

# 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:

AT&T 1-800-246-8464  
 Black Hills Energy 1-800-694-8989  
 City of Wichita Water & Sewer 1-316-219-8921  
 City of Wichita Stormwater 1-316-268-4090  
 City of Wichita Traffic 1-316-268-4034  
 Cox Communications 1-888-249-3530  
 Kansas Gas Service 1-888-482-4950  
 Westar Energy 1-800-544-4857

2. Utility service lines, poles, etc. 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 will require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits will 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 City 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 elevations shown are NAVD 88.

8. All stubs and capped pipes shall be located with green plastic tape in the same manner as risers.

9. Connecting to Existing Manholes:  
 Prior to laying sewer lines using existing stubs in existing manholes, the Contractor shall expose and verify the elevation, grade and alignment of existing stubs and notify the Engineer of any deviation from the plans. Where the stub is unusable due to elevation grade or alignment, the Contractor shall remove the stub and plug the hole, and reshape the existing manhole invert to provide smooth flow. Where connection to an existing manhole that does not have an existing stub, the Contractor shall core cut into existing manhole wall to make connection using approved water stop gasket, and reshape the existing manhole invert to provide smooth flow. The cost of connect to existing manholes is incidental to the project.

10. Contractor shall limit the extent of trench open overnight and weekends to less than 50 feet.

11. Contractor shall provide positive drainage away from all manhole covers.

12. The Contractor shall prevent any construction debris from entering the existing sanitary sewer during construction.

13. The Contractor shall protect from damage and support existing utilities through construction as approved by the utility owner and the Engineer at the contractor's expense.

14. All of Res. "I" Firefly Way Addition and Res. "B" Wichita Destination Development disturbed during construction shall be seeded and mulched as follows:

Seed -- Kansas Premium Fescue Blend; 8 lbs. PLS/1000 Sq. Ft.  
 Annual Rye grass; 3 lbs./1000 Sq. Ft.  
 Fertilizer -- 12-24-12 Ratio; 45 Lbs./Ac.  
 Mulch -- 2 Tons Prairie Hay/Ac.

All other disturbed areas within street R/W and lots are to be seeded as follows:

Seed -- Rye grass; 5 lbs./1000 Sq. Ft.

All costs associated with seeding including mobilization, preparation of ground, seeding, fertilizing, mulching, etc. shall be included in the L.S. bid item "Seeding".

An additional bid item for "Seeding, Temporary" has been included and may be used at the discretion of the design engineer. Temporary seed shall be Annual Rye at 5 lbs./1000 Sq. Ft. unless otherwise noted and shall be planted when permanent seed or sod cannot be used due to seasonal limitations. If the "Seeding, Temporary" bid item is not used, 100% of the pay item will be deducted from the contract. All costs associated with temporary seeding including mobilization, preparation of ground, seeding, etc., shall be included in the L.S. bid item "Seeding, Temporary".

15. 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.

16. The developer for this project is Ritchie Development, Kevin Mullen, (316)684-7300.

17. CONSTRUCTION SEQUENCE & PHASING  
 The intent of the construction schedule is to complete the sewer, water, storm sewer, and grading that serve Lots 49-64, Blk D and Lots 28-33, Blk E as soon as possible. After the construction is complete for those lots and adjacent right-of-way, paving/sws construction will begin.




Recommended Construction Sequence

- Sanitary Sewer Line 1, Line 3 Sta 0+00 to Sta 6+62.4, Line 4 & Line 5 may be constructed in any order except for sanitary sewer service #1.
- Complete mass grading of lots and adjacent street right-of-ways for Lots 49-64, Blk D and Lots 28-33, Blk E.
- Install storm sewer and water line that serve Lots 49-64, Blk D and Lots 28-33, Blk E.
- The remaining sewer lines & services, and mass grading may be constructed in any order the contractor desires.

## Benchmarks

BM#1: RR spike in high line pole, 40' west and 30' south of Lot 60, Block D, Firefly Way Addition.  
 Elev. = 1399.54 NAVD88

BM#2: V-notch in sidewalk along Eagle St., adjacent to NE corner of Lot 15, Block E, Firefly Way Addition.  
 Elev. = 1401.26 NAVD88

- Benefit District Ph. 4 
- Benefit District Ph. 5 
- Benefit District Ph. 6 

# SANITARY SEWER IMPROVEMENTS

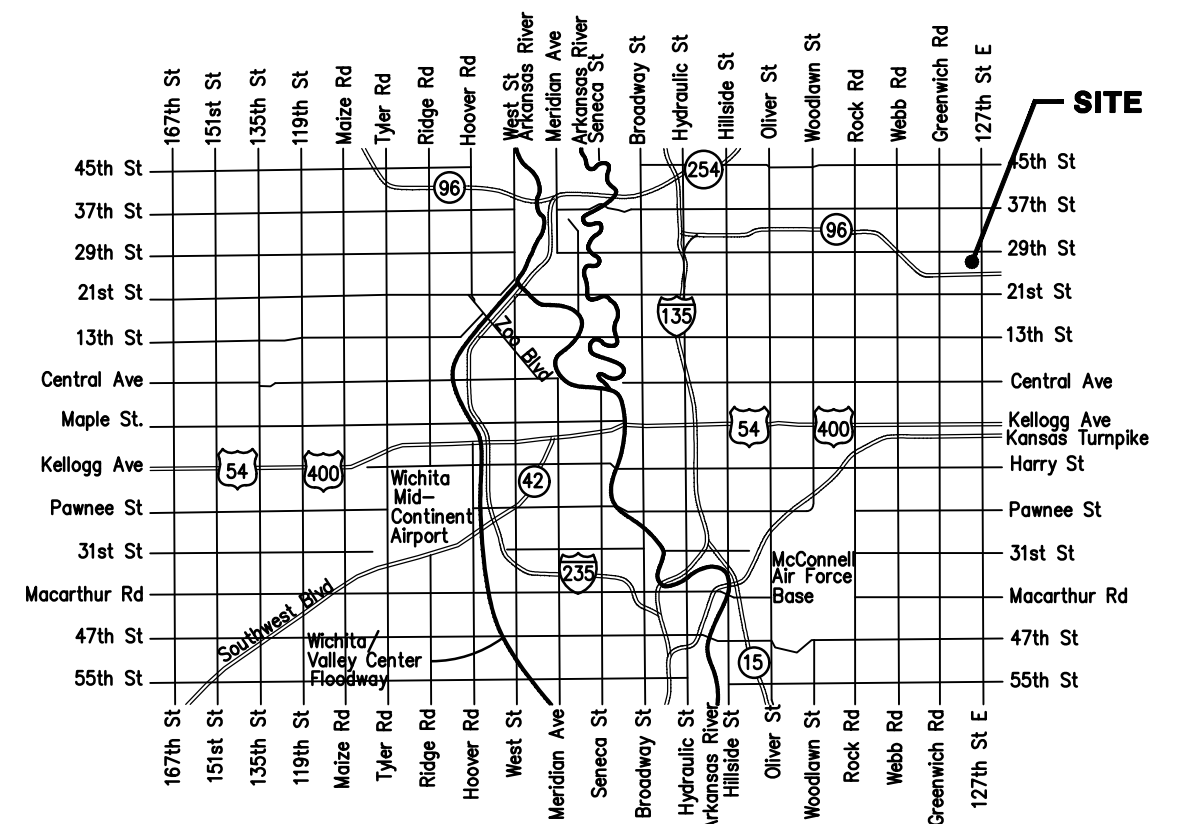
to serve

## FIREFLY WAY ADD. Ph. 4, 5 & 6

### CITY OF WICHITA, KANSAS

Gary Janzen, P.E. City Engineer

Phase 4	Phase 5	Phase 6
468-85812	468-85813	468-85814
O.C.A. Number	O.C.A. Number	O.C.A. Number
744511	744512	744513



Vicinity Map

Nowak Construction - Contractor  
 K Yale - City of Wichita, Field Project Engineer  
 R. Skilling - City of Wichita, Inspector  
 As-built  
 Stubs and Risers  
 Release Date: 8/17/2020 (release date for connection purposes only)  
 Completion Date: 7/6/2021  
 pdf: apr 9/2/2020

## Sheet Index

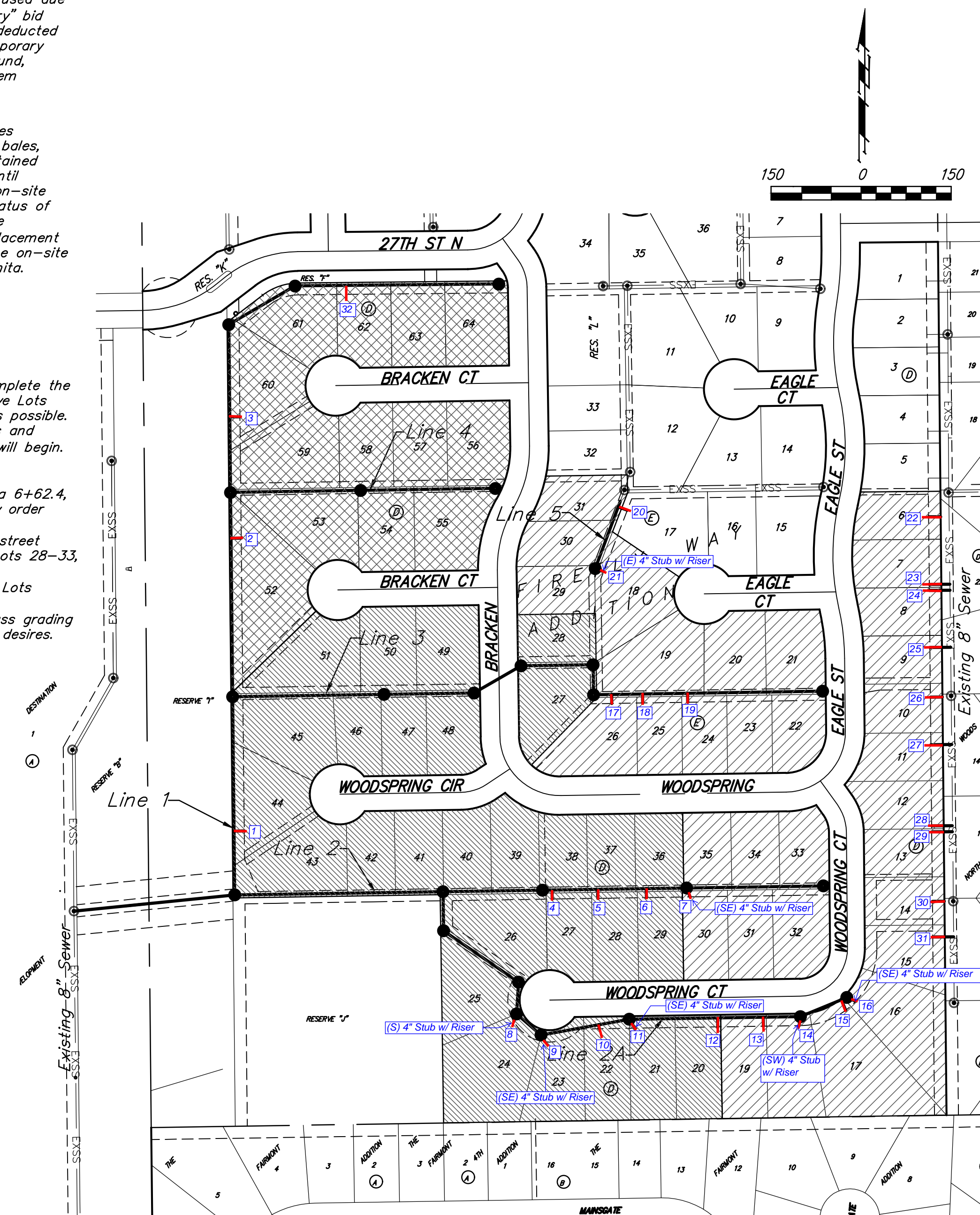
Title Sheet	1
Line 1	2-4
Line 2	5
Line 2A	6
Line 3	7
Lines 4 & 5	8
Additional Risers	9
Erosion Control Plan	10
Precast SS Manhole Detail	11
Manhole Frame & Cover Detail	12
Vertical Riser Detail	13
Erosion Control BMP Details	14-18
Coordinate Sheet	19
Copy of Plat	20

Phase 4 includes  
 Line 1 Sta. 0+00 to 2+69.0 (incl. MH)  
 Line 2 Sta. 7+52.8 (incl. MH) to 9+80.4  
 Line 2A Sta. 4+72.3 (incl. MH) to 8+40.8  
 Line 3 Sta. 4+02.0 (incl. MH) to 10+44.0  
 Line 5  
 Risers #22-31

Phase 5 includes  
 Line 1 Sta 2+69.0 to 8+00  
 Line 2 Sta 0+00 to 7+52.8  
 Line 2A Sta 0+00 to 4+72.3  
 Line 3 Sta 0+00 to 4+02.0

Phase 6 includes  
 Line 1 Sta. 8+00 to 16+85.4  
 Line 4

All costs for bid items, "Site Clearing", "Site Restoration", and "Seeding" shall be included in the Phase 4 project.



November 2019



Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0143  
 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

**Sanitary Sewer Riser Location Table**

Project Name: Firefly Way SS Improvements Phase 5,6,7

Project Location: 27th and Bracken

Project No.: 468-85812 468-85813 468

OCA No.: 744511 744512 744513

Contractor: Nowak

Inspector: Roger Skilling

Riser No.	Line No.	Station	Distance from Main to Riser (Lt./Rt.)	Distance from	
				Upstream MH	Downstream MH
1	1	3+75	17' RT	224.0	106.0
2	1	8+63	17' RT	76.0	264.0
3	1	10+65	17' RT	153.0	126.0
4	2	5+28	15' RT	225.0	16.0
5	2	6+04	15' RT	148.0	92.0
6	2	6+85	15' RT	67.0	173.0
7	2	7+52	5.5' RT	0.0	0.0
8	2A	2+70	13.5' RT	0.0	0.0
9	2A	3+22	13.5' RT	0.0	0.0
10	2A	4+20	7' RT	0.0	0.0
11	2A	4+72	17' RT	0.0	0.0
12	2A	5+53	15' RT	204.0	81.0
13	2A	6+29	15' RT	128.0	157.0
14	2A	7+57	15' RT	0.0	0.0
15	2A	7+79	21.5' RT	44.0	40.0
16	2A	8+41	16' RT	0.0	0.0
17	3	6+92	15' RT	352.0	30.0
18	3	7+44	15' RT	300.0	82.0
19	3	8+19	15' RT	225.0	157.0
20	5	0+30	16' LT	109.0	30.0
21	5	1+39	15' LT	0.0	0.0
22	EXISTING	0+42	20' RT		42.0
23	EXISTING	1+52	34.5' RT		152.0
24	EXISTING	1+62	34.5' RT		162.0
25	EXISTING	2+57	34.5' RT		257.0
26	EXISTING	3+38	20' RT		338.0
27	EXISTING	4+19	34.5' RT		419.0
28	EXISTING	5+54	34.5' RT		554.0
29	EXISTING	5+64	34.5' RT		564.0
30	EXISTING	6+80	20' RT		680.0



**BENCHMARKS:**  
 BM#1: RR spike in high line pole, 40' west and 30' south of Lot 60, Block D, Firefly Way Addition.  
 Elev. = 1399.54 NAVD88

BM#2: V-notch in sidewalk along Eagle St., adjacent to NE corner of Lot 15, Block E, Firefly Way Addition.  
 Elev. = 1401.26 NAVD88

Contractor to contact owners (both hotel and Res. "B") at least two weeks prior to construction to coordinate parking lot removal/replacement.

Trees in conflict with sanitary sewer construction to be removed by contractor. To be paid for as lump sum bid item "Site Clearing"

All other trees shall remain and be protected from damage during construction. Overhanging limbs shall be trimmed by the Contractor using a chain saw only as necessary for construction and with approval of the Engineer. Cost of tree trimming to be included in bid item "Site Clearing"

Remove and replace rock, restore berm to prior conditions. Install erosion control mat in disturbed areas on the side slopes and top of the berm.

Proposed Concrete Ditch Liner. See plans and details in Storm Water Drain project.

Remove, do not replace existing fence as necessary for sanitary sewer construction.

WICHITA DESTINATION DEVELOPMENT

Sta. 0+00.0, Begin Line 1 Core into existing manhole and extend pipe east. Seal and grout around new pipe using non-shrink grout. Reshape invert if necessary. Cost of coring, sealing, grouting and reshaping to be incidental to cost of pipe. Top Elev. = 1390.86 N=7,658.26 E=18,437.29

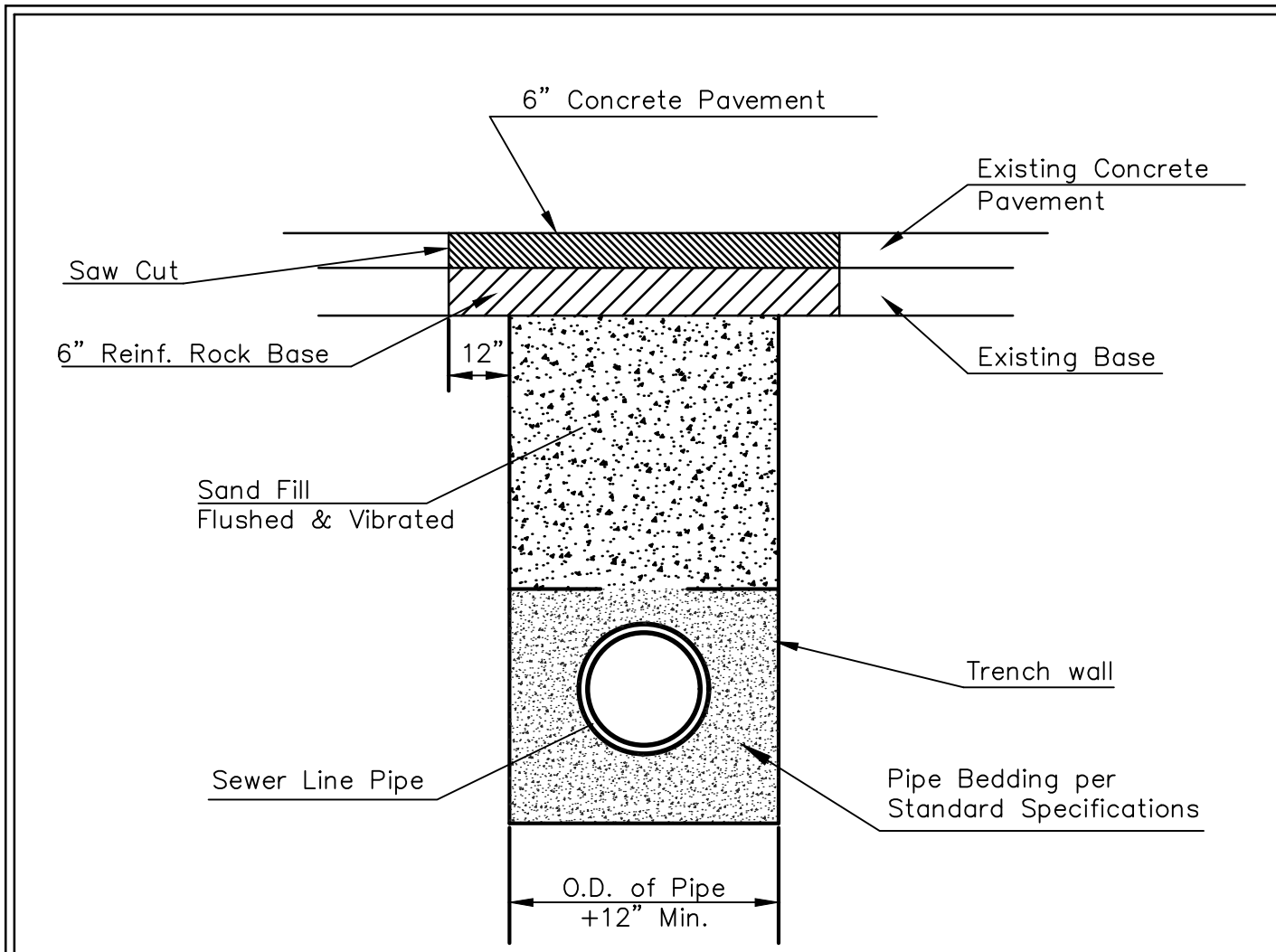
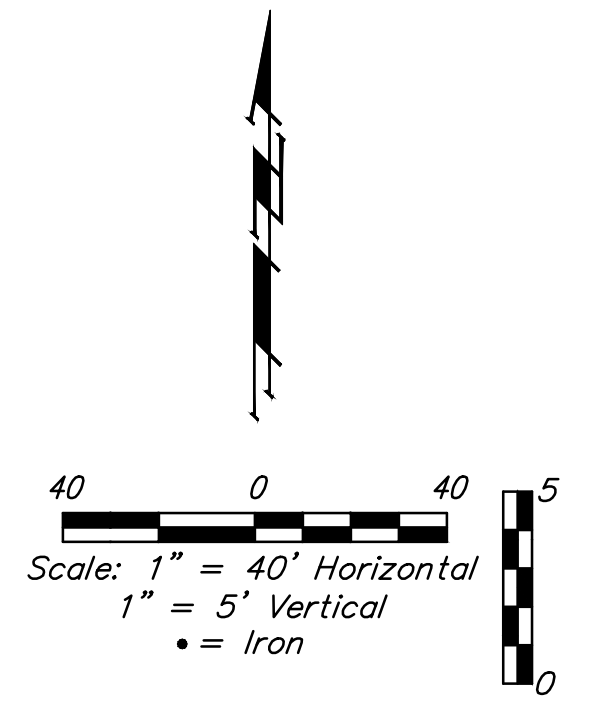
OWNER One Valley Center LLC  
 125 N. Emporia St. Ste. 202  
 Wichita, KS 67202

Saw cut and remove existing concrete pavement and curb & gutter to nearest joint as necessary for sanitary sewer construction. Install sand backfill flushed and vibrated as needed for excavated areas. Replace pavement with 6" Concrete Reinforced Pavement W/ Reinforced Crushed Rock Base 6". New pavement to be restriped with yellow Pavement Marking, 4" as needed. All work to be incidental to "Site Restoration".

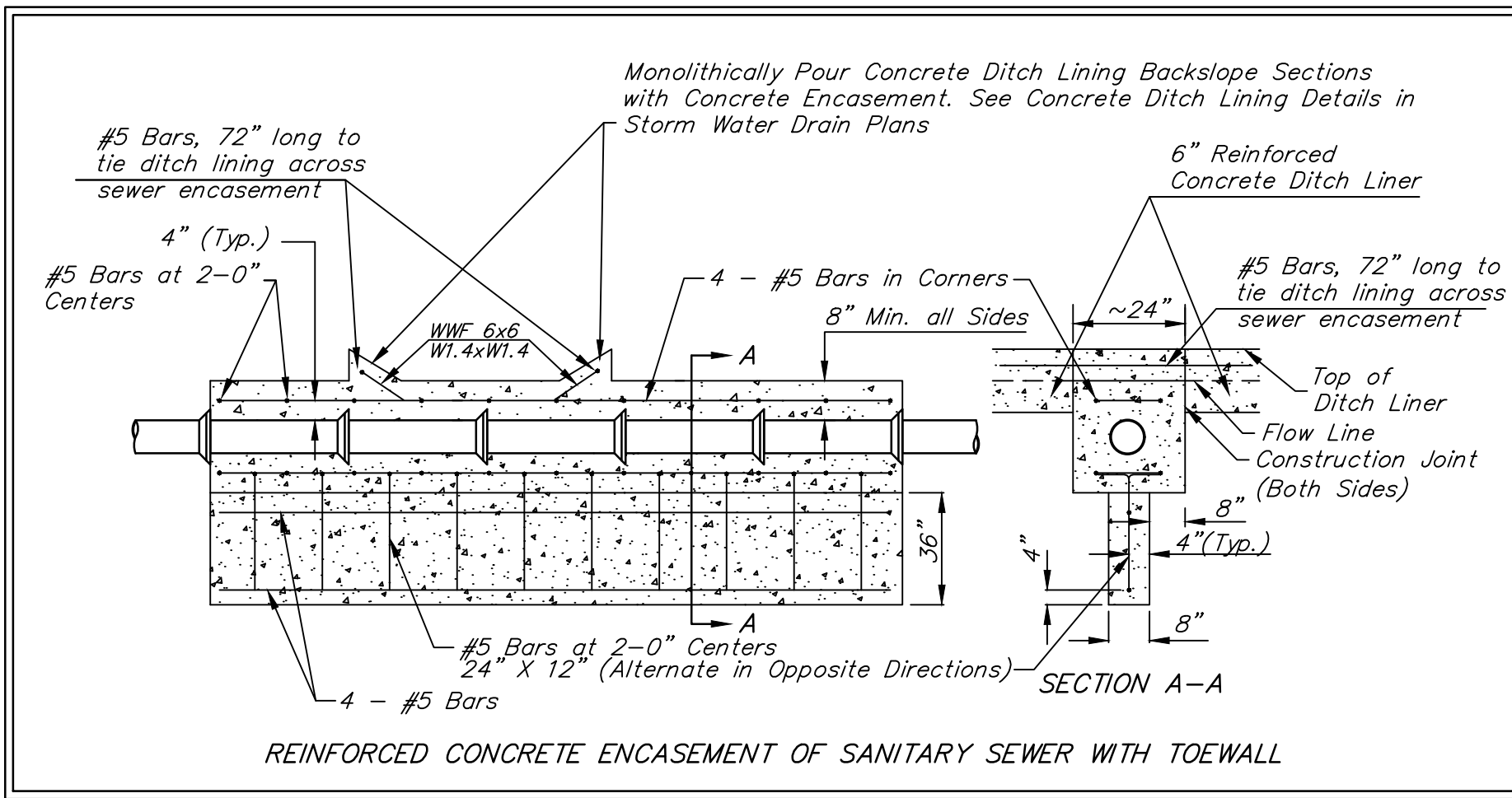
Sta. 0+82.0 to Sta. 1+27.0 Install 45.0 L.F. concrete encasement with toewall per detail, this sheet.

CAUTION! Ex. OH Elec. Crossing

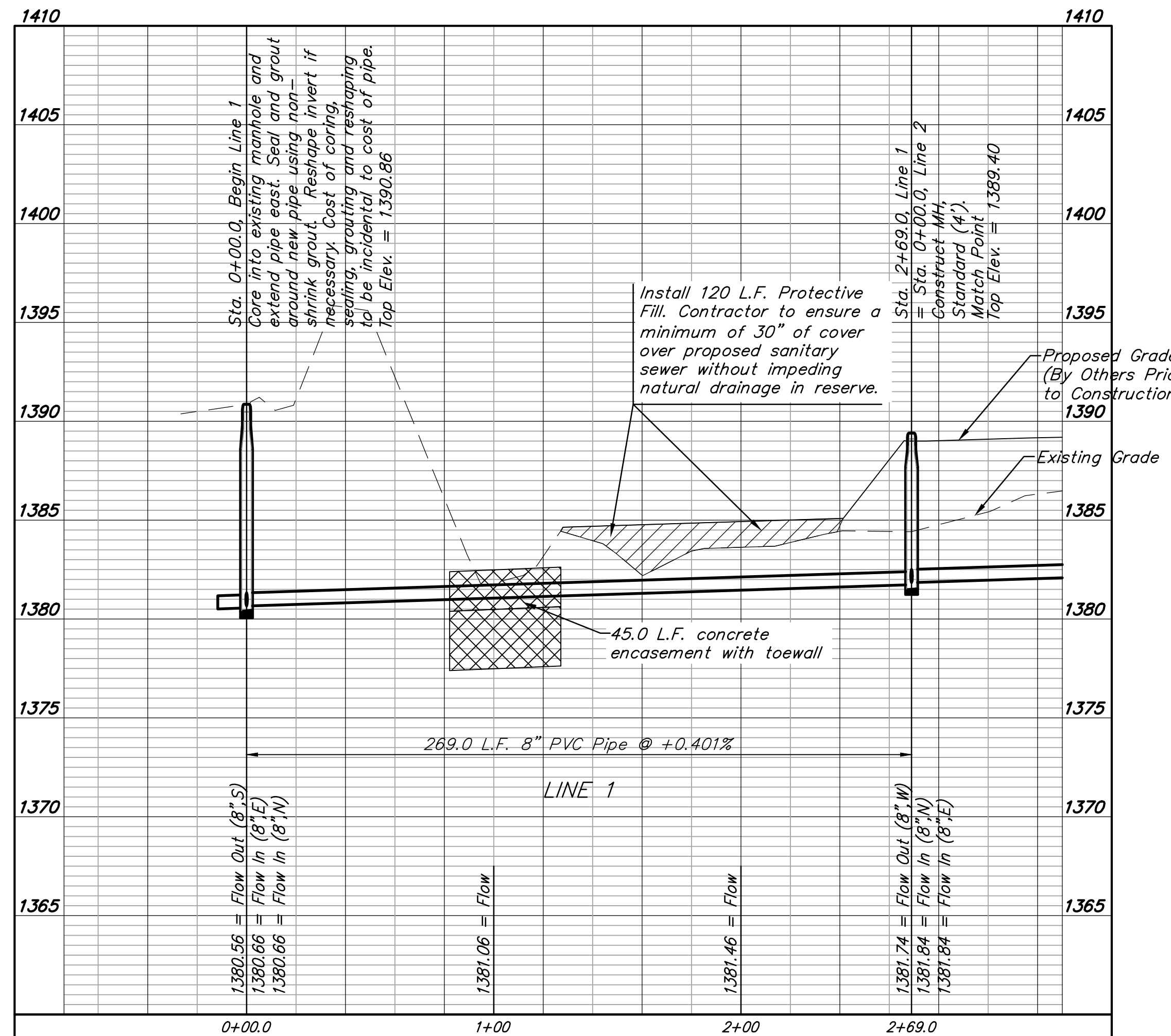
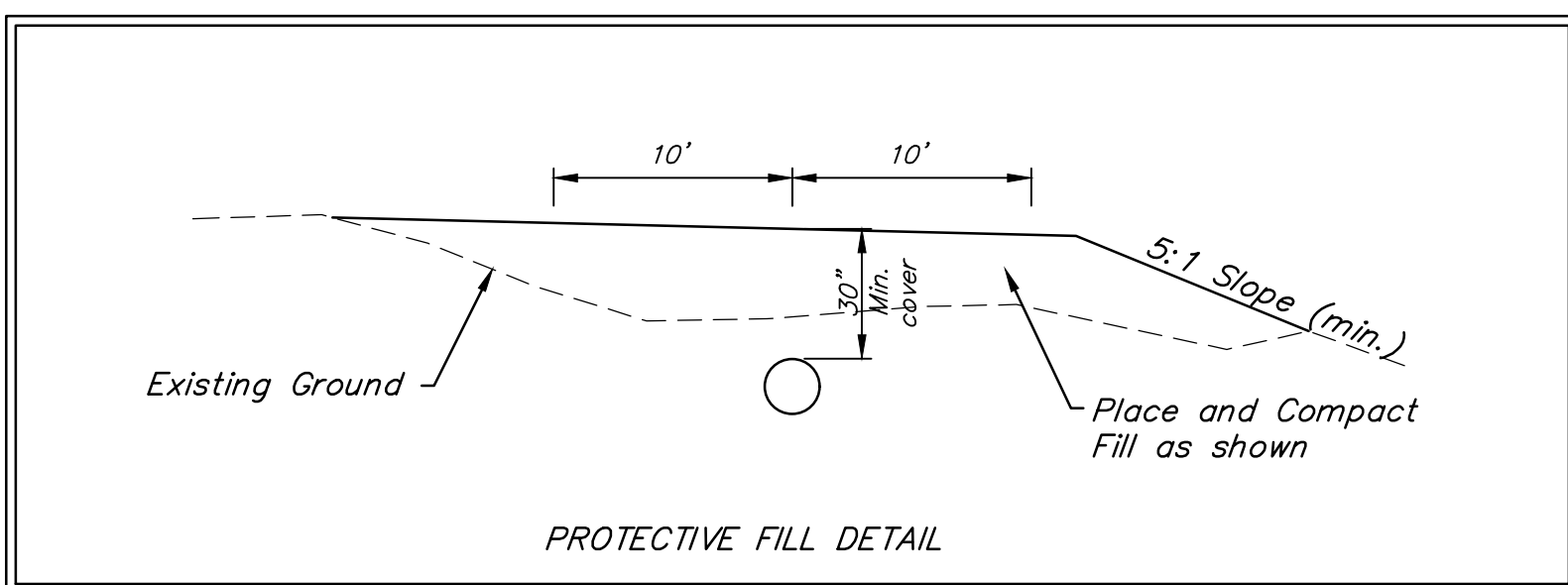
Sta. 2+69.0, Line 1 = Sta. 0+00.0, Line 2 Construct MH, Standard (4). Match Point Top Elev. = 1389.40 N=7,685.16 E=18,704.96



PAVEMENT REPLACEMENT & TRENCH COMPACTION UNDER EXISTING PAVEMENT



Contractor shall verify elevation and alignment of existing 8" pipe prior to construction and notify Engineer of any discrepancy.



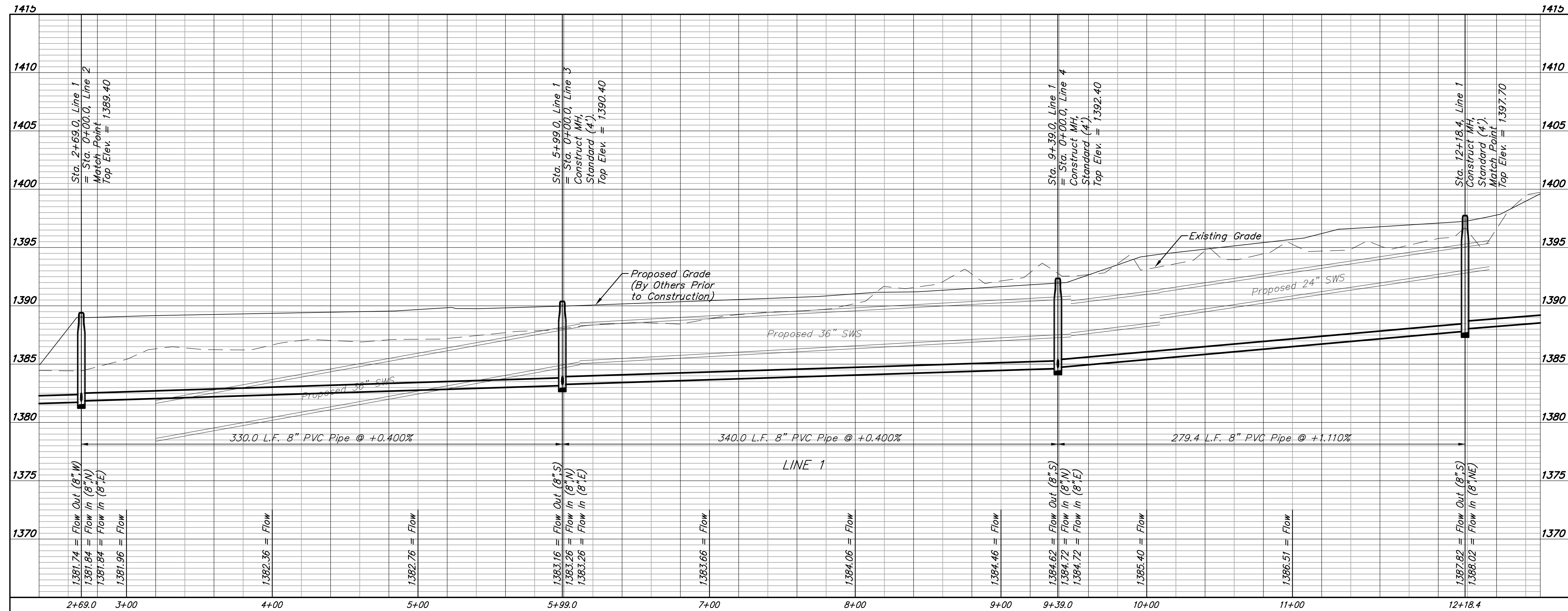
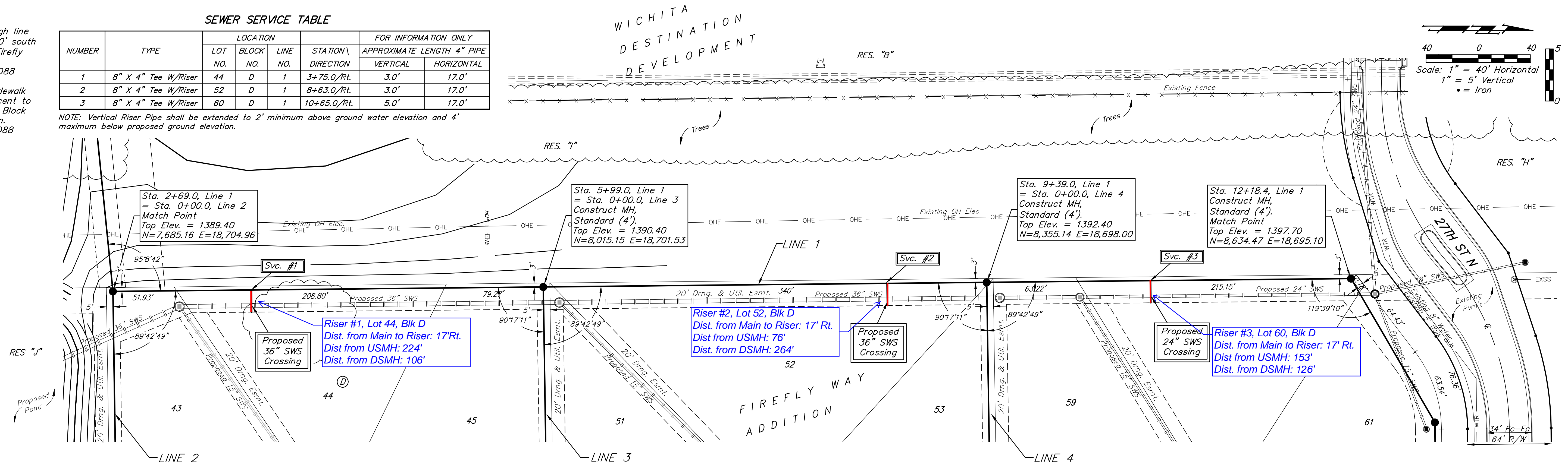
**BENCHMARKS:**  
 BM#1: RR spike in high line pole, 40' west and 30' south of Lot 60, Block D, Firefly Way Addition.  
 Elev. = 1399.54 NAVD88

BM#2: V-notch in sidewalk along Eagle St., adjacent to NE corner of Lot 15, Block E, Firefly Way Addition.  
 Elev. = 1401.26 NAVD88

**SEWER SERVICE TABLE**

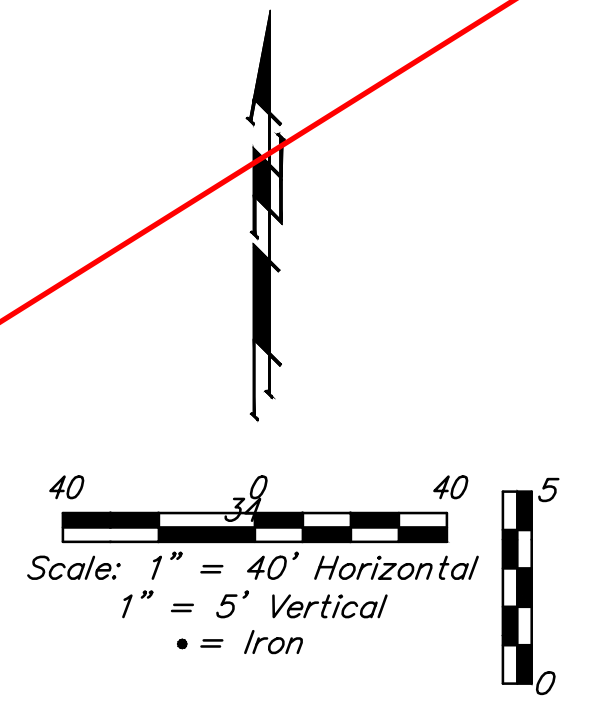
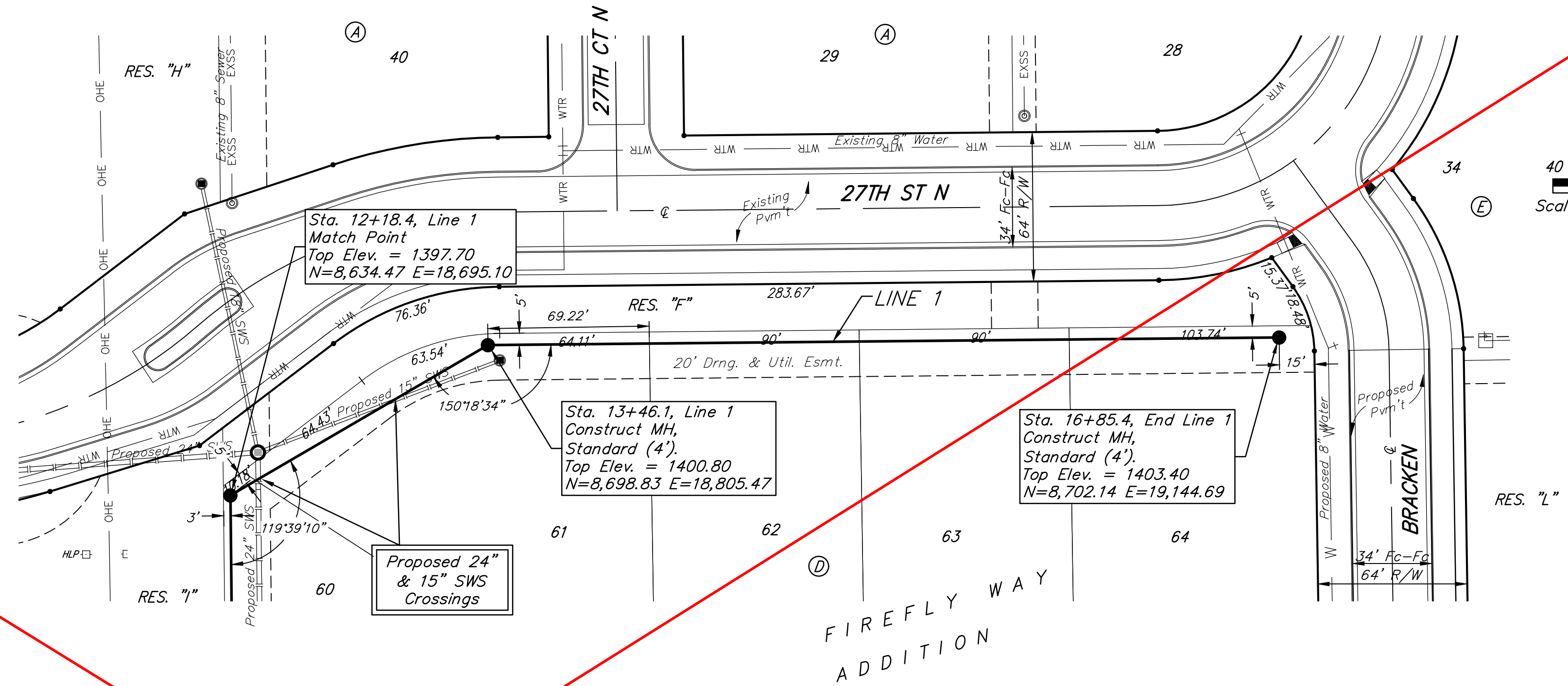
NUMBER	TYPE	LOCATION			FOR INFORMATION ONLY		
		LOT NO.	BLOCK NO.	LINE NO.	STATION \ DIRECTION	APPROXIMATE LENGTH 4" PIPE	VERTICAL
1	8" X 4" Tee W/Riser	44	D	1	3+75.0/Rt.	3.0'	17.0'
2	8" X 4" Tee W/Riser	52	D	1	8+63.0/Rt.	3.0'	17.0'
3	8" X 4" Tee W/Riser	60	1	10+65.0/Rt.	5.0'	17.0'	

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

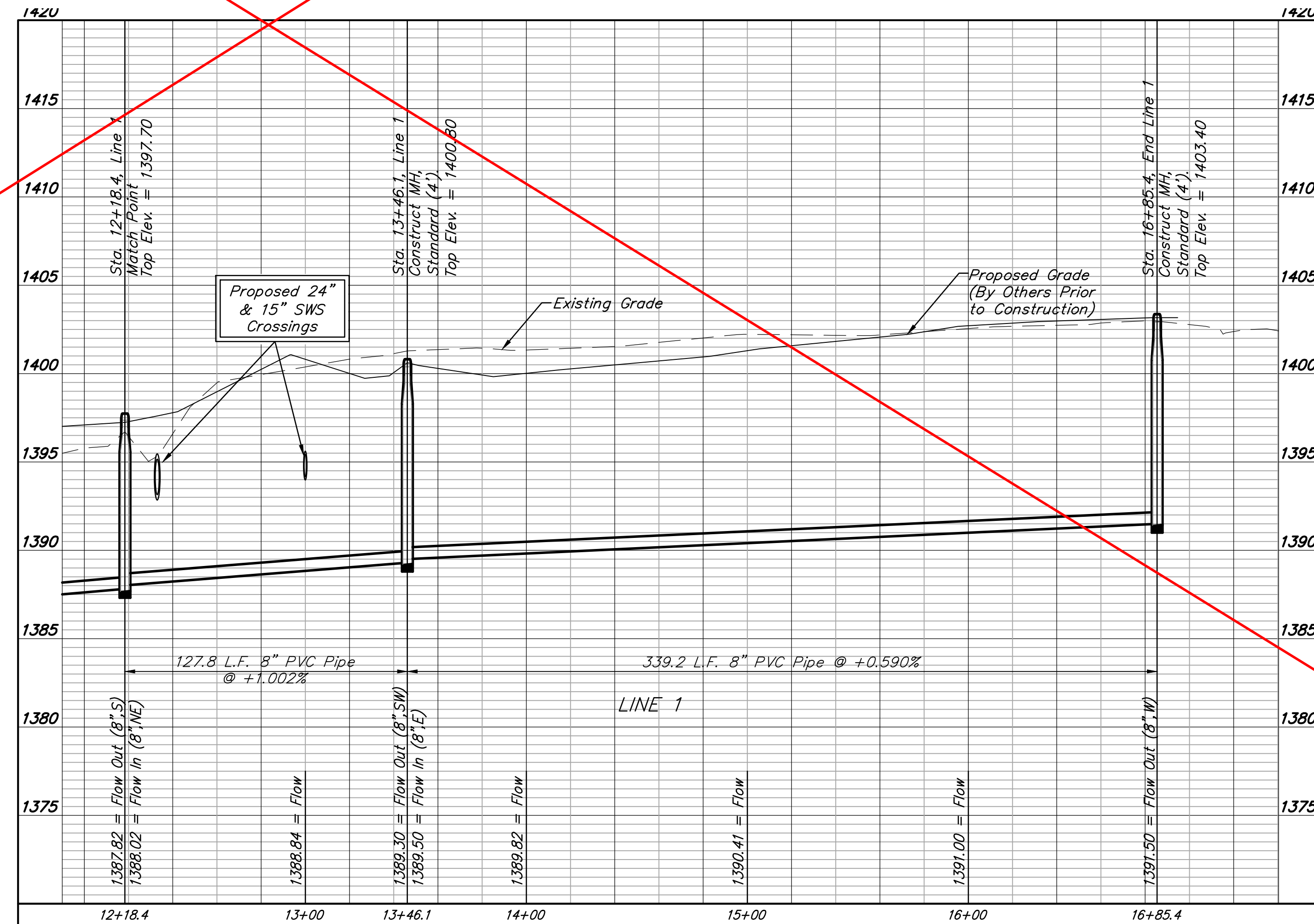


**BENCHMARKS:**  
 BM#1: RR spike in high line pole, 40' west and 30' south of Lot 60, Block D, Firefly Way Addition.  
 Elev. = 1399.54 NAVD88

BM#2: V-notch in sidewalk along Eagle St., adjacent to NE corner of Lot 15, Block E, Firefly Way Addition.  
 Elev. = 1401.26 NAVD88



SEE REVISED SHEET

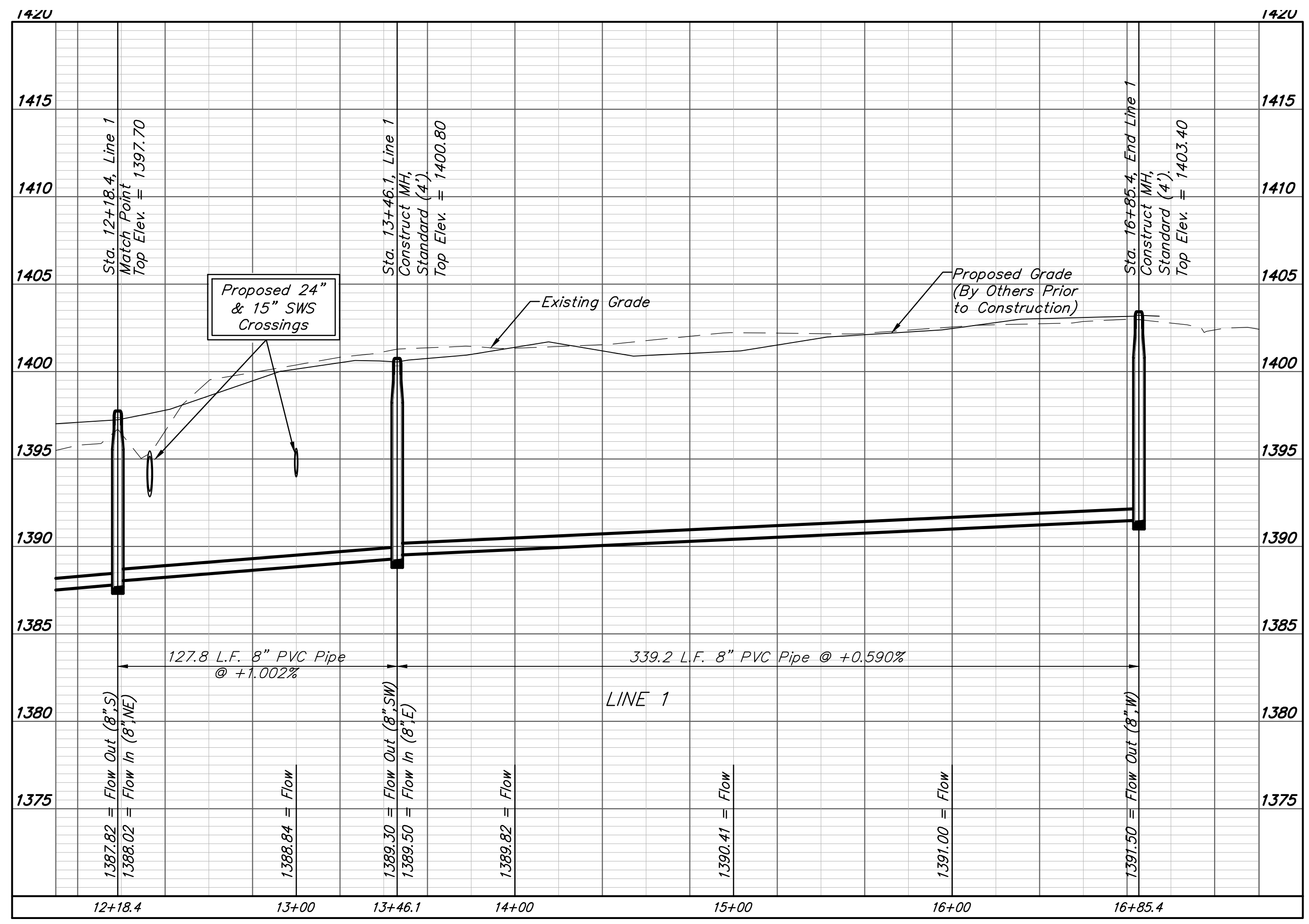
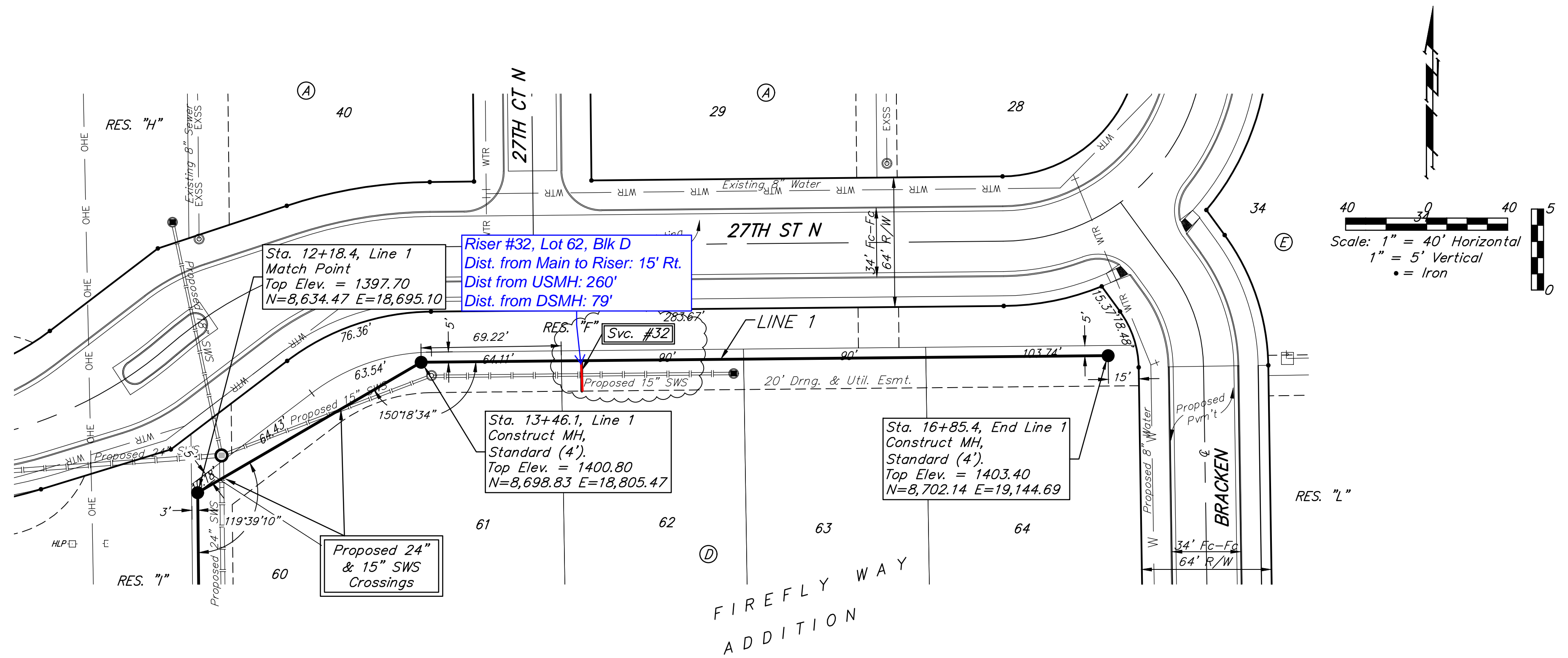


**BENCHMARKS:**  
 BM#1: RR spike in high line pole, 40' west and 30' south of Lot 60, Block D, Firefly Way Addition.  
 Elev. = 1399.54 NAVD88

BM#2: V-notch in sidewalk along Eagle St., adjacent to NE corner of Lot 15, Block E, Firefly Way Addition.  
 Elev. = 1401.26 NAVD88

SEWER SERVICE TABLE							
NUMBER	TYPE	LOCATION			STATION DIRECTION	FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.		APPROXIMATE LENGTH 4" PIPE	VERTICAL
32	8" X 4" Tee W/Riser	62	D	1	14+25.3/Rt.	5.0'	15.0'

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



**BENCHMARKS:**  
 BM#1: RR spike in high line pole, 40' west and 30' south of Lot 60, Block D, Firefly Way Addition.  
 Elev. = 1399.54 NAVD88

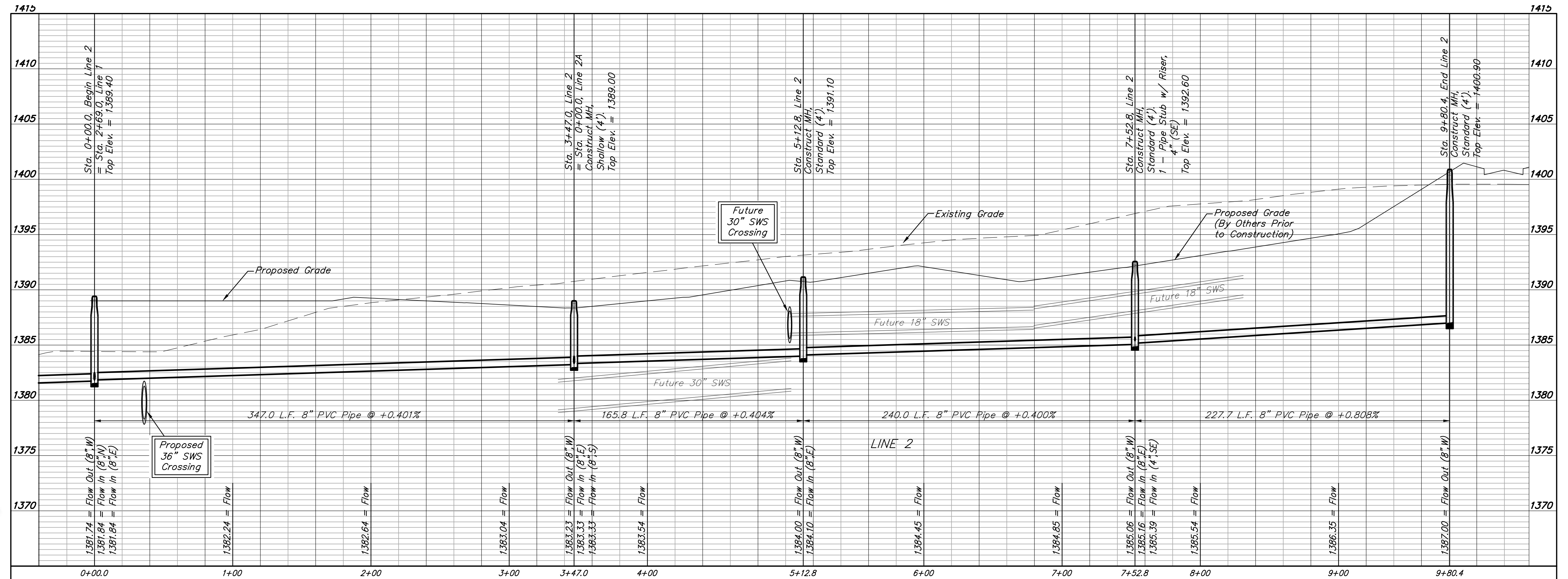
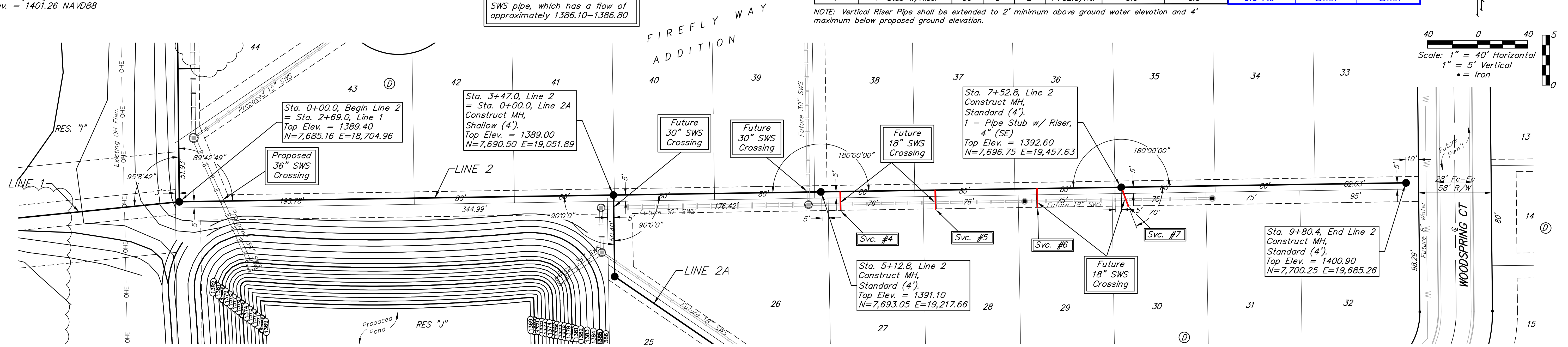
BM#2: V-notch in sidewalk along Eagle St., adjacent to NE corner of Lot 15, Block E, Firefly Way Addition.  
 Elev. = 1401.26 NAVD88

\*Risers #4, #6, #7 & #8: the 8"x4" service tee shall be rotated to a 2% slope above horizontal for the service connection to fit under the 15" SWS pipe, which has a flow of approximately 1386.10-1386.80

**SEWER SERVICE TABLE**

NUMBER	TYPE	LOCATION			FOR INFORMATION ONLY		DISTANCE FROM MAIN TO RISER	DISTANCE FROM		
		LOT NO.	BLOCK NO.	LINE NO.	STATION \ DIRECTION	APPROXIMATE LENGTH 4" PIPE		VERTICAL	HORIZONTAL	USMH
4	8" X 4" Tee W/Riser	27	D	2	5+28.4/Rt.	2.5'	15.0'	15' Rt.	225'	16'
5	8" X 4" Tee W/Riser	28	D	2	6+04.4/Rt.	3.5'	15.0'	15' Rt.	148'	92'
6	8" X 4" Tee W/Riser	29	D	2	6+85.4/Rt.	2.5'	15.0'	15' Rt.	67'	173'
7	4" Stub W/Riser	30	D	2	7+52.8/Rt.	3.0'	5.5'	5.5' Rt.	@mh	@mh

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



**Baughman Company, P.A.**  
 ENGINEERING, ARCHITECTURE, PLANNING & LANDSCAPE ARCHITECTURE  
 1125 W. 19th St., Suite 200, Lawrence, KS 66044  
 Phone: 785.842.1111 Fax: 785.842.1112  
 www.baughmanpa.com

**FIREFLY WAY ADDITION**  
**LINE 2**  
 SANITARY SEWER IMPROVEMENTS

**BENCHMARKS:**  
 BM#1: RR spike in high line pole, 40' west and 30' south of Lot 60, Block D, Firefly Way Addition.  
 Elev. = 1399.54 NAVD88

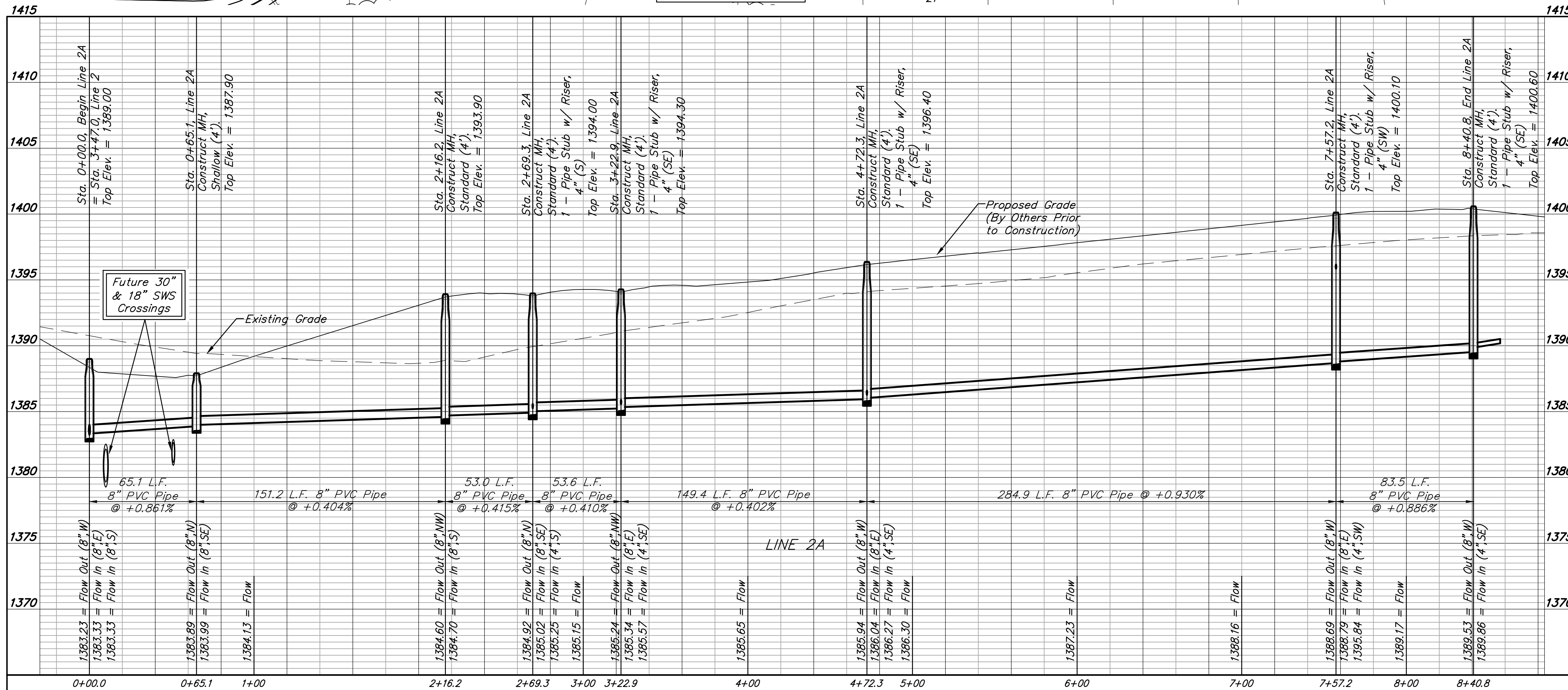
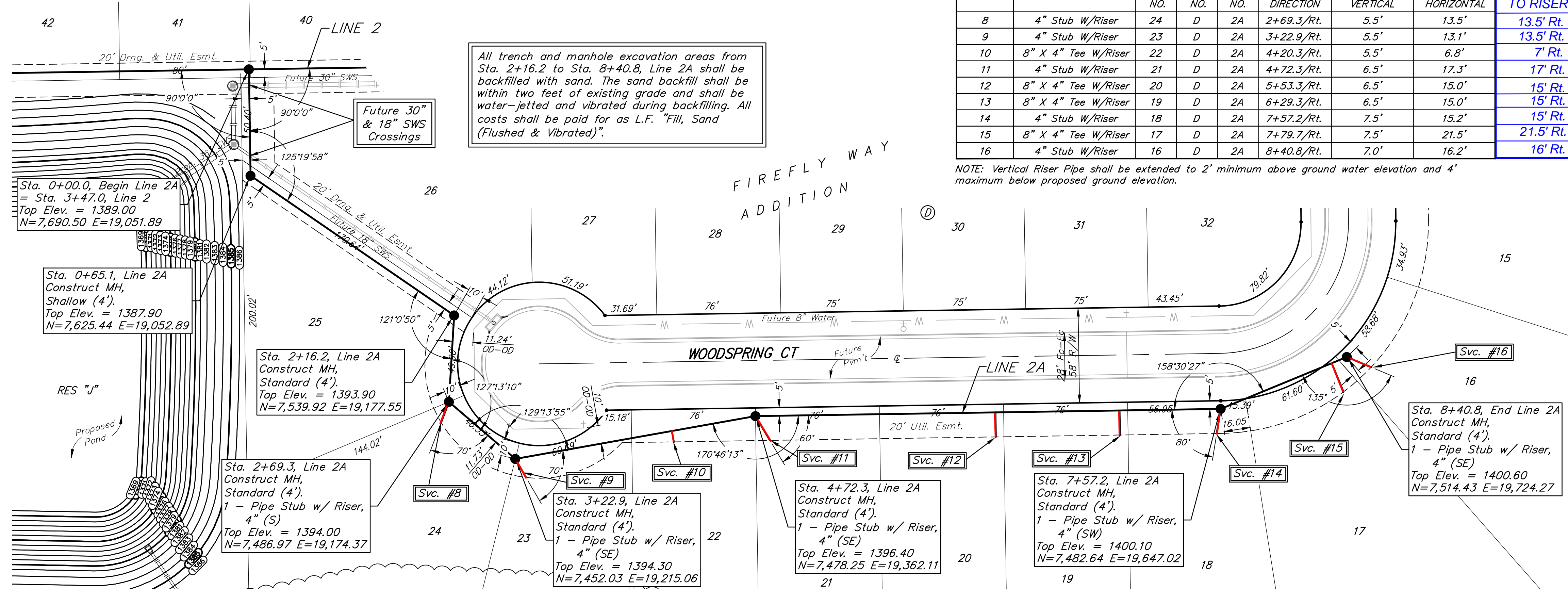
BM#2: V-notch in sidewalk along Eagle St., adjacent to NE corner of Lot 15, Block E, Firefly Way Addition.  
 Elev. = 1401.26 NAVD88

**SEWER SERVICE TABLE**

NUMBER	TYPE	LOCATION				FOR INFORMATION ONLY		DISTANCE FROM MAIN TO RISER	DISTANCE FROM	
		LOT NO.	BLOCK NO.	LINE NO.	STATION \ DIRECTION	APPROXIMATE LENGTH 4" PIPE			US MH	DSMH
8	4" Stub W/Riser	24	D	2A	2+69.3/Rt.	5.5'	13.5'	13.5' Rt.	@mh	@mh
9	4" Stub W/Riser	23	D	2A	3+22.9/Rt.	5.5'	13.1'	13.5' Rt.	@mh	@mh
10	8" X 4" Tee W/Riser	22	D	2A	4+20.3/Rt.	5.5'	6.8'	7' Rt.	@mh	@mh
11	4" Stub W/Riser	21	D	2A	4+72.3/Rt.	6.5'	17.3'	17' Rt.	@mh	@mh
12	8" X 4" Tee W/Riser	20	D	2A	5+53.3/Rt.	6.5'	15.0'	15' Rt.	20'	81'
13	8" X 4" Tee W/Riser	19	D	2A	6+29.3/Rt.	6.5'	15.0'	15' Rt.	20'	15'
14	4" Stub W/Riser	18	D	2A	7+57.2/Rt.	7.5'	15.2'	15' Rt.	@mh	@mh
15	8" X 4" Tee W/Riser	17	D	2A	7+79.7/Rt.	7.5'	21.5'	21.5' Rt.	44'	40'
16	4" Stub W/Riser	16	D	2A	8+40.8/Rt.	7.0'	16.2'	16' Rt.	@mh	@mh

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

Scale: 1" = 40' Horizontal  
 1" = 5' Vertical  
 • = Iron



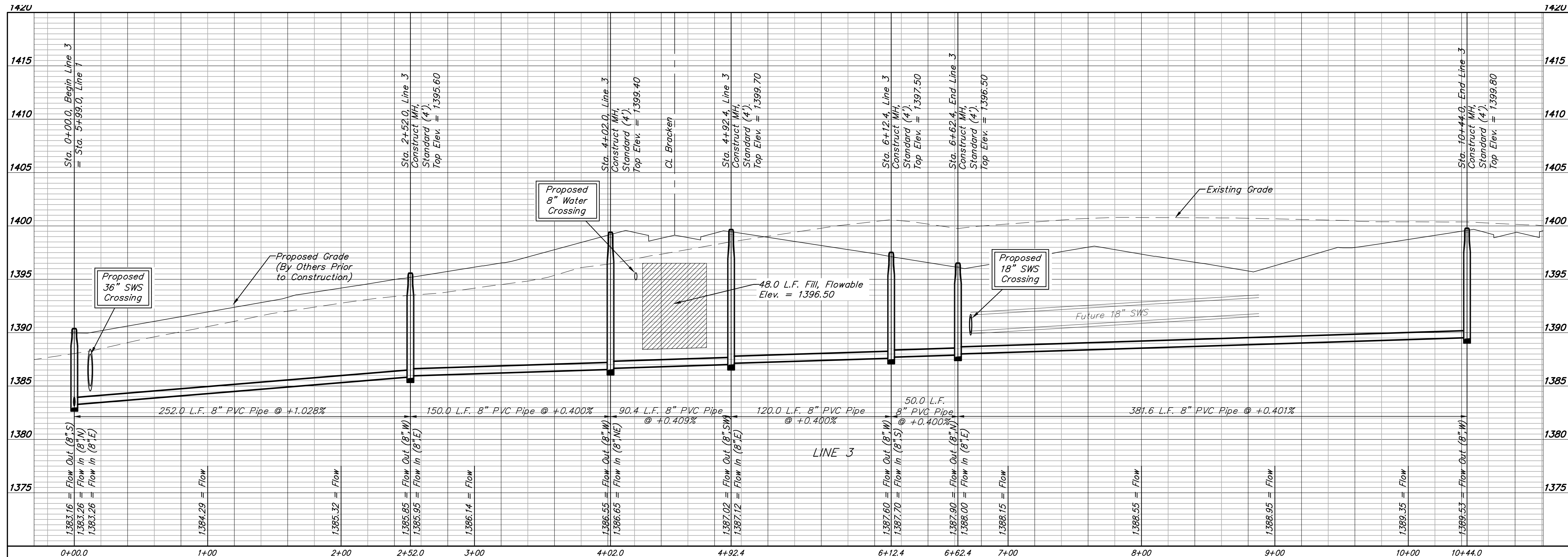
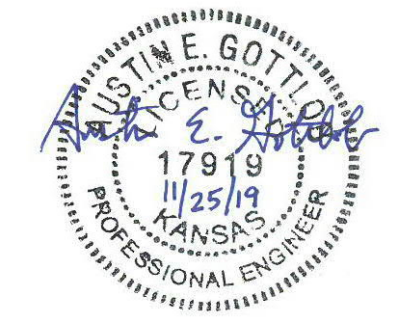
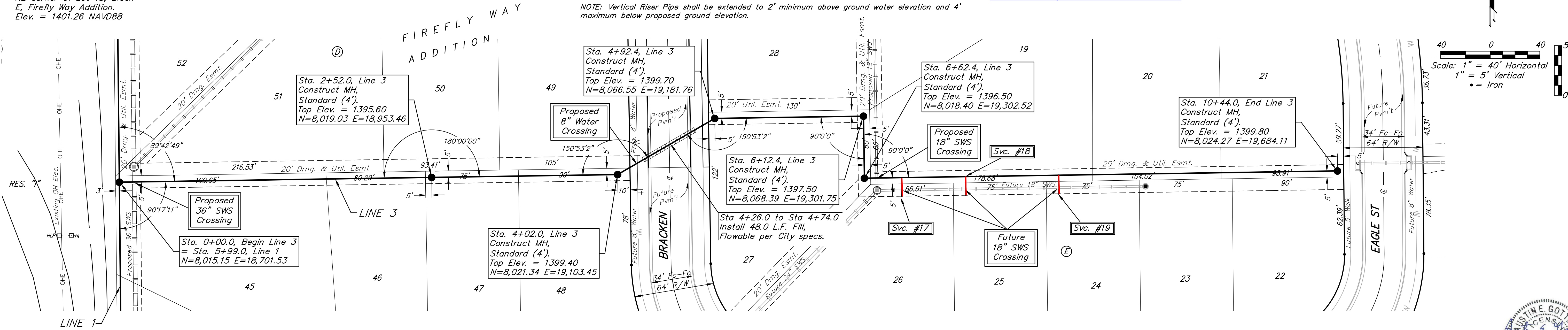
**BENCHMARKS:**  
 BM#1: RR spike in high line pole, 40' west and 30' south of Lot 60, Block D, Firefly Way Addition.  
 Elev. = 1399.54 NAVD88

BM#2: V-notch in sidewalk along Eagle St., adjacent to NE corner of Lot 15, Block E, Firefly Way Addition.  
 Elev. = 1401.26 NAVD88

**SEWER SERVICE TABLE**

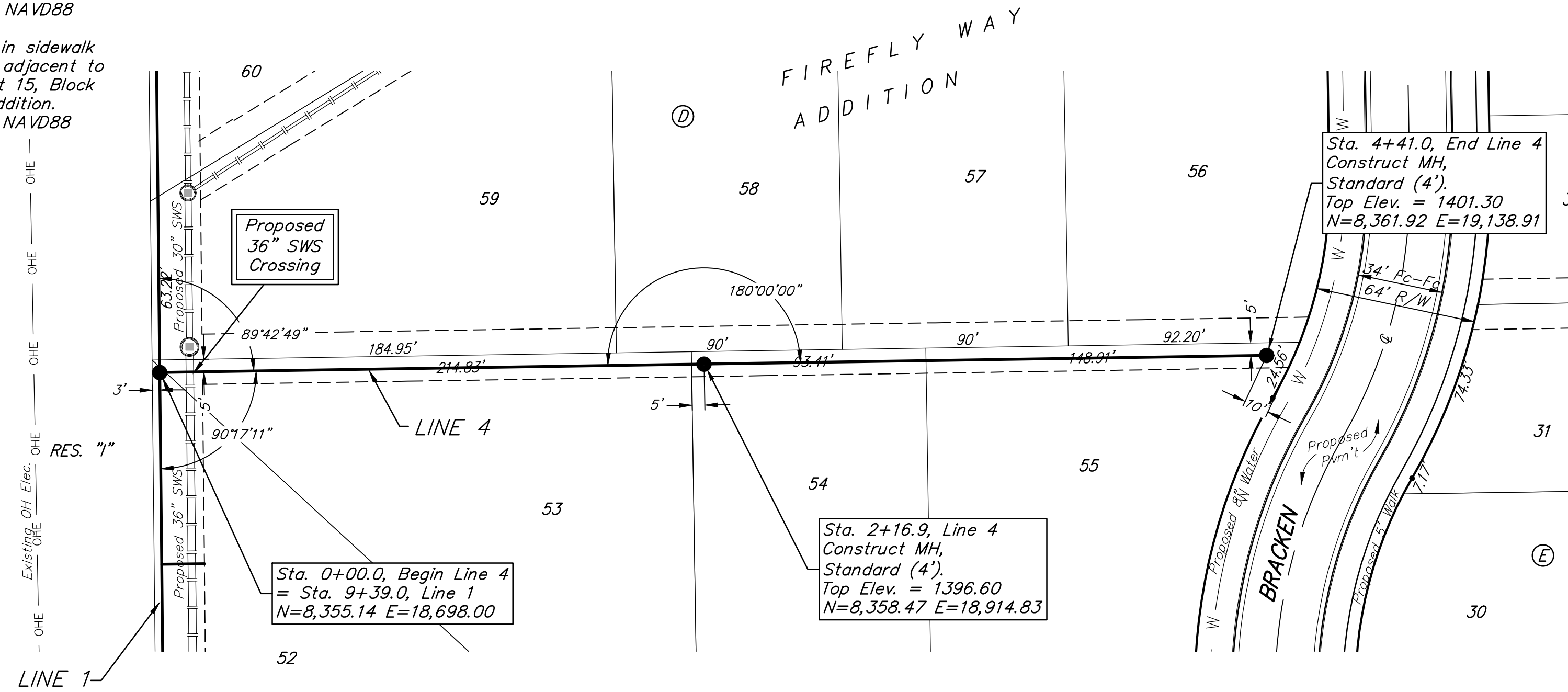
NUMBER	TYPE	LOCATION				FOR INFORMATION ONLY		DISTANCE FROM MAIN TO RISER	DISTANCE FROM	
		LOT NO.	BLOCK NO.	LINE NO.	STATION \ DIRECTION	APPROXIMATE LENGTH 4" PIPE			USMH	DSMH
17	8" X 4" Tee W/Riser	26	E	3	6+92.4/Rt.	4.5'	15.0'	15' Rt.	352'	30'
18	8" X 4" Tee W/Riser	25	E	3	7+44.0/Rt.	5.5'	15.0'	15' Rt.	300'	82'
19	8" X 4" Tee W/Riser	24	E	3	8+19.0/Rt.	4.5'	15.0'	15' Rt.	225'	157'

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



**BENCHMARKS:**  
 BM#1: RR spike in high line pole, 40' west and 30' south of Lot 60, Block D, Firefly Way Addition.  
 Elev. = 1399.54 NAVD88

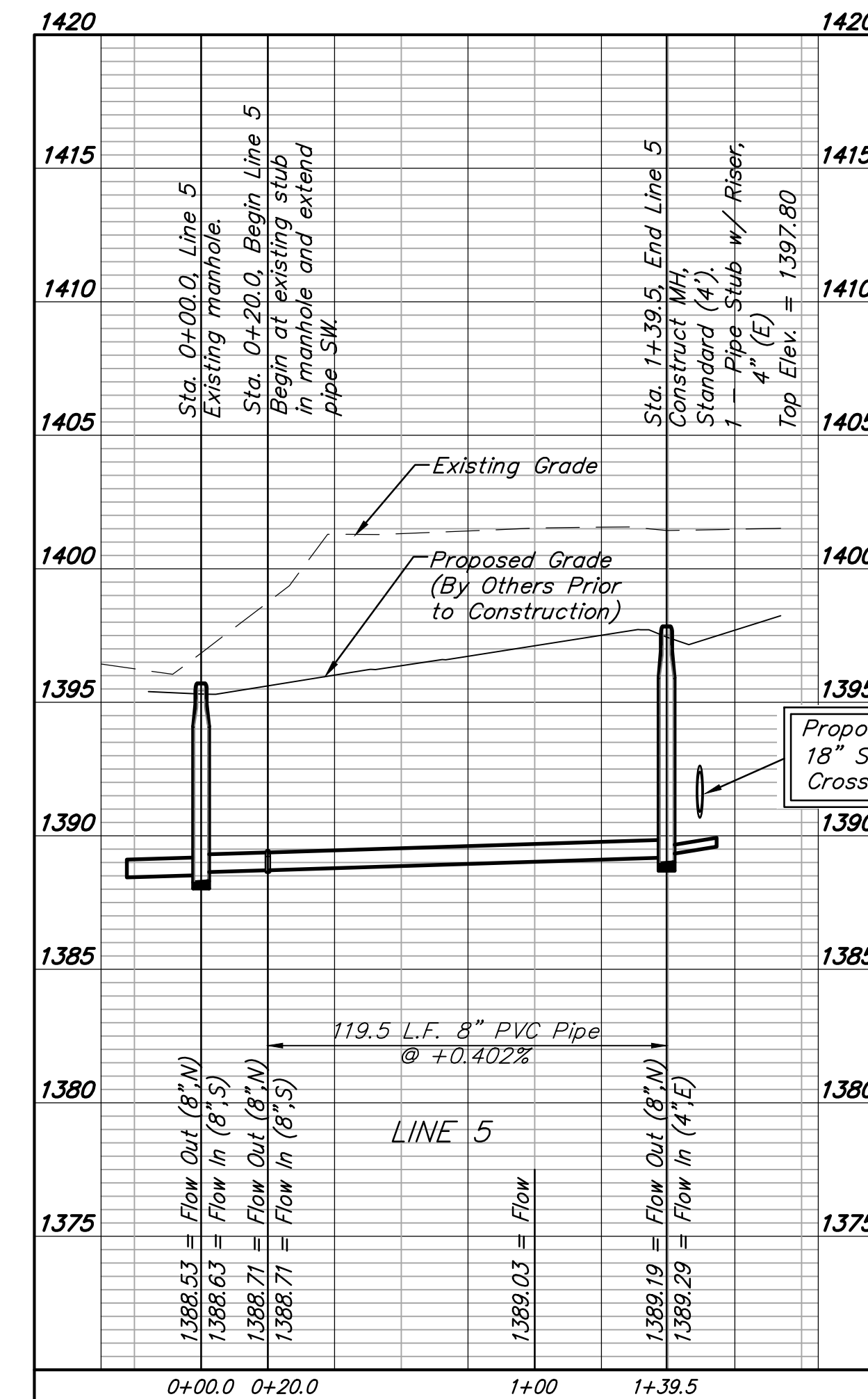
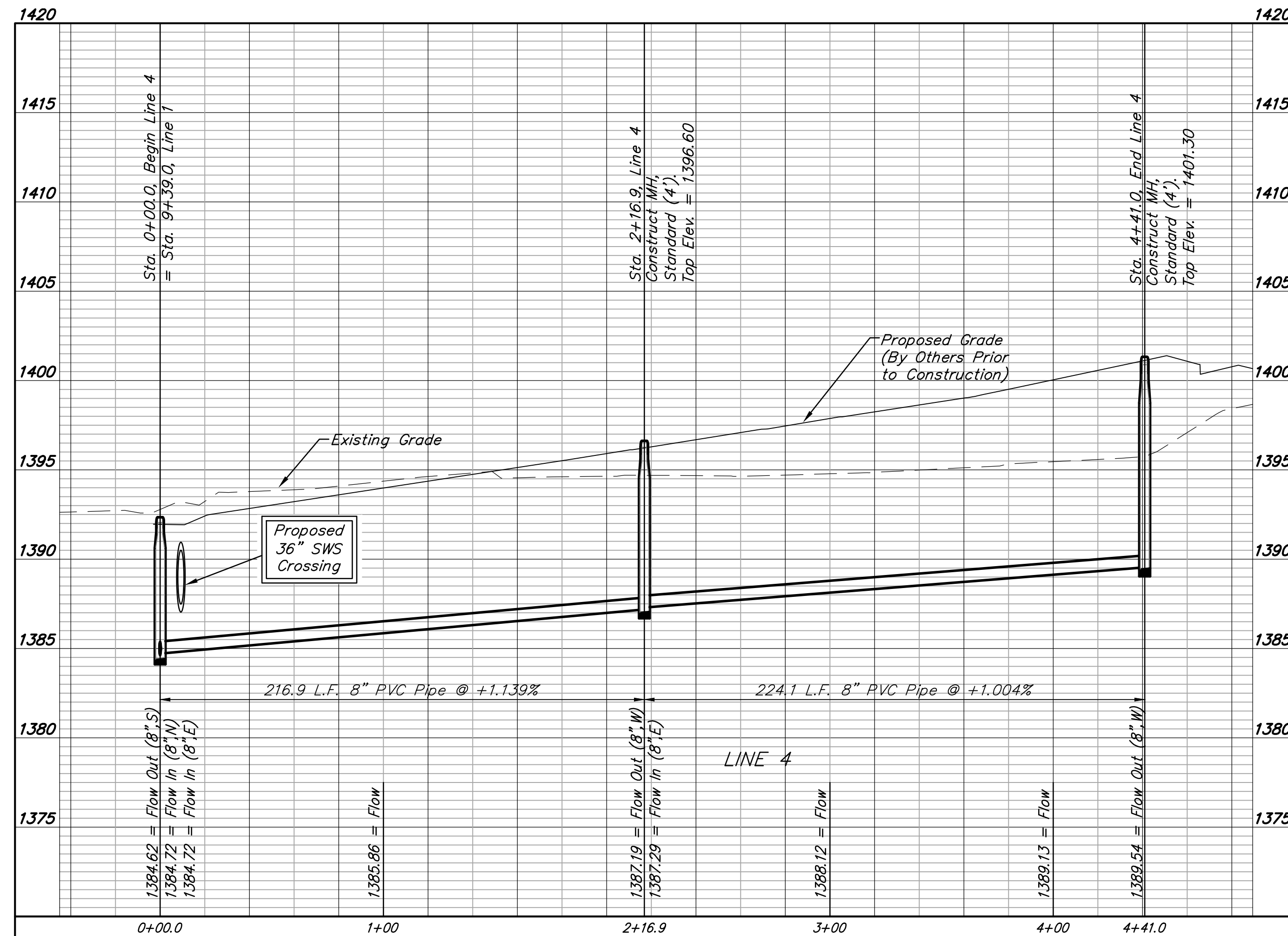
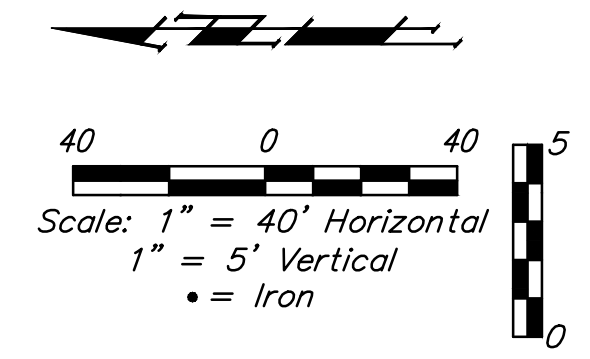
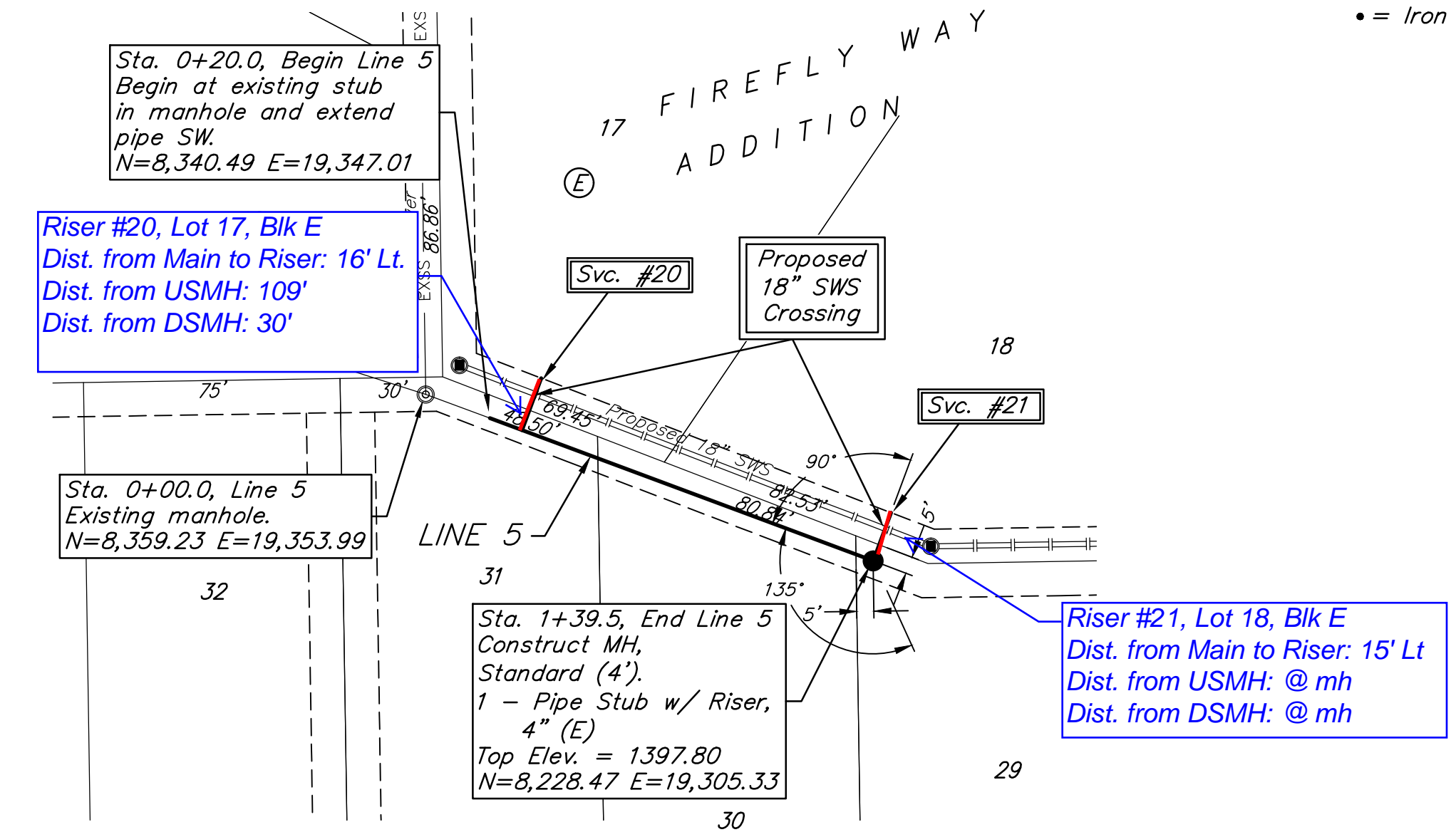
BM#2: V-notch in sidewalk along Eagle St., adjacent to NE corner of Lot 15, Block E, Firefly Way Addition.  
 Elev. = 1401.26 NAVD88



**SEWER SERVICE TABLE**

NUMBER	TYPE	LOCATION			FOR INFORMATION ONLY		
		LOT NO.	BLOCK NO.	LINE NO.	STATION \ DIRECTION	APPROXIMATE LENGTH 4" PIPE VERTICAL	HORIZONTAL
20	8" X 4" Tee W/Riser	17	E	5	0+30.0/Lt.	3.5'	16.2'
21	4" Stub W/Riser	18	E	5	1+39.5/Lt.	4.5'	15.0'

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



Contractor shall verify elevation and alignment of existing 8" pipe prior to construction and notify Engineer of any discrepancy.



**BENCHMARKS:**  
 BM#1: RR spike in high line pole, 40' west and 30' south of Lot 60, Block D, Firefly Way Addition.  
 Elev. = 1399.54 NAVD88

BM#2: V-notch in sidewalk along Eagle St., adjacent to NE corner of Lot 15, Block E, Firefly Way Addition.  
 Elev. = 1401.26 NAVD88

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.

Lot 6 - MOORE, MAURICE D 2623 N WOODRIDGE CT

Lot 13 - GODFREY, GREGORY J & TRISHA 2651 N WOODRIDGE CT

Lot 14 - PREHEIM, JANELLE L LIV TR 2655 N WOODRIDGE CT

Lot 21 - GRAF, STEPHEN P & ASHLEY R 2715 N WOODRIDGE CT

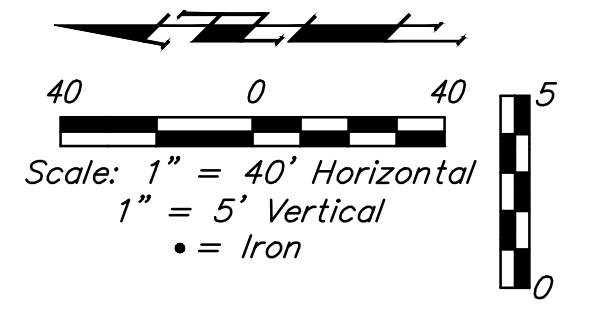
Lot 22 - PISTOTNIK, KEVIN ANTHONY 2719 N WOODRIDGE CT.

**SEWER SERVICE TABLE**

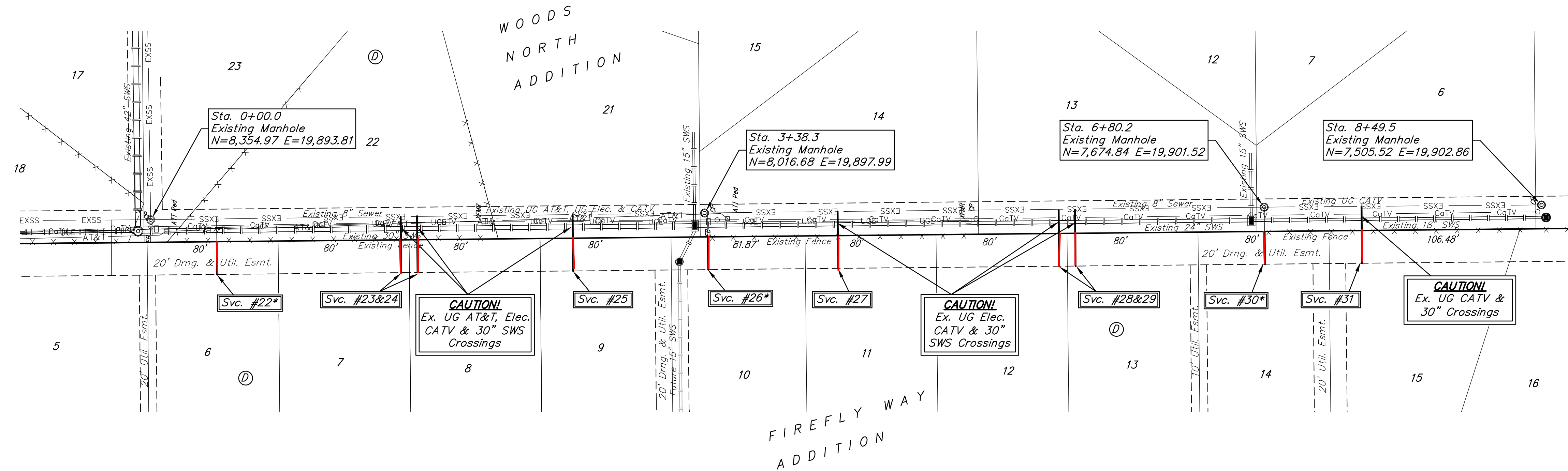
DISTANCE FROM MAIN TO RISER	DISTANCE FROM		NUMBER	TYPE	LOCATION			FOR INFORMATION ONLY		
	UPSTREAM MH	DOWNSTREAM MH			LOT NO.	BLOCK NO.	LINE NO.	STATION \ DIRECTION	APPROXIMATE LENGTH 4" PIPE	VERTICAL
20' Rt.	-	42'	22	Extend existing riser*	6	D	-	0+40.2/Rt.	-	20.0'
34.5' Rt.	-	152'	23	8" X 4" Saddle Tap W/Riser	7	D	-	1+52.7/Rt.	11.5'	34.5'
34.5' Rt.	-	162'	24	8" X 4" Saddle Tap W/Riser	8	D	-	1+62.7/Rt.	11.5'	34.5'
34.5' Rt.	-	257'	25	8" X 4" Saddle Tap W/Riser	9	D	-	2+57.7/Rt.	11.0'	34.5'
20' Rt.	-	338'	26	Extend existing riser*	10	D	-	3+38.3/Rt.	-	20.0'
34.5' Rt.	-	419'	27	8" X 4" Saddle Tap W/Riser	11	D	-	4+19.5/Rt.	10.0'	34.5'
34.5' Rt.	-	554'	28	8" X 4" Saddle Tap W/Riser	12	D	-	5+54.5/Rt.	10.0'	34.5'
34.5' Rt.	-	564'	29	8" X 4" Saddle Tap W/Riser	13	D	-	5+64.5/Rt.	10.0'	34.5'
20' Rt.	-	680'	30	Extend existing riser*	14	D	-	6+80.2/Rt.	-	20.0'
34.5' Rt.	-	739'	31	8" X 4" Saddle Tap W/Riser	15	D	-	7+39.5/Rt.	7.5'	34.5'

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

Risers #23-25 #27-29: These risers can go either under or over the existing sws and still be deep enough to serve the lots with basement service.  
 Riser #31: The 8"x4" service tee shall be rotated to a 2% slope above horizontal for the service connection to fit under the existing 18" SWS pipe, which has a flow of approximately 1388.75



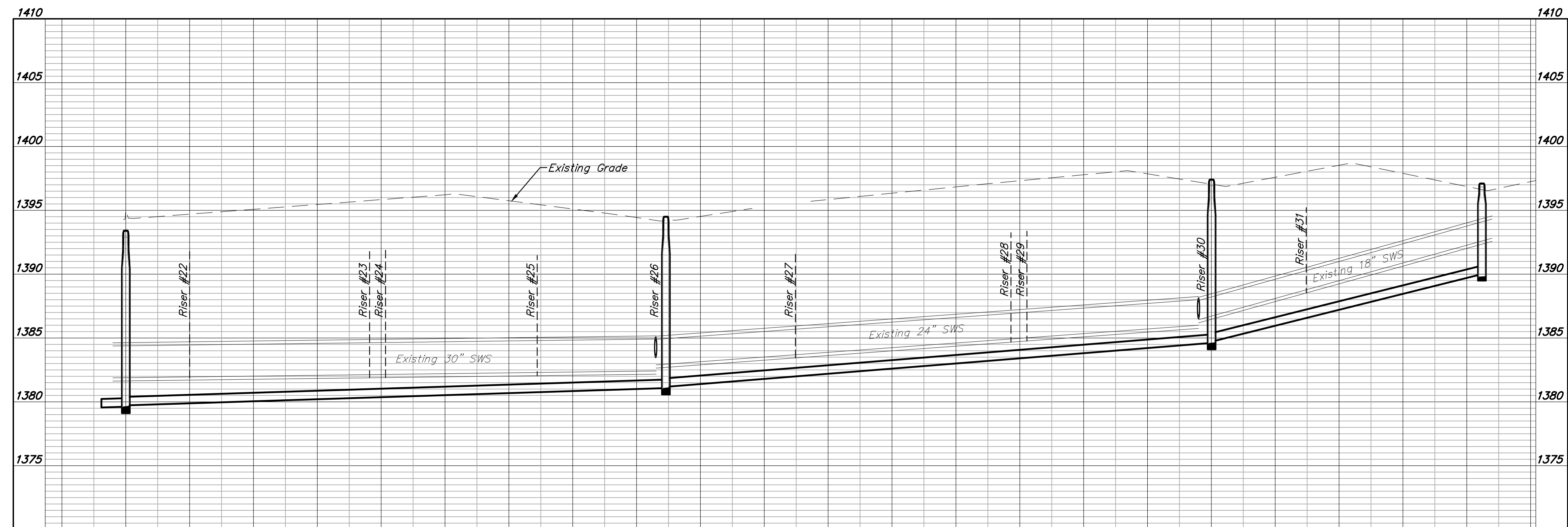
\*Extend existing riser 20.0' west to edge of easement.



**Baughman Company, P.A.**  
 ENGINEERING ARCHITECTURE PLANNING LANDSCAPE ARCHITECTURE  
 17919  
 11/25/19  
 KANSAS  
 PROFESSIONAL ENGINEER  
 Justin G. Goff

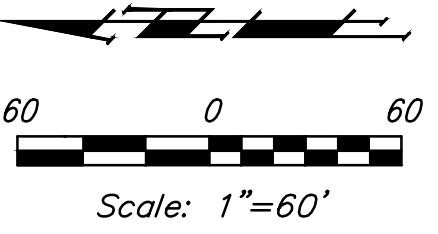
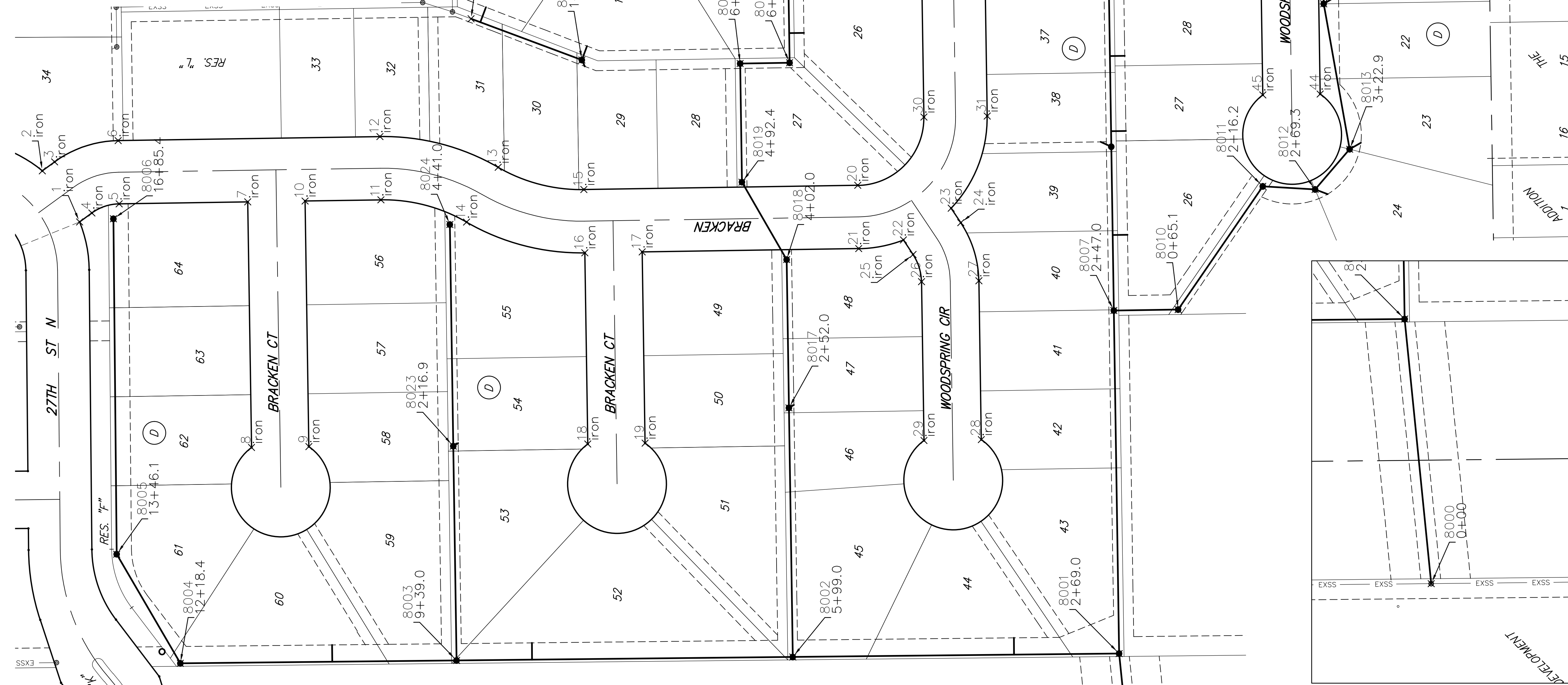
FIREFLY WAY ADDITION  
**ADDL. RISERS**  
 SANITARY SEWER IMPROVEMENTS

Contractor shall verify elevation and alignment of existing 8" pipe prior to construction and notify Engineer of any discrepancy.



SANITARY SEWER IMPROVEMENTS

Point #	Northing	Easting	Raw Description
8000	7658.26	18437.29	0+00
8001	7685.16	18704.96	2+69.0
8002	8015.15	18701.53	5+99.0
8003	8355.14	18698.00	9+39.0
8004	8634.47	18695.10	12+18.4
8005	8698.83	18805.47	13+46.1
8006	8702.14	19144.69	16+85.4
8007	7690.50	19051.89	2+47.0
8008	7696.75	19457.63	7+52.8
8009	7700.25	19685.26	9+80.4
8010	7625.44	19052.89	0+65.1
8011	7539.92	19177.55	2+16.2
8012	7486.97	19174.37	2+69.3
8013	7452.03	19215.06	3+22.9
8014	7478.25	19362.11	4+72.3
8015	7482.64	19647.02	7+57.2
8016	7514.43	19724.27	8+40.8
8017	8019.03	18953.46	2+52.0
8018	8021.34	19103.45	4+02.0
8019	8066.55	19181.76	4+92.4
8020	8068.39	19301.75	6+12.4
8021	8018.40	19302.52	6+62.4
8022	8024.27	19684.11	10+44.0
8023	8358.47	18914.83	2+16.9
8024	8361.92	19138.91	4+41.0
8025	8340.49	19347.01	0+00
8026	8228.47	19305.33	1+19.5



COORDS IRON

Point #	Northing	Easting	Raw Description
1	8736.32	19141.50	iron
2	8774.04	19193.20	iron
3	8761.63	19202.26	iron
4	8723.91	19150.56	iron
5	8696.35	19159.78	iron
6	8697.34	19223.77	iron
7	8566.30	19161.78	iron
8	8562.48	18913.39	iron
9	8504.48	18914.28	iron
10	8508.30	19162.67	iron
11	8431.63	19163.85	iron
12	8432.61	19227.84	iron
13	8313.04	19196.79	iron
14	8345.04	19141.36	iron
15	8226.45	19174.30	iron
16	8225.47	19110.31	iron
17	8167.47	19111.20	iron
18	8222.49	18916.92	iron
19	8164.50	18917.82	iron
20	7949.48	19178.56	iron
21	7948.50	19114.57	iron
22	7903.30	19123.29	iron
23	7855.02	19155.44	iron
24	7845.24	19140.75	iron
25	7893.52	19108.60	iron
26	7884.98	19081.12	iron
27	7826.98	19082.02	iron
28	7824.51	18921.35	iron
29	7882.50	18920.46	iron
30	7882.54	19247.60	iron
31	7818.55	19248.58	iron
32	7824.32	19623.80	iron
33	7888.31	19622.82	iron
34	7834.77	19673.27	iron
35	7868.57	19720.40	iron
36	7852.45	19731.97	iron
37	7818.64	19684.84	iron
38	7789.41	19694.40	iron
39	7789.97	19752.39	iron
40	7597.68	19754.27	iron
41	7597.12	19696.27	iron
42	7545.63	19646.06	iron
43	7487.64	19646.95	iron
44	7481.85	19270.86	iron
45	7539.84	19269.97	iron
46	7956.97	19689.77	iron
47	7957.59	19753.76	iron
48	8079.24	19752.58	iron
49	8078.62	19688.58	iron
50	8170.08	19742.02	iron
51	8156.00	19679.58	iron
52	8160.20	19678.66	iron
53	8218.08	19670.26	iron
54	8215.88	19526.93	iron
55	8157.88	19527.83	iron
56	8348.27	19680.08	iron
57	8333.87	19742.44	iron

FIREFLY WAY ADDITION  
**COORDINATE SHEET**  
 SANITARY SEWER IMPROVEMENTS  
 Baughman Company, P.A.  
 ENGINEERING, ARCHITECTURE, PLANNING & LANDSCAPE ARCHITECTURE  
 APPROVAL: [Signature]  
 DATE: 11/25/19  
 SHEET 19 OF 20

