

Vicinity Map

### Benchmark

BM #1: City of Wichita disc top of headwall of RCBC 660± east of the SE Cor. of the SE1/4, SEC. 22, TWP. 27-S, R-2-W. Elev. = 1410.27 NAVD88

BM #2: 60d step nail in utility pole 28' east of Q 162nd St. W. and 26' north of Q of Maple. Elev. = 1417.99 NAVD88

BM #3: City of Wichita disc on top of north headwall of RCBC under Maple 175' west of the 151st Street North. Elev. = 1390.57 NAVD88

Inspector: Edgardo Flores  
 Contractor: McCullough  
 Company: City Of Wichita  
 Superintendent: Rob  
 C900 6": 2520 LF  
 8": 848.29 LF  
 4": 53.37 LF  
 Air Release: 3 ea  
 Manholes: 3 ea  
 LIFT STATION & FORCE MAIN

# SANITARY SEWER IMPROVEMENTS

to serve

## PIKE ADDITION

Lift Station Address: 15500 W. Maple

### CITY OF WICHITA, KANSAS

Gary Janzen, P.E. City Engineer  
 Project Number 468-2019-005340  
 O.C.A. Number 629320

B. Woods - City of Wichita, Field Project Engineer  
 Final Acceptance Date: 8/13/2021  
 Completion Date:  
 As-built  
 apr 4/21/2022

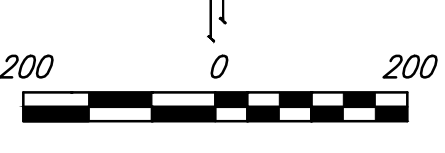
Location: 15500 W Maple St  
 Facility Site: 7468  
 Building ID: 7468-101  
 Room ID: 7468-101-01-100  
 Floor ID: 7468-101-01  
 Equipment ID: 4968L68  
 See sheet 12 for list of Vertical Assets

### Sheet Index

Title Sheet	1
SS Line 1 Plan/Profile	2
SS Line 2 Plan/Profile	3
Forcemain Plan/Profile	4-6
Forcemain Connection	7
Pump Station Details	8-11
Pump Control Details	12-13
Precast SS Manhole Detail	14
Manhole Frame & Cover Detail	15
Erosion Control Plan	16-16a
Erosion Control BMP Details	17-21
Coordinate Sheet	22-23
Copy of Plat	24

### GENERAL NOTES:

- 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
- 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.
- 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.
- 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.
- 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.
- 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.
- A portion of excess excavated material shall be mounded around manholes which extend more than one (1) foot above the existing ground. Such mound shall be constructed with new development a six (6) foot diameter flat top with 4 to 1 side slopes down to the original ground. The elevation of the flat top of the mound shall be 0.4 foot below the top to the manhole.
- Contractor shall limit the extent of trench openings overnight and weekends to less than 50 feet.
- 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.
- 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 "Maintain Existing BMPs".
- All elevations shown are NAVD 88.
- All stubs and capped pipes shall be located with green plastic tape in the same manner as risers.
- 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 re-establish 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.
- Contractor shall provide positive drainage away from all manhole covers.
- The Contractor shall prevent any construction debris from entering the existing sanitary sewer during construction.
- All of Maple Street R/W that has been disturbed by 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".
- The developer for this project is Jay W. Russell, P.O. Box 75337, Wichita, KS 67272 (316)722-2417 jwrussell1105@cloud.com



North Arrow

Scale: 1" = 100'

Scale: 1" = 100'

Scale: 1" = 100'

Scale: 1" = 100'

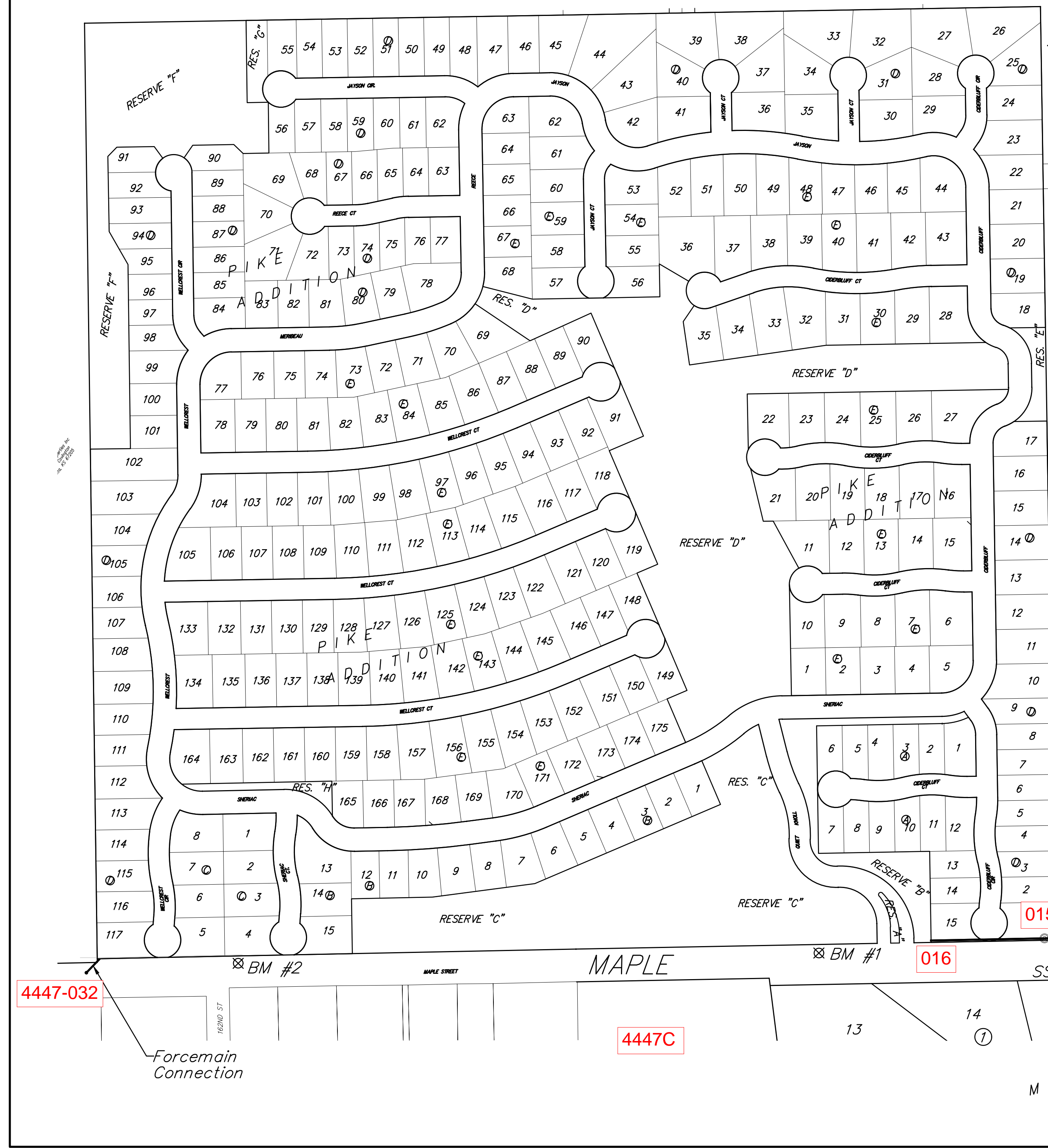
Scale: 1" = 100'

Scale: 1" = 100'

Scale: 1" = 100'

Scale: 1" = 100'

Scale: 1" = 100'



Basin: SWI-14

4447B

4546A

414AR

4546-039

4447-032

4447C

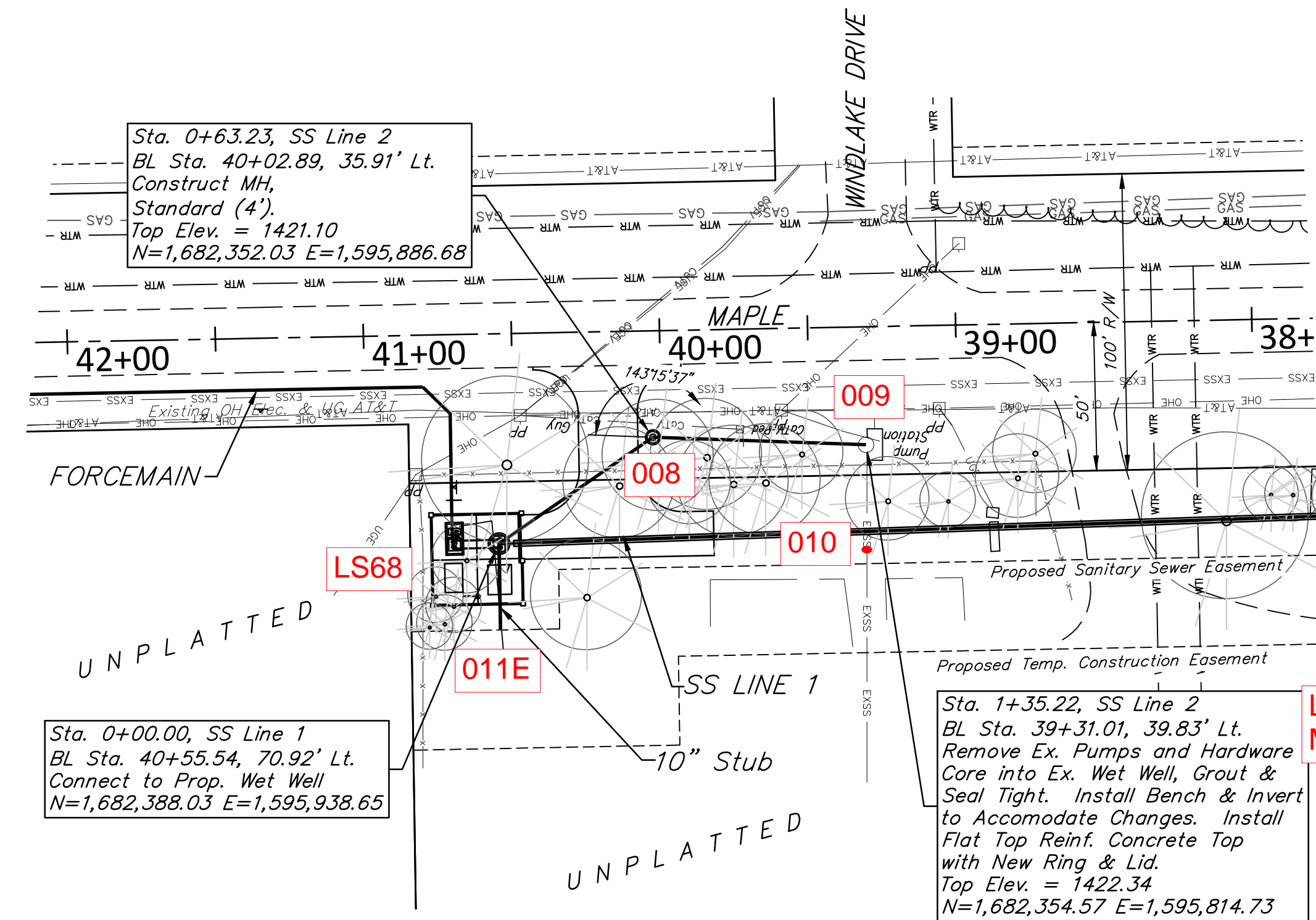
4546D



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



**BENCHMARK:**  
 BM #1: City of Wichita disc top  
 of headwall of RCBC 660± east  
 of the SE Cor. of the SE1/4,  
 SEC. 22, TWP. 27-S, R-2-W.  
 Elev. = 1410.27 NAVD88



Sta. 0+63.23, SS Line 2  
 BL Sta. 40+02.89, 35.91' Lt.  
 Construct MH,  
 Standard (4').  
 Top Elev. = 1421.10  
 N=1,682,352.03 E=1,595,886.68

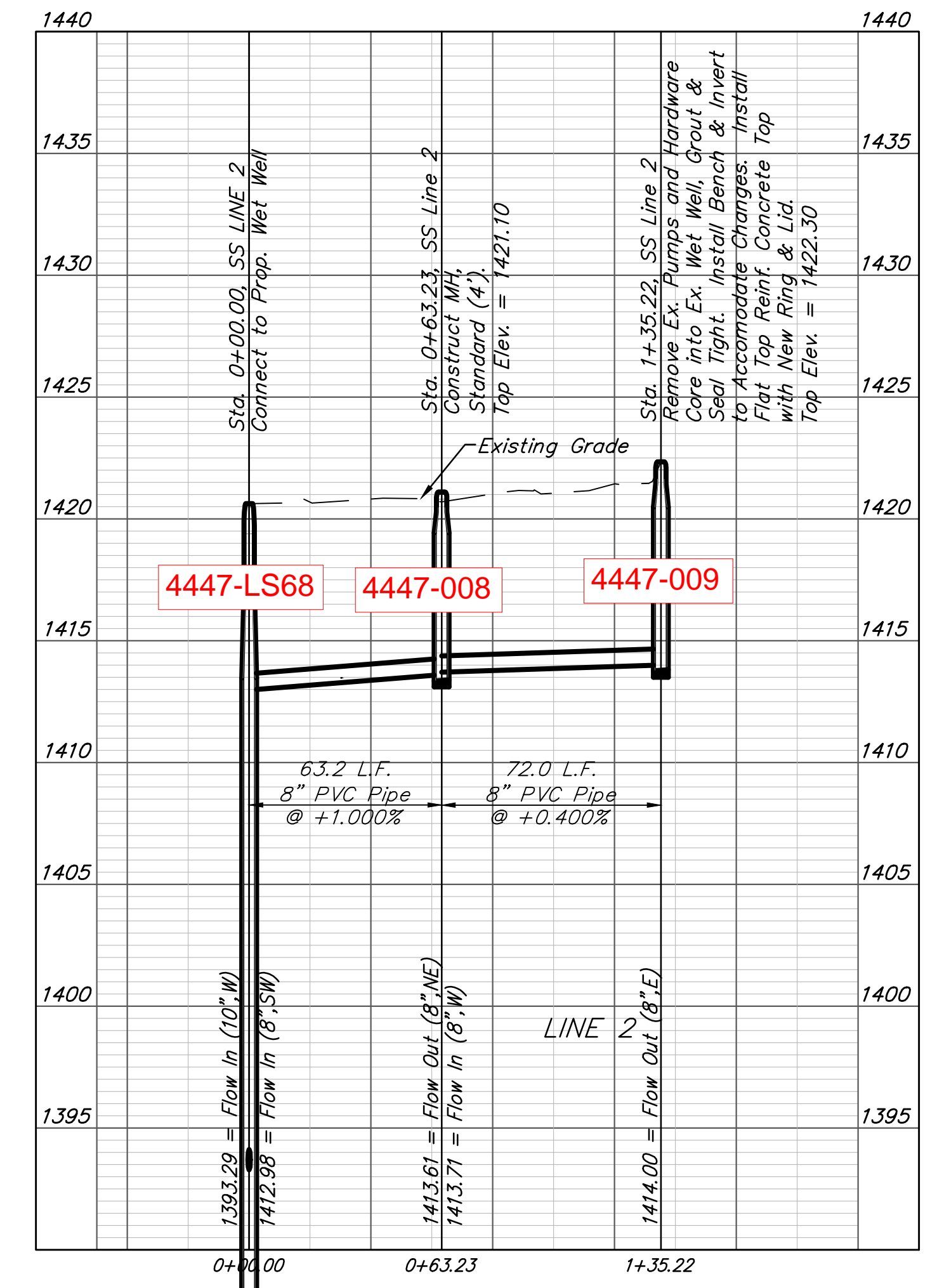
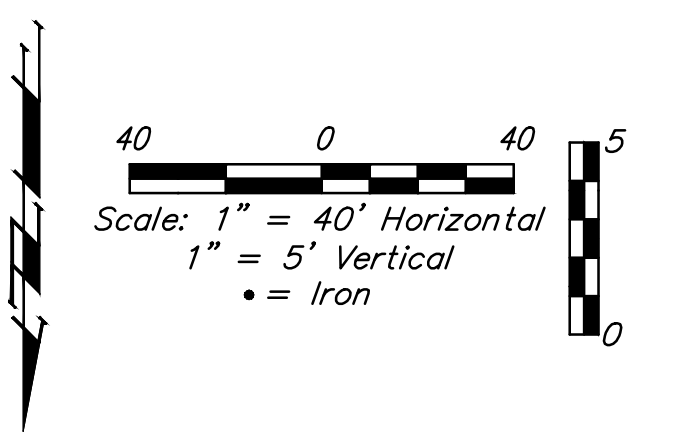
Sta. 0+00.00, SS Line 1  
 BL Sta. 40+55.54, 70.92' Lt.  
 Connect to Prop. Wet Well  
 N=1,682,388.03 E=1,595,938.65

Sta. 1+35.22, SS Line 2  
 BL Sta. 39+31.01, 39.83' Lt.  
 Remove Ex. Pumps and Hardware  
 Core into Ex. Wet Well, Grout &  
 Seal Tight. Install Bench & Invert  
 to Accommodate Changes. Install  
 Flat Top Reinf. Concrete Top  
 with New Ring & Lid.  
 Top Elev. = 1422.34  
 N=1,682,354.57 E=1,595,814.73

LS48 is now  
 MH-009

All Cost Associated with Removing the  
 Existing Pump Station and Converting  
 the Existing Wet Well into a Manhole  
 Shall be SUBSIDIARY to the Lump Sum  
 Bid Item "Wet Well Conversion".

The Existing Pump Station Shall  
 Remain in Service Until the  
 Proposed Lift Station is in Service.



**Baughman Company, P.A.**  
 1518 S. WABASH, SUITE 201, P.O. BOX 27271, F166260149  
 ENGINEERS, PLANNERS, ARCHITECTS  
 17974  
 2-19-20  
 KANSAS  
 PROFESSIONAL ENGINEER

PIKE ADDITION  
**SS LINE 2**  
 SANITARY SEWER IMPROVEMENTS

REVISIONS  
 SHEET  
 OF  
**3**  
**24**

**BENCHMARK:**  
 BM #1: City of Wichita disc top of headwall of RCBC 660± east of the SE Cor. of the SE 1/4, SEC. 22, TWP. 27-S, R-2-W. Elev. = 1410.27 NAVD88

BL Sta. 40+70, 51.5' Lt.  
 Install Force Main Warning Sign w/ 2" Test Station.  
 See Detail, Sheet 11.

The Contractor Shall Ensure that the First 50' of the 6" Force Main Shall be Installed per Plan with the Pipe Sloped Back Towards the Pump Station.

\*\*\*Stationing is backwards for our data\*\*\*

22 Bend  
 72' W of CL 151 St  
 17' N of CL Maple St.

Sta. 8+93.48, Force Main  
 BL Sta. 49+28.50, 17.50' Lt.  
 Install 1-6" 22.5" CIMJ Bend (Rt.)  
 Match Point  
 N=1,682,351.18 E=1,596,812.47

CAUTION  
 Existing 6" Gas  
 16" Gas Crossings

BL Sta. 48+35, 25.0' Lt.  
 Install Force Main Warning Sign w/ 2" Test Station.  
 See Detail, Sheet 11.

Sta. 0+04.00, Force Main  
 BL Sta. 40+71.29, 55.00' Lt.  
 Connect to 6" Force Main  
 N=1,682,372.41 E=1,595,954.71

Install 28.38 L.F. 6" PVC Pipe  
 Sta. 0+32.38, Force Main  
 BL Sta. 40+71.20, 26.62' Lt.  
 Install 1-6" 45" CIMJ Bend (Lt.)  
 N=1,682,344.03 E=1,595,955.15

BL Sta. 41+35, 25.0' Lt.  
 Install Force Main Warning Sign w/ 2" Test Station.  
 See Detail, Sheet 11.

45 Bend  
 53" E of CL Driveway of lift station.  
 27' N of CL Maple St

Sta. 0+45.24, Force Main  
 BL Sta. 40+80.26, 17.50' Lt.  
 Install 1-6" 45" CIMJ Bend (Lt.)  
 N=1,682,335.08 E=1,595,964.38

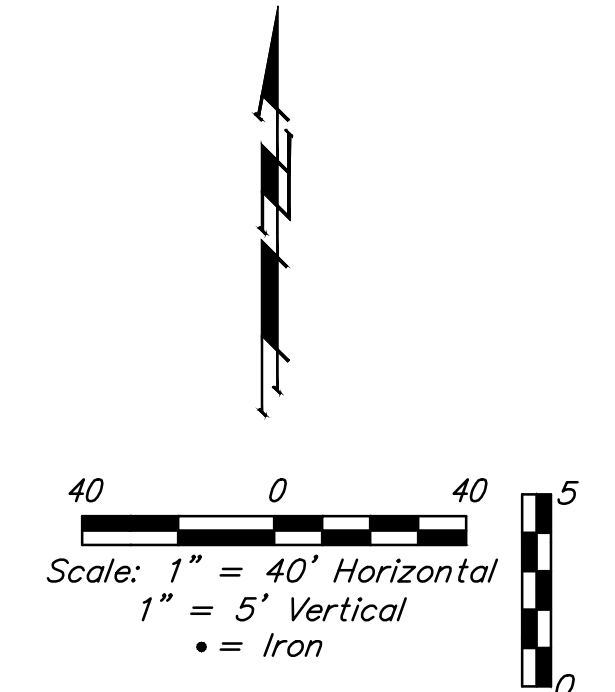
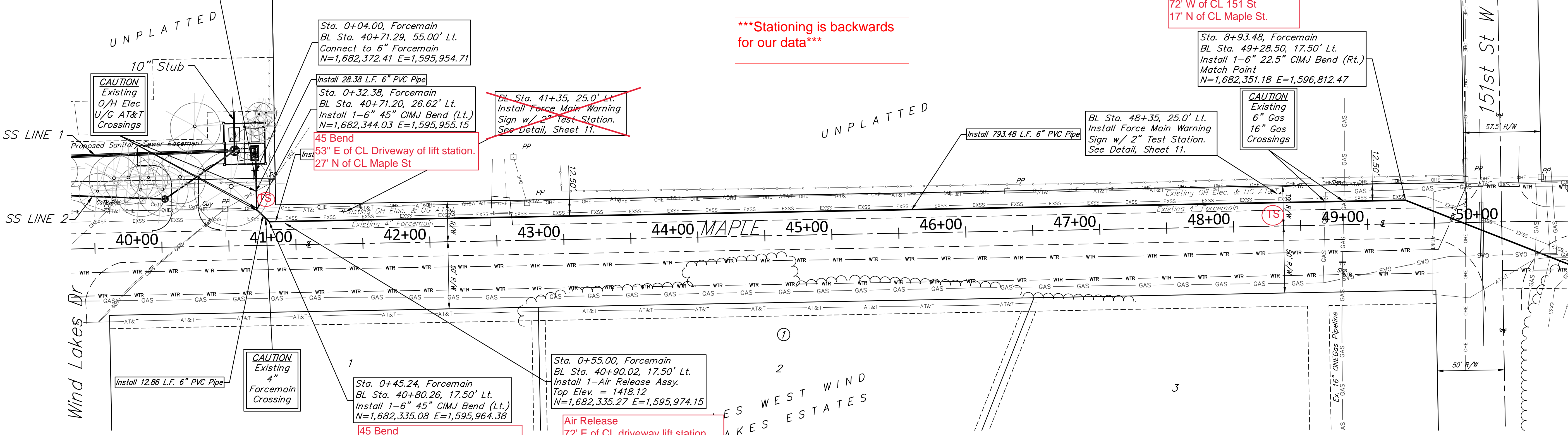
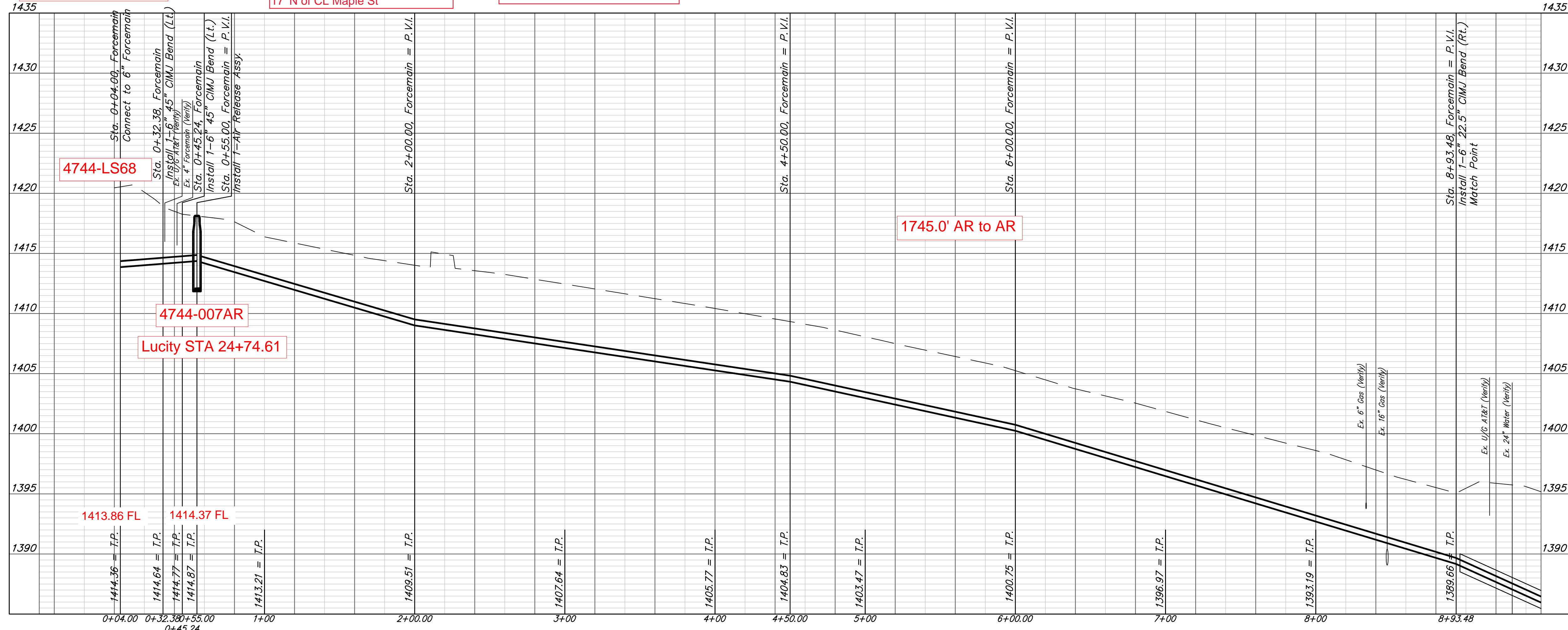
45 Bend  
 62' E of CL driveway of lift station  
 17' N of CL Maple St

Sta. 0+55.00, Force Main  
 BL Sta. 40+90.02, 17.50' Lt.  
 Install 1-Air Release Assy.  
 Top Elev. = 1418.12  
 N=1,682,335.27 E=1,595,974.15

Air Release  
 72' E of CL driveway lift station  
 17' N of CL Maple St

Lucity STA 25+29.61

Lucity STA 24+74.61

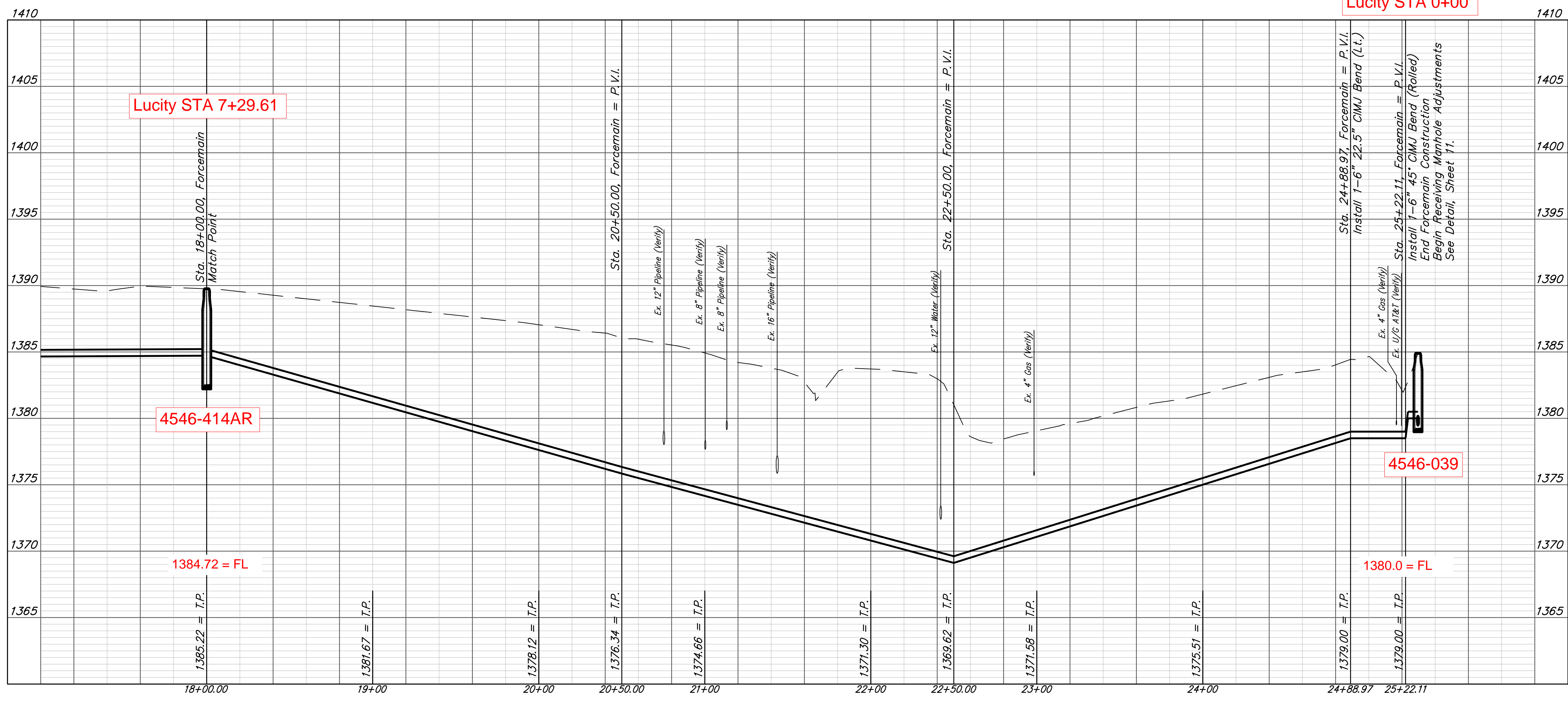
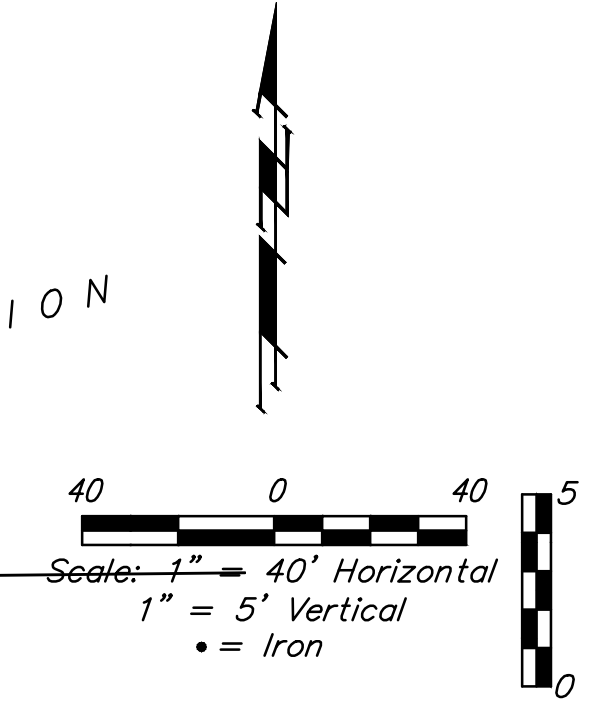
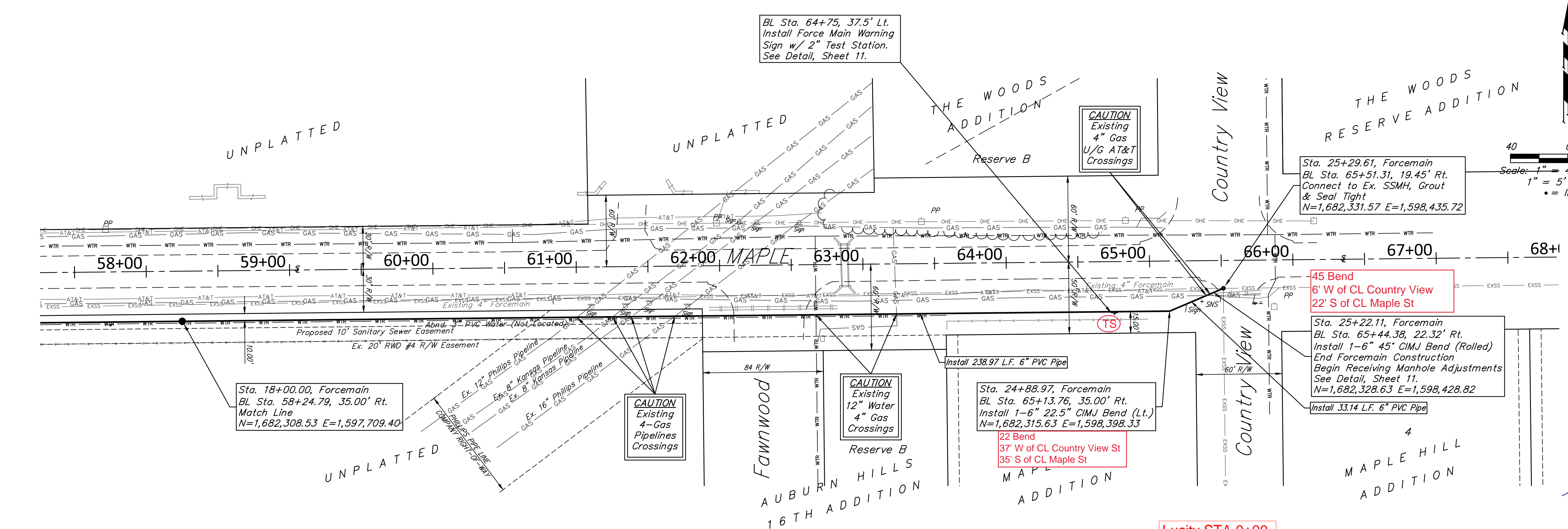


PIKE ADDITION  
**FORCE MAIN**  
 PUMP STATION AND FORCE MAIN

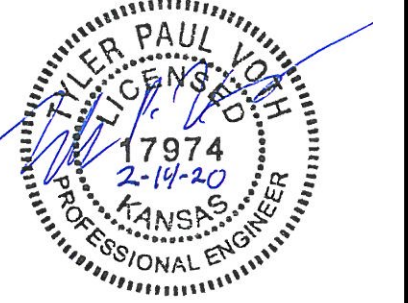
BAUGHMAN COMPANY, P.A.  
 1518 S. WABASH, SUITE 201, WICHITA, KS 67202  
 ENGINEERING, SURVEYING, PLANNING, LANDSCAPE ARCHITECTURE  
 Tyler Paul Koch  
 License No. 17974  
 State of Kansas  
 Date: 02/20



**BENCHMARK:**  
 BM #3: City of Wichita disc on top of north headwall of RCBC under Maple 175' west of the 151st Street North.  
 Elev. = 1390.57 NAVD88



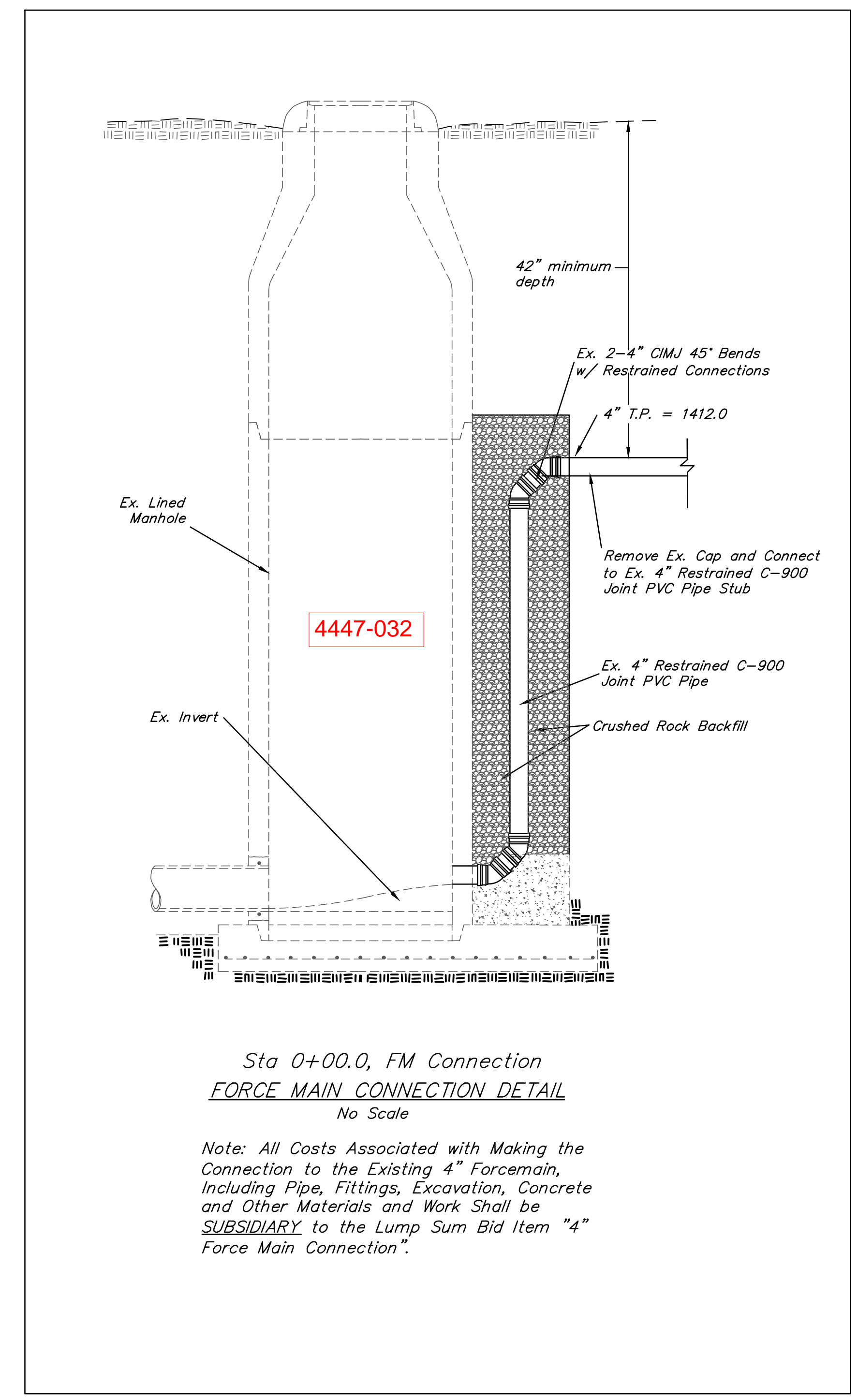
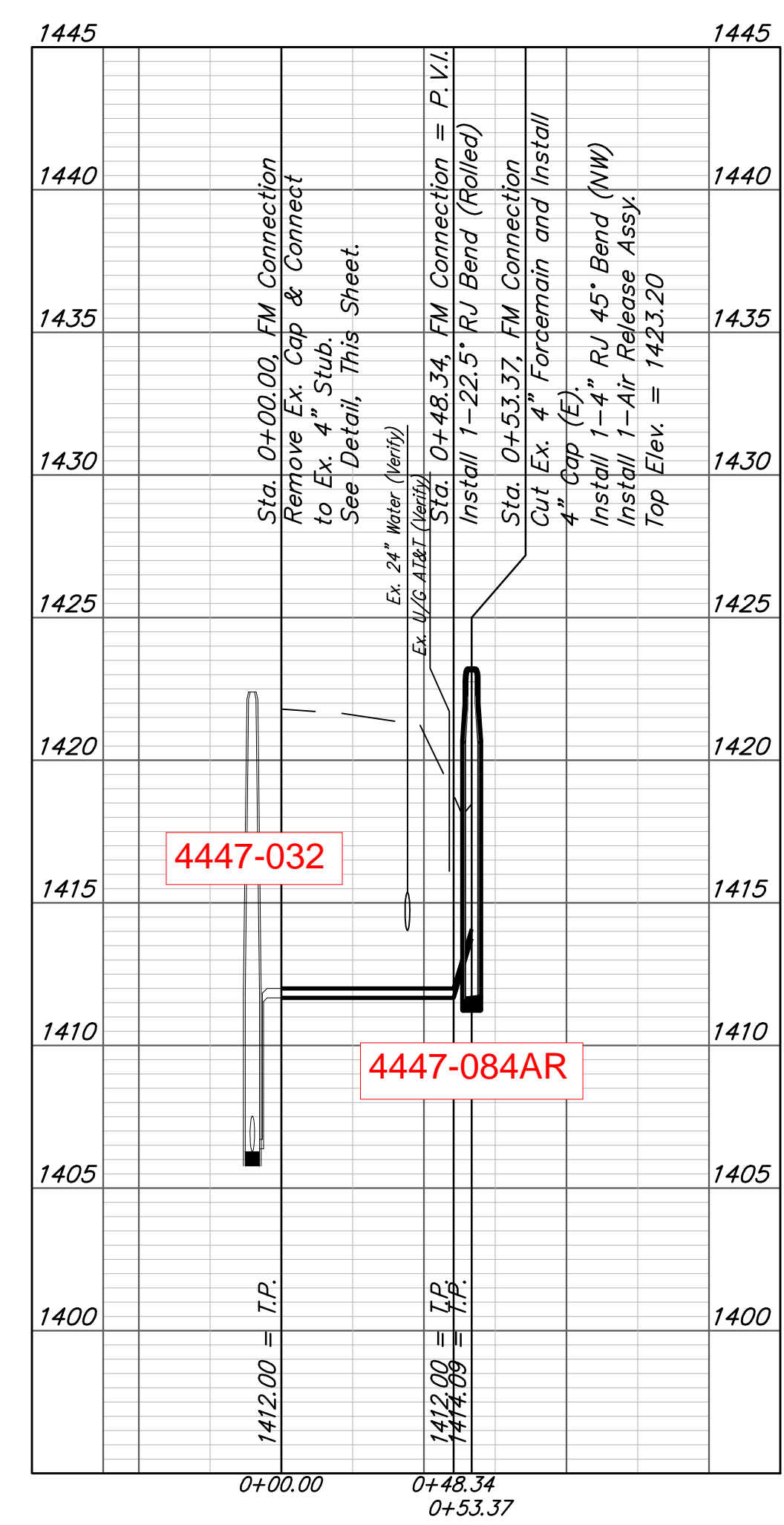
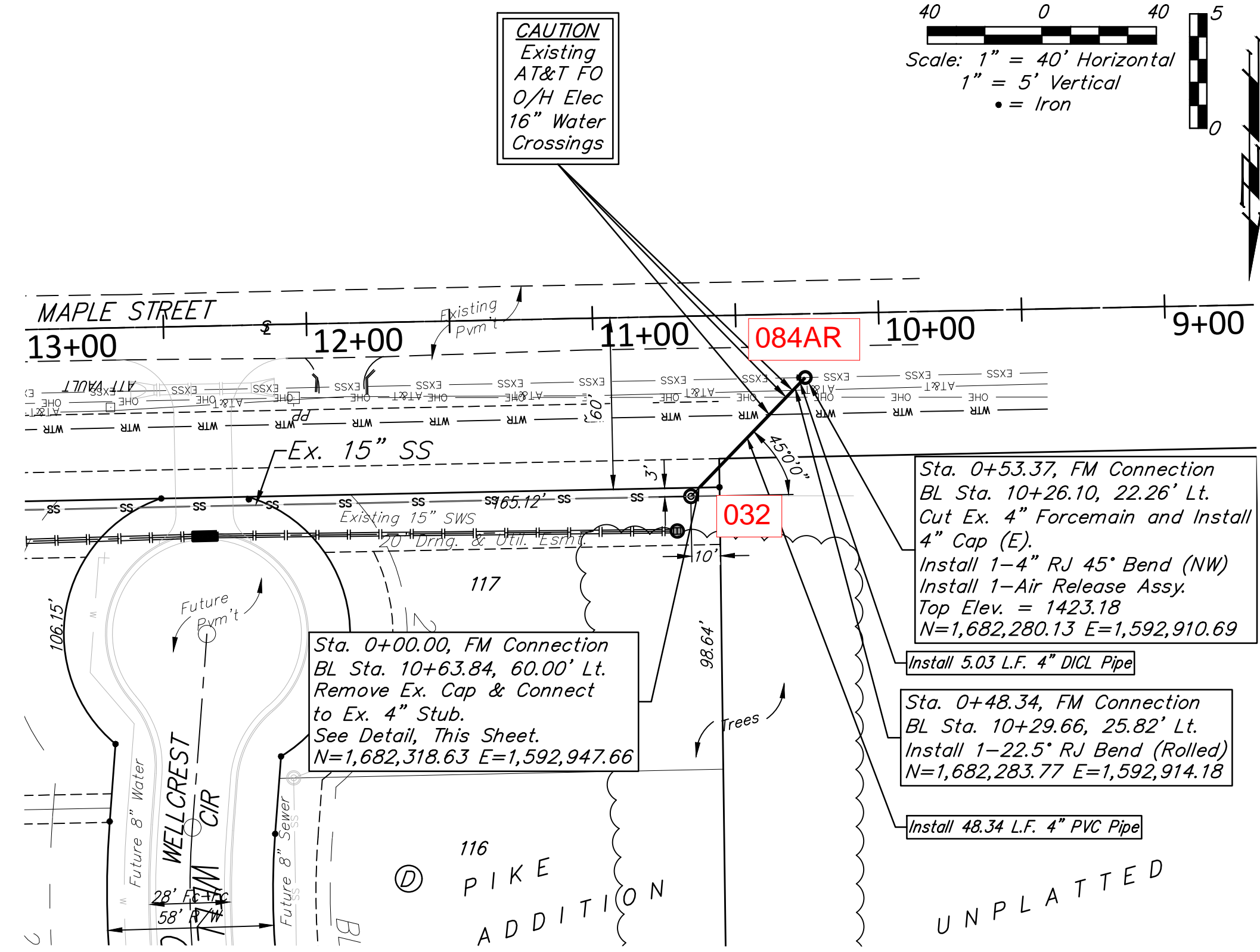
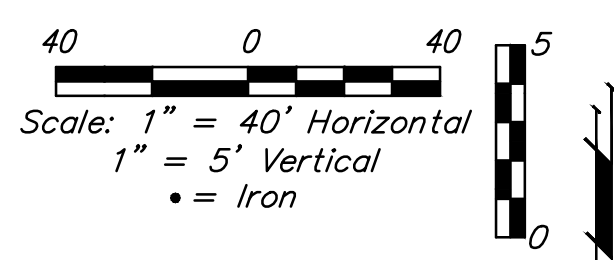
Lucy STA 0+00



Baughman Company, P.A.  
 1518 S. Wakarusa St., Wichita, KS 67211 P: 316.262.0149 F: 316.262.0149  
 ENGINEERING, SURVEYING, PLANNING, LANDSCAPE ARCHITECTURE  
 Tyler Paul Young  
 License No. 17974  
 State of Kansas  
 Date: 02/20

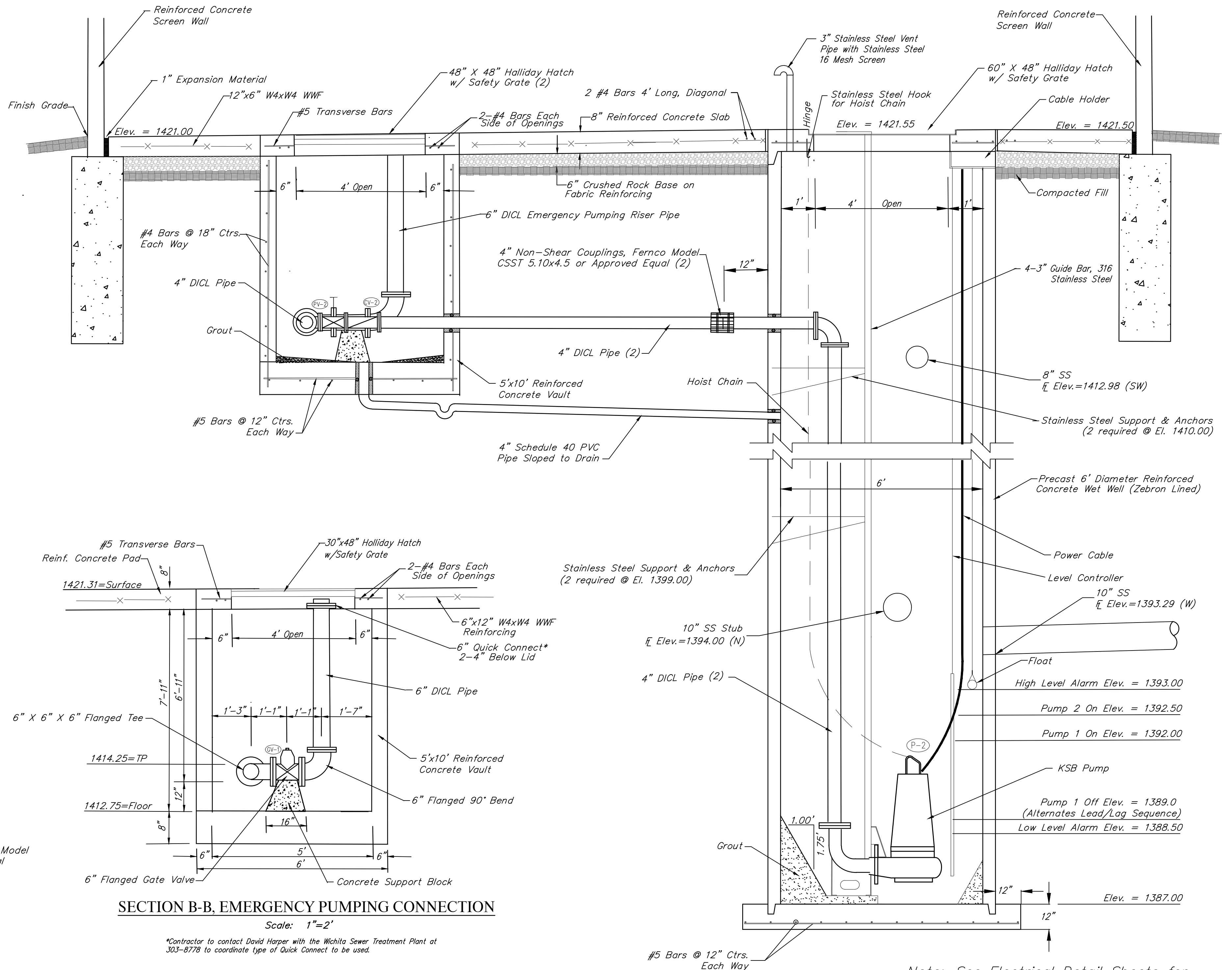
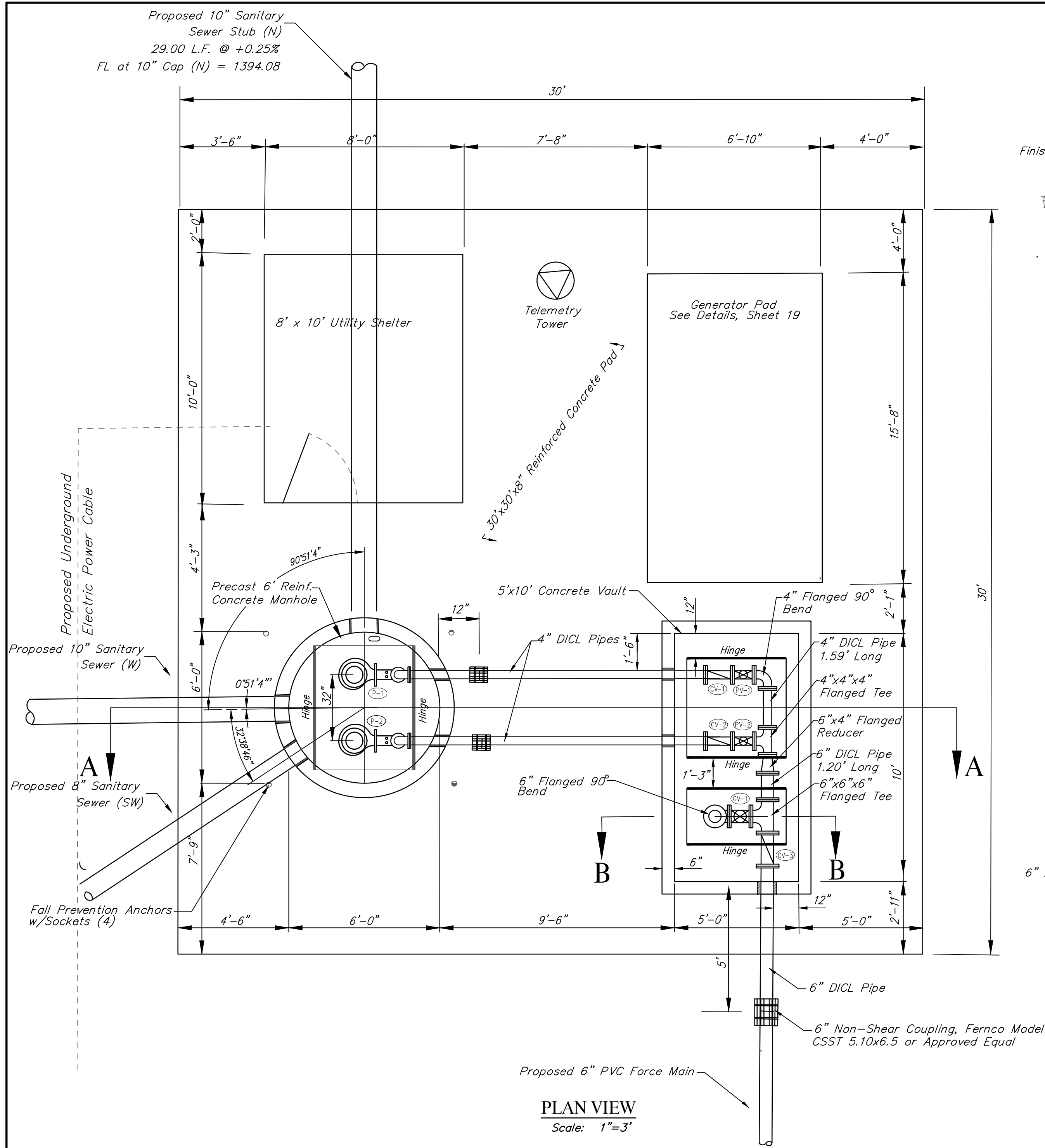
PIKE ADDITION  
**FORCEMAIN**  
 PUMP STATION AND FORCEMAIN

**BENCHMARK:**  
 BM #1: City of Wichita disc top  
 of headwall of RCBC 660± east  
 of the SE Cor. of the SE1/4,  
 SEC. 22, TWP. 27-S, R-2-W.  
 Elev. = 1410.27 NAVD88



**Baughman Company, P.A.**  
 1518 S. WABASH, SUITE 1000, WICHITA, KS 67202, P. 316.262.0149  
 ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS  
 Design: TPV, Approval: TPV, Date: 07/20  
 P.E. Tyler Paul Johnson, License No. 17974, State of Kansas

PIKE ADDITION  
**4" FORCE MAIN CONNECTION**  
 SANITARY SEWER IMPROVEMENTS



- The Price Bid for Furnishing and Installing the Lift Station, including the Wet Well, Valve Vault, and Other Miscellaneous Appurtenances, Shall Include All Costs for Furnishing and Installing the Lift Station as Indicated in the Plans Complete in Place and in Operation. This Price Shall Include the Cost of Constructing and/or Installing Compacted Subgrade, Concrete Pavement, Electrical Conduit, Electrical Wiring, Disconnect Switch, Pump Controls, Electrical Power Supply, Finished Grading, Concrete Slump Block Wall, and any Other Incidentals Necessary to Complete the Work and Place the Lift Station into Satisfactory Operation. The Price Bid Shall Include All Sanitary Sewer Pipe and Force Main Extended Outside the Slab as Shown in the Site Plan and Details.
- All Force Main Piping Shall be Ductile Iron (Flanged) to 5' Outside the Structures, Unless Otherwise Noted. All Interior Piping Shall be Cement Lined and Epoxy Coated Ductile Iron Pipe.
- Pipe Penetrations Thru the Wet Well, Valve Vault, and Concrete Pad Shall be Grouted Watertight With Non-Shrink Grout and Water Stop Gaskets as Required.
- The Contractor shall perform an Exfiltration Test on the complete Wet Well. The Wet Well shall be tested individually by securely plugging all inlet and outlet pipes. The Wet Well shall be filled to its full depth and then observed for at least six (6) hours. Exfiltration loss from the 6-foot diameter Wet Well shall not exceed the rate of 1.70 Gallons per foot of Wet Well depth per day. If exfiltration exceeds the maximum limits, the Contractor shall repair the leaks and defects, and then retest.
- The Contractor shall support all piping inside the Wet Well and Valve Vault as required.
- All hardware inside the Wet Well and Valve Vault, including but not limited to the Guide Bar, Hoist Chain, Chain Catch, etc. shall be stainless steel. 316 Stainless Steel shall be used when available, otherwise 304 Stainless Steel is acceptable. Nylon Rope will not be allowed in the Wet Well.
- Wet Well and Valve Vault design shall be subject to the same design requirements as Precast Manholes.
- The interior of the Wet Well shall be lined Zebon 386 or approved equal.
- Backfill around the Wet Well and under the Valve Vault and Pad shall be a low volume change material compacted to 95% ASTM D-1557.
- The Contractor shall coordinate with Evergy to extend electric services to the Pump Station Site. The Contractor shall verify the electrical service costs & requirements PRIOR to Bidding. ALL COST INCURRED TO EXTEND SERVICES TO THE SITE SHALL BE INCLUDED IN LUMP SUM BID ITEM "PUMP STATION MODULE".
- The Contractor shall verify all requirements and dimensions of the Generator Pad with the Generator Supplier prior to construction.

- No Electrical Connections will be Allowed within the Wetwell.
- Contact David Harper with the City of Wichita Sewer Treatment Plant at 303-8778 PRIOR to Lift Station Start-up.
- Contractor shall install 4 Fall Prevention Anchors at locations as shown outside of Hatch on above drawing. Anchors shall be 3M/Sala Model 2100169 Pour-in-Place Detent Anchor w/ Socket or approved equal.

PLUG VALVE SCHEDULE

MARK	LOCATION	STATUS	SIZE	FITTINGS	OPERATOR
PV-1	VALVE VAULT	NEW	4"	FLANGE	GEARED OPERATOR W/ EXTENSION & 2" NUT
PV-2	VALVE VAULT	NEW	4"	FLANGE	GEARED OPERATOR W/ EXTENSION & 2" NUT

GATE VALVE SCHEDULE

MARK	LOCATION	STATUS	SIZE	FITTINGS	OPERATOR
GV-1	VALVE VAULT	NEW	6"	FLANGE	GEARED OPERATOR W/ EXTENSION & 2" NUT

CHECK VALVE SCHEDULE

MARK	LOCATION	STATUS	SIZE	FITTINGS	OPERATOR
CV-1	VALVE VAULT	NEW	4"	FLANGE	LEVER & SPRING
CV-2	VALVE VAULT	NEW	4"	FLANGE	LEVER & SPRING
CV-3	VALVE VAULT	NEW	6"	FLANGE	LEVER & SPRING

PUMP SCHEDULE

MARK	TYPE	GPM	HEAD (FT)	EFF. %	HP	RPM	ELECT.
P-1	SUBMERSIBLE	413	71.6	49.5% MIN.	20.0	1750	460/60/3
P-2	SUBMERSIBLE	413	71.6	49.5% MIN.	20.0	1750	460/60/3



Note: See Electrical Detail Sheets for Pump Control Wiring & Enclosures.

**Baughman** PUMP STATION  
Sanitary Sewer Improvements

115 Ellis St. Wichita, KS 67211 F 316-262-7271 F 316-262-0149  
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

PROJECT NUMBER: LS68

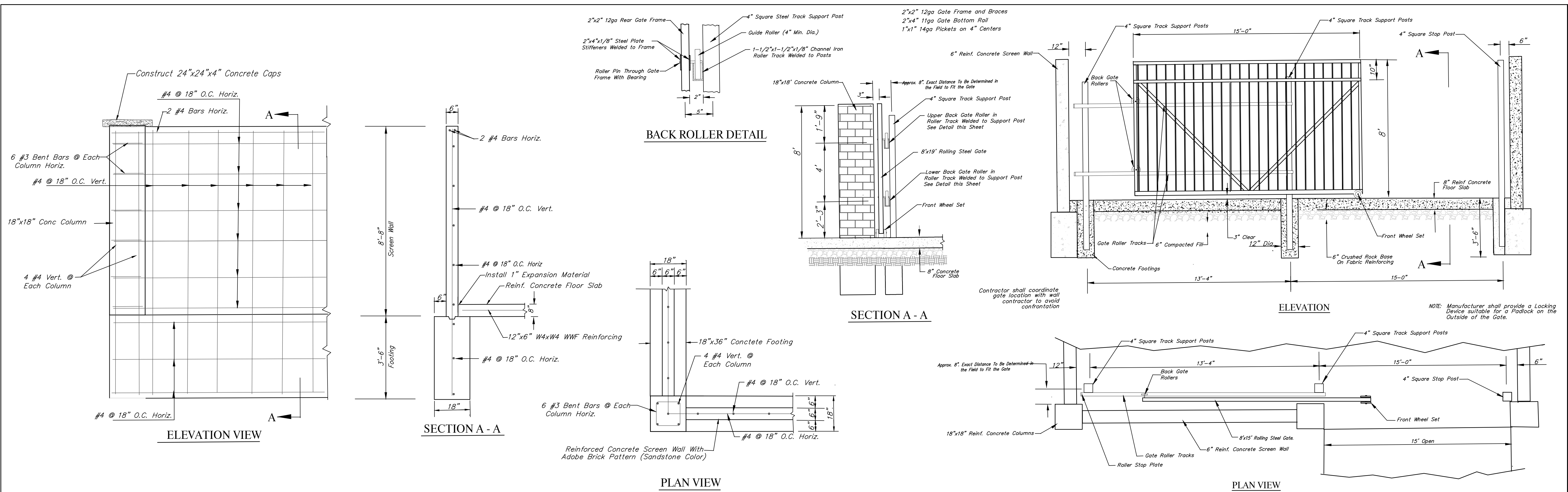
DESIGN: TPV  
DRAWN: Staff

APPROVED: TPV  
DATE: 02/20

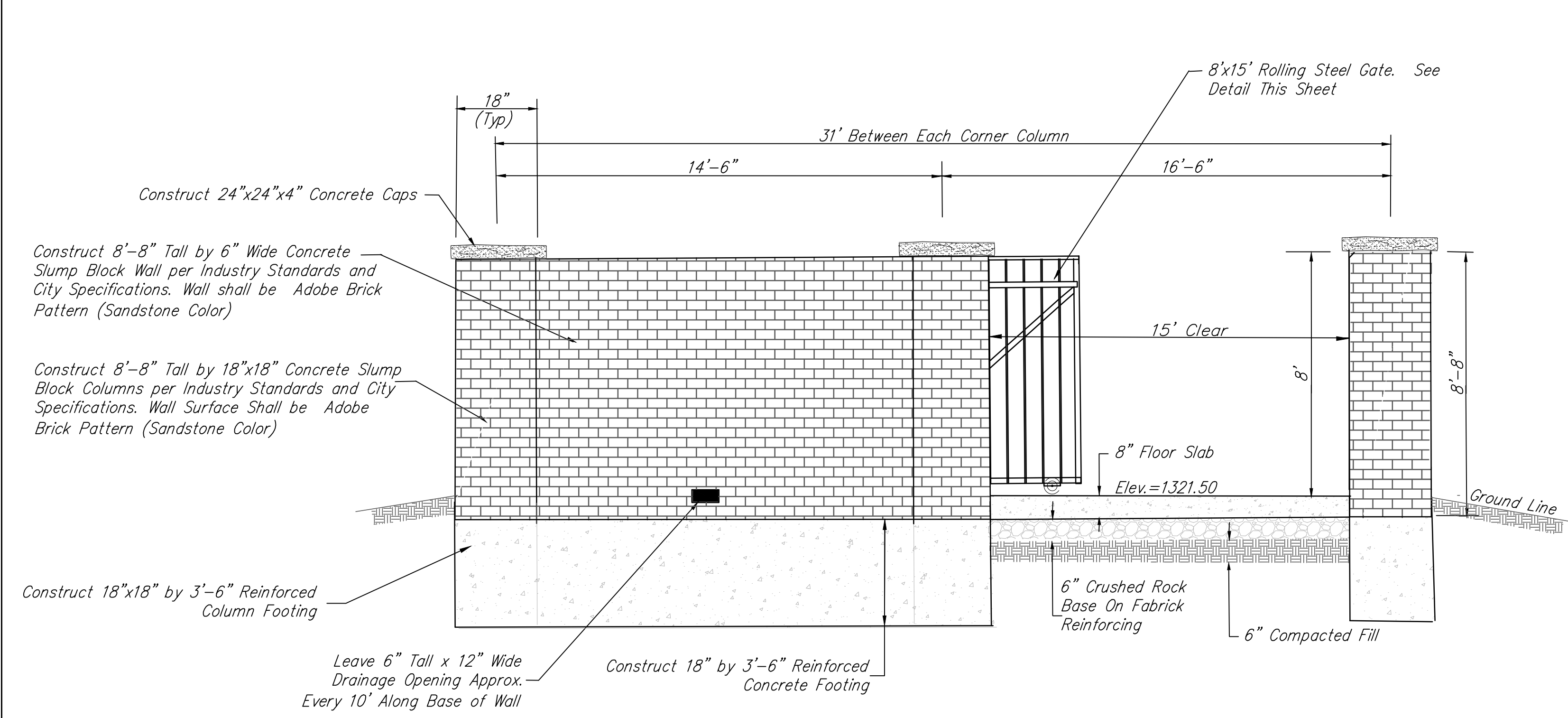
SCALE: Noted  
SHEET: 8 OF 24

E:\Projects\Pike Addition\_Engineering Phase 1\SS Main 1941-E171\Bse-Pump Station.dwg



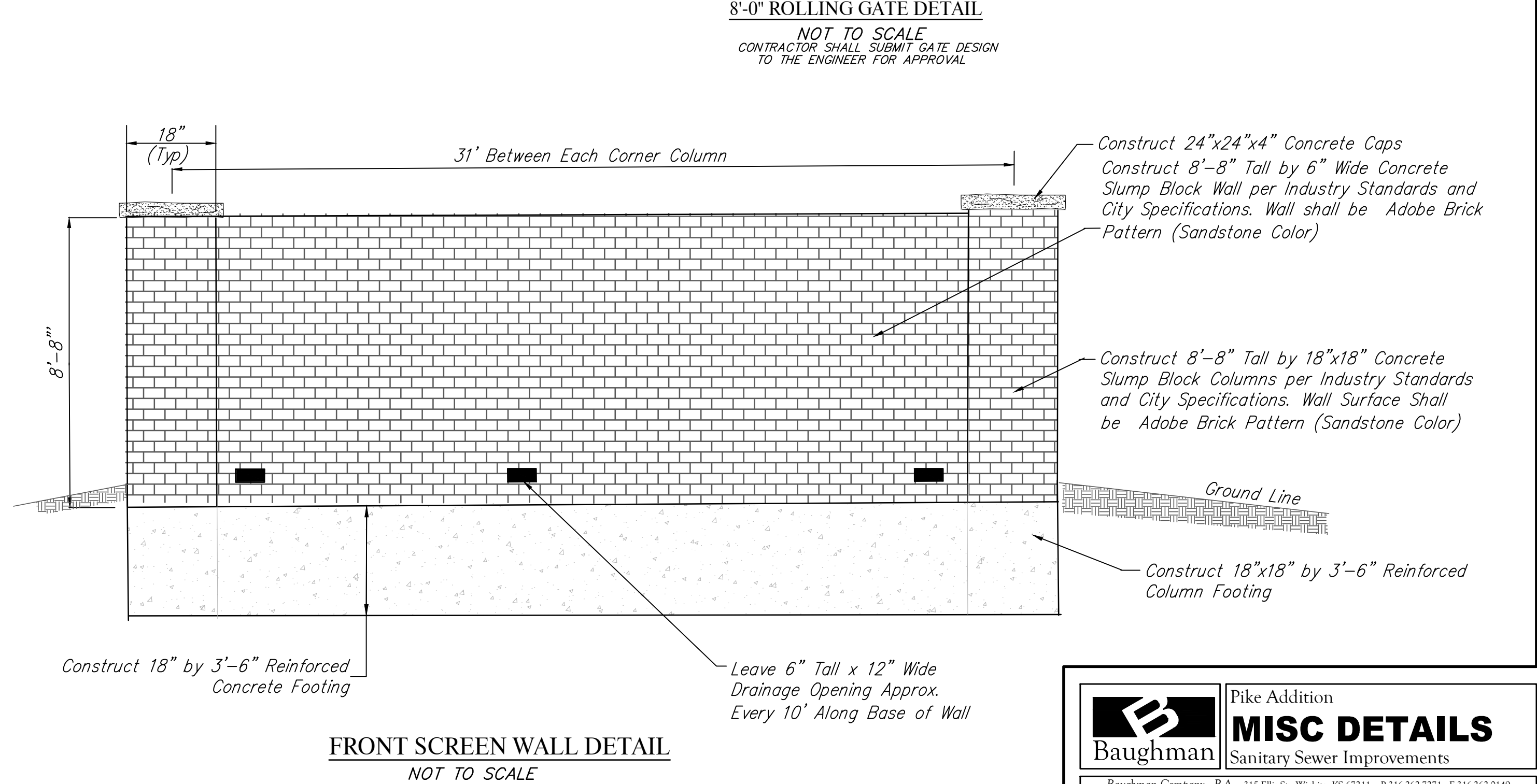


**SCREENING WALL REINFORCING DETAIL**



**WEST SIDE SCREEN WALL WITH GATE DETAIL**

NOT TO SCALE  
 Note: Cost of 8' Concrete Slump Block Screening Wall shall be Included in L.S. Bid Item "Lift Station Module."



**FRONT SCREEN WALL DETAIL**

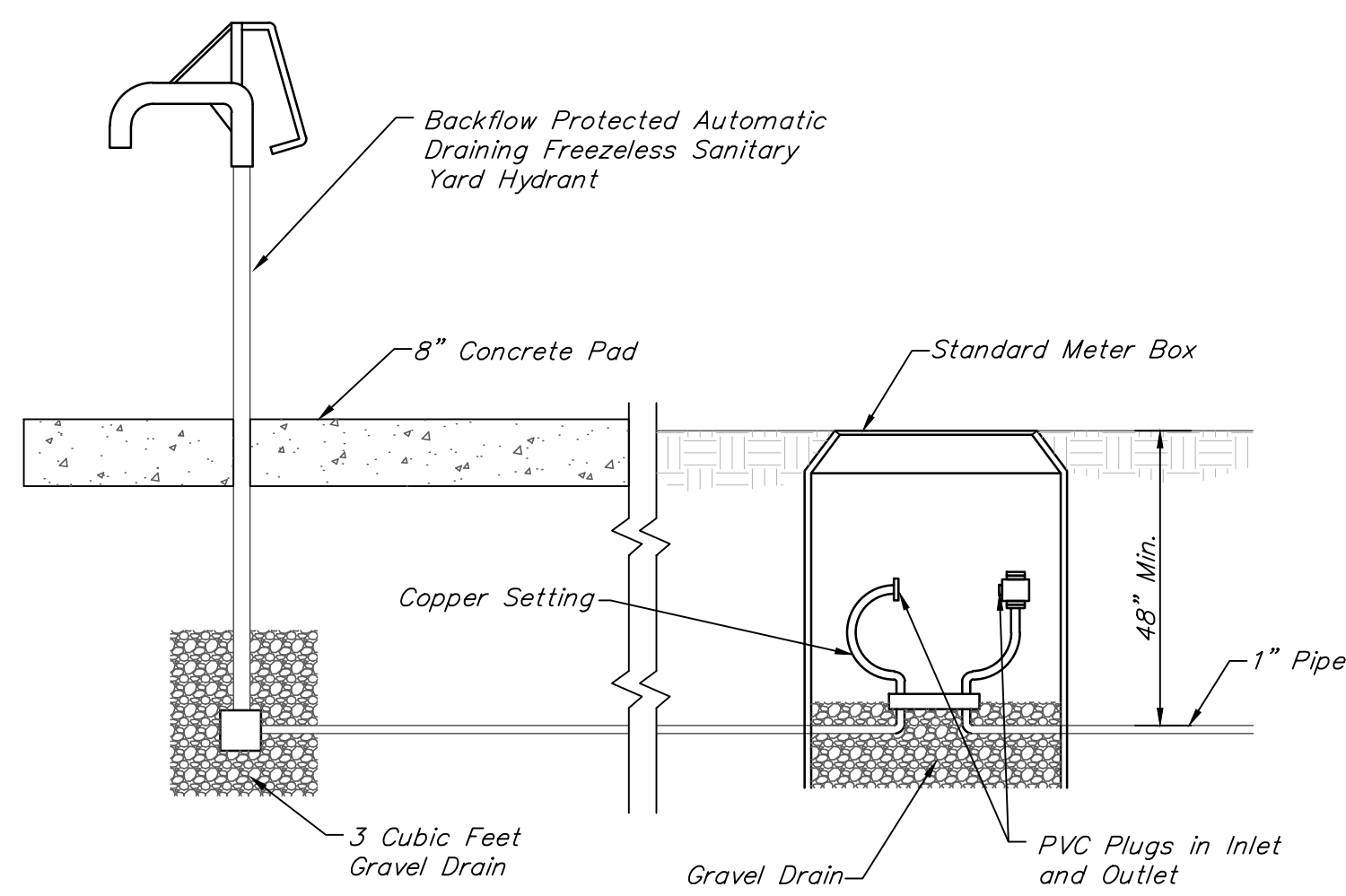
NOT TO SCALE

Note: Cost of 6' Concrete Slump Block Screening Wall shall be Included in L.S. Bid Item "Lift Station Module."

NOT TO SCALE  
 CONTRACTOR SHALL SUBMIT WALL DESIGN TO THE ENGINEER FOR APPROVAL

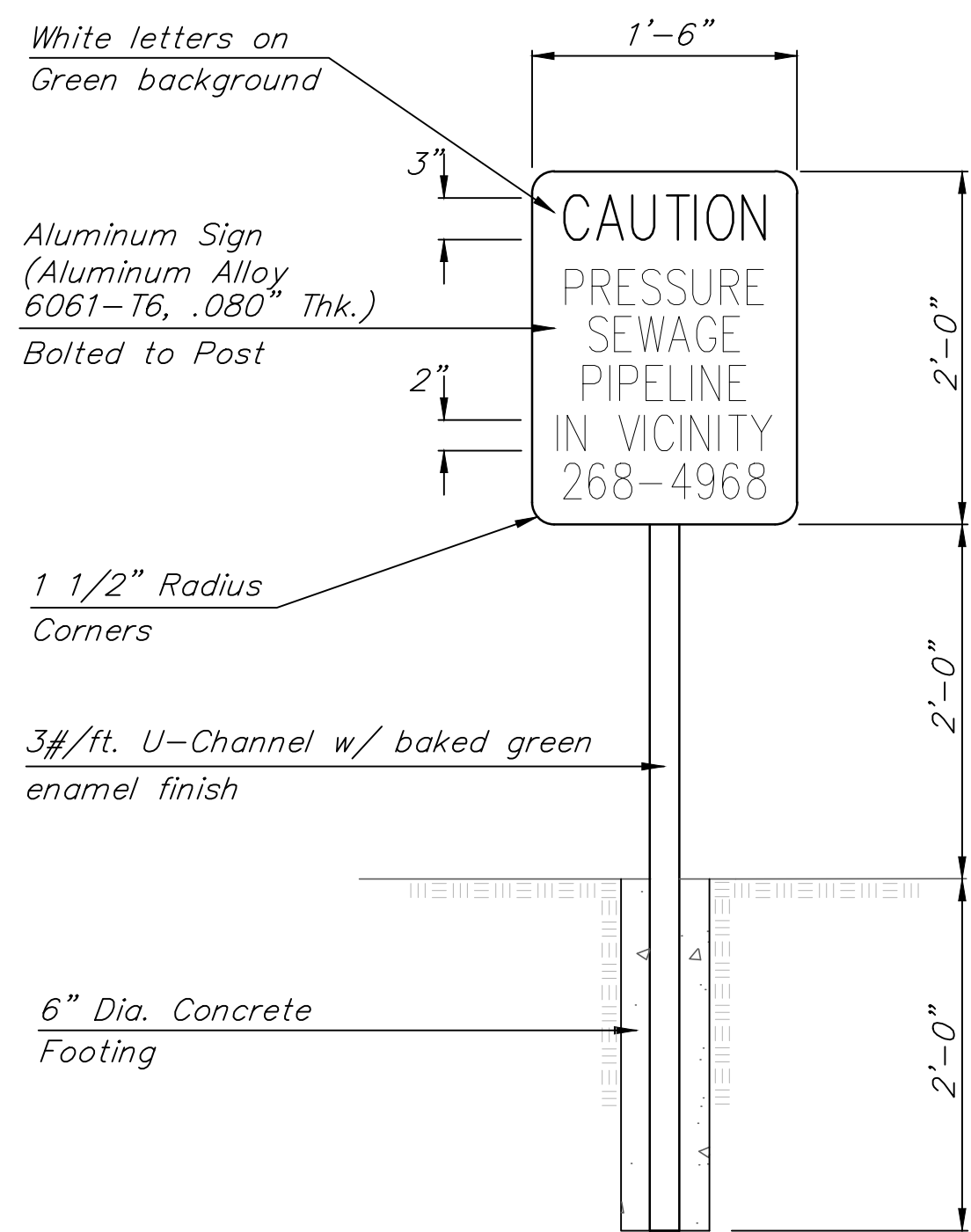


<b>Baughman</b>		<b>Pike Addition MISC DETAILS</b>	
Sanitary Sewer Improvements		Sanitary Sewer Improvements	
Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316.262.7271 F 316.262.0149			
ENGINEERING   SURVEYING   PLANNING   LANDSCAPE ARCHITECTURE			
PROJECT NUMBER	TPV	DESIGN	DRAWN
REVISIONS:		APPROVED	DATE
		TPV	02/20
		SCALE	Noted
		SHEET	10 OF 24



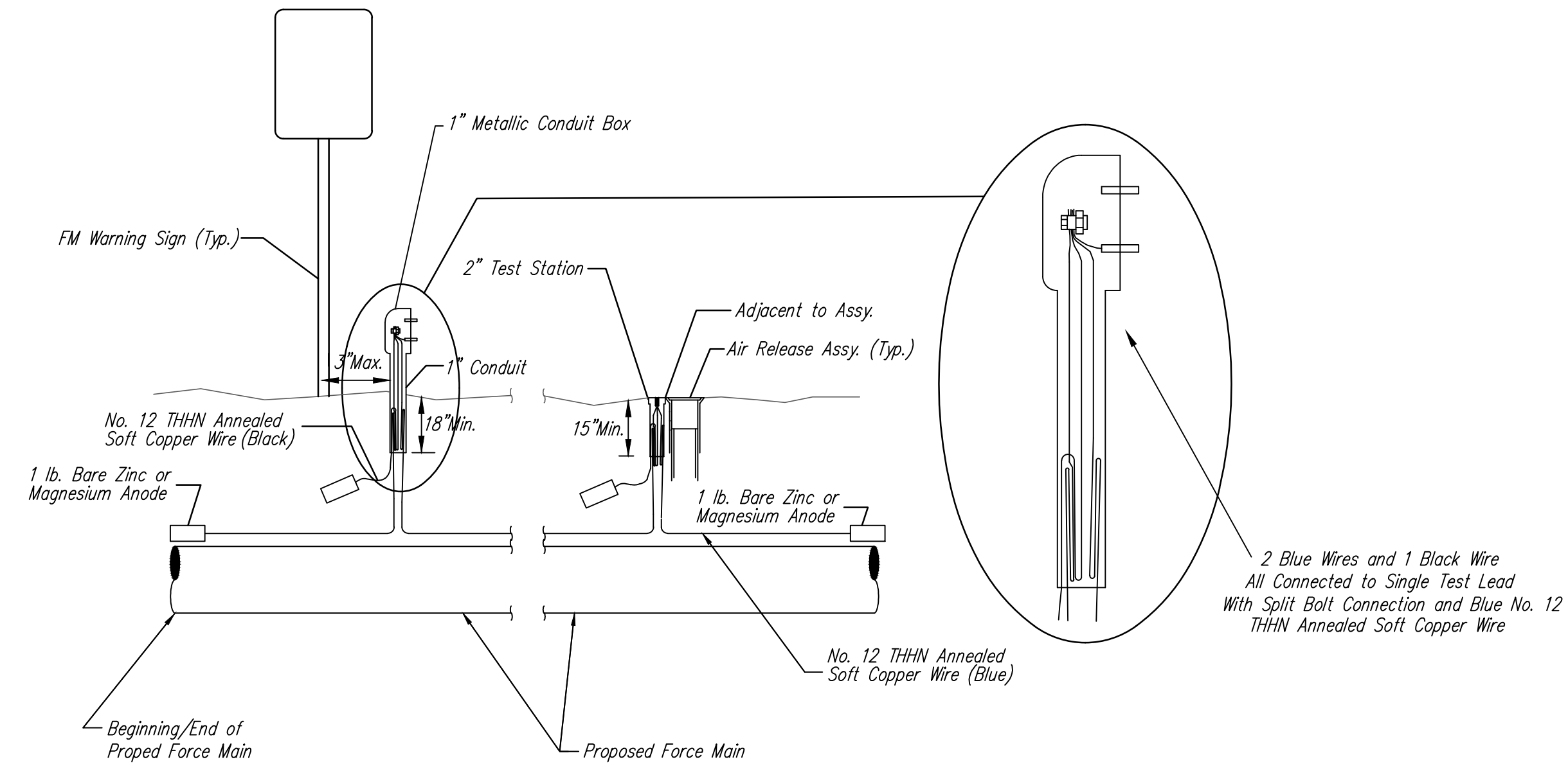
**YARD HYDRANT DETAIL**

Note: All Costs Associated with the Yard Hydrant shall be Included in L.S. Bid Item "Lift Station Module."



**FORCE MAIN WARNING SIGN DETAIL**

Note: Install Metal Warning Signs as Shown on the Forcemain Plans. Signs Shall Not be More than 1,100' Apart. Exact Locations of Warning Signs shall be Approved by the Engineer. Cost of Signs shall be Included in L.S. Bid Item "Lift Station Module."



**TRACER WIRE**

Conductive type pipe locator/tracer wire shall be installed to locate all waterline pipe regardless of pipe material. The wire shall extend the entire length of the proposed pipe. The wire shall be taped to the waterline and pulled with the pipe. Split-bolt connectors shall be used at splice locations. Electrical tape shall cover all splices so no bare wire is exposed. Test stations shall be installed adjacent to all fire hydrants along the waterline and at blowoffs or valves near the ends of the waterlines. Any exceptions to the location of test stations shall be approved by the engineer. At each test station, the tracer wire shall be connected to a 1 lb. Zinc or magnesium anode. Anodes shall also be attached to the tracer wire at both the beginning and the end of the proposed waterline. A typical layout of the tracer wire and test station is provided in the above figure.

**WIRE**

The tracer wire shall be Blue No. 12 THHN annealed soft copper wire with thermal plastic insulation. The insulation shall be heat, oil, and gasoline resistant as manufactured by Temple Electric or approved equal. To allow for grade adjustment, a minimum of 12" of excess wire shall be coiled at the bottom of the test station for all wires. The insulation sheathing shall be removed such that 1" bare copper wire is exposed at all points of connection. Contractor shall attach wire being installed with proposed water main to any tracer wire installed with adjacent waterline projects.

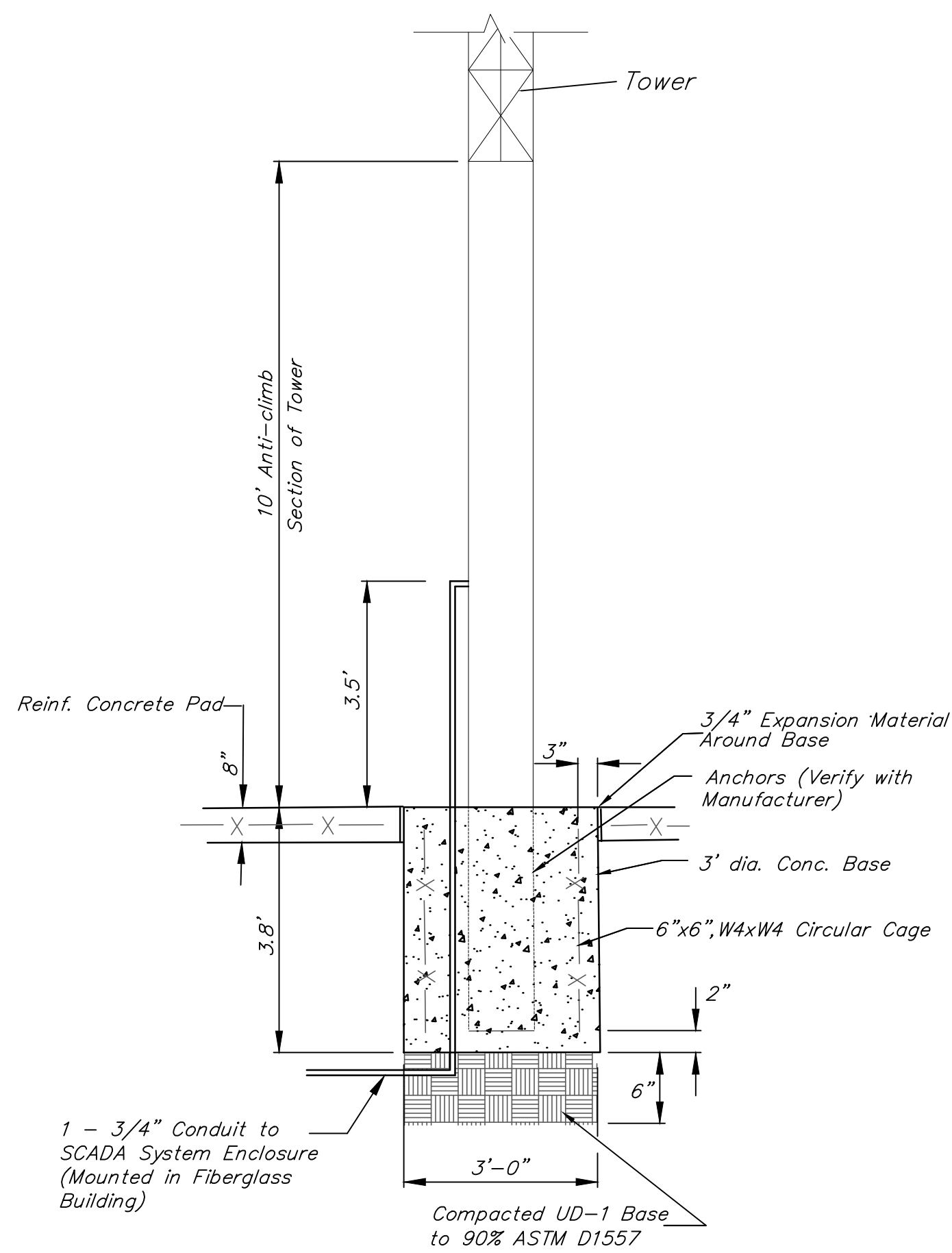
**TEST STATIONS**

The test station for fire hydrant applications shall be a 1 inch galvanized conduit style test station as manufactured by AGRA Industries with a removable solid cover having two leads extending from the face or approved equal. The test station for valve applications shall be 2 inch flush style test station T2PS3B as manufactured by HANDLEY Industries or approved equal. The conduit style shall be attached to a 1 inch rigid galvanized conduit with a minimum length of 36" and plastic end bushing. The flush style shall have the word "Force Main" stamped or molded into the lid. All test stations shall be manufactured using molded blue tops or sufficiently coated with blue enamel paint. The tracer wire and the anode wire shall be installed to allow 10 inches of wire within the test station. In concrete environments such as sidewalks or in the downtown area the contractor shall use the flush style test station. The location of all test stations shall be approved by the engineer, recorded, and shown in the as-built drawings.

The anodes shall be 1 lb. bare zinc or magnesium. The anodes shall be buried at the same elevation as the waterline at each test station. The anodes shall be connected to Black No. 12 THHN annealed soft copper wire which shall be extended to the test station.

**TRACER WIRE DETAIL**

COST IS SUBSIDIARY TO PIPE INSTALLATION

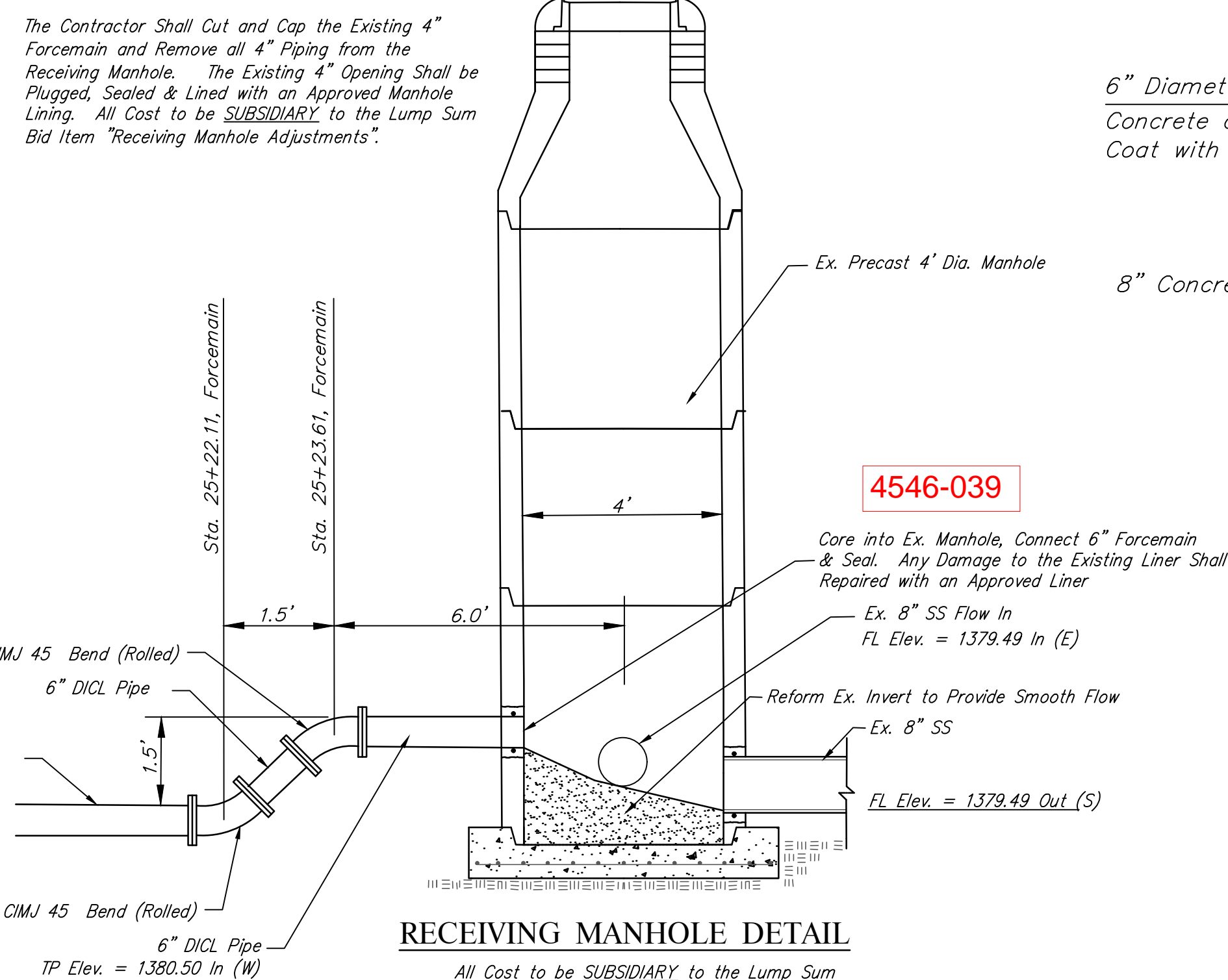


**SCADA SYSTEM DETAIL**

SCALE: 1" = 2'

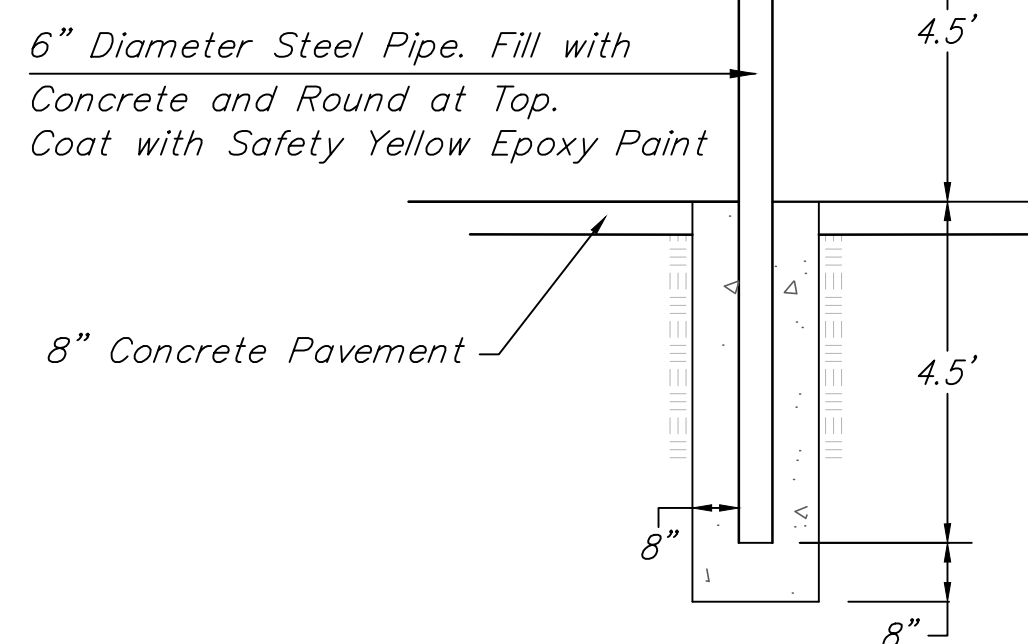
**NOTES:**

- MAXIMUM TOWER HEIGHT IS 30 FEET.
- 6" COPPER GROUND ROD SHALL BE PROVIDED FOR THE TOWER.
- ANCHOR BOLT SIZES AND LENGTHS SHALL BE PER THE TOWER MANUFACTURERS RECOMMENDATIONS.



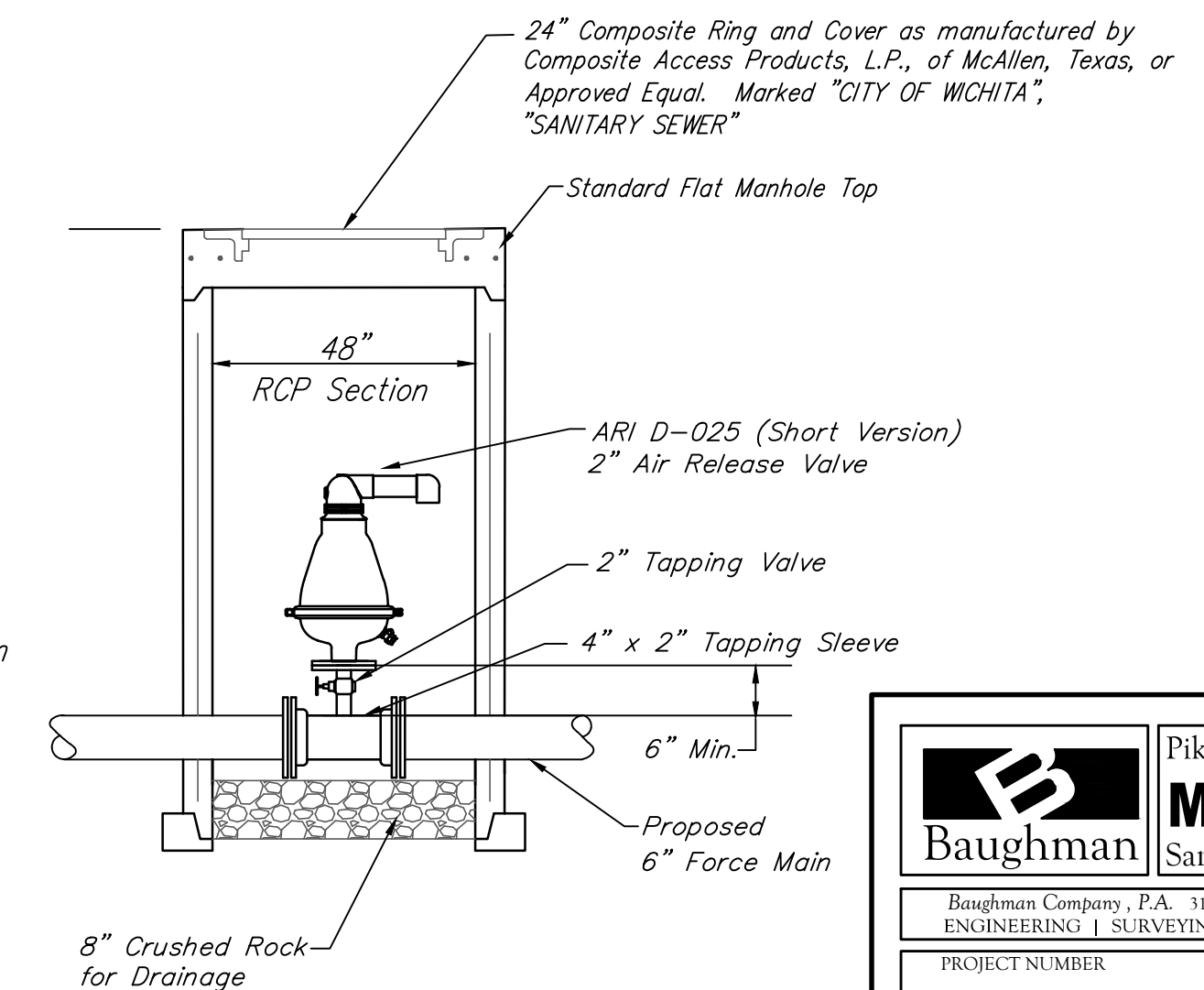
**RECEIVING MANHOLE DETAIL**

All Cost to be SUBSIDIARY to the Lump Sum Bid Item "Receiving Manhole Adjustments."



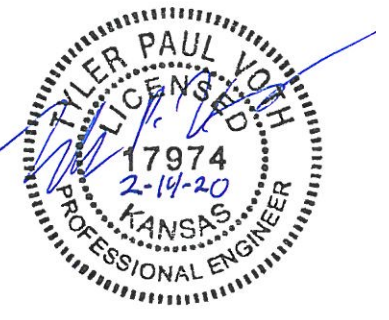
**BOLLARD DETAIL**

Note: Cost of Bollards shall be Included in L.S. Bid Item "Lift Station Module."



**AIR RELEASE VALVE and VAULT DETAIL**

Note: Install Air Release Valve and Vault at Locations as Shown on the Plans.



<b>Baughman</b>		Pike Addition <b>MISC DETAILS</b> 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			
PROJECT NUMBER	DESIGN	TPV	DRAWN
REVISIONS:	TPV	TPV	Staff
	APPROVED	DATE	02/20
	Noted	SCALE	
	SHEET	<b>11 OF 24</b>	

120/208V/30/4W/+GRD 50 AMP BKR, WALL MTD. 42,000 AIC LABELED										
MINI-POWER ZONE L INTEGRAL PANEL/ TRANSFORMER										
CIRC NO.	LOAD V.A.	LOAD DESCRIPTION	POLE	PHASE	AMP SIZE	LOAD DESCRIPTION	LOAD V.A.	CIRC NO.		
1	140	PUMP LIGHTG	1	20	A	20	1	INT. RECEPT.	200	2
3	300	EXT. LIGHTING	1	20	B	20	1	BATTERY CHRGR	1000	4
5	200	EXT. RECEPT.	1	20	C	15	2	JACKET HTR	1500	6
7	60	EF-1	1	20	A	-	-	-	-	8
9		SPARE	1	25	B	15	2	COOLANT HTR	1500	10
11		SPARE	1	20	C	-	-	-	-	12
13		SPARE			A	20	1	SPARE		14
15		SPARE			B	-	-	SPARE		16
17		SPARE			C	-	-	SPARE		18

- 15 KVA MINI-POWER ZONE COMBINATION PANEL/ TRANSFORMER, 480V, PRIMARY WITH 120/208V, 3-PHASE, 4-WIRE SECONDARY, 18 POLE PANEL.
- VERIFY CIRCUITING REQUIREMENTS WITH GENERATOR PROVIDED PRIOR TO ORDERING PANEL AND BREAKERS.

277/480V/30/4W/+GRD 225 AMP M.L.O. SURFACE MTD. 42,000 AIC LABELED										
PANEL H W/ GRD. BUS										
CIRC NO.	LOAD V.A.	LOAD DESCRIPTION	POLE	PHASE	AMP SIZE	LOAD DESCRIPTION	LOAD V.A.	CIRC NO.		
1	15,000	MINI ZONE L	3	25	A	100	3	CP-1	44800	2
3					B	-	-			4
5					C	-	-			6
7		SPARE	1	20	A	20	3	UH-1	3300	8
9		SPARE	1	20	B	-	-			10
11		SPARE	1	20	C	-	-			12
13		SPACE			A	20	1	SPACE		14
15		SPACE			B	-	-	SPACE		16
17		SPACE			C	-	-	SPACE		18

LIGHT FIXTURE SCHEDULE								
FXTR LTR	MANUFACTURER	CATALOG NUMBER	LAMPS NO.	LAMPS TYPE	FIXT. VOLT.	FINISH	MOUNTING	REMARKS
A	WILLIAMS	96-4-L62-HIAFR-DRV-UNV	-	LED	UNV	WHITE	SURFACE	ENCLOSED AND GASKETED.
B	WILLIAMS	WPI-L44/850-PG-WG-120	-	LED	120	STANDARD	WALL	(1)(2)

- ### LIGHT FIXTURE SCHEDULE NOTES
- PROVIDE FIXTURE WITH INTEGRAL PHOTOCELL.
  - MANUFACTURERS LISTED IN THIS SCHEDULE OR APPROVED BY WRITTEN ADDENDUM WILL BE THE ONLY APPROVED MANUFACTURERS TO BID THE LIGHTING FIXTURES FOR THIS PROJECT. CONTRACTORS AND SUPPLIERS USING PRICING FROM MANUFACTURERS NOT LISTED ON SCHEDULE OR BY ADDENDUM DO SO AT THEIR OWN RISK.

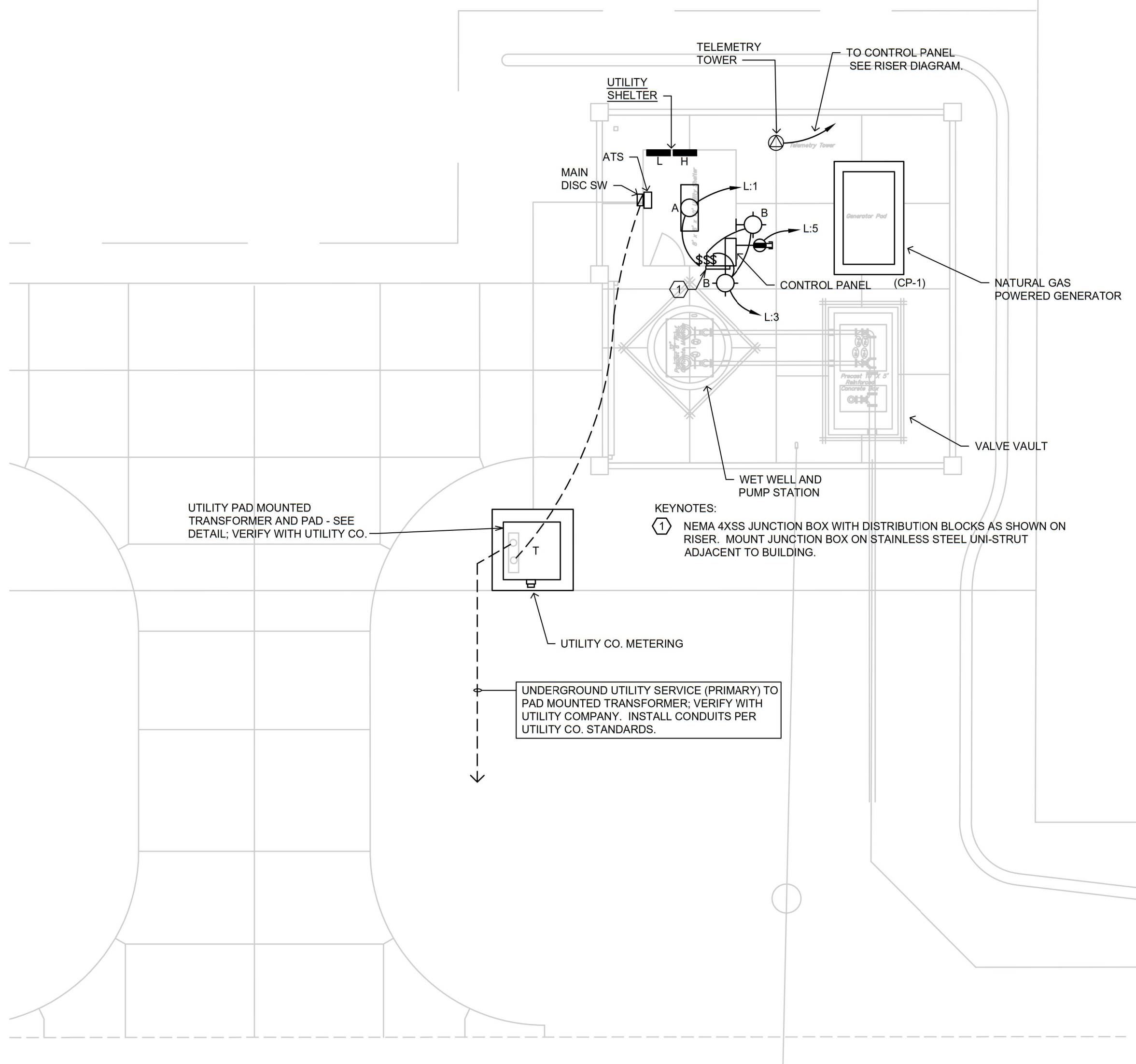
EQUIPMENT CONNECTION SCHEDULE															SCH. CODE SW=DISC. SW CB=CIR. BKR T=TOGGLE SW.		
UNIT DESIG.	LOAD	PANEL DEVICE RATING (AMPS/POLE)	DISC. DEVICE AT UNIT (AMPS/POLE)	STARTER (SIZE/POLE)	CIRC. NO.	FEEDER IDENT.	ICE-PIKE ADDITION										
	H.P.	FLA	MCA	2001	2003	3003	5003	10003	5003	4002	3002	2002	FUSE SIZE	NEUMAR	IN CP-1		
CP-1	(2) 20 54 68															H-2	3#3/8 1#8GRD-1 1/4" C
P-1	20	27	34													CP-1	3#8 1#10GRD-1" C
EF-1	60W															CP-1	3#8 1#10GRD-1" C
UH-1	3.3KW	4														H-8	3#1/2 1#12GRD-3/4" C

- ### EQUIPMENT CONNECTION SCHEDULE NOTES
- ALL CONNECTIONS AND ELECTRICAL EQUIPMENT LISTED IN SCHEDULE SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. FIELD VERIFY CONNECTION REQUIREMENTS AND EQUIPMENT PROVIDED BY OTHERS PRIOR TO ROUGH-IN.
  - REFER TO DRAWINGS AND SPECIFICATIONS FOR THE REQUIREMENTS ASSOCIATED WITH WIRING AND CONNECTIONS OF INTERLOCKING, THERMOSTAT LOCATIONS, EXHAUST FAN CONTROL SWITCHES, AND OTHER CONTROLS OF MECHANICAL EQUIPMENT.
  - NOT USED.
  - PROVIDE A 30A, 1 POLE, 125V, HORSEPOWER RATED TOGGLE SWITCH WITH A 125V, 3/4 HP RATED FUSTAT (EQUAL TO BUSSMAN #50Y), SIZE FUSE PER MANUFACTURER'S RECOMMENDATION.
  - STARTER AND POWER FACTOR CORRECTION CAPACITORS SHALL BE PROVIDED AS PART OF CP-1. CONTRACTOR TO PROVIDE WIRING FROM CP-1 TO DISTRIBUTION BLOCKS IN JUNCTION BOX LOCATED OUTSIDE BUILDING AND CONNECT PUMP SUPPLIED CABLING AS REQUIRED.
  - PROVIDE CONNECTION TO EXHAUST AN PROVIDED WITH UTILITY SHED AS REQUIRED. INSTALL A COOK MODEL GC-142 CABINET FAN OR EQUIVALENT, 75 CFM AT 0.25" E.S.P., 59 WATTS, 120V/160. INSTALL TIGHT TO CEILING OF UTILITY SHELTER. PROVIDE ALUMINUM GRILLE, WALL CAP PAINTED TO MATCH UTILITY SHELTER. CONTROL TRANSFORMER, AND 24V. THERMOSTAT TO TURN FAN ON ABOVE 80° (ADJUSTABLE). INSTALL A 12"x 12" WALL LOUVER WITH MOTORIZED DAMPER INTERLOCKED TO OPEN WITH FAN OPERATION.
  - PROVIDE CONNECTION TO UNIT HEATER IN UTILITY SHED AS REQUIRED. VERIFY LOCATION PRIOR TO ROUGH-IN. INSTALL A MARKEL MODEL P3P5103CAIN ELECTRIC UNIT HEATER OR EQUIVALENT. HEATER SHALL BE 3.3 KW, 112 MBH, 4.0A, 480/360. PROVIDE WITH WALL MOUNTING BRACKET, CONTROL TRANSFORMER, AND 24 V LOW VOLTAGE THERMOSTAT TO START THE HEATER BELOW 50° (ADJUSTABLE).

### SYMBOL LIST

SYMBOL	DESCRIPTION	MOUNTING
(A)	FLUORESCENT FIXTURE & FIXTURE LETTER	CEILING
(A)	INCAND. OR H.I.D. FIXTURE & FIXT. LETTER	WALLBRACKET
(A)	GFCI DUPLEX GROUNDED RECEPTACLE	1'-3" AFF
(A)	DUPLEX GROUNDED RECEPTACLE	1'-3" AFF
(A)	EXTERIOR GFCI RECEPT. WEATHERPROOF	1'-3" AFF
(A)	SWITCHES (1-POLE,3-WAY,4-WAY,PILOT,KEY)	4'-0" TO TOP
(A)	JUNCTION BOX	
(A)	FUSTAT	
(A)	SPECIAL DEVICE AS NOTED ON PLAN	
(A)	BRANCH CIRCUIT PANEL & PANEL DESIG.	6'-6" TO TOP
(A)	H.D. SAFETY SWITCH (AMPS,POLE,VOLTAGE)	6'-6" TO TOP
(A)	STARTER (SIZE,POLE,VOLTAGE)	6'-6" TO TOP
(A)	THERMOSTAT (BY M.C.)	4'-0" TO TOP
(A)	MOTOR	
(A)	CONDUIT RUN 2#12 & 1#12 GRD.-1/2" C.	CEIL./WALL
(A)	CONDUIT RUN 2 CIRCUIT, #12 & #12 GRD.-1/2" C.	EARTH/FLOOR
(A)	PARTIAL HOMERUN (MULTIPLE LOAD LOCATIONS)	
(A)	SEE NOTE #7	
(A)	FEEDER IDENTIFICATION, SEE SCHEDULE	
(A)	WEATHERPROOF	
(A)	INDICATES SWITCHING SCHEME	

- ### GENERAL NOTES
- ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) & THE AMERICANS WITH DISABILITIES ACT (ADA).
  - REFER TO RELATED ARCHITECTURAL, MECHANICAL, AND STRUCTURAL DRAWINGS FOR RELATED INFORMATION.
  - REFER TO THE SPECIFICATIONS FOR DATA NOT ON THE DRAWINGS.
  - E.C. SHALL REFER TO DRAWINGS AND SPECIFICATIONS FOR THE REQUIREMENTS ASSOCIATED WITH WIRING AND CONNECTION OF INTERLOCKING AND CONTROLS OF MECHANICAL UNITS AND THERMOSTAT LOCATIONS.
  - COORDINATE OUTLET BOX LOCATIONS WITH MASONRY TO MINIMIZE CUTTING OF BRICK OR BLOCK.
  - ALL MOUNTING HEIGHTS TO CENTERLINE OF ITEM UNLESS OTHERWISE NOTED. VERIFY ALL OUTLET LOCATIONS ON THE JOB PRIOR TO ROUGH-IN.
  - CONDUIT RUN W/ CONDUCTORS AS INDICATED & GROUND WIRE SIZED PER N.E.C. 250-122 (2017); CONDUIT SIZE AS REQUIRED.
  - WHEN INCREASED CONDUCTOR SIZES ARE SHOWN ON THE PLANS, THE LARGER CONDUCTOR SIZE SHALL BE USED THROUGHOUT THE LENGTH OF THE CIRCUIT, INCLUDING NEUTRAL AND GROUND.
  - CONTRACTOR SHALL BUILD TO ALL CURRENT NATIONAL, STATE, AND LOCAL CODES.



**ELECTRICAL SITE PLAN LAYOUT DIAGRAM**  
SCALE: 1"=10'  
NORTH

- #### Facility Site Asset Inventory
- 7468L680010001 L68\_Site\_Valve Vault/Vault Drain Line
  - 7468L680010002 L68\_Site\_Wet Well Structure Vent Line
  - 7468L680440001 L68\_Site\_Wet Well Structure
  - 7468L680450001 L68\_Site\_Frost Free Hydrant
  - 7468L680490001 L68\_Site\_Valve Vault Structure
  - 7468L684550001 L68\_Site\_SCADA Panel Encl\_PLC direct D3-350 CPU
  - 7468L684560001 L68\_Site\_SCADA Panel Encl\_Radio 4RF Aprisa
  - 7468L684600001 L68\_Site\_SCADA Panel Enclosure
  - 7468L684970001 L68\_Site\_SCADA Panel Enclosure\_UPS Power Supply
  - 7468L684970002 L68\_Site\_SCADA Panel Enclosure\_Power Supply
  - 7468L685060001 L68\_Site\_SCADA Tower
  - 7468L685060002 L68\_Site\_SCADA Tower\_Yagi Antenna W/Coaxial cbls
  - 7468L687000001 L68\_Site\_Grass\_Lawn/Landscape
  - 7468L687510001 L68\_Site\_Wet Well Hatch Door
  - 7468L687510002 L68\_Site\_Valve Vault Hatch Door
  - 7468L687590001 L68\_Site\_Drive\_Street/Sidewalk/Paving
  - 7468L687610001 L68\_Site\_Concrete\_Screening Walls
  - 7468L687610002 L68\_Site\_Steel Roll Gate
  - 7468L687640001 L68\_Site\_Bldg\_FRP Pump Station Control Building
  - 7468L680010003 L68\_Site\_Potable Water Yard Piping

- #### Process Equipment Assets Inventory
- 4968L680010001 L68-Discharge Piping 4 inch - Pump 1 (P-1)
  - 4968L680010002 L68-Discharge Piping 4 inch - Pump 2 (P-2)
  - 4968L680010003 L68-Discharge Piping 6 inch - W/ Emergency Pump Connection 6 inch
  - 4968L680010004 L68-Discharge Piping 6 inch - Forcemain
  - 4968L680210001 L68-Isolation Plug Valve 4 inch -Gear Op.Post Chk Valve Pump 1 (PV-1)
  - 4968L680210002 L68-Isolation Plug Valve 4 inch -Gear Op Post Chk Valve Pump 2 (PV-2)
  - 4968L680210003 L68-Isolation Gate Valve 6 inch -Gear Op Bypass Conn. Valve (GV-1)
  - 4968L680410001 L68-Check Valve 4 inch Level & Spring - Pump 1 (CV-1)
  - 4968L680410002 L68-Check Valve 4 inch Level & Spring - Pump 2 (CV-2)
  - 4968L680410003 L68-Check Valve 6 inch Level & Spring - Force Main (CV-3)
  - 4968L681240001 L68-Starter/VFD - Pump 1 (P-1)
  - 4968L681240002 L68-Starter/VFD - Pump 2 (P-2)
  - 4968L682360001 L68-Submersible Pump/Motor 1 (P-1)
  - 4968L682360002 L68-Submersible Pump/Motor 2 (P-2)
  - 4968L684120001 L68-Generator-Natural Gas
  - 4968L68470001 L68-Floats - Wet Well High High Level
  - 4968L684520001 L68-Submersible Level Transducer - Wet well

- #### Facility Building Asset Inventory
- 7468L687690001 L68\_Door W/Window
  - 7468L687580001 L68\_Concrete Foundations, Slab Floor
  - 7468L687430001 L68\_Safety Door Switch
  - 7468L687340003 L68\_Interior Lighting
  - 7468L687340002 L68\_Exterior Lighting Wall Pack W/Photocell #1
  - 7468L687340001 L68\_Exterior Receptacle Outlet
  - 7468L687240001 L68\_HVAC Exhaust Fan W/Vent Motor
  - 7468L681250001 L68\_Main Power Disconnect Meter Panel

- #### Facility Room Asset Inventory
- 7468L687310001 L68-Control Room\_Electric Interior Light VT-LED
  - 7468L687300001 L68-Control Room\_Electric Inter Receptacle Outlet
  - 7468L687280001 L68-Control Room\_Electrical Unit Heater (UH01)
  - 7468L681270002 L68-Control Room\_Switch, Exterior Lights
  - 7468L681270001 L68-Cntrl Room\_Electrical Switch, Light, Fan
  - 7468L681250005 L68-Electrical Pump Control Panel (CP1)
  - 7468L681250004 L68-Control Room\_Electrical Generator Panel ATS02
  - 7468L681250003 L68-Control Room\_Electrical Panel L (MPZ L)
  - 7468L681250002 L68-Control Room\_Electrical Panel (Panel H)



**Baughman** Pike Addition  
**ELEC. SCHEDULES**  
Sanitary Sewer Improvements

PROJECT NUMBER: \_\_\_\_\_ DESIGN: GS DRAWN: \_\_\_\_\_  
APPROVED: PJV DATE: 02-14-2020  
SCALE: AS NOTED  
SHEET: 12 OF 24

