LATERAL 123, WESTLINK SEWER
SANITARY SEWER EXTENSIONS
SERVING
BRADFORD NORTH 3RD ADDITION
PROJECT NO. 468-82749
INDEX 743260

GENERAL NOTES

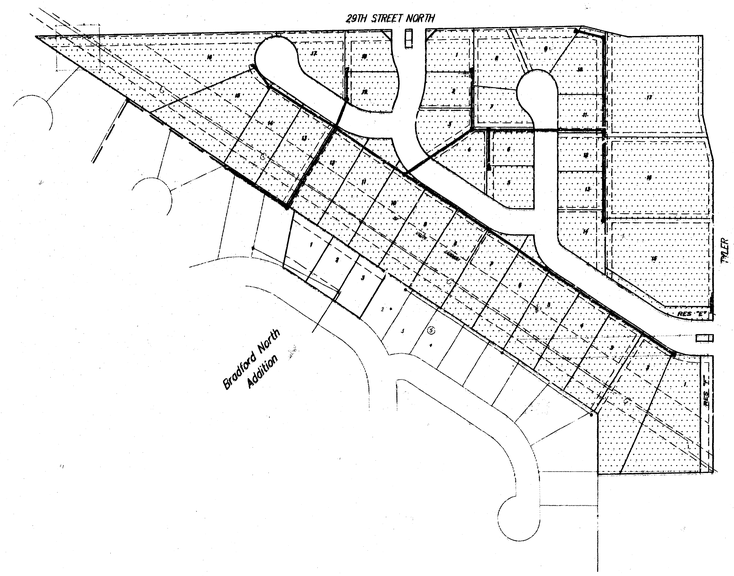
1. Traffic will not be affected by construction of this project.
2. Underground utility service lines and overhead utility pole lines are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically 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. The Contractor shall notify pipeline companies at least 24 hours in advance of any work being performed across and/or adjacent to pipelines.
4. Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.
5. The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.
6. Contractor will be required to provide a minimum advance notice of twenty-four (24) hours to utility companies prior to starting any excavation as follows:

   Kansas One-Call 687-2470

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

Cable vision	262-4270 or 263-2061
K.G.&E. Gas	383-9650
K.G.&E. Electric	383-9600
Peoples Natural Gas Company	942-8350 or 263-8161
Southwestern Bell Telephone Company	1-571-2611
City of Wichita Water Department	268-4908
City of Wichita Sewer Maintenance	268-4071

7. Prior to bidding, the Contractor shall contact J. Russell @ 722-2417 to verify if any or all of the easement grading on the site has been completed.



Scale: 1" = 150'

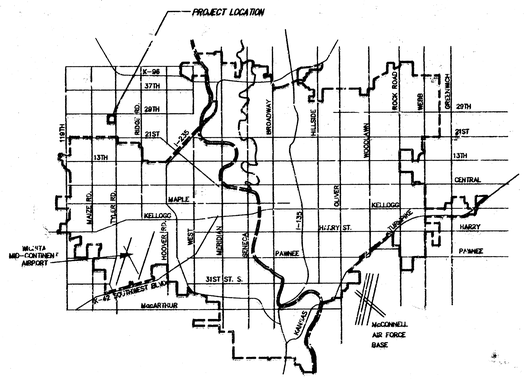
BENCH MARKS

BM #1 – C.O.W. DISC 32.3' S AND 30' E. OF TYLER ROAD AND 29TH ST. N. INTERSECTION
ELEV. = 178.04 CITY DATUM

BM #2 – C.O.W. DISC IN E. PARKING OF. TYLER AT 25TH ST. N. AND "B" RD ROAD.
ELEV. 163.61 CITY DATUM

INDEX OF SHEETS

1. TITLE SHEET
2. LINE 1 & LINE 2 PLAN/PROFILE
3. LINE 3 PLAN/PROFILE
4. LINE 4 & LINE 5 PLAN/PROFILE
5. LINE 6 & LINE 7 PLAN/PROFILE
6. SHALLOW TYPE 'P' MANHOLE DETAILS
7. STANDARD TYPE 'P' MANHOLE DETAILS
8. EASEMENT GRADING PLAN
9. EASEMENT GRADING EARTHWORK SUMMARY



VICINITY MAP

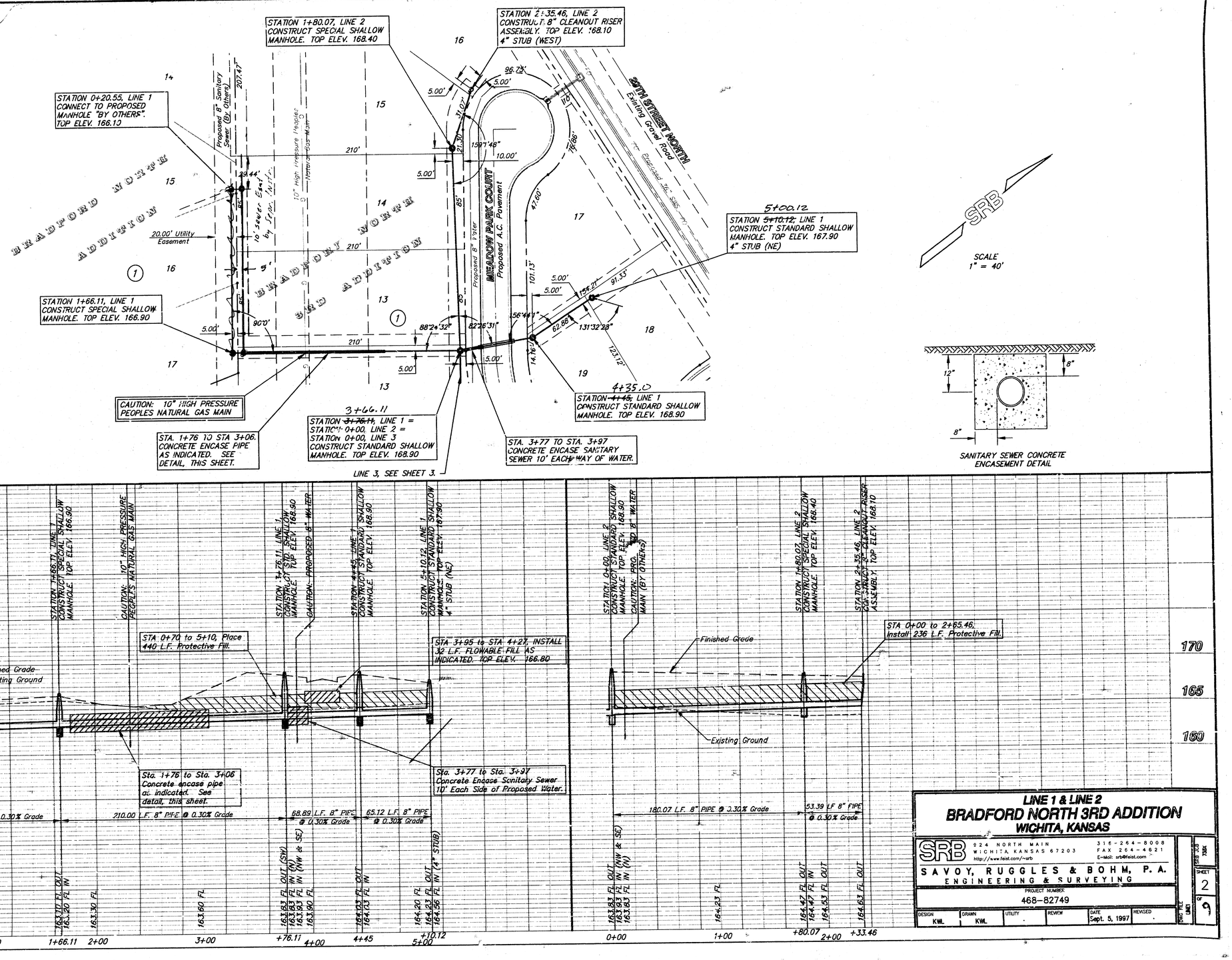
AS BUILT
Booked
P-24
B-3-98
R. DL.

IMPROVEMENT DISTRICT

CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK, P.E.

CHRISTOPHER MICHAEL LICENSED 11631 10-30 KANSAS PROFESSIONAL ENGINEER

SRB 924 NORTH MAIN WICHITA, KANSAS 67203 316-264-8008 FAX 264-4621
SAVOY, RUGGLES & BOHM, P.A.
ENGINEERING & SURVEYING



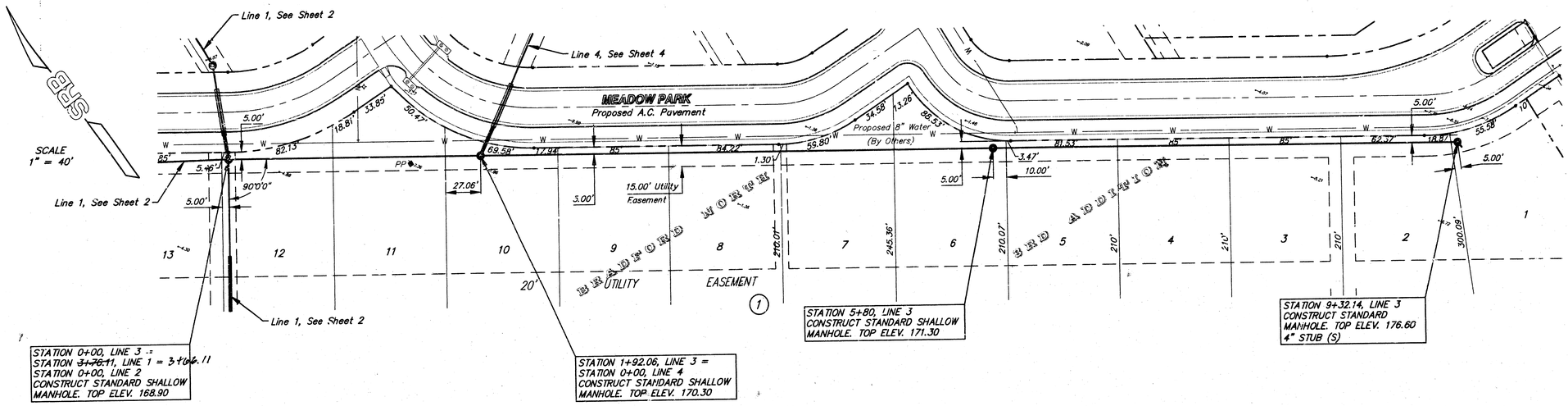
LINE 1 & LINE 2
BRADFORD NORTH 3RD ADDITION
WICHITA, KANSAS

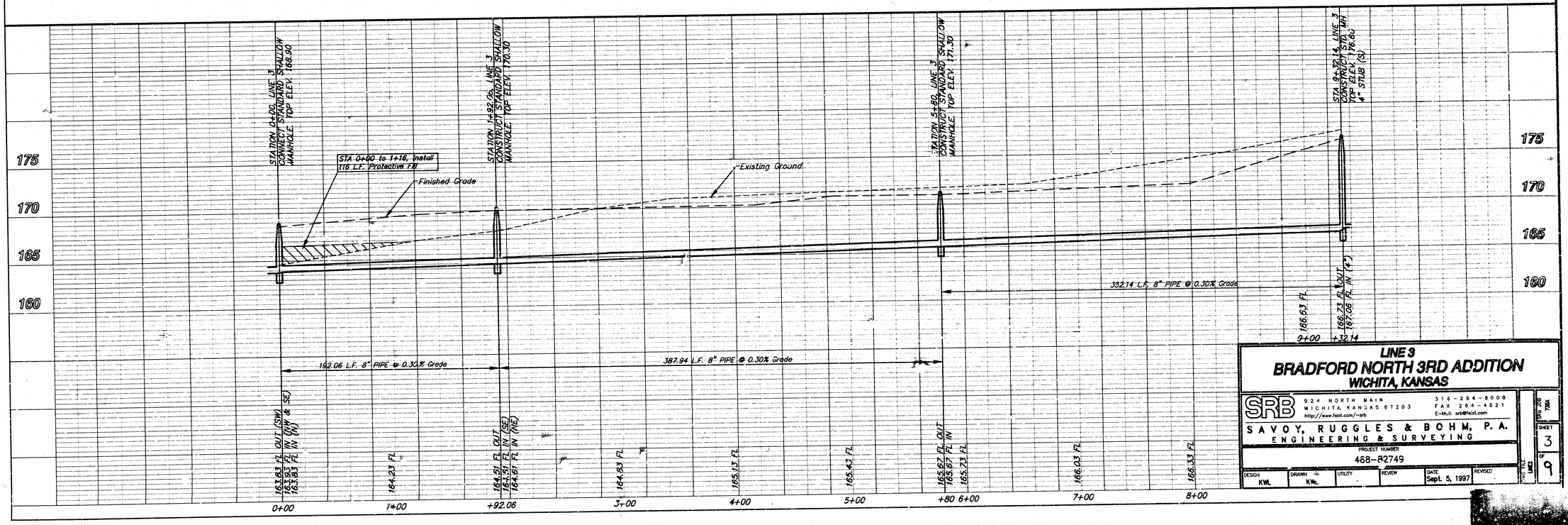
SRB
924 NORTH MAIN
WICHITA, KANSAS 67203
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316-264-8008
FAX 264-4621
E-Mail: srb@feist.com
SAVOY, RUGGLES & BOHM, P.A.
ENGINEERING & SURVEYING

PROJECT NUMBER: 468-82749

DESIGN	DRAWN	UTILITY	REVIEW	DATE	REVISED
KWL	KWL	.		Sept. 5, 1997	.

PROJECT NO. 708X
SHEET 2 OF 3 SHEETS





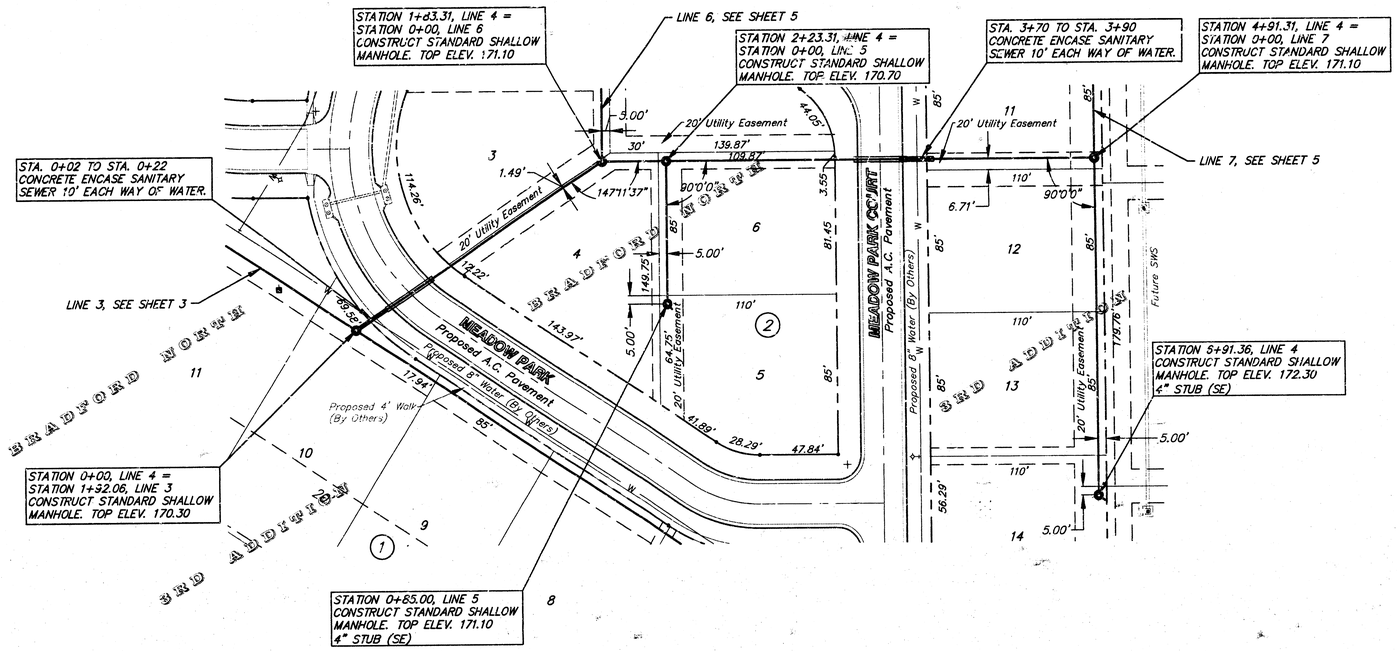
LINE 3
BRADFORD NORTH 3RD ADDITION
WICHITA, KANSAS

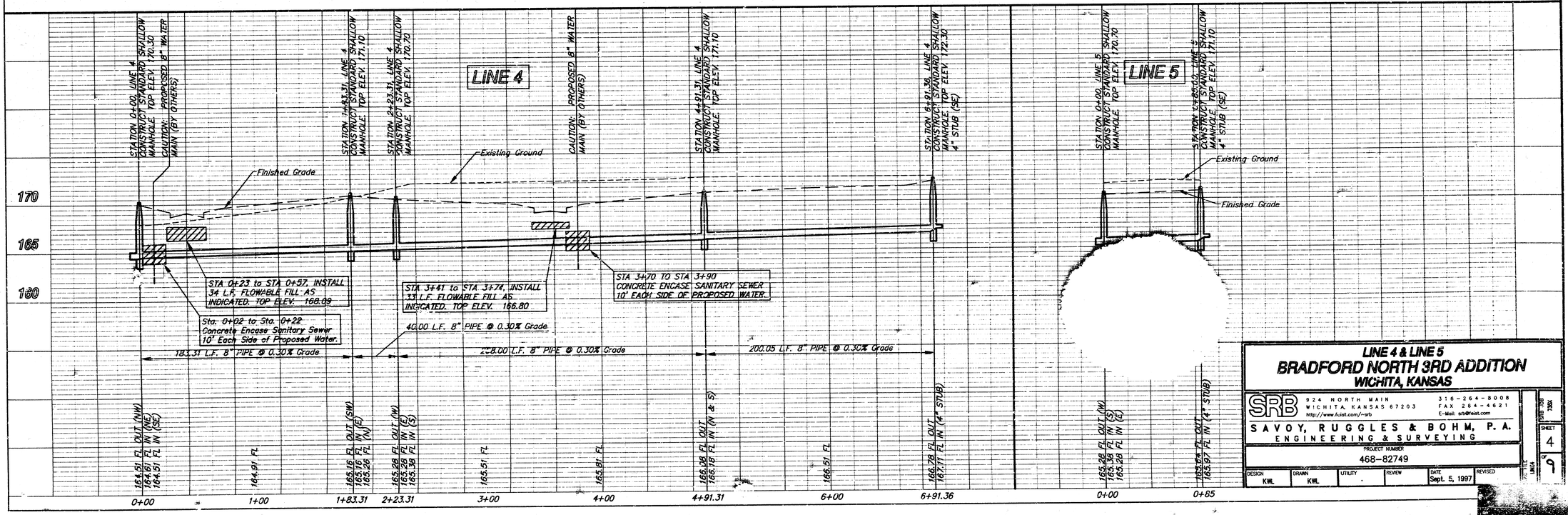
SRB
924 NORTH MAIN
WICHITA, KANSAS 67203
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316-264-8008
FAX 264-4621
E-Mail: srb@feist.com
SAVOY, RUGGLES & BOHM, P.A.
ENGINEERING & SURVEYING

PROJECT NUMBER
468-82749

DESIGN	DRAWN	UTILITY	REVIEW	DATE	REVISED
KWL	KWL			Sept. 5, 1997	

SHEET 3 OF 9





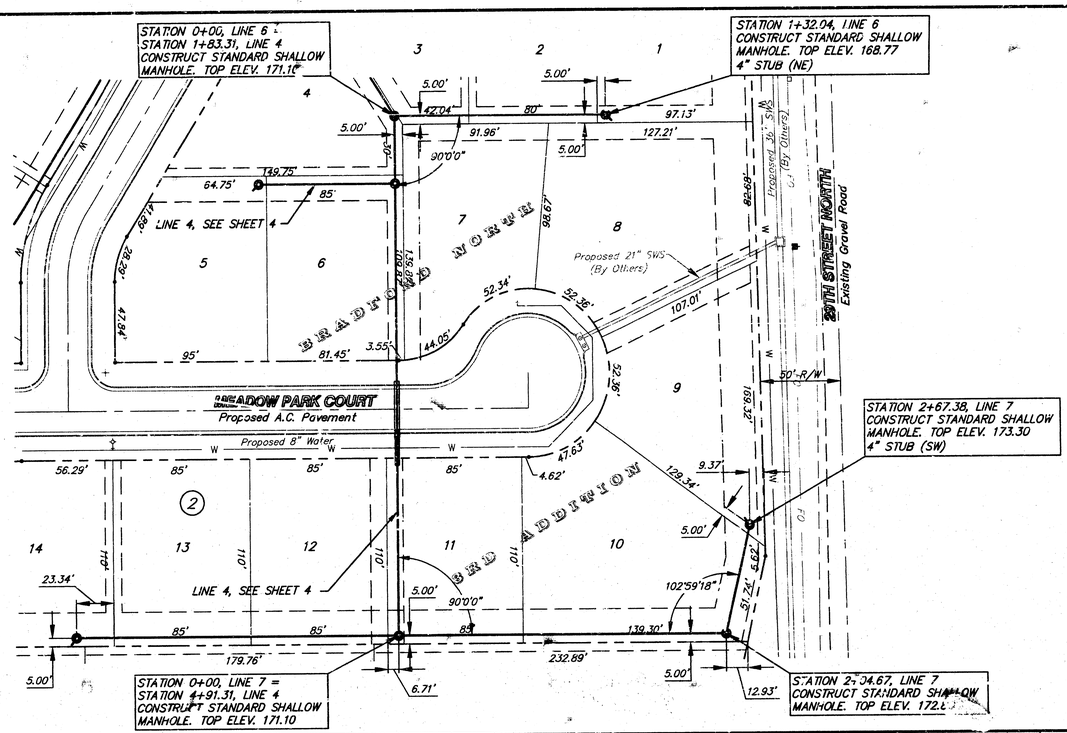
LINE 4 & LINE 5
BRADFORD NORTH 3RD ADDITION
WICHITA, KANSAS

SRB
924 NORTH MAIN
WICHITA, KANSAS 67203
http://www.fcist.com/~srb
316-264-8008
FAX 264-4621
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SAVOY, RUGGLES & BOHM, P. A.
ENGINEERING & SURVEYING

PROJECT NUMBER 468-82749

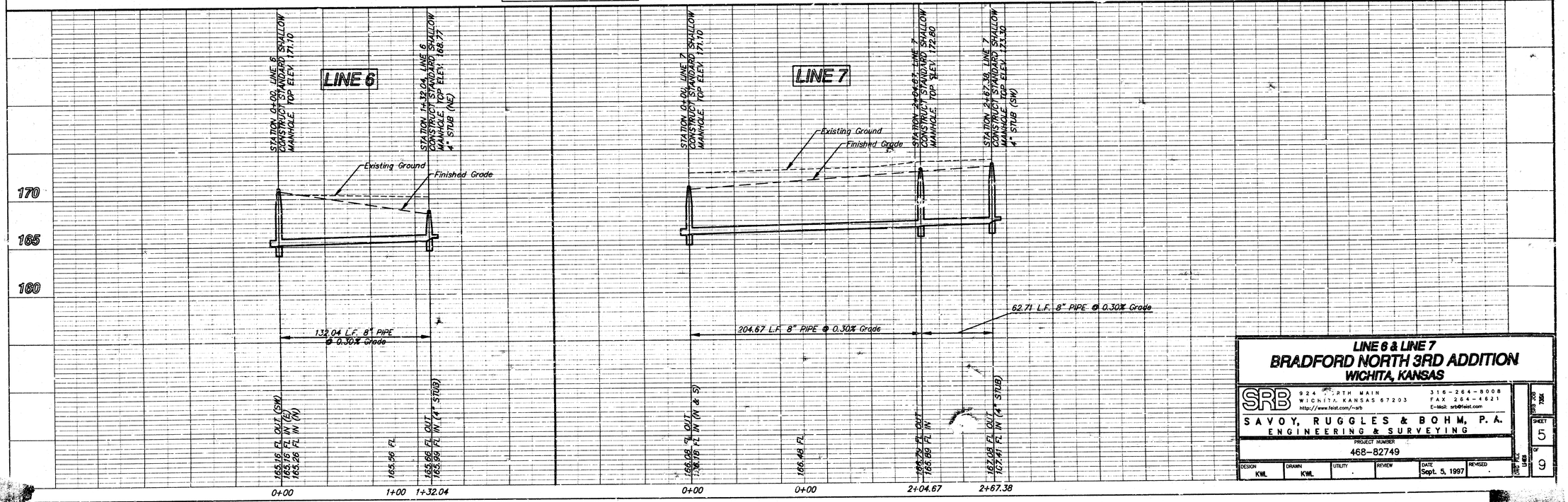
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KWL	KWL			Sept. 5, 1997	

SHEET 4 of 9



SRB

SCALE
1" = 40'



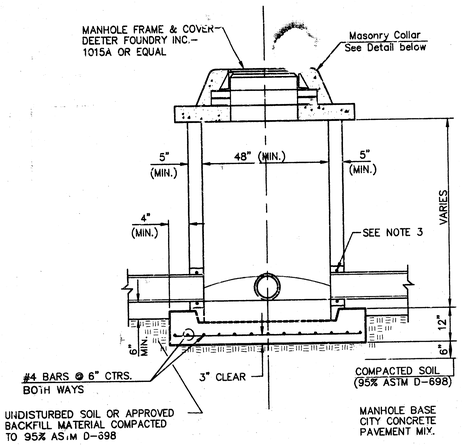
LINE 6 & LINE 7
BRADFORD NORTH 3RD ADDITION
WICHITA, KANSAS

SRB
924 N. 25TH MAIN
WICHITA, KANSAS 67203
http://www.feist.com/~srb
316-264-8008
FAX 264-4621
E-Mail: srb@feist.com
SAVOY, RUGGLES & BOHM, P.A.
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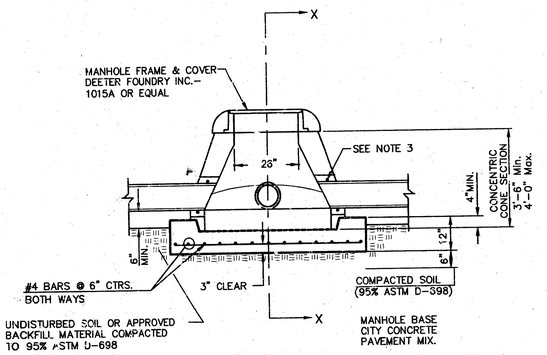
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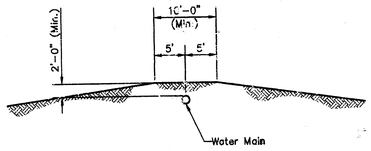
SHEET 5 OF 9



SHALLOW TYPE "P" MANHOLE

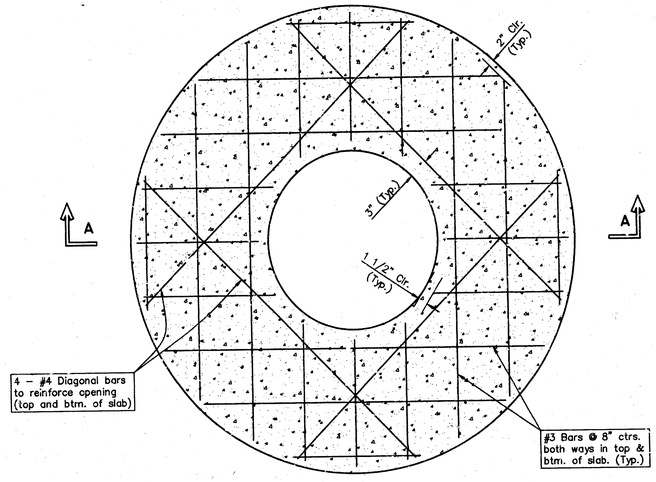


SPECIAL SHALLOW TYPE "P" MANHOLE

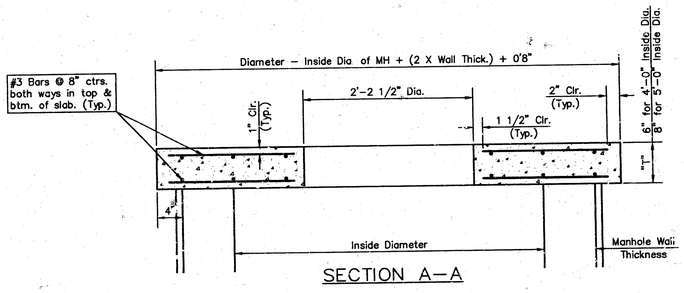


PROTECTIVE FILL DETAIL

Minimum protective fill shall be provided in all instances where cover over the proposed water line is less than two (2) feet. (cost subsidiary to pipe installation).

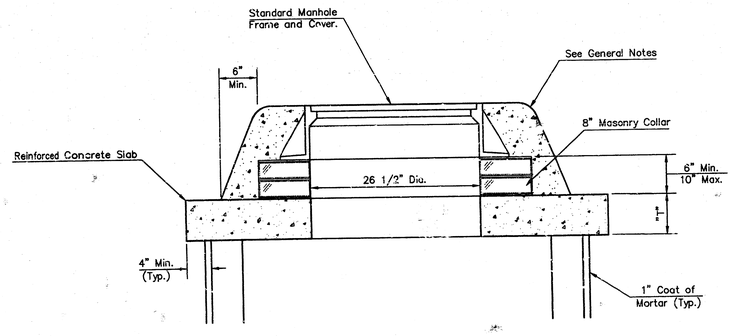


PLAN

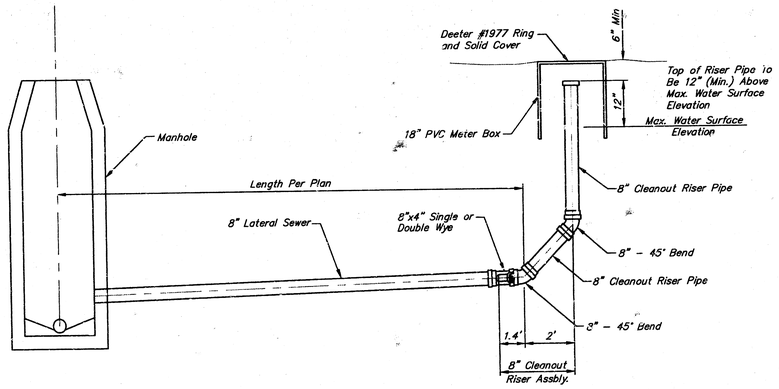


SECTION A-A

CONCRETE SLAB DETAILS



MASONRY COLLAR DETAIL



CLEANOUT RISER DETAIL

GENERAL NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER 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 THEMEC 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. 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.
13. 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.
14. 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.
15. ALL BRICK USED IN MANHOLE CONSTRUCTION SHALL MEET GRADE SW OF ASTM C652 OR C62-87.

SHALLOW TYPE "P" MANHOLE DETAILS

SRB 924 NORTH MAIN WICHITA KANSAS 67203 316-264-8008 FAX 264-4525
SAVOY, RUGGLES & BOHM, P.A.
ENGINEERING & SURVEYING

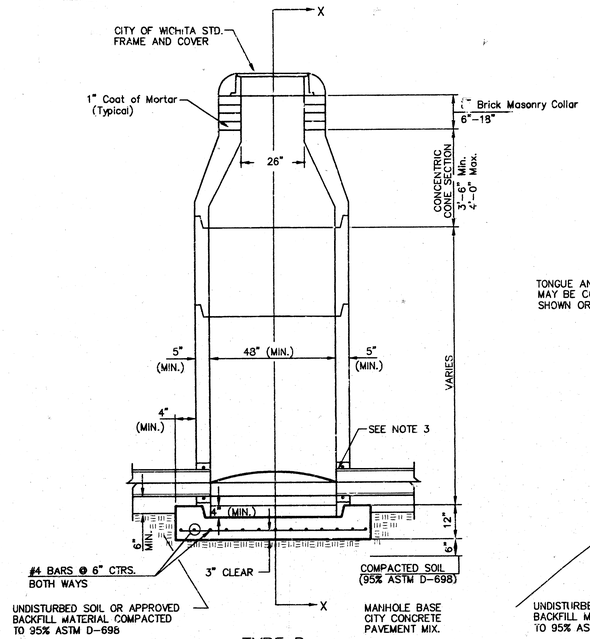
PROJECT NUMBER 468-82749

DRAWN	DESIGN	REVIEW	DATE	UTILITY	SRB JOB
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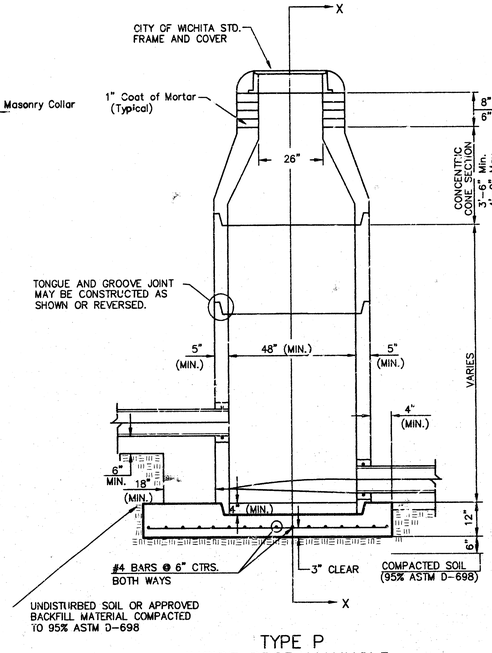
REVISED

DWG TITLE SHEET NUMBER 6 OF 9

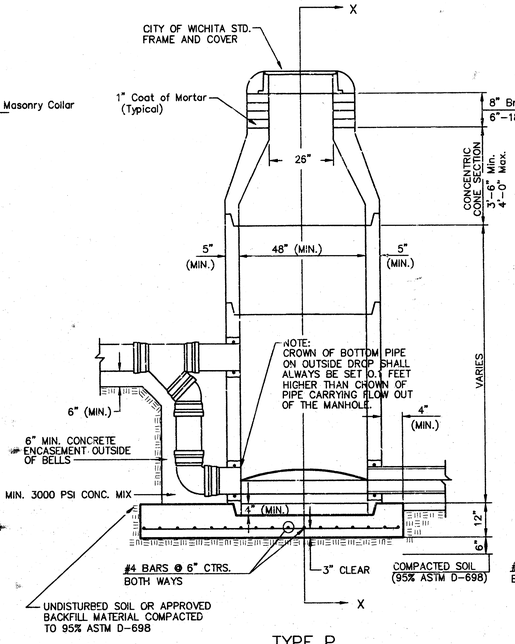
SEWER APPURTENANCES DETAILS



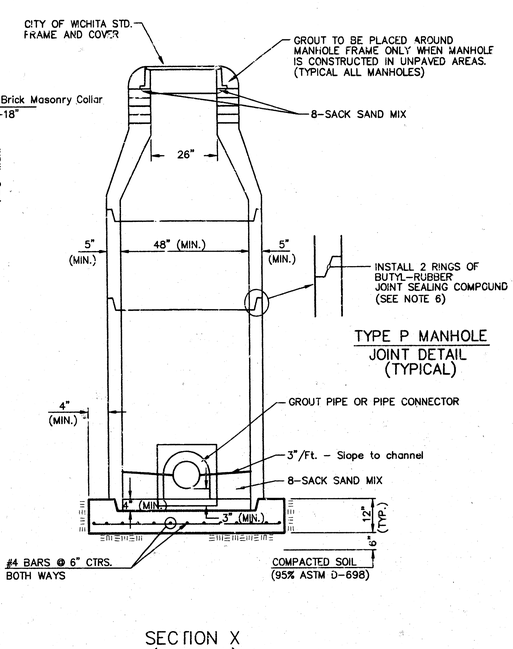
TYPE P
STANDARD MANHOLE



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.

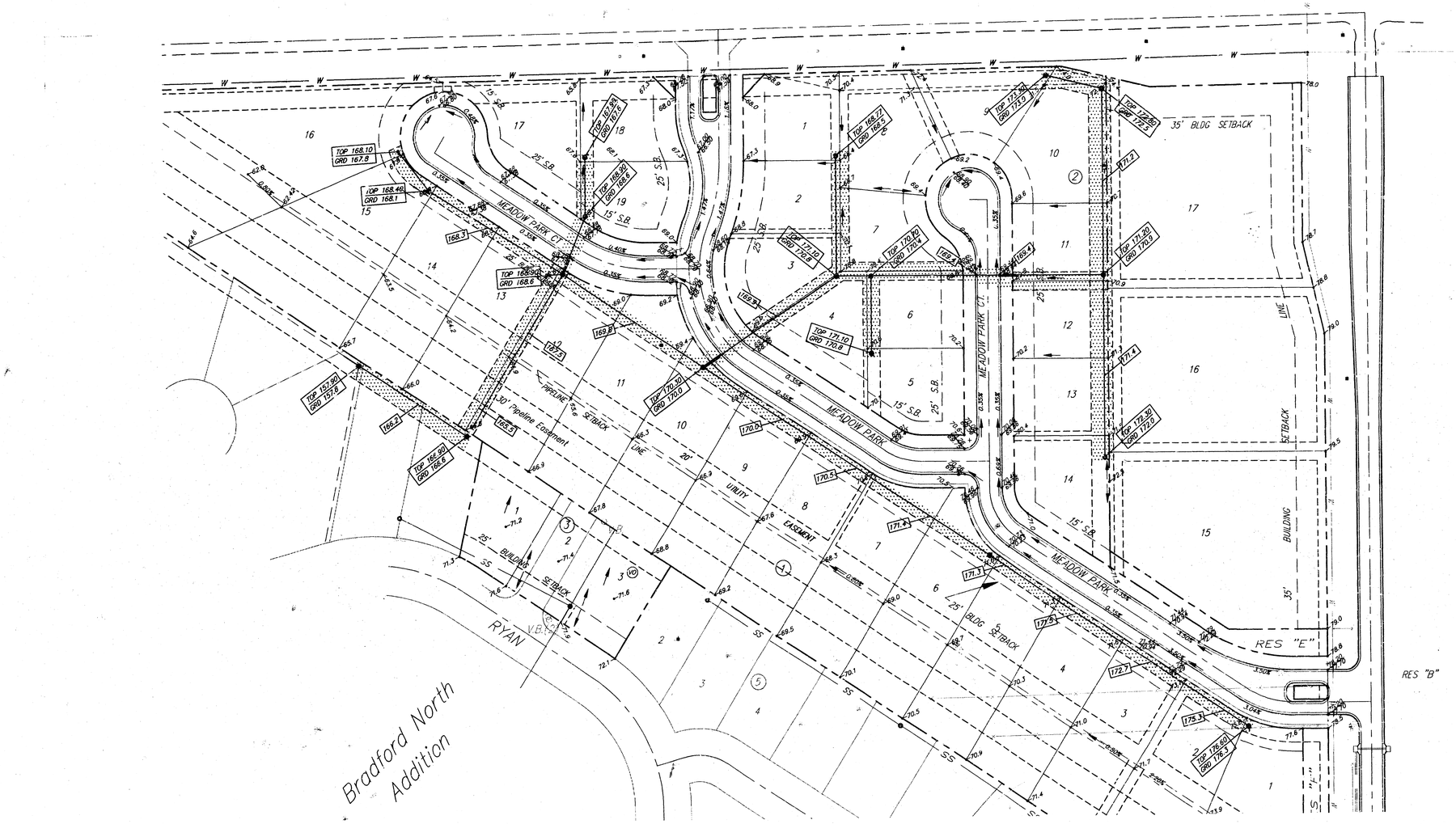
THE CITY OF WICHITA

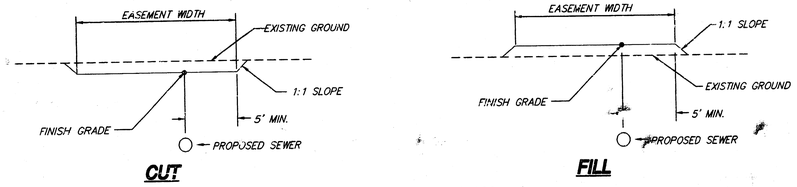
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4501
(316) 268-4114 FAX

STANDARD TYPE 'P' MANHOLES

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

PROJECT NUMBER	INDEX CODE
468-82749	743260
DATE MAR 96	SHEET 7 OF 9





CUT

FILL

TYPICAL GRADING SECTION

LEGEND

- 163.1 — FINISH ELEVATION THIS PROJECT
- 162.31 TC — PROPOSED TOP OF CURB ELEVATION
- 162.31 — PROPOSED GROUND ELEVATION
- EXISTING GROUND ELEVATION
- GRADING AREA – THIS PROJECT

SRB

Scale: 1" = 60'

EASEMENT GRADING PLAN
BRADFORD NORTH 3RD ADDITION
WICHITA, KANSAS

SRB
924 NORTH MAIN
WICHITA, KANSAS 67203
http://www.feist.com/~srb
316-264-8008
FAX 264-4621
E-mail: srb@feist.com

SAVOY, RUGGLES & BOHM, P. A.
ENGINEERING & SURVEYING

PROJECT NUMBER 468-82749

DESIGN	DRAWN	UTILITY	REVIEW	DATE	REVISED
CMB/KWL	KWL	.		Sept. 5, 1997	.

CASE FILE: Easement Grading

SHEET 8 OF 9

LINE 1

STATION	DEPTH Feet		AREAS Square Feet		VOLUMES Cubic Yards		CUMULATIVE VOLUMES Cubic Yards	
	FILL	CUT	FILL	CUT	FILL	CUT	FILL	CUT
0+21	1.06	0.00	23.32	0.00	21.96	0.00	21.96	0.00
0+50	0.86	0.00	17.94	0.00	28.69	0.00	46.54	0.00
1+00	0.53	0.00	10.38	0.00	19.57	0.00	63.21	0.00
1+50	0.50	0.00	10.25	0.00	9.49	0.00	77.70	0.00
2+00	0.00	0.00	0.00	0.00	0.00	0.00	77.70	0.00
2+30	0.00	0.00	0.00	0.00	8.90	0.00	86.60	0.00
2+71	0.57	0.00	11.72	0.00	154.15	0.00	240.75	0.00
3+42.1	4.33	0.00	105.35	0.00	177.34	0.00	418.09	0.00
3+96.7	3.04	0.00	70.04	0.00	71.30	0.00	489.39	0.00
4+24.6	2.96	0.00	67.96	0.00	72.08	0.00	561.48	0.00
4+50.1	3.59	0.00	84.69	0.00	151.34	0.00	712.81	0.00
5+10.2	2.30	0.00	51.29	0.00				

LINE 2

STATION	DEPTH Feet		AREAS Square Feet		VOLUMES Cubic Yards		CUMULATIVE VOLUMES Cubic Yards	
	FILL	CUT	FILL	CUT	FILL	CUT	FILL	CUT
0+00	3.90	0.00	93.21	0.00	177.01	0.00	177.01	0.00
0+50	4.07	0.00	97.96	0.00	185.61	0.00	362.62	0.00
1+00	4.23	0.00	102.49	0.00	194.31	0.00	556.93	0.00
1+50	4.40	0.00	107.38	0.00	198.55	0.00	755.48	0.00
2+00	4.39	0.00	107.07	0.00	129.50	0.00	884.98	0.00
2+33.46	4.21	0.00	101.92	0.00				

LINE 3

STATION	DEPTH Feet		AREAS Square Feet		VOLUMES Cubic Yards		CUMULATIVE VOLUMES Cubic Yards	
	FILL	CUT	FILL	CUT	FILL	CUT	FILL	CUT
0+00	4.00	0.00	96.00	0.00	164.55	0.00	164.55	0.00
0+50	3.48	0.00	81.71	0.00	138.35	0.00	302.89	0.00
1+00	2.95	0.00	67.70	0.00	114.54	0.00	417.43	0.00
1+50	2.49	0.00	56.00	0.00	92.15	0.00	509.58	0.00
2+00	1.98	0.00	43.52	0.00	54.51	0.00	564.09	0.00
2+50	0.74	0.00	15.35	0.00	9.27	0.00	573.36	0.00
2+82.61	0.00	0.00	0.00	0.00	0.00	1.50	573.36	1.50
3+00	0.00	0.23	0.00	0.00	0.00	21.12	573.36	22.62
3+50	0.00	0.87	0.00	0.00	0.00	36.05	573.36	58.67
4+00	0.00	0.99	0.00	0.00	0.00	33.65	573.36	92.32
4+50	0.00	0.75	0.00	0.00	0.00	23.90	573.36	116.22
5+00	0.00	0.50	0.00	0.00	0.00	22.12	573.36	138.34
5+50	0.00	0.66	0.00	0.00	0.00	27.04	573.36	165.37
6+00	0.00	0.75	0.00	0.00	0.00	28.42	573.36	193.80
6+50	0.00	0.73	0.00	0.00	0.00	40.70	573.36	234.50
7+00	0.00	1.35	0.00	0.00	0.00	67.87	573.36	302.37
7+50	0.00	2.02	0.00	0.00	0.00	97.70	573.36	400.07
8+00	0.00	2.69	0.00	0.00	0.00	95.70	573.36	495.77
8+50	0.00	1.93	0.00	0.00	0.00	64.63	573.36	560.60
9+00	0.00	1.30	0.00	0.00	0.00	27.68	573.36	588.28
9+32.14	0.00	0.90	0.00	0.00				

LINE 4

STATION	DEPTH Feet		AREAS Square Feet		VOLUMES Cubic Yards		CUMULATIVE VOLUMES Cubic Yards	
	FILL	CUT	FILL	CUT	FILL	CUT	FILL	CUT
0+21	2.10	0.00	46.41	0.00	45.82	0.00	45.82	0.00
0+36	1.06	0.00	22.32	0.00	19.43	0.00	65.25	0.00
0+65	0.67	0.00	13.85	0.00	25.05	0.00	90.30	0.00
1+10	0.78	0.00	16.21	0.00	25.86	0.00	116.16	0.00
1+60	0.57	0.00	11.72	0.00	0.00	0.00	122.47	0.00
1+89.06	0.00	0.00	0.00	0.00	0.00	31.46	122.47	31.46
2+36	0.00	1.67	0.00	36.19	0.00	98.76	122.47	130.21
3+00	0.00	2.13	0.00	47.14	0.00	87.35	122.47	217.57
3+43	0.00	2.75	0.00	62.56	0.00	65.28	122.47	282.84
3+71	0.00	2.78	0.00	63.33	0.00	61.29	122.47	344.13
4+00	0.00	2.28	0.00	50.80	0.00	83.81	122.47	427.94
4+50	0.00	1.82	0.00	39.71	0.00	67.91	122.47	495.85
5+00	0.00	1.56	0.00	33.63	0.00	57.52	122.47	553.47
5+50	0.00	1.34	0.00	28.60	0.00	49.20	122.47	602.68
6+00	0.00	1.16	0.00	24.55	0.00	42.99	122.47	645.67
6+50	0.00	1.04	0.00	21.88	0.00	24.45	122.47	670.12
6+?.36	0.00	0.45	0.00	10.04				

LINE 5

STATION	DEPTH Feet		AREAS Square Feet		VOLUMES Cubic Yards		CUMULATIVE VOLUMES Cubic Yards	
	FILL	CUT	FILL	CUT	FILL	CUT	FILL	CUT
0+00	0.00	1.20	0.00	25.44	0.00	48.36	0.00	48.36
0+50	0.00	1.26	0.00	26.79	0.00	30.97	0.00	79.33
0+85	0.00	1.00	0.00	21.00				

LINE 6

STATION	DEPTH Feet		AREAS Square Feet		VOLUMES Cubic Yards		CUMULATIVE VOLUMES Cubic Yards	
	FILL	CUT	FILL	CUT	FILL	CUT	FILL	CUT
0+00	0.33	0.00	6.09	0.00	1.69	0.00	1.69	0.00
0+15	0.00	0.00	0.00	0.00	0.00	6.64	1.69	6.64
0+50	0.00	0.50	0.00	10.25	0.00	34.92	1.69	41.56
1+00	0.00	1.29	0.00	27.46	0.00	39.58	1.69	81.14
1+32.04	0.00	1.80	0.00	39.24				

LINE 7

STATION	DEPTH Feet		AREAS Square Feet		VOLUMES Cubic Yards		CUMULATIVE VOLUMES Cubic Yards	
	FILL	CUT	FILL	CUT	FILL	CUT	FILL	CUT
0+00	0.00	1.70	0.00	0.00	0.00	28.59		
0+50	0.00	1.44	0.00	30.87	0.00	51.73		
1+00	0.00	1.18	0.00	24.99	0.00	40.76		
1+50	0.00	0.91	0.00	19.03	0.00	36.05		
2+00	0.00	0.98	0.00	20.56	0.00	34.05		
2+50	0.00	0.78	0.00	16.21	0.00	9.88		
2+67.38	0.00	0.70	0.00	14.49				

PROJECT TOTALS	
FILL	CUT
2295.3 CY	1620.5 CY

EASEMENT GRADING EARTHWORK SUMMARY
BRADFORD NORTH 3RD ADDITION
WICHITA, KANSAS

SRB
924 NORTH MAIN
WICHITA, KANSAS 67203
http://www.feist.com/~srb
316-264-8008
FAX 264-4621
E-mail: srb@feist.com
SAVOY, RUGGLES & BOHM, P. A.
ENGINEERING & SURVEYING

PROJECT NUMBER 468-82749

DESIGN	DRAWN	UTILITY	REVIEW	DATE	REVISED
KWL	KWL			Oct. 13, 1997	

SRB JOB 7024

SHEET 9 OF 9

CAD FILE

10-02-03 02