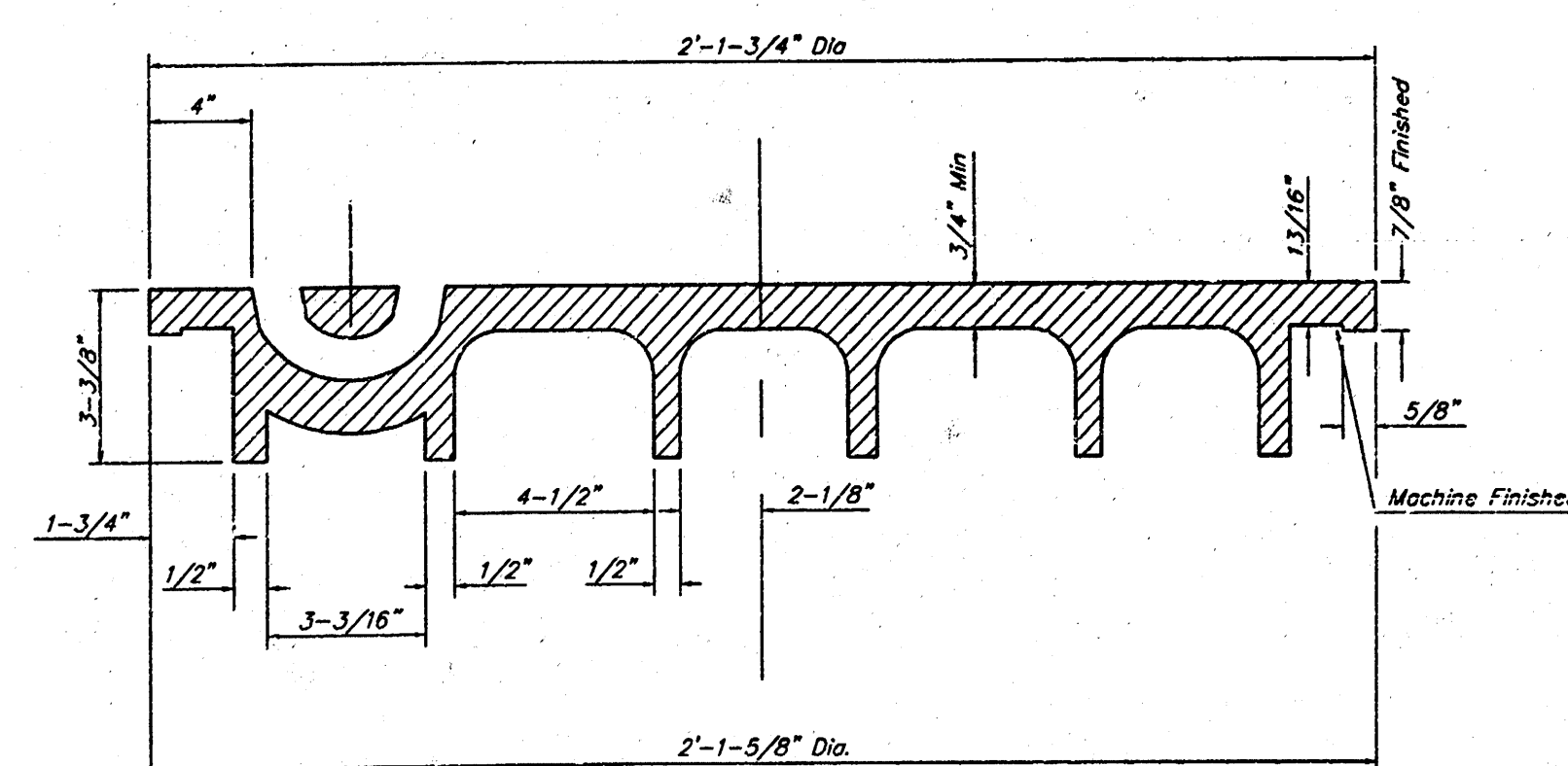
MANHOLE COVER
Weight = 180 Lbs.



TOP VIEW

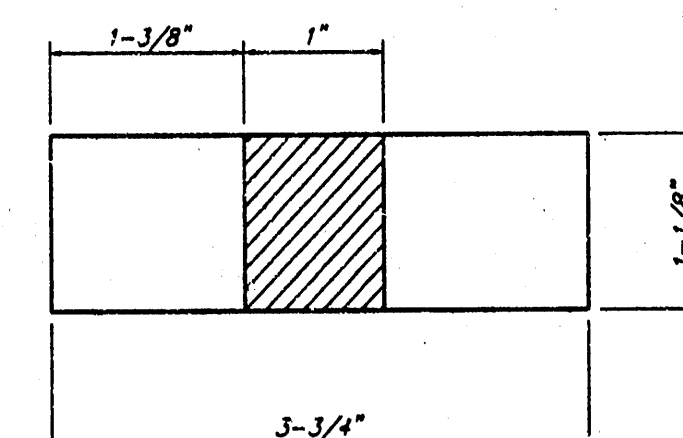


BOTTOM VIEW

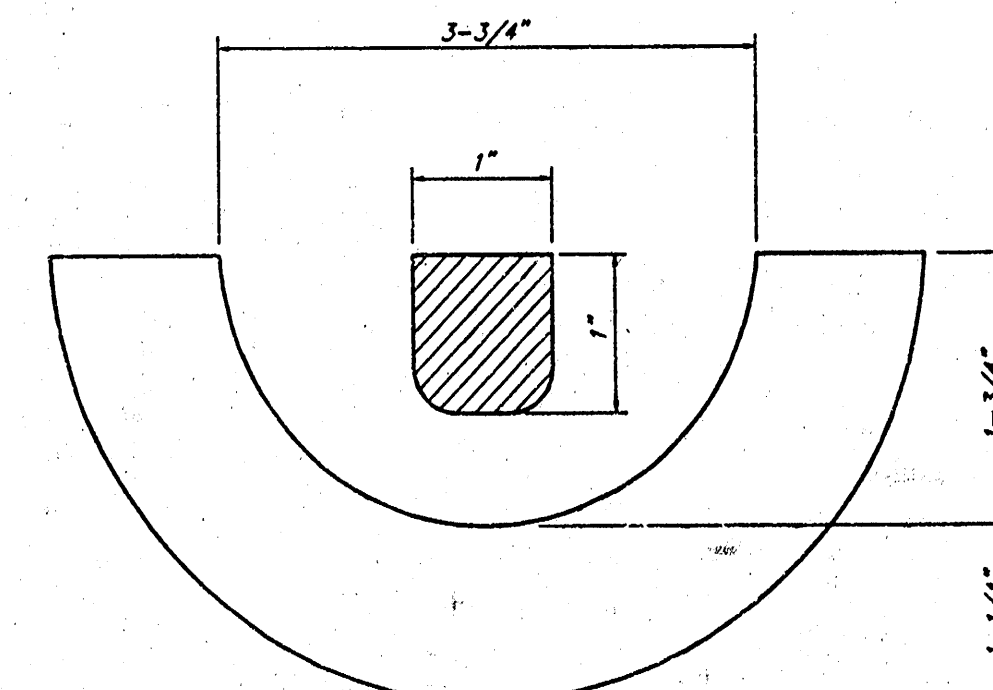


SECTION VIEW

PICKHOLE DETAIL



TOP VIEW

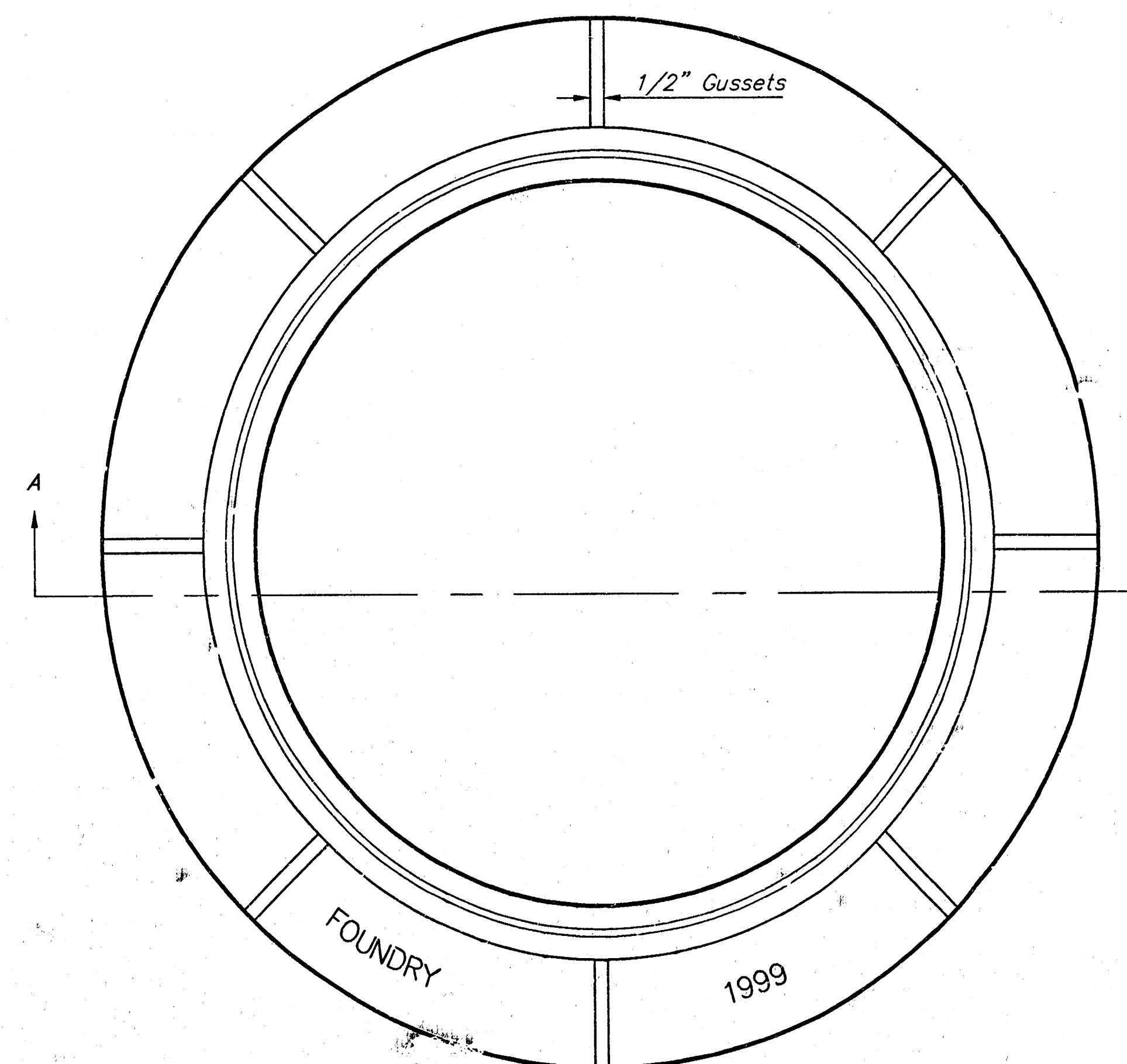


SECTION VIEW

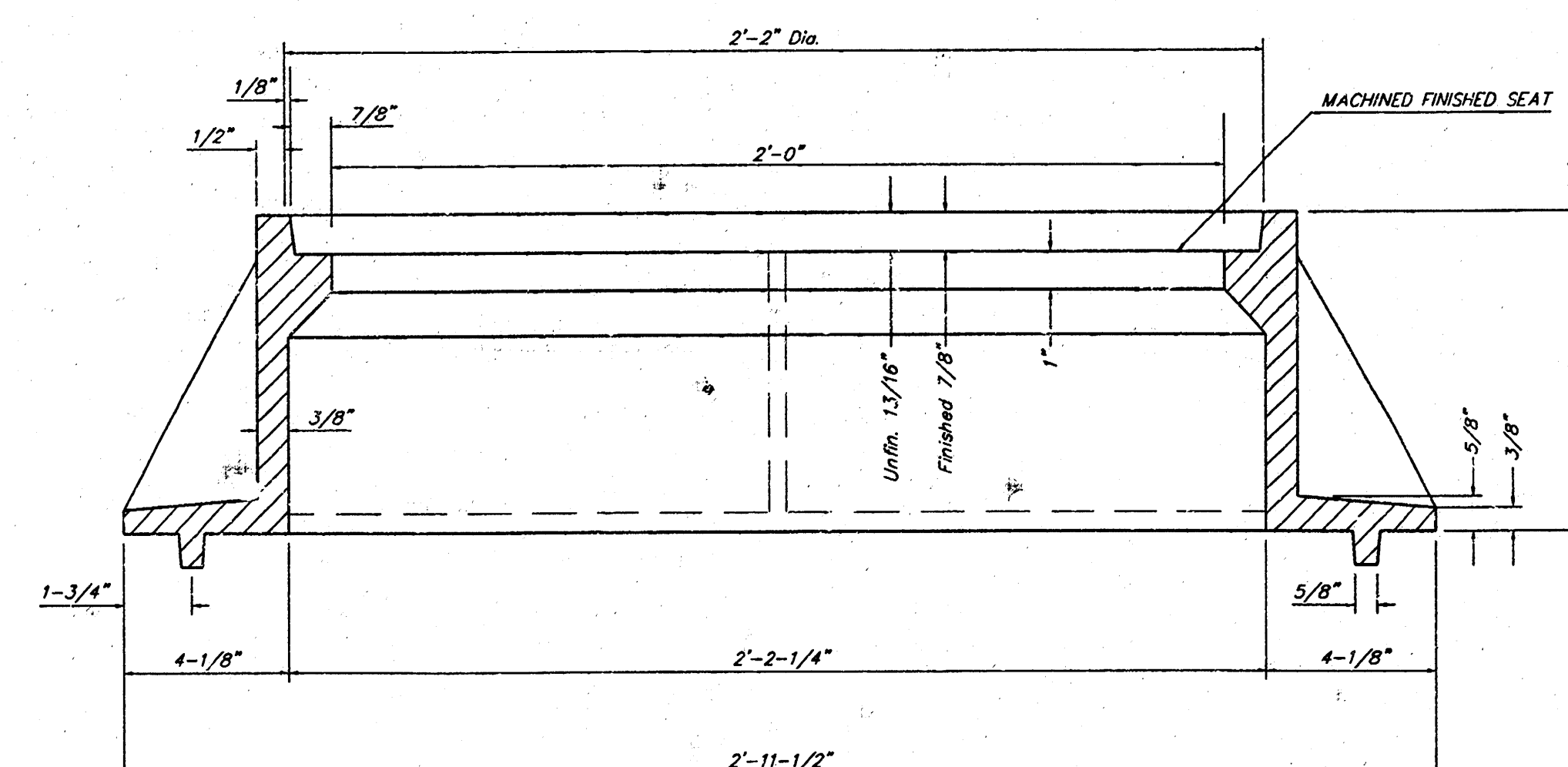
MANHOLE FRAME AND COVER DETAIL

ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

MANHOLE FRAME
Weight = 145 Lbs.



TOP VIEW



SECTION A-A

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.

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 1051 PPS 607881					
DESIGN STAFF	DRAWN STAFF	APPROVED	DATE 9/22/00	SCALE NONE	SHEET 5 OF 6

WILLOW PLACE

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

State of Kansas) SS
Sedgwick County) We, Baughman Company, P.A., Surveyors in
aforesaid county and state do hereby certify that we have surveyed and
platted "WILLOW PLACE", an Addition to Wichita, Sedgwick County, Kansas
and that the accompanying plat is a true and correct exhibit of the
property surveyed, described as a tract of land lying in the NW1/4 of
Sec. 29, Twp. 26-S, R-2-E of the 6th P.M., Sedgwick County, Kansas,
more particularly described as follows: Commencing at the SE corner
of said NW1/4; thence S89°10'08"W, 20.00 feet along the south line
of said NW1/4 to a point of beginning, said point being a point on a
curve to the left; thence along said curve 887.25 feet, said curve having
a central angle of 89°38'02", a radius of 567.15 feet, and a long chord
of 799.50 feet, bearing N45°38'17"W; thence S89°32'42"W, 662.94 feet;
thence S78°21'42"W, 19.59 feet to the southerly right-of-way line of
Missouri Pacific Railroad; thence N61°31'26"E, 497.70 feet along said
southerly line to a point lying 35.00 feet south of the north line of said
NW1/4; thence N89°38'23"E, 824.88 feet, parallel with said north line,
to a point on the east line of said NW1/4; thence S70°49'16"E,
792.07 feet along said east line; thence S89°10'44"W, 20.00 feet to
the point of beginning.

Existing public easements and dedications being
vacated by virtue of K.S.A. 12-5:2(b).

Baughman Company, P.A.

Michael D. Conrey, Surveyor
Michael D. Conrey

Know all men by these presents that we,
the undersigned, have caused the land in the surveyors certificate to be
platted into Lots, Blocks, and Streets, to be known as "WILLOW PLACE",
an Addition to Wichita, Sedgwick County, Kansas. The utility easement is
hereby granted as indicated for the construction and maintenance of all
public utilities. The drainage easements are hereby granted as indicated
for drainage purposes. The drainage and utility easement is hereby
granted as indicated for drainage purposes and for the construction
and maintenance of all public utilities. The street, drainage, and utility
easements are hereby granted as indicated for street related purposes,
for drainage purposes, and for the construction and maintenance of all
public utilities. The streets are hereby dedicated to and for the use
of the public. All abutters rights of access to or from 45th Street
North over and across the north line of Lots 1, 15, 16, and 17, Block A,
and over and across the north line of Lots 1, 2, 3, and 4, Block B,
are hereby granted to the City of Wichita, Kansas.

Forty-Fifth Street Properties, L.L.C.

Jerry D. Michell, Member

Michael Brand, Member
Brand Investments, LLC, Member,
by Michael Brand, Member

State of Kansas) SS
Sedgwick County) The foregoing instrument acknowledged before
me, this 11th day of August, 2000, by Jerry D. Michell, Member of
Forty-Fifth Street Properties, L.L.C., on behalf of the limited liability
company.

JUDITH M. TERHUNE
Notary Public - State of Kansas
My Appl. Expires 11-7-2001

Judith M. Terhune, Notary Public
JUDITH M. TERHUNE

My App't. Exp. 11-7-2001

State of Kansas) SS
Sedgwick County) The foregoing instrument acknowledged before
me, this 11th day of August, 2000, by Michael Brand, Member of
Brand Investments, LLC, as Member of Forty-Fifth Street Properties, L.L.C.,
on behalf of the limited liability company.

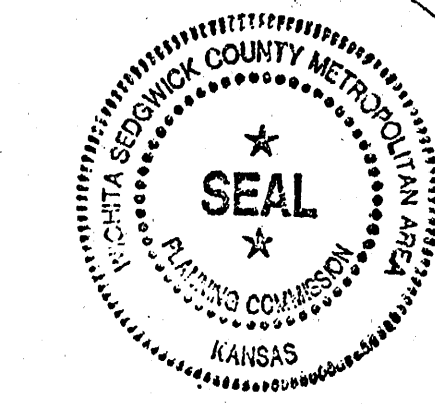
JUDITH M. TERHUNE
Notary Public - State of Kansas
My Appl. Expires 11-7-2001

Judith M. Terhune, Notary Public
JUDITH M. TERHUNE

My App't. Exp. 11-7-2001

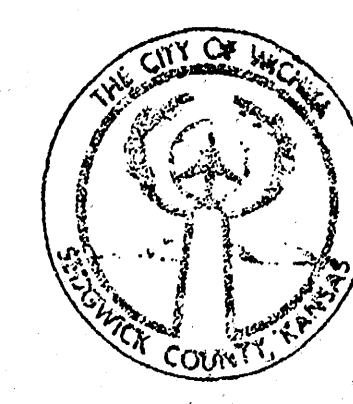
This plat of "WILLOW PLACE", an Addition to
Wichita, Sedgwick County, Kansas has been submitted to and approved by
the Wichita-Sedgwick County Metropolitan Area Planning Commission,
Wichita, Kansas.

Dated this 16th day of March, 2000
Wichita-Sedgwick County Metropolitan Area Planning Commission



Francis S. Garofalo, Chairman

Marvin S. Krout, Secretary



Bob Knight, Mayor

Pat Burnett, City Clerk

Reviewed in accordance with K.S.A. 58-2005
on this 21st day of August, 2000.

Tricia L. Robello, L.S. #1246
Deputy County Surveyor
Sedgwick County, Kansas

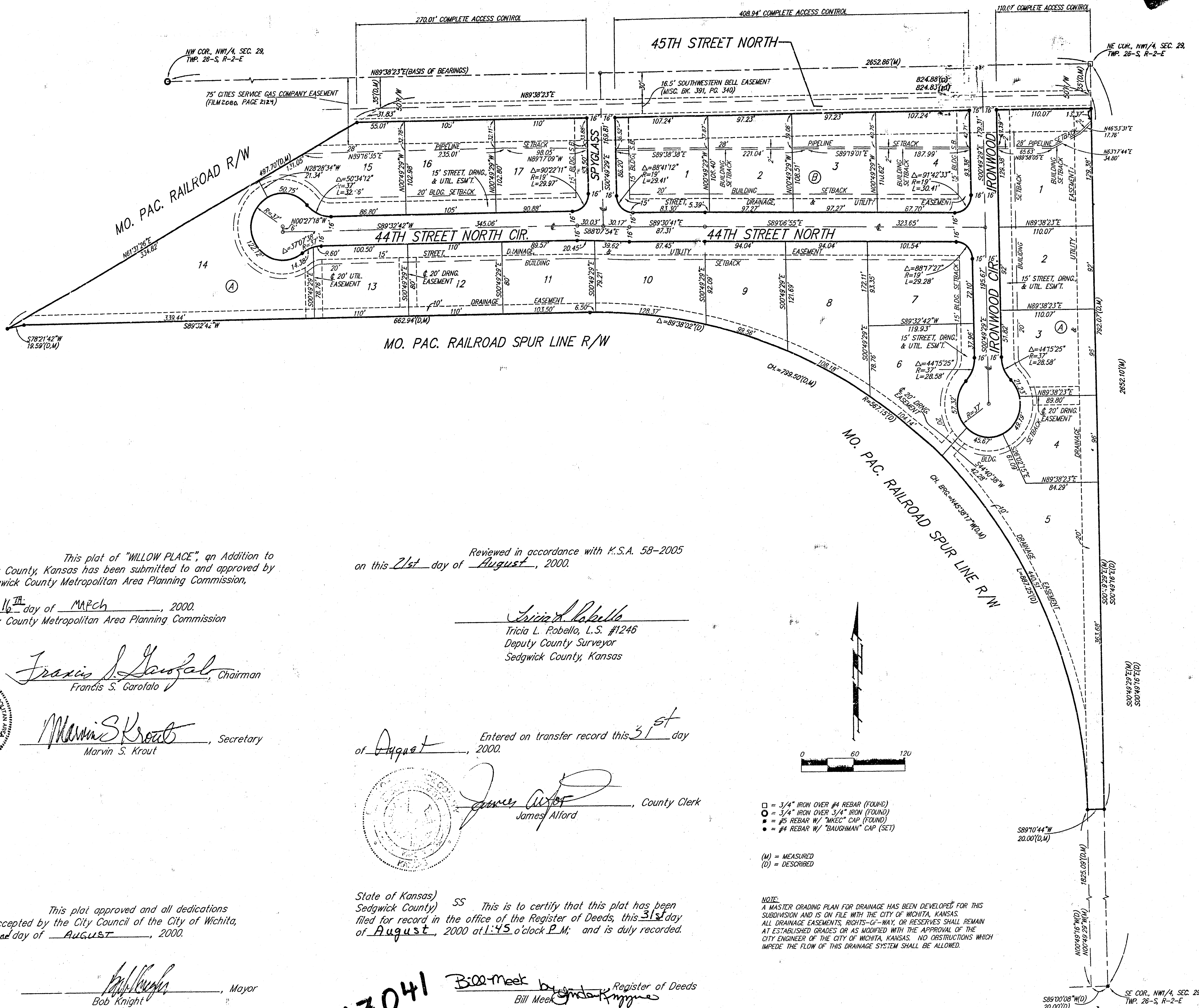
Entered on transfer record this 31st day
of August, 2000.

James Alford, County Clerk

State of Kansas) SS
Sedgwick County) This is to certify that this plat has been
filed for record in the office of the Register of Deeds, this 31st day
of August, 2000 at 1:45 o'clock P.M.; and is duly recorded.

Bill Meek, Register of Deeds

Linda Kizzire, Deputy



Legend:
□ = 3/4" IRON OVER #4 REBAR (FOUND)
○ = 3/4" IRON OVER 3/4" IRON (FOUND)
● = #5 REBAR W/ "WIDE" CAP (FOUND)
■ = #4 REBAR W/ "BAUGHMAN" CAP (SET)
(M) = MEASURED
(D) = DESCRIBED

NOTE:
A MASTER GRADING PLAN FOR DRAINAGE HAS BEEN DEVELOPED FOR THIS
SUBDIVISION AND IS ON FILE WITH THE CITY OF WICHITA, KANSAS.
ALL DRAINAGE EASEMENTS, RIGHTS-OF-WAY, OR RESERVES SHALL REMAIN
AT ESTABLISHED GRADES OR AS NOTED WITH THE APPROVAL OF THE
CITY ENGINEER OF THE CITY OF WICHITA, KANSAS. NO OBSTRUCTIONS WHICH
IMPED THE FLOW OF THIS DRAINAGE SYSTEM SHALL BE ALLOWED.

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211
P.L.P. 11/11/00 WILLOW PLACE 730 LONGWELL MAP OF D-40-000