CONSTRUCTION PLANS

SANITARY SEWER EXTENSIONS

ABERDEEN FIRST ADDITION

TO

THE CITY OF WICHITA, KANSAS

MICHAEL E. LINDEBAK, P.E. – CITY ENGINEER

LATERAL 333, SOUTHWEST INTERCEPTOR

PROJECT NO. 468-82382

INDEX CODE 741900

GENERAL NOTES:

1. Existing utility lines 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.

2. Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be the 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.

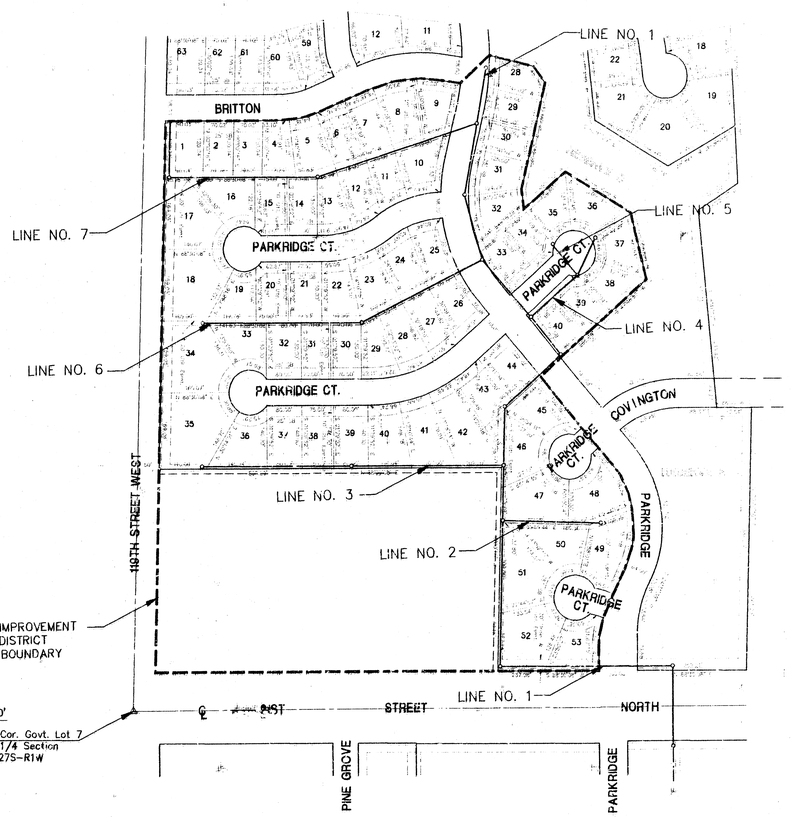
3. The Contractor shall be responsible for maintaining continuous flow of sewage through construction. Contractor's proposed method for maintaining sewage flow shall be approved by the Engineer. Cost of maintaining flow of sewage through construction will not be paid for directly and this cost shall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

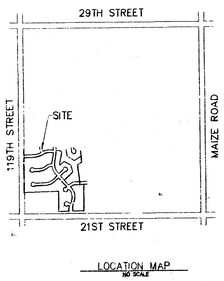
4. The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor or a licensed professional engineer in accordance with state laws.

5. 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 the proposed new construction shall be saved and protected from damage.

6. Contractor shall vacuum test all manholes according to the City of Wichita standard specifications.

7. Temporary grass seeding shall be provided on all distributed areas.





LOCATION MAP
NO SCALE

INDEX

TITLE SHEET	SHEET 1
LINE NO. 1 – 2	SHEET 2
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TYPE "C" MANHOLE	SHEET 9
VERTICAL RISER DETAIL	SHEET 10
ABERDEEN 1ST ADDITION PLAT	SHEET 11

BENCH MARKS

(City of Wichita Datum)

1. City of Wichita Disc 67' S. of centerline of 21st and 45' E. of centerline of 119th.
   Elev. 172.08
2. 80d Nail in P.P. 30' E. and 50' S. W. 1/4 Corner.
   Section 6-T27S-R1W
   Elev. 172.06
3. 80d Nail in P.P. 40' W. and 40' N. Corner Section
   6-T27S-R1W
   Elev. 175.05
4. 80d Nail in P.P. 50' S. N. 1/4 Corner Section
   6-T27S-R1W
   Elev. 179.98

BOOKED PER PLAN

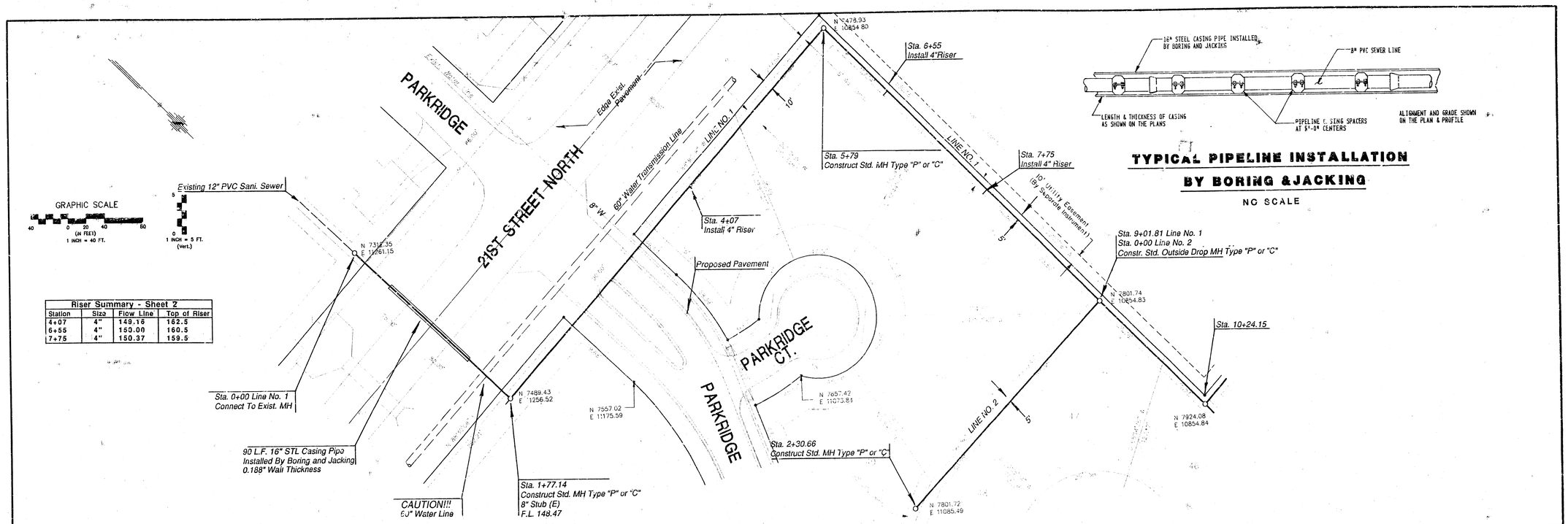
KENNY E. HILL
LICENSED
7690
KANSAS
PROFESSIONAL ENGINEER

5-18-94

JUNE 1994

PLANS PREPARED
BY
POE & ASSOCIATES OF KANSAS, INC.
Consulting Engineers
434 N. Oliver Suite 110 Wichita KS 67208 316/685-4114

F:\APPS\DOCAPP\5311\BASE-SS Mon May 16 08:33:09 1994 Jim Parsons Poe & Assoc.

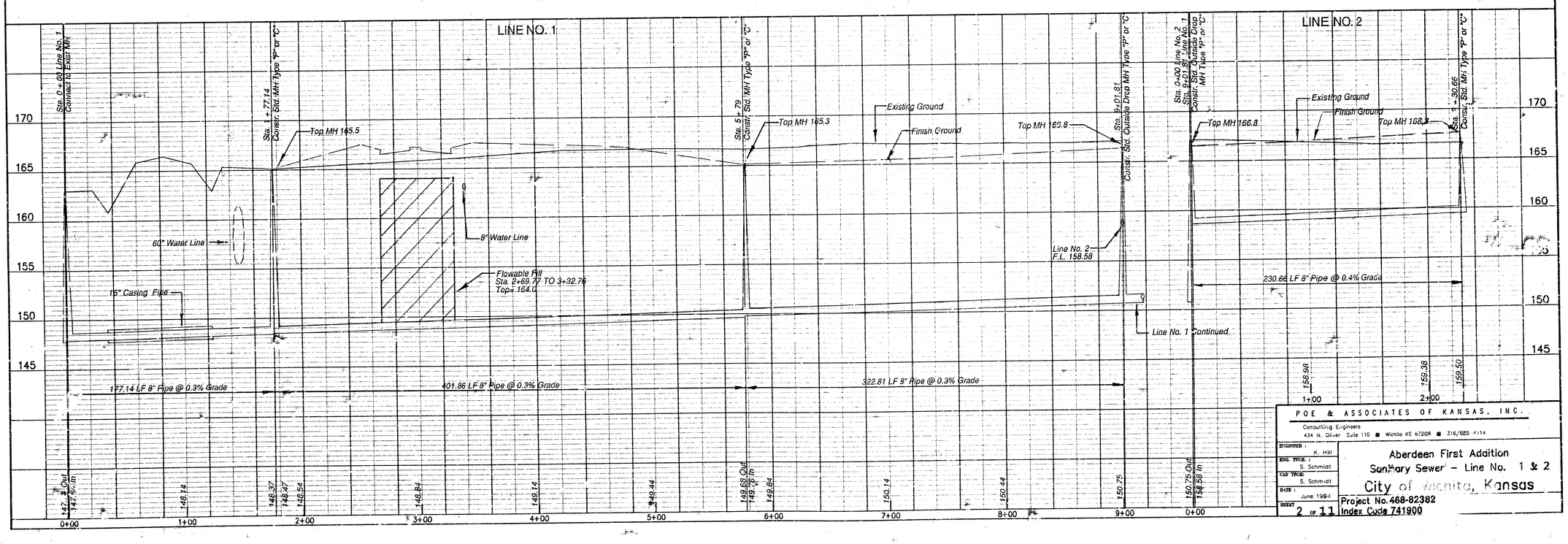


TYPICAL PIPELINE INSTALLATION

BY BORING & JACKING

NO SCALE

Riser Summary - Sheet 2			
Station	Size	Flow Line	Top of Riser
4+07	4"	149.16	162.5
6+55	4"	150.00	160.5
7+75	4"	150.37	159.5



POE & ASSOCIATES OF KANSAS, INC.
Consulting Engineers
434 N. Oliver Suite 110 ■ Wichita KS 67208 ■ 316/685-4114

ENGINEER :	K. Hill
ENG. TECH. :	S. Schmidt
CAD TECH:	S. Schmidt
DATE :	June 1994
SHEET	2 OF 11

Aberdeen First Addition
Sanitary Sewer - Line No. 1 & 2
City of Wichita, Kansas
Project No. 468-82382
Index Code 741900

F:\APPS\DOA\P\531\BASE-SS Mon May 4 14:56:08 1994 Steve Schmidt

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 INCH = 40 FT.

5 0
1 INCH = 5 FT.
(Vert.)

Riser Summary - Sheet 3			
Station	Size	Flow Line	Top of Riser
10+55	4"	151.22	161.0
11+60	4"	151.63	162.0
12+10	4"	151.78	161.5
12+20	4"	151.80	163.0
15+65	4"	152.95	163.5
17+10	4"	153.48	165.0
18+20	4"	153.91	165.0
19+70	4"	154.36	162.5
20+40	4"	154.57	162.0

Sta. 9+01.81 Line No. 1
10' Utility Easement
(By Separate Instrument)
N 7801.74
E 10858.83
LINE NO. 5
5'
LINE NO. 1
N 7974.88
E 10654.84
Sta. 10+24.15
Construct Std. Outside Drop MH
Type "P" or "C"
Sta. 10+55
Install 4" Riser
Sta. 11+54.62
Construct Std. MH Type "P" or "C"
N 8054.54
E 10854.85
Sta. 11+60
Install 4" Riser
Sta. 12+10
Install 4" Riser
Sta. 12+20
Install 4" Riser
Line No. 2
PARKRIDGE CT.
8" W
PARKRIDGE
PARKRIDGE CT.
Sta. 13+30.65
Construct Std. MH Type "P" or "C"
N 8172.75
E 10985.28
LINE NO. 1
N 8254.26
E 10911.43
LINE NO. 4
6" W
PARKRIDGE CT.
Sta. 14+40.65 Line No. 1
Sta. 0+00 Line No. 4
Construct Std. Outside Drop MH Type "P" or "C"
Sta. 15+65
Install 4" Riser
N 8301.29
E 10862.05
5'
LINE NO. 6
N 8378.52
E 10795.40
Sta. 16+10.66
Construct Std. Outside Drop MH
Type "P" or "C"
Sta. 17+10
Install 4" Riser
PARKRIDGE CT.
8" W
N 8521.55
E 10751.54
Sta. 17+60.26
Construct Std. MH Type "P" or "C"
Sta. 18+20
Install 4" Riser
5'
LINE NO. 7
N 8679.79
E 10776.57
Sta. 19+70
Install 4" Riser
BRITTON
Sta. 20+40
Install 4" Riser
LINE NO. 1
Sta. 19+20.47
Construct Std. MH Type "P" or "C"
4" Stub (SE)
F.L. 156.21
Sta. 20+46.19
Construct Std. MH Type "P" or "C"

LINE NO. 1

Sta. 9+01.81
Construct Std. MH Type "P" or "C"
Top MH 166.8
Sta. 10+24.15
Construct Std. Outside Drop MH
Type "P" or "C"
Top MH 167.3
Top MH 168.1
Line No. 3
F.L. 161.18
Sta. 11+54.62
Construct Std. MH Type "P" or "C"
Finish Ground
8" Water Line
Sta. 13+30.65
Construct Std. MH Type "P" or "C"
Top MH 169.0
Flowable Fill
Sta. 12+70.04 TO 13+07.04
Line No. 4
F.L. 158.45
Sta. 14+40.15
Construct Std. Outside Drop MH
Type "P" or "C"
Top MH 169.3
Flowable Fill
Sta. 14+59.04 TO 14+90.06
Top=165.5
Top MH 169.7
Sta. 16+10.66
Construct Std. Outside Drop MH
Type "P" or "C"
Line No. 6
F.L. 161.15
Sta. 17+60.26
Construct Std. MH Type "P" or "C"
Existing Ground
Top MH 169.5
Sta. 19+20.47
Construct Std. MH Type "P" or "C"
Top MH 168.4
Line No. 7
F.L. 154.31
Sta. 20+46.19
Construct Std. MH Type "P" or "C"
Top MH 168.0

175
170
165
160
155
150

122.34 LF 8" Pipe @ 0.3% Grade
130.47 LF 8" Pipe @ 0.3% Grade
176.83 LF 8" Pipe @ 0.5% Grade
110.0 LF 8" Pipe @ 0.3% Grade
170.01 LF 8" Pipe @ 0.3% Grade
149.00 LF 8" Pipe @ 0.3% Grade
160.21 LF 8" Pipe @ 0.3% Grade
135.63 LF 8" Pipe @ 0.3% Grade

159.75 151.09 151.12 151.85 151.51 Out 151.61 In 151.79 152.05 152.14 Out 152.24 In 152.45 152.57 152.75 153.05 153.48 Out 153.18 In 153.45 153.63 153.78 153.85 154.15 154.21 154.45 154.58

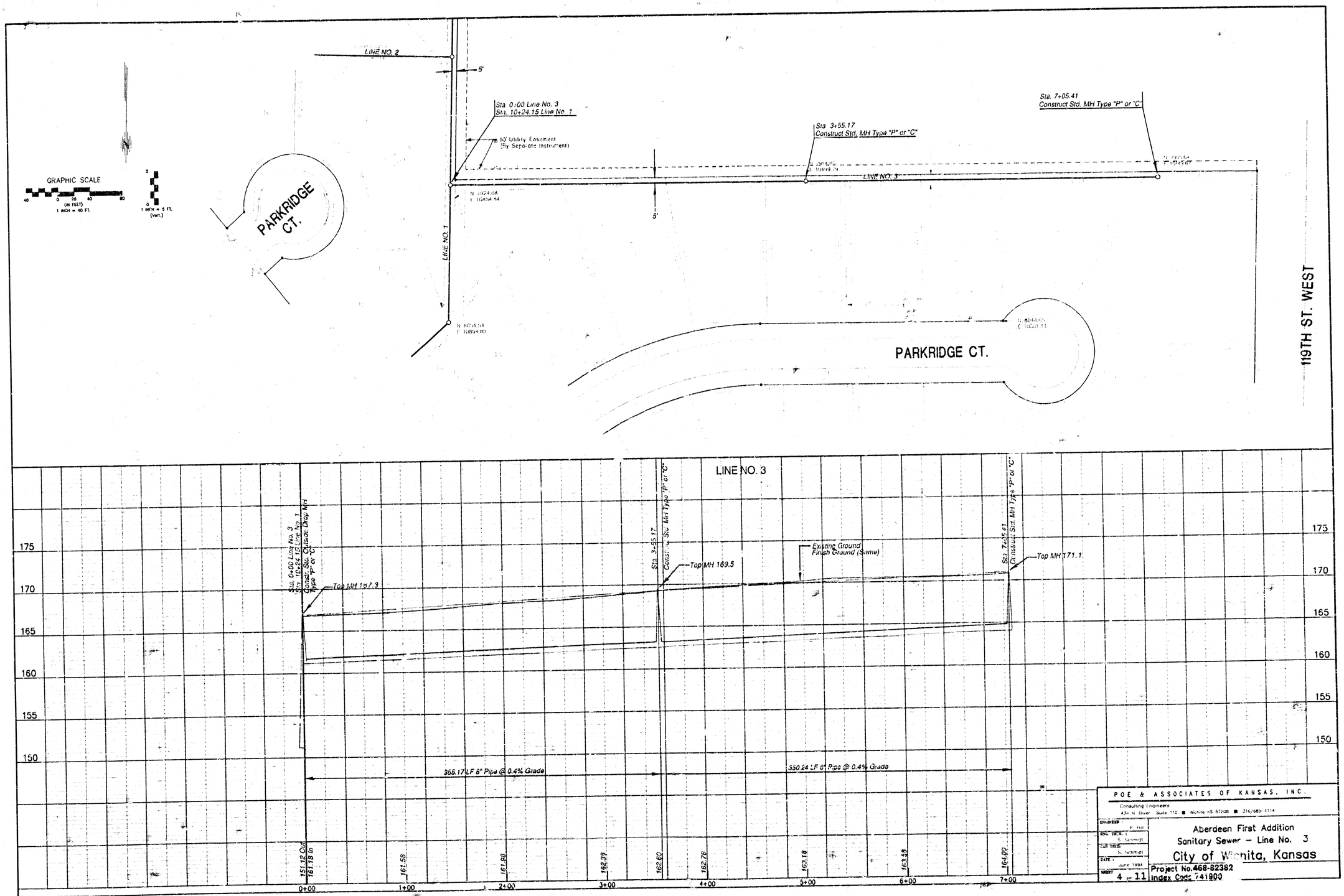
9+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00

POE & ASSOCIATES OF KANSAS, INC.
Consulting Engineers
434 N. Oliver Suite 110 ■ Wichita KS 67208 ■ 316/685-4114

ENGINEER : K. Hill
ENG. TECH. : S. Schmidt
CAD TECH. : S. Schmidt
DATE : June 1994
SHEET 3 OF 11

Aberdeen First Addition
Sanitary Sewer – Line No. 1
City of Wichita, Kansas
Project No. 468-82382
Index Code 741900

F:\APPS\CAD\PLS31\BASE-SS Wed May 4 14:56:02 1994, Steve Schmidt



POE & ASSOCIATES OF KANSAS, INC.
Consulting Engineers
434 N. Oliver Suite 110 ■ Wichita KS 67208 ■ 316/685-4114

ENGINEER	K. Hall
ENG. TECH.	S. Schmidt
CAD TECH.	S. Schmidt
DATE	June 1994
SHEET	4 of 11

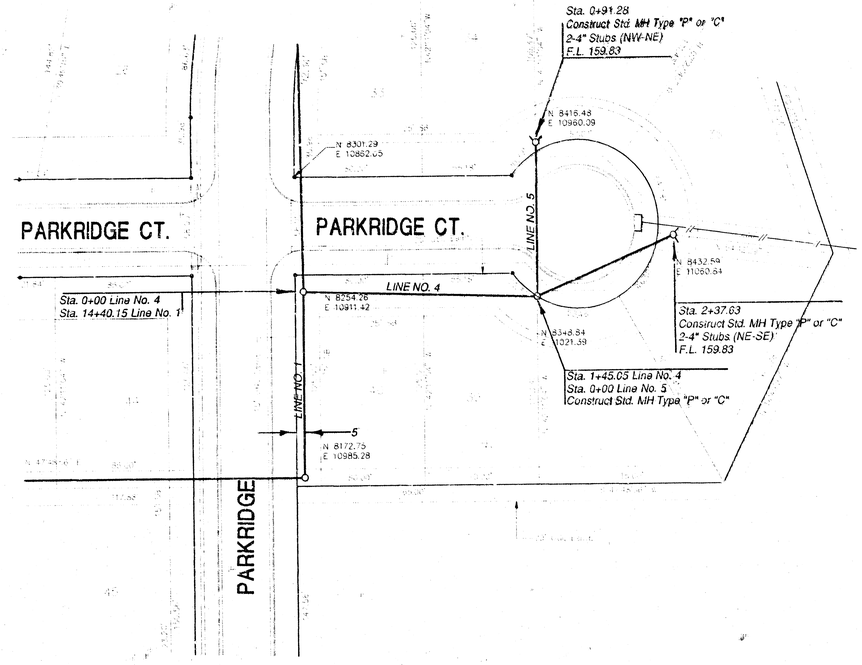
Aberdeen First Addition
Sanitary Sewer – Line No. 3
City of Wichita, Kansas
Project No. 468-82382
Index Code 741900

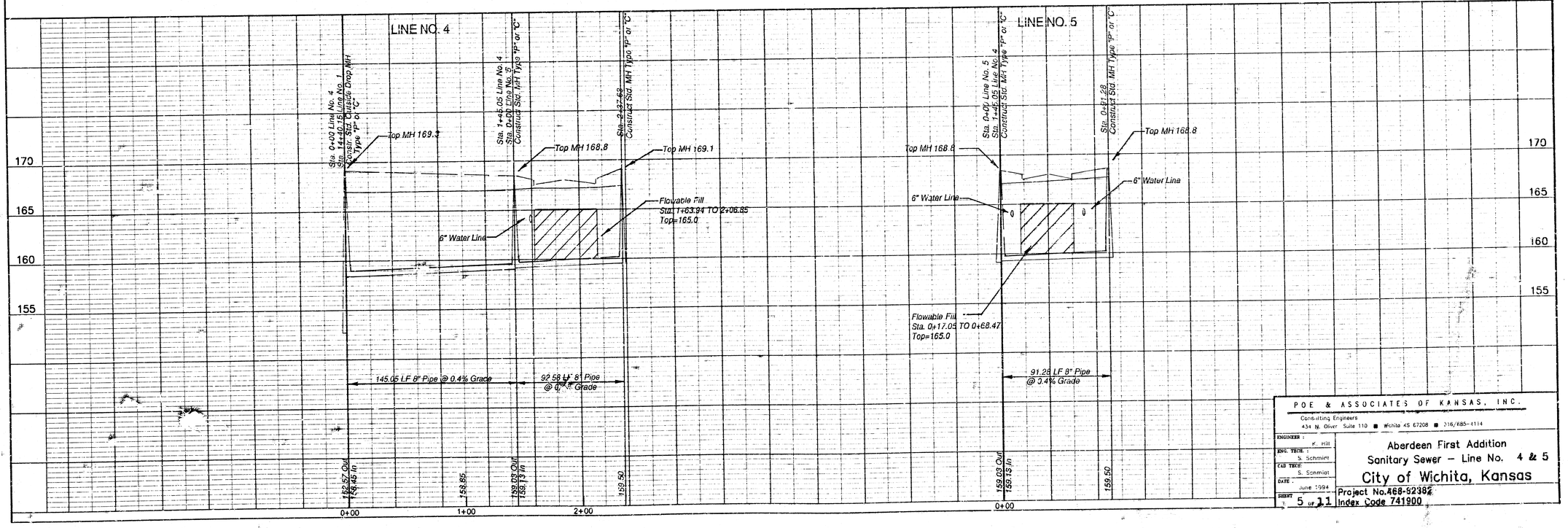
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GRAPHIC SCALE

40 20 0 20 40 80
(IN FEET)
1 INCH = 40 FT.

5 0
1 INCH = 5 FT.
(VERT.)



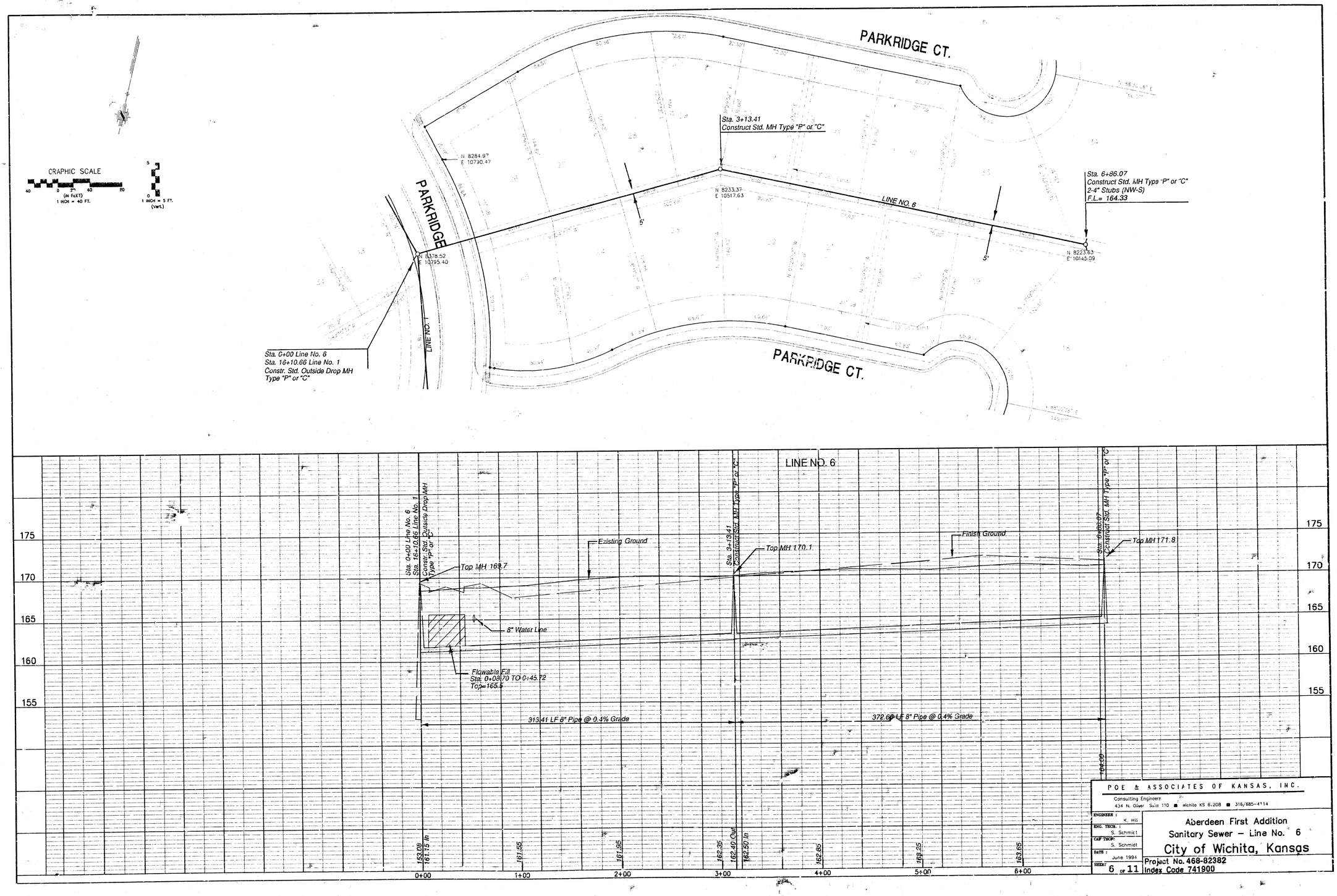


POE & ASSOCIATES OF KANSAS, INC.
Consulting Engineers
434 N. Oliver Suite 110 ■ Wichita KS 67208 ■ 316/685-4114

ENGINEER :	K. Hill
ENG. TECH. :	S. Schmidt
CAD TECH:	S. Schmidt
DATE :	June 1994
SHEET :	5 OF 11

Aberdeen First Addition
Sanitary Sewer – Line No. 4 & 5
City of Wichita, Kansas
Project No.468-92382
Index Code 741900

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POE & ASSOCIATES OF KANSAS, INC.
Consulting Engineers
434 N. Oliver Suite 110 ■ wichita KS 67208 ■ 316/685-4114

ENGINEER :	K. Hill
ENG. TECH. :	S. Schmidt
CAD TECH:	S. Schmidt
DATE :	June 1994
SHEET	6 OF 11

Aberdeen First Addition
Sanitary Sewer – Line No. 6
City of Wichita, Kansas
Project No. 468-82382
Index Code 741900

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GRAPHIC SCALE

40 0 20 40 80
(IN FEET)
1 INCH = 40 FT.

5 0 5
1 INCH = 5 FT.

PARKRIDGE CT.

119TH STREET

PARKRIDGE

BRITTON

LINE NO. 7

LINE NO. 1

N 8521.55
E 10751.54

N 8603.27
E 10705.03

N 8679.79
E 10776.57

N 8553.64
E 10408.81

N 8544.81
E 10059.89

Sta. 0+00 Line No. 7
Sta. 19+20.47 Line No. 1
Construct Std. MH Type "P" or "C"

Sta. 4+80
Install 4" Riser

Sta. 5+00
Install 4" Riser

Sta. 5+55
Install 4" Riser

Sta. 6+25
Install 4" Riser

Sta. 7+00
Install 4" Riser

Sta. 7+10
Install 4" Riser

Sta. 3+88.80
Construct Std. MH Type "P" or "C"

Sta. 7+37.34
Construct Std. MH Type "P" or "C"

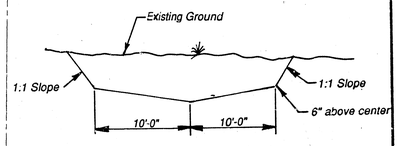
Sta. 8+62.62
CAP 8" Pipe
End of Project

5'

10'

Riser Summary - Sheet 7			
Station	Size	Flow Line	Top of Riser
4+80	4"	156.33	163.0
5+00	4"	156.41	163.0
5+55	4"	156.63	163.5
5+70	4"	156.69	163.5
6+25	4"	156.91	164.0
7+00	4"	157.21	165.0
7+10	4"	157.25	165.0

Note: Extra dirt from easement grading shall be wasted on adjacent lots.



Typical Easement Grading
No Scale

LINE NO. 7

Sta. 0+00 Line No. 7
Sta. 19+20.47 Line No. 1
Construct Std. MH Type "P" or "C"

Sta. 3+88.80
Construct Std. MH Type "P" or "C"

Sta. 7+37.34
Construct Std. MH Type "P" or "C"

Sta. 8+62.62
8" Cap End of Project

Existing Ground

Finish Ground

See Typical
Easm't. Grading

Top MH 168.4

Top MH 168.3

Top MH 171.3

8" Water Line

Flowable Fill
Sta. 0+04.99 TO 0+47.37
Top=155.0

388.60 LF 8" Pipe @ 0.4% Grade

349.04 LF 8" Pipe @ 0.4% Grade

124.78 LF 8" Pipe @ 0.4% Grade

154.21 Out
154.31 In

154.71

155.11

155.51

155.86 Out
155.96 In

156.41

156.81

157.21

157.36 Out
157.46 In

157.71

157.96

8.00

0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00

175 170 165 160 155

POE & ASSOCIATES OF KANSAS, INC.
Consulting Engineers
234 N. Oliver Suite 110 ■ Wichita KS 67208 ■ 316/685-4114

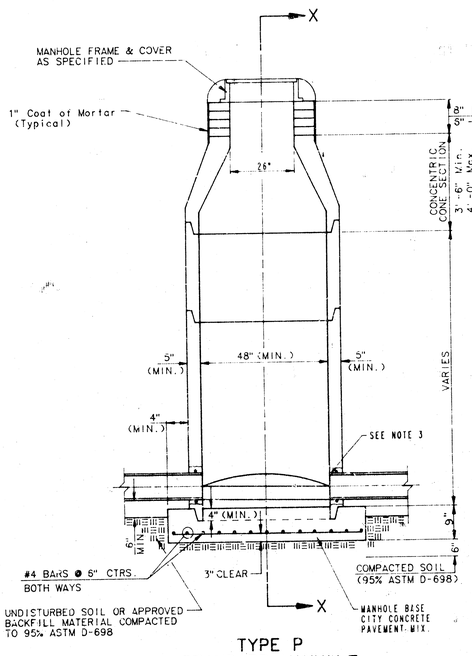
ENGINEER : K. Hill
ENG. TECH. : S. Schmidt
CAD TECH: S. Schmidt
DATE : June 1994
SHEET 7 OF 11

Aberdeen First Addition
Sanitary Sewer – Line No. 7
City of Wichita, Kansas
Project No. 430-82382
Index Code 741900

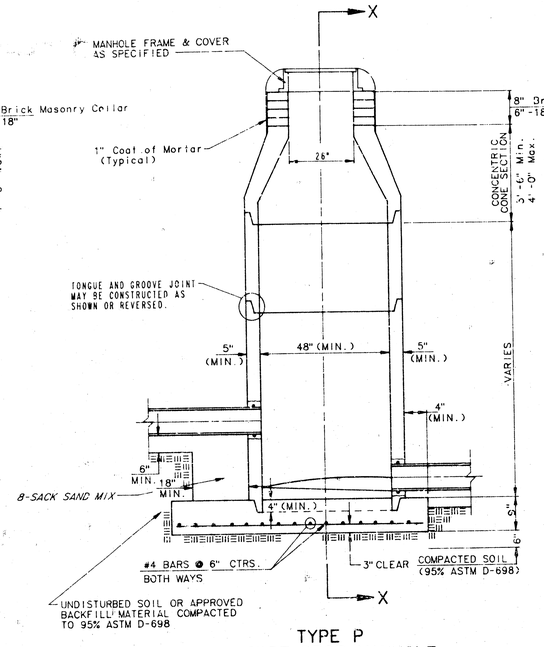
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SEWER APPURTENANCES DETAILS

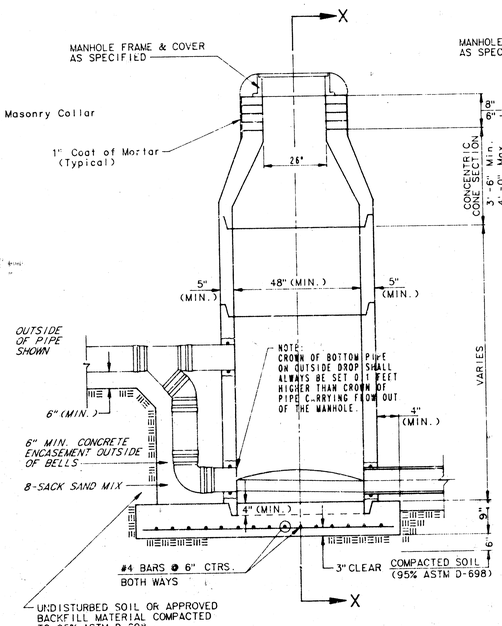
ADOPTED AS STANDARD DESIGN
BY
CITY OF WICHITA



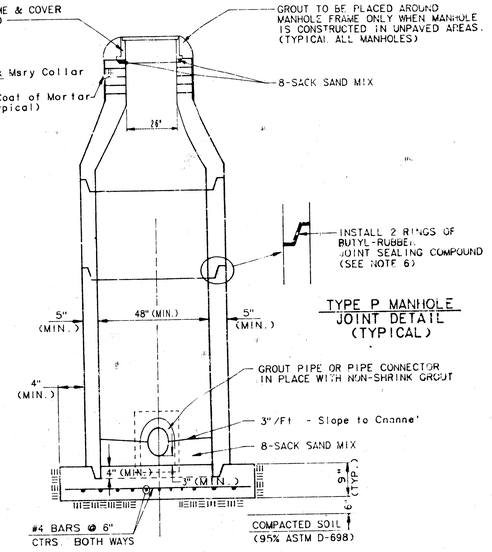
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE



TYPE P MANHOLE
JOINT DETAIL
(TYPICAL)

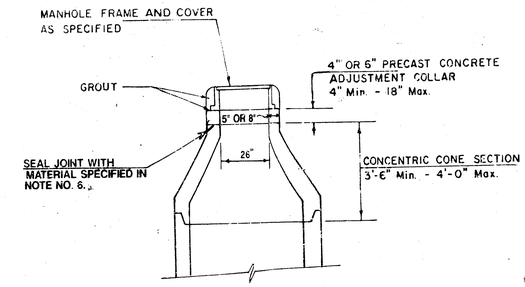
SECTION X
(TYPICAL)

GENERAL NOTES

PRECAST MANHOLE NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISION 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 BITUMINUS 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 MEET 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 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.
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.



ALTERNATE CONSTRUCTION
IN UNPAVED AREAS

Sheet 8 of 11
ABERDEEN FIRST ADDITION
PROJECT NO. 468-82382
INDEX CODE: 741900
REVISED NOV. 1993
NOTE NO. 16 REVISED JAN. 1991
Revised 3-21-89
Revised 8-10-88
Revised June 12 1985

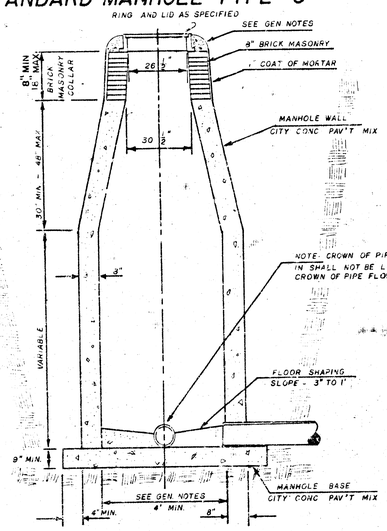
10 JUL 154

SEWER APPURTENANCES DETAILS

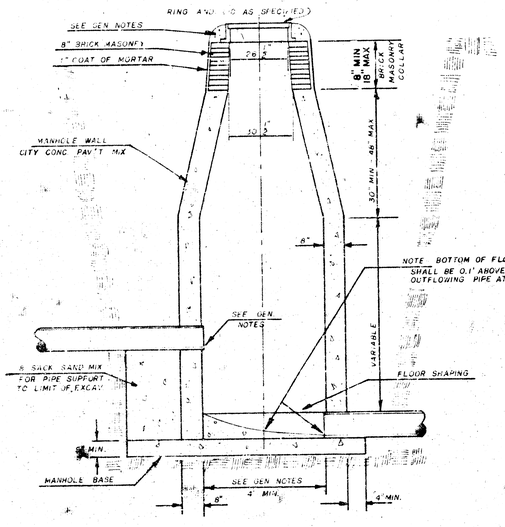
ADOPTED AS STANDARD DESIGN
BY

City of Wichita, Kansas

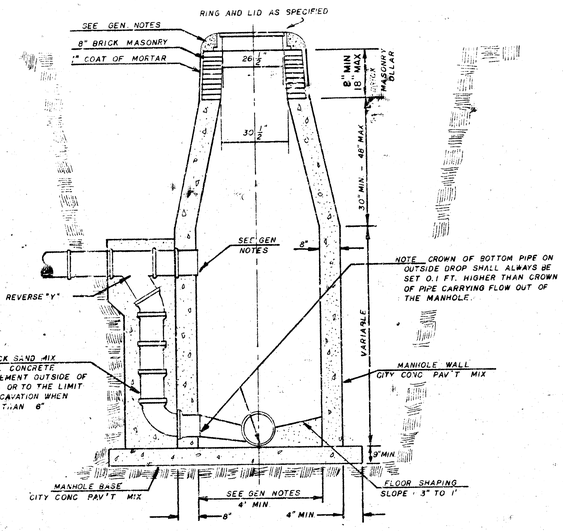
STANDARD MANHOLE TYPE "C"



INSIDE DROP MANHOLE TYPE "C"



OUTSIDE DROP MANHOLE TYPE "C"



GENERAL NOTES

1. 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 THIS 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 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLE SHALL HAVE THE TOP HALF REMOVED TO HEAT 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'.

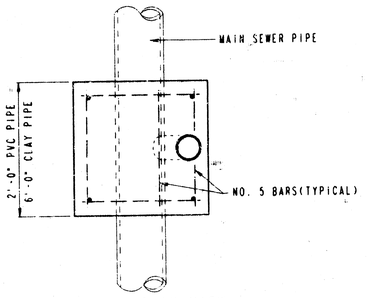
   THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.

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.

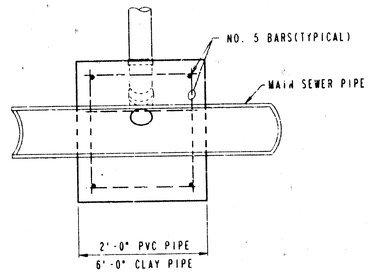
JNL JAN. 1982

Sheet 9 of 11
ABERDEEN FIRST ADDITION
PROJECT NO. 468-82382
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NOTE NO. 7 REVISED JAN 1991

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

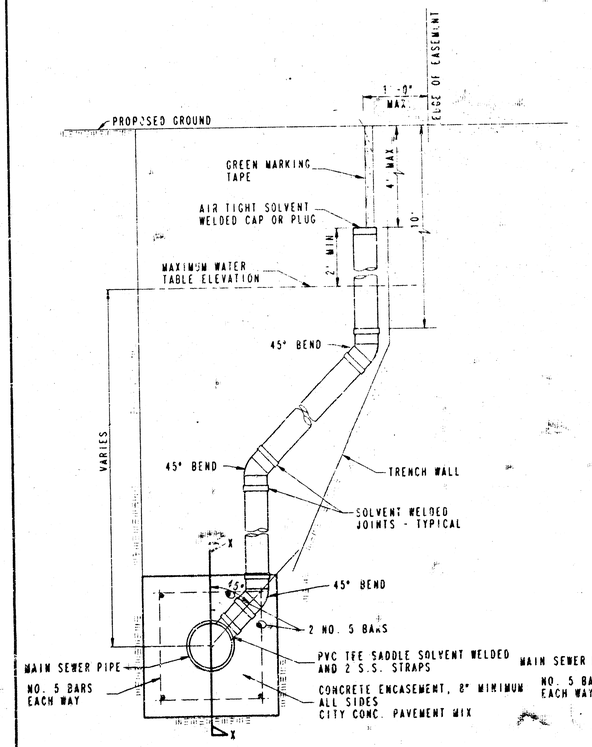


TYPICAL PLAN VIEW

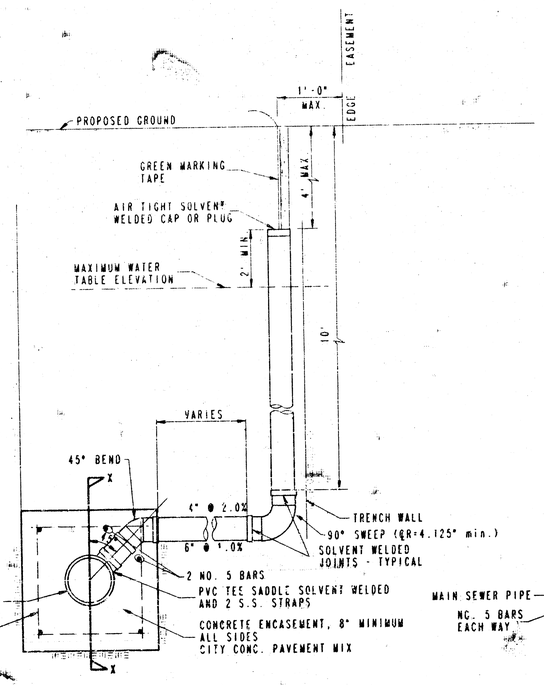


TYPICAL SECTION X-X

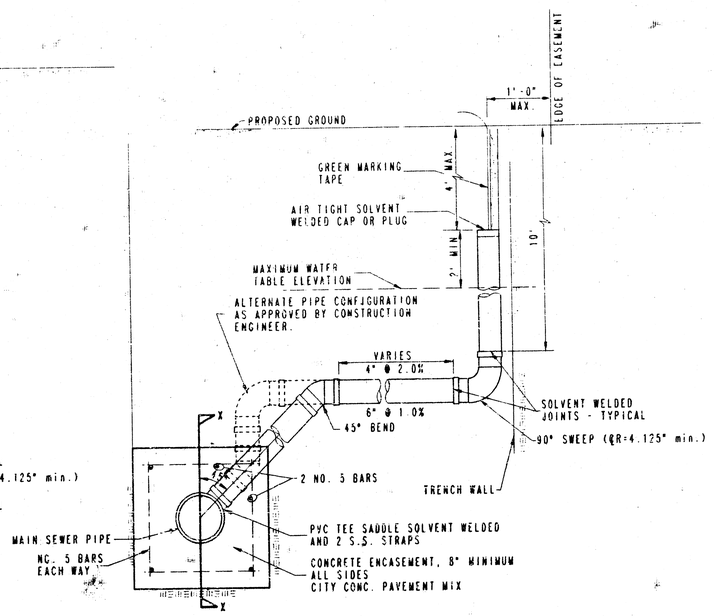
PLAN | CHECKED | CHECKED | BY | DATE



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 14 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 SDR 35 PVC Pipe or 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 with 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 maximum 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.

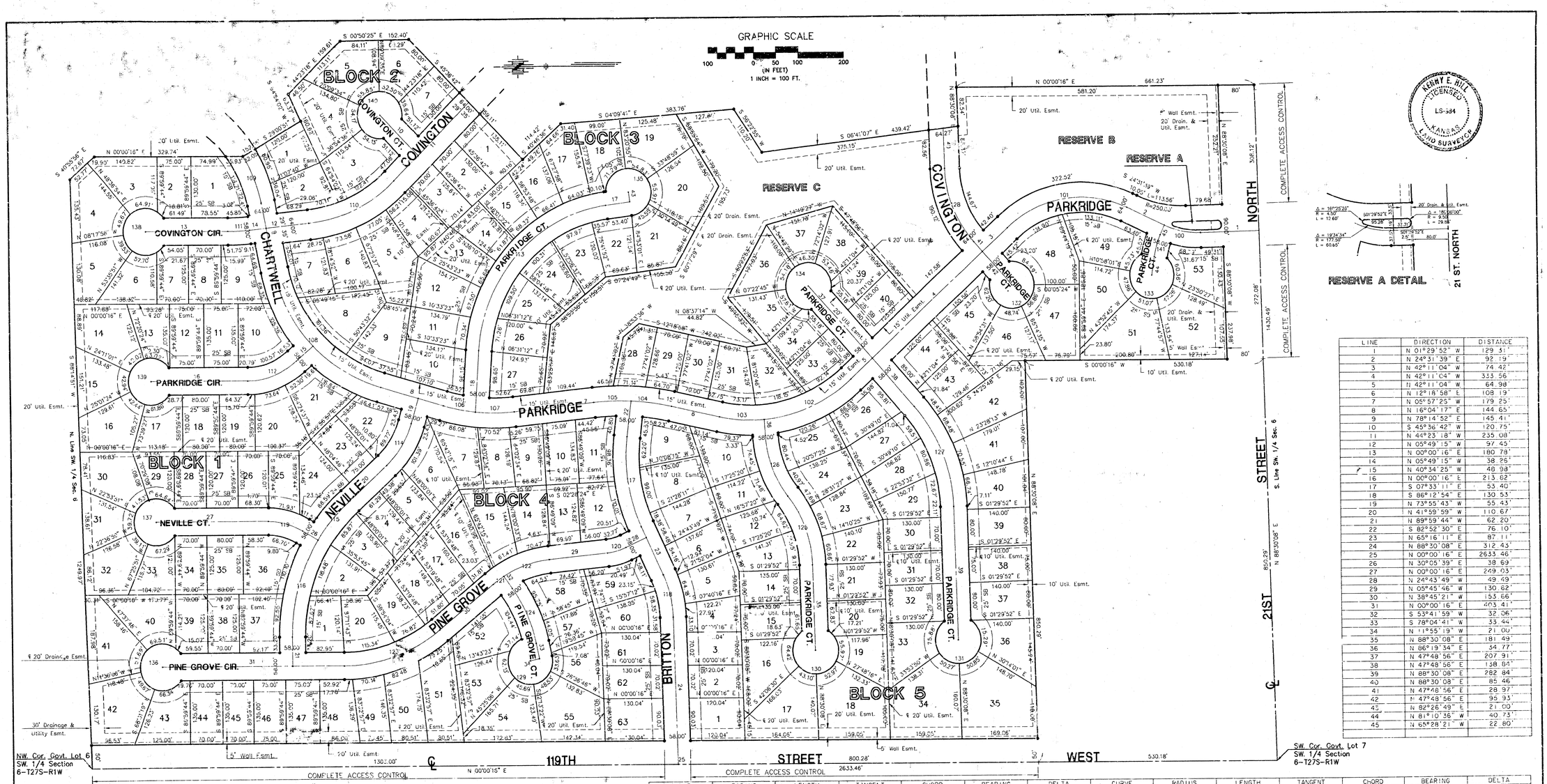
12. RISER LOCATION. The riser shall be located per plan if shown. If not shown on the plan, the riser shall be located at the center of the lot, within one foot of the property side of the easement for the lot being served. All riser locations shall be approved by the Construction Engineer prior to installation.

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".

ABERDEEN FIRST ADDITION
PROJECT NO. 468-82382
INDEX CODE: 741900 Sheet 10 of 11

10-1-11



KENNY E. HILL LICENSED LS-534 KANSAS LAND SURVEYOR

LINE	DIRECTION	DISTANCE
1	N 01°29'53" W	129.31'
2	N 24°31'39" E	92.19'
3	N 42°11'04" W	74.42'
4	N 42°11'04" W	333.56'
5	N 42°11'04" W	64.98'
6	N 12°16'58" E	108.19'
7	N 05°57'25" W	179.25'
8	N 16°04'17" E	144.65'
9	N 78°14'52" E	145.41'
10	S 45°36'42" W	120.75'
11	N 44°23'18" W	235.08'
12	N 05°49'15" W	97.45'
13	N 00°00'16" E	180.78'
14	N 05°49'15" W	38.26'
15	N 40°34'25" W	48.98'
16	N 00°00'16" E	213.62'
17	S 07°33'11" E	53.40'
18	S 86°19'54" E	130.53'
19	N 73°55'43" W	55.43'
20	N 41°59'59" W	110.67'
21	N 89°59'44" W	62.20'
22	S 82°52'30" E	76.10'
23	N 65°16'11" E	87.11'
24	N 88°30'08" E	312.43'
25	N 00°00'16" E	2633.46'
26	N 30°05'39" E	38.69'
27	N 00°00'16" E	269.03'
28	N 24°43'49" W	49.49'
29	N 05°45'46" W	130.62'
30	N 38°45'21" W	153.66'
31	N 00°00'16" E	403.41'
32	S 53°41'59" W	32.06'
33	S 78°04'41" W	33.44'
34	N 11°55'19" W	21.00'
35	N 88°30'08" E	181.49'
36	N 86°19'34" E	34.77'
37	N 47°48'56" E	207.91'
38	N 47°48'56" E	138.64'
39	N 88°30'08" E	282.84'
40	N 88°30'08" E	85.46'
41	N 47°48'56" E	28.97'
42	N 47°48'56" E	95.93'
43	N 82°26'49" E	21.00'
44	N 81°10'36" W	40.73'
45	N 65°28'21" W	22.80'

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
100	183.00'	83.12'	42.29'	82.41'	S 11°30'54" W	26°01'31"
101	245.00'	285.26'	161.28'	269.42'	N 08°49'42" W	66°42'45"
102	330.00'	214.44'	111.16'	210.69'	S 23°34'06" E	37°13'38"
103	330.00'	99.46'	50.11'	99.08'	S 03°40'55" W	17°16'09"
104	540.00'	90.16'	45.19'	90.06'	N 07°31'58" E	09°34'00"
105	540.00'	82.06'	41.11'	81.98'	N 01°36'14" W	08°42'23"
106	415.00'	72.49'	36.34'	72.40'	S 11°04'03" W	10°00'29"
107	415.00'	87.07'	43.69'	86.91'	S 00°03'11" W	12°01'14"
108	332.00'	360.28'	200.18'	342.86'	S 47°09'35" W	62°10'35"
109	296.32'	107.35'	54.27'	106.77'	N 67°52'08" E	20°45'28"
110	315.00'	212.04'	110.21'	208.06'	S 25°06'16" E	38°34'03"
111	480.00'	48.80'	24.42'	48.78'	S 02°54'29" E	05°49'31"
112	171.00'	121.11'	63.22'	118.59'	S 20°17'05" E	40°34'41"
113	331.00'	454.43'	271.22'	419.58'	N 46°53'02" W	78°39'43"
114	190.00'	105.88'	54.35'	104.52'	S 57°37'51" E	31°55'43"
115	388.00'	108.59'	54.65'	108.24'	N 50°01'04" W	16°02'10"
116	388.00'	216.43'	111.11'	213.63'	N 74°00'57" W	31°57'35"
117	352.00'	195.71'	100.45'	193.19'	S 81°11'50" W	31°51'19"
118	230.00'	93.26'	47.28'	92.62'	N 76°53'09" E	23°13'57"
119	156.00'	81.93'	41.93'	80.99'	N 15°02'58" E	30°05'23"
120	128.00'	42.37'	21.38'	42.18'	S 15°14'47" E	18°58'04"

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
121	240.00'	28.85'	14.43'	28.81'	N 35°19'53" W	06°52.57"
122	240.00'	109.37'	55.65'	108.43'	N 18°49'05" W	26°06'38"
123	340.00'	230.01'	119.60'	225.65'	S 19°22'33" E	38°45'37"
124	303.42'	129.10'	65.54'	128.13'	N 65°53'20" E	24°22'42"
125	245.17'	138.29'	82.01'	155.56'	N 70°00'22" E	36°59'32"
126	228.82'	139.04'	71.74'	136.91'	S 68°55'05" W	34°48'57"
127	329.00'	233.63'	121.98'	228.75'	N 68°09'32" E	40°41'12"
128	240.00'	170.43'	88.99'	166.87'	S 68°09'32" W	40°41'12"
129	50.00'	227.12'				260°15'41"
130	50.00'	252.29'				289°05'56"
131	50.00'	252.29'				289°05'56"
132	50.00'	252.29'				289°05'56"
133	50.00'	252.29'				289°05'56"
134	50.00'	252.29'				289°05'56"
135	50.00'	227.61'				260°49'10"
136	50.00'	252.29'				289°05'56"
137	50.00'	252.29'				289°05'56"
138	50.00'	252.29'				289°05'56"
139	50.00'	252.29'				289°05'56"
140	50.00'	252.29'				289°05'56"
141	170.84'	46.82'	23.56'	46.68'	N 73°19'28" W	15°42'15"

BENCH MARKS

City of Wichita Bench Mark Disc, 67' south of centerline 21st St. & 79' south of section line, and 46' east of centerline 119th St. Elevation 172.08

80d nail in power pole, 30' east and 50' south of Northwest Corner of Government Lot 6 in SW Quarter of Section 6-T27S-R1W. Elevation 172.03

80d nail in power pole 50' south of NE Corner of of Government Lot 3 in NW Quarter of Section 6-T27S-R1W. Elevation 179.98

All Easements are either 10 feet wide or 20 feet wide Utility Easements unless otherwise noted.

The Minimum Low Opening Elevation of the homes built in this addition shall be 167.5 (City of Wichita Datum).(1354.9 MSL)

Front yard Building Setback Lines are 25 feet and Sideyard Building Setback Lines are 15 feet unless otherwise shown.

ABERDEEN FIRST ADDITION

TO WICHITA, SEDGWICK COUNTY, KANSAS

Project No. 468-83282
Index Code 741900
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APPS\GCA\PLS31\ABER3 Fri Mar 11 11:48:15 1994 Bill Fox-POE & ASSOC.