

GENERAL NOTES:

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

Kansas One-Call 687-2470

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

Cox Communications 262-4270
 Kansas Gas Service 1-888-482-4950
 Westar Energy 383-8650
 Black Hills Energy 1-800-303-0357
 AT&T 268-2245
 City of Andover Public Works 733-1303
 Conoco Phillips Pipeline Co. 1-877-267-2290
 Southern Star Pipeline Co. 529-6600
 Kinder-Morgan Pipeline Co. 1-888-844-5658

2. Utility service lines, poles, valve boxes, meters, and etcetera are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.

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, in the opinion of the Engineer, that 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 buried 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.

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 give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) days notice prior to start of construction.

6. 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.

7. All existing and proposed erosion control measures including silt fencing, erosion control mat, straw bales, inlet barriers, and const. entrance shall be maintained throughout construction by the contractor and until project is accepted by the City of Wichita. The on-site engineer shall complete weekly reports on the status of erosion control measures. The contractor shall be required to comply with maintenance and/or replacement of erosion control measures as determined by the on-site engineer until project is accepted by City of Wichita. Maintenance and/or replacement of erosion control measures to be paid by L.S. bid item "Site Restoration".

8. All excess excavation shall remain on-site and shall be stockpiled or spread at a location determined by the engineer.

9. 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 work.

10. All areas disturbed during construction shall be seeded at 300 lbs./acre with Rye Grass immediately following construction in that area. Contractor shall prepare ground per City Specifications.

11. Construction Staking and Testing (Tv and Air) is to be provided by the Contractor and to be included as L.S. bid item "Site Clearing & Restoration".

12. Sanitary Sewer Services to the following lots, shall not be constructed until after the adjacent Storm Water Sewer Lines have been completely constructed.

Lot Block
 46-48 A
 10-12 B
 18 C

At that point the Services shall be constructed over the top of the Storm Water Sewer Line and meeting the required specifications listed on sheet 12, Vertical Riser Assembly Sewer Detail.

13. Main benefit fee must be paid on all property.

T. Mason - City of Wichita, Inspector
 Stubs & Risers
 Release Date: 01/20/2016
 :aprosas 2/12/2016

AS BUILT PLANS

Contractor: Nowak
 Inspector: Don Eddingfield, Baughman Co.
 pdf's by: KEK, 9/5/14

SANITARY SEWER IMPROVEMENTS to serve CASTLEGATE ADDITION Private Project Sewer: 2194 PPS (607861) CITY OF WICHITA, KANSAS

Gary Janzen, P.E. - City Engineer
 April 2014

Benchmarks

"X" CUT ON TOP OF CURB INLET NORTH SIDE OF CENTRAL 30' EAST OF THE INTERSECTION OF CENTRAL AND FIREFLY.
 N: 4997.42 E: 4999.10
 ELEV. = 1341.99 (NAVD88)

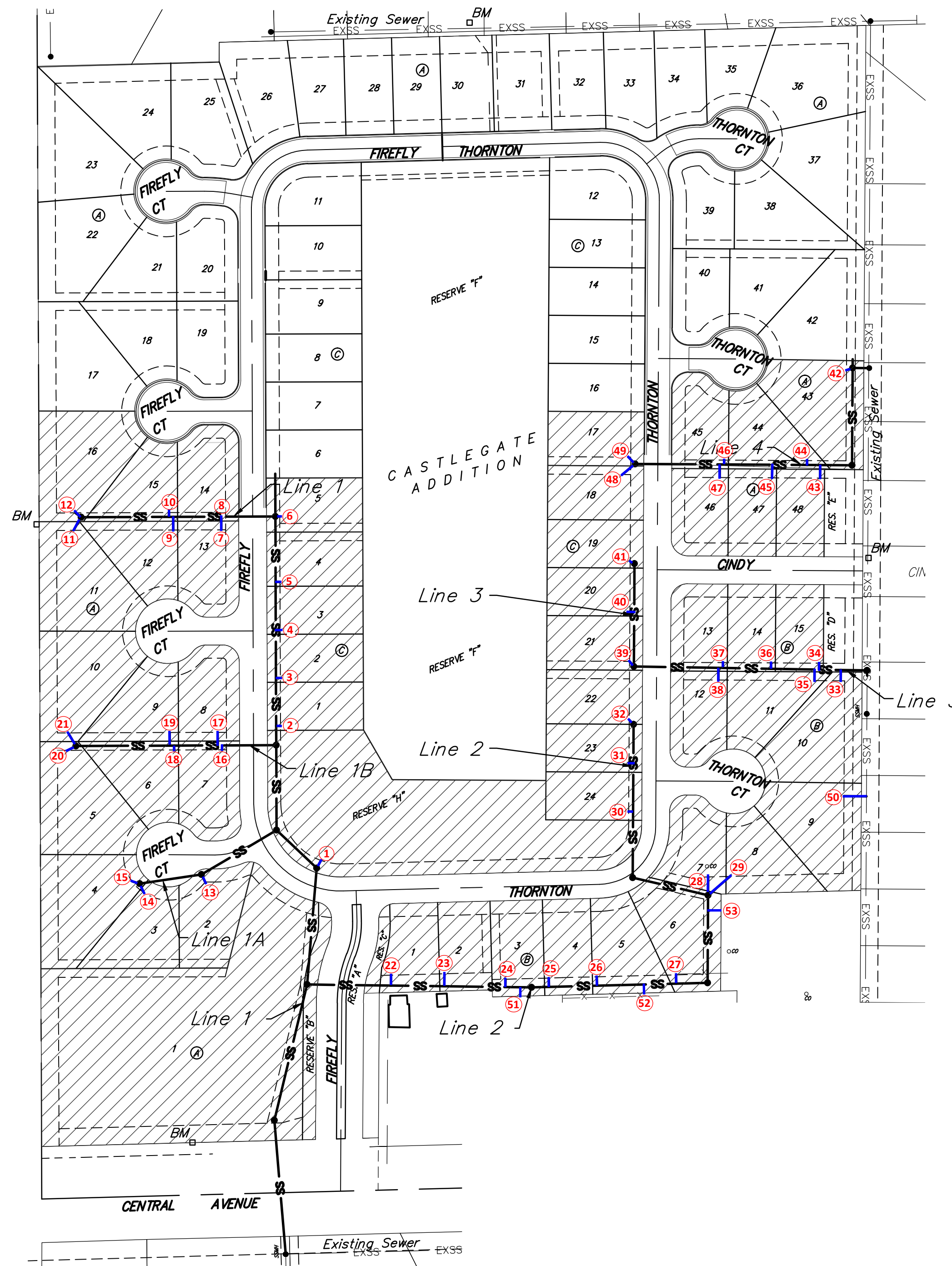
"X" CUT IN CURB INLET EAST SIDE OF AZURE ST. NEAR NORTH END OF CASTLEGATE ADDITION
 N: 6320.08 E: 5589.16
 ELEV. = 1342.58 (NAVD88).

"X" CUT IN NORTH SIDE OF CURB ALONG EXISTING CINDY DRIVE, ONE JOINT BACK FROM EDGE OF PAVEMENT, NEAR EAST EDGE OF CASTLEGATE ADDITION.
 N: 5698.62 E: 6050.20
 ELEV. = 1342.38

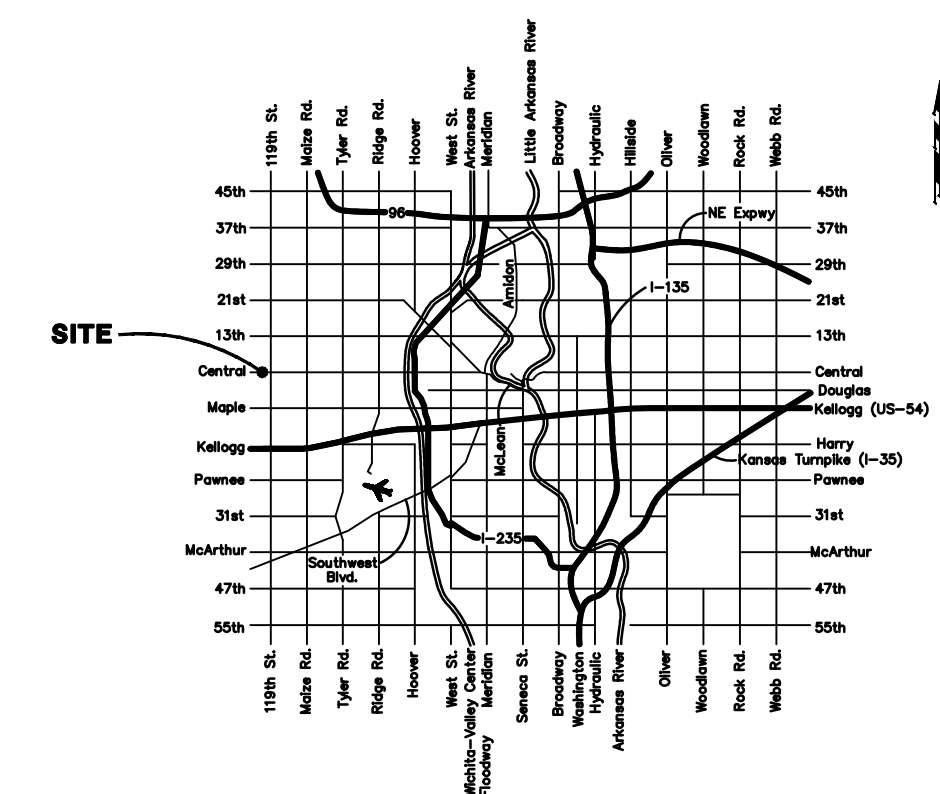
#4 REBAR ALONG EXISTING FENCE LINE NEAR SWS CORNER OF LOT 11 BLOCK A, CASTLEGATE ADDITION.
 N: 5625.17 E: 5089.21
 ELEV. = 1343.56

Sheet Index

Title Sheet	1
Line 1	2-3
Lines 1A & 1B	4
Lines 2	5-6
Line 3	7
Lines 4	8
Existing Line/ SS Services	9
Standard & Shallow Manhole Detail	10
Manhole Frame & Cover Detail	11
Standard Riser Detail	12
Erosion Control Plan	13
Erosion Control BMP Details	14
Copy of Plat	15

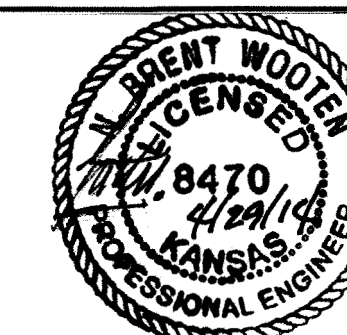
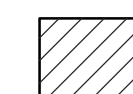


APPROVED AS NOTED
 BY CITY ENGINEER OF WICHITA
 Engineering *Rebecca Orif 9/14*
 NOTE TO CONTRACTORS
 Inspection and testing for this project are to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita 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.



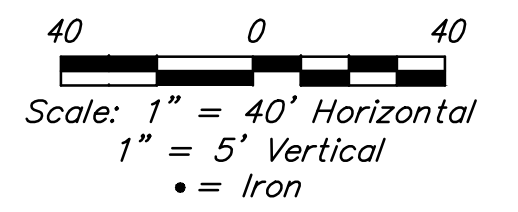
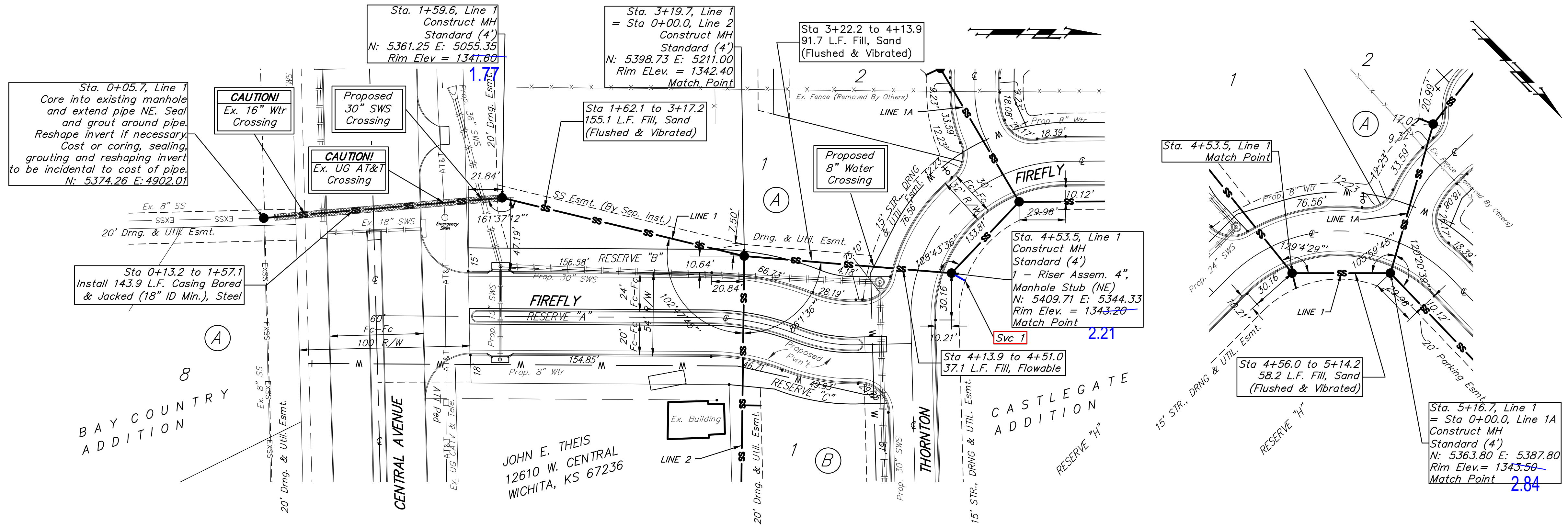
Vicinity Map

Benefit District

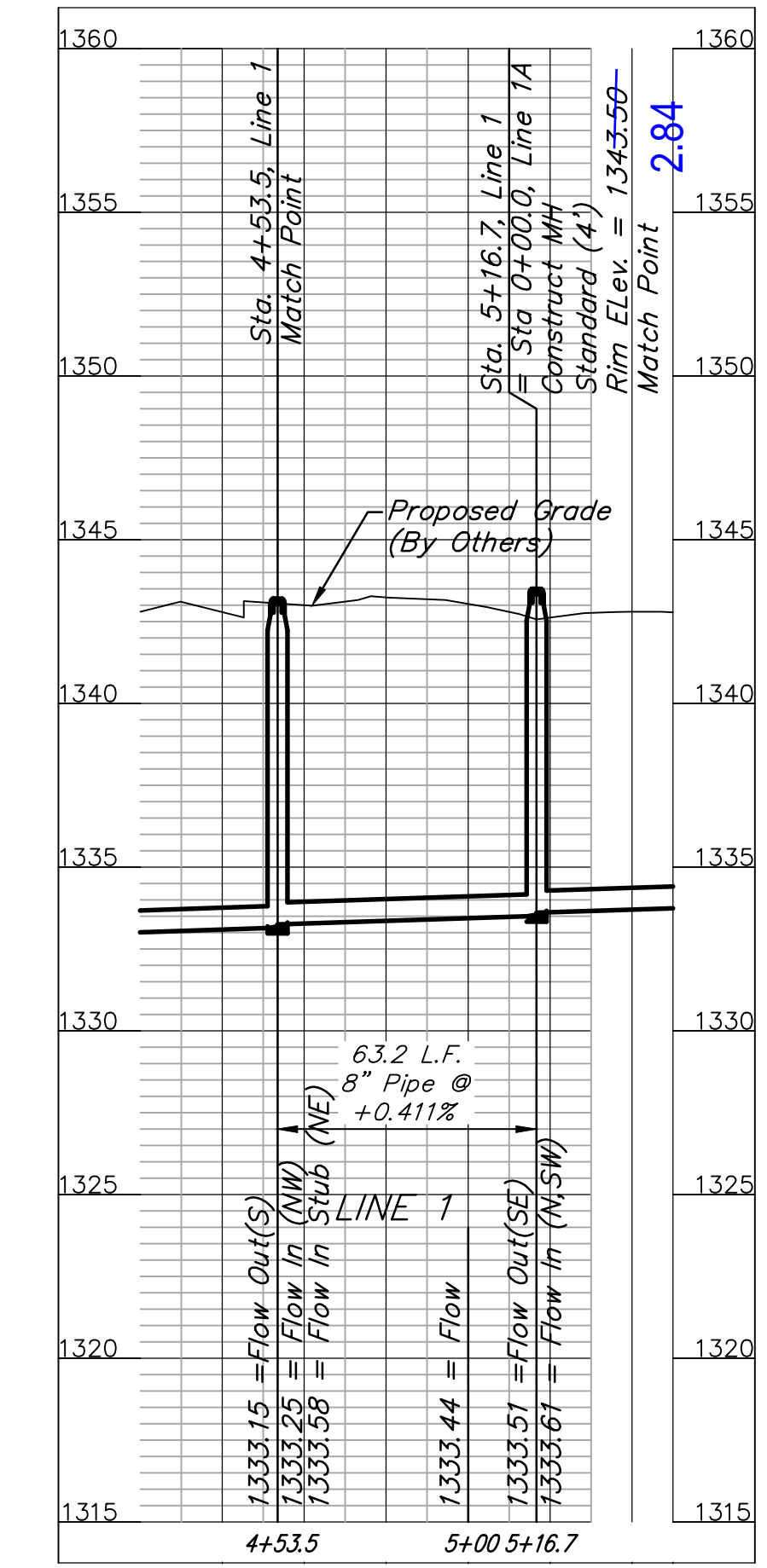
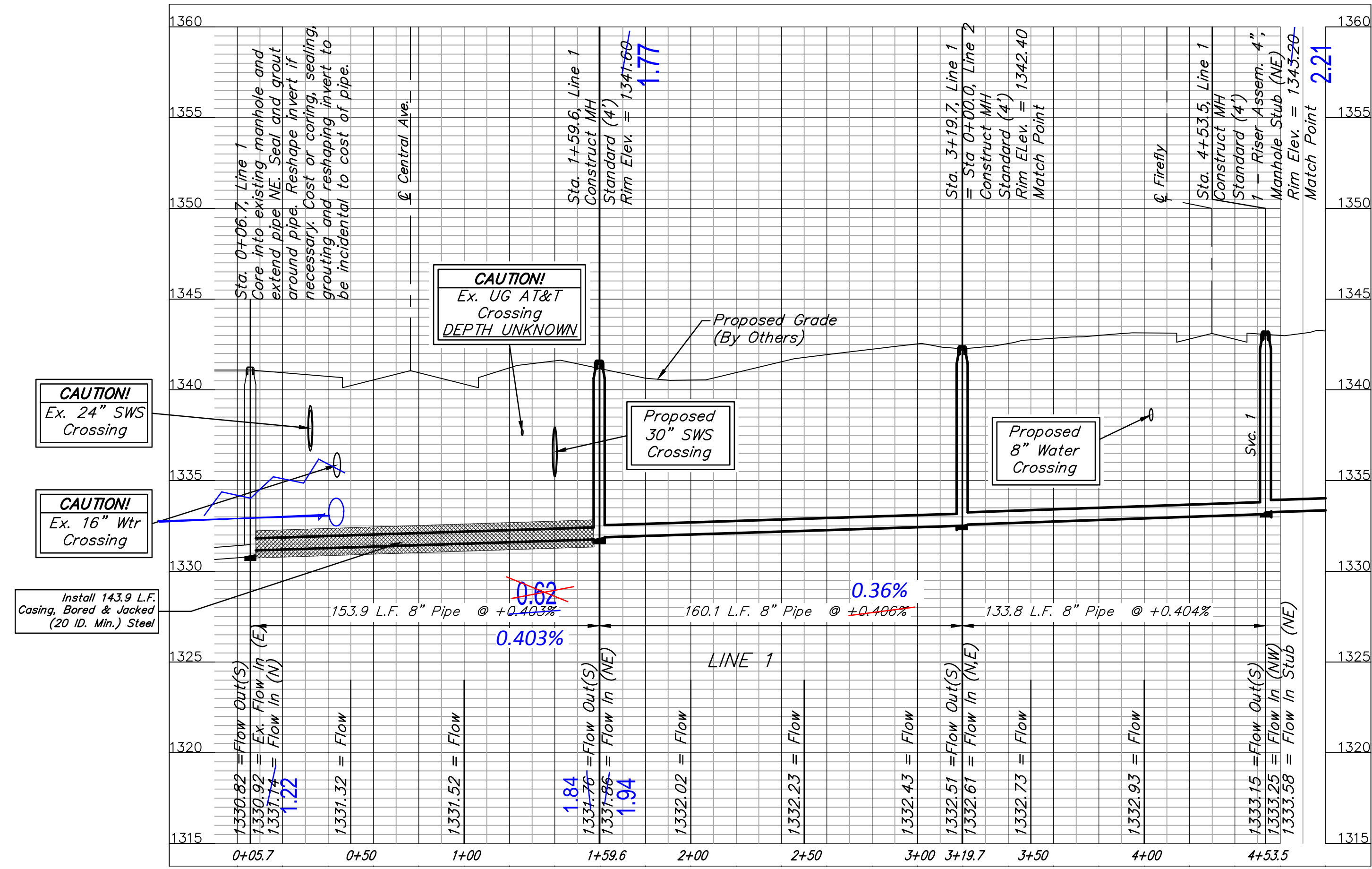


Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

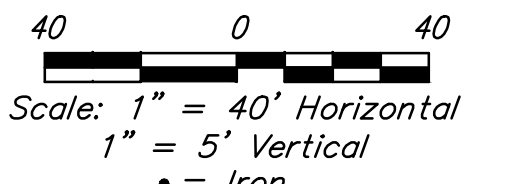
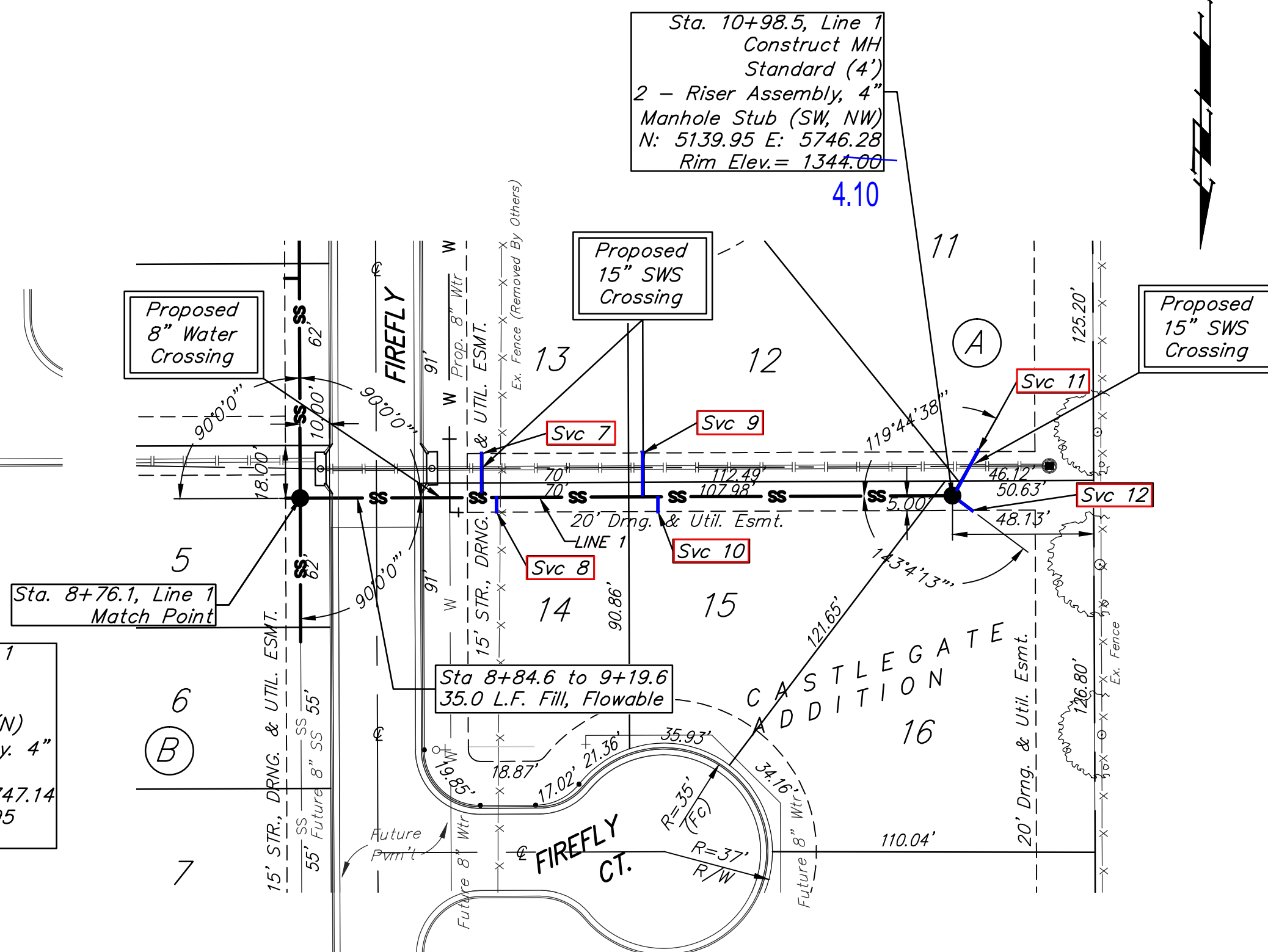
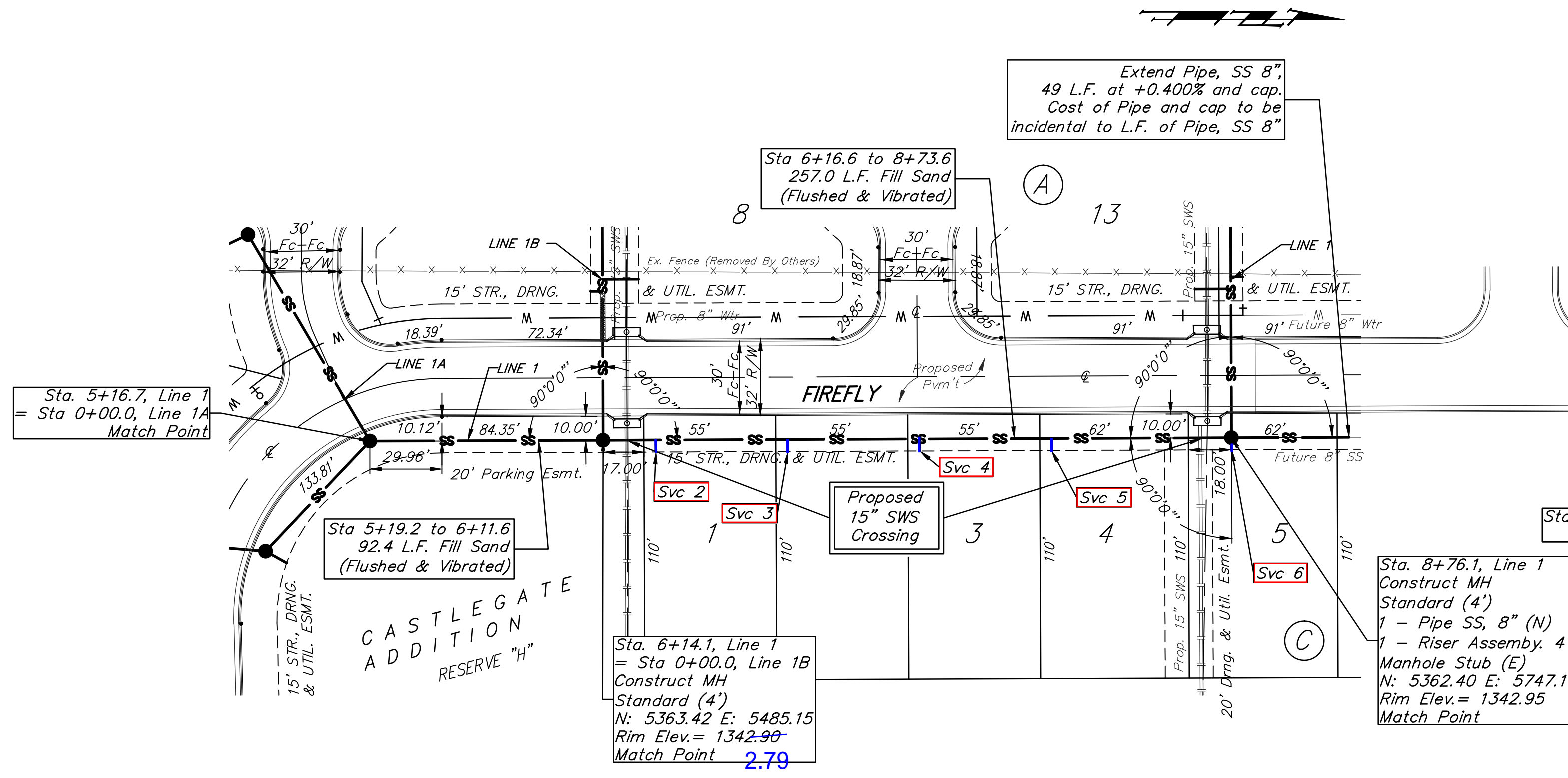
The cost of the installation of the pipe being placed inside of the Steel casing, being installed, by boring and jacking is not incidental to the L.F. bid item "Casing Bored and Jacked (20" ID Min.), Steel. It shall be bid as L.F. bid item "Pipe, SS 8".



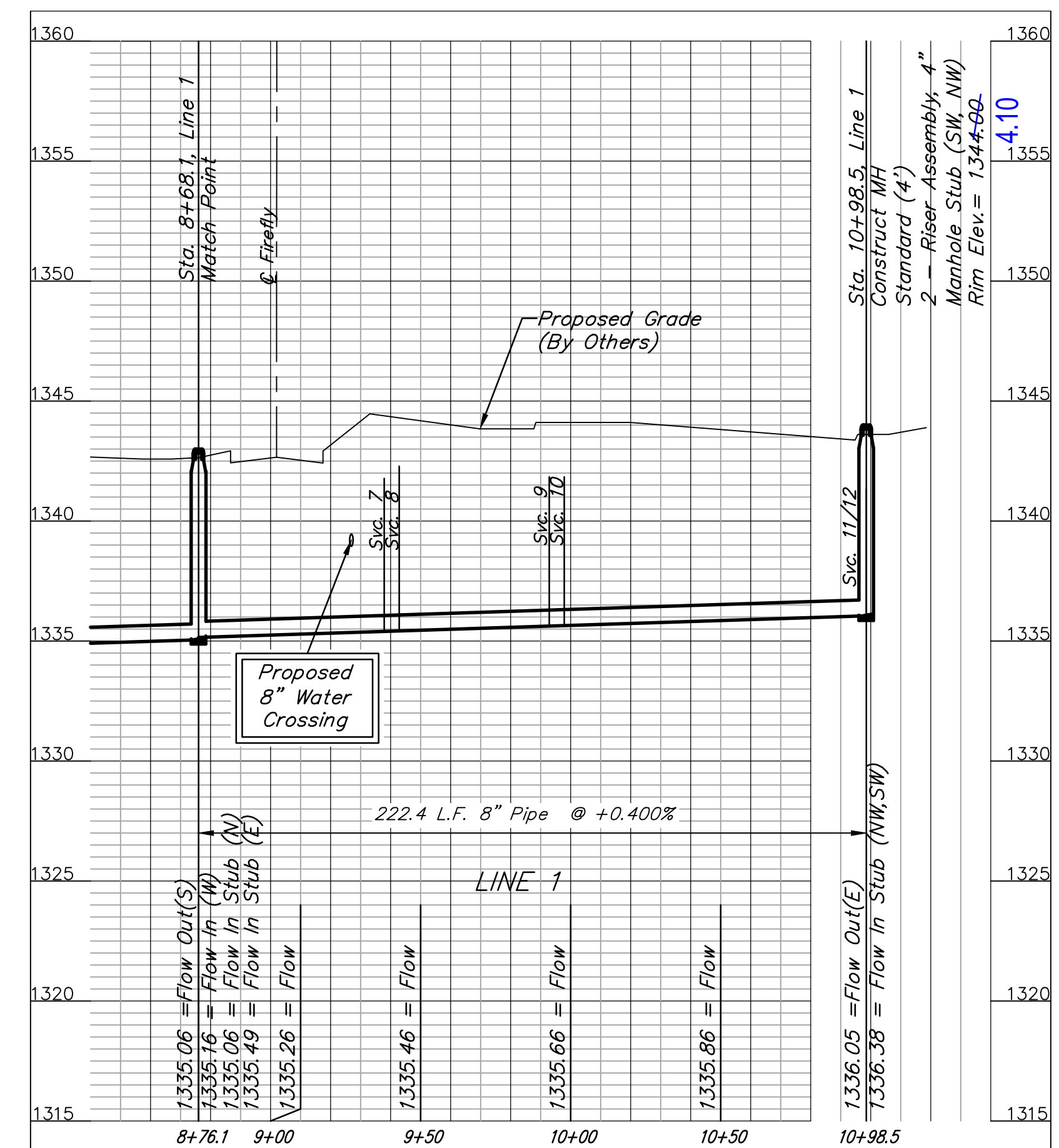
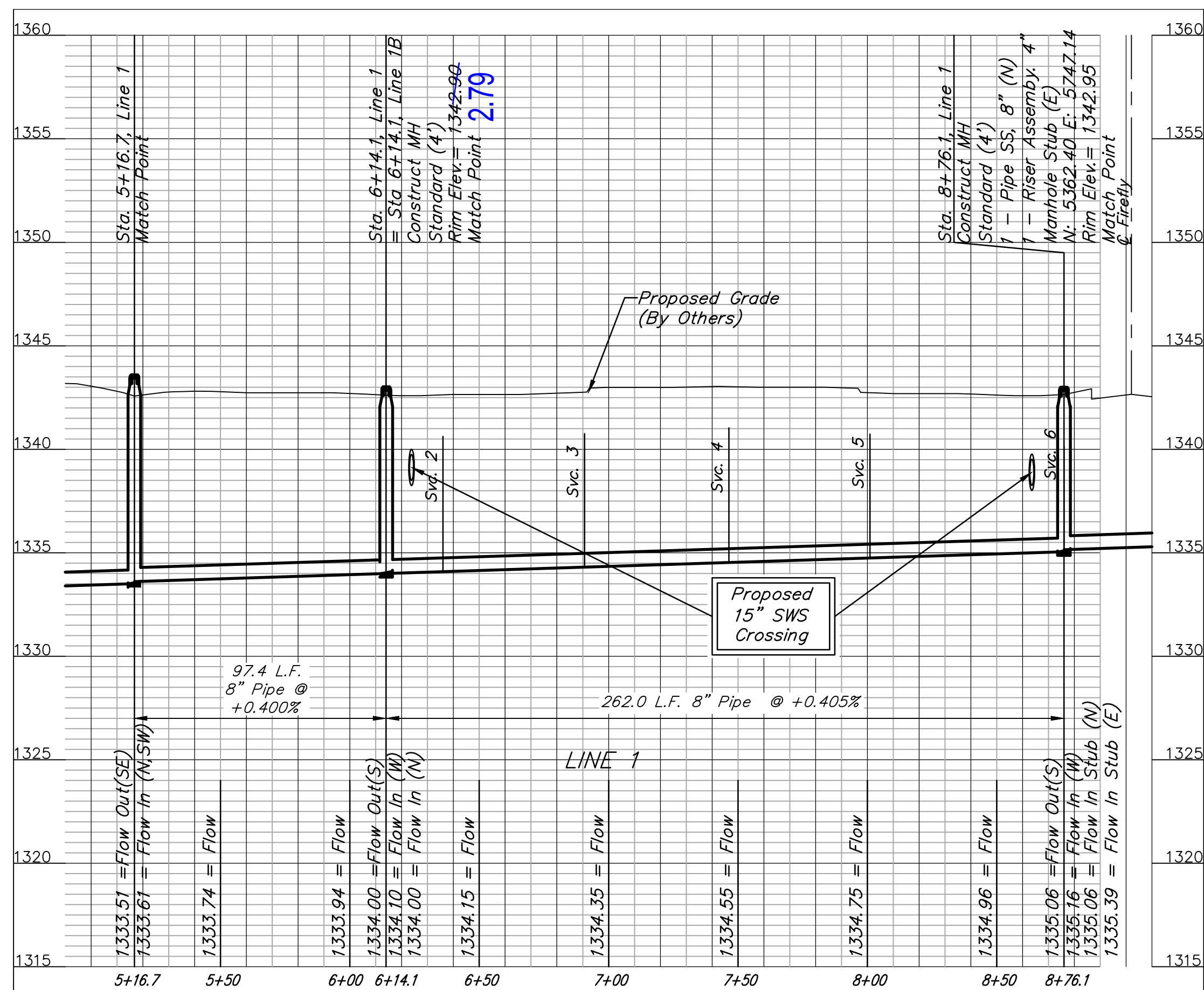
BENCHMARKS:
 "X" CUT IN TOP OF CURB INLET NORTH SIDE OF CENTRAL 30' EAST OF THE INTERSECTION OF CENTRAL AND FIREFLY.
 N: 4997.42 E: 4999.10
 ELEV. = 1341.99 (NAVD88)
 "X" CUT IN CURB INLET EAST SIDE OF AZURE ST. NEAR NORTH END OF CASTLEGATE ADDITION
 N: 6320.08 E: 5589.16
 ELEV. = 1342.58 (NAVD88)
 "X" CUT IN NORTH SIDE OF CURB ALONG EXISTING CINDY DRIVE, ONE JOINT BACK FROM EDGE OF PAVEMENT, NEAR EAST EDGE OF CASTLEGATE ADDITION.
 N: 5698.62 E: 6050.20
 ELEV. = 1342.38
 #4 REBAR ALONG EXISTING FENCE LINE NEAR SWS CORNER OF LOT 11 BLOCK A, CASTLEGATE ADDITION.
 N: 5625.17 E: 5089.21
 ELEV. = 1343.56



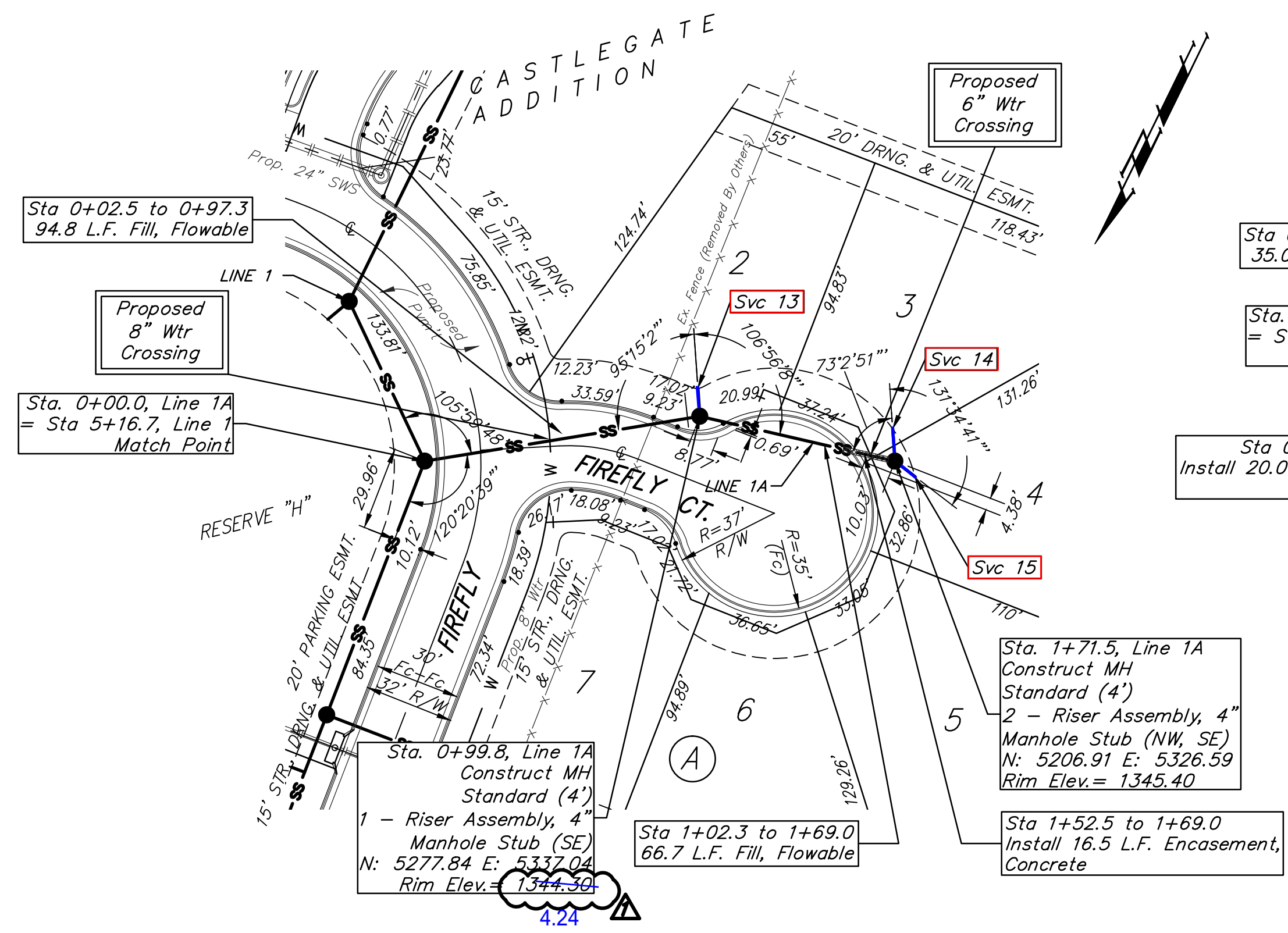
		CASTLEGATE ADDITION LINE 1 SANITARY SEWER IMPROVEMENTS	
		PROJECT NUMBER: _____ REVISIONS: _____	DESIGN: JCS DRAWN: JCS APPROVED: _____ DATE: 4-29-14
SCALE: Noted SHEET:		2 OF 15	



BENCHMARKS:
 "X" CUT ON TOP OF CURB INLET NORTH SIDE OF CENTRAL 30' EAST OF THE INTERSECTION OF CENTRAL AND FIREFLY.
 N: 4997.42 E: 4999.10
 ELEV. = 1341.99 (NAVD88)
 "X" CUT IN CURB INLET EAST SIDE OF AZURE ST. NEAR NORTH END OF CASTLEGATE ADDITION
 N: 6320.08 E: 5589.16
 ELEV. = 1342.58 (NAVD88).
 "X" CUT IN NORTH SIDE OF CURB ALONG EXISTING GINDY DRIVE, ONE JOINT BACK FROM EDGE OF PAVEMENT, NEAR EAST EDGE OF CASTLEGATE ADDITION.
 N: 5098.02 E: 6050.20
 ELEV. = 1342.38
 #4 REBAR ALONG EXISTING FENCE LINE NEAR SWS CORNER OF LOT 11 BLOCK A, CASTLEGATE ADDITION.
 N: 5625.17 E: 5089.21
 ELEV. = 1343.56



		CASTLEGATE ADDITION	
		LINE 1 SANITARY SEWER IMPROVEMENTS	
Baughman Company, P.A. 315 Ellis St., Wichita, KS 67211 P: 316-262-7271 F: 316-262-0149 ENGINEERING SURVEYING PLANNING LANDSCAPE ARCHITECTURE		DESIGN	DRAWN
PROJECT NUMBER		JCS	JCS
REVISIONS:		APPROVED	DATE
		SCALE	4/29/14
		Noted	
		SHEET	
		3 OF 15	
E:/Projects/Castlegate Add./Engineering/Phase I/SS Plans.dwg 14-01-E004			

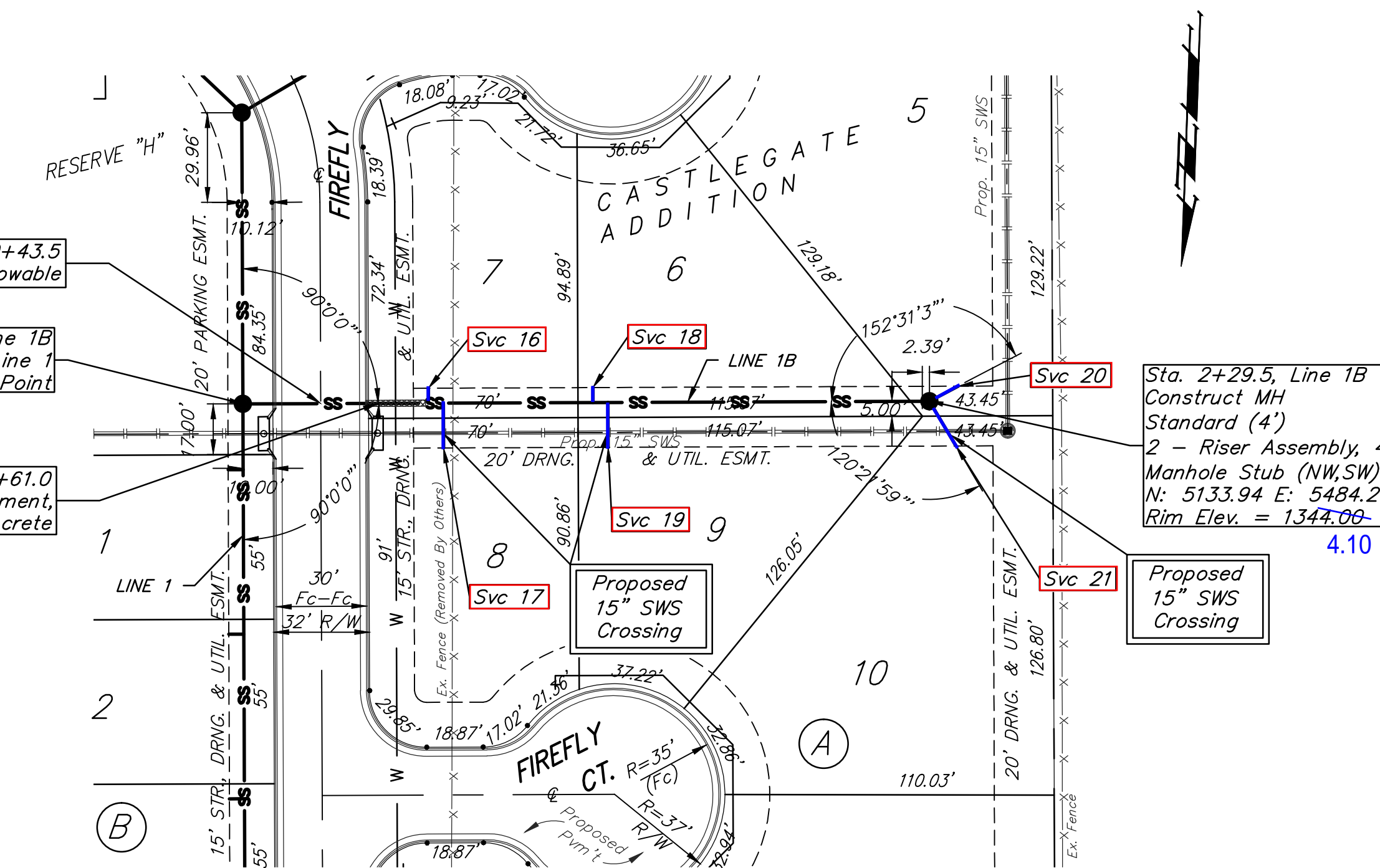


Sta 0+08.5 to 0+43.5
35.0 L.F. Fill, Flowable

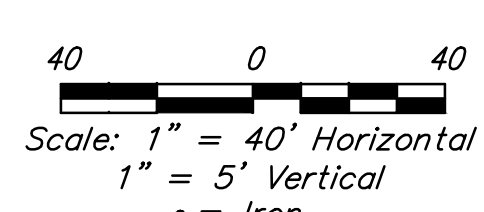
Sta 0+41.0 to 0+61.0
Install 20.0 L.F. Encasement, Concrete

Sta. 1+71.5, Line 1A
Construct MH
Standard (4")
2 - Riser Assembly, 4"
Manhole Stub (NW, SE)
N: 5206.91 E: 5326.59
Rim Elev. = 1345.40

Sta 1+52.5 to 1+69.0
Install 16.5 L.F. Encasement, Concrete



Sta. 2+29.5, Line 1B
Construct MH
Standard (4")
2 - Riser Assembly, 4"
Manhole Stub (NW,SW)
N: 5133.94 E: 5484.26
Rim Elev. = 1344.00-4.10

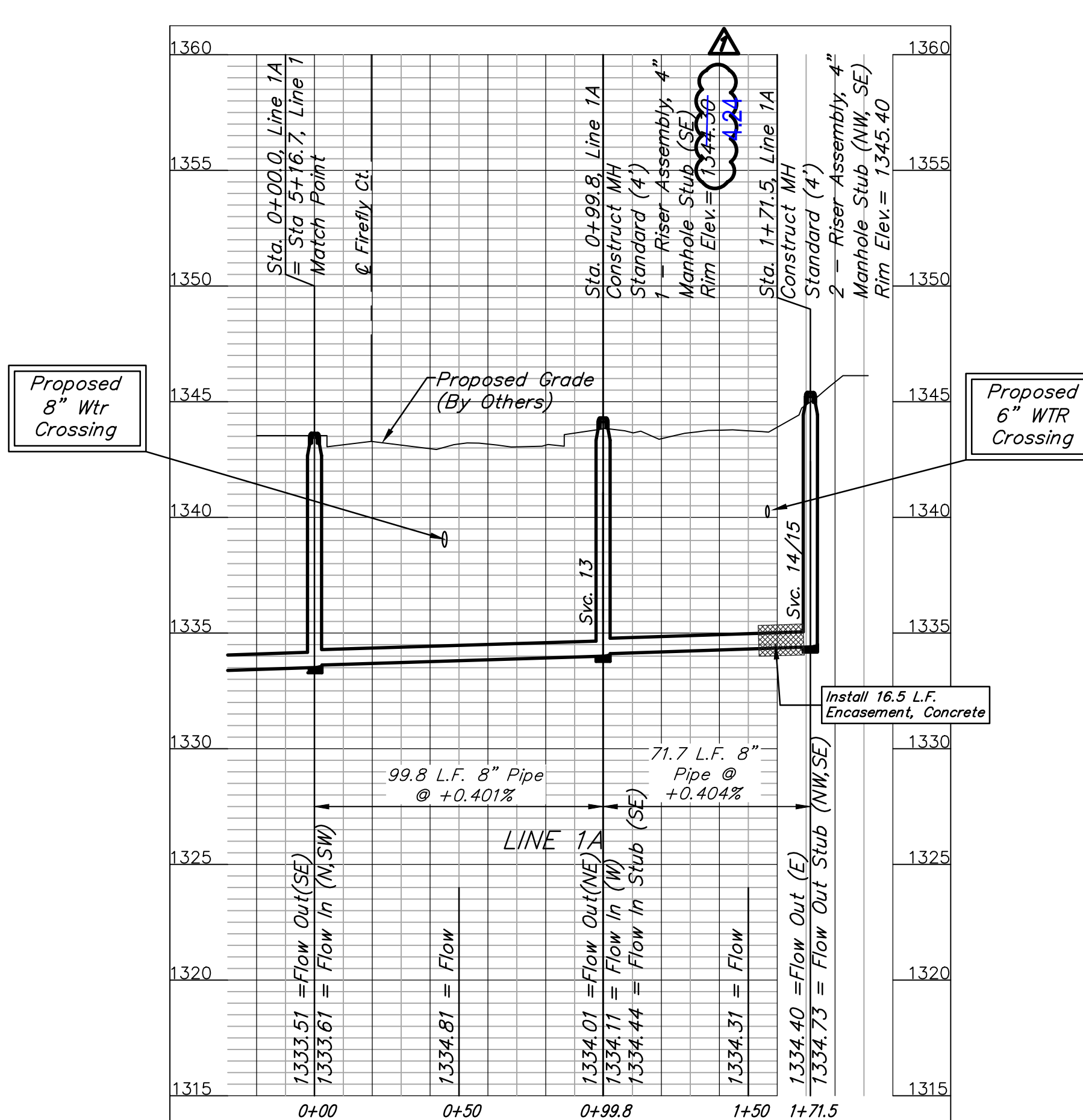


BENCHMARKS:
"X" CUT ON TOP OF CURB INLET NORTH SIDE OF CENTRAL 30' EAST OF THE INTERSECTION OF CENTRAL AND FIREFLY.
N: 4997.42 E: 4999.10
ELEV. = 1341.99 (NAVD88)

"X" CUT IN CURB INLET EAST SIDE OF AZURE ST. NEAR NORTH END OF CASTLEGATE ADDITION
N: 6320.08 E: 5589.16
ELEV. = 1342.58 (NAVD88).

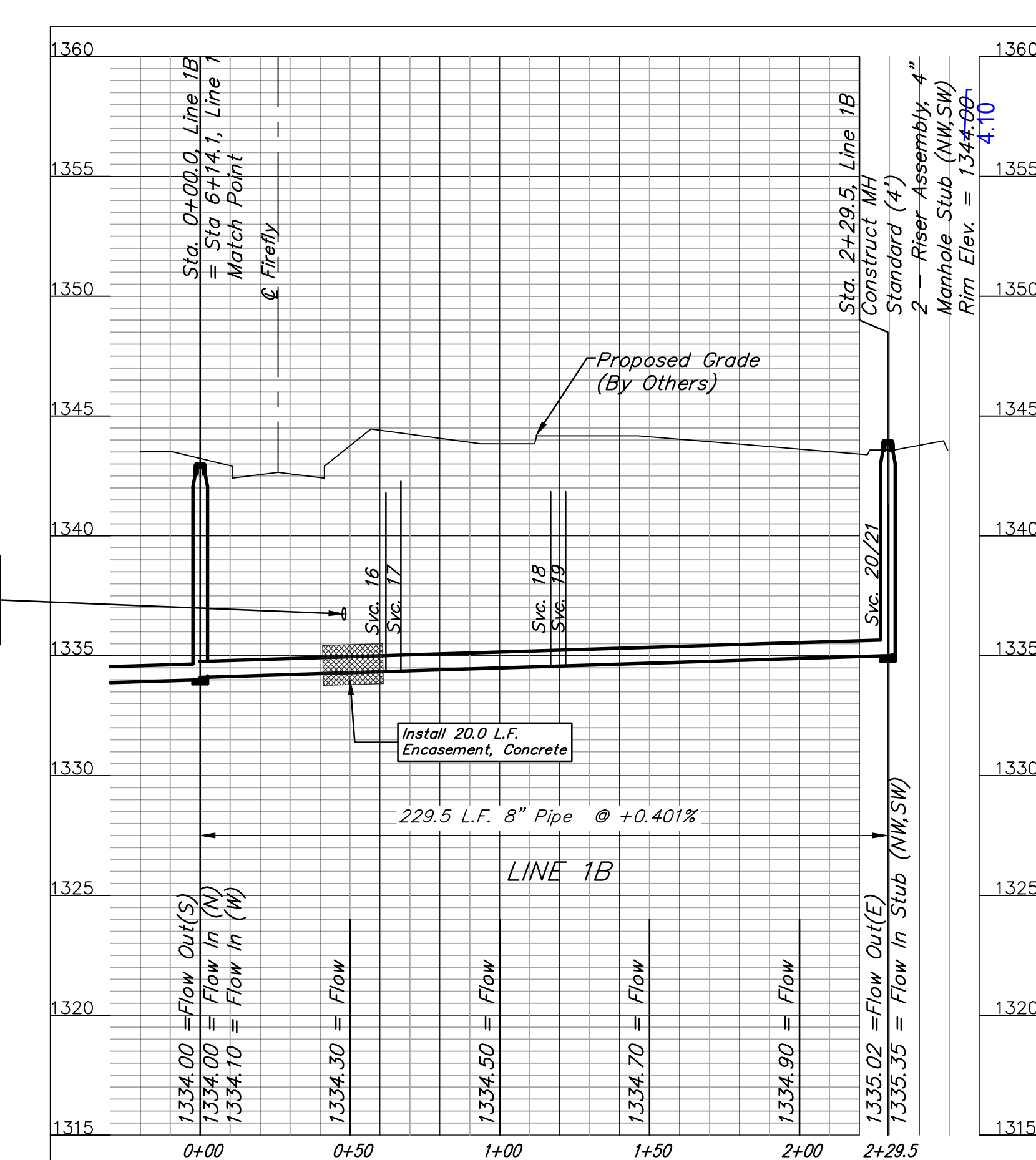
"X" CUT IN NORTH SIDE OF CURB ALONG EXISTING CINDY DRIVE, ONE JOINT BACK FROM EDGE OF PAVEMENT, NEAR EAST EDGE OF CASTLEGATE ADDITION.
N: 5698.62 E: 6050.20
ELEV. = 1342.38

#4 REBAR ALONG EXISTING FENCE LINE NEAR SWS CORNER OF LOT 11 BLOCK A, CASTLEGATE ADDITION.
N: 5625.17 E: 5089.21
ELEV. = 1343.56



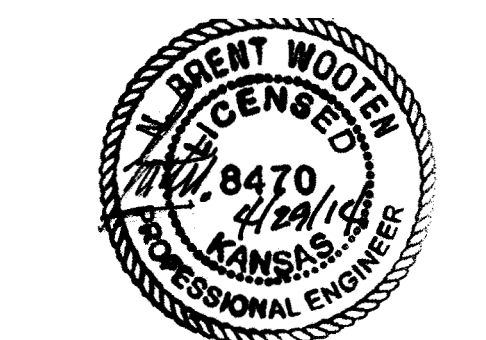
Proposed 8" WTR Crossing

Install 16.5 L.F. Encasement, Concrete

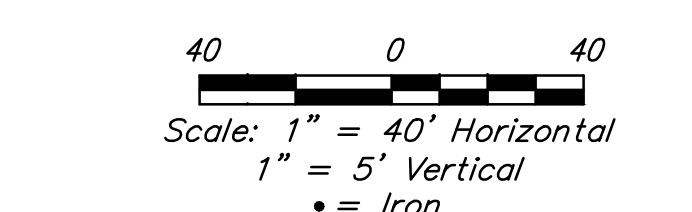
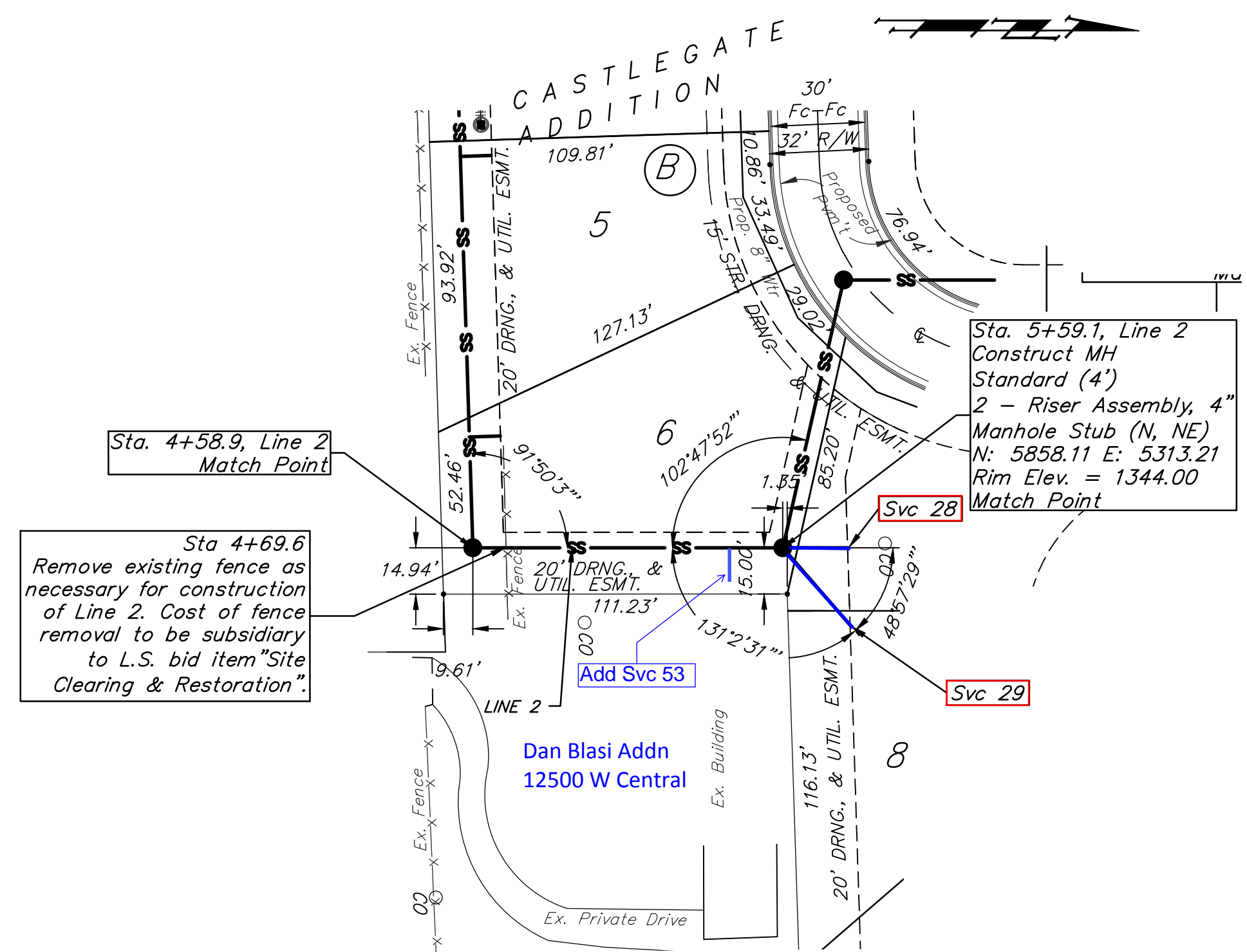
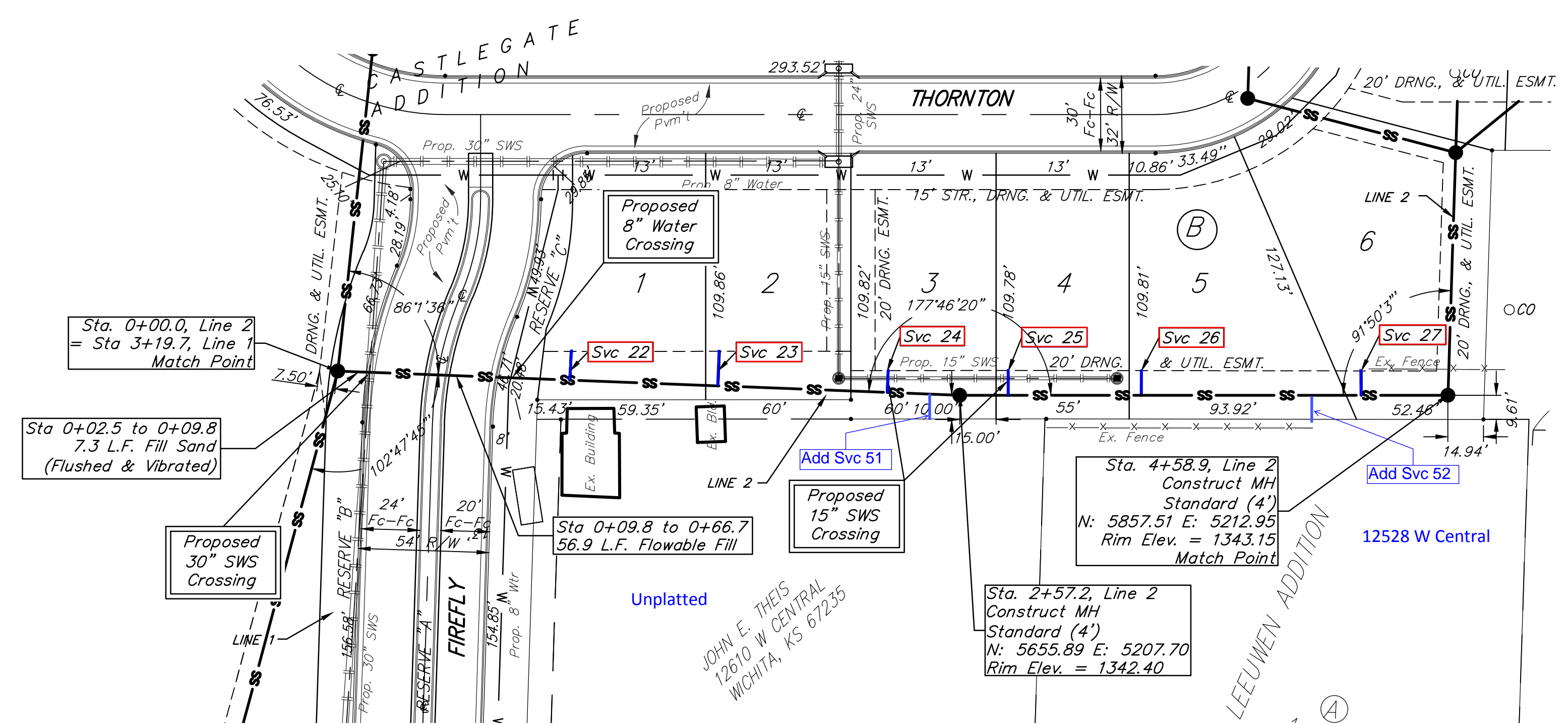


Proposed 8" WTR Crossing

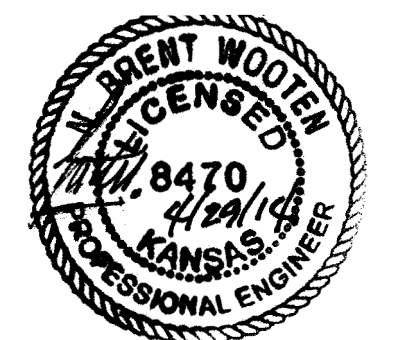
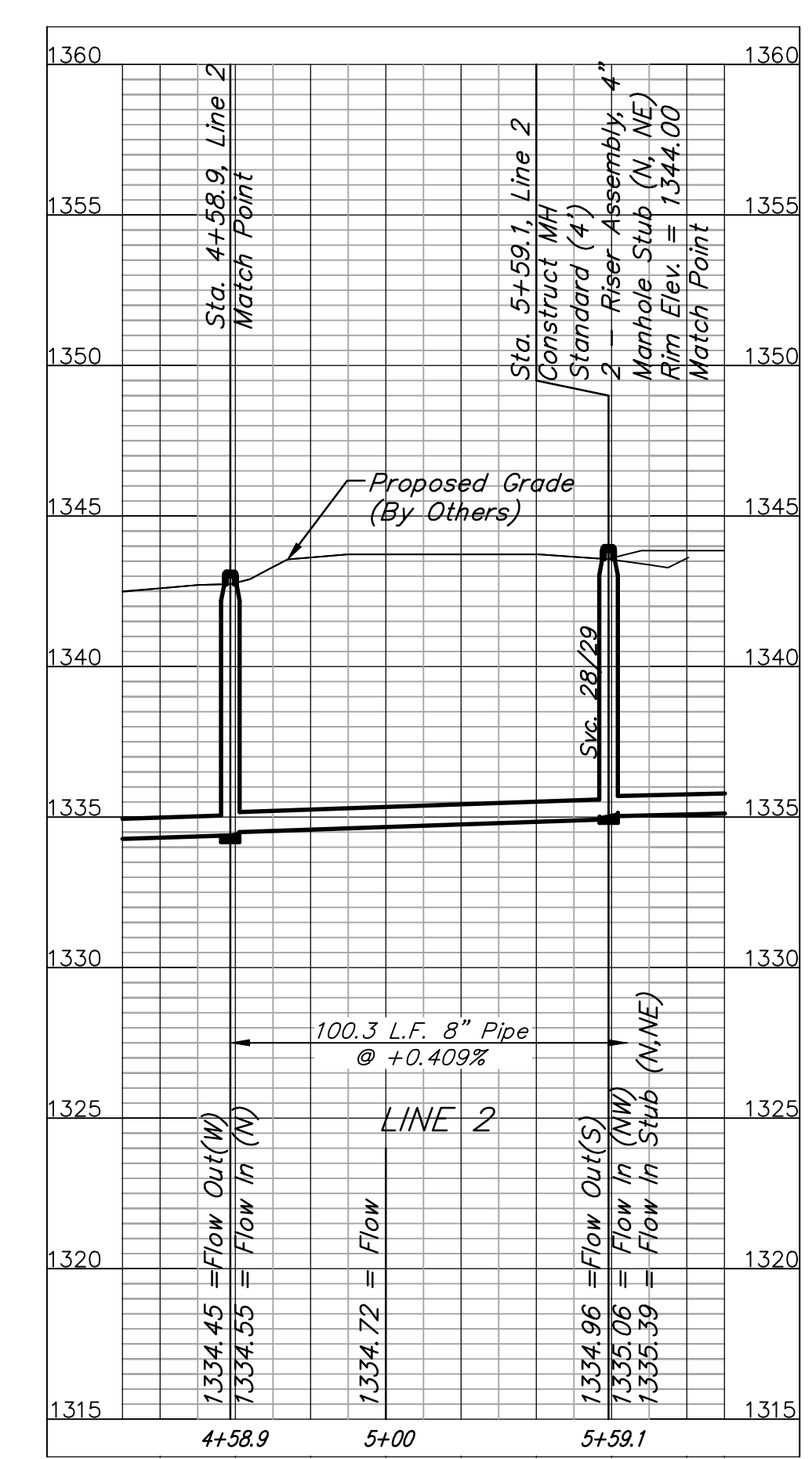
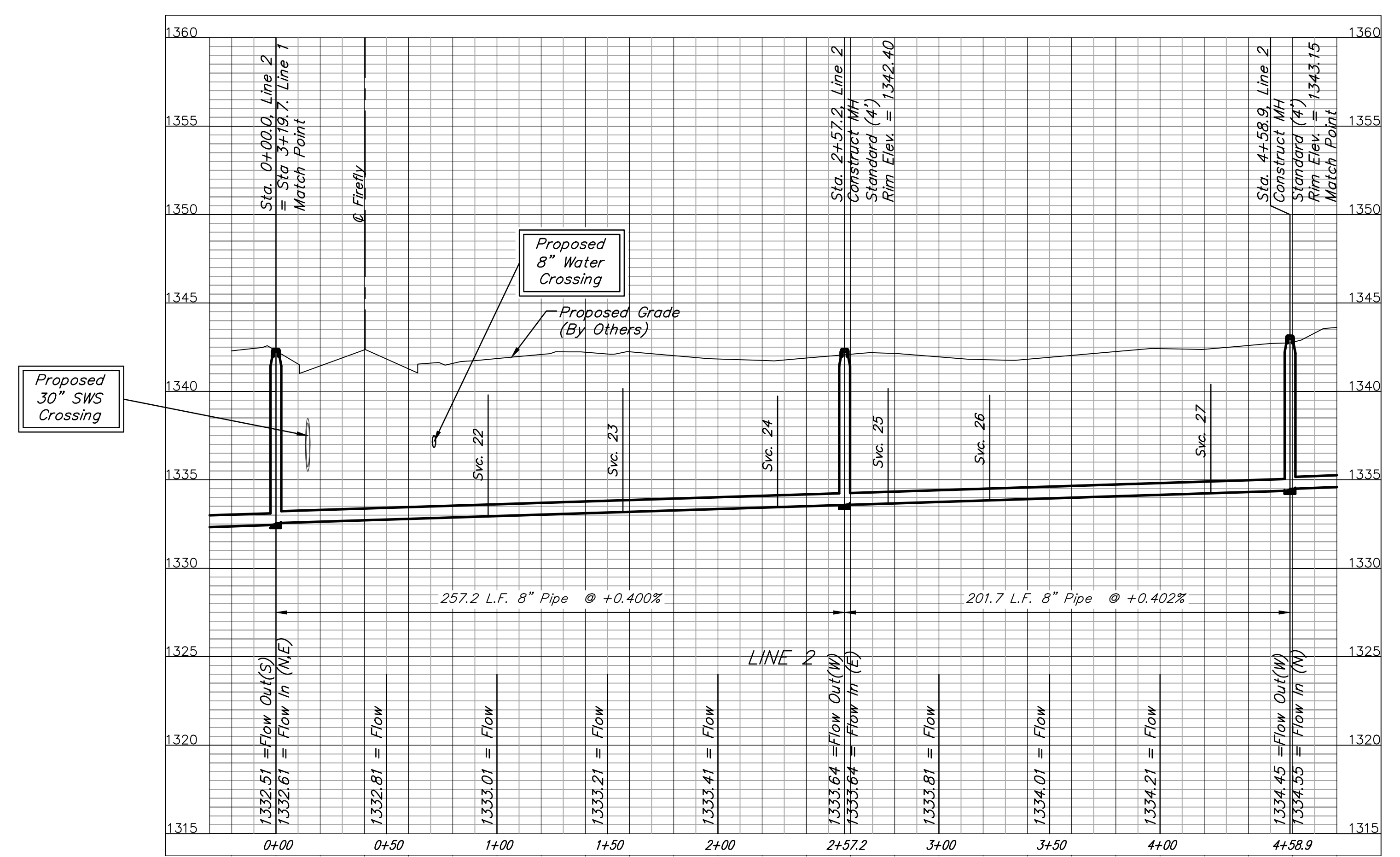
Install 20.0 L.F. Encasement, Concrete



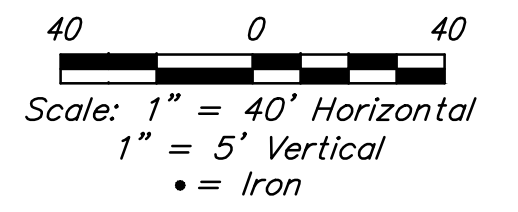
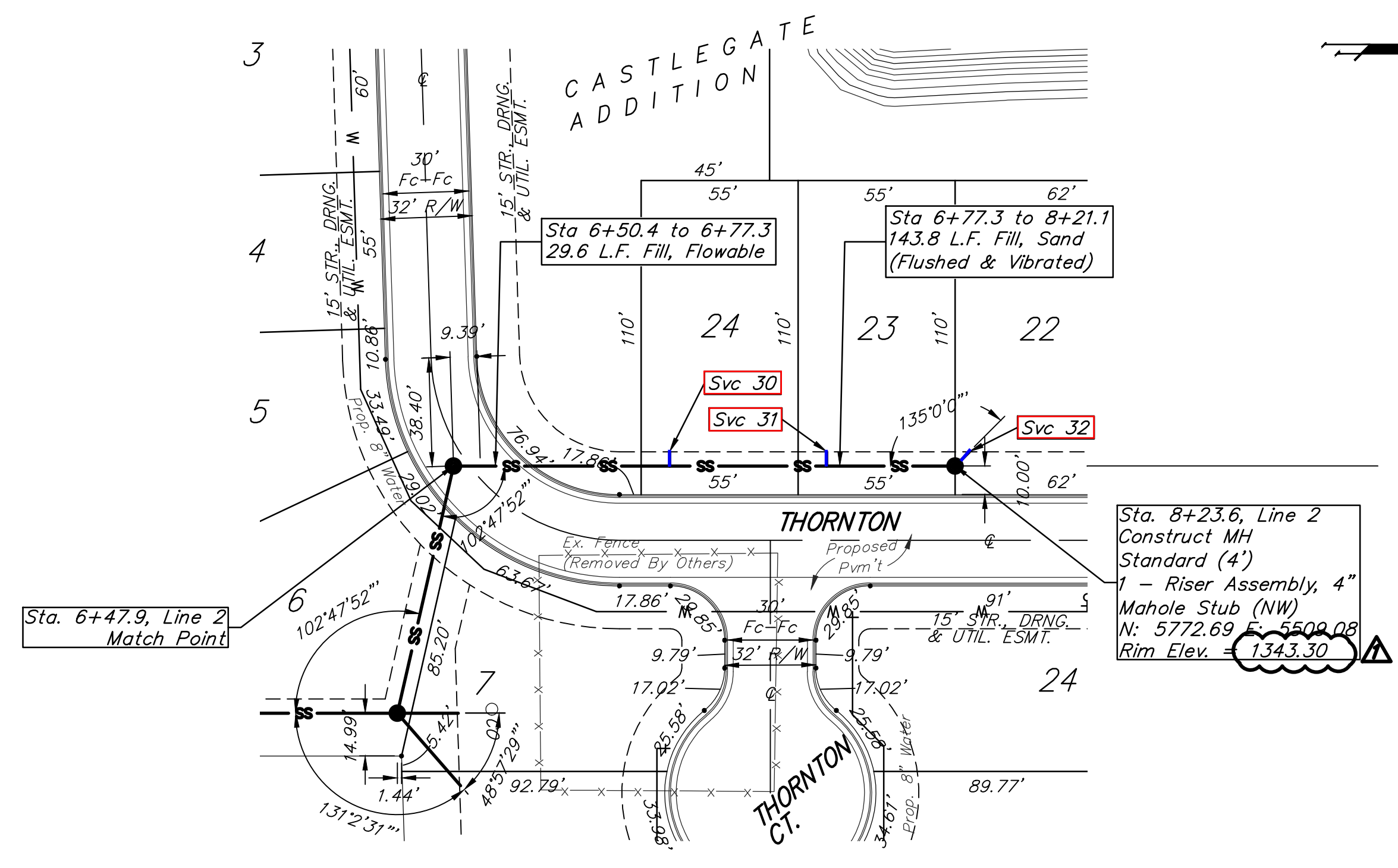
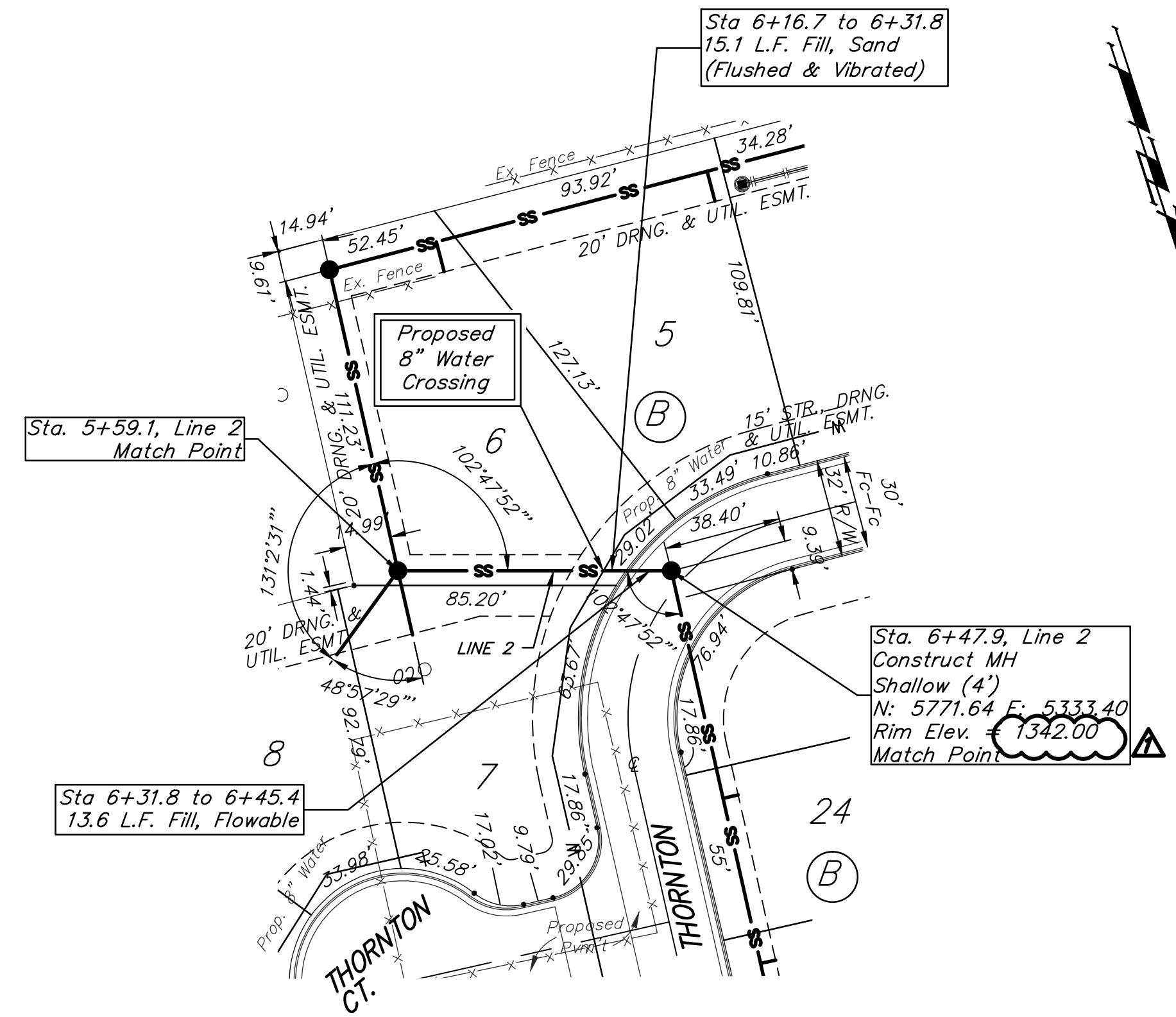
		CASTLEGATE ADDITION LINES 1A & 1B SANITARY SEWER IMPROVEMENTS	
		<small>Baughman Company, P.A. 315 Ellis St., Wichita, KS 67211 P 316-262-2771 F 316-262-0149 ENGINEERING SURVEYING PLANNING LANDSCAPE ARCHITECTURE</small>	
PROJECT NUMBER		DESIGN	DRAWN
REVISIONS:	TMS	JCS	JCS
05/07/14		APPROVED	DATE
Revise MH Top			4-29-14
		SCALE	
		Noted	
		SHEET	
		4 OF 15	



BENCHMARKS:
 "X" CUT ON TOP OF CURB INLET NORTH SIDE OF CENTRAL 30' EAST OF THE INTERSECTION OF CENTRAL AND FIREFLY.
 N: 4997.42 E: 4999.10
 ELEV. = 1341.99 (NAVD88)
 "X" CUT IN CURB INLET EAST SIDE OF AZURE ST. NEAR NORTH END OF CASTLEGATE ADDITION
 N: 6320.08 E: 5589.16
 ELEV. = 1342.58 (NAVD88).
 "X" CUT IN NORTH SIDE OF CURB ALONG EXISTING CINDY DRIVE, ONE JOINT BACK FROM EDGE OF PAVEMENT, NEAR EAST EDGE OF CASTLEGATE ADDITION.
 N: 5698.62 E: 6050.20
 ELEV. = 1342.38
 #4 REBAR ALONG EXISTING FENCE LINE NEAR SWS CORNER OF LOT 11 BLOCK A, CASTLEGATE ADDITION.
 N: 5625.17 E: 5089.21
 ELEV. = 1343.56



		CASTLEGATE ADDITION	
		LINE 2 SANITARY SEWER IMPROVEMENTS	
<small>Baughman Company, P.A. 315 Ellis St., Wichita, KS 67211 P 316-263-2771 F 316-262-0149 ENGINEERING SURVEYING PLANNING LANDSCAPE ARCHITECTURE</small>			
PROJECT NUMBER	DESIGN	DRAWN	
	JCS	JCS	
REVISIONS:	APPROVED	DATE	
		4-29-14	
	SCALE		
	Noted		
	SHEET	5 OF 15	

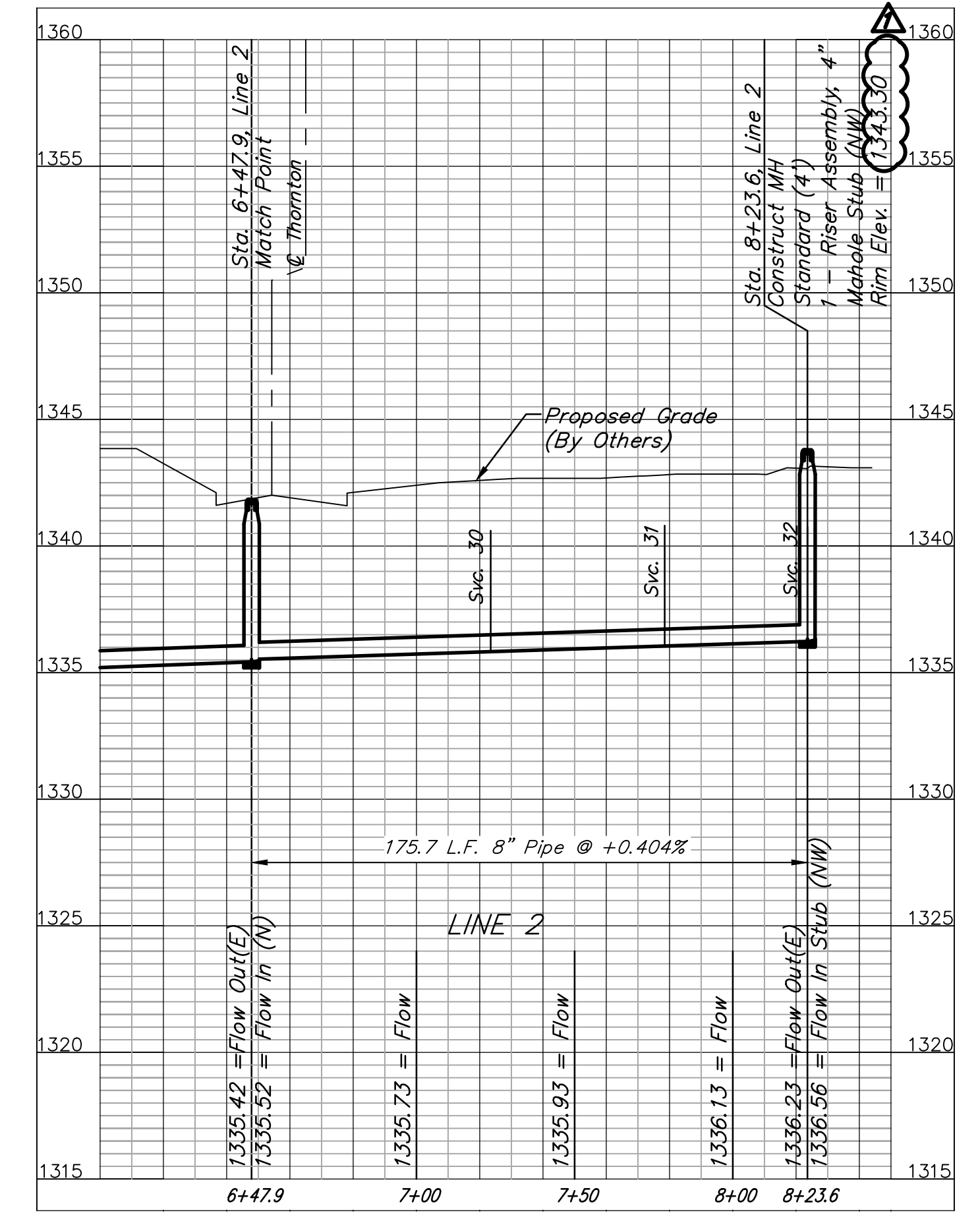
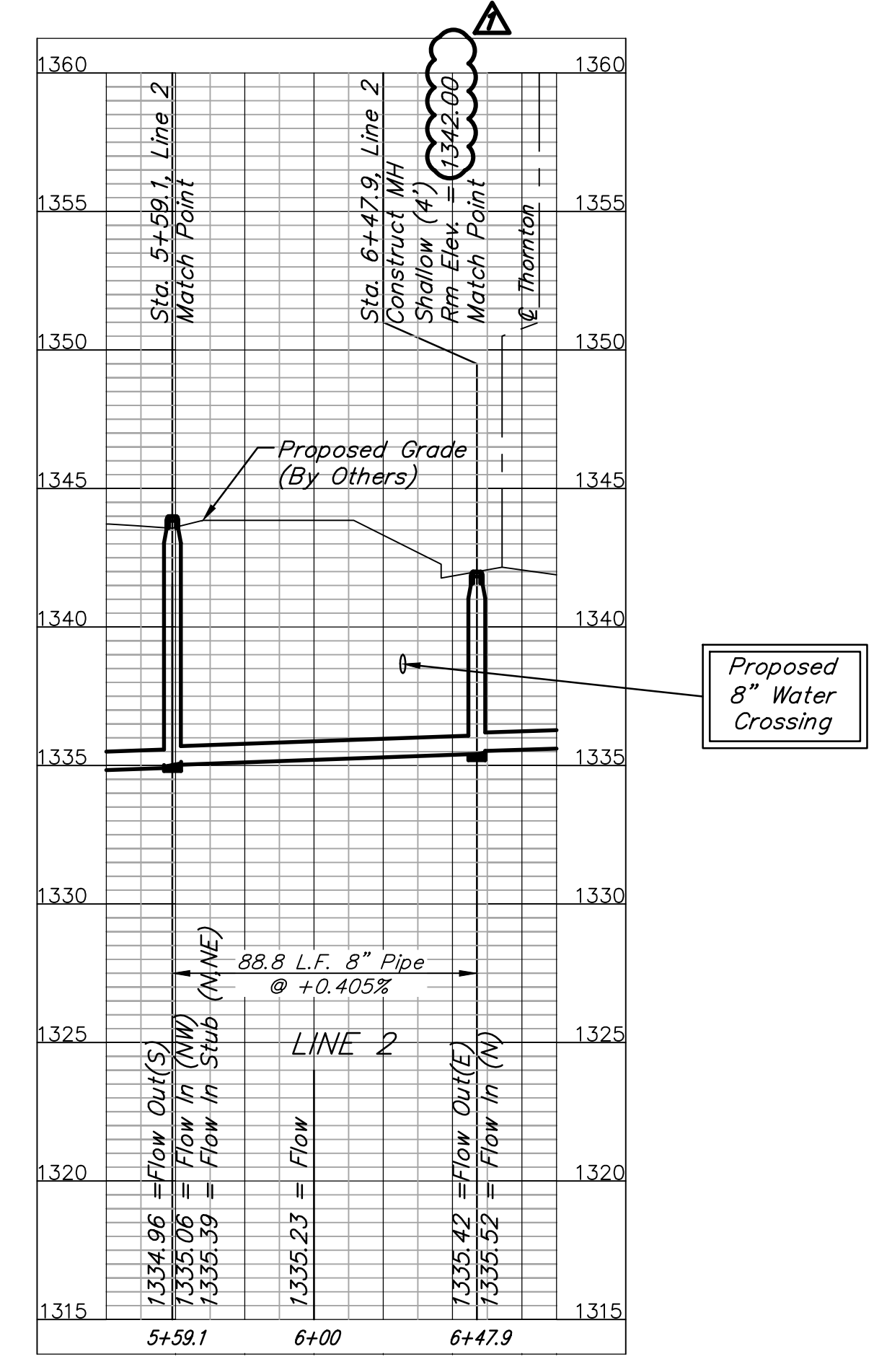


BENCHMARKS:
 "X" CUT ON TOP OF CURB INLET NORTH SIDE OF CENTRAL 30' EAST OF THE INTERSECTION OF CENTRAL AND FIREFLY.
 N: 4997.42 E: 4999.10
 ELEV. = 1341.99 (NAVD88)

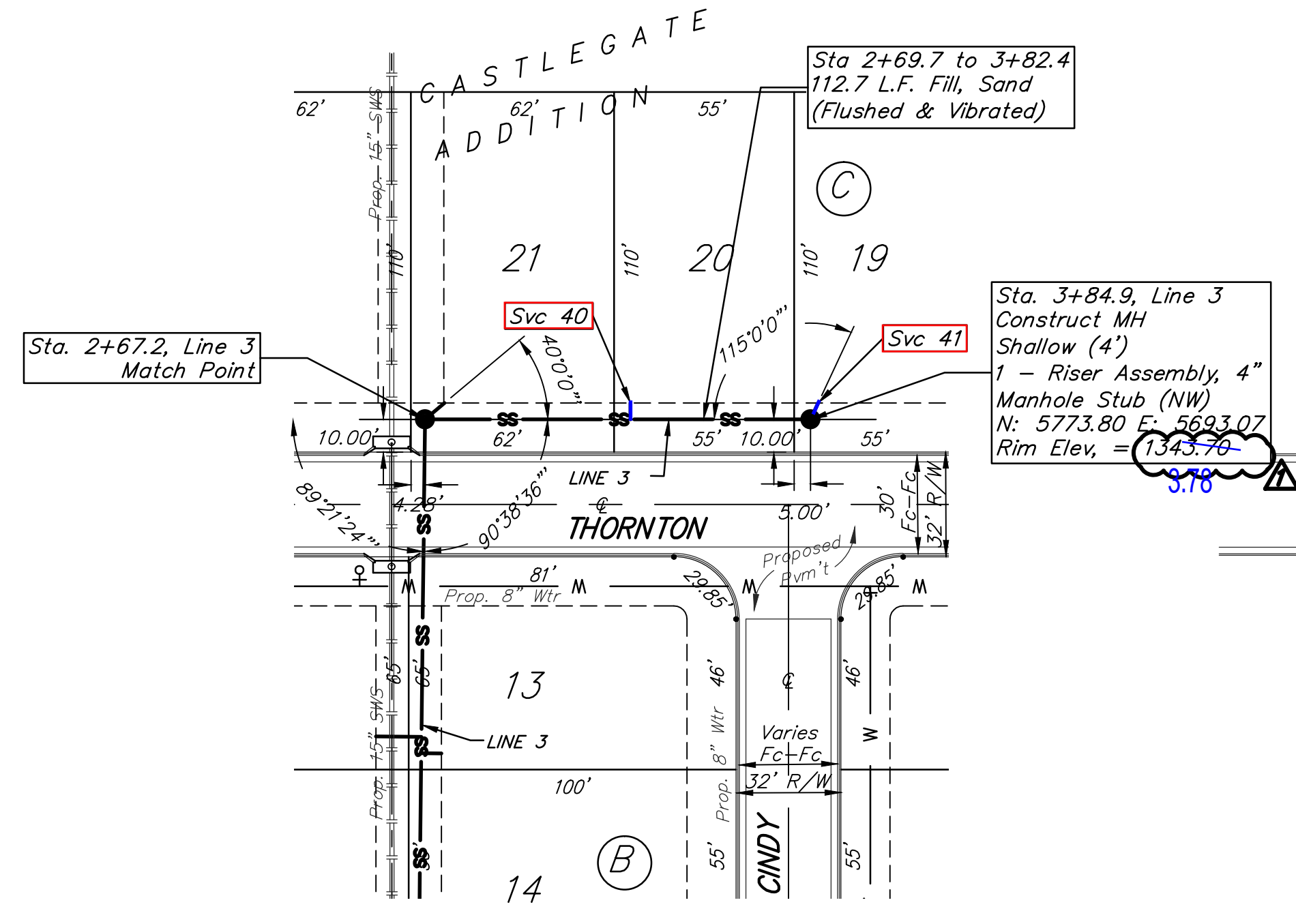
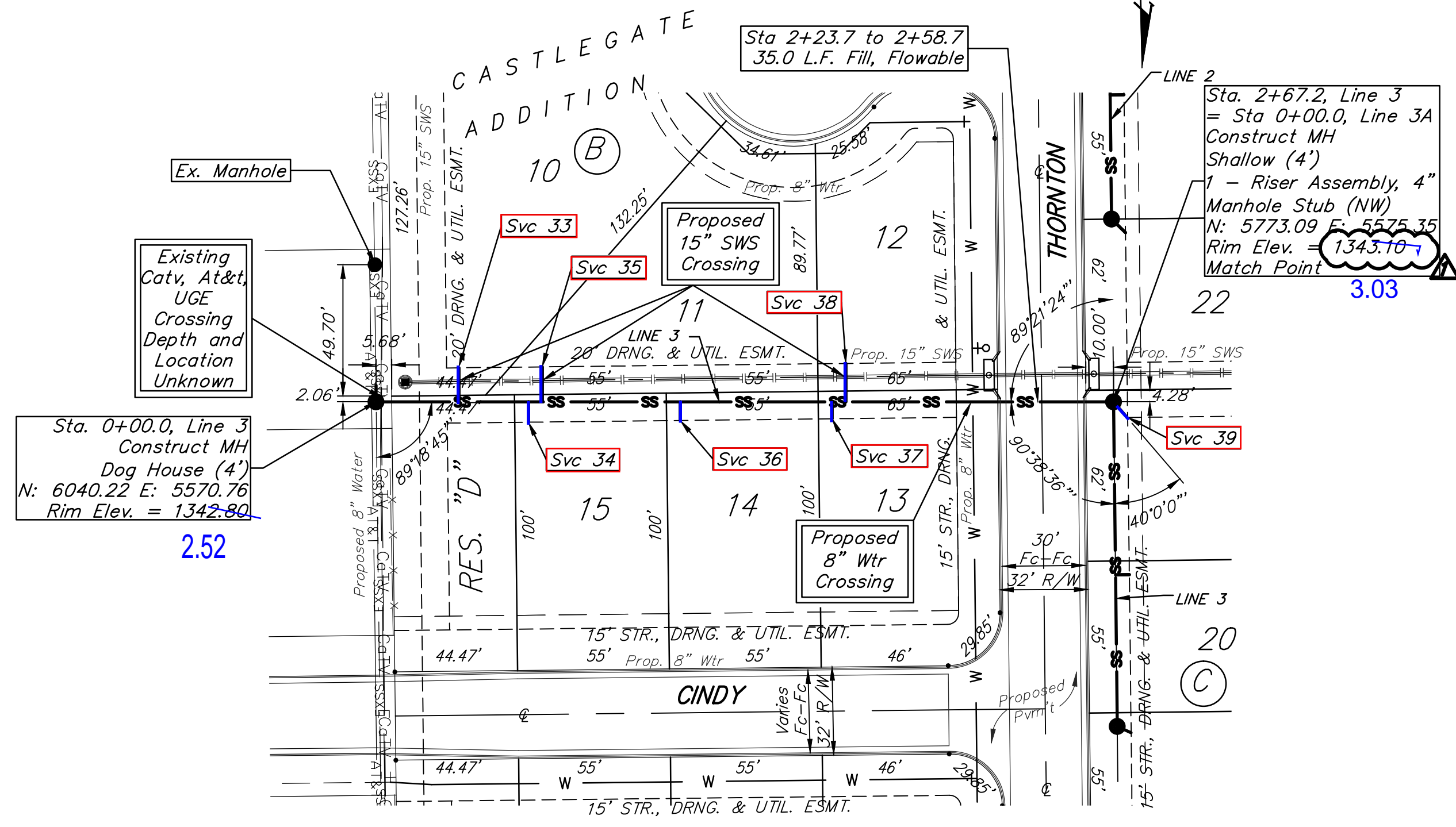
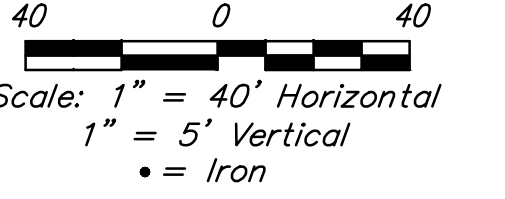
"X" CUT IN CURB INLET EAST SIDE OF AZURE ST. NEAR NORTH END OF CASTLEGATE ADDITION.
 N: 6320.08 E: 5589.16
 ELEV. = 1342.58 (NAVD88).

"X" CUT IN NORTH SIDE OF CURB ALONG EXISTING CINDY DRIVE, ONE JOINT BACK FROM EDGE OF PAVEMENT, NEAR EAST EDGE OF CASTLEGATE ADDITION.
 N: 5698.62 E: 6050.20
 ELEV. = 1342.38

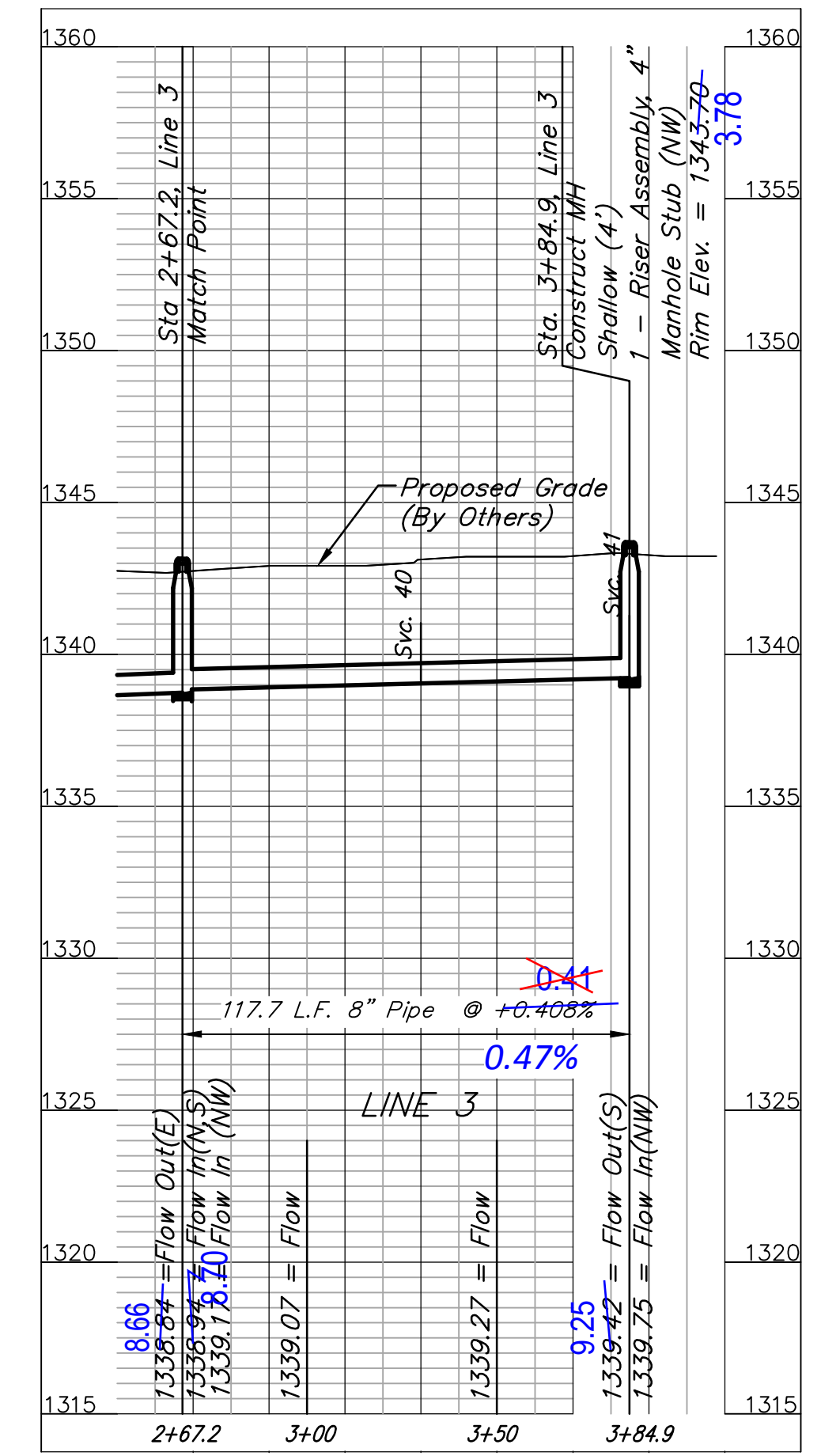
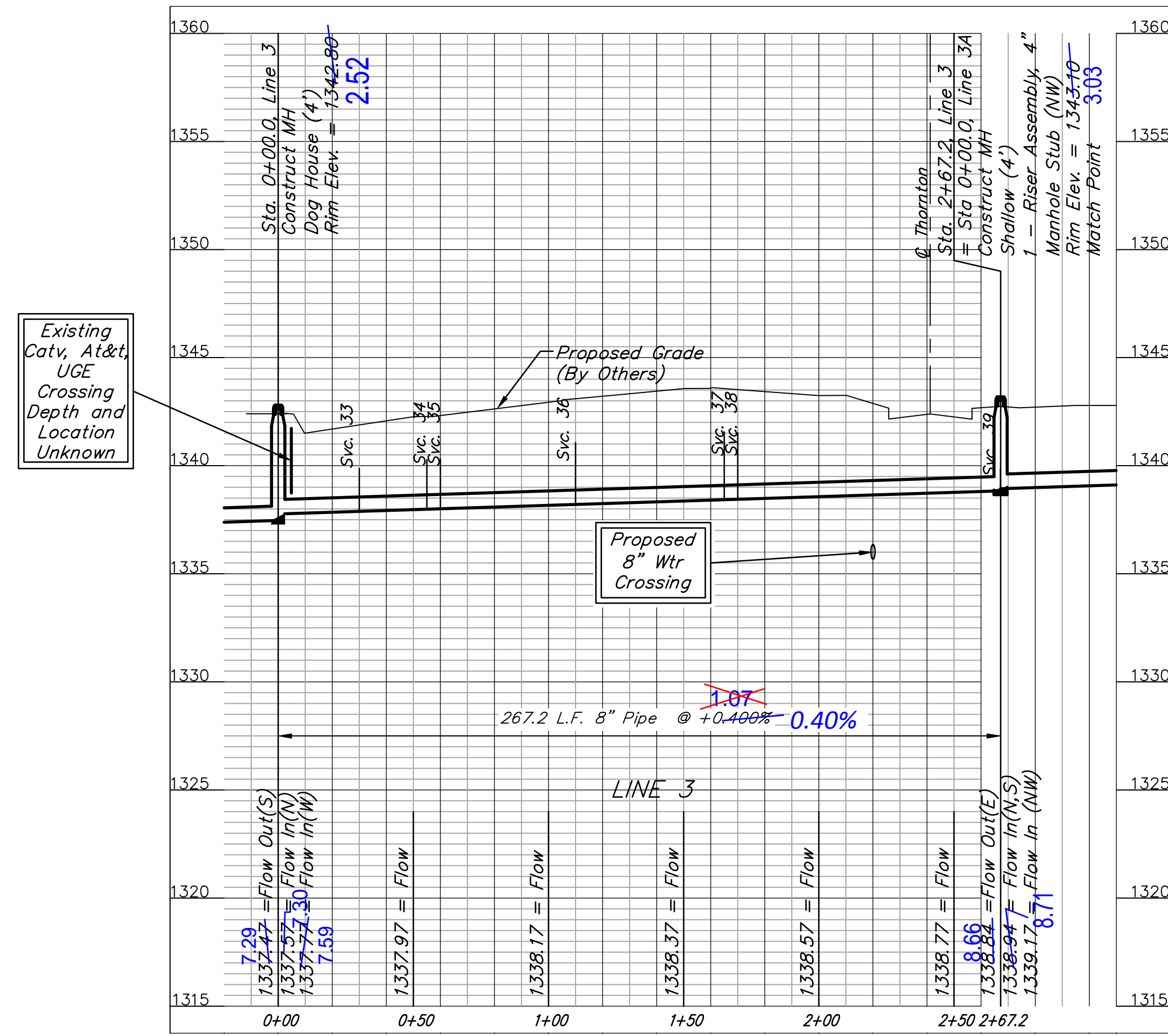
#4 REBAR ALONG EXISTING FENCE LINE NEAR SWS CORNER OF LOT 11 BLOCK A, CASTLEGATE ADDITION.
 N: 5625.17 E: 5089.21
 ELEV. = 1343.56



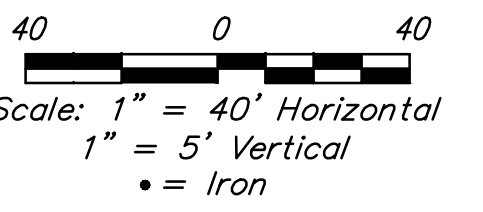
		CASTLEGATE ADDITION	
		LINE 2	
Baughman Company, P.A. 315 Ellis St., Wichita, KS 67211 P 316-263-2771 F 316-262-0149 ENGINEERING SURVEYING PLANNING LANDSCAPE ARCHITECTURE		DESIGN	DRAWN
PROJECT NUMBER	TMS	JCS	JCS
REVISIONS:	05/07/14	APPROVED	DATE
Revise: MH Top			4-29-14
SCALE		SHEET	
Noted		6 OF 15	



BENCHMARKS:
 "X" CUT ON TOP OF CURB INLET NORTH SIDE OF CENTRAL 30' EAST OF THE INTERSECTION OF CENTRAL AND FIREFLY.
 N: 4997.42 E: 4999.10
 ELEV. = 1341.99 (NAVD88)
 "X" CUT IN CURB INLET EAST SIDE OF AZURE ST. NEAR NORTH END OF CASTLEGATE ADDITION
 N: 6320.08 E: 5589.16
 ELEV. = 1342.58 (NAVD88)
 "X" CUT IN NORTH SIDE OF CURB ALONG EXISTING CINDY DRIVE, ONE JOINT BACK FROM EDGE OF PAVEMENT, NEAR EAST EDGE OF CASTLEGATE ADDITION.
 N: 5698.62 E: 6050.20
 ELEV. = 1342.38
 #4 REBAR ALONG EXISTING FENCE LINE NEAR SWS CORNER OF LOT 11 BLOCK A, CASTLEGATE ADDITION.
 N: 5625.17 E: 5089.21
 ELEV. = 1343.56



		CASTLEGATE ADDITION LINES 3 & 3A SANITARY SEWER IMPROVEMENTS	
		<small>Baughman Company, P.A. 315 Ellis St., Wichita, KS 67211 P 316-262-2771 F 316-262-0149 ENGINEERING SURVEYING PLANNING LANDSCAPE ARCHITECTURE</small>	
PROJECT NUMBER		DESIGN	DRAWN
		JCS	JCS
REVISIONS:	TMS	APPROVED	DATE
05/07/14			4/29/14
		SCALE	
		Noted	
		SHEET	
			7 OF 15

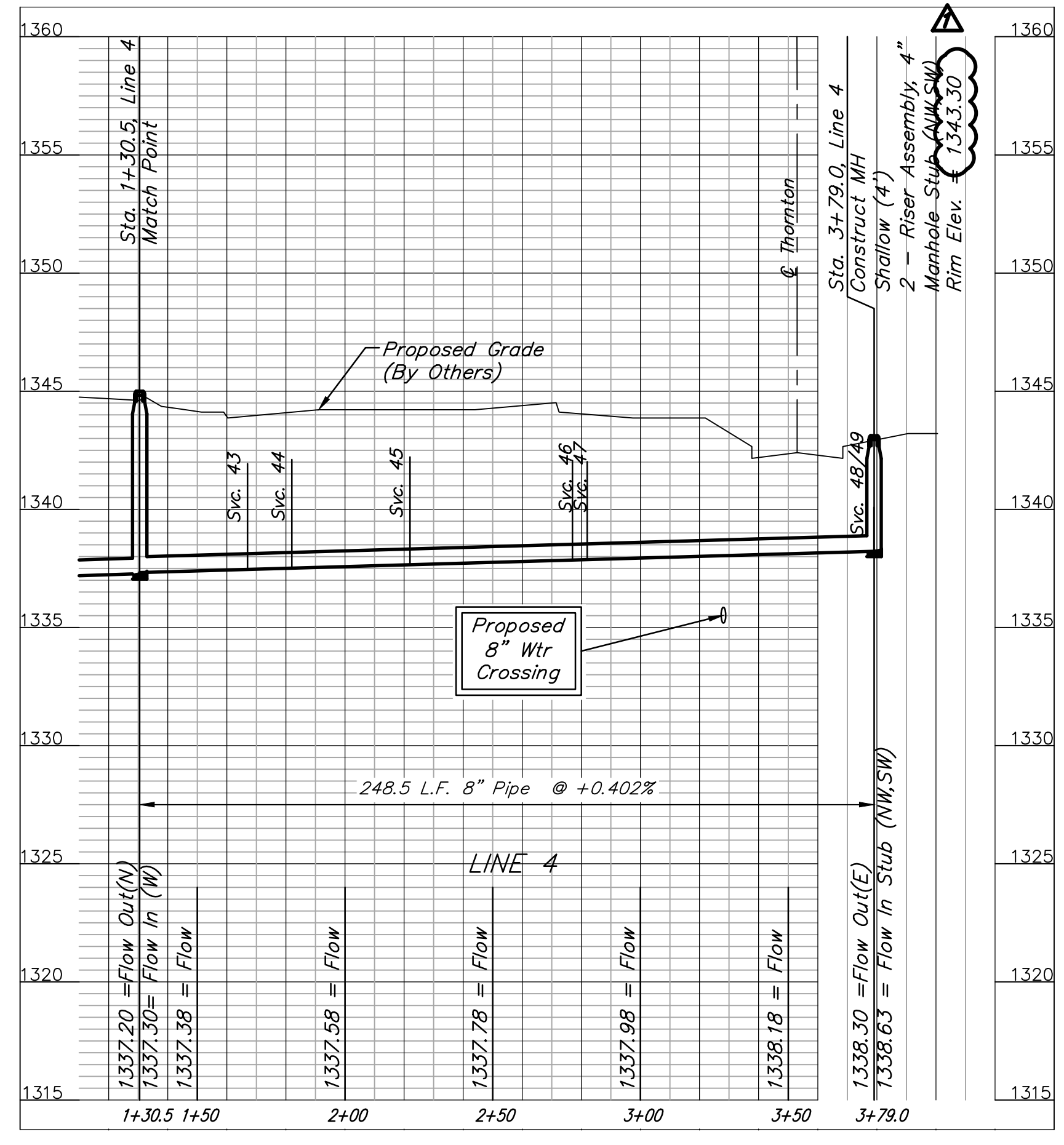
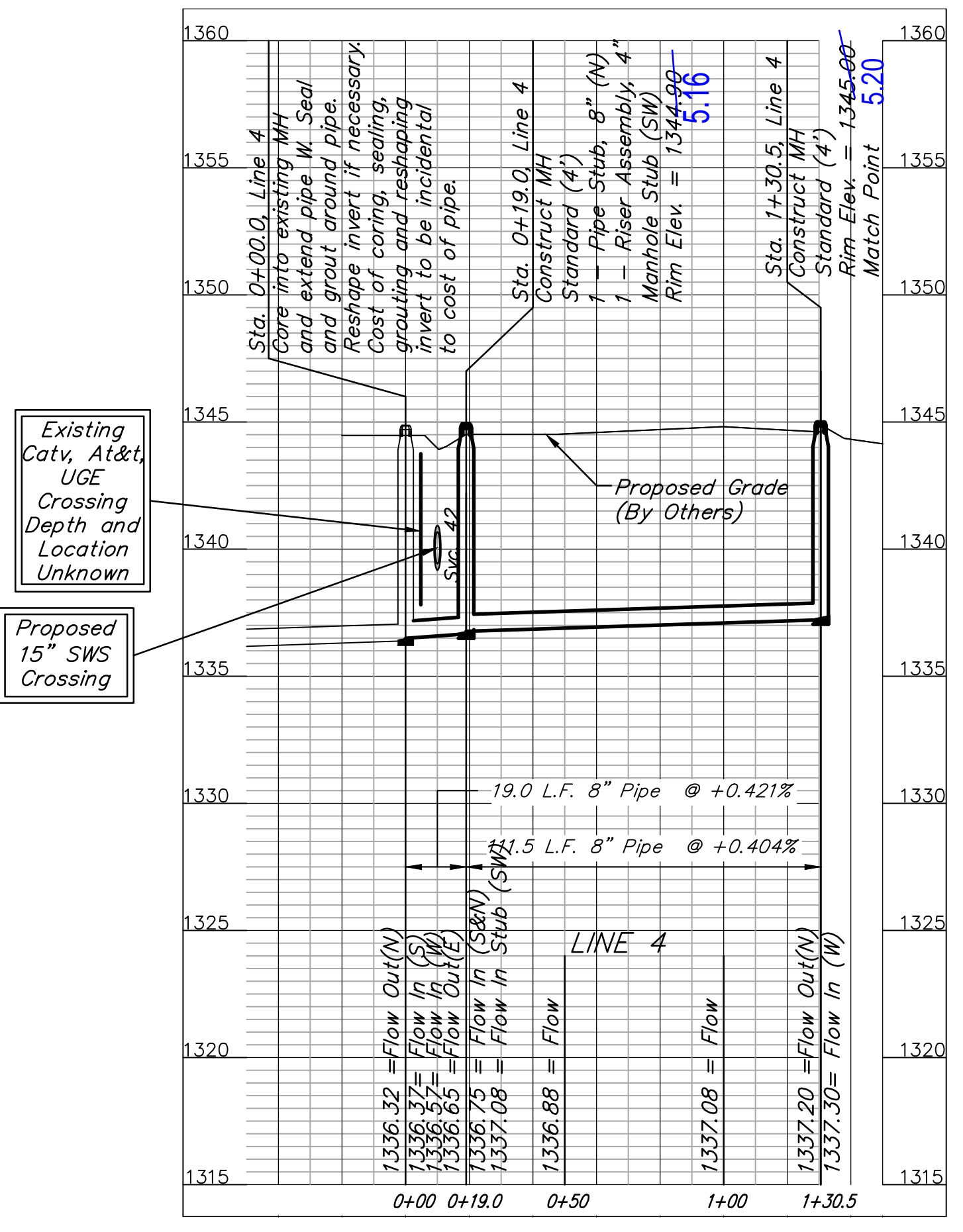
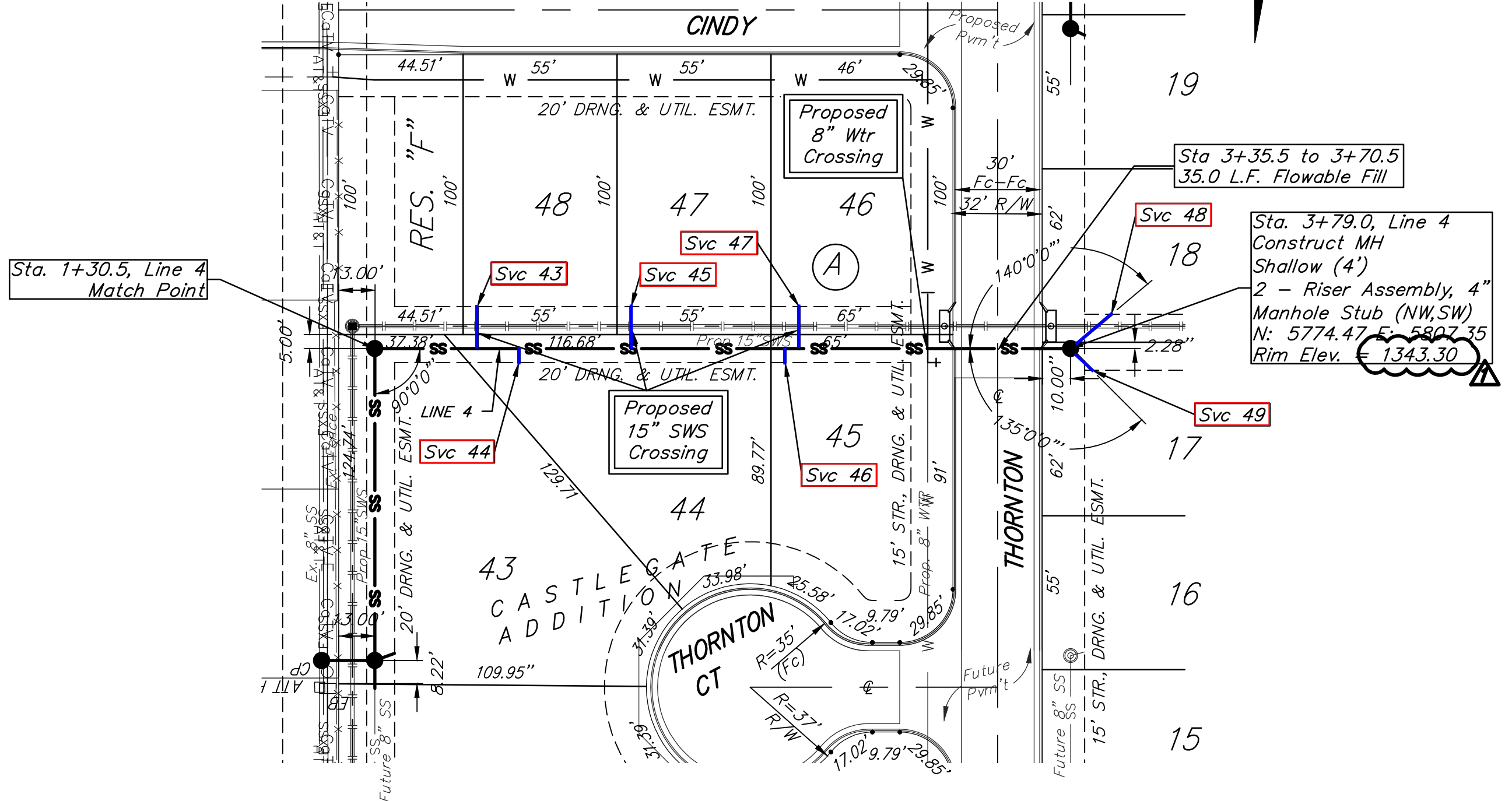
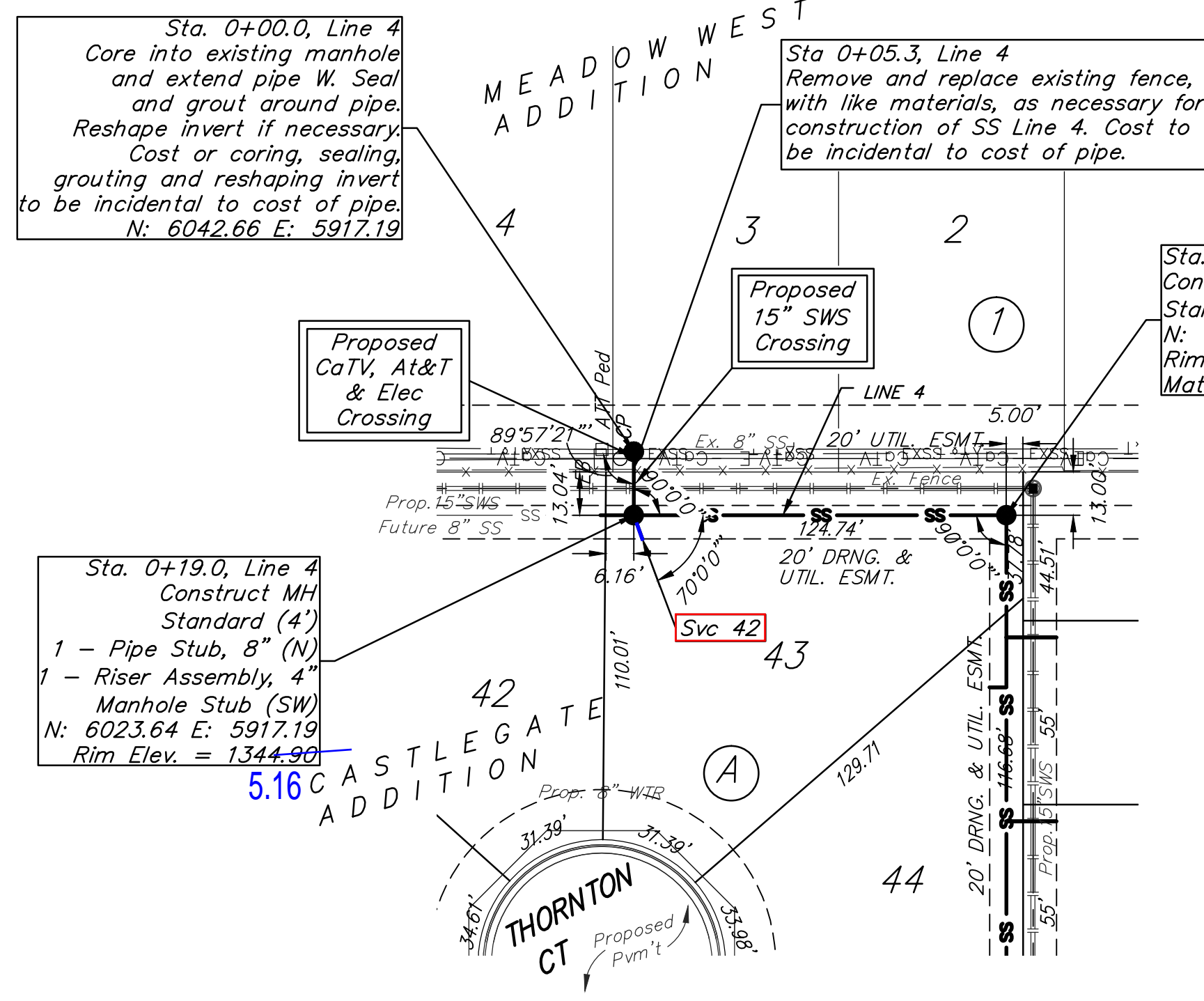


BENCHMARKS:
 "X" CUT ON TOP OF CURB INLET NORTH SIDE OF CENTRAL 30' EAST OF THE INTERSECTION OF CENTRAL AND FIREFLY.
 N: 4997.42 E: 4999.10
 ELEV. = 1341.99 (NAVD88)

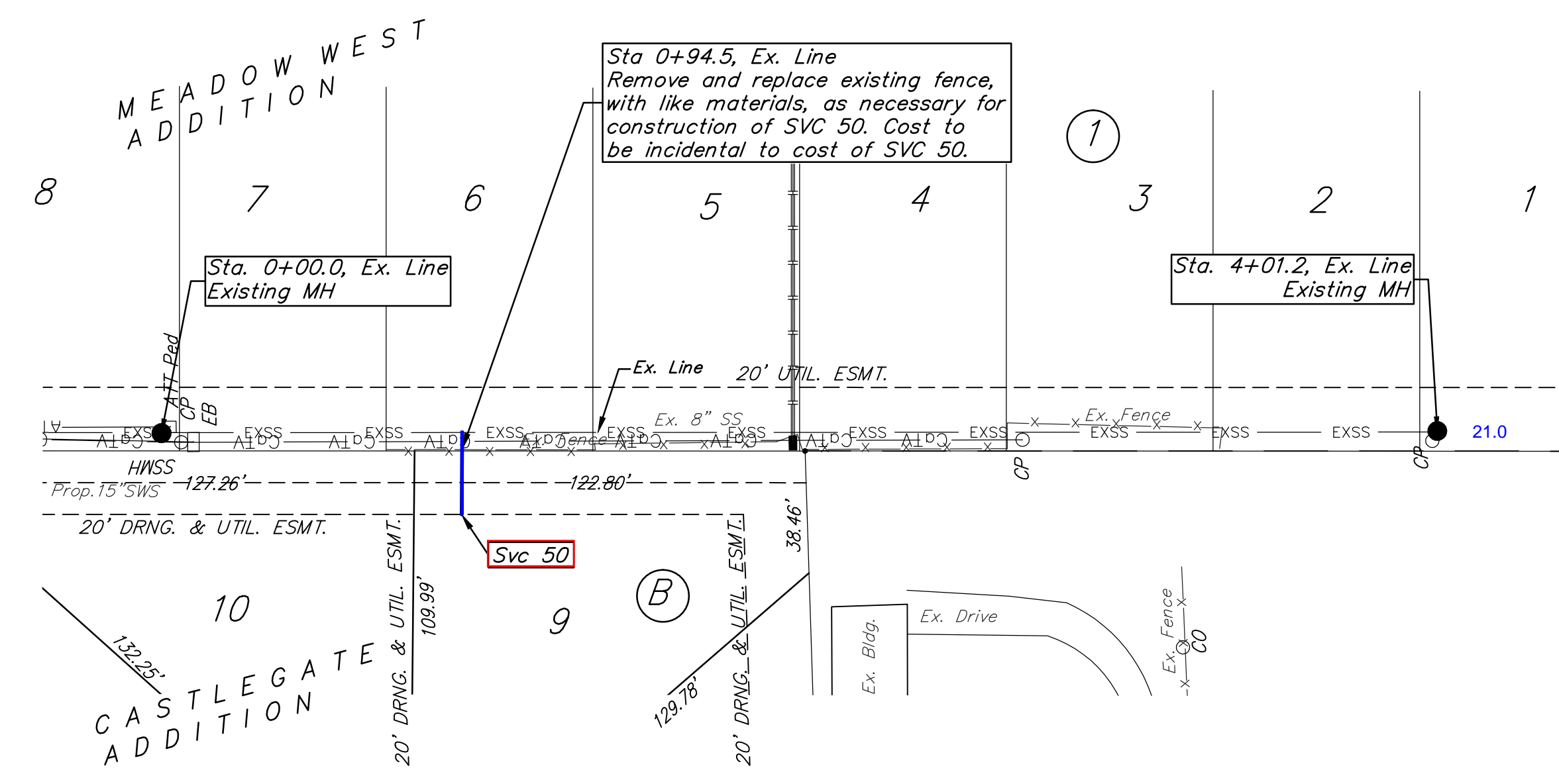
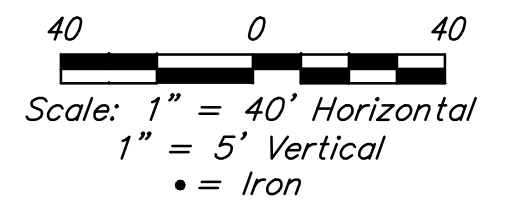
"X" CUT IN CURB INLET EAST SIDE OF AZURE ST. NEAR NORTH END OF CASTLEGATE ADDITION
 N: 6320.08 E: 5589.16
 ELEV. = 1342.58 (NAVD88).

"X" CUT IN NORTH SIDE OF CURB ALONG EXISTING CINDY DRIVE, ONE JOINT BACK FROM EDGE OF PAVEMENT, NEAR EAST EDGE OF CASTLEGATE ADDITION.
 N: 5698.62 E: 6050.20
 ELEV. = 1342.38

#4 REBAR ALONG EXISTING FENCE LINE NEAR SWS CORNER OF LOT 11 BLOCK A, CASTLEGATE ADDITION.
 N: 5625.17 E: 5089.21
 ELEV. = 1343.56



		CASTLEGATE ADDITION	
		LINE 4	
PROJECT NUMBER 05/07/14 Revise: MH Top		DESIGN JCS APPROVED DATE 4/29/14	
REVISIONS:		SCALE Noted SHEET	
		8 OF 15	



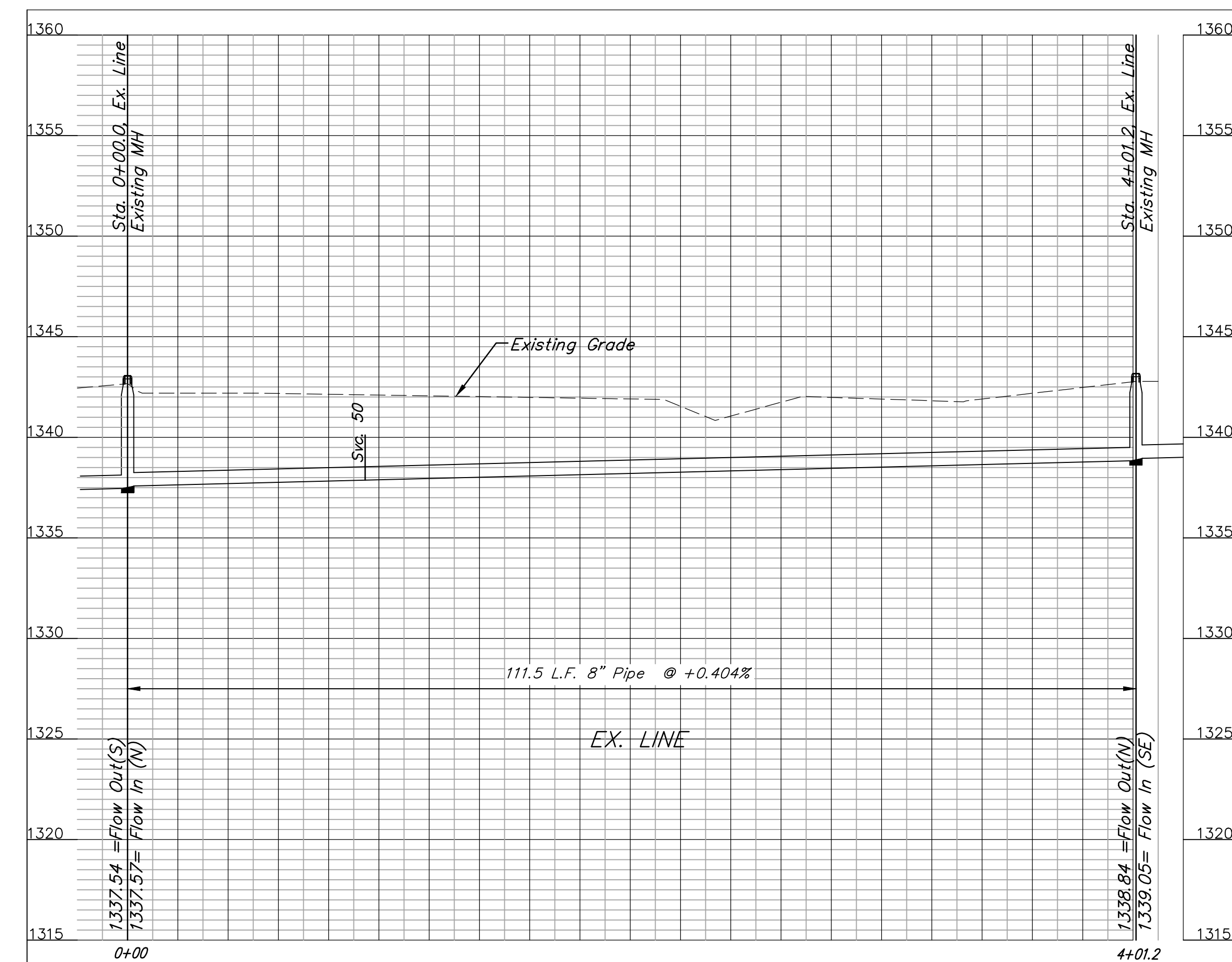
Note: Horizontal L's increased per Owner's request

NUMBER	TYPE	LOCATION			FOR INFORMATION ONLY		
		LOT. NO.	BLOCK NO.	LINE NO.	STATION/DIRECTION	VERTICAL (ft)	HORIZONTAL (ft)
1	Riser Assembly, 4" Manhole Stub	Reserve "H"	-	1	4+53.5	8.1	10.0
2	Riser Assembly, 4" Vertical	1	C	1	6+36.0	6.6	5.0
3	Riser Assembly, 4" Vertical	2	C	1	6+91.0	6.5	5.0
4	Riser Assembly, 4" Vertical	3	C	1	7+46.57+50.0	6.5	5.0
5	Riser Assembly, 4" Vertical	4	C	1	8+01.0	6.0	5.0
6	Riser Assembly, 4" Manhole Stub	5	C	1	8+76.1	5.0	5.0
7	Riser Assembly, 4" Vertical	13	A	1	9+38.0	6.4	15.0
8	Riser Assembly, 4" Vertical	14	A	1	9+43.0	6.7	5.0
9	Riser Assembly, 4" Vertical	12	A	1	9+93.0	6.3	15.0
10	Riser Assembly, 4" Vertical	15	A	1	9+98.0	6.2	5.0
11	Riser Assembly, 4" Manhole Stub	11	A	1	10+98.5	5.3	17.4
12	Riser Assembly, 4" Manhole Stub	16	A	1	10+98.5	5.3	8.3
13	Riser Assembly, 4" Manhole Stub	2	A	1A	0+99.8	7.1	10.0
14	Riser Assembly, 4" Manhole Stub	3	A	1A	1+71.5	8.0	11.6
15	Riser Assembly, 4" Manhole Stub	4	A	1A	1+71.5	8.0	9.1
16	Riser Assembly, 4" Vertical	7	A	1B	0+62.0	7.5	5.0
17	Riser Assembly, 4" Vertical	8	A	1B	0+67.0	7.9	15.0
18	Riser Assembly, 4" Vertical	6	A	1B	1+17.0	7.3	5.0
19	Riser Assembly, 4" Vertical	9	A	1B	1+22.0	7.3	15.0
20	Riser Assembly, 4" Manhole Stub	5	A	1B	2+29.5	6.3	10.8
21	Riser Assembly, 4" Manhole Stub	10	A	1B	2+29.5	6.3	17.4
22	Riser Assembly, 4" Vertical	1	B	2	0+96.0	11.9	10.0
23	Riser Assembly, 4" Vertical	2	B	2	1+57.0	14.3	10.0
24	Riser Assembly, 4" Vertical	3	B	2	2+27.0	6.3	10.0
25	Riser Assembly, 4" Vertical	4	B	2	2+77.0	6.5	10.0
26	Riser Assembly, 4" Vertical	5	B	2	3+32.0	6.0	10.0
27	Riser Assembly, 4" Vertical	6	B	2	4+23.0	6.2	10.0
28	Riser Assembly, 4" Manhole Stub	7	B	2	5+59.1	6.7	21.3
29	Riser Assembly, 4" Manhole Stub	8	B	2	5+59.1	6.7	33.7
30	Riser Assembly, 4" Vertical	24	C	2	7+23.5	4.8	5.0
31	Riser Assembly, 4" Vertical	23	C	2	7+78.5	4.8	5.0
32	Riser Assembly, 4" Manhole Stub	22	C	2	8+23.6	4.5	7.1
33	Riser Assembly, 4" Vertical	10	B	3	0+30.0	2.0	12.4
34	Riser Assembly, 4" Vertical	15	B	3	0+55.0	2.3	7.4
35	Riser Assembly, 4" Vertical	11	B	3	0+60.0	2.3	12.7
36	Riser Assembly, 4" Vertical	14	B	3	1+10.0	2.9	6.8
37	Riser Assembly, 4" Vertical	13	B	3	1+65.0 1+62.0	3.2	6.2
38	Riser Assembly, 4" Vertical	12	B	3	1+70.0	3.1	13.9
39	Riser Assembly, 4" Manhole Stub	21	C	3	2+67.2	1.0	7.8
40	Riser Assembly, 4" Vertical	20	C	3A	0+62.5 3+30.0	2.0	5.0
41	Riser Assembly, 4" Manhole Stub	19	C	3A	1+77.7 3+89.0	2.1	5.5
42	Riser Assembly, 4" Manhole Stub	43	A	4	0+19.0	5.3	7.5
43	Riser Assembly, 4" Vertical	48	A	4	1+67.0	4.5	15.0
44	Riser Assembly, 4" Vertical	44	A	4	1+82.0	4.6	5.0
45	Riser Assembly, 4" Vertical	47	A	4	2+22.0	4.6	15.0
46	Riser Assembly, 4" Vertical	45	A	4	2+77.0	4.2	5.0
47	Riser Assembly, 4" Vertical	46	A	4	2+82.0	4.2	15.0
48	Riser Assembly, 4" Manhole Stub	18	C	4	3+79.0	1.9	19.1
49	Riser Assembly, 4" Manhole Stub	17	C	4	3+79.0	1.9	10.9
50	Riser Assembly, 4" Vertical	9	B	Ex. Line	0+94.5	2.3	25.8

BENCHMARKS:
 "X" CUT ON TOP OF CURB INLET NORTH SIDE OF CENTRAL 30' EAST OF THE INTERSECTION OF CENTRAL AND FIREFLY.
 N: 4997.42 E: 4999.10
 ELEV. = 1341.99 (NAVD88)
 "X" CUT IN CURB INLET EAST SIDE OF AZURE ST. NEAR NORTH END OF CASTLEGATE ADDITION
 N: 6320.08 E: 5589.16
 ELEV. = 1342.58 (NAVD88).
 "X" CUT IN NORTH SIDE OF CURB ALONG EXISTING CINDY DRIVE, ONE JOINT BACK FROM EDGE OF PAVEMENT, NEAR EAST EDGE OF CASTLEGATE ADDITION.
 N: 5698.62 E: 6050.20
 ELEV. = 1342.38
 #4 REBAR ALONG EXISTING FENCE LINE NEAR SWS CORNER OF LOT 11 BLOCK A, CASTLEGATE ADDITION.
 N: 5625.17 E: 5089.21
 ELEV. = 1343.56

NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.

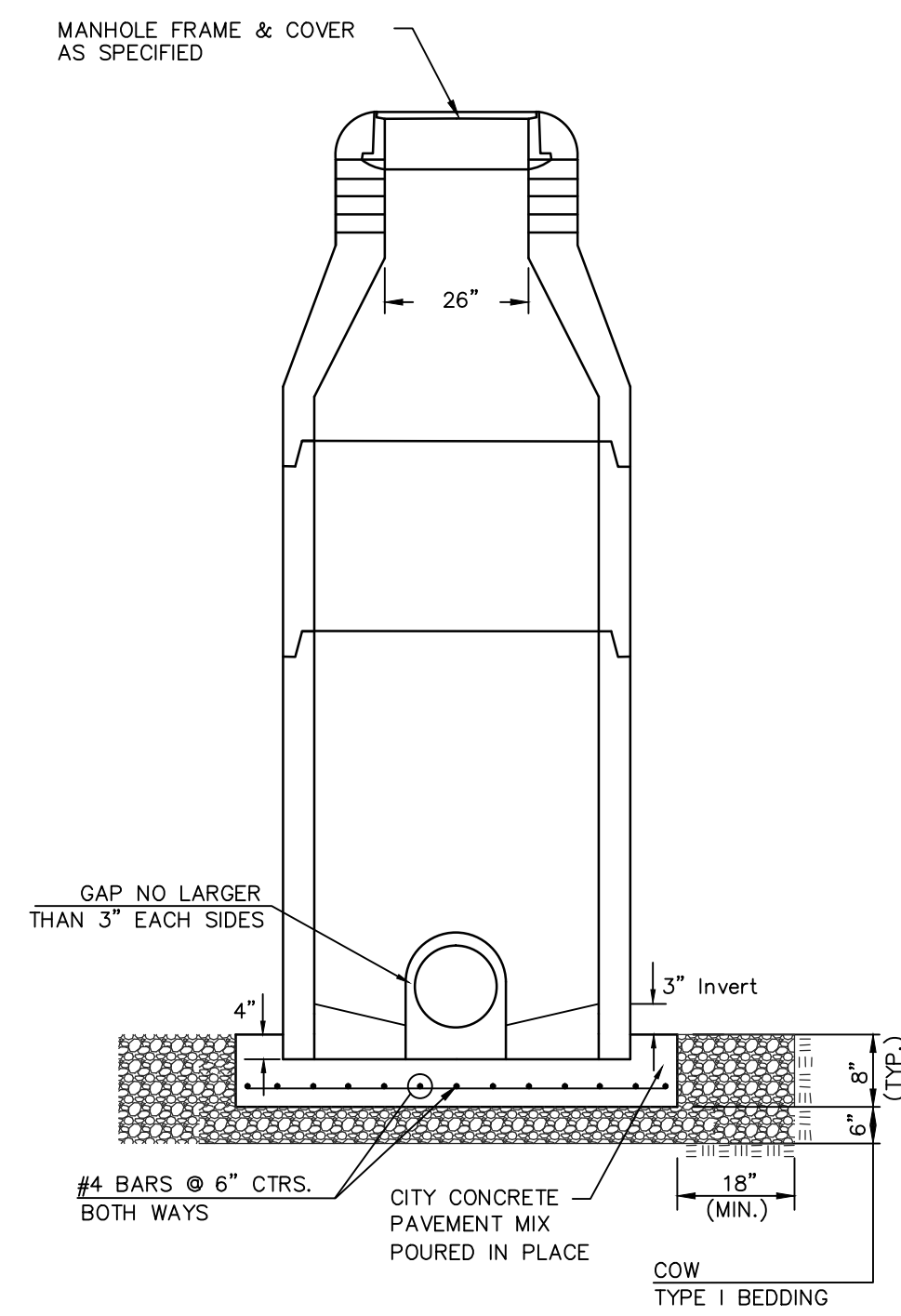
Added Taps:	(Not part of Benefit District)							
51	Tap, 4"	-	-	2	2+37	0.0	10.0	Unplatted 12610 W Central
52	Tap, 4"	-	-	2	3+89	0.0	10.0	Lot 1, Blk A, Van Leeuwen Addn, 12528 W Central
53	Tap, 4"	-	-	2	5+44	0.0	10.0	Lot 1, Blk A, Dan Blasi Add, 12500 W Central



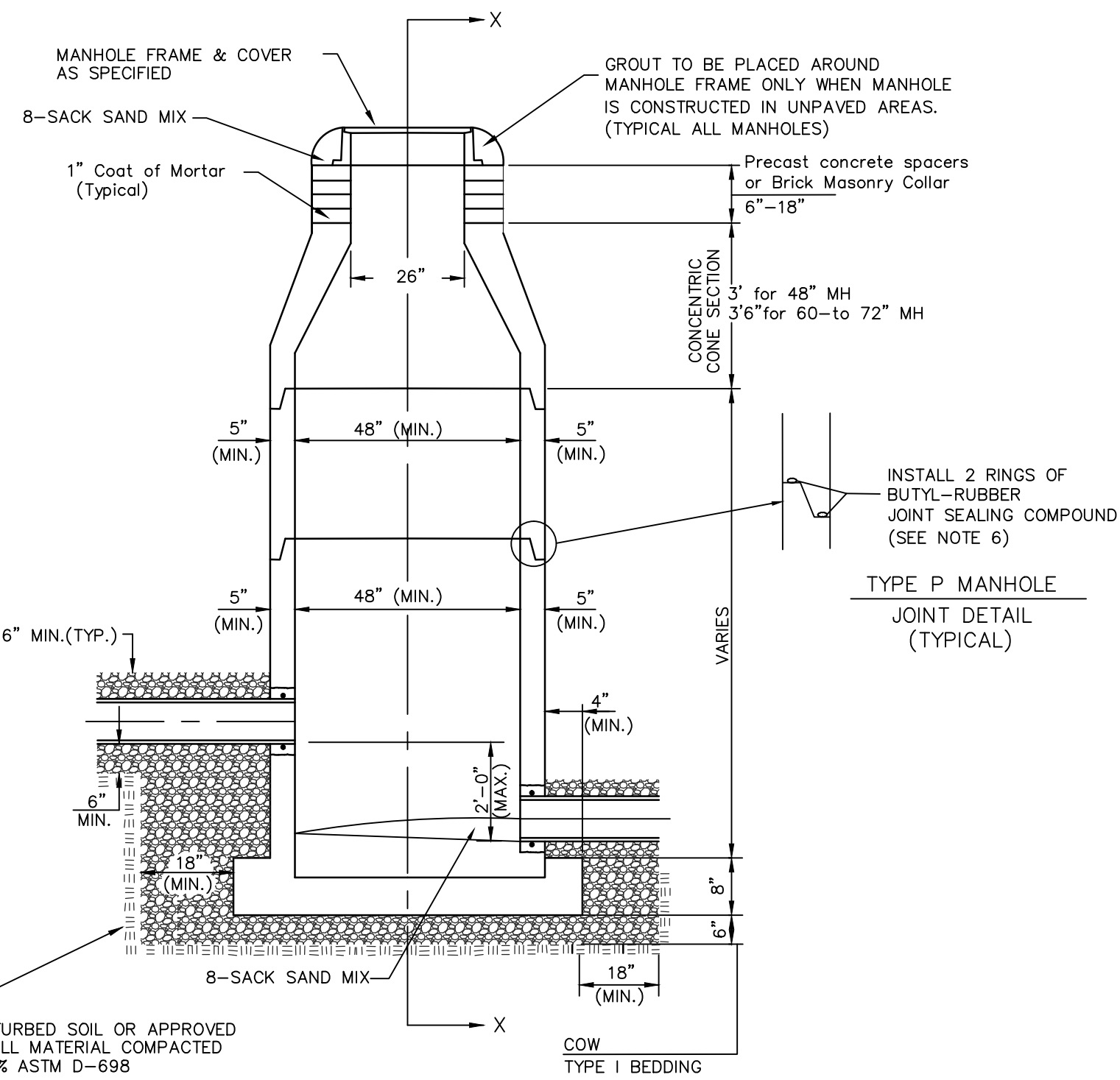
CASTLEGATE ADDITION
Existing Line
 SANITARY SEWER IMPROVEMENTS

Baughman Company, P.A. 315 Ellis St., Wichita, KS 67211 P: 316-262-2771 F: 316-262-0149 ENGINEERING SURVEYING PLANNING LANDSCAPE ARCHITECTURE	
PROJECT NUMBER	DESIGN: JCS DRAWN: JCS
REVISIONS:	APPROVED: DATE: 4-29-14
	SCALE: Noted SHEET: 9 OF 15

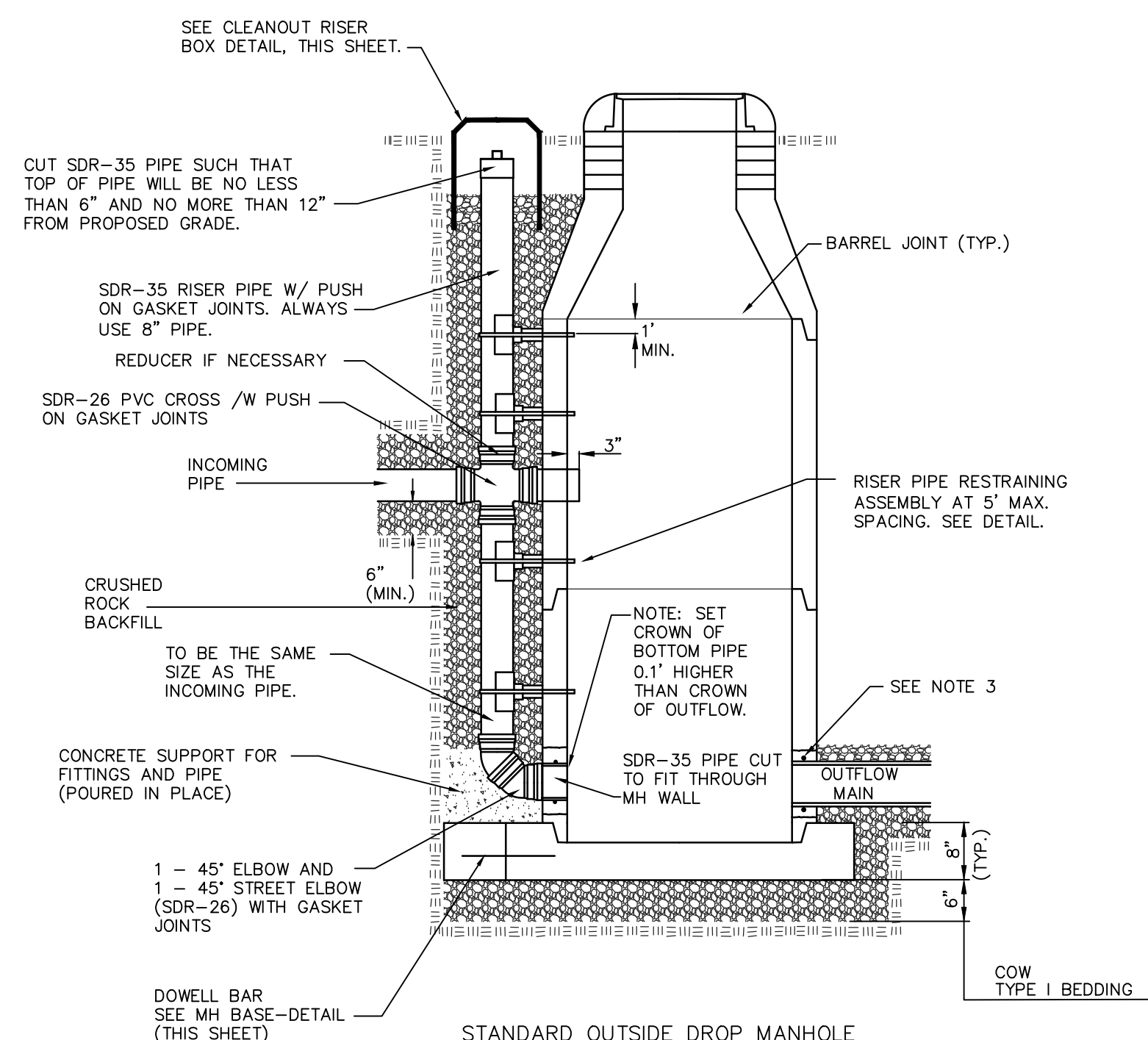
E:/Projects/Castlegate Add./Engineering/Phase I/SS Plans.dwg 14-01-EO04



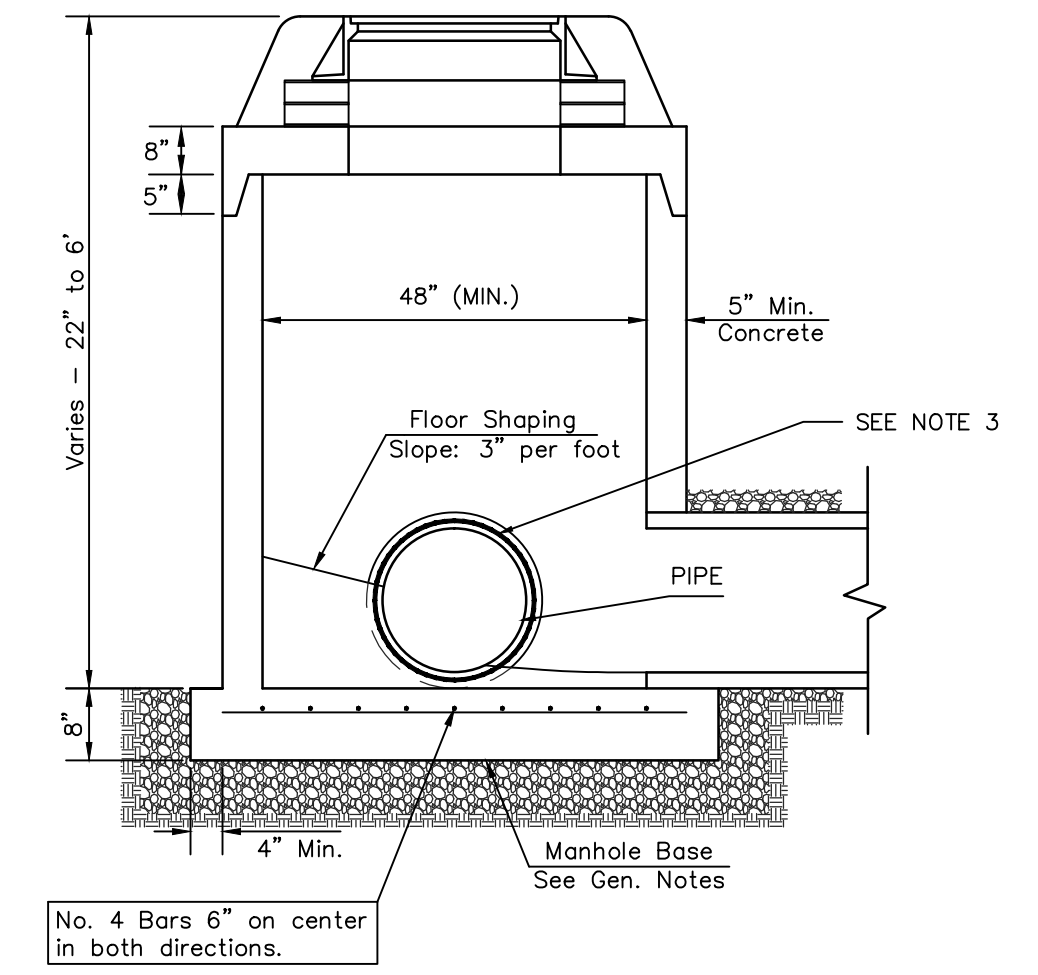
DOG HOUSE MANHOLE
(OVER EXISTING PIPE)
Not to Scale



STANDARD MANHOLE
Not to Scale



STANDARD OUTSIDE DROP MANHOLE
Not to Scale

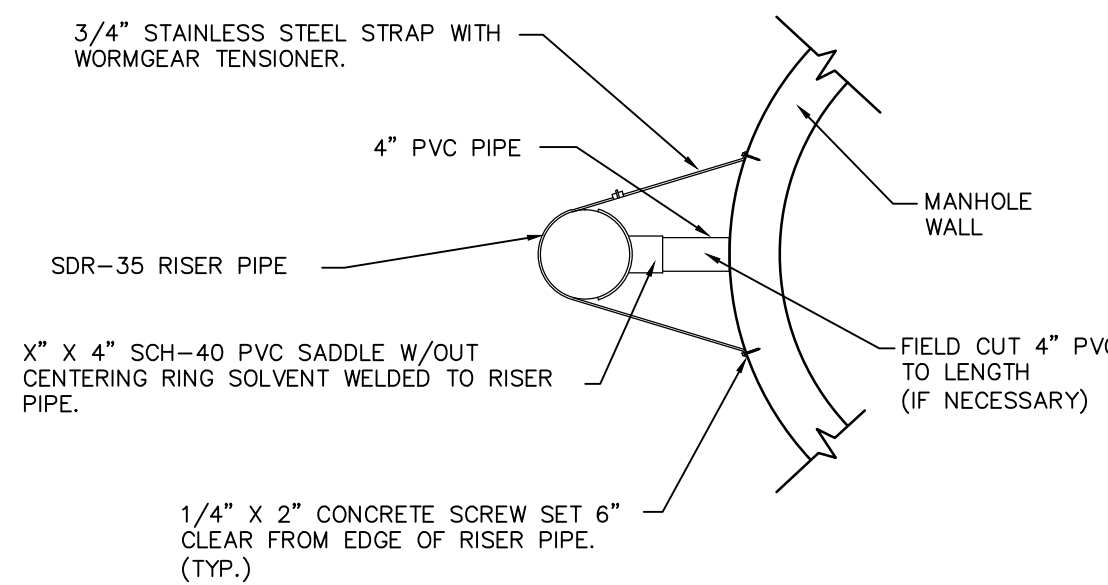


SHALLOW MANHOLE
Not to Scale

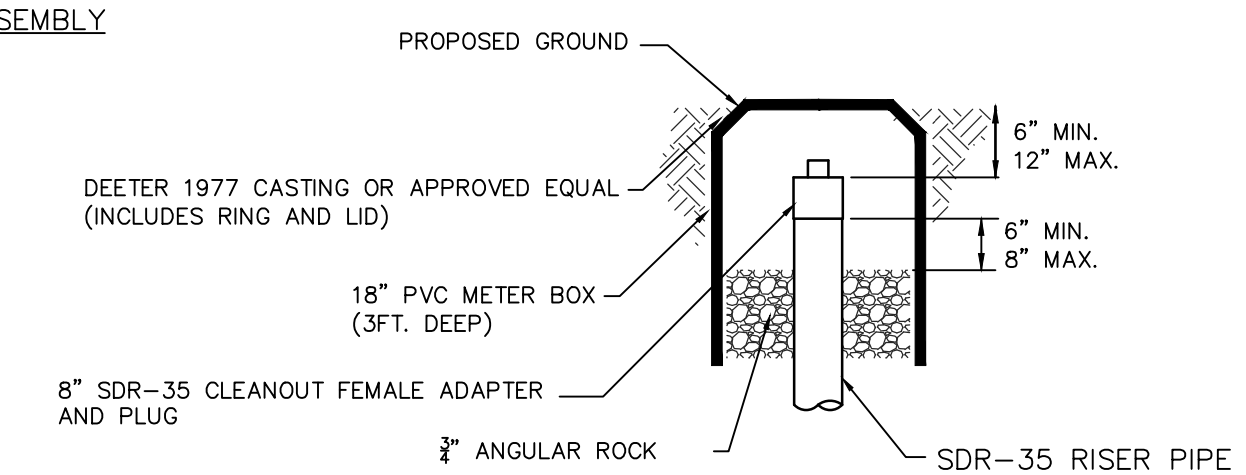
 = COW TYPE I BEDDING
 = UNDISTURBED SOIL

PRECAST MANHOLE GENERAL NOTES

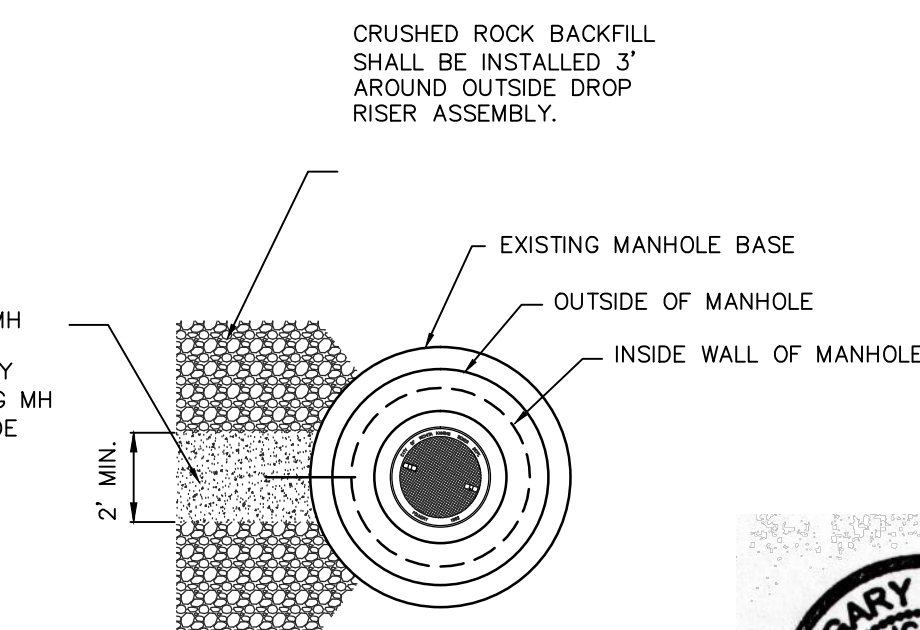
- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
- NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
- APPROVED FLEXIBLE WATERSTOP SHALL BE INSTALLED TO JOIN THE SEWER PIPE TO THE MANHOLE WALL. THE SEWER PIPE SHALL BE SUPPORTED WITH CRUSHED ROCK A MINIMUM OF 3 FEET FROM THE FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
- ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
- EXTERIOR MANHOLE WALLS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
- JOINT SEALING COMPOUND SHALL BE PER 804.4 OF STANDARD SPECIFICATIONS.
- ALL MANHOLE SECTION JOINTS THAT WILL BE IN GROUNDWATER OR GREATER THAN 12' DEEP SHALL BE WRAPPED WITH AN EXTERNAL JOINT SEAL PER SECTION 804.4 OF STANDARD SPECIFICATIONS, AS INDICATED BY THE PLANS.
- PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE FOR DOG HOUSE MANHOLES.
- 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.
- LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
- 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. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
- 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.
- WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
- OPENINGS SHALL BE CORE DRILLED INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS DRILLED 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. 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.
- 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. 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.
- 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.
- THE VERTICAL DROP IN STANDARD MANHOLES SHALL NOT EXCEED 2' REGARDLESS OF PIPE SIZE. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- STANDARD 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.
- PRECAST CONCRETE SPACERS OR 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 FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.
- REFER TO PLANS FOR SIZE OF OUTSIDE DROP RISER, SADDLES AND CROSS.



RISER PIPE RESTRAINING ASSEMBLY
Not to Scale



CLEANOUT RISER BOX DETAIL
Not to Scale



MH BASE DETAIL
Not to Scale

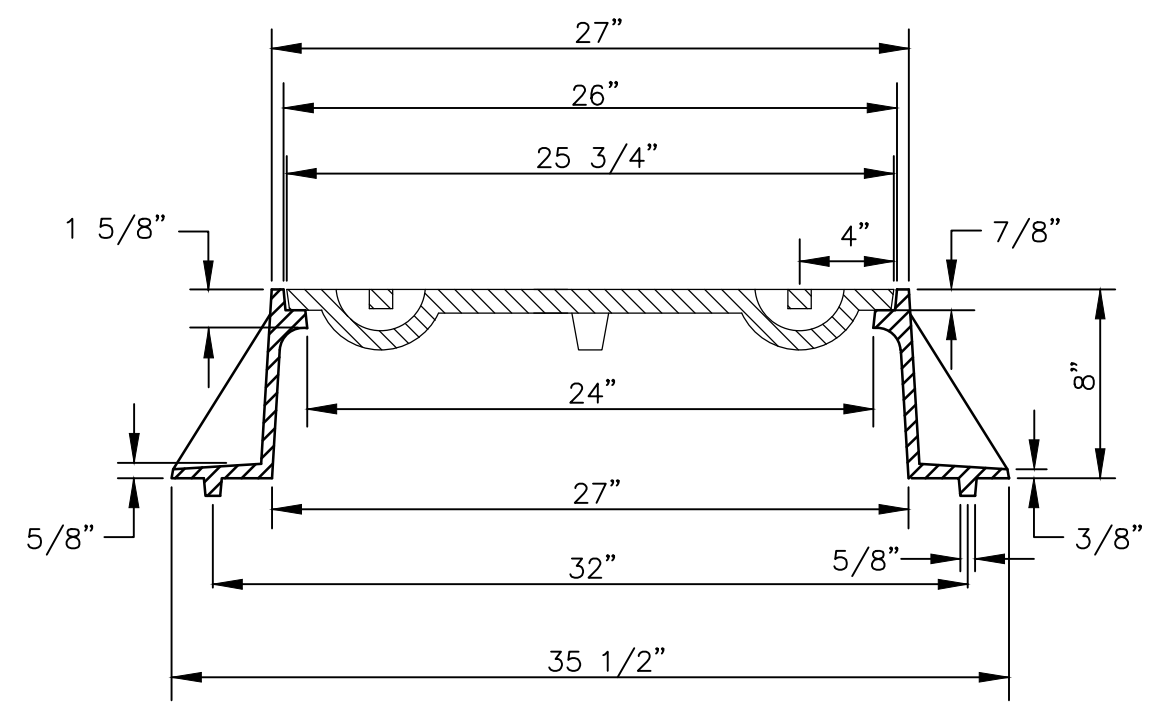
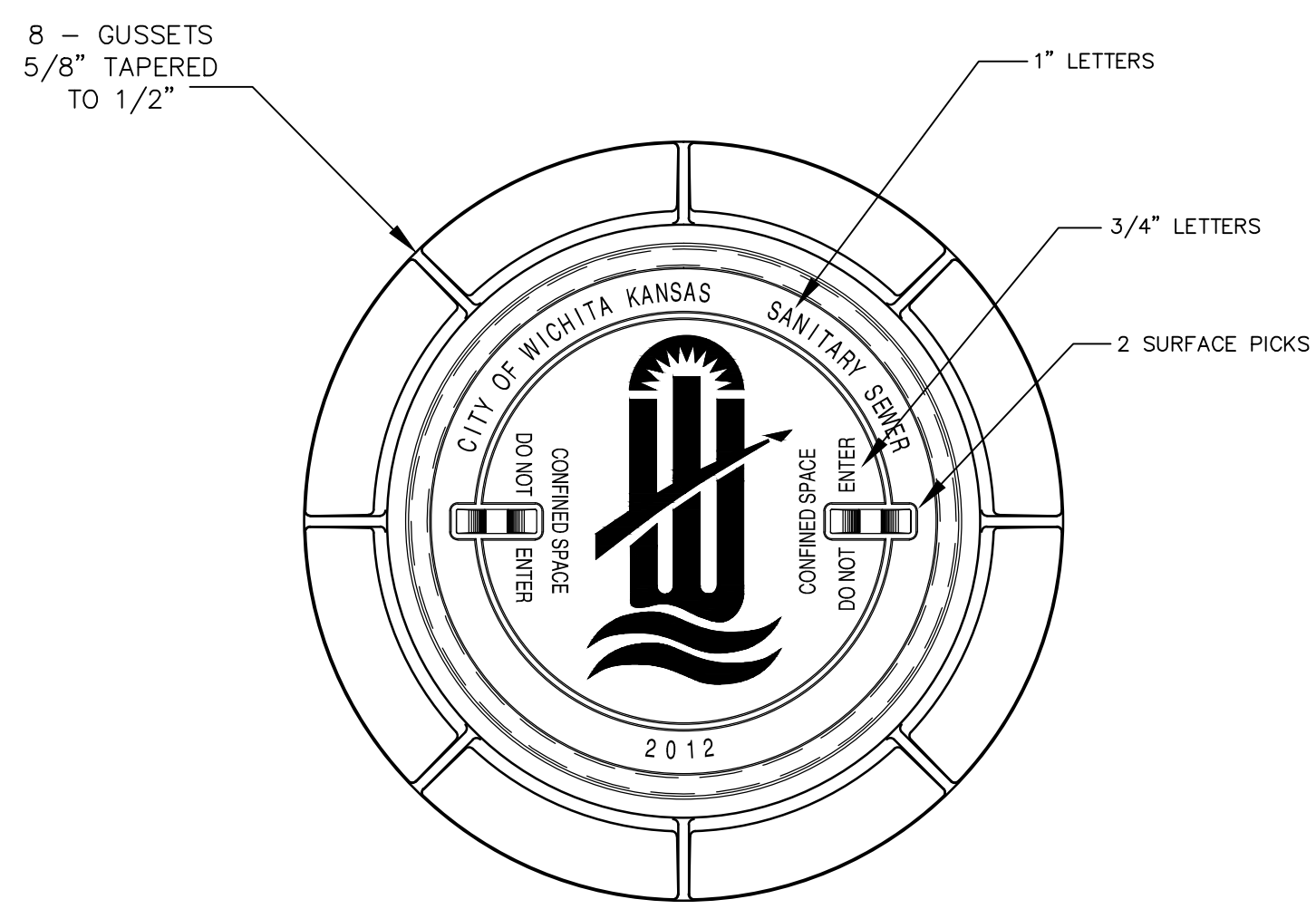
SANITARY SEWER MANHOLE DIAMETERS		
DIAMETER	DEPTH	PIPE SIZE
4'	0'-15'	8"-18"
5'	15'-30'	21"-30"
6'	>30'	36"-60"



**PRECAST
SANITARY SEWER
MANHOLE**

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
		14-18-14
CITY ENGINEER'S OFFICE		SHEET
CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		10 of 15

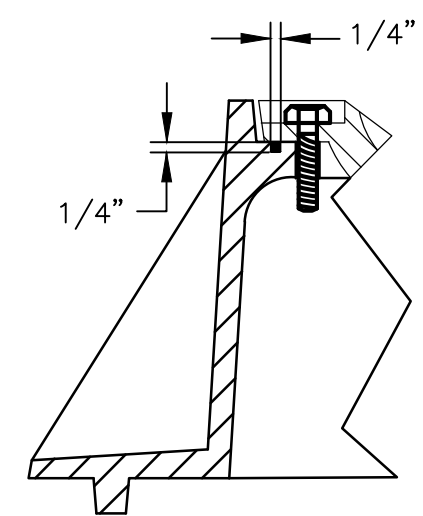
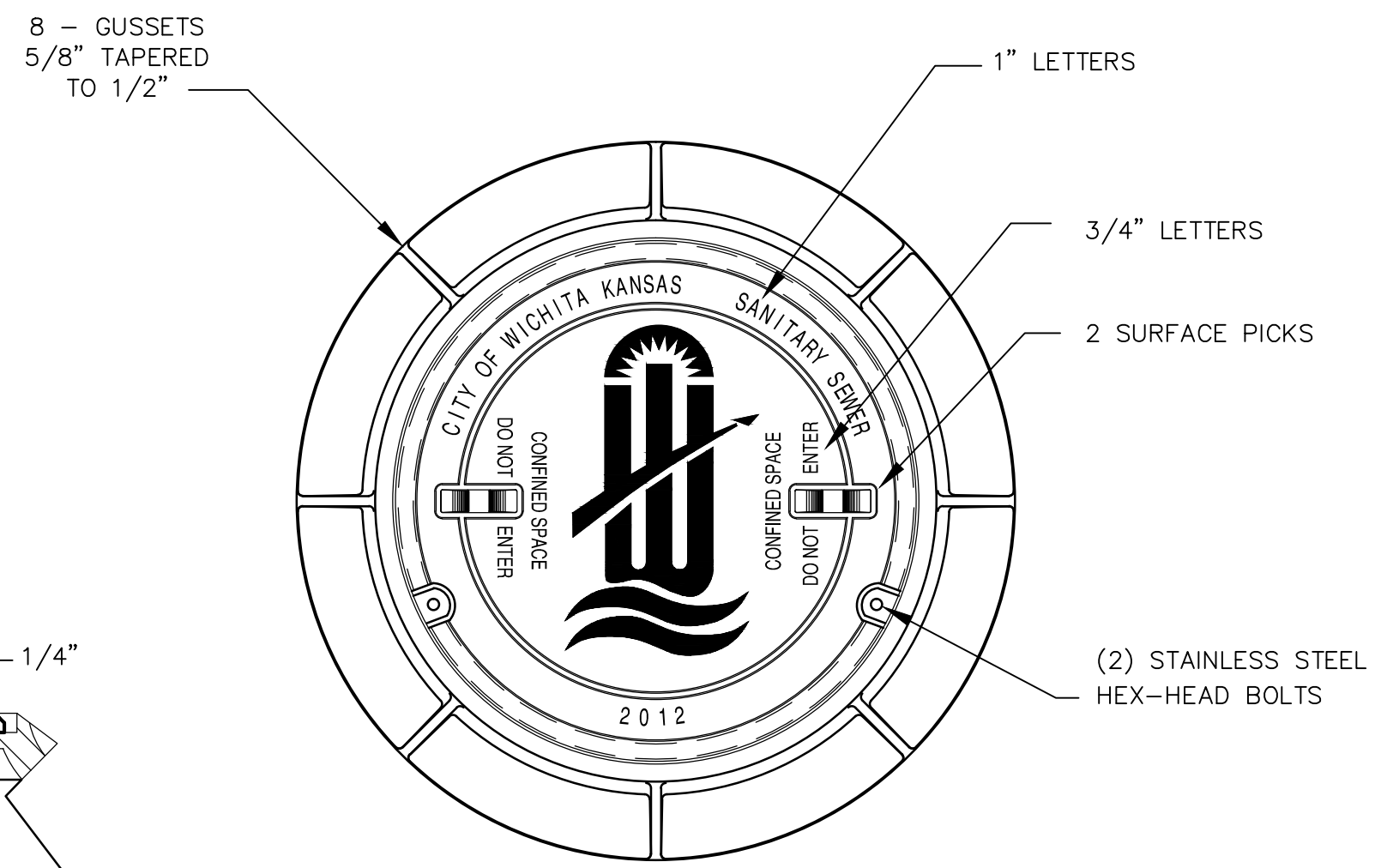


STANDARD MANHOLE FRAME & COVER

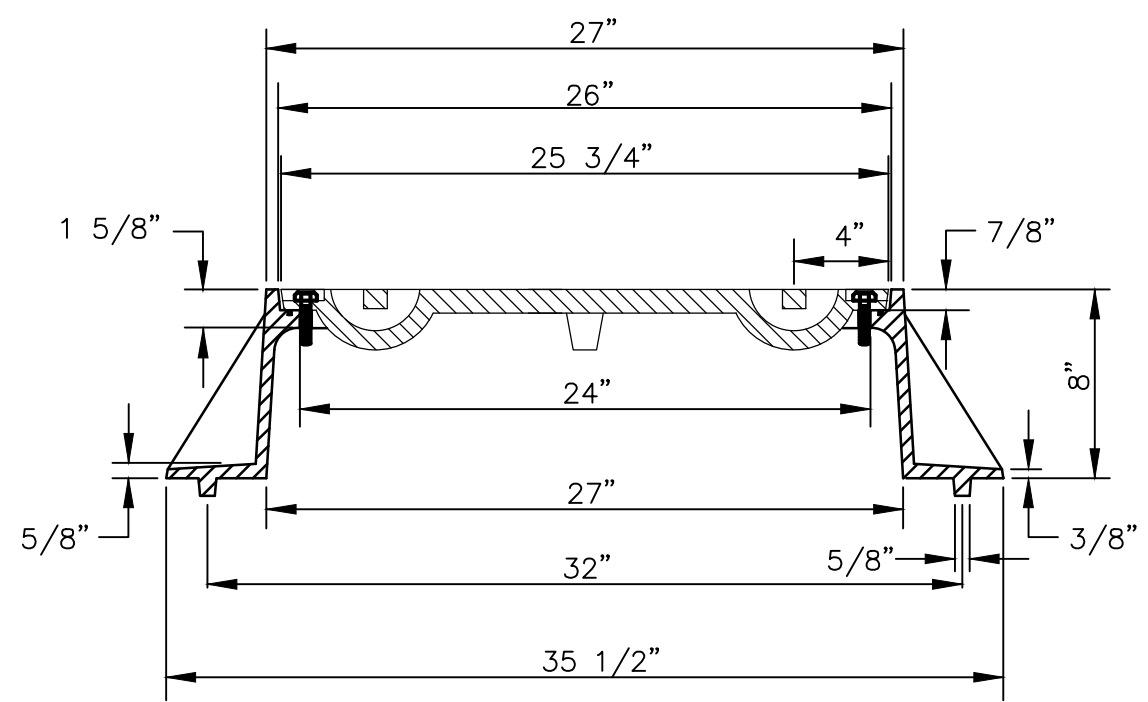
DEETER #1261 OR EJIW #1936-Z1

NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.



DETAIL OF T-GASKET



BOLT DOWN MANHOLE FRAME & COVER

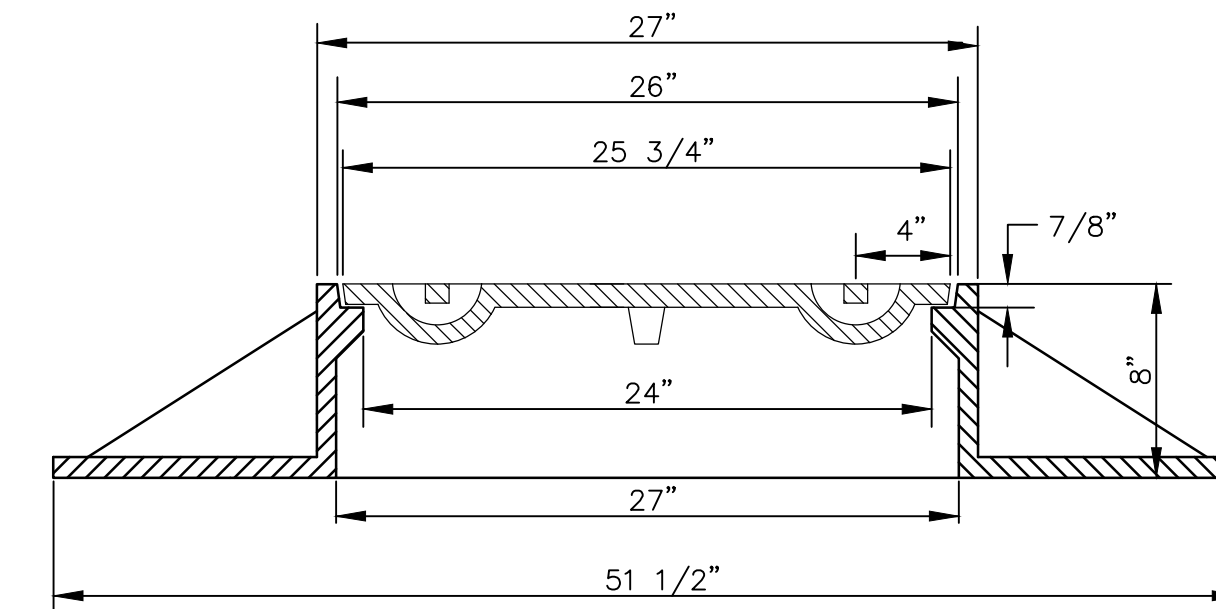
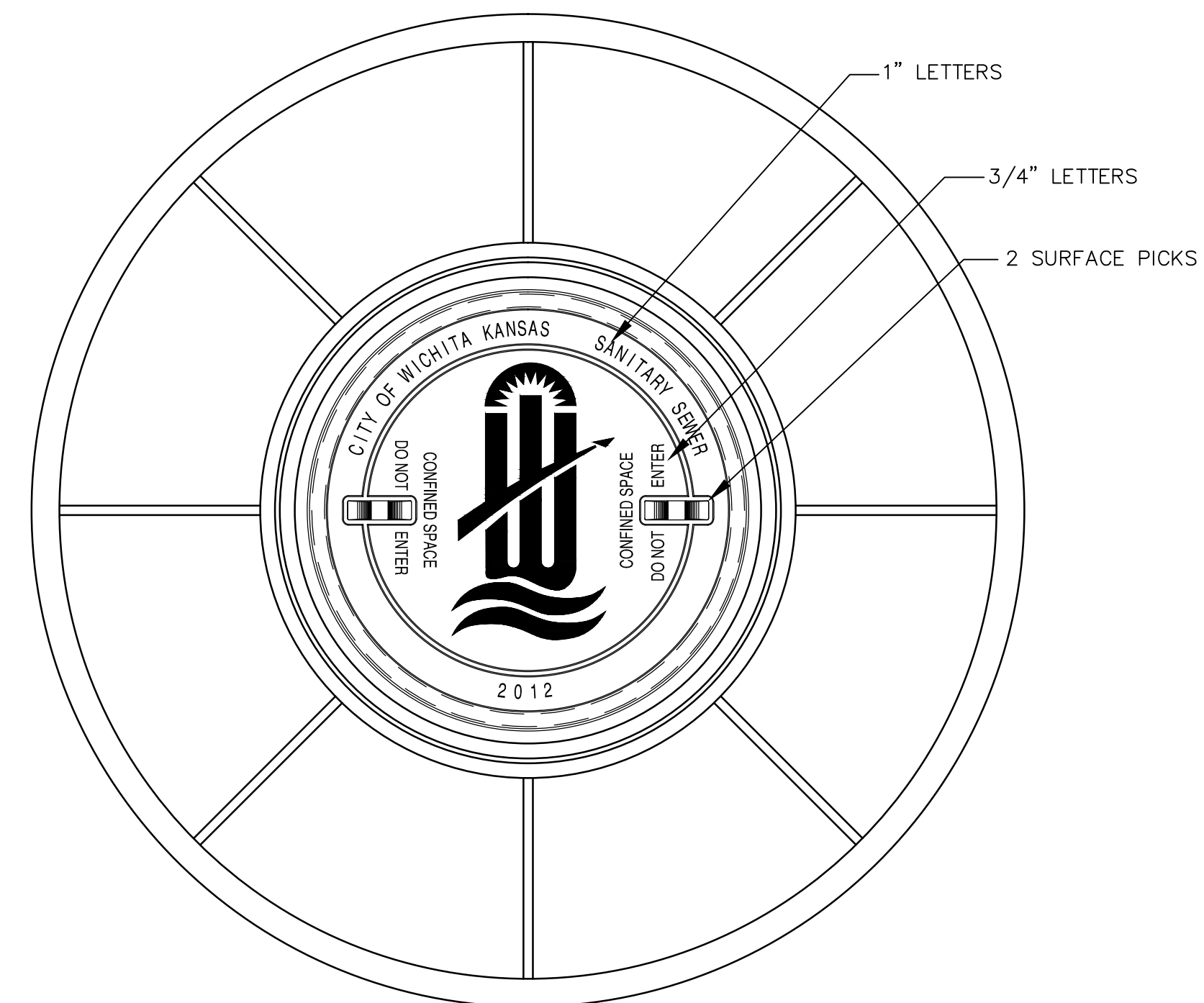
DEETER #1261 OR EJIW #1936-Z1

NOTE:

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

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 FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.
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 WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1 INCH IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SANITARY SEWER". THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN WITH 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.

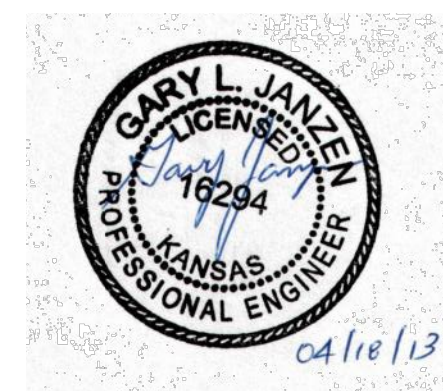


WIDE FLANGED FRAME & COVER

DEETER #1261A

NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

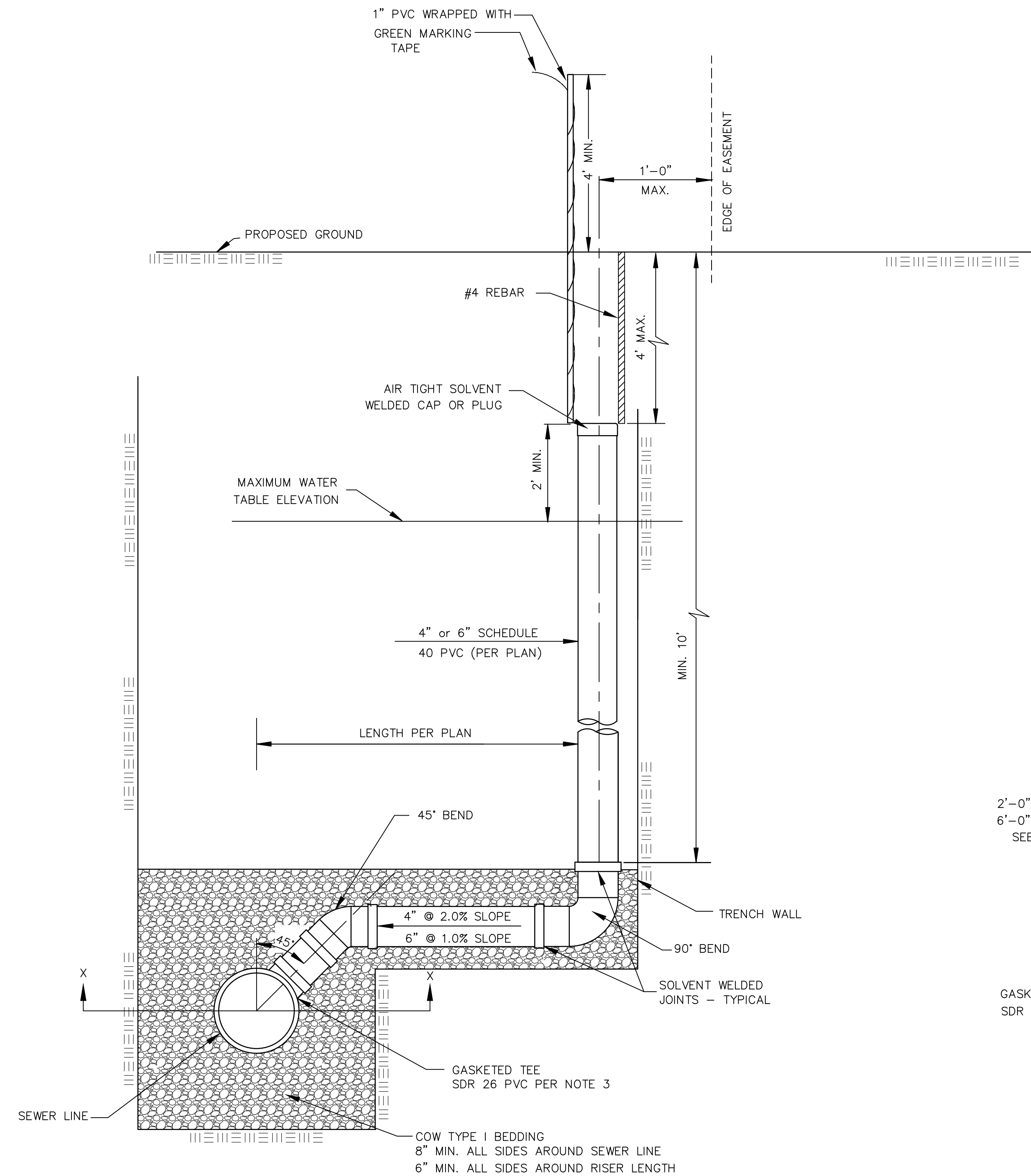


MANHOLE FRAME AND COVER (SANITARY SEWER)		
CITY ENGINEER Gary Janzen, P.E. City Engineer		
PROJECT NUMBER	OCA NUMBER	DATE 14-18-14
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		DESIGN STAFF
		DRAWN STAFF
		SHEET bif 15

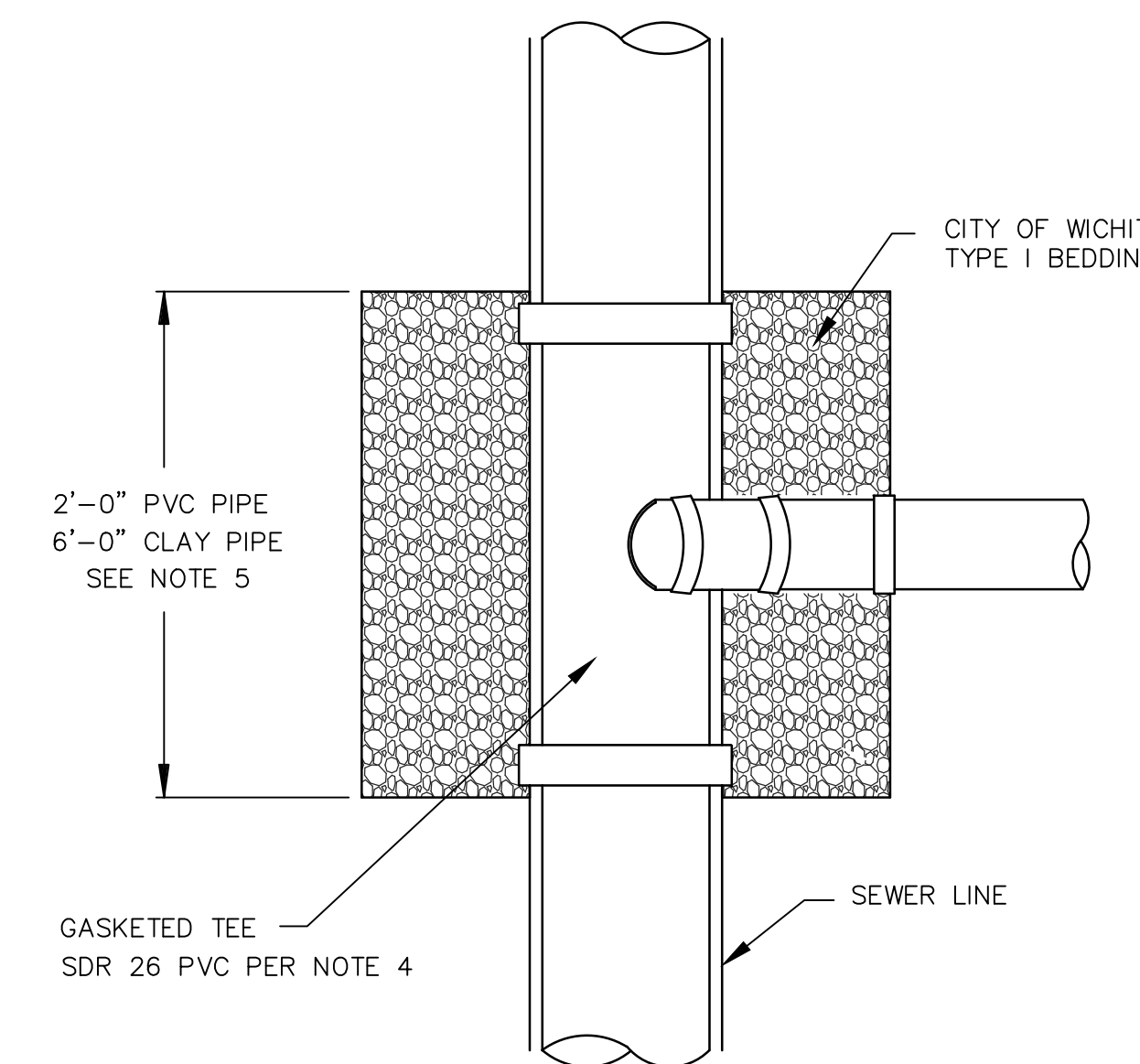
GENERAL NOTES

- APPLICATION.** Risers shall be installed to serve all lots or tracts where the sanitary sewer main is below the water table, where the sanitary sewer main depth is greater than 12' below the proposed ground elevation, where the main is adjacent to a pond or wherever service lines would have to cross under storm sewer pipe. Installation of risers because of field conditions shall be as approved by the City Engineer. The location of the risers to serve developed property shall be approved by the property owner and the Construction Engineer.
- MANHOLE STUB RISERS.** Manhole stub risers 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 stub and the flowline of the sanitary sewer line out of the manhole shall not exceed 2'. Risers shall be utilized at manholes as indicated in Note 1. Manhole stub riser shall be set such that the top of the stub is not lower than the top of the sanitary sewer line.
- SIZING.** Risers shall be sized according to the plans and riser table where risers are indicated by the plans. Where risers are required because of field conditions, the risers shall be 6" 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 shall be approved by the construction Engineer prior to installation.
- RISER MATERIAL.** Risers shall be constructed of Schedule 40 PVC Pipe, meeting the requirement of the latest revision of A.S.T.M.. All pipe joints shall be solvent welded. Full body tee shall be SDR 26 PVC pipe.
- ROCK ENCASEMENT.** Riser connection to clay pipe sanitary sewers shall be rock encased both ways from the riser centerline. The rock 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 rock encased one foot each way from the riser centerline. Crushed rock shall conform to ASTM C-33, Gradation No. 67, and shall meet all requirements for Portland Cement Concrete pavement Coarse Aggregate, Section 406.2, City of Wichita Standard Specifications.
- BEDDING.** Beyond the limits of the rock encasement, 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.
- 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 back filling the riser pie shall be approved by the Construction Engineer.
- 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.
- 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 2' (min.) above the maximum water table elevation, regardless of the riser elevation shown on the plans.
- MARKING.** Locations of the ends of the sanitary sewer riser pipe shall be marked by installing 1" PVC from the top of the riser to a minimum of 4' above the top of finished grade. No. 4 rebar shall be placed centered over the riser from the cap to the existing ground. The 1" PVC pipe shall be wrapped with green colored plastic tape, for the full length above 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.
- LOCATION MEASURES.** The project inspector shall record and document the location of all risers constructed as measured from the nearest manhole, indicate the direction from the manhole, the direction and distance from the main, riser size, and elevation of the top of the riser in tabular format.
- 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.
- PAYMENT.** "Riser Assembly, Vertical " shall be paid for at the contract unit price per each, which shall be full compensation for all pipe, fittings, marking tape, length of backfill, labor, site restoration, and any other items necessary to complete the work.

"Riser Assembly, Manhole Stub" 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, rock encasement, and all other items as required and listed for "Riser Assembly, Vertical "

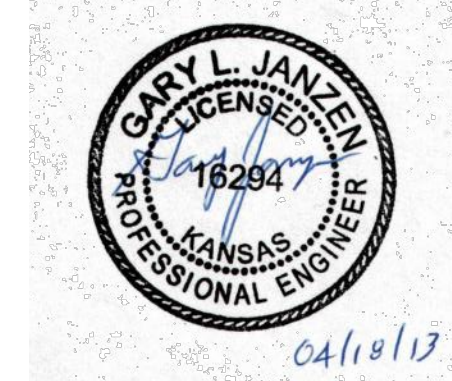


NOTE:
NON SHEAR COUPLING TO BE USED
WHEN HOOKING TO CLAY PIPE.



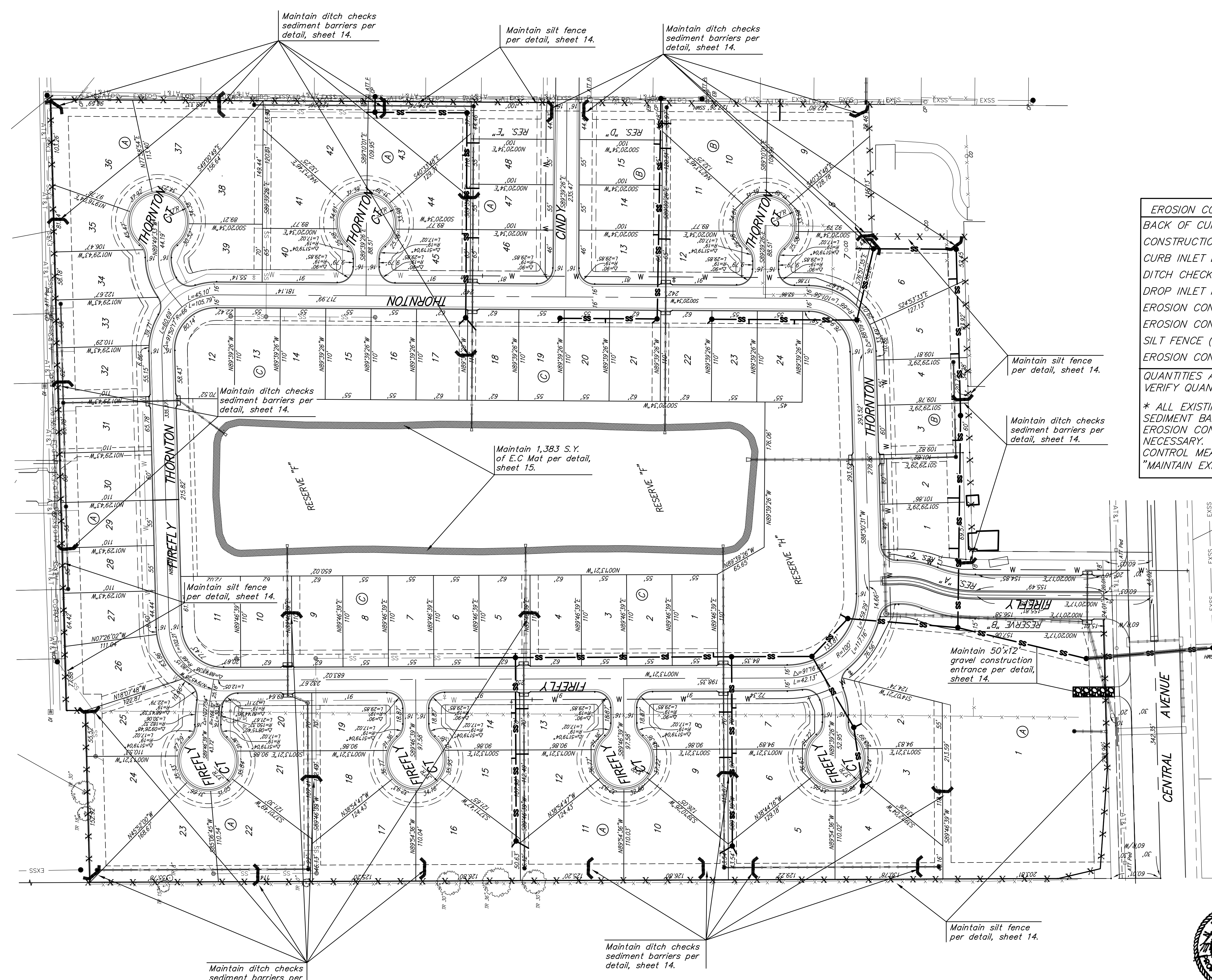
TYPICAL SECTION X-X

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



VERTICAL RISER ASSEMBLY SEWER DETAIL		
CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE 14-18-14
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 12 of 14

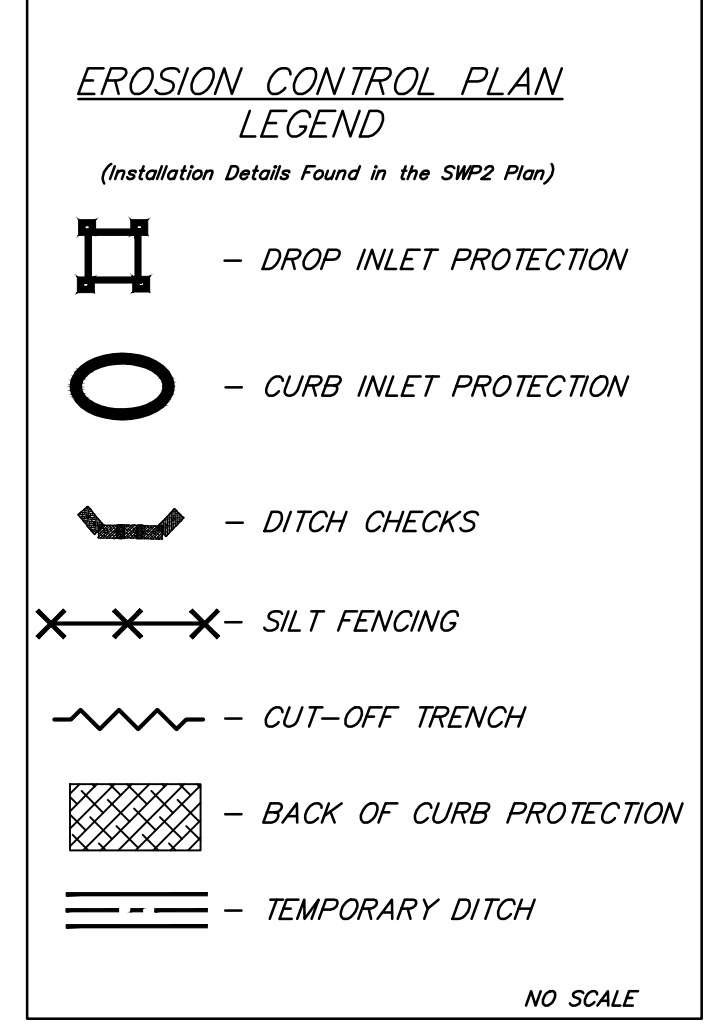
Scale: 1" = 60'



EROSION CONTROL MEASURE	INSTALL	MAINTAIN	REMOVE
BACK OF CURB PROTECTION (LF)	0	0	0
CONSTRUCTION ENTRANCE (EA)	0	1	0
CURB INLET BARRIER (EA)	0	0	0
DITCH CHECK (EA)	0	29	0
DROP INLET PROTECTION (EA)	0	0	0
EROSION CONTROL (LS)	0	0	0
EROSION CONTROL BERM (LF)	0	0	0
SILT FENCE (LF)	0	4,132	0
EROSION CONTROL MAT (SY)	0	1,383	0

QUANTITIES ARE FOR INFORMATION ONLY! CONTRACTOR SHALL VERIFY QUANTITIES PER FINAL BID QUANTITY SHEET.

* ALL EXISTING BMPs INCLUDING CONSTRUCTION ENTRANCE, SEDIMENT BARRIERS, SILT FENCE, CUT-OFF TRENCH, AND EROSION CONTROL MAT SHALL BE MAINTAINED AND REPAIRED IF NECESSARY. REPLACEMENT OR REMOVAL OF EROSION CONTROL MEASURES TO BE PAID FOR BY L.S. BID ITEM "MAINTAIN EXISTING EROSION CONTROL BMPs"



Baughman

ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

CASTLEGATE ADDITION

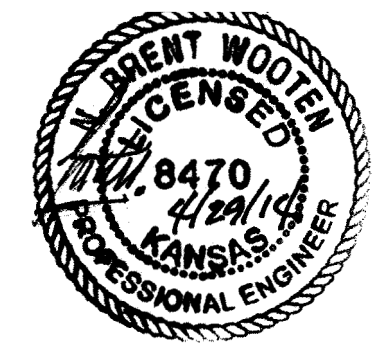
EROSION CONTROL PLAN

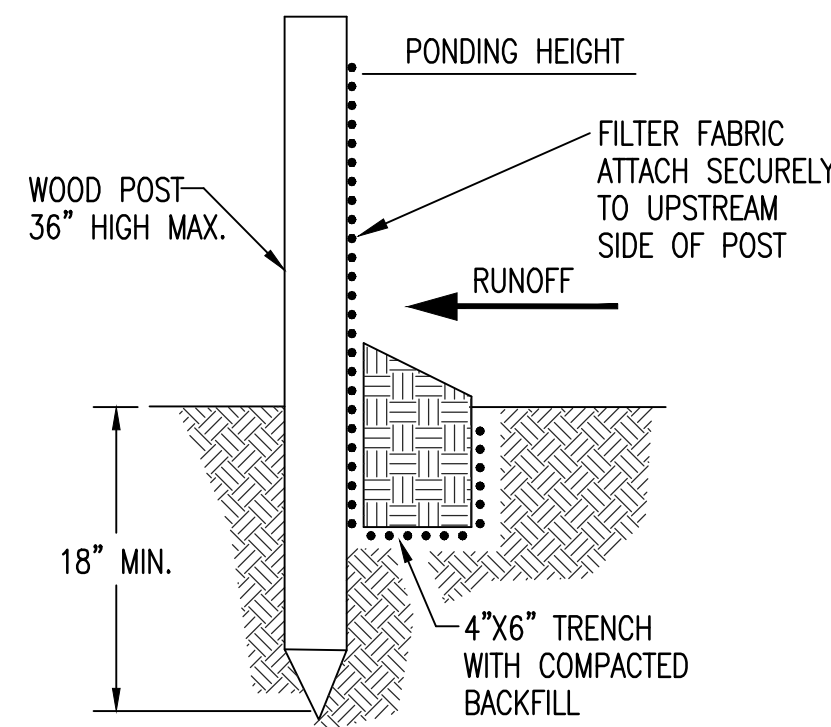
SANITARY SEWER IMPROVEMENTS

PROJECT NUMBER REVISIONS:	DESIGN: JCS DRAWN: JCS APPROVED: DATE 4-25-14 SCALE: Noted SHEET:
------------------------------	-------------------------------------------------------------------------------

13 OF 15

E:/Projects/Castlegate Add./Engineering/Phase1/SS Plans.dwg 13-12-E992





SILT FENCE BARRIERS

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT. WHEN PRACTICABLE, SILT FENCE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. SILT FENCE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 6" DEEP BY 4" WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE. ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH. PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSLOPE EDGE. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT-FENCE FABRIC SHOULD REMAIN EXPOSED. LAY THE EXPOSED SILT FENCE UPSLOPE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 18". PLACE POSTS NO MORE THAN 4' APART. ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

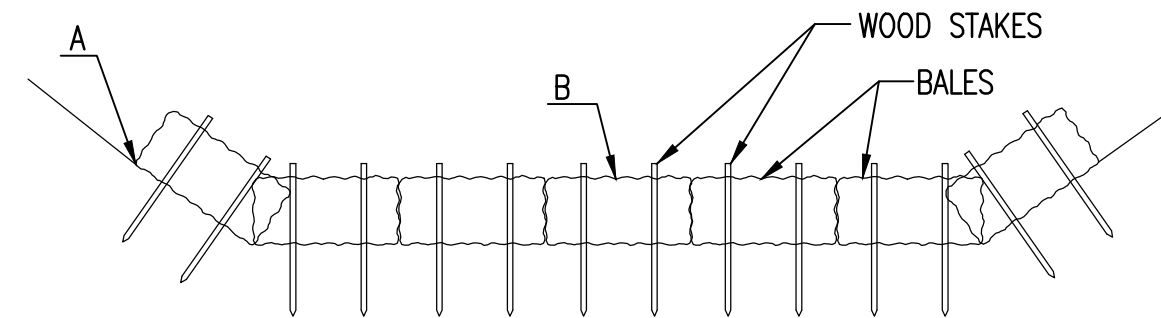
WHEN PRACTICABLE, DO NOT PLACE SILT FENCE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. WHEN THE FLOW CONCENTRATES, IT OVERTOPS THE BARRIER AND THE SILT FENCE SLOPE BARRIER QUICKLY DETERIORATES. DO NOT PLACE SILT-FENCE POSTS ON THE UPSLOPE SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL. DO NOT PLACE SILT FENCE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT SUFFICIENTLY ANCHORED, IT WILL WASH OUT. SILT FENCE SLOPE BARRIERS MUST BE DUG INTO THE GROUND-SILT FENCE AT GROUND LEVEL DOES NOT WORK BECAUSE WATER WILL FLOW UNDERNEATH.

INSPECTION AND MAINTENANCE:

SILT FENCE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
- DOES WATER FLOW UNDER THE SLOPE BARRIER?
- DO THE SILT FENCES SAG EXCESSIVELY?
- HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

NOTE: POINT A MUST BE HIGHER THAN POINT B SO THAT WATER FLOWS OVER THE BALES AND NOT AROUND THEM.



STRAW BALE DITCH CHECKS

MATERIAL SPECIFICATION:

BALE DITCH CHECKS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. OPTIONAL: THE DOWNSLOPE SCOUR APRON SHOULD BE CONSTRUCTED OF A DOUBLE-NETTED STRAW EROSION-CONTROL BLANKET AT LEAST 6' WIDE. OPTIONAL: THE METAL LANDSCAPE STAPLES USED TO ANCHOR THE EROSION-CONTROL BLANKET SHOULD BE AT LEAST 8" LONG.

PLACEMENT:

BALE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. THE DITCH CHECK SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK. STRAW BALE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD. BALES SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED. THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH GRADE (%)	CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH-IT WILL BE USED LATER. OPTIONAL: ON THE DOWNSLOPE SIDE OF THE TRENCH, ROLL OUT A LENGTH OF EROSION-CONTROL BLANKET (SCOUR APRON) EQUAL TO THE LENGTH OF THE TRENCH. PLACE THE UPSLOPE EDGE OF THE EROSION-CONTROL BLANKET ALONG THE BOTTOM UPSLOPE EDGE OF THE TRENCH. THE EROSION CONTROL BLANKET SHOULD BE ANCHORED IN THE TRENCH WITH ONE ROW OF 8" LANDSCAPE STAPLES PLACED ON 18" CENTERS. THE REMAINDER OF THE EROSION-CONTROL BLANKET (THE PORTION THAT IS NOT LYING IN THE TRENCH) WILL SERVE AS THE DOWNSLOPE SCOUR APRON. THIS SECTION OF THE BLANKET SHOULD BE ANCHORED TO THE GROUND WITH 8" LANDSCAPE STAPLES PLACED AROUND THE PERIMETER OF THE BLANKET ON 18" CENTERS. THE REMAINDER OF THE BLANKET SHOULD BE ANCHORED USING TWO EVENLY SPACED ROWS OF 8" LANDSCAPE STAPLES ON 18" CENTERS PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND. ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSLOPE SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP AND EXTEND UPSTREAM NO MORE THAN 24".

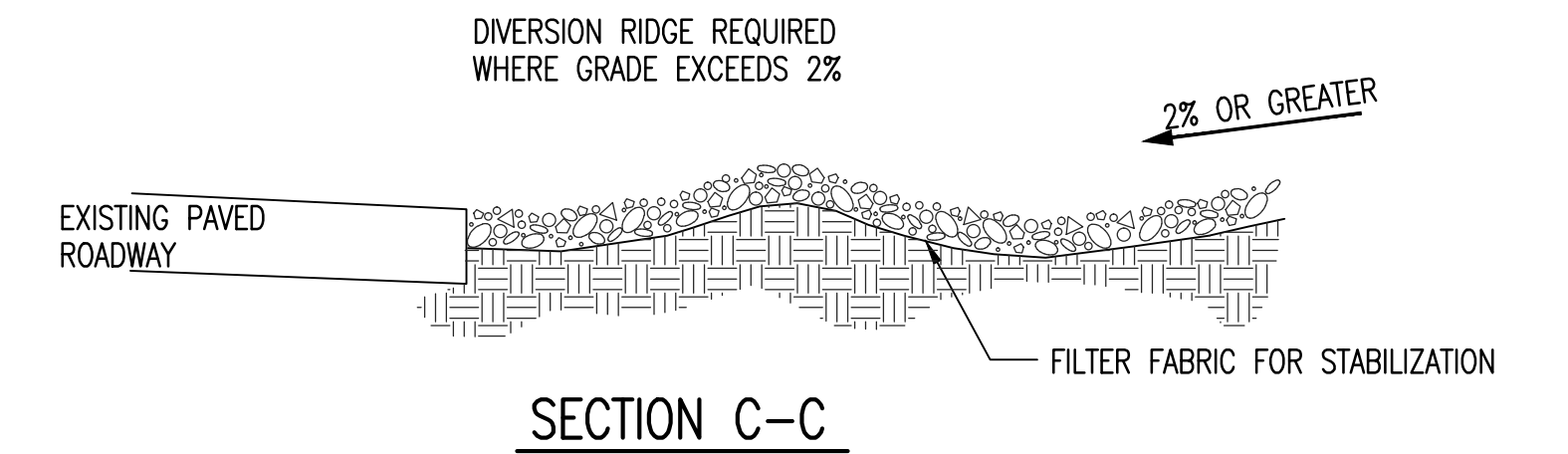
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

DO NOT PLACE A BALE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW. DO NOT PLACE BALE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW. FOLLOW PRESCRIBED DITCH-CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS. DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. DO NOT PLACE BALE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT. BALE DITCH CHECKS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE CHECK.

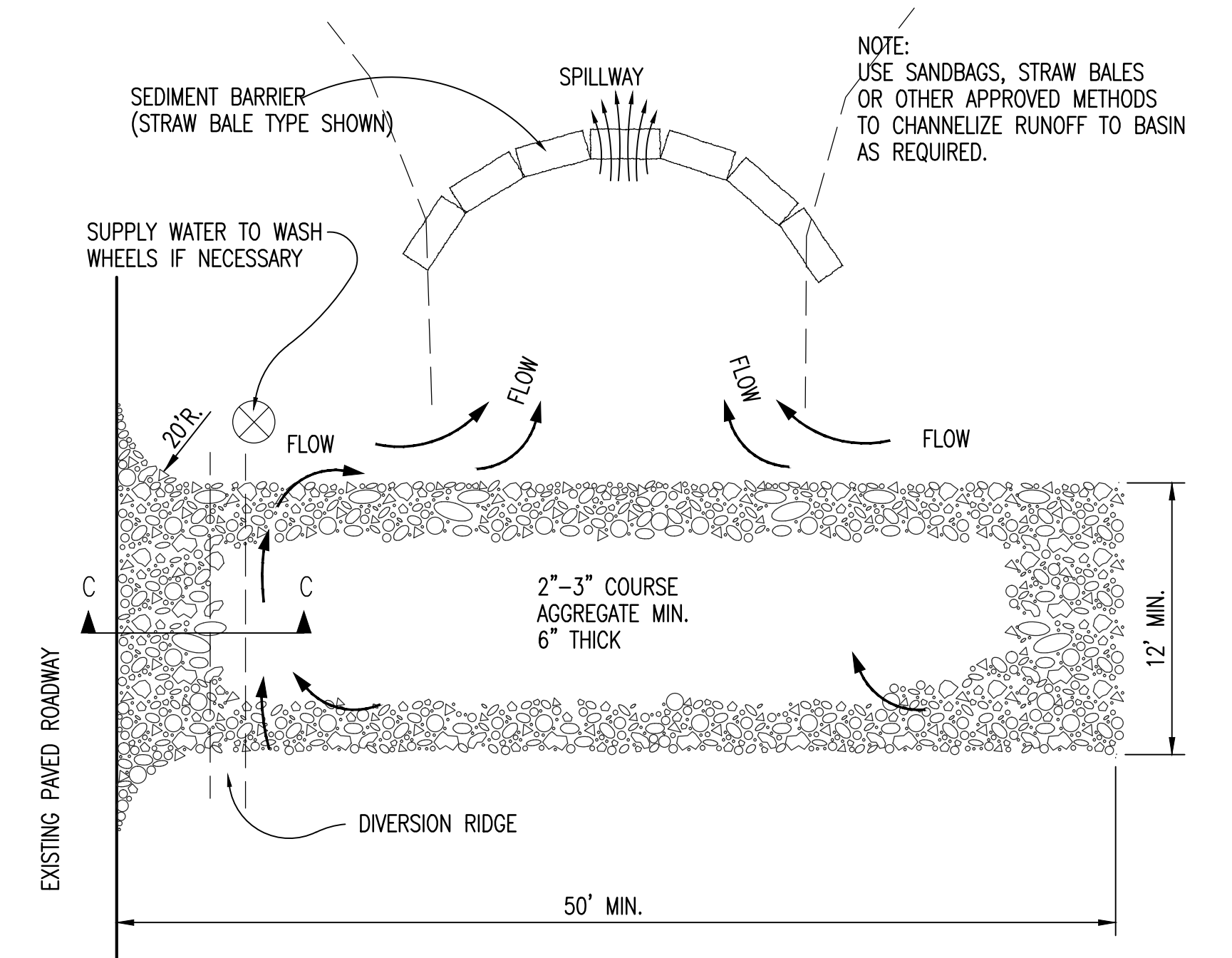
INSPECTION AND MAINTENANCE:

BALE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- DOES WATER FLOW AROUND THE DITCH CHECK?
- DOES WATER FLOW UNDER THE DITCH CHECK?
- DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
- ARE ANY BALES AND/OR SCOUR APRONS (OPTIONAL) DISLODGED?
- ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



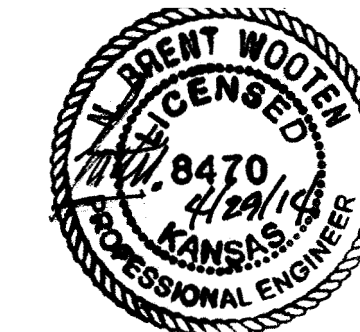
SECTION C-C



STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
- DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.



	CASTLEGATE ADDITION	
	EROSION CONTROL DETAILS SANITARY SEWER IMPROVEMENTS	
<small>Baughman Company, P.A. 315 Ellis St., Wichita, KS 67211 P 316-263-7771 F 316-262-0149 ENGINEERING SURVEYING PLANNING LANDSCAPE ARCHITECTURE</small>		
PROJECT NUMBER	DESIGN STAFF	DRAWN STAFF
REVISIONS:	APPROVED	DATE
	SCALE	4-29-14
	Noted	
	SHEET	14 OF 15
<small>E:/Projects/Castlegate Add./Engineering/Phase1/SS Plans.dwg 14-01-E004</small>		

