

Engineer:

Tuttle & Associates, Inc.

9714 E. 55TH Place, Tulsa, OK 74146

Phone: (918) 663-5567

Owner:

AS BUILT PLANS

PORTOFINO WICHITA, LLC

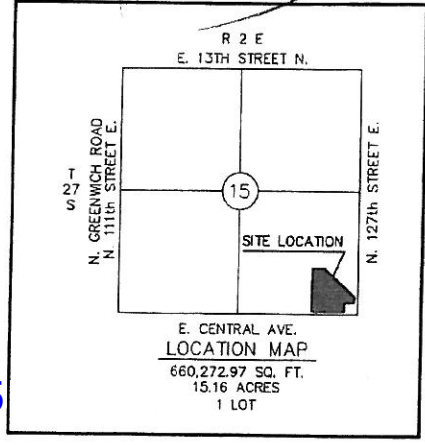
4200 E. Skelly Dr., Tulsa, OK 74133

Phone: (918) 492-1983

Contractor: Triangle Construction & Utility
Inspector: Fred Smith, Baughman Co.

pdf's by: KEK, 2/17/15

1640 LF
18mm
10 - \$ 2600
6.31
1170
2000



T.Mason - City of Wichita, Inspector
Release Date: 3/16/2015
: APROsas 3/17/2015

PROJECT NUMBER: 2187 PPS

OCA (607861)

PRIVATE SANITARY SEWER TO SERVE PORTOFINO ADDITION

GARY JANZEN, P.E., CITY ENGINEER
WICHITA, KANSAS

GENERAL NOTES:

Revised 3/3/15 - 3/6/15 - 3/9/15

1. Contractor will be required to provide a minimum advance notice of seventy-two (72) hours to utility companies prior to starting any excavation as follows:

Kansas One-Call 811 or 1-800-DIG-SAFE

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

Cox Communications	262-7204
Kansas Gas Service	
888-482-4950	
Westar	383-8600
AT&T	1-800-288-8313
City of Wichita Water Department	262-6000
City of Wichita Sewer Maintenance	262-6000

2. Underground utility service lines and overhead utility pole lines are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. Location information has been obtained from the various utility companies and is either from company record drawings or company-provided field locations. The contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.

3. Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations that, in the opinion of the Engineer, will leave an unsightly appearance will not be approved.

4. 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 construction limits would require additional archeological investigations unless buried in a previously approved borrow location.

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

6. The contractor shall seed, fertilize and mulch all disturbed areas upon completion of construction.

Site Bench Mark #1
Square Cut Top of Curb at the SE Corner
of the Storm Water Inlet, 38' S. & 5' W. of
the SE Corner Lot 36, Block 1, Crest Lake
Addition
KANSAS STATE PLANE COORDINATES
N: 1689256.02
E: 1692674.28
Elevation = 1354.88 (NAVD88)

Site Bench Mark #2
Square Cut Top of Curb, 16.5' S. & 19.5' E.
of the NE Corner of the Subject
KANSAS STATE PLANE COORDINATES
N: 1689630.22
E: 1691630.28
Property Elevation = 1363.58 (NAVD88)



Sheet Index

1	COVER
2	PLAT
3 & 3R	SEWER PLAN
4-6 & 4R, 5R, 6R	SEWER PLAN & PROFILE
7-11	DETAILS

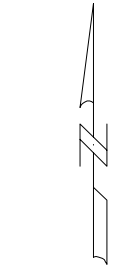
LEGAL DESCRIPTION

Lot 1, Block A, Portofino Addition, an Addition to the City of Wichita, Sedgwick County, Kansas according to the official recorded plat contained in PC 239-9, Filed 07-01-2013

ALL CONSTRUCTION IN ACCORDANCE WITH CURRENT CITY OF WICHITA AND KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT CRITERIA

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA
Public Works Rebecca Gaul 2/15/14
Sanitary Sewer Lines N/A
NOTE TO CONTRACTORS

Installation, inspection and testing for this project is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such inspection nor shall any work be commenced without written authorization by the City Engineer. All Construction and Materials shall comply with the City of Wichita Specifications and Standards (on file and available in the City Engineer's Office)



SCALE: 1" = 60'

SEWER SERVICE LOCATION					
NUMBER	TYPE	LOCATION		FOR INFORMATION ONLY	
		LINE NO.	STATION/DIRECTION	APPROXIMATE LENGTH	PIPE
				VERTICAL	HORIZONTAL
1	8"X6" Tee Saddle	A	2+03/Rt.	11'	34'
2	8"X6" Tee Saddle	A	2+18/Rt.	13'	247'
3	8"X4" Tee Saddle	A	0+81/Rt.	13'	163'
4	8"X4" Tee Saddle	C	0+58/Lt.	7'	49'
5	8"X4" Tee Saddle	C	1+08/Lt.	7'	31'
6	8"X6" Tee Saddle	C	1+93/Lt.	9'	143'
7	8"X6" Tee Saddle	A	4+13/Rt.	12'	173'
8	8"X4" Tee Saddle	A	5+80/Rt.	5'	25'
9	8"X6" Tee Saddle	A	4+18/Lt.	12'	117'
10	8"X6" Tee Saddle	A	5+77/Lt.	7'	114'
11	8"X6" Tee Saddle	B	6+89/Rt.	9'	174'
12	8"X4" Tee Saddle	B	5+92/Lt.	8'	36'
13	8"X4" Tee Saddle	B	4+91/Lt.	7'	38'
14	8"X4" Tee Saddle	B	3+35/Lt.	7'	30'
15	8"X6" Tee Saddle	B	3+09/Rt.	10'	63'
16	8"X4" Tee Saddle	B	1+83/Lt.	7'	38'
17	8"X6" Tee Saddle	B	0+17/Rt.	10'	14'
18	8"X4" Tee Saddle	B	1+32/Lt.	6'	39'
19	8"X6" Tee Saddle	A	2+18/Lt.	11'	14'
20	8"X4" Tee Saddle	A	0+85/Lt.	11'	153'
21	8"X6" Tee Saddle	C	3+10/Lt.	8'	22'
22	8"X6" Tee Saddle	C	5+78/Lt.	8'	128'
23	8"X4" Tee Saddle	B	10+06/Rt.	7'	172'
24	8"X4" Tee Saddle	B	10+00/Rt.	6'	54'
25	8"X4" Tee Saddle	B	8+97/Rt.	6'	27'

Sta 1+70/Lt

168'



SANITARY SEWER PLAN
 PORTOFINO
 CITY OF WICHITA, KANSAS
 PLANS & ESTIMATES PREPARED BY:
TUTTLE & ASSOCIATES, INC.
 9718 E. 55TH PL.
 TULSA, OK. 74146
 918-663-5567

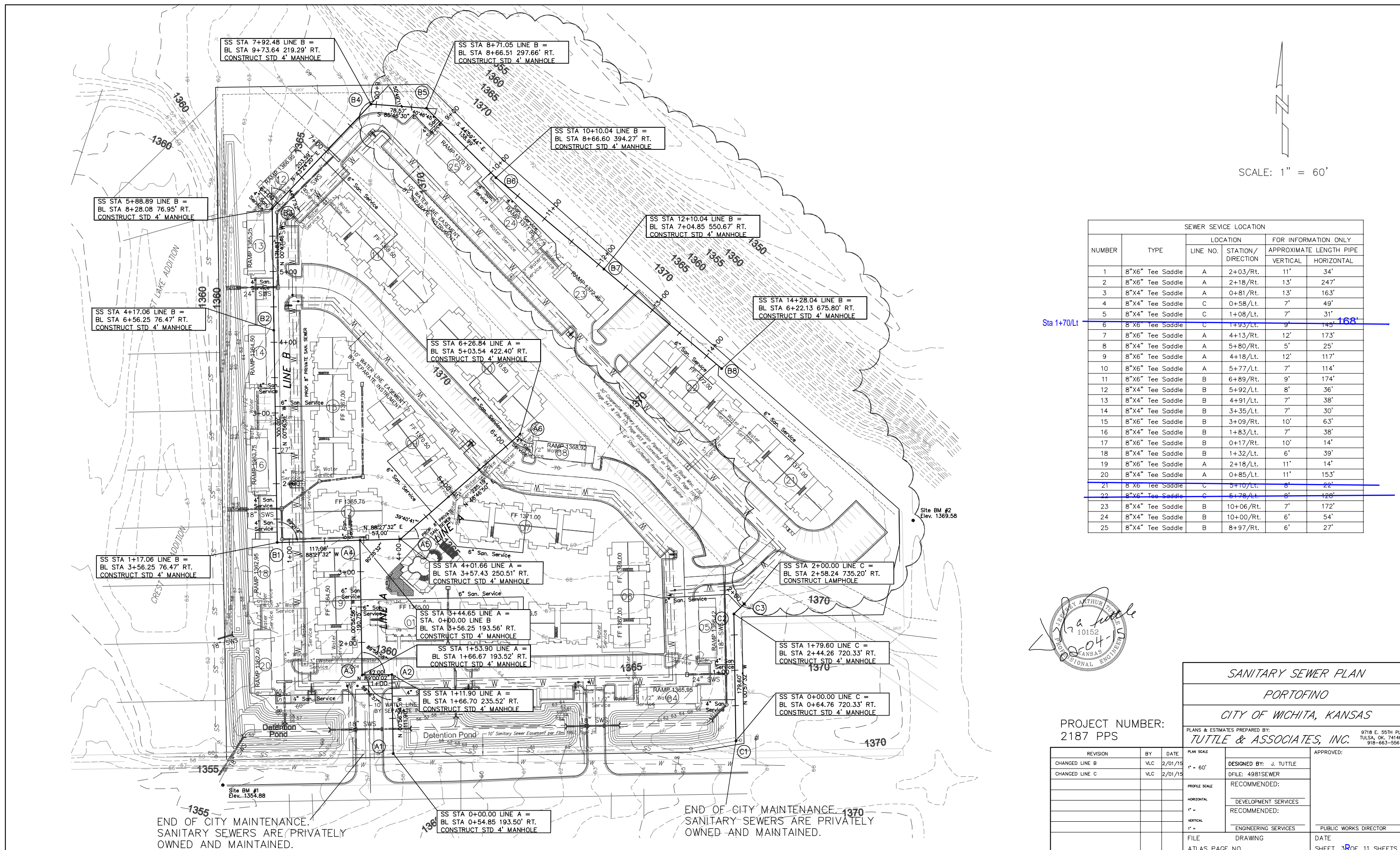
PROJECT NUMBER:
2187 PPS

REVISION	BY	DATE
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CHANGED LINE C	VLC	2/01/15

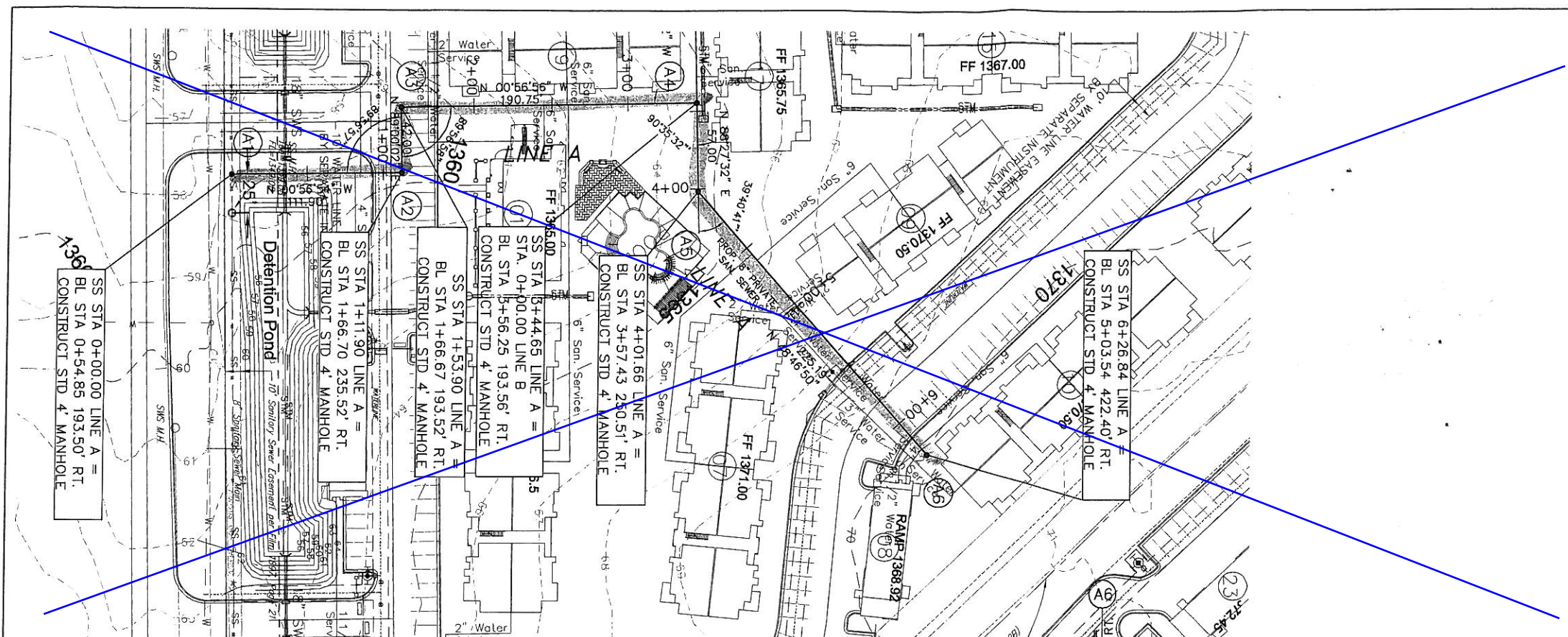
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1" = 60'	J. TUTTLE	
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	RECOMMENDED:	
HORIZONTAL	DEVELOPMENT SERVICES	
	RECOMMENDED:	
VERTICAL	ENGINEERING SERVICES	
		PUBLIC WORKS DIRECTOR
FILE	DRAWING	DATE
ATLAS PAGE NO		SHEET 3 OF 11 SHEETS

END OF CITY MAINTENANCE.
 SANITARY SEWERS ARE PRIVATELY
 OWNED AND MAINTAINED.

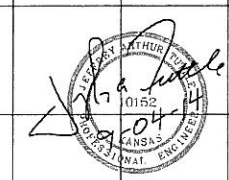
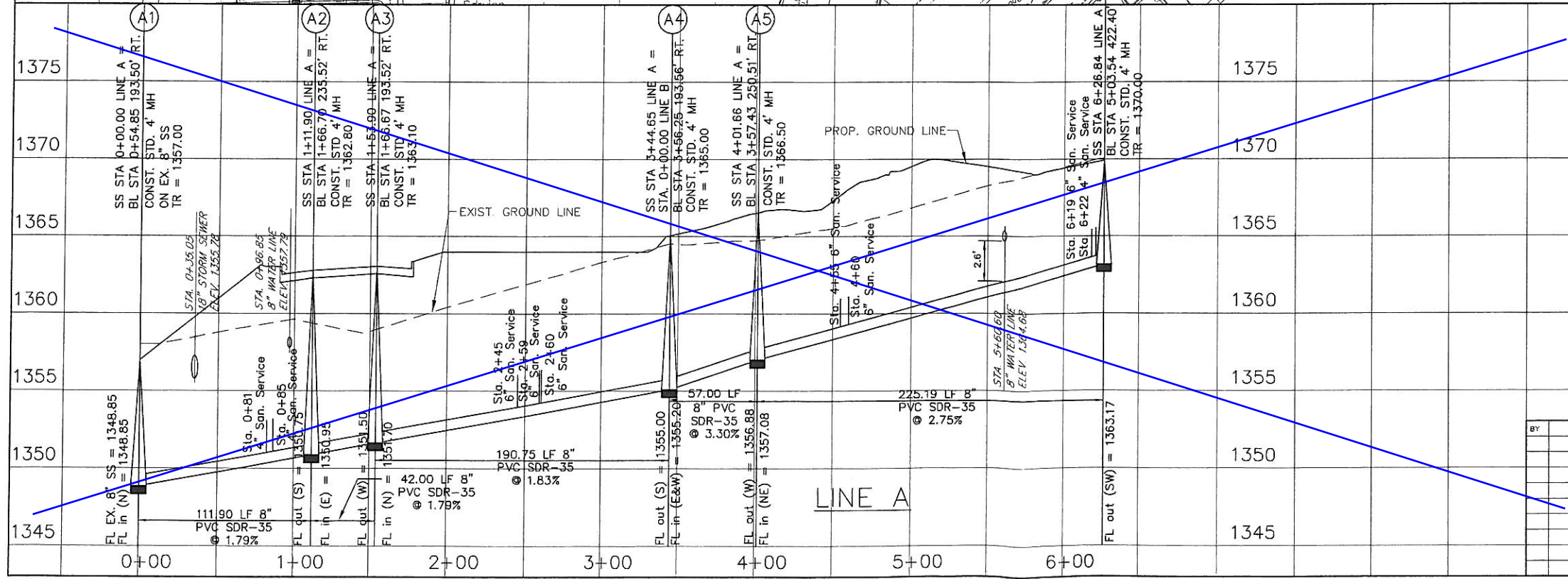
END OF CITY MAINTENANCE.
 SANITARY SEWERS ARE PRIVATELY
 OWNED AND MAINTAINED.



SCALE: 1" = 40'



VOID SEE SH 4R

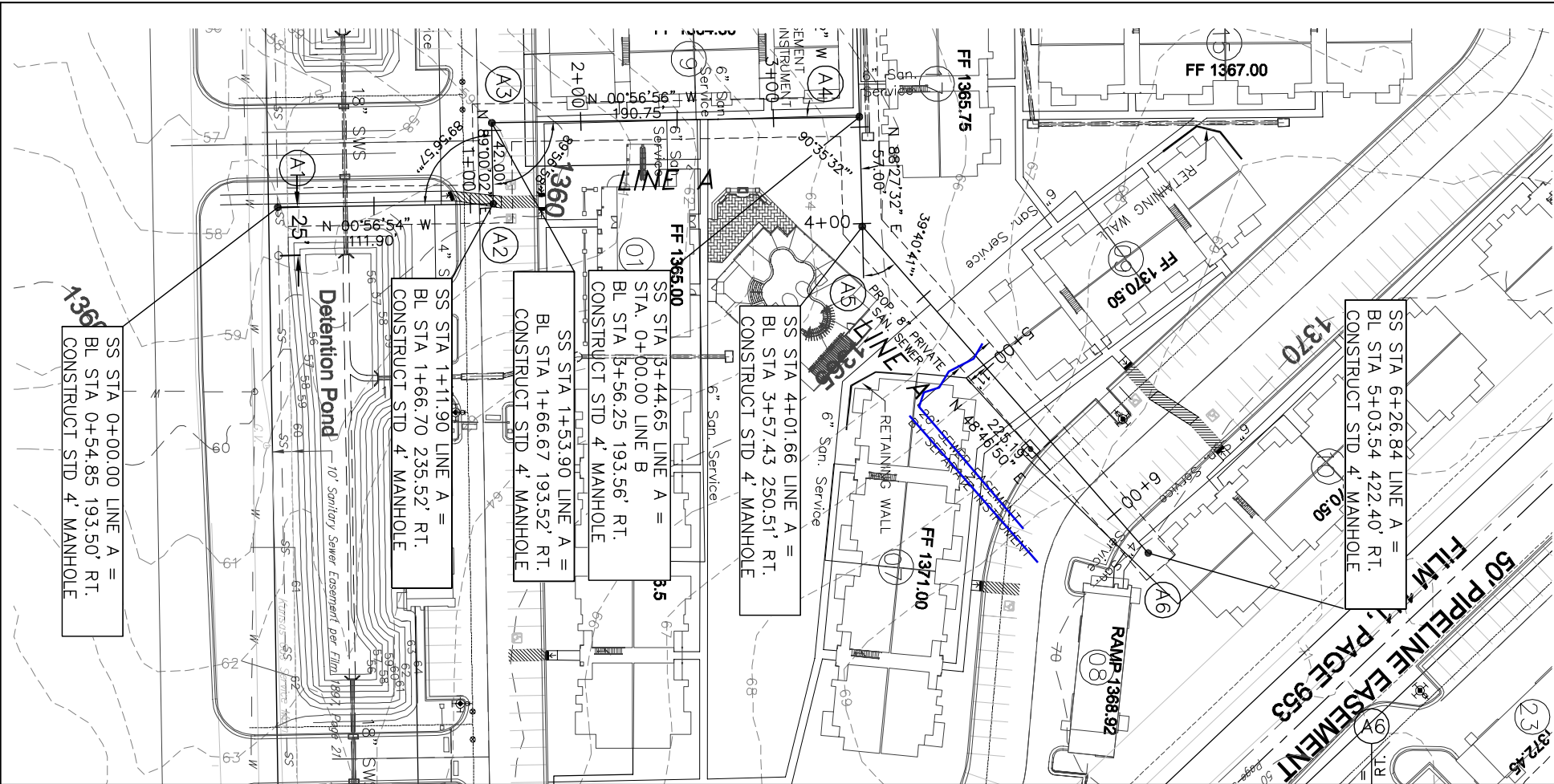


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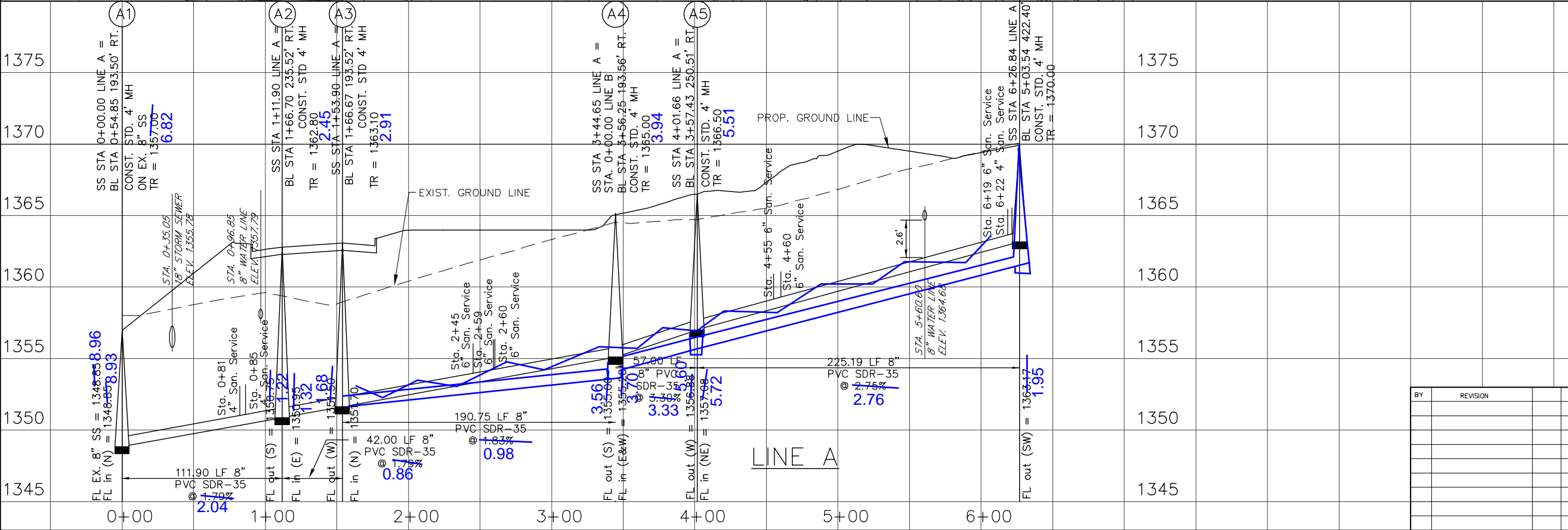
SANITARY SEWER PLAN AND PROFILE
PORTOFINO
CITY OF WICHITA, KANSAS
PLANS & ESTIMATES PREPARED BY:
TUTTLE & ASSOCIATES, INC. 8714 E. 55TH PL
TULSA, OK. 74148
918-663-3567

BY	REVISION	DATE

DESIGNED BY:	APPROVED:
DFILE: 481SEWERPAP	
RECOMMENDED:	
DEVELOPMENT SERVICES	
RECOMMENDED:	
ENGINEERING SERVICES	PUBLIC WORKS DIRECTOR
FILE	DATE
ATLAS PAGE NO	SHEET 4 OF 11 SHEETS



SCALE: 1" = 40'



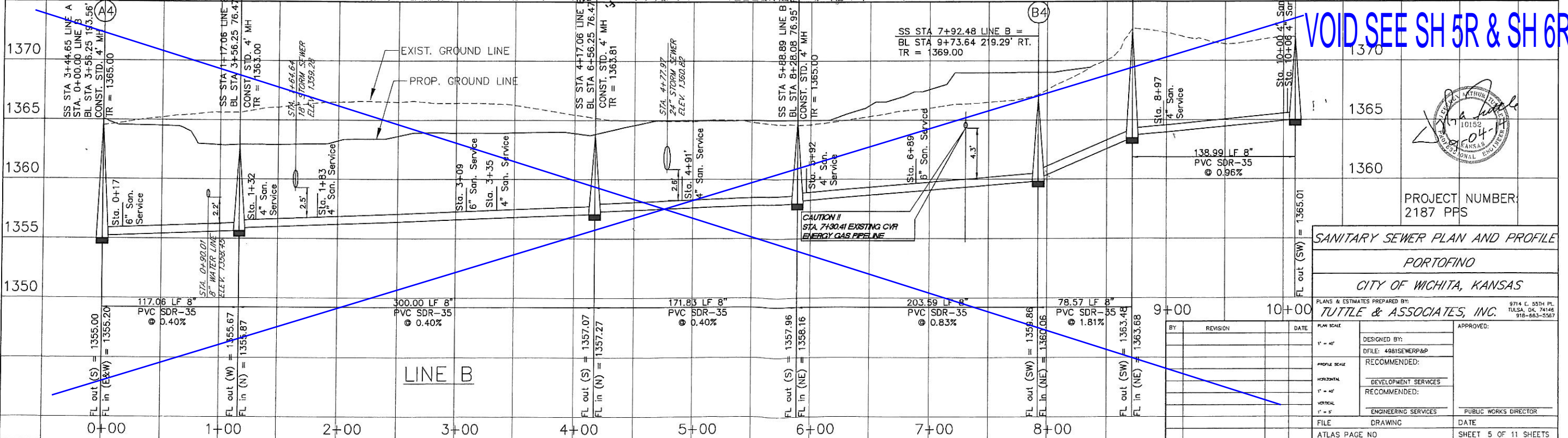
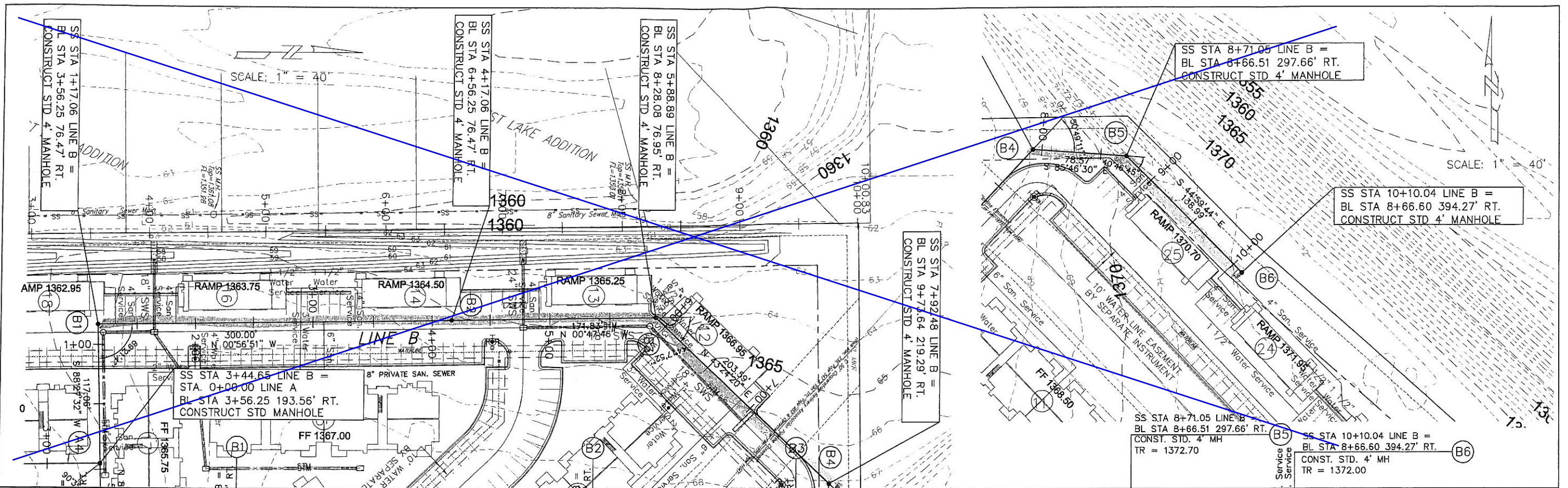
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SANITARY SEWER PLAN AND PROFILE
PORTOFINO
CITY OF WICHITA, KANSAS

PLANS & ESTIMATES PREPARED BY:
TUTTLE & ASSOCIATES, INC.

9714 E. 55TH PL.
TULSA, OK. 74146
918-663-5567

BY	REVISION	DATE	PLAN SCALE	APPROVED:
			1" = 40'	DESIGNED BY: DFILE: 4981SEWERP&P
			PROFILE SCALE	
			HORIZONTAL 1" = 40'	RECOMMENDED: DEVELOPMENT SERVICES
			VERTICAL 1" = 8'	RECOMMENDED: ENGINEERING SERVICES
			FILE	PUBLIC WORKS DIRECTOR
			DRAWING	DATE
			ATLAS PAGE NO	SHEET 4 OF 11 SHEETS



VOID SEE SH 5R & SH 6R



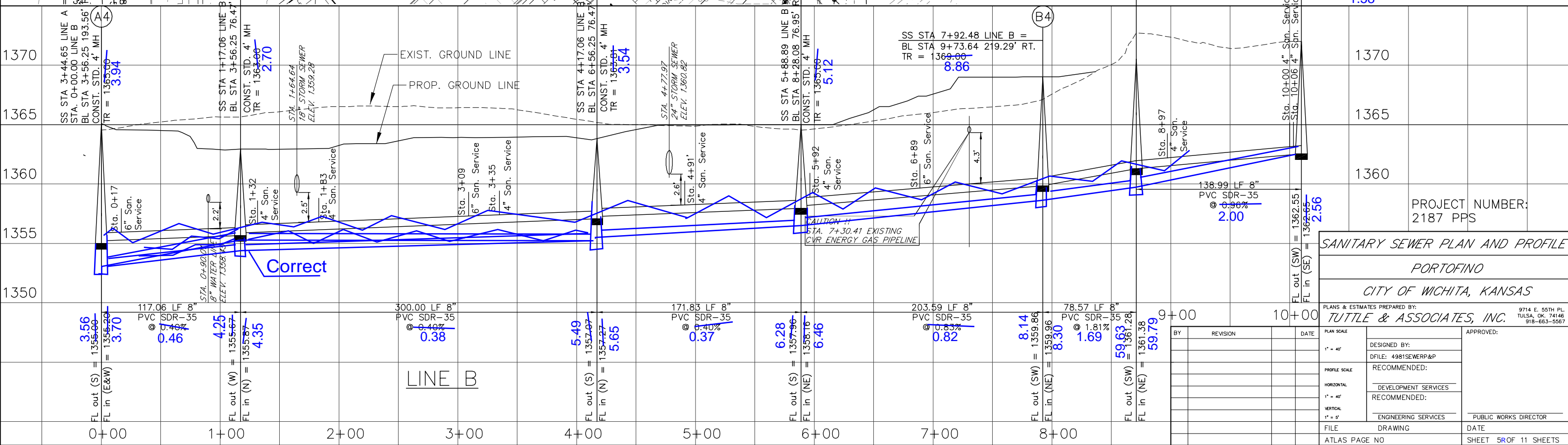
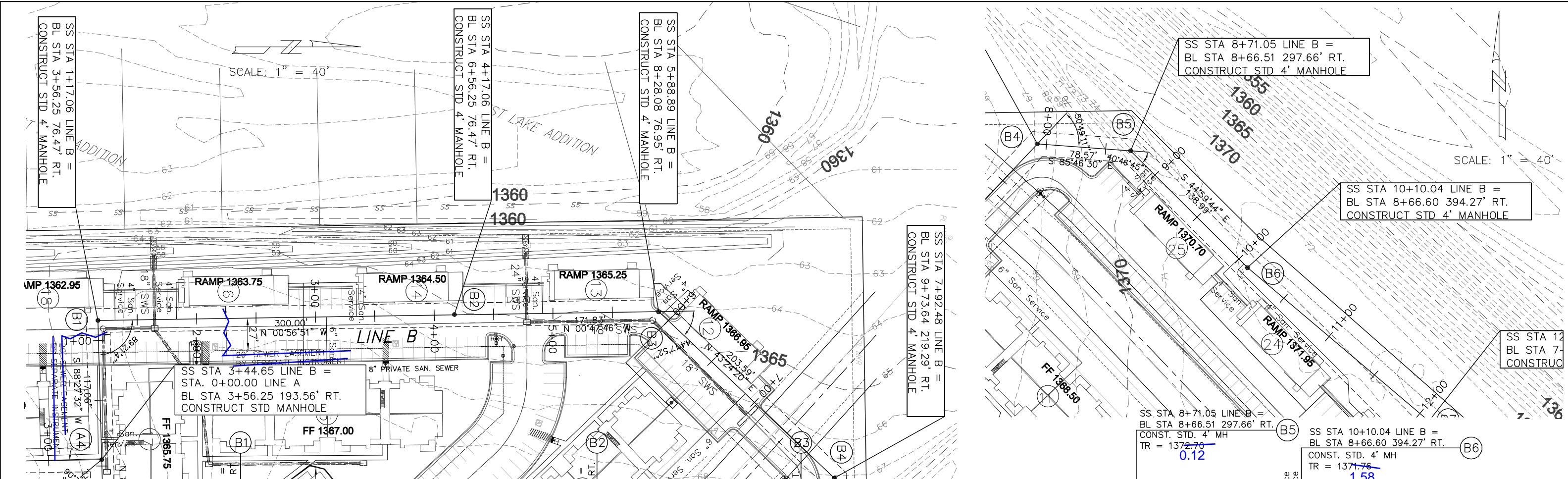
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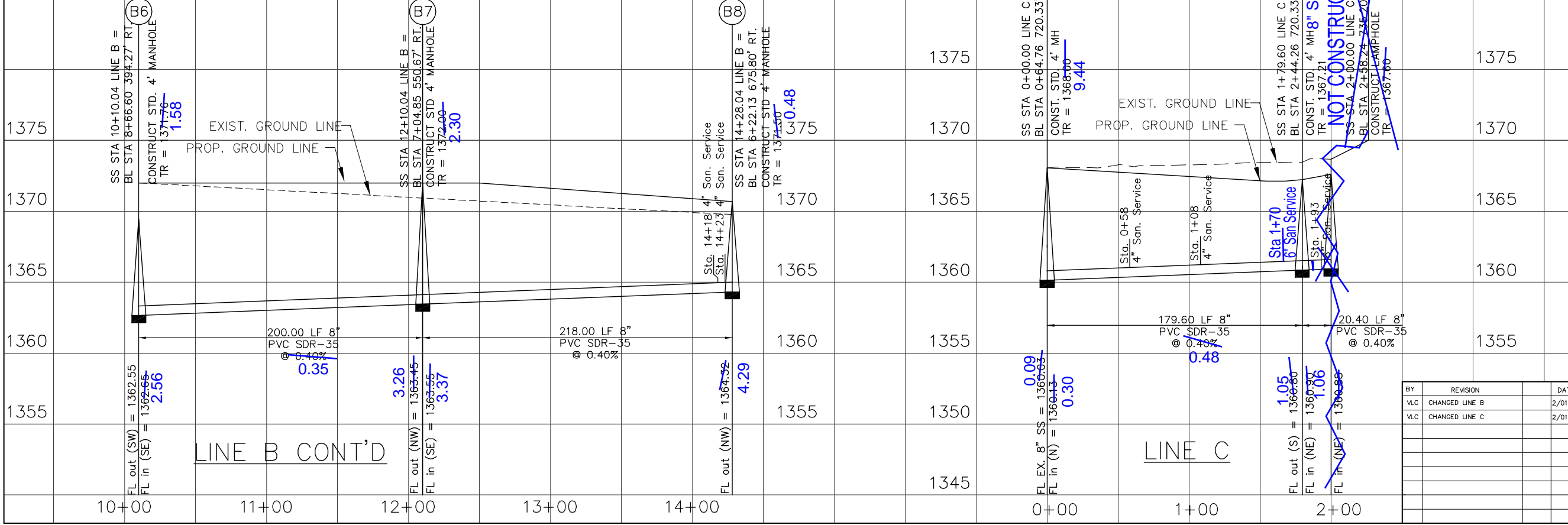
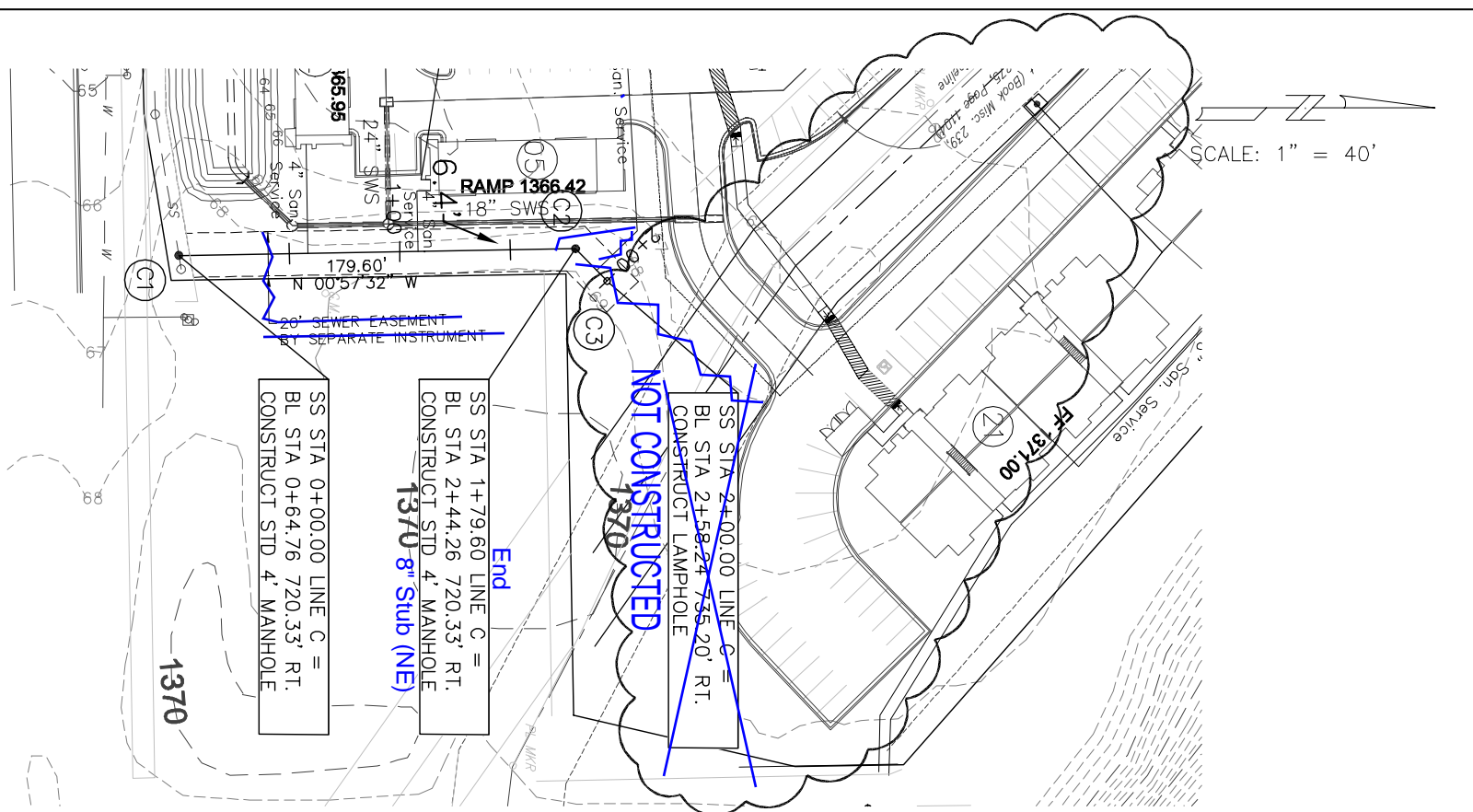
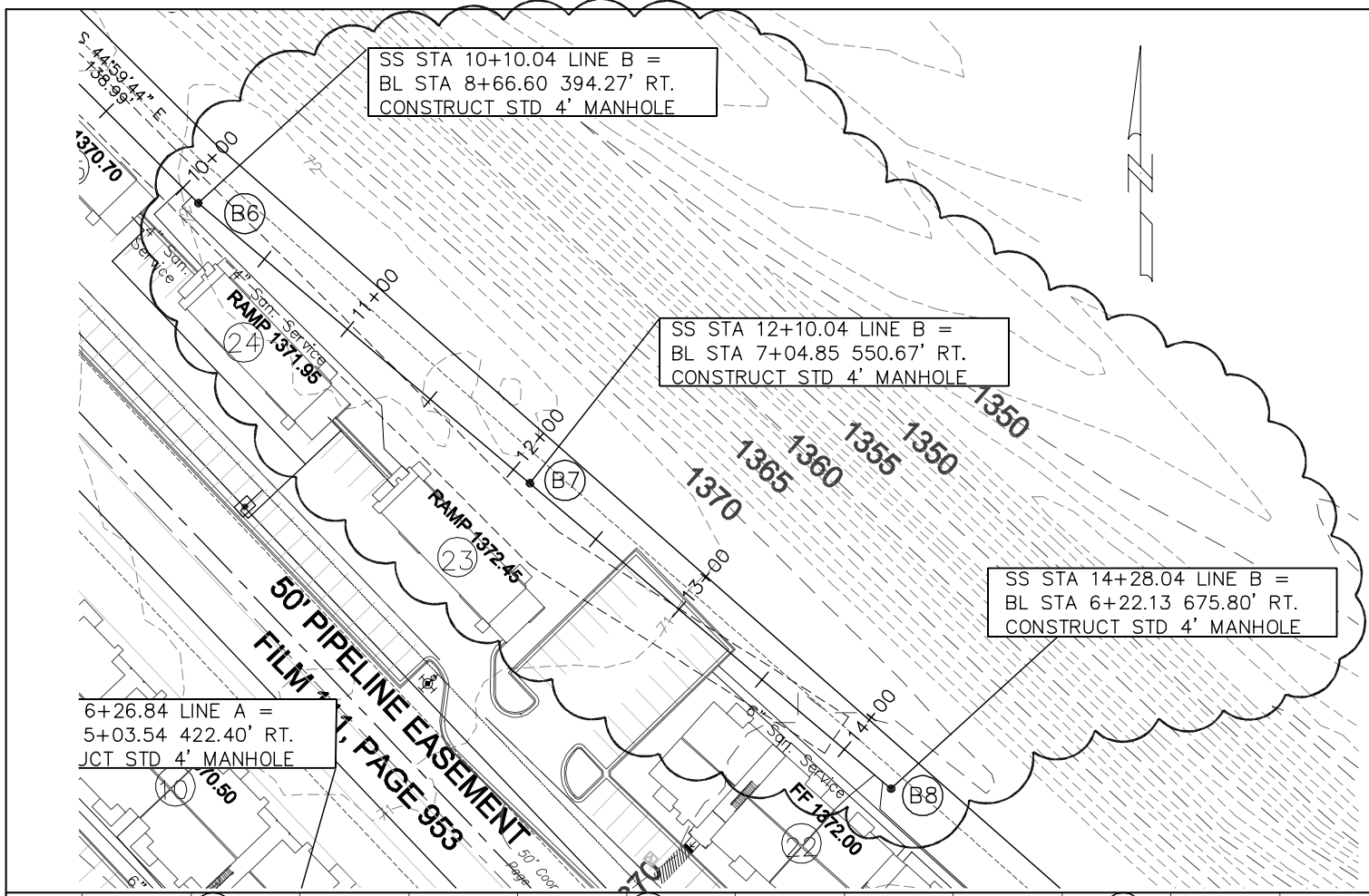
SANITARY SEWER PLAN AND PROFILE
PORTOFINO
CITY OF WICHITA, KANSAS

PLANS & ESTIMATES PREPARED BY:
TUTTLE & ASSOCIATES, INC. 9714 E. 55TH PL. TULSA, OK. 74146 918-663-5567

BY	REVISION	DATE

DESIGNED BY:	APPROVED:
DFILE: 498ISEWERP&P	
RECOMMENDED:	
RECOMMENDED:	
ENGINEERING SERVICES	PUBLIC WORKS DIRECTOR
FILE	DATE
DRAWING	
ATLAS PAGE NO	SHEET 5 OF 11 SHEETS





BY	REVISION	DATE	PLAN SCALE	APPROVED:
VLC	CHANGED LINE B	2/01/15	1" = 40'	DESIGNED BY: DFILE: 4981SEWERP&P
VLC	CHANGED LINE C	2/01/15	1" = 40'	
			PROFILE SCALE	RECOMMENDED: DEVELOPMENT SERVICES RECOMMENDED: ENGINEERING SERVICES
			HORIZONTAL 1" = 40'	
			VERTICAL 1" = 5'	
			FILE	PUBLIC WORKS DIRECTOR
			DRAWING	DATE
			ATLAS PAGE NO	SHEET 6 OF 11 SHEETS

PROJECT NUMBER:
2187 PPS

SANITARY SEWER PLAN AND PROFILE

PORTOFINO

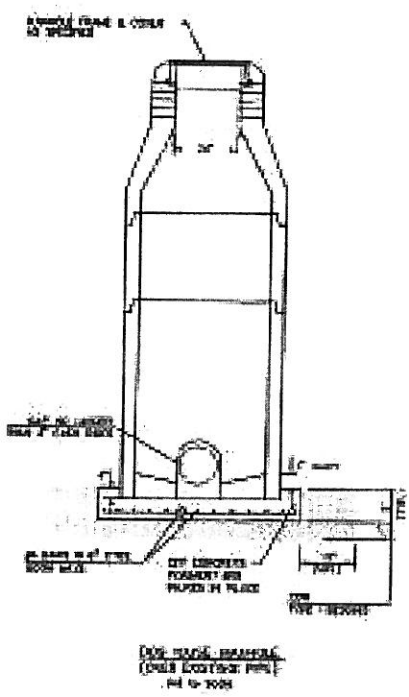
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PLANS & ESTIMATES PREPARED BY:
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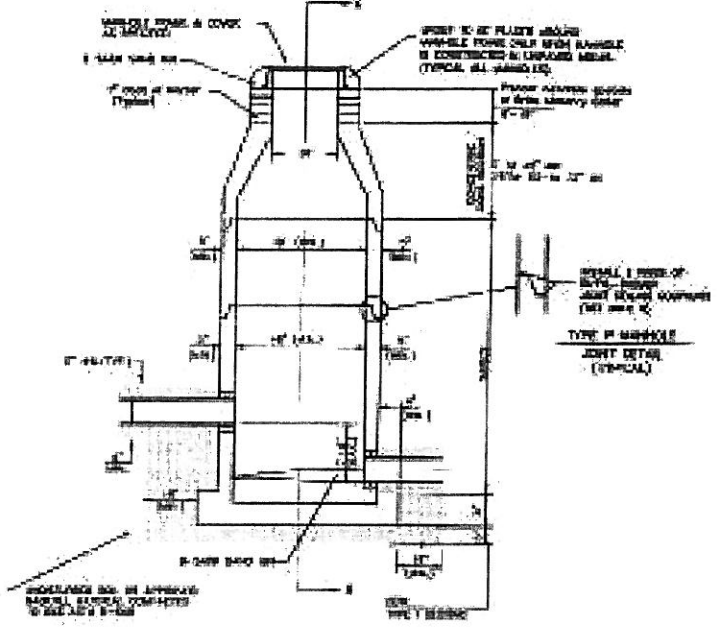
9714 E. 55TH PL.
TULSA, OK. 74146
918-663-5567

LINE B CONT'D

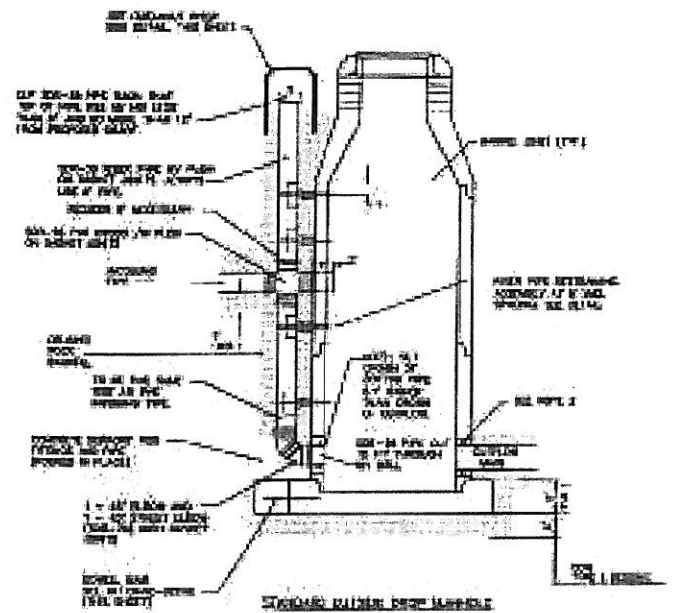
LINE C



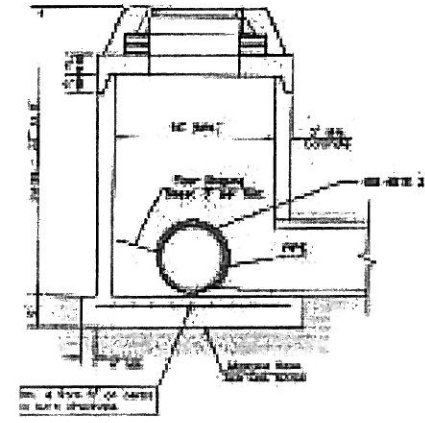
BOX MANHOLE
(COVER EXPOSED PIPE)
14 to 20 in



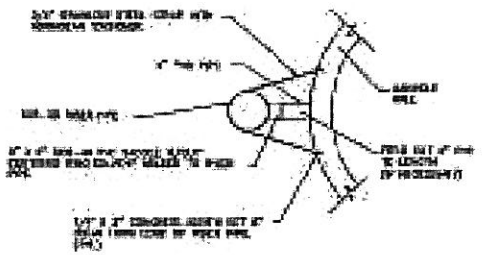
STANDARD MANHOLE
14 to 20 in



STANDARD RISER MANHOLE
14 to 20 in



CLEANOUT RISER MANHOLE
14 to 20 in

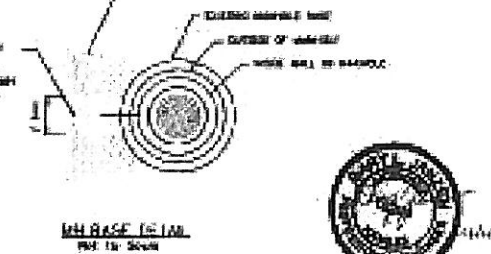
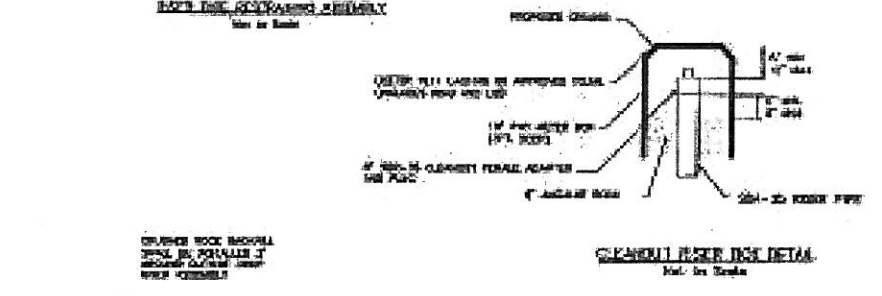


Sanitary Sewer Manhole Diameter

DIAMETER	DEPTH	PIPE SIZE
4'	2'-0"	12"-14"
4'	12'-0"	24"-30"
6'	12'-0"	36"-48"

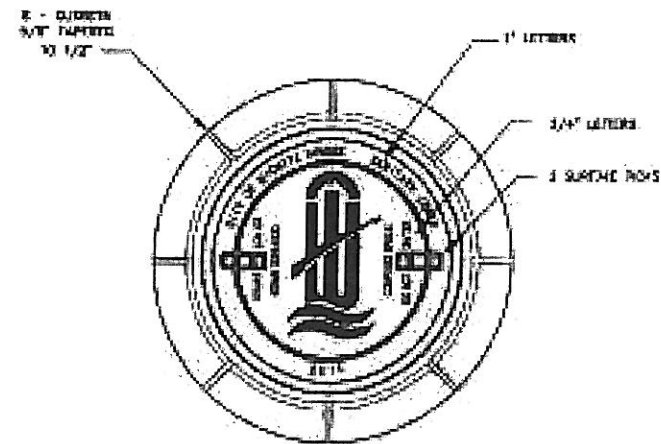
PRECAST MANHOLE GENERAL NOTES

1. ALL PRECAST CONCRETE MANHOLE SYSTEMS SHALL CONFORM TO THE LATEST REVISIONS OF ANSI A 31.8, THIS IS REFERRED BY THE SPECIFICATIONS.
2. MANHOLE FRAMES SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE MANHOLES SHALL BE INSTALLED TO JOIN THE EXISTING PIPE TO THE MANHOLE. THE JOINT SHALL BE SUPPORTED WITH CHAINED PICKS A MINIMUM OF 2 FEET FROM THE TOP OF THE MANHOLE. THE JOINT SHALL BE PROTECTED WITH A 2" THICK RIGID POLYURETHANE FLEXIBLE JOINT.
4. ALL EXPOSED SURFACES OF THE MANHOLE SYSTEMS SHALL BE FINISHED TO MATCH THE EXISTING SURFACE AND SHALL BE PAINTED OR COATED TO MATCH THE EXISTING SURFACE.
5. EXISTING MANHOLE SYSTEMS SHALL BE REPAIRED OR REPLACED WITH STANDARD SPECIFICATIONS.
6. JOINT MATERIALS SHALL BE PER SECTION 05 11 00 STANDARD SPECIFICATIONS.
7. ALL MANHOLE SYSTEMS SHALL BE INSTALLED TO MATCH THE EXISTING SURFACE AND SHALL BE FINISHED TO MATCH THE EXISTING SURFACE.
8. EXISTING MANHOLE SYSTEMS SHALL BE REPAIRED OR REPLACED WITH STANDARD SPECIFICATIONS.
9. TOP OF MANHOLE FLOOR SHALL BE AT LEAST 2 INCHES BELOW THE FLOOR LINE OF THE OUTLET PIPE TO MAINTAIN PROPER FLOW CHARACTERISTICS OF EXISTING SYSTEM.
10. IF THE FLOOR IS TO BE FILLED WITH NON-EXPANSIVE GROUT AND THE EXISTING SURFACE GRADE IS FLOORED.
11. EXISTING FLOOR IS TO BE REPAIRED OR REPLACED WITH STANDARD SPECIFICATIONS. THE EXISTING SURFACE GRADE SHALL BE MAINTAINED TO MATCH THE EXISTING SURFACE GRADE. ALL EXISTING SURFACE GRADES SHALL BE MAINTAINED TO MATCH THE EXISTING SURFACE GRADE.
12. EXISTING FLOOR IS TO BE REPAIRED OR REPLACED WITH STANDARD SPECIFICATIONS. THE EXISTING SURFACE GRADE SHALL BE MAINTAINED TO MATCH THE EXISTING SURFACE GRADE. ALL EXISTING SURFACE GRADES SHALL BE MAINTAINED TO MATCH THE EXISTING SURFACE GRADE.
13. ALL MANHOLE SYSTEMS SHALL BE INSTALLED TO MATCH THE EXISTING SURFACE AND SHALL BE FINISHED TO MATCH THE EXISTING SURFACE.
14. EXISTING MANHOLE SYSTEMS SHALL BE REPAIRED OR REPLACED WITH STANDARD SPECIFICATIONS.
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22. EXISTING MANHOLE SYSTEMS SHALL BE REPAIRED OR REPLACED WITH STANDARD SPECIFICATIONS.
23. EXISTING MANHOLE SYSTEMS SHALL BE REPAIRED OR REPLACED WITH STANDARD SPECIFICATIONS.
24. EXISTING MANHOLE SYSTEMS SHALL BE REPAIRED OR REPLACED WITH STANDARD SPECIFICATIONS.



CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

PRECAST
SANITARY SEWER
MANHOLE
BY
GARY JANZEN, P.E.
DATE: 01/2012
CITY ENGINEER'S OFFICE
CITY HALL - 5TH FLOOR
100 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-6200

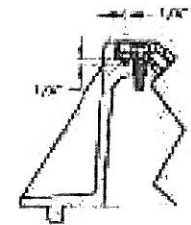
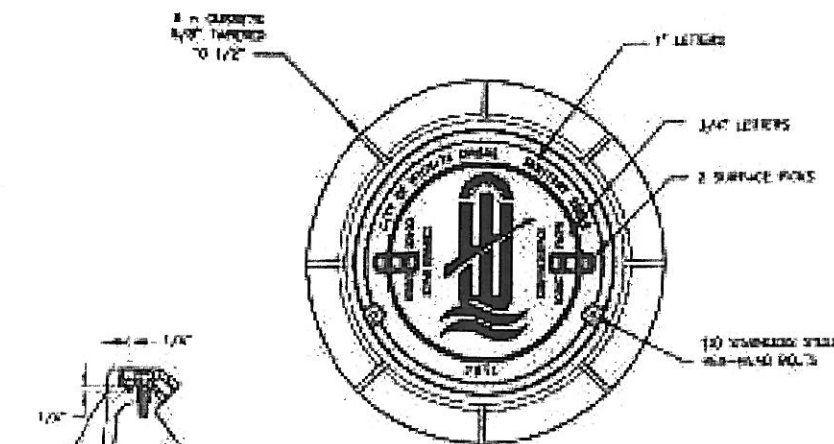


STANDARD MANHOLE FRAME & COVER

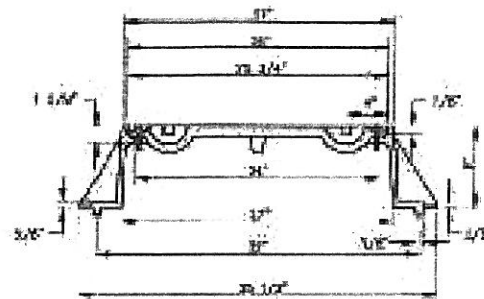
DEETER #1261 OR E.J.M. #1936-Z1

NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.



DETAIL OF T-GASKET

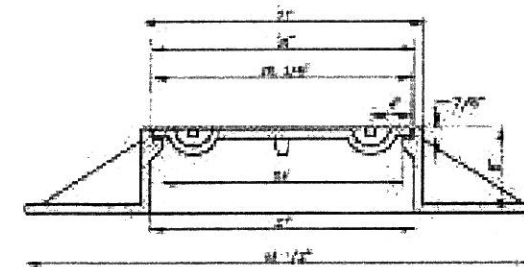
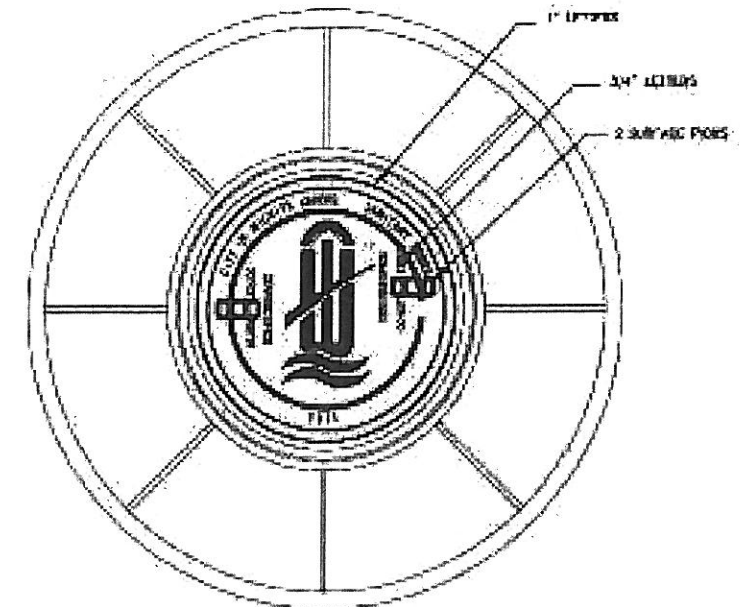


RIGHT DOWN MANHOLE FRAME & COVER

DEETER #1261 OR E.J.M. #1936-Z1

NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.
2. FURNISHED WITH A T-GASKET IN THE FRAME.



WIDE FLANGED FRAME & COVER

DEETER #1261

NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

GENERAL NOTES

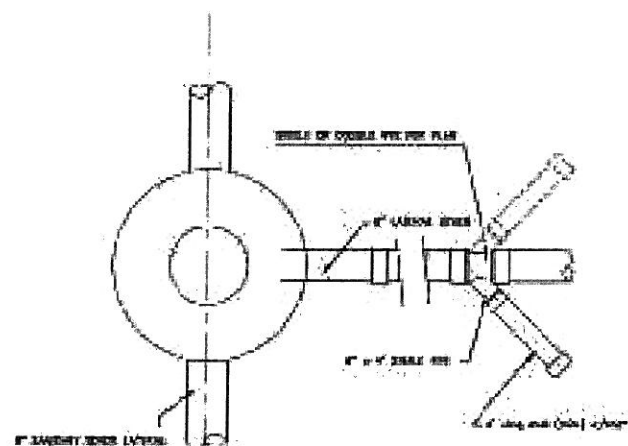
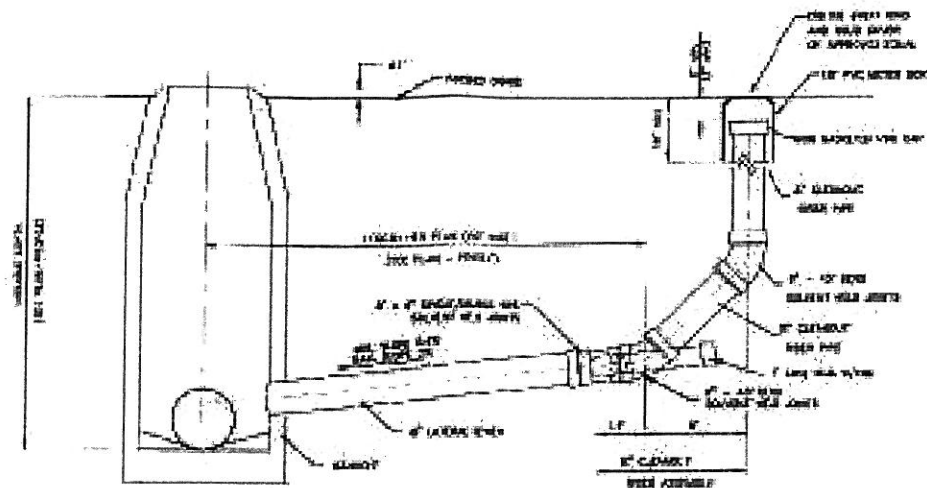
1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.
2. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDARY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDARY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURERS OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.
3. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SEATING SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.
4. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR IN WHICH THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1" HIGH IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SANITARY SEWER". THE TOP SURFACE OF THE COVER SHALL BE MACHINED IN WICHITA CITY OF WICHITA 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
(SANITARY SEWER)

GARY JANZEN, P.E.

CITY ENGINEER'S OFFICE
CITY HALL - 300 SOUTH WALKER
SANITARY SEWER DIVISION
WICHITA, KANSAS 67202-1228
(316) 268-4371



4" BRUNNEN TEACH USED TO JOIN
 4" TO 4" WITH TYPICALLY 45° WELD
 SERVICE CONNECTION IS REQUIRED.
 SINGLE OR DOUBLE WYE TO BE USED
 WHERE INDICATED ON PLAN.
 WHEN AN OVERLAP/4" STUB
 WITH HORIZONTAL RISER

IF 4" LATERAL TO BE
 WELD-TESTED UP TO THE TOP
 OF PVC PIPE PER STANDARD
 SPECIFICATIONS

**CLEANOUT RISER ASSEMBLY DETAIL
 W/ MANHOLE CONNECTION**

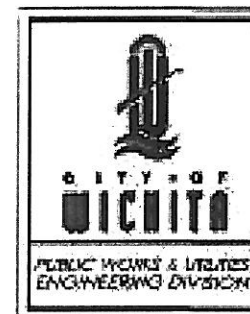
GENERAL NOTES:

TAPS: NO TAPS ARE PERMITTED BETWEEN THE MANHOLE/TEE AND THE CLEANOUT RISER.

BEDDING: BEDDING AROUND THE SANITARY SEWER RISER SHALL BE COMPACTED PIPE BEDDING TYPE 2 (TYPE 1 IN GROUND/BATTEN).

MATERIAL: RISER AND LATERALS SHALL BE CONSTRUCTED OF SDR-35 PVC PIPE. TEES SHALL BE SDR-25 PIPE, 4" STUBS SHALL BE SCHEDULE 40.

CONNECTIONS: ALL SERVICE CONNECTIONS MUST BE MADE TO THE WYE PROVIDED.



CLEANOUT RISER ASSEMBLY DETAIL		
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