Lateral 448, Southwest Interceptor Sewer
SANITARY SEWER
IMPROVEMENTS TO SERVE
HOSKINSON 2ND ADDITION

Project Number

468-83090

CITY OF WICHITA, KANSAS

Michael E. Lindebak, P. E., City Engineer

OCA #743857

GENERAL NOTES

1. 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:

Cablevision	262-4270
or	263-2061
K.P.L. Gas Service Company	383-8650
Kansas Gas & Electric Company	383-8600
Peoples Natural Gas Gas	942-8811
or	1800-303-0357
Southwestern Bell Telephone Company	1-571-2611
City of Wichita Water Department	268-4908
City of Wichita Sewer Department	268-4071
Kansas Gas Service	832-3168
or	932-3167

2. Exist. utilities and their locations, 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 which do not conflict with proposed construction.

3. The Contractor to verify utility locations prior to construction of this project.

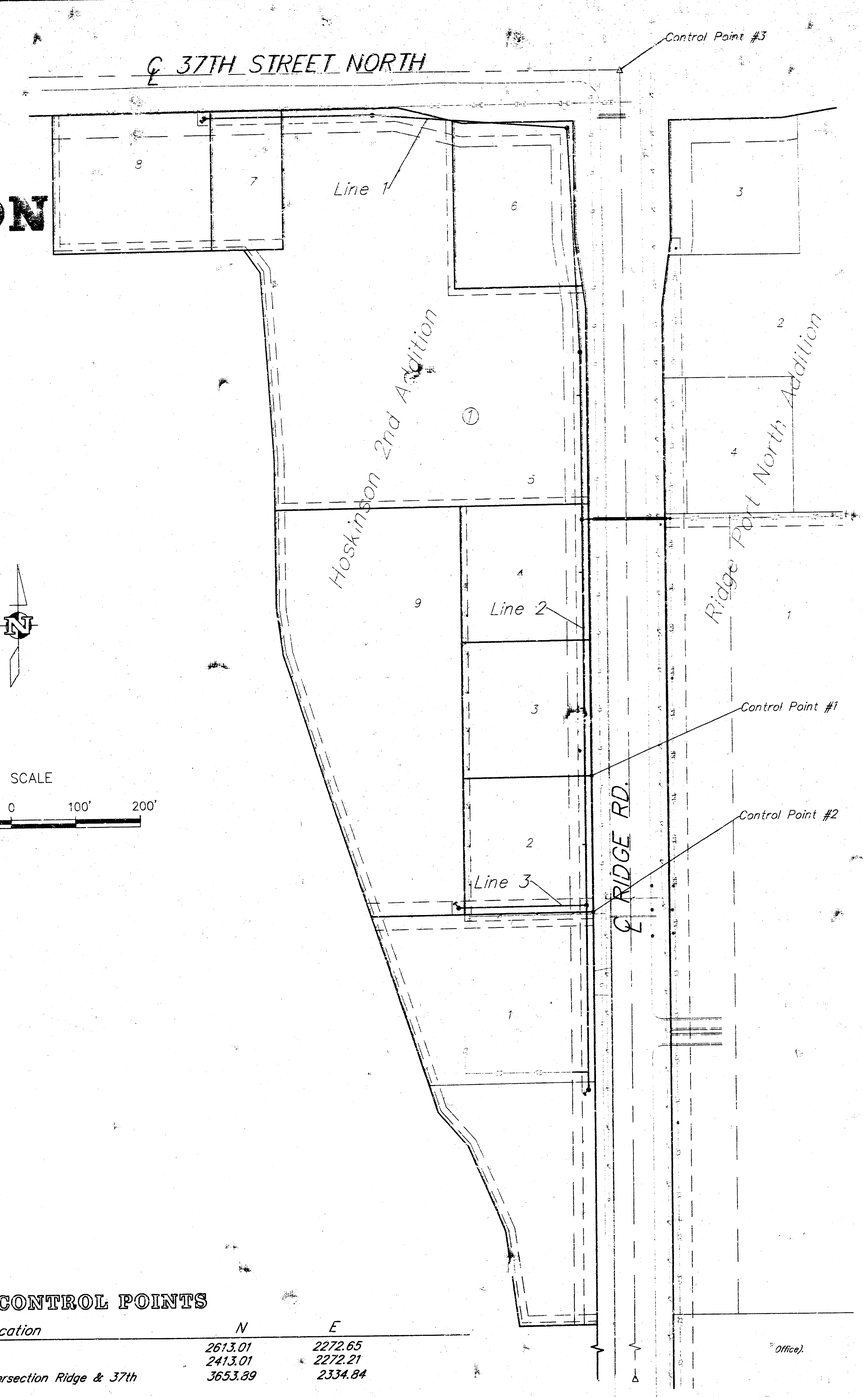
4. Utility service and installation shall be coordinated with the respective utility owners. Contacts are:

Kansas Gas Service	Jim Stoltz	832-3122
K.G.E.	Russ Chitwood	261-6251
Wichita Water	Bill Perkins	268-4555
	Paul Bryant	268-4555
Southwestern Bell	Jim Tobin	268-2759

5. All areas disturbed by construction shall be seeded with rye Rebel II Fescure grass at a rate of 350 lbs./acre immediately following construction in that area.

6. Traffic affected by the construction of this project shall be handled in accordance with the latest edition of the Manual on Uniform Traffic Control Devices.

7. All lawn/turf areas disturbed by construction of proposed improvements shall be restored with the same grass/ sod as existing. Restoration of disturbed areas shall include, but not be limited to, top soil preparation, seeding, mulch and/or reseeding. All seeding/sodding work shall be in accordance with the City of Wichita standard specifications and the City of Wichita administrative regulation No. 4R78 which governs cleanup and replacement following construction. All costs for this work shall be subsidiary to the lump sum price bid for "Site Restoration."



Benefit District Hatch

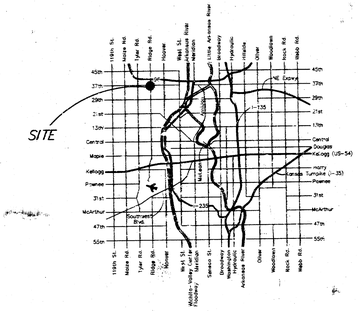
Benefit District is Lots 1 thru 9, block 1, Hoskinson 2nd Addition.

BENCHMARK:

A cut "□" on the southeast hubguard, south end of bridge, east side of Ridge Road. 33.5' east of east 1/4 Cor. Sec. 33
Elev.=1431.84 (City Datum)
City Datum = Sea Level - 1187.4

INDEX

1-Cover
2-3 Plan and Profile Line 1
4-Plan and Profile Line 2 & 3
5-7 Standard Manhole Details
8-Copy of Plat
9-RISER DETAIL



LOCATION MAP

Booked
P-166
2-12-01
AS BUILT
RDL

CONTROL POINTS

	Description/Location	N	E
CP 1.	NE Cor. Lot 2	2613.01	2272.65
CP 2.	SE Cor. Lot 2	2413.01	2272.21
CP 3.	3/4" Iron, Intersection Ridge & 37th	3653.89	2334.84

KIRK E. MILLER
DECEMBER
11233
10/18/00
KANSAS
PROFESSIONAL ENGINEER

MILLER P.A.
ENGINEERING SERVICES
254 S. Lorac, Suite 210 Wichita, KS. 67211
316/262-1281 fax: 316/262-5773

Sta 1+38.26, SS line 1 =
Sta 0+00, Line 2
Install One-4' Dia.
Outside Drop MH.
8" FL (In)=131.63 (N)(S)
8" FL (In)=135.17 (N)
8" FL (Out)=131.53 (E)
Top=147.24
N=2990.38
E=2263.48

CAUTION!
Exist. Gas Line

HOSKINSON 2ND ADDITION

Sta. 3+20.50
4" Riser

35' Setback

10' Sanitary Sewer Easement

22.5'

159.69

37.11

90°

90°

246.33 LF. 8"SS @0.4%

Sta 3+84.59, SS line 1
Install One-4' Dia. MH.
8" FL (In)= 136.25 (N)
8" FL (Out)= 136.15 (S)
Top=147.92
N=3236.71
E=2264.02

36°39'36"

10'

2.59'

10'

332.06 L.F. 8" SS @0.4%

℄ 37th St. N

Sta 7+16.65 SS Line 1
Install One-4' Dia. MH
8" FL (In)= 137.68 (W)
8" FL (Out)= 137.58 (S)
Top = 147.78
N=3568.46
E=2249.75

138.26' LF. 8"SS @0.8%

115 if Bore & Encase

CAUTION!
Ex. 20" WL

CAUTION!
Ex. Fire Hydrant

90°+30°

℄ RIDGE RD.

10' Utility Easement

CAUTION!
Ex. Water Valve

Sta 0+00, SS line 1
Connect To Exist.
Type P Manhole
8" FL (in)= 130.42 (W)
10" FL (Out)=130.25 (S)
Top=141.45
N=2990.08
E=2401.74

1

4

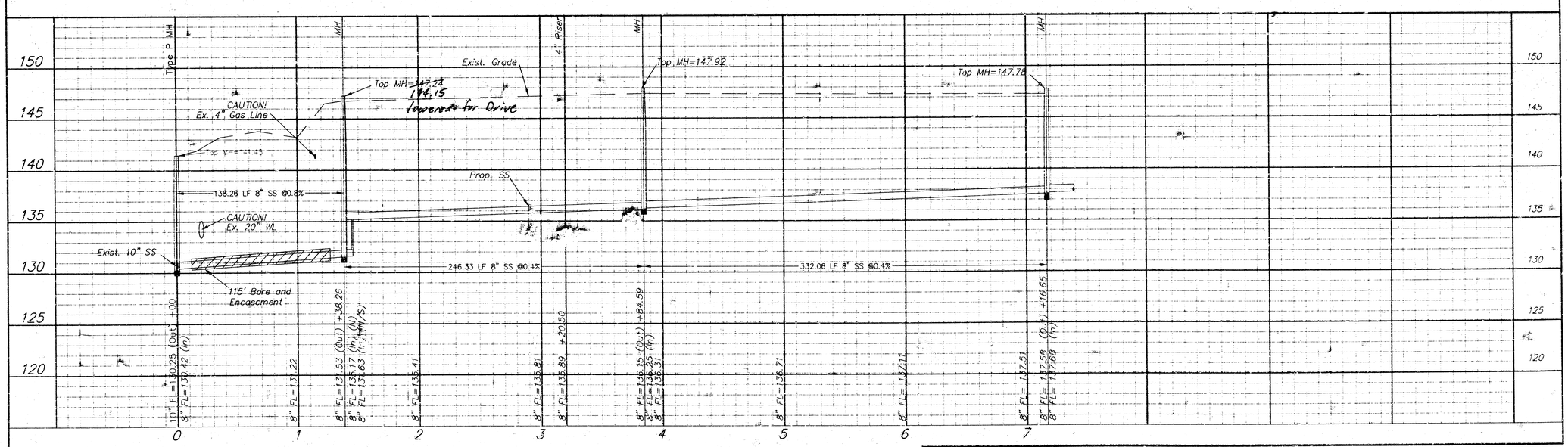
2

3

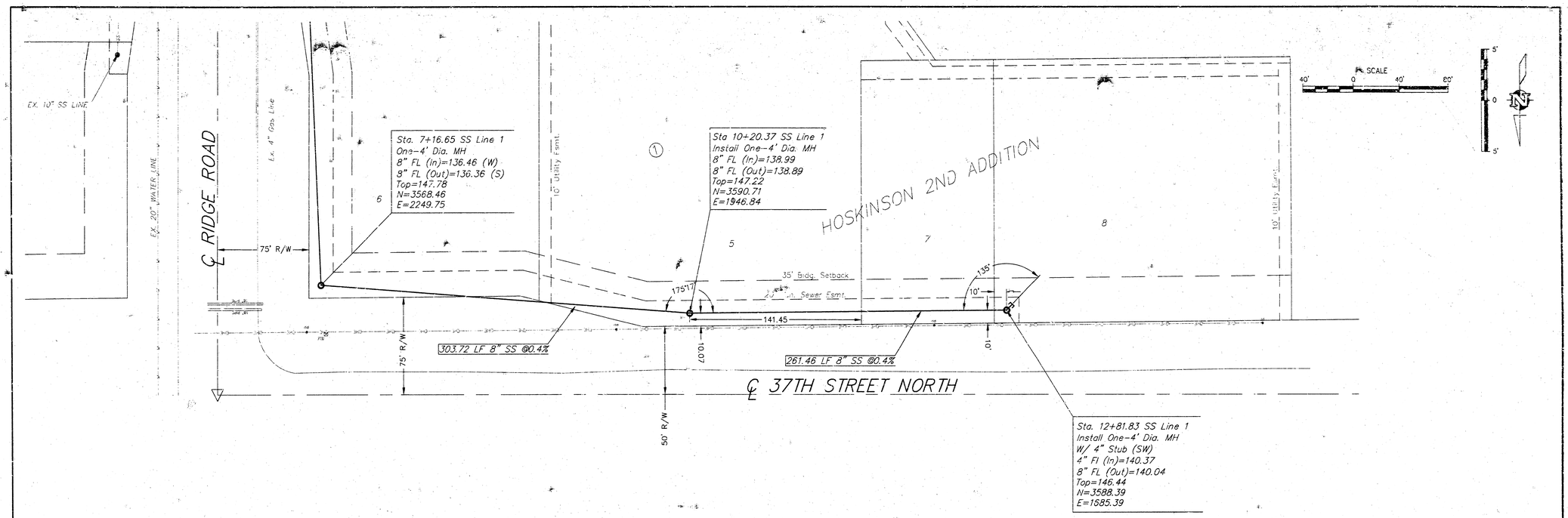
10' Setback

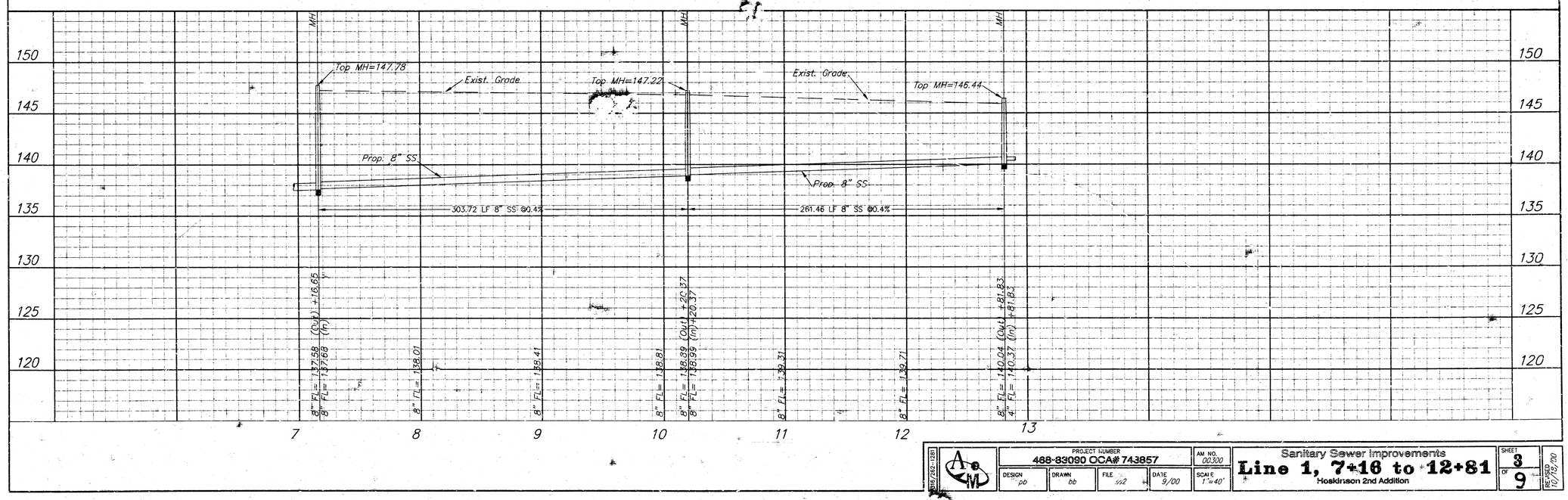
Ridge Port North Addition

SCALE
40' 0 40' 80'
5' 0 5'



811/782-1281	PROJECT NUMBER 468-83090 OCA# 743857				AM NO. 00300	Sanitary Sewer Improvements	SHEET 2 OF 9
	DESIGN pb	DRAWN bb	FILE ss1	DATE 9/00	SCALE 1"=40'	**Line 1, 0+00 to 7+16** Hoskinson 2nd Addition	REVISED 10/18/00





	PROJECT NUMBER 468-83090 OCA# 743857				AM NO. 00300	Sanitary Sewer Improvements Line 1, 7+16 to 12+81 Hoskinson 2nd Addition	SHEET 3 OF 9
	DESIGN pb	DRAWN bb	FILE 1/2	DATE 9/00	SCALE 1"=40'		RE'S 10/15/00

Sta 0+00 SS Line 2 =
Sta 1+38.26 SS Line 1
One-4' Dia. Outside
Drop MH
8" FL (In)=131.83 (N)
8" FL (in)=131.63 (S)
8" FL (Out)=131.53 (E)
Top=147.29
N=2990.38
E=2263.48

℄ RIDGE RD.

Sta 2+87.46 SS Line 2
Install One-4' Dia. MH
8" FL (in)=132.88
8"FL (Out)=132.78
Top=147.14
N=2702.92
E=2262.85

CAUTION!
Ex. 8" Fire Hydrant

Sta. 5+67.46 SS Line 2 =
Sta. 0+00 SS Line 3
Install One-4' Dia. MH
8" FL (In)=134.10 (S)
8" FL (In)=134.10 (W)
8" FL (Out)=134.00 (N)
Top=146.72
N=2422.92
E=2262.23

CAUTION!
Ex. 8" Water Line

60' R/A

287.46 LF 8" SS @0.4%

280.00 LF 8" SS @0.4%

8" Water Line

4" Gas Line

20' San. Sewer

35' Bldg. Setback

90.00

11.52'

Sta. 0+78.01
4" Riser

Sta. 2+77.88
4" Riser

Sta. 4+78.09
4" Riser

90°37'50"

89°22'10"

271.54 LF 8" SS @0.4%

Exist. 4" SS Line to
be connected by
separate contractor.

Sta. 8+39.00 SS Line 2
Install One-4' Dia. MH
w/ 6" Stub
6" FL (In)=135.36
8" FL (Out)=135.19
Top=145.21
N=2151.39
E=2261.63

10' Utility Esmt.

20' SS Esmt.

Ex. 4" SS Line

HOSKINSON 2ND ADDITION

200.00 LF 8" SS @ 0.4%

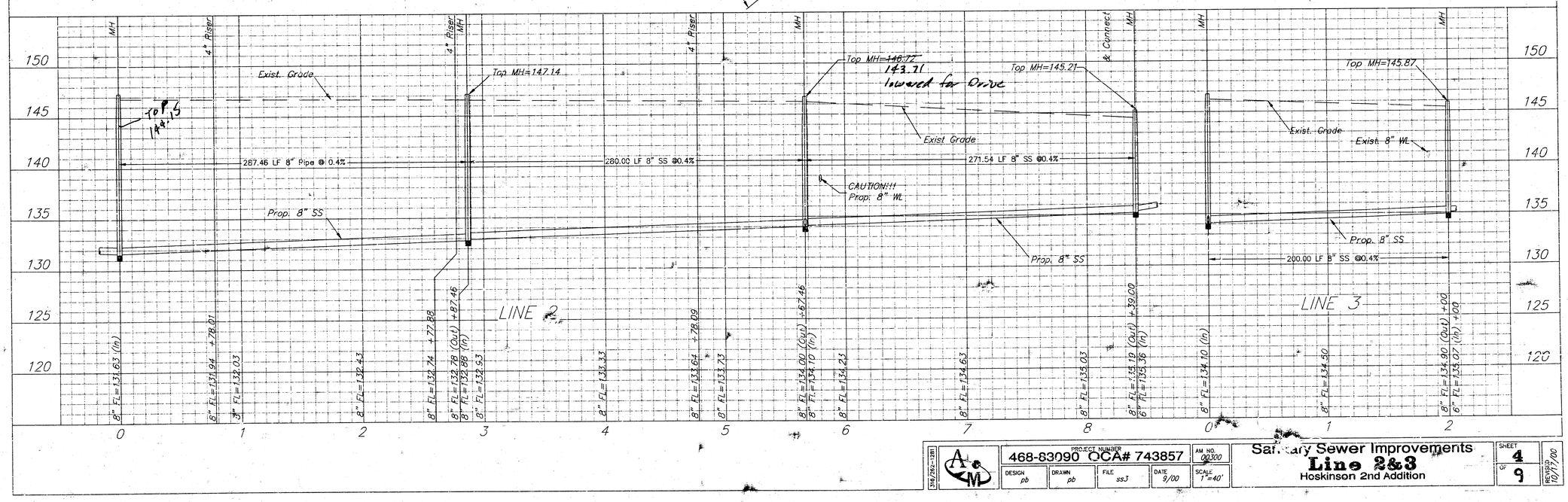
CAUTION!
Ex. 8" Water Line

40' Access Esmt.

125°40'28"

Sta. 2+00 SS Line 3
Install One-4' Dia. MH
w/ 6" Stub
6"Stub FL (In)=135.07
8" FL (Out)=134.90
Top=145.87
N=2421.16
E=2062.24

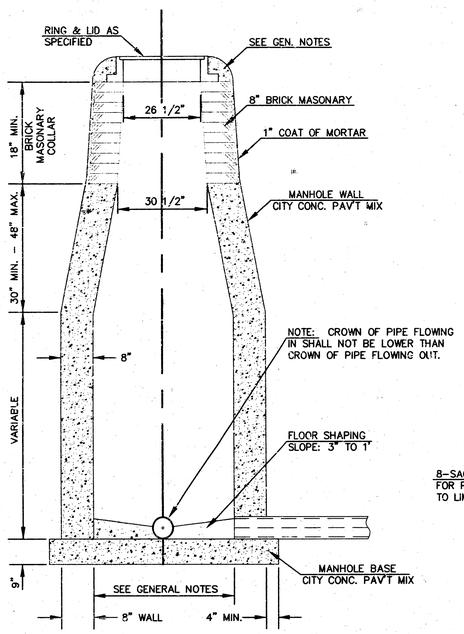
SCALE
40' 0 40' 80'
5' 0 5'



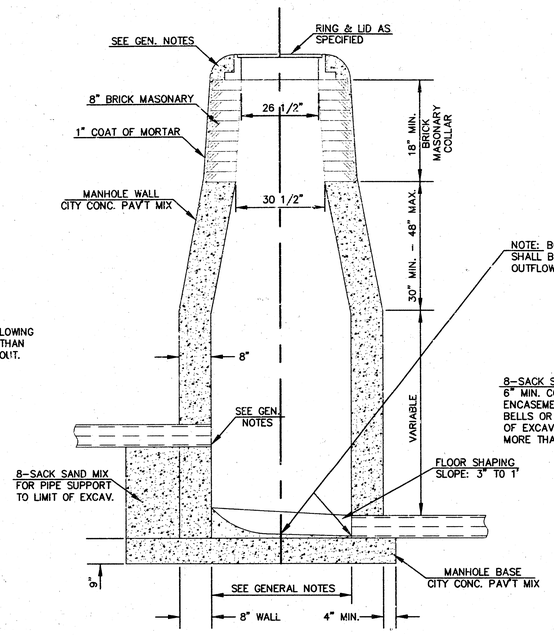
316/286-1281	PROJECT NUMBER 468-63090 QCA# 743857			AM NO. 00300	Sanitary Sewer Improvements Line 2&3 Hoskinson 2nd Addition	SHEET 4 OF 9
	DESIGN pb	DRAWN pb	FILE ss3	DATE 9/00	SCALE 1"=40'	REVISED 10/17/00

SEWER APPURTENANCES DETAILS

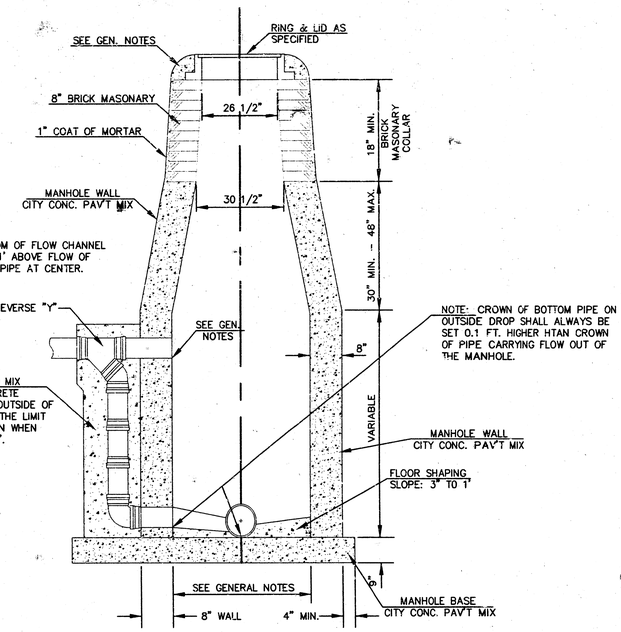
STANDARD MANHOLE TYPE "C"



INSIDE DROP MANHOLE TYPE "C"



OUTSIDE DROP MANHOLE TYPE "C"



GENERAL NOTES

1. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE WALLS AND 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. TYPE "C" MANHOLES CAN BE CONSTRUCTED ONLY WHERE PIPE SIZES ARE 8" OR SMALLER. THE INSIDE DIAMETER OF TYPE "C" MANHOLES SHALL BE 4'. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.

2. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASE. REINFORCING STEEL SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. REINFORCING STEEL SHALL BE PLACED 6" ABOVE THE BOTTOM 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 FOR INSIDE AND OUTSIDE DROP MANHOLES. THE UPPER INLET PIPE SHALL BE GROUTED INTO THIS OPENING WITH NON-SHRINK GROUT. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT.

4. 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" 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.

5. 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.

6. 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 FREE FALL DROP INSIDE MANHOLES SHALL NOT EXCEED 2'. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.

8. STANDARD MANHOLES TYPE "C" AND STANDARD INSIDE DROP MANHOLES TYPE "C" SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES TYPE "C" SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.

THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
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455 NORTH MAIN STREET
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TYPE "C" MANHOLES

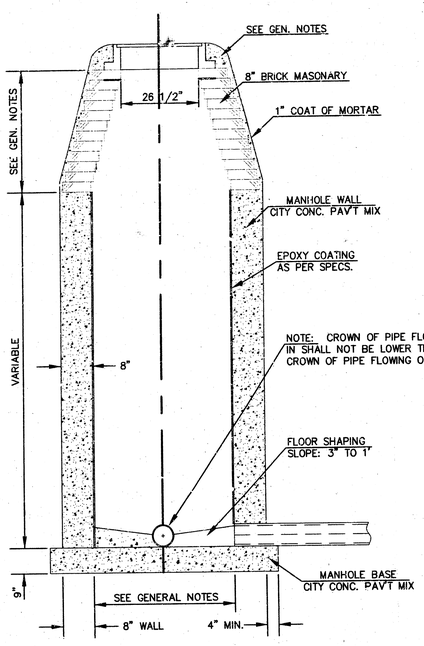
M. S. LINDEBAK P.E. - CITY ENGINEER

PROJECT NUMBER	INDEX CODE
XXX-XXXXX	XXXXXX
DATE: MAR 96	SHEET 5 OF 9

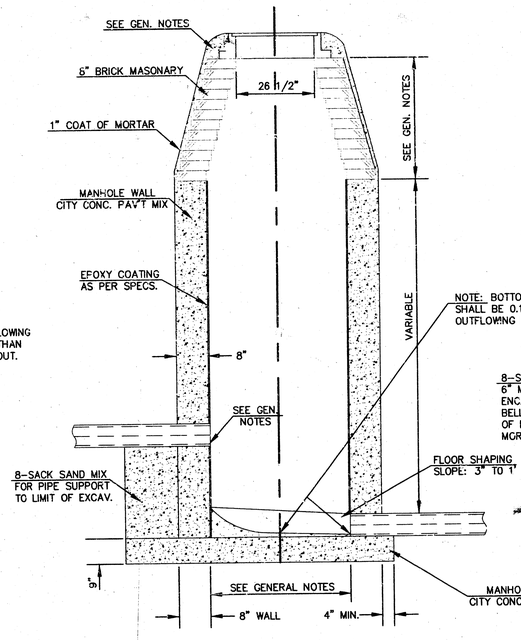
TYP-CMH.DWG

SEWER APPURTENANCES DETAILS

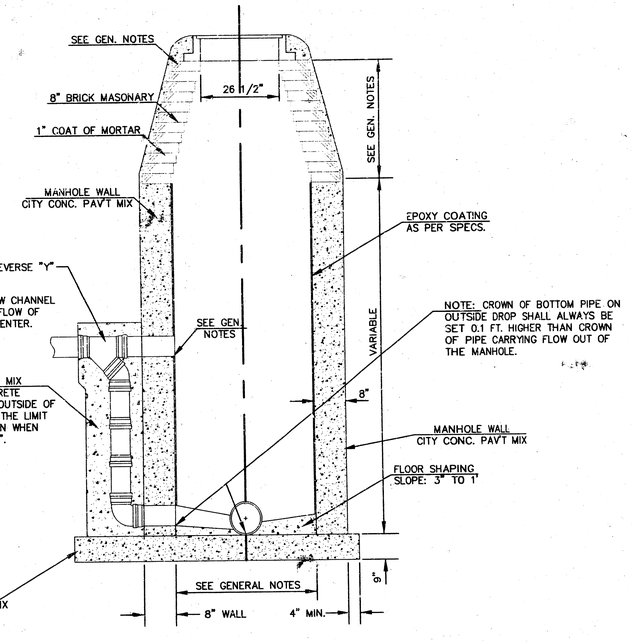
STANDARD MANHOLE TYPE "D"



INSIDE DROP MANHOLE TYPE "D"



OUTSIDE DROP MANHOLE TYPE "D"



NOTE: EPOXY COATING ON INTERIOR CONCRETE SURFACES MAY BE DELETED WHEN TYPE "D" MANHOLES ARE CONSTRUCTED ON SEWERS WITH DIAMETERS SMALLER THAN 10".

GENERAL NOTES

1. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE WALLS AND 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.

   ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WALL WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE PROTECTED BY AN APPROVED EPOXY COATING. TYPE "D" MANHOLES MAY BE USED ON PIPE SIZES 8" TO 36" WHEN THE MANHOLE DEPTH EXCEEDS THE REQUIRED CORBEL HEIGHT BY 1' PLUS THE OUTSIDE DIAMETER OF THE LARGEST PIPE IN THE MANHOLE.

   MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE A DIAMETER OF 4'. MANHOLES CONSTRUCTED WHERE THE PIPE SIZES AR 24" OR LARGER SHALL HAVE A DIAMETER OF 5'. THE HEIGHT OF THE CORBELS ON 4' DIAMETER MANHOLES SHALL BE 4'. MANHOLES HAVING A DIAMETER OF 5' SHALL HAVE CORBELS 6' IN HEIGHT. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.

2. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASE. REINFORCING STEEL SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. REINFORCING STEEL SHALL BE PLACED 6" ABOVE THE BOTTOM 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 FOR INSIDE AND OUTSIDE DROP MANHOLES. THE UPPER INLET PIPE SHALL BE GROUTED INTO THIS OPENING WITH NON-SHRINK GROUT. THE EXTERIOR OF THIS COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. THE INTERIOR PLASTIC LINING SHALL BE SEALED AROUND THE INLET PIPE OPENING IN SUCH A MANNER THAT WILL EFFECTIVELY MAINTAIN THE INTEGRITY OF THE PROTECTIVE PLASTIC LINER.

4. 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.

5. 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.

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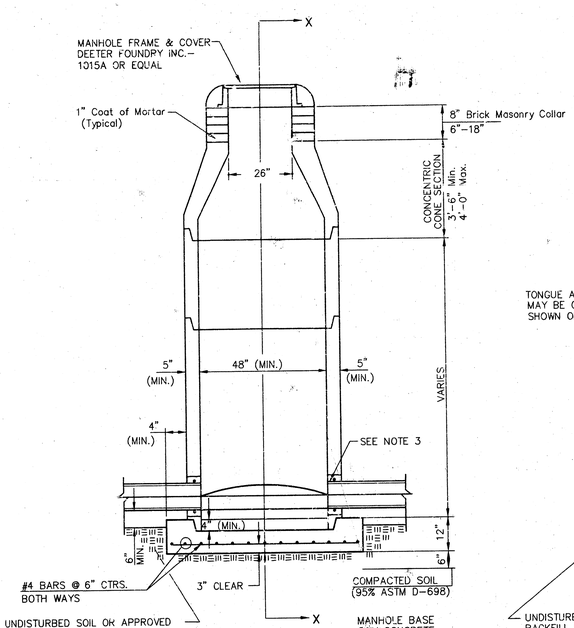
TYPE "D" MANHOLES

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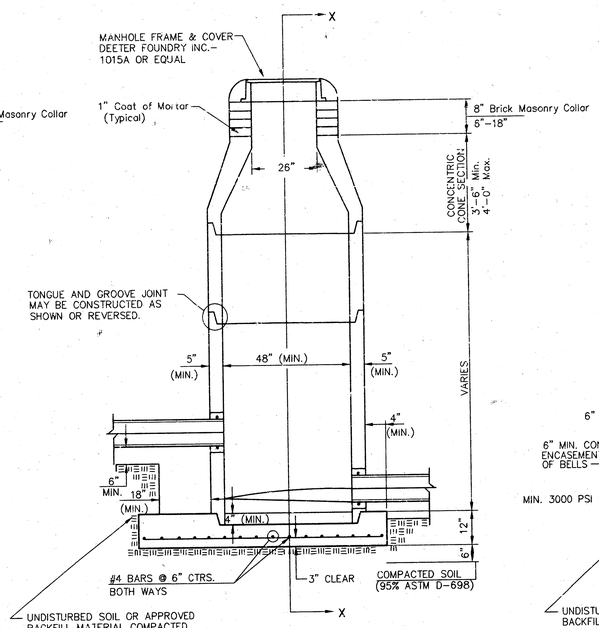
PROJECT NUMBER	INDEX CODE
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DATE: MAR 96	SHEET 6 OF 9

TYP-DMH.DWG

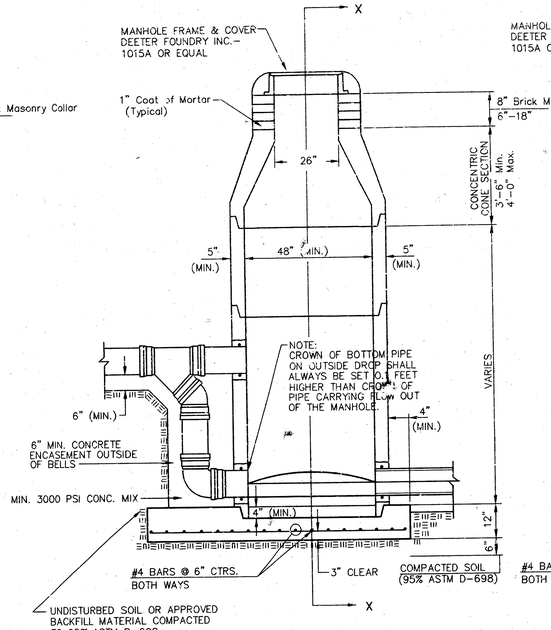
SEWER APPURTENANCES DETAILS



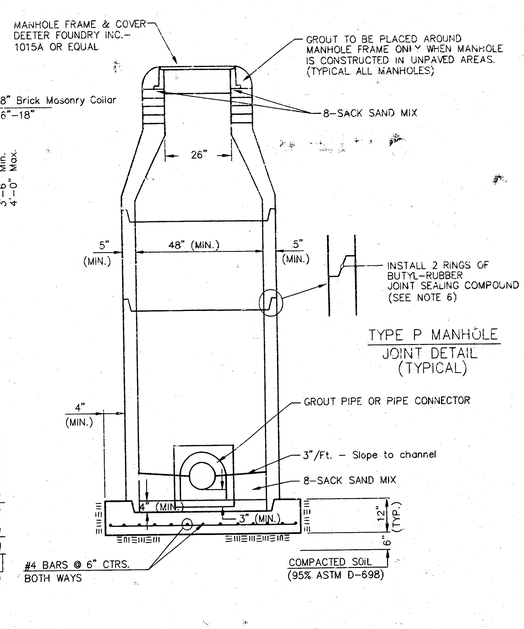
TYPE P STANDARD MANHOLE



TYPE P INSIDE DROP MANHOLE



TYPE P OUTSIDE DROP MANHOLE



TYPE P MANHOLE JOINT DETAIL (TYPICAL)

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 NONSHRINK 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 MAHOLE. 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.

THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
CITY HALL – SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4501
(316) 268-4114 FAX

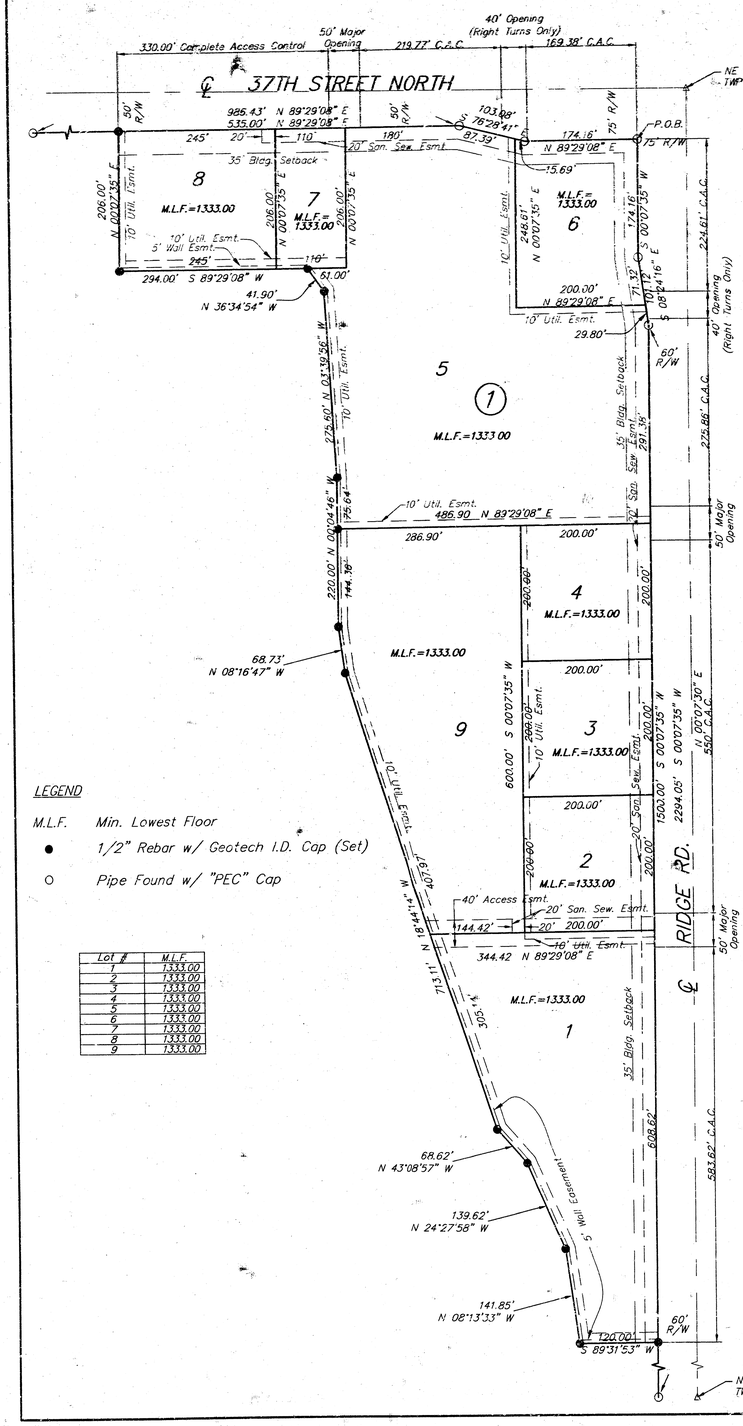
STANDARD TYPE 'P' MANHOLES

M. E. LINDEBAK P.E. – CITY ENGINEER

PROJECT NUMBER	INDEX CODE
XXX–XXXXX	XXXXXX
DATE: MAR 96	SHEET 7 OF 9

HOSKINSON 2ND ADDITION

SEDGWICK COUNTY, KANSAS



SCALE

100' 0 100' 200'

NOTES:

1. M.L.F. = Min. Lowest Floor
2. This plat is subject to the conditions of DP-242.

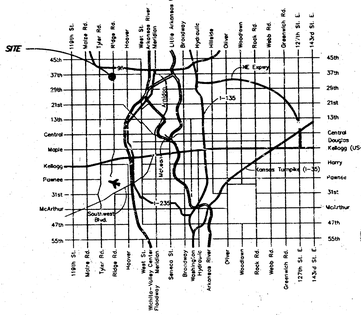
LEGEND

M.L.F. Min. Lowest Floor

● 1/2" Rebar w/ Geotech I.D. Cap (Set)

○ Pipe Found w/ "PEC" Cap

Lot #	M.L.F.
1	1333.00
2	1333.00
3	1333.00
4	1333.00
5	1333.00
6	1333.00
7	1333.00
8	1333.00
9	1333.00



LOCATION MAP

Benchmark:
A cut "□" on the southeast hubguard, south end of bridge, east side of Ridge Road. 33.5' east of east 1/4 Cor, Sec. 33.
Elev.=1331.24

State of Kansas)
Sedgwick County) ss

I, the undersigned licensed land surveyor in aforesaid county and state, do hereby certify that, under the supervision of the undersigned, we have surveyed and platted "HOSKINSON 2ND ADDITION", Sedgwick County, Kansas and that the accompanying plat is a true and correct exhibit of the property surveyed, described as follows:

A tract of land in the East ½ of the Northeast ¼ of Section 33, Township 26 South, Range 1 West of the 6th P.M. being more particularly described as follows: Beginning at a 1" iron pipe that is 75 feet west and 75 feet south of the Northeast corner of the Northeast ¼ of said Section 33;
Thence S 00°07'35" W (assumed) parallel with and 75 feet west of the east line of said Northeast ¼, for a distance of 174.16 feet;
Thence S 08°2':16" E for a distance of 101.12 feet;
Thence S 00°07'35" W parallel with and 60 feet west of the east line of said Northeast ¼ for a distance of 1500.00 feet;
Thence S 89°31'53" W for a distance of 120.00 feet;
Thence N 08°13'33" W for a distance of 141.85 feet;
Thence N 24°27'58" W for a distance of 139.62 feet;
Thence N 43°08'57" W for a distance of 68.62 feet;
Thence N 18°44'14" W for a distance of 713.11 feet;
Thence N 08°16'47" W for a distance of 68.73 feet;
Thence N 00°04'46" W for a distance of 220.00 feet;
Thence N 03°39'56" W for a distance of 275.60 feet;
Thence N 36°34'54" W for a distance of 41.90 feet;
Thence S 89°29'08" W for a distance of 294.00 feet;
Thence N 00°07'35" E for a distance of 206.00 feet;
Thence N 89°29'08" E parallel with and 60' south of the north line of said Northeast ¼ for a distance of 535.00 feet;
Thence S 76°28'41" E for a distance of 103.08 feet;
Thence N 89°29'08" E parallel with and 75 feet south of the north line of said Northeast ¼ for a distance of 174.16 feet to the Point of Beginning.

_____ Surveyor
Steven Brosemer, L.S. #752

State of Kansas)
Sedgwick County) ss

Know all men by these presents, that we, the undersigned, have caused the land described in the surveyor's certificate to be platted into Lots and a Block to be known as "HOSKINSON 2ND ADDITION", Sedgwick County, Kansas. The utility easements are hereby granted as indicated for constructing, maintaining, operating, and repairing public improvements. The wall easements are hereby granted as indicated for constructing and maintaining screening walls. The access controls are hereby dedicated to the appropriate governing body as shown hereon. Minimum building floor elevations have been established for this property.

A drainage plan has been developed for the plat. All drainage easements, rights-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer, and unobstructed to allow for the conveyance of stormwater.

Date_____

By: _____
Michael J. Boyd,
Member, Box Development, L.L.C.

State of Kansas)
Sedgwick County) ss

BE IT REMEMBERED, that on this____day of_____, 2000, before me, the undersigned, a notary public in and for the County and State aforesaid, came Michael J. Boyd, Member, BOX DEVELOPMENT, L.L.C., a Kansas limited liability company, for and on behalf of said limited liability company, to me personally known to be the same person who executed this instrument and such person duly acknowledged the execution of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

_____
Notary Public

My appointment expires: _____

State of Kansas)
Sedgwick County) ss

This plat of "HOSKINSON 2ND ADDITION", Wichita, Sedgwick County, Kansas, has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.
Dated this __ day of _____, 2000.
Wichita-Sedgwick County Metropolitan Area Planning Commission.

_____, Chair
Francis S. Garafalo

_____, Secretary
Marvin S. Krout

State of Kansas)
City of Wichita) ss

This plat approved and all dedications shown hereon accepted by the City Council of the City of Wichita, Kansas, this____day of _____, 2000.

_____, Mayor
Bob Knight

_____, City Clerk
Pat Burneit

State of Kansas)
Sedgwick County) ss

The dedications shown on this plat, if any, are hereby occupied by the Board of County Commissioners, Sedgwick County, Kansas on _____, 20_____.

_____, Chairman
Thomas G. Winters

Attest: _____, County Clerk
James Alford

State of Kansas)
Sedgwick County) ss

This is to certify that this plat has been filed for record in the office of the Register of Deeds, this____day of _____, 2000, at_____ o'clock_____; and is duly recorded.

_____, Register of Deeds
Bill Meek

_____, Deputy
Linda Kizzire

Entered on transfer record this _____ day of _____, 20____.

_____, County Clerk
James Alford

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

99102/PLAT

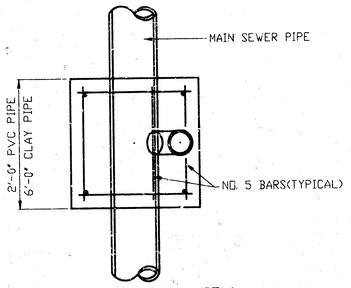
_____
Tricia L. Robello, LS #1246
Deputy County Surveyor
Sedgwick County Kansas

AUSTIN MILLER P.A.
ENGINEERING SERVICES
254 S. Laura, Suite 210 Wichita, KS. 67211
316/262-1281 fax: 316/262-6773

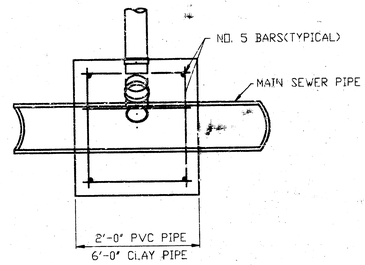
VERTICAL RISER DETAILS
ADOPTED AS STANDARD DESIGN
BY
CITY OF WICHITA, KANSAS
OCTOBER 1992

SEWER SERVICE TABLE

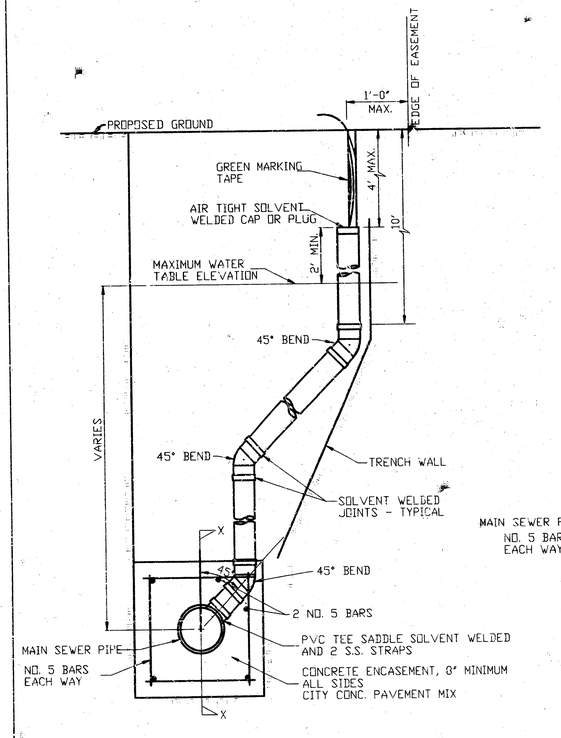
NO.	TYPE	LOCATION				FOR INFORMATION ONLY		RECORD INFORMATION (TO BE COMPLETED BY PROJECT INSPECTOR)		NO.
		LOT NO.	BLOCK NO.	LINE NO.	STATION/ DIRECTION	APPROXIMATE LENGTH 4" PIPE VERTICAL	APPROXIMATE LENGTH 4" PIPE HORIZONTAL	DISTANCE FROM NEAREST MANHOLE UPSTREAM	DISTANCE FROM NEAREST MANHOLE DOWNSTREAM	
1	8"X4" Tee Saddle	5	1	1	3+20	8'	9'			
2	8"X4" Tee Saddle	4	1	2	0+78	11'	9'			
3	8"X4" Tee Saddle	3	1	2	2+78	10'	9'			
4	8"X4" Tee Saddle	2	1	2	4+78	9'	9'			



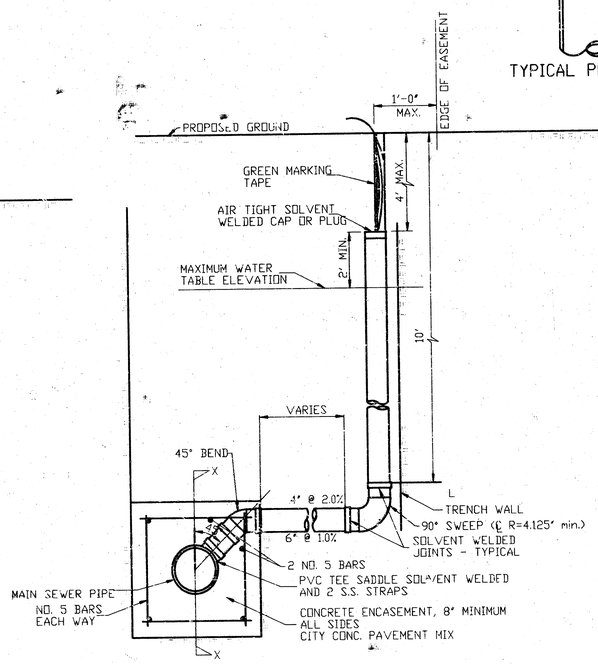
TYPICAL PLAN VIEW



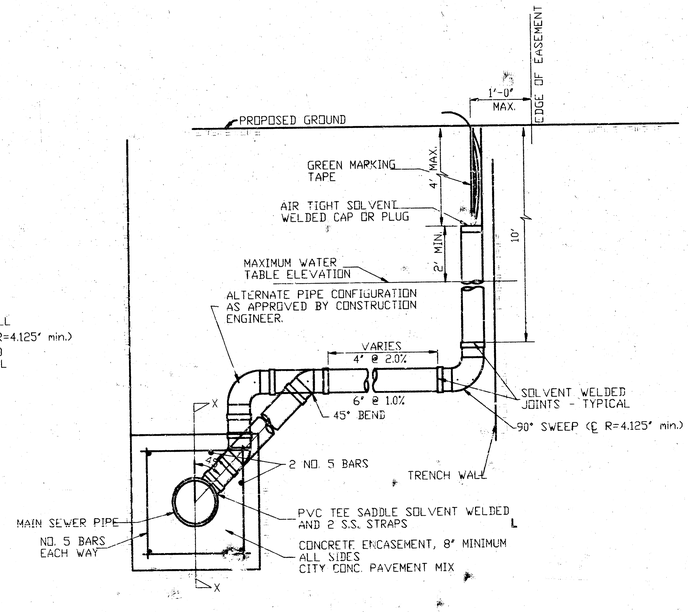
TYPICAL SECTION X-X



METHOD "A"



METHOD "B"



METHOD "C"

NOTE: RISER PIPE REQUIREMENTS AT MANHOLE STUBS SHALL BE SIMILAR TO THOSE SHOWN ABOVE.

GENERAL NOTES

1. RISERS. Risers shall be installed to serve all lots or tracts where the sanitary sewer main is below the water table. Risers shall also be installed to serve all lots and tracts where the sanitary sewer main depth is greater than 12 feet below the proposed ground elevation. Installation of risers because of field conditions shall be as approved by the Construction Engineer. The location of the risers to serve developed property shall be approved by the property owner and the Construction Engineer.
2. PIPE STUBS. Pipe stubs shall be installed in manholes where locations of manholes will provide satisfactory service connection as determined by the Construction Engineer. The vertical distance between the flowline of the manhole pipe stub and the flowline of the sanitary sewer main out of the manhole shall not exceed 2 feet. Risers shall be utilized at manhole pipe stubs as indicated in Note 1. Manhole pipe stubs shall be set such that the top of the stub is not lower than the top of the sanitary sewer main.
3. SIZING. Pipe stubs and risers shall be sized according to the plans and riser table where risers are indicated by the plans. Where risers or pipe stubs are required because of field conditions, the risers and stubs shall be six-inch diameter for commercial or industrial properties and 4" or 6" diameter for residential properties, based on lot size and sanitary sewer main depth. Sizing of risers and stubs shall be approved by the Construction Engineer prior to installation.
4. RISER OR STUB MATERIAL. Risers and stubs shall be constructed of Schedule 40 PVC Pipe, meeting the requirements of the latest revision of A.S.T.M. . All pipe joints shall be solvent welded.
5. REINFORCED CONCRETE ENCASEMENT. Riser connections to clay pipe sanitary sewers shall be reinforced concrete encased both ways from the riser centerline. The reinforced concrete encasement shall extend three feet from the riser centerline or stop at the first sanitary sewer pipe joint within three feet of the riser centerline. Riser connections to PVC Sanitary Sewer mains shall be reinforced concrete encased one foot each way from the riser centerline. The concrete encasement shall be reinforced using reinforcing steel as shown in the appropriate drawing. The concrete shall conform to the City Standard Specifications for concrete pavement.
6. BEDDING. Bedding around the sanitary sewer riser shall be compacted Pipe Bedding Type 1 or 2. The bedding shall be placed and compacted from the depth of the sanitary sewer main to the top of the sanitary sewer riser pipe. Compacted Pipe Bedding Type 1 or 2 shall be required for all risers whether constructed in vertical wall or sloped wall trenches. Bedding material and construction practices shall be approved by the Construction Engineer prior to installation.
7. SUPPORT OF RISERS. Sanitary sewer riser pipe shall be supported during trench backfill. The riser pipe shall be held in a vertical position at all times until trench backfill and compaction has been completed. Contractor's methods for supporting and backfilling the riser pipe shall be approved by the Construction Engineer.
8. PLUGGING. The ends of the riser pipes and manhole stubs shall be plugged using an airtight solvent welded cap or plug. Cap or plug fittings shall be approved by the Construction Engineer prior to installation. Caps or plugs which do not provide an airtight seal will not be accepted.
9. TOP OF THE RISER PIPE. The top elevation of the sanitary sewer riser pipe shall be built per plan elevations, unless otherwise directed by the Construction Engineer. Where riser elevations are not shown on the plans, the top of the risers shall be set at an elevation four feet below the proposed ground surface. If ground water is encountered, the top of the riser pipe shall be set at an elevation two feet (min.) above the maximum water table elevation, regardless of the riser elevation shown on the plans.
10. MARKING. Locations of the ends of the sanitary sewer riser pipe shall be marked by fastening green colored plastic tape to the end of the riser. The tape shall be supported by a length of wooden 2 x 4, extending from the top of the riser pipe to the proposed ground surface. The green tape shall be visible and extend one foot above the proposed ground surface. The green tape shall be 4 mil Polyethylene Film with a minimum width of three inches, specifically manufactured for the purpose of identification of underground sewers.
11. LOCATION MEASURES. The project inspector shall record and document the location of all risers constructed as measured from the nearest manhole, indicating the direction from the manhole, the direction and distance from the main, riser size, and elevation of the top of the riser.
12. RISER LOCATION. The riser shall be located per plan if shown. If not shown on the plan, the riser shall be located at the center of the lot, within one foot of the property side of the easement for the lot being served. All riser locations shall be approved by the Construction Engineer prior to installation.
13. PAYMENT. 'Sanitary sewer risers' shall be paid for at the contract unit price per each, which price shall be full compensation for all pipe, fittings, marking tape, length of wooden 2 x 4, reinforced concrete encasement, support during backfill, backfill, labor, site restoration, and any other items necessary to complete the work.

'Manhole stubs' shall be paid for at the contract unit price per each, which shall be full compensation for all labor, material, and incidentals necessary to complete the work including all pipe, fittings, reinforced concrete encasement, and all other items as required and listed for 'Sanitary Sewer Risers'.

THE CITY OF WICHITA
CITY ENGINEER'S OFFICE

VERTICAL RISER DETAIL

M. E. LINDEBAK P.E. - CITY ENGINEER

PROJECT NUMBER	INDEX CODE
468-83000	743857
DATE: MAR 96	SHEET 9 OF 9

RISERDTL.DWG

18-05-01-50