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

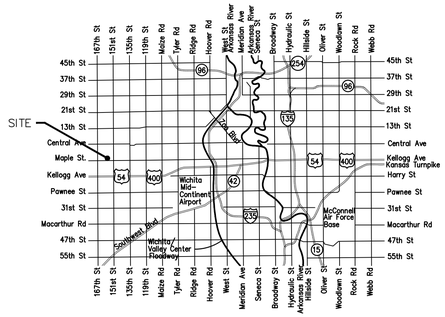
SANITARY SEWER IMPROVEMENTS
to serve
PIKE ADDITION
Lift Station Address: 15500 W. Maple
CITY OF WICHITA, KANSAS

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

Sheet Index

Vicinity Map

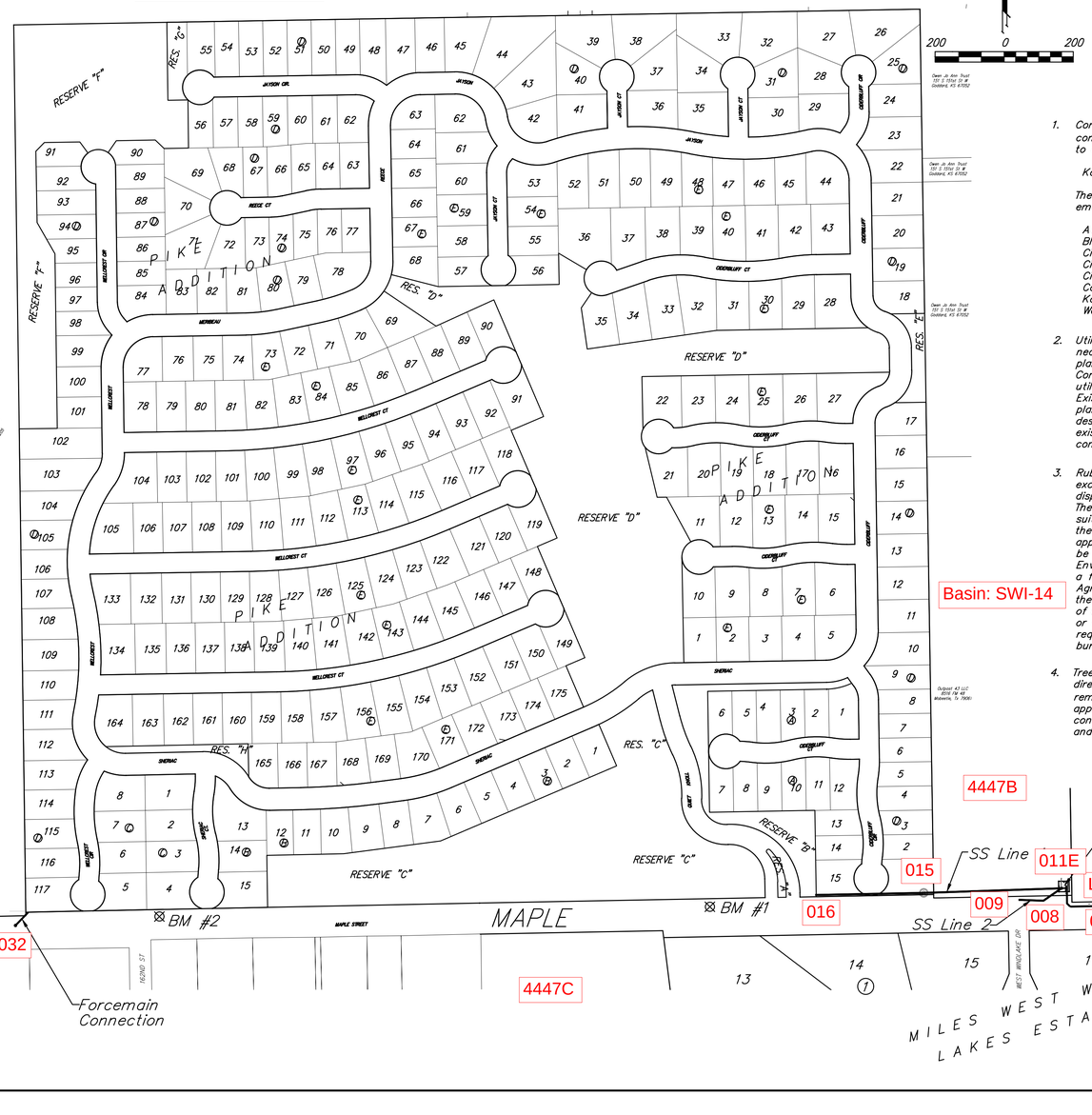


Benchmark

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 ℄ 162nd St. W. and 26' north of ℄ 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



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.*

GENERAL NOTES:

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. *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.*

8. *Contractor shall limit the extent of trench openings overnight and weekends to less than 50 feet.*

9. *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.*

10. *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".*

11. *All elevations shown are NAVD 88.*

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

13. *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.*

14. *Contractor shall provide positive drainage away from all manhole covers.*

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

16. *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".

17. *The developer for this project is Jay W. Russell, P.O. Box 75337, Wichita, KS 67272 (316)722–2417 jwrussell1105@icloud.com*

TYLER PAUL RUSSELL 17974 2-14-20 KANSAS PROFESSIONAL ENGINEER

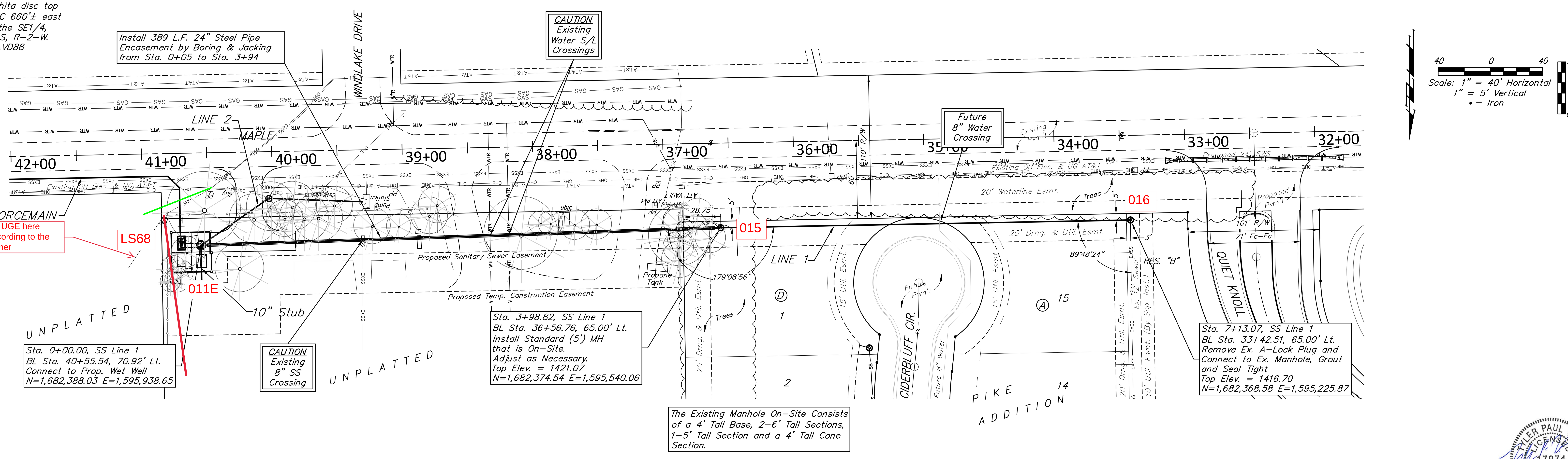
Sept 2019

Baughman

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

E:\Projects\Pike Addition_\Engineering\Phase 1\SS Main 1901-E171\Base-Pump Station.dwg

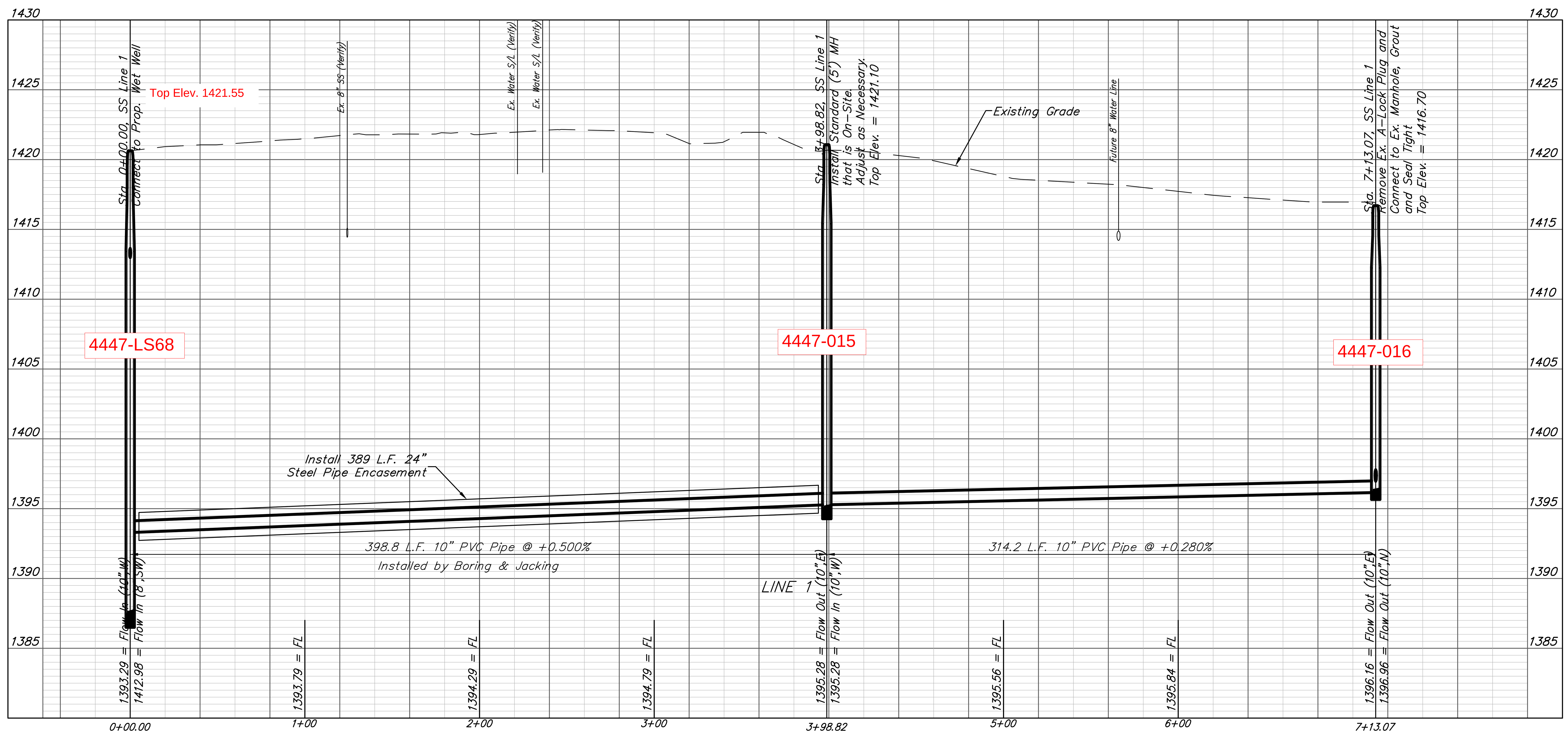
BENCHMARK:
BM #1: City of Wichita disc top of headwall of RCBC 660'± east of the SE Cor. of the SE1/4, SEC. 22, TWP. 27-S, R-2-W.
Elev. = 1410.27 NAVD88



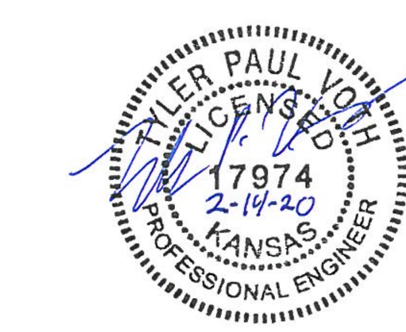
Install 389 L.F. 24" Steel Pipe Encasement by Boring & Jacking from Sta. 0+05 to Sta. 3+94
CAUTION Existing Water S/L Crossings
WINDLAKE DRIVE
LINE 2
MAPLE
42+00
41+00
40+00
39+00
38+00
37+00
36+00
34+00
33+00
32+00
Future 8" Water Crossing
FORCEMAIN
No UGE here according to the owner
LS68
011E
015
016
10" Stub
UNPLATTED
Proposed Sanitary Sewer Easement
Proposed Temp. Construction Easement
20' Waterline Esmt.
20' Drng. & Util. Esmt.
LINE 1
CIDERBLUFF CIR.
QUIET KNOLL
PIKE ADDITION
RES. "B"
101' R/W
71' Fc-Fc
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
CAUTION Existing 8" SS Crossing
Sta. 3+98.82, SS Line 1
BL Sta. 36+56.76, 65.00' Lt.
Install Standard (5') MH that is On-Site.
Adjust as Necessary.
Top Elev. = 1421.07
N=1,682,374.54 E=1,595,540.06
Sta. 7+13.07, SS Line 1
BL Sta. 33+42.51, 65.00' Lt.
Remove Ex. A-Lock Plug and Connect to Ex. Manhole, Grout and Seal Tight
Top Elev. = 1416.70
N=1,682,368.58 E=1,595,225.87
The Existing Manhole On-Site Consists of a 4' Tall Base, 2-6' Tall Sections, 1-5' Tall Section and a 4' Tall Cone Section.
Scale: 1" = 40' Horizontal
1" = 5' Vertical
• = Iron

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"



Sta. 0+00.00, SS Line 1
Connect to Prop. Wet Well
Top Elev. 1421.55
Sta. 3+98.82, SS Line 1
Install Standard (5') MH that is On-Site. Adjust as Necessary.
Top Elev. = 1421.10
Sta. 7+13.07, SS Line 1
Remove Ex. A-Lock Plug and Connect to Ex. Manhole, Grout and Seal Tight
Top Elev. = 1416.70
Existing Grade
4447-LS68
4447-015
4447-016
Install 389 L.F. 24" Steel Pipe Encasement
398.8 L.F. 10" PVC Pipe @ +0.500%
Installed by Boring & Jacking
314.2 L.F. 10" PVC Pipe @ +0.280%
LINE 1
0+00.00
1+00
2+00
3+00
3+98.82
5+00
6+00
7+13.07



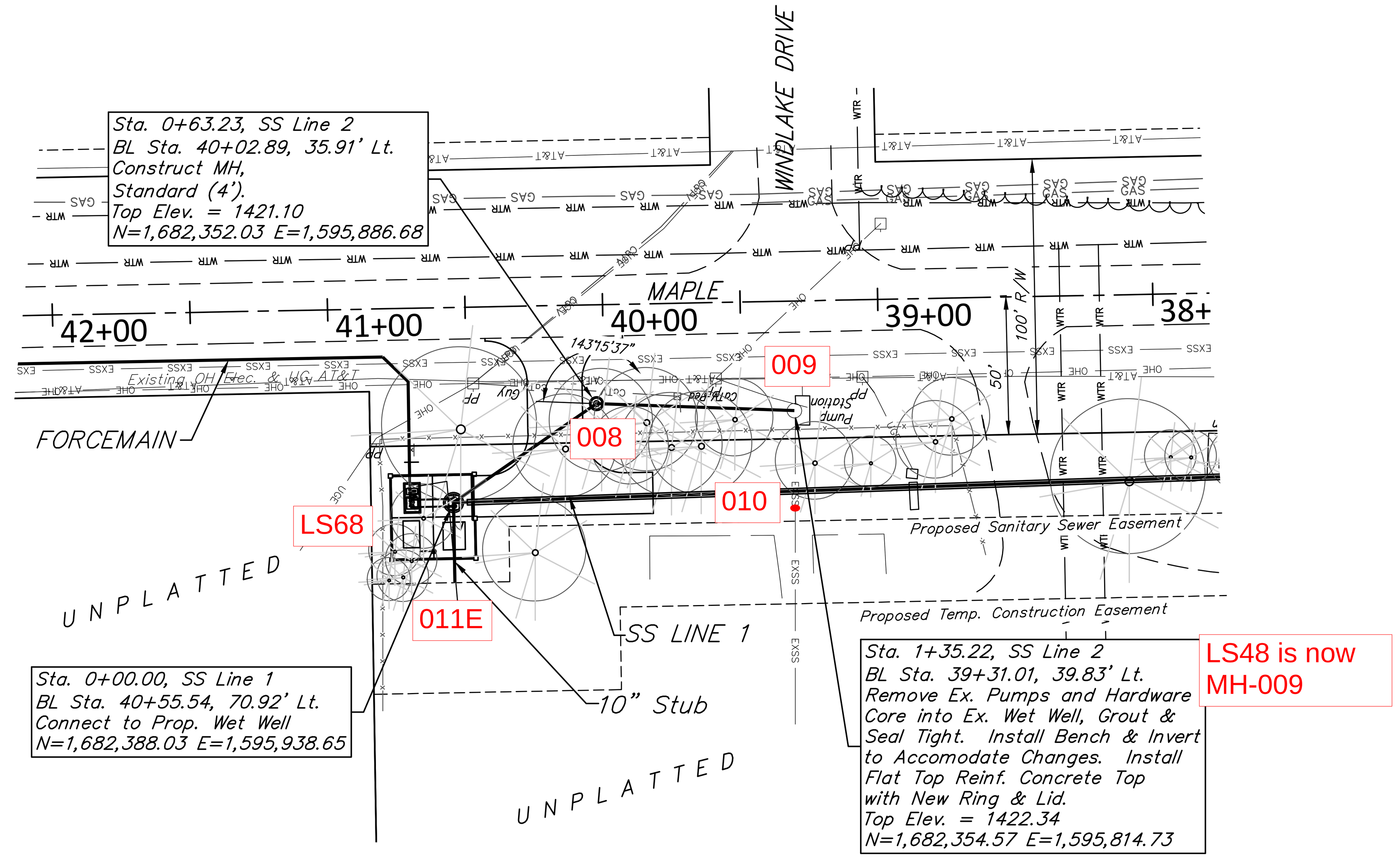
PIKE ADDITION
SS LINE 1
SANITARY SEWER IMPROVEMENTS

Baughman Company, P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE
Design: TPV Drawn: TPV Approved: TPV Date: 02/20
File: E:/Pike Addition/Engineering/Phase 1/SS Main/Base-Pump Station.dwg

REVISIONS:

SHEET 2 OF 24

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

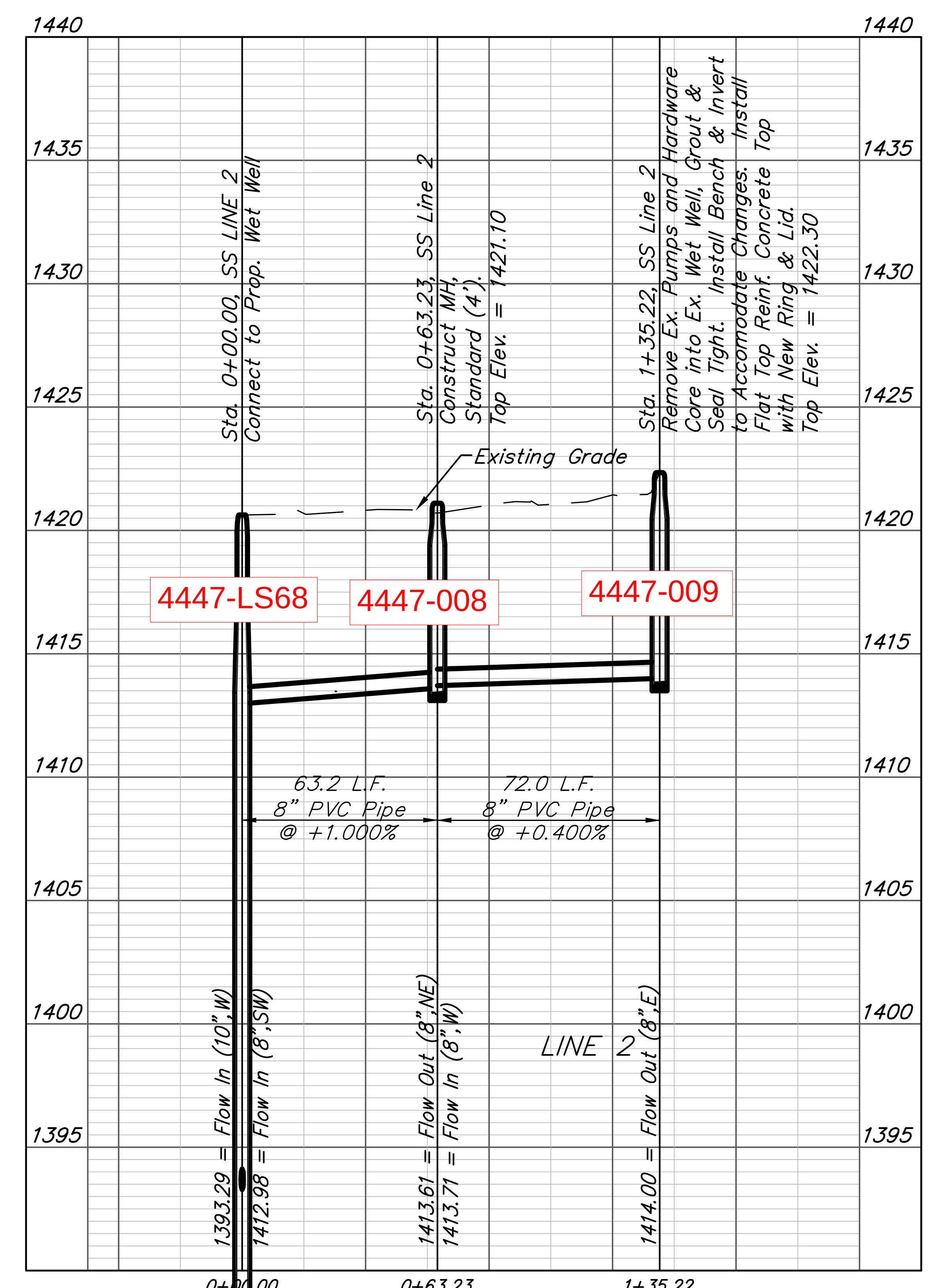


All Cost Associated with Removing the Existing Pump Station and Converting the Existing Wet Well into a Manhole Shall be SUBSIDIARY to the Lump Sum Bid Item "Wet Well Conversion".

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

40 0 40
Scale: 1" = 40' Horizontal
1" = 5' Vertical
• = Iron

TYLER PAUL VOTH
LICENSED
17974
2-14-20
KANSAS
PROFESSIONAL ENGINEER



Baughman Company, P.A.

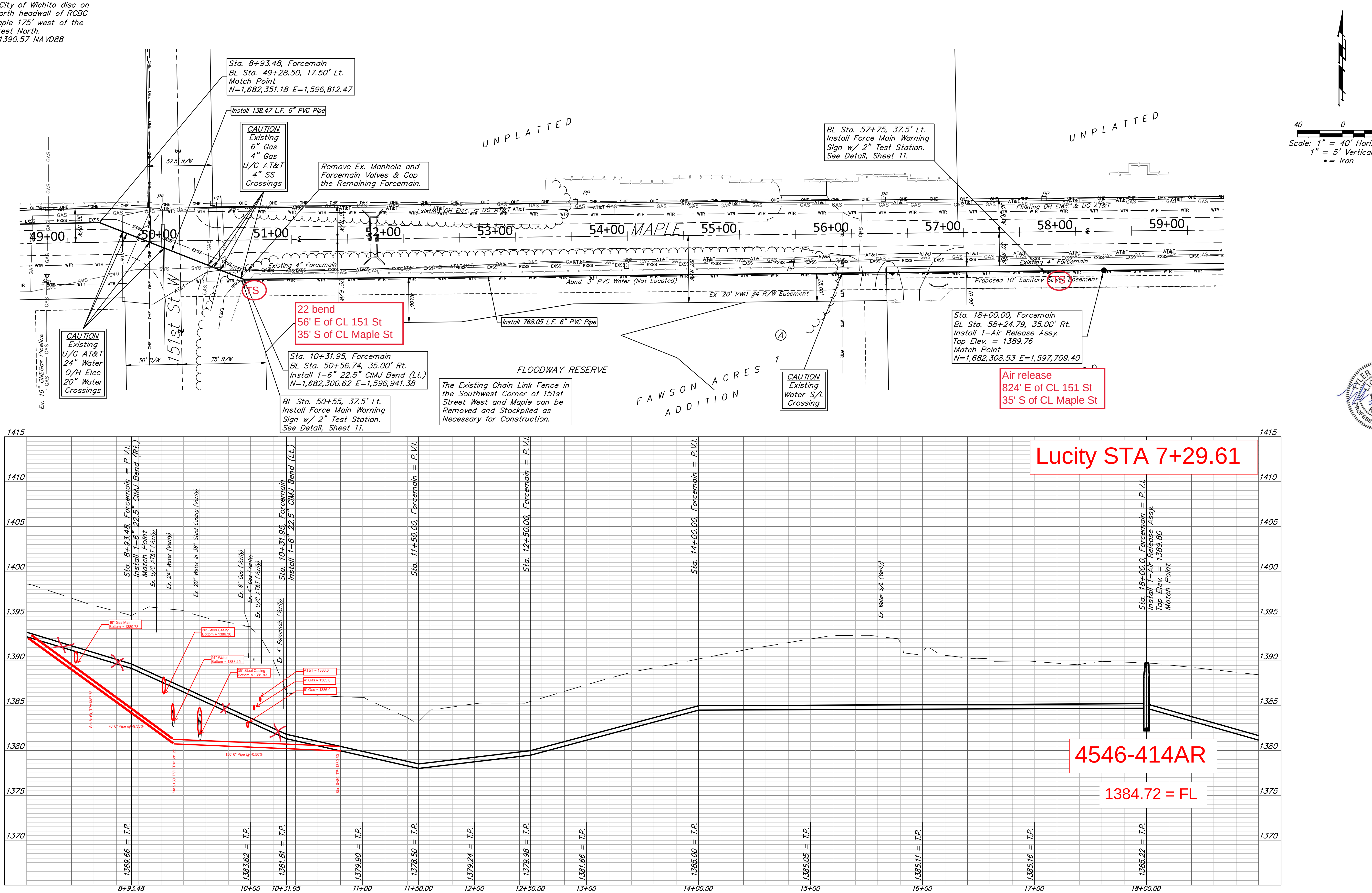
PIKE ADDITION
SS LINE 2
SANITARY SEWER IMPROVEMENTS

REVISIONS

SHEET 3 OF 24


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
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" Forcemain 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, Forcemain
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
UNPLATTED
10" Stub
CAUTION Existing O/H Elec U/G AT&T Crossings
Sta. 0+04.00, Forcemain
BL Sta. 40+71.29, 55.00' Lt.
Connect to 6" Forcemain
N=1,682,372.41 E=1,595,954.71
Install 28.38 L.F. 6" PVC Pipe
Sta. 0+32.38, Forcemain
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
45 Bend
53" E of CL Driveway of lift station.
27' N of CL Maple St
BL Sta. 41+35, 25.0' Lt. Install Force Main Warning Sign w/ 2" Test Station. See Detail, Sheet 11.
UNPLATTED
Install 793.48 L.F. 6" PVC Pipe
BL Sta. 48+35, 25.0' Lt. Install Force Main Warning Sign w/ 2" Test Station. See Detail, Sheet 11.
CAUTION Existing 6" Gas 16" Gas Crossings
151st St W
57.5' R/W
Scale: 1" = 40' Horizontal
1" = 5' Vertical
• = Iron
SS LINE 1
SS LINE 2
Proposed Sanitary Sewer Easement
Existing OH Elec. & UG AT&T
Existing 4" Forcemain
40+00 41+00 42+00 43+00 44+00 MAPLE 45+00 46+00 47+00 48+00 49+00 50+00
Wind Lakes Dr
Install 12.86 L.F. 6" PVC Pipe
CAUTION Existing 4" Forcemain Crossing
Sta. 0+45.24, Forcemain
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, Forcemain
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
WEST WIND LAKES ESTATES
Ex. 16" ONEGas Pipeline
50' R/W
Lucity STA 25+29.61
Sta. 0+04.00, Forcemain Connect to 6" Forcemain
Sta. 0+32.38, Forcemain Install 1-6" 45" CIMJ Bend (Lt.)
Ex. 4" Forcemain (Verify)
Sta. 0+45.24, Forcemain Install 1-6" 45" CIMJ Bend (Lt.)
Sta. 0+55.00, Forcemain = P.V.I. Install 1-Air Release Assy.
Sta. 2+00.00, Forcemain = P.V.I.
Sta. 4+50.00, Forcemain = P.V.I.
Sta. 6+00.00, Forcemain = P.V.I.
Sta. 8+93.48, Forcemain = P.V.I. Install 1-6" 22.5" CIMJ Bend (Rt.) Match Point
4744-LS68
1745.0' AR to AR
4744-007AR
Lucity STA 24+74.61
Ex. 6" Gas (Verify)
Ex. 16" Gas (Verify)
Ex. U/G AT&T (Verify)
Ex. 24" Water (Verify)
1413.86 FL
1414.37 FL
1414.36 = T.P.
1414.64 = T.P.
1414.77 = T.P.
1414.87 = T.P.
1413.21 = T.P.
1409.51 = T.P.
1407.64 = T.P.
1405.77 = T.P.
1404.83 = T.P.
1403.47 = T.P.
1400.75 = T.P.
1396.97 = T.P.
1393.19 = T.P.
1389.66 = T.P.
1435 1430 1425 1420 1415 1410 1405 1400 1395 1390
0+04.00 0+32.38 0+55.00 0+45.24 1+00 2+00.00 3+00 4+00 4+50.00 5+00 6+00.00 7+00 8+00 8+93.48
TYLER PAUL VOTH LICENSED 17974 KANSAS PROFESSIONAL ENGINEER
Baughman Company, P.A.
Baughman
PIKE ADDITION
FORCEMAIN
PUMP STATION AND FORCEMAIN
SHEET 4 OF 24

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



Sta. 8+93.48, Forcemain
BL Sta. 49+28.50, 17.50' Lt.
Match Point
N=1,682,351.18 E=1,596,812.47
Install 138.47 L.F. 6" PVC Pipe
CAUTION
Existing
6" Gas
4" Gas
U/G AT&T
4" SS
Crossings
Remove Ex. Manhole and Forcemain Valves & Cap the Remaining Forcemain.
UNPLATTED
BL Sta. 57+75, 37.5' Lt.
Install Force Main Warning Sign w/ 2" Test Station.
See Detail, Sheet 11.
UNPLATTED
Scale: 1" = 40' Horizontal
1" = 5' Vertical
• = Iron
49+00
50+00
51+00
52+00
53+00
54+00
MAPLE
55+00
56+00
57+00
58+00
59+00
Existing OH Elec. & UG AT&T
Existing 4" Forcemain
Abnd. 3" PVC Water (Not Located)
Ex. 20' RWD #4 R/W Easement
Proposed 10' Sanitary Sewer Easement
151st St. W
57.5' R/W
50' R/W
75' R/W
22 bend
56' E of CL 151 St
35' S of CL Maple St
Install 768.05 L.F. 6" PVC Pipe
Sta. 18+00.00, Forcemain
BL Sta. 58+24.79, 35.00' Rt.
Install 1-Air Release Assy.
Top Elev. = 1389.76
Match Point
N=1,682,308.53 E=1,597,709.40
CAUTION
Existing
U/G AT&T
24" Water
O/H Elec
20" Water
Crossings
Ex. 16" ONEGas Pipeline
Sta. 10+31.95, Forcemain
BL Sta. 50+56.74, 35.00' Rt.
Install 1-6" 22.5° CIMJ Bend (Lt.)
N=1,682,300.62 E=1,596,941.38
BL Sta. 50+55, 37.5' Lt.
Install Force Main Warning Sign w/ 2" Test Station.
See Detail, Sheet 11.
FLOODWAY RESERVE
The Existing Chain Link Fence in the Southwest Corner of 151st Street West and Maple can be Removed and Stockpiled as Necessary for Construction.
FAWSON ACRES ADDITION
CAUTION
Existing
Water S/L
Crossing
Air release
824' E of CL 151 St
35' S of CL Maple St
Lucity STA 7+29.61
Sta. 8+93.48, Forcemain = P.V.I.
Install 1-6" 22.5° CIMJ Bend (Rt.)
Match Point
Ex. U/G AT&T (Verify)
Ex. 24" Water (Verify)
Ex. 20" Water in 36" Steel Casing (Verify)
Ex. 6" Gas (Verify)
Ex. 4" Gas (Verify)
Ex. U/G AT&T (Verify)
Ex. 4" Forcemain (Verify)
Sta. 10+31.95, Forcemain = P.V.I.
Install 1-6" 22.5° CIMJ Bend (Lt.)
Sta. 11+50.00, Forcemain = P.V.I.
Sta. 12+50.00, Forcemain = P.V.I.
Sta. 14+00.00, Forcemain = P.V.I.
Ex. Water S/L (Verify)
Sta. 18+00.0, Forcemain = P.V.I.
Install 1-Air Release Assy.
Top Elev. = 1389.80
Match Point
4546-414AR
1384.72 = FL
1415
1410
1405
1400
1395
1390
1385
1380
1375
1370
1389.66 = T.P.
1383.62 = T.P.
1381.81 = T.P.
1379.90 = T.P.
1378.50 = T.P.
1379.24 = T.P.
1379.98 = T.P.
1381.66 = T.P.
1385.00 = T.P.
1385.05 = T.P.
1385.11 = T.P.
1385.16 = T.P.
1385.22 = T.P.
8+93.48
10+00
10+31.95
11+00
11+50.00
12+00
12+50.00
13+00
14+00.00
15+00
16+00
17+00
18+00.00

TYLER PAUL VOTH
LICENSED
17974
2-14-20
KANSAS
PROFESSIONAL ENGINEER

Baughman Company, P.A.

PIKE ADDITION
FORCEMAIN
PUMP STATION AND FORCEMAIN

REVISIONS

SHEET
5
OF
24

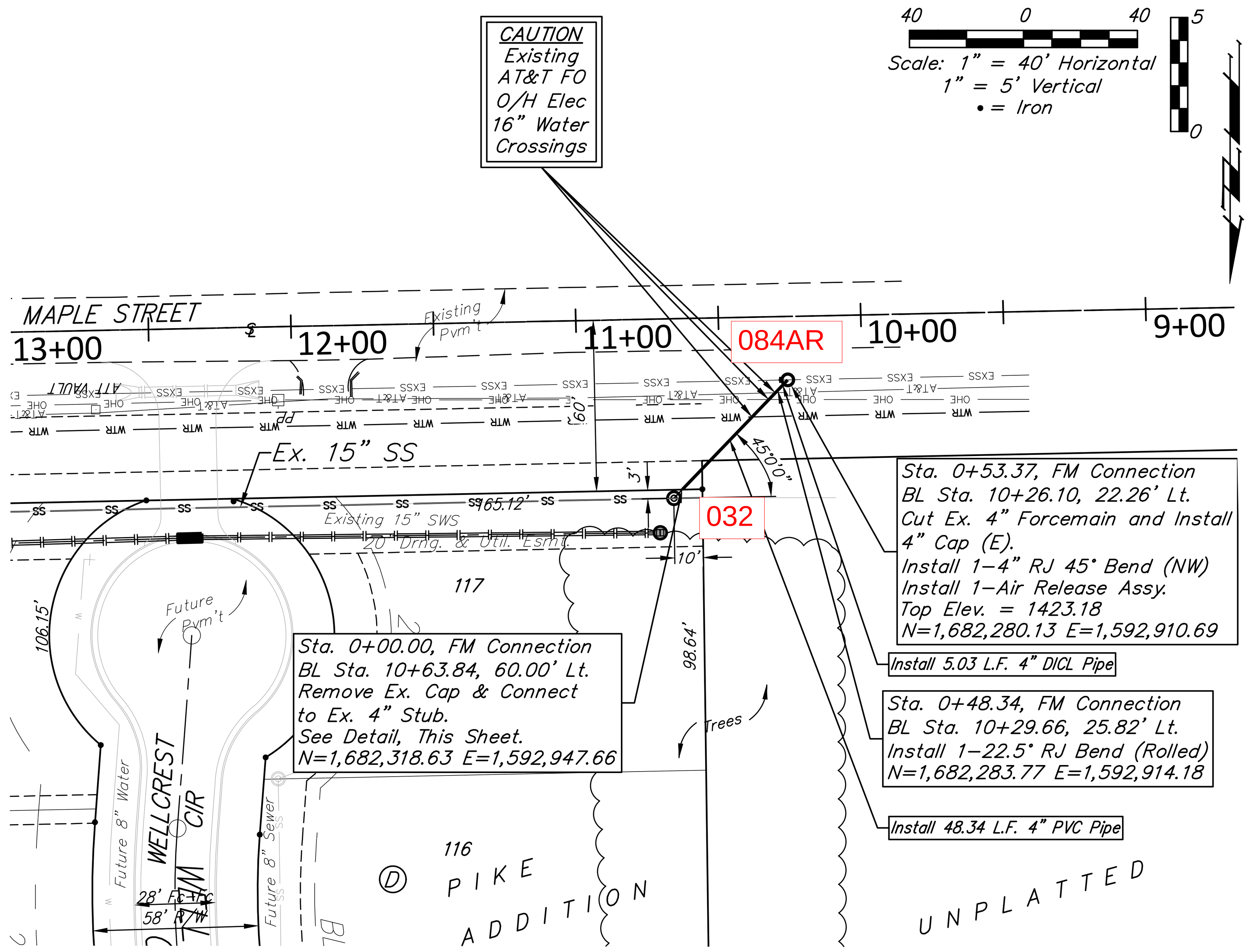

BENCHMARK:
BM #3: City of Wichita disc on top of north headwall of RCBC under Maple 175' west of the 151st Street North.
Elev. = 1390.57 NAVD88
BL Sta. 64+75, 37.5' Lt.
Install Force Main Warning Sign w/ 2" Test Station.
See Detail, Sheet 11.
UNPLATTED
THE WOODS ADDITION
Reserve B
CAUTION
Existing 4" Gas U/G AT&T Crossings
Country View
THE WOODS RESERVE ADDITION
Sta. 25+29.61, Forcemain
BL Sta. 65+51.31, 19.45' Rt.
Connect to Ex. SSMH, Grout & Seal Tight
N=1,682,331.57 E=1,598,435.72
Scale: 1" = 40' Horizontal
1" = 5' Vertical
• = Iron
58+00
59+00
60+00
61+00
62+00
MAPLE
63+00
64+00
65+00
66+00
67+00
68+00
45 Bend
6' W of CL Country View
22' S of CL Maple St
Abnd. 3" PVC Water (Not Located)
Existing 4" Forcemain
Proposed 10' Sanitary Sewer Easement
Ex. 20' RWD #4 R/W Easement
Sta. 25+22.11, Forcemain
BL Sta. 65+44.38, 22.32' Rt.
Install 1-6" 45° CIMJ Bend (Rolled)
End Forcemain Construction
Begin Receiving Manhole Adjustments
See Detail, Sheet 11.
N=1,682,328.63 E=1,598,428.82
Sta. 18+00.00, Forcemain
BL Sta. 58+24.79, 35.00' Rt.
Match Line
N=1,682,308.53 E=1,597,709.40
Ex. 12" Phillips Pipeline
Ex. 8" Kansas Pipeline
Ex. 8" Kansas Pipeline
Ex. 16" Phillips Pipeline
PHILLIPS PIPE LINE COMPANY RIGHT-OF-WAY
CAUTION
Existing 4-Gas Pipelines Crossings
CAUTION
Existing 12" Water 4" Gas Crossings
Install 238.97 L.F. 6" PVC Pipe
Sta. 24+88.97, Forcemain
BL Sta. 65+13.76, 35.00' Rt.
Install 1-6" 22.5° CIMJ Bend (Lt.)
N=1,682,315.63 E=1,598,398.33
22 Bend
37' W of CL Country View St
35' S of CL Maple St
Install 33.14 L.F. 6" PVC Pipe
Fawnwood
Reserve B
AUBURN HILLS 16TH ADDITION
MAPLE ADDITION
4
MAPLE HILL ADDITION
Lucity STA 0+00
Lucity STA 7+29.61
Sta. 18+00.00, Forcemain Match Point
Sta. 20+50.00, Forcemain = P.V.I.
Ex. 12" Pipeline (Verify)
Ex. 8" Pipeline (Verify)
Ex. 8" Pipeline (Verify)
Ex. 16" Pipeline (Verify)
Ex. 12" Water (Verify)
Sta. 22+50.00, Forcemain = P.V.I.
Ex. 4" Gas (Verify)
Sta. 24+88.97, Forcemain = P.V.I.
Install 1-6" 22.5° CIMJ Bend (Lt.)
Ex. 4" Gas (Verify)
Ex. U/G AT&T (Verify)
Sta. 25+22.11, Forcemain = P.V.I.
Install 1-6" 45° CIMJ Bend (Rolled)
End Forcemain Construction
Begin Receiving Manhole Adjustments
See Detail, Sheet 11.
4546-414AR
4546-039
1384.72 = FL
1380.0 = FL
1385.22 = T.P.
1381.67 = T.P.
1378.12 = T.P.
1376.34 = T.P.
1374.66 = T.P.
1371.30 = T.P.
1369.62 = T.P.
1371.58 = T.P.
1375.51 = T.P.
1379.00 = T.P.
1379.00 = T.P.
18+00.00
19+00
20+00
20+50.00
21+00
22+00
22+50.00
23+00
24+00
24+88.97
25+22.11
1410
1405
1400
1395
1390
1385
1380
1375
1370
1365
TYLER PAUL VOTH
LICENSED
17974
2-14-20
KANSAS
PROFESSIONAL ENGINEER

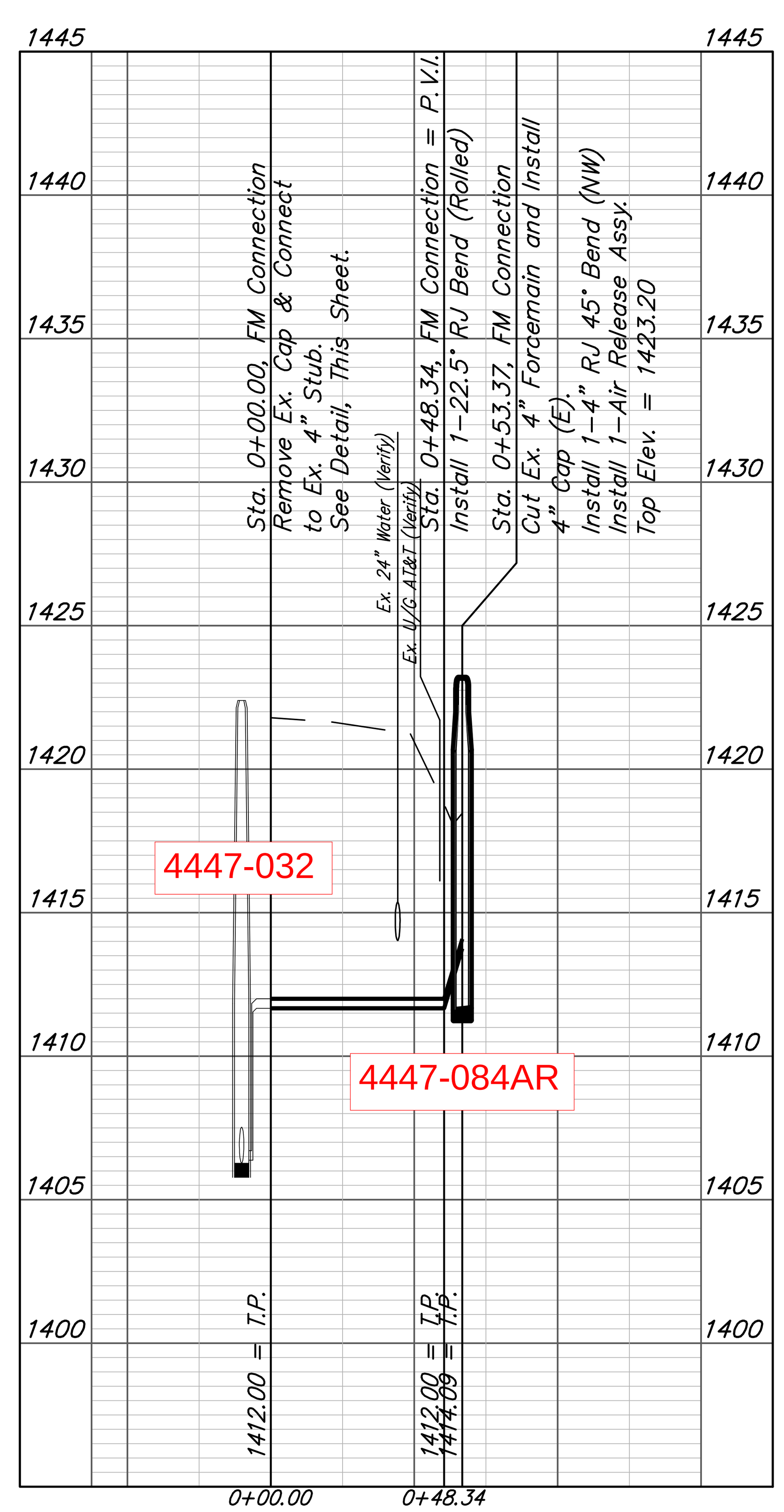
Baughman Company, P.A.

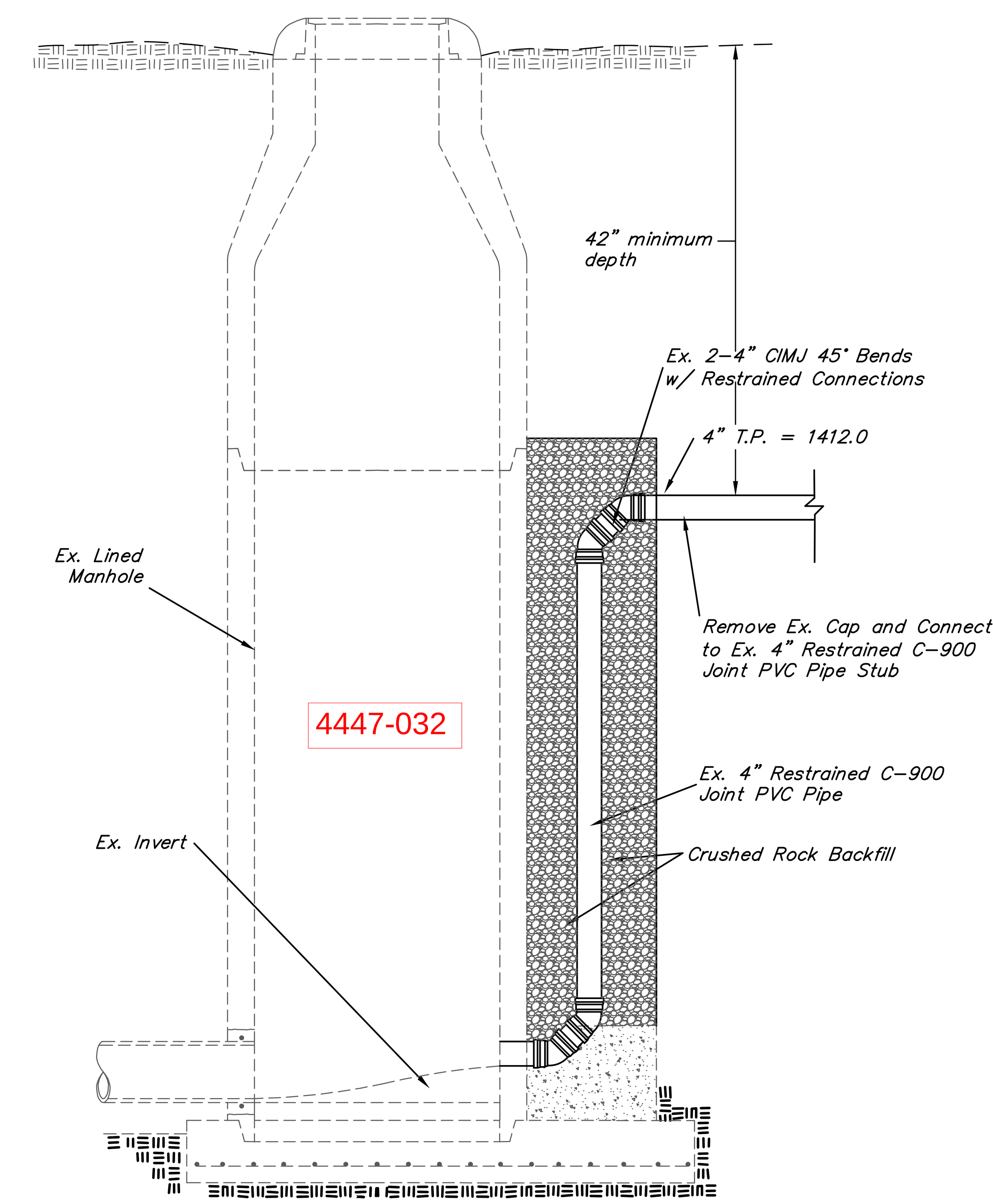
PIKE ADDITION
FORCEMAIN
PUMP STATION AND FORCEMAIN

SHEET 6 OF 24

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+00.0, FM Connection

FORCE MAIN CONNECTION DETAIL

No Scale

Note: All Costs Associated with Making the Connection to the Existing 4" Forcemain, Including Pipe, Fittings, Excavation, Concrete and Other Materials and Work Shall be SUBSIDIARY to the Lump Sum Bid Item "4" Force Main Connection".

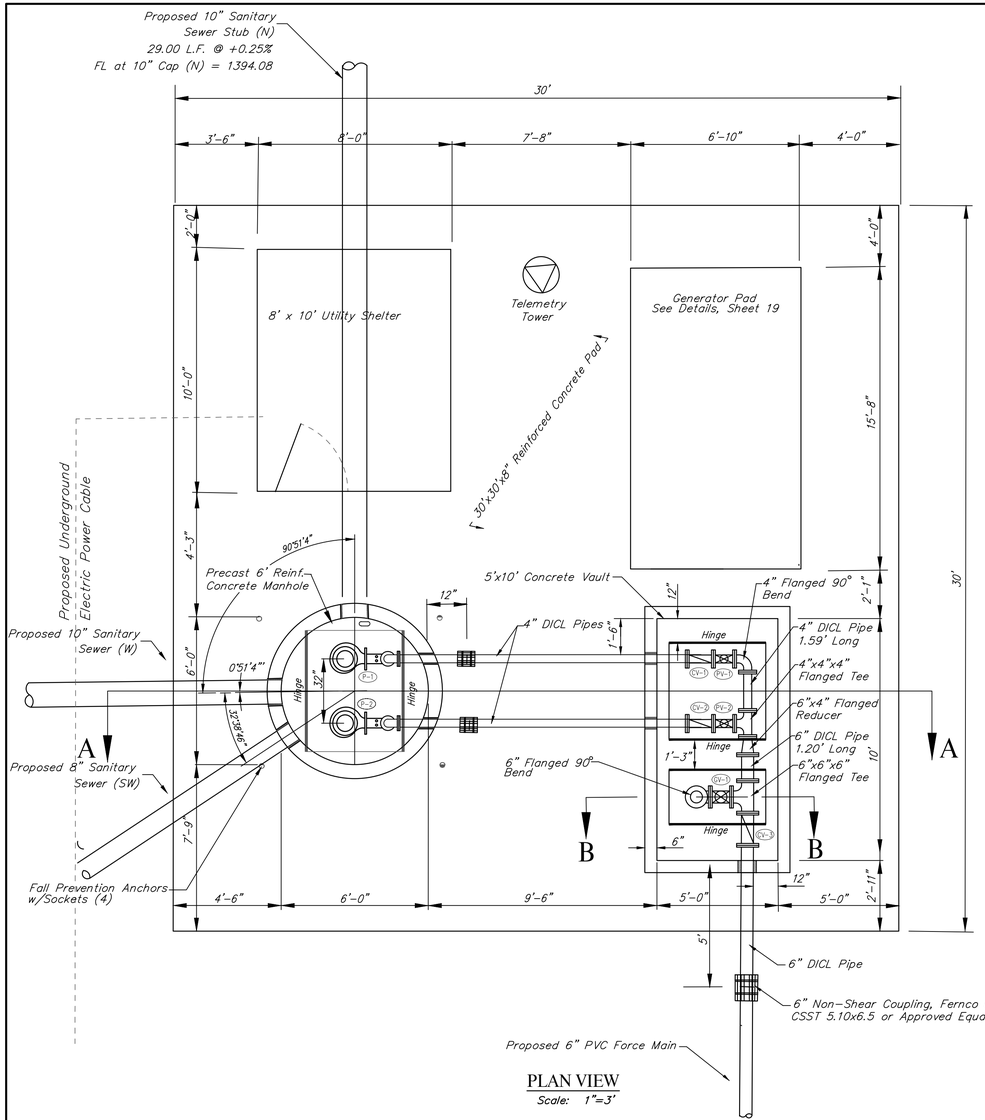
TYLER PAUL VOTH
LICENSED
17974
2-14-20
KANSAS
PROFESSIONAL ENGINEER

Baughman Company, P.A.

PIKE ADDITION
4" FORCEMAIN CONNECTION
SANITARY SEWER IMPROVEMENTS

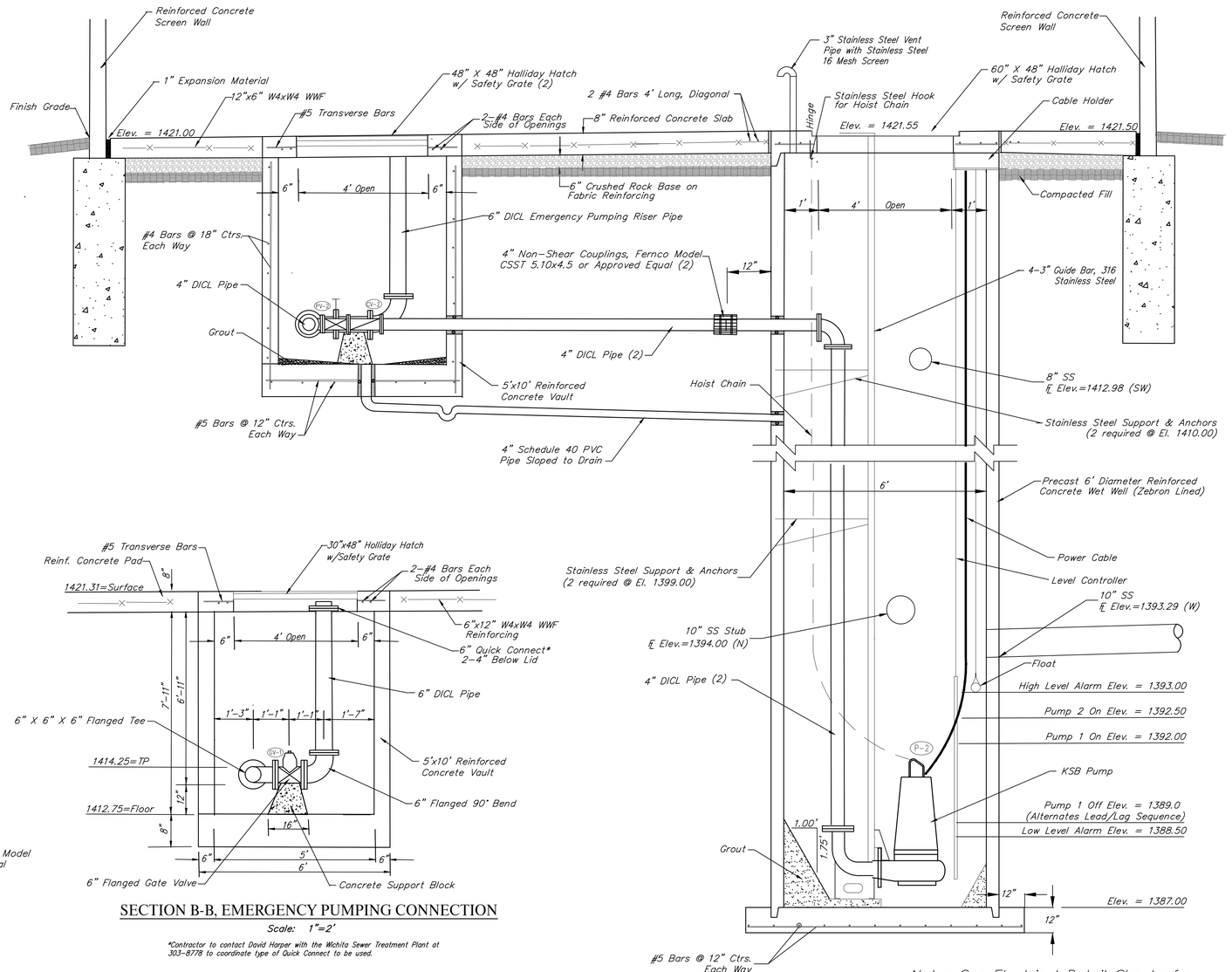
REVISIONS

SHEET 7 OF 24



PLAN VIEW

Scale: 1"=3'



SECTION B-B, EMERGENCY PUMPING CONNECTION

Scale: 1"=2'

*Contractor to contact David Harper with the Wichita Sewer Treatment Plant at 303-8778 to coordinate type of Quick Connect to be used.

1. 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.

2. 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.

3. 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.

4. 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.

5. The Contractor shall support all piping inside the Wet Well and Valve Vault as required.

6. 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.

7. Wet Well and Valve Vault design shall be subject to the same design requirements as Precast Manholes.

8. The interior of the Wet Well shall be lined Zebron 386 or approved equal.

9. 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.

10. 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".

11. The Contractor shall verify all requirements and dimensions of the Generator Pad with the Generator Supplier prior to construction.

12. No Electrical Connections will be Allowed within the Wetwell.

13. Contact David Harper with the City of Wichita Sewer Treatment Plant at 303-8778 PRIOR to Lift Station Start-up.

14. 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.

SECTION A-A

No Scale

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

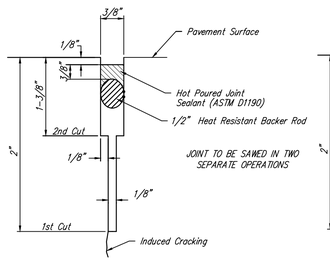
Pike Addition
PUMP STATION
Sanitary Sewer Improvements

PROJECT NUMBER

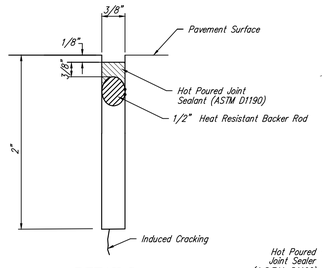
REVISIONS: LS68

DESIGN TPV | DRAWN Staff
APPROVED TPV | DATE 02/20
SCALE Noted
SHEET 8 OF 24

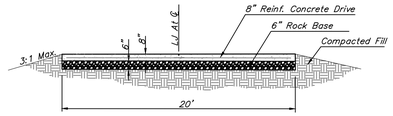
E:\Projects\Pike Addition_\Engineering\Phase 1\SS Main 1901-E171\Base-Pump Station.dwg



DETAIL A

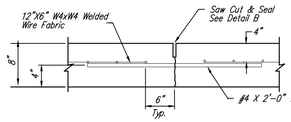


DETAIL B



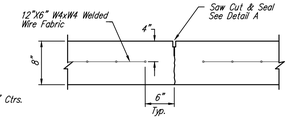
SECTION A-A, DRIVE SECTION

SCALE: 1" = 5'



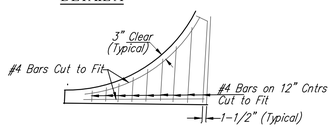
LONGITUDINAL JOINT DETAIL

(L.J.)



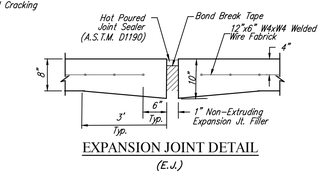
CONTRACTION JOINT DETAIL

(C.J.)



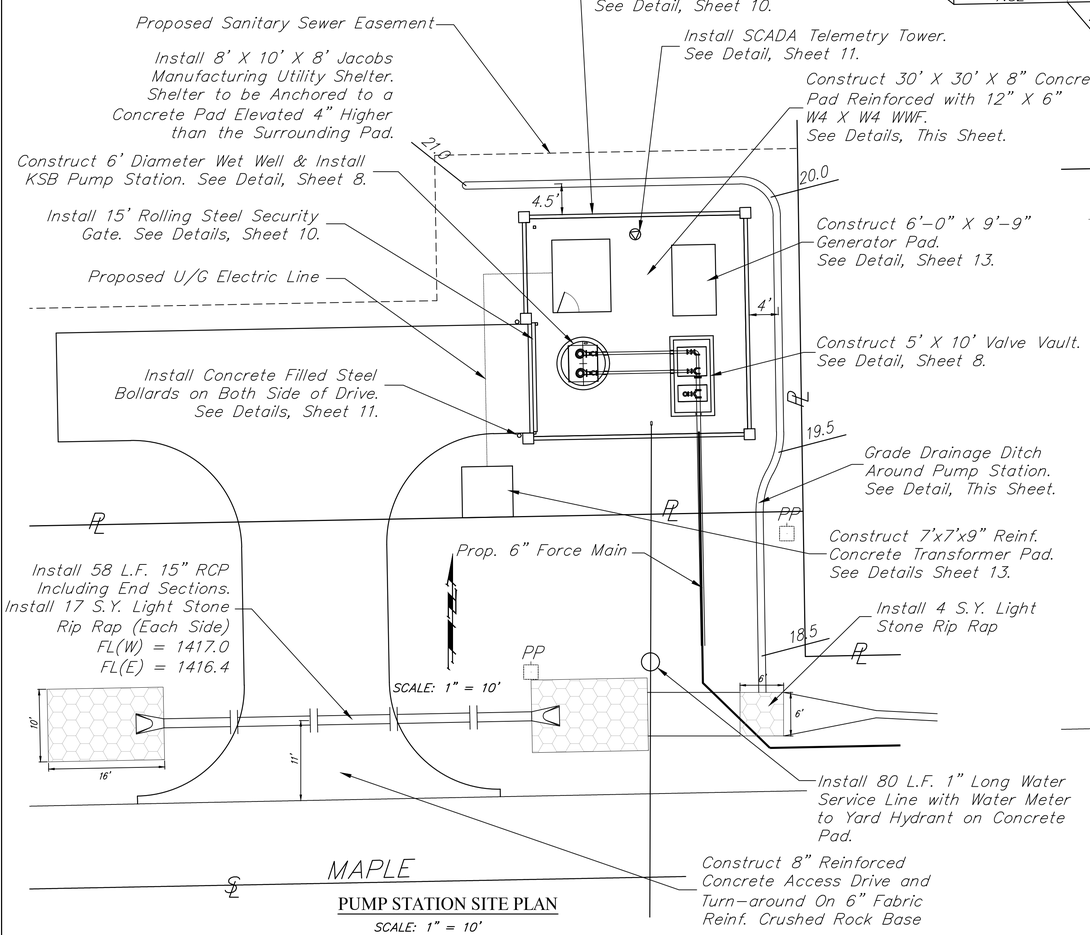
WING REINFORCING DETAIL

SCALE: 1" = 5'



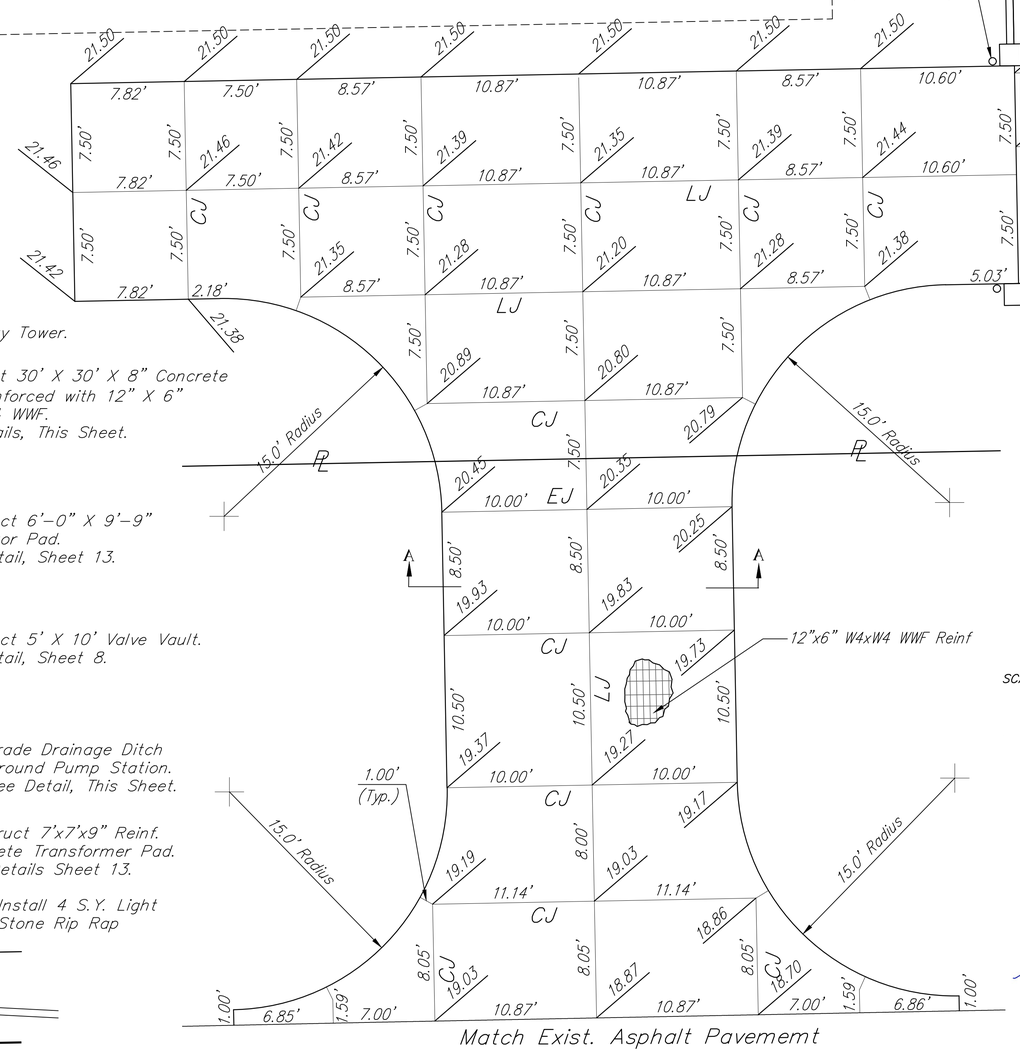
EXPANSION JOINT DETAIL

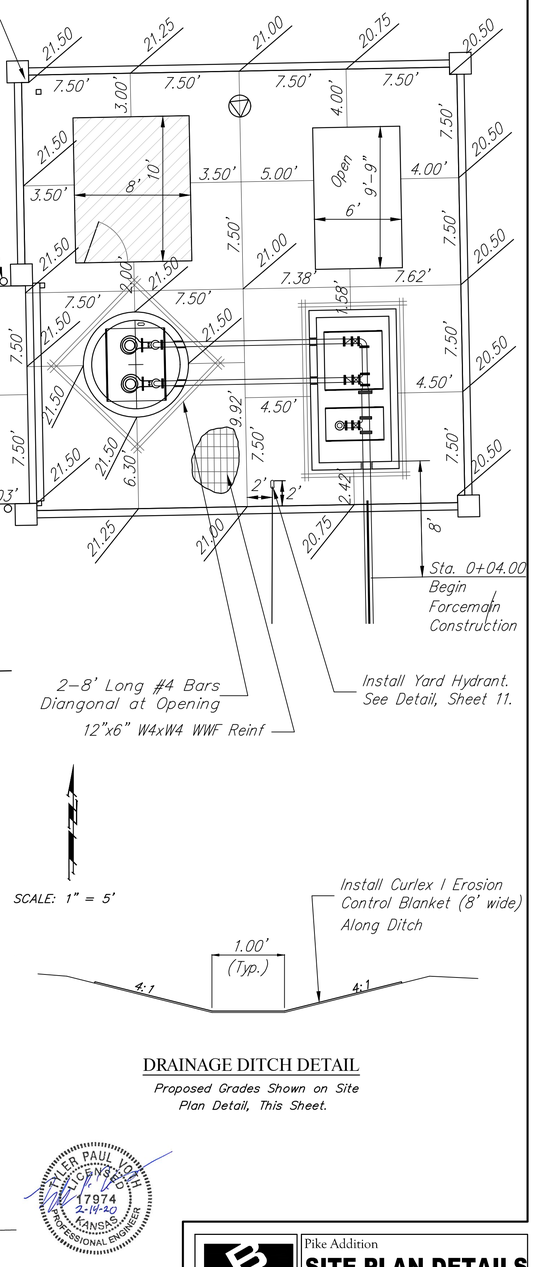
(E.J.)



PUMP STATION SITE PLAN

SCALE: 1" = 10'





DRAINAGE DITCH DETAIL

Proposed Grades Shown on Site Plan Detail, This Sheet.

CONCRETE PAD JOINT PLAN

SCALE: 1" = 5'

Denotes Area to have 4" Thick Concrete Building Floor On Top of 8" Thick Reinf Concrete Pad.

Note: The Cost of All Work Required to Construct the Lift Station, Including the Wet Well and Vault, Pumps, Valves, Piping, Shed, Screen Walls, Gate, 10" Stub Concrete Flat Work, Including Lift Station Pad, Driveway and Transformer Pad, Draiange Items, Power Supply and Electronic Controls Shall be Included In the Lump Sum Bid Item "Lift Station Module."

TYLER PAUL VOTH
LICENSED
17974
2-14-20
KANSAS
PROFESSIONAL ENGINEER

Baughman

Pike Addition

SITE PLAN DETAILS

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

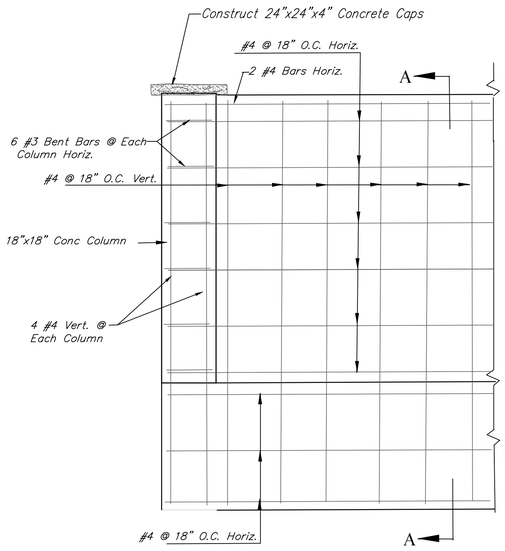
PROJECT NUMBER

REVISIONS: 3-13-20 TPV Drive Pipe Added and Drainge Ditch Revisions

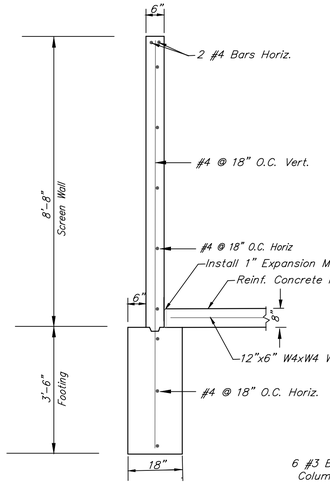
DESIGN TPV | DRAWN Staff | APPROVED TPV | DATE 2/20 | SCALE Noted

SHEET **9** OF **24**

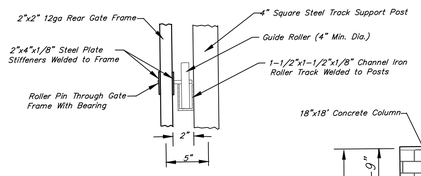
E:\Projects\Pike Addition_\Engineering\Phase 1\SS Main 1901-E171\Base-Pump-Station.dwg



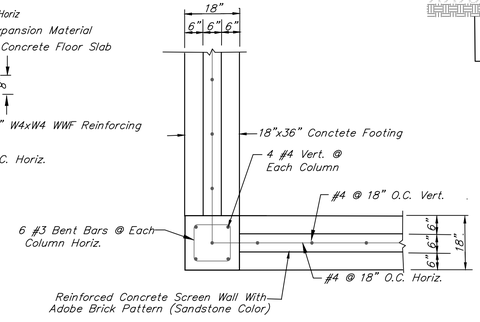
ELEVATION VIEW



SECTION A - A

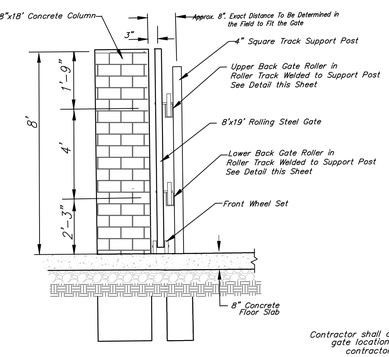


BACK ROLLER DETAIL

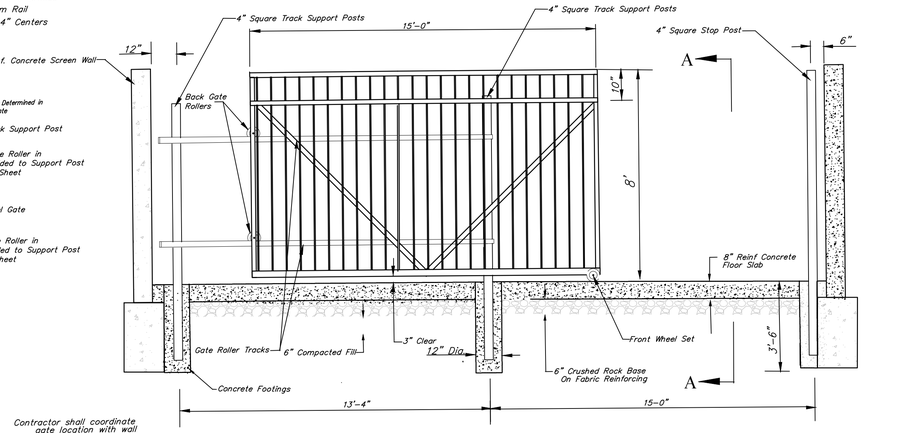


PLAN VIEW

2"x2" 12ga Gate Frame and Braces
2"x4" 11ga Gate Bottom Rail
1"x1" 14ga Pickets on 4" Centers



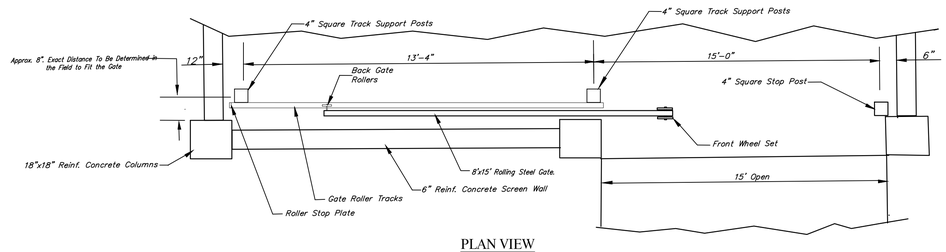
SECTION A - A



Contractor shall coordinate gate location with wall contractor to avoid confrontation

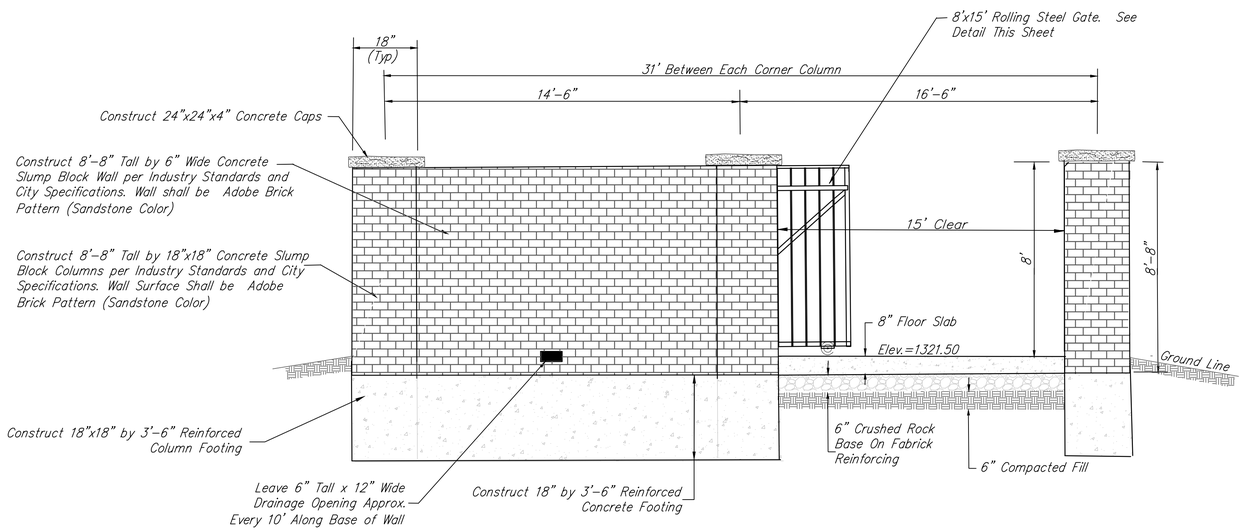
ELEVATION

NOTE: Manufacturer shall provide a Locking Device suitable for a Padlock on the Outside of the Gate.



PLAN VIEW

SCREENING WALL REINFORCING DETAIL



WEST SIDE SCREEN WALL WITH GATE DETAIL

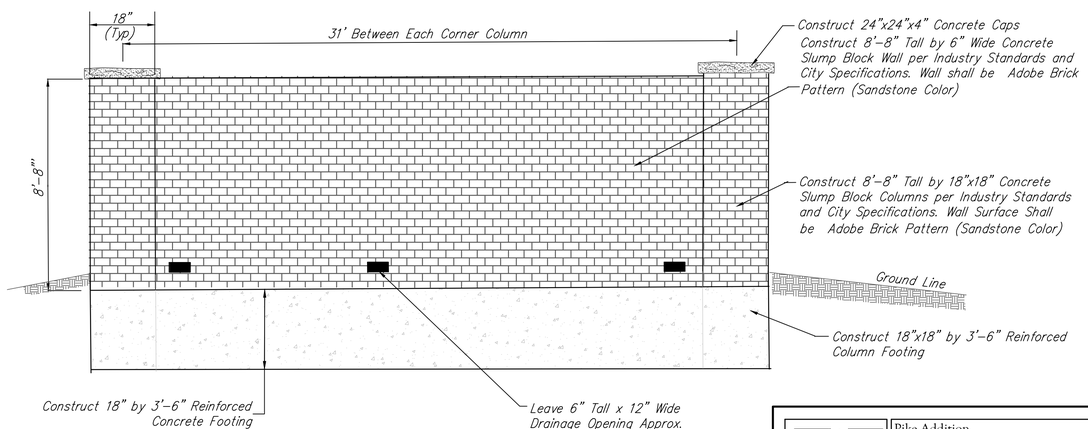
NOT TO SCALE

Note: Cost of 8' Concrete Slump Block Screening Wall shall be Included in L.S. Bid Item "Lift Station Module."

8'-0" ROLLING GATE DETAIL

NOT TO SCALE

CONTRACTOR SHALL SUBMIT GATE DESIGN TO THE ENGINEER FOR APPROVAL



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

TYLER PAUL VOTH LICENSED 17974 2-14-20 KANSAS PROFESSIONAL ENGINEER

Baughman

Pike Addition

MISC DETAILS

Sanitary Sewer Improvements

Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7221 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

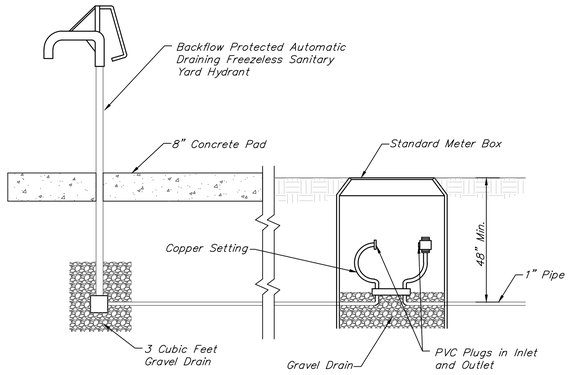
PROJECT NUMBER

REVISIONS:

DESIGN TPV | DRAWN Staff | APPROVED TPV | DATE 02/20 | SCALE Noted

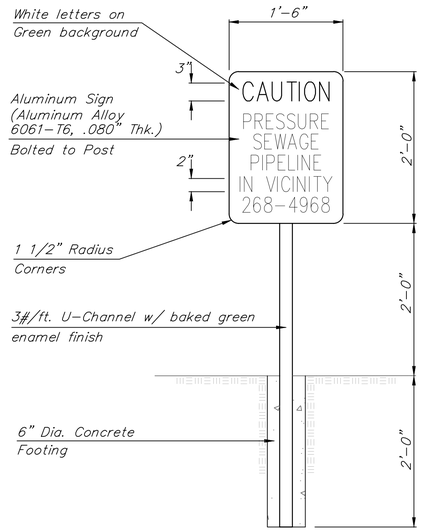
SHEET 10 OF 24

E:\Projects\Pike Addition_\Engineering\Phase 1\SS Main 1901-E171\Base Pump Station.dwg



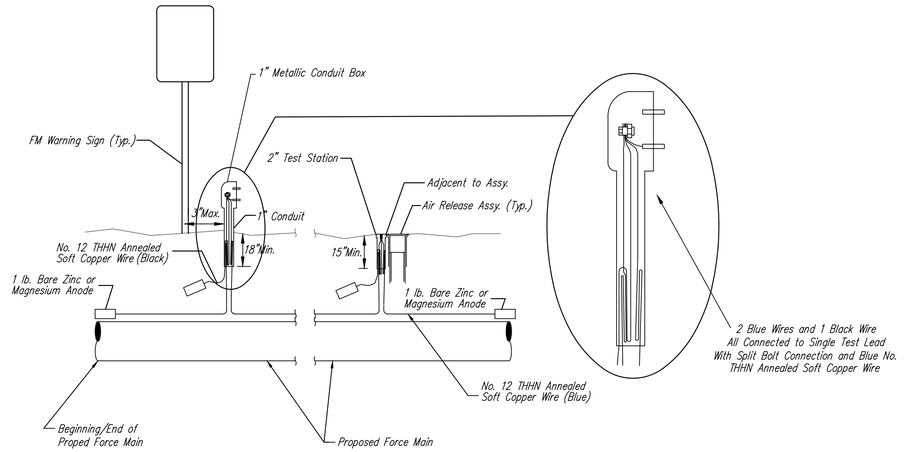
YARD HYDRANT DETAIL

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.

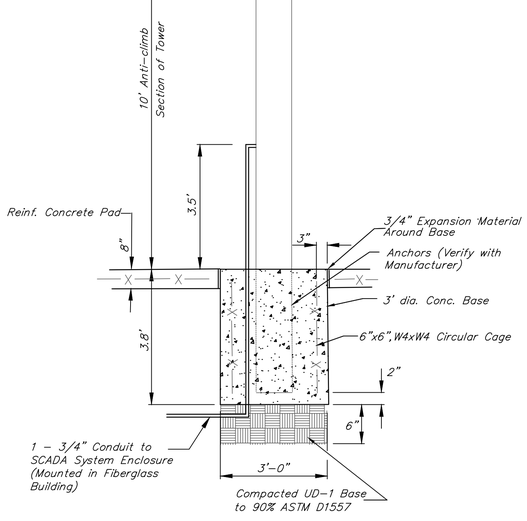
TEST STATIONS

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

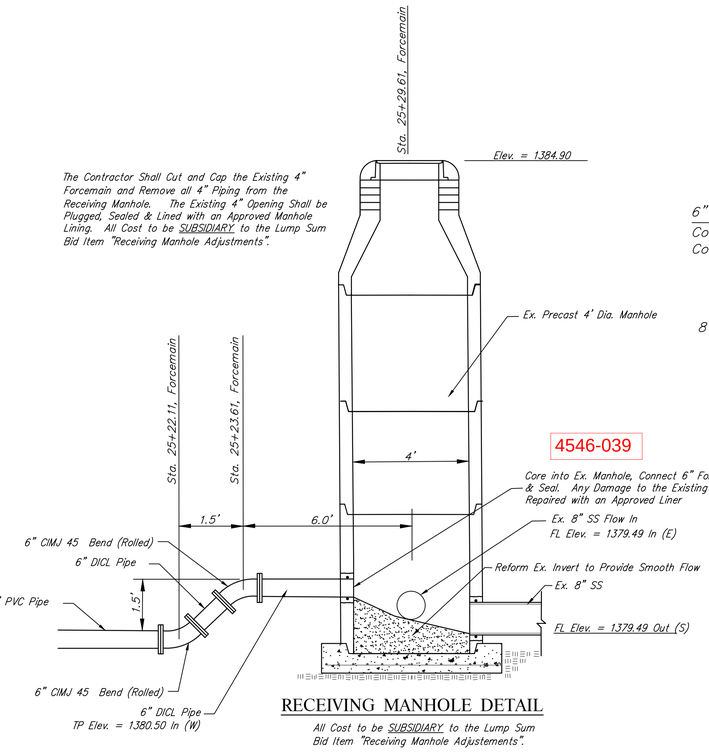


SCADA SYSTEM DETAIL

SCALE: 1" = 2'

NOTES:

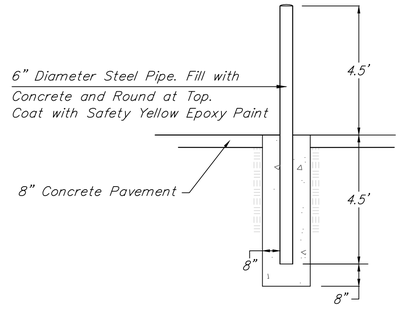
1. MAXIMUM TOWER HEIGHT IS 30 FEET.
2. 6' COPPER GROUND ROD SHALL BE PROVIDED FOR THE TOWER.
3. ANCHOR BOLT SIZES AND LENGTHS SHALL BE PER THE TOWER MANUFACTURERS RECOMMENDATIONS.



4546-039

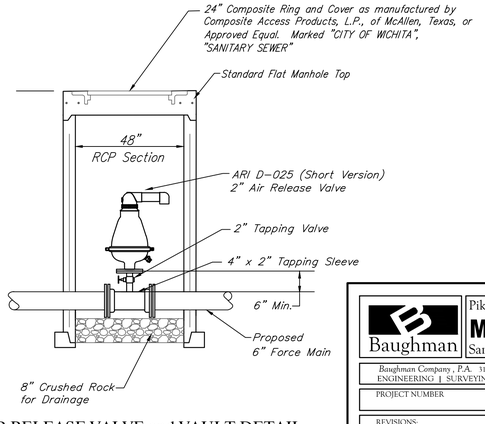
RECEIVING MANHOLE DETAIL

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



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.

TYLER PAUL VOTH LICENSED 17974 2-14-20 KANSAS PROFESSIONAL ENGINEER

Baughman

Pike Addition

MISC DETAILS

Sanitary Sewer Improvements

Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-2721 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

PROJECT NUMBER	DESIGN TPV	DRAWN Staff
REVISIONS:	APPROVED TPV	DATE 02/20
	SCALE Noted	
	SHEET 11 OF 24	

E:\Projects\Pike Addition_\Engineering\Phase 1\SS Main 1901-E171\Base-Pump Station.dwg

(1) MINI-POWER ZONE L

120/208V/3Ø/4W/+GRD
50 AMP BKR, WALL MTD.
42,000 AIC LABELED

INTEGRAL PANEL/ TRANSFORMER

CIRC. NO.	LOAD V.A.	LOAD DESCRIPTION	POLE	AMP SIZE	PHASE	AMP SIZE	POLE	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 CHRG	1000	4	(2)
5	200	EXT. RECEPT.	1	20	C	15	2	JACKET HTR	1500	6	(2)
7	60	EF-1	1	20	A	--	--	--------------------	------	8	
9		SPARE	1	25	B	15	2	COOLANT HTR	1500	10	(2)
11		SPARE	1	20	C	--	--	--------------------	------	12	
13		SPACE			A	20	1	SPARE		14	
15		SPACE			B			SPACE		16	
17		SPACE			C			SPACE		18	

(1) 15 KVA MINI-POWER ZONE COMBINATION PANEL/ TRANSFORMER, 480V. PRIMARY WITH 120/208V., 3-PHASE, 4-WIRE SECONDARY. 18 POLE PANEL.

(2) VERIFY CIRCUITING REQUIREMENTS WITH GENERATOR PROVIDED PRIOR TO ORDERING PANEL AND BREAKERS.

PANEL H

277/480V/3Ø/4W/+GRD
225 AMP M.L.O, SURFACE MTD.
42,000 AIC LABELED

W/ GRD. BUS

CIRC. NO.	LOAD V.A.	LOAD DESCRIPTION	POLE	AMP SIZE	PHASE	AMP SIZE	POLE	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	SPARE		14
15		SPACE			B			SPACE		16
17		SPACE			C			SPACE		18

(2) LIGHT FIXTURE SCHEDULE

ICE- PIKE ADDITION

	FIXT LTR	MANUFACTURER	CATALOG NUMBER	LAMPS NO.	LAMPS TYPE	FIXT. VOLT.	FINISH	MOUNTING	REMARKS
(2)	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

ICE- PIKE ADDITION

(1) PROVIDE FIXTURE WITH INTEGRAL PHOTOCELL.

(2) 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.

(1)(2) EQUIPMENT CONNECTION SCHEDULE

ICE- PIKE ADDITION

SCH. CODE
SW=DISC. SW
CB=CIR.BKR.
T=TOGGLE SW.

	UNIT DESIG.	120/60/1	208/60/1	480/60/3	208/60/3	LOAD H.P.	LOAD FLA	LOAD MCA	PANEL DEVICE RATING (AMPS/POLE) 20/1	20/3	30/3	50/3	100/3	50/3	40/2	20/2	DISC. DEVICE AT UNIT (AMPS/POLE) FUSTAT	30/3	60/3	100/3	200/3	40/2	30/2	T (4)	FUSE SIZE	NEMA3R	STARTER (SIZE/POLE)	IN CP-1	CIRC. NO.	FEEDER IDENT.
	CP-	DUPLEX CONTROL PANEL																												
	1			●		(2) 20	54	68					●							SW					70		———		H-2	3#3& 1#8GRD-1 1/4" C
	P-	PUMP																												
(5)	1			●		20	27	34				●							SW						40		VFD	●	CP-1	3#8& 1#10GRD-1" C
(5)	2			●		20	27	34				●							SW						40		VFD	●	CP-1	3#8& 1#10GRD-1" C
	EF-	EXHAUST FAN																												
(6)	1	●				60W			●															●		●	———		L-7	2#12& 1#12GRD-1/2" C
	UH-	UNIT HEATER																												
(7)	1			●		3.3KW	4			●								SW									———		H-8	3#12& 1#12GRD-3/4" C

EQUIPMENT CONNECTION SCHEDULE NOTES

ICE- PIKE ADDITION

(1) 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.

(2) 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.

(3) NOT USED.

(4) PROVIDE A 30A, 1 POLE, 125V. HORSEPOWER RATED TOGGLE SWITCH WITH A 125V, 3/4 HP RATED FUSTAT (EQUAL TO BUSSMAN #SOY), SIZE FUSE PER MANUFACTURER'S RECOMMENDATION.

(5) 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.

(6) 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/1/60. 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.

(7) 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, 480/3/60. PROVIDE WITH WALL MOUNTING BRACKET, CONTROL TRANSFORMER, AND 24 V LOW VOLTAGE THERMOSTAT TO START THE HEATER BELOW 50° (ADJUSTABLE).

SYMBOL LIST

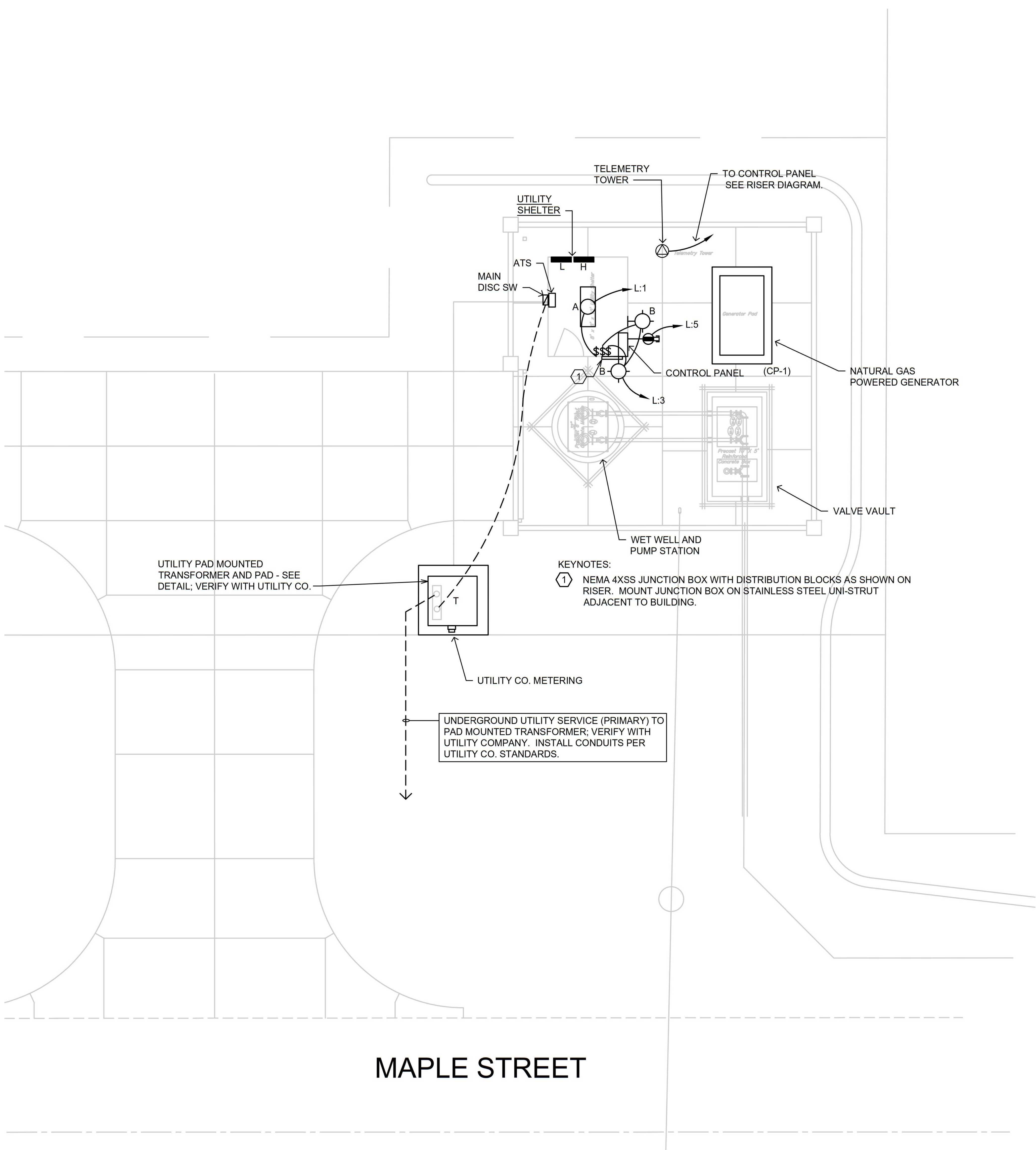
ICE- PIKE ADDITION

SYMBOL	DESCRIPTION	MOUNTING
(A)	FLUORESCENT FIXTURE & FIXTURE LETTER	CEILING
(A)	INCAND. OR H.I.D. FIXTURE & FIXT. LETTER	WALLBRACKET
	GFCI DUPLEX GROUNDED RECEPTACLE	1'-3" AFF
	DUPLEX GROUNDED RECEPTACLE	1'-3" AFF
	EXTERIOR GFCI RECEPT. WEATHERPROOF	1'-3" AFF
$ $3 $4 $P $K	SWITCHES (1-POLE,3-WAY,4-WAY,PILOT,KEY)	4'-0" TO TOP
J	JUNCTION BOX	
F	FUSTAT	
□	SPECIAL DEVICE AS NOTED ON PLAN	
A	BRANCH CIRCUIT PANEL & PANEL DESIG.	6'-6"TO TOP
30/3/240	H.D. SAFETY SWITCH (AMPS,POLE,VOLTAGE)	6'-6"TO TOP
0/3/240	STARTER (SIZE,POLE,VOLTAGE)	6'-6"TO TOP
T	THERMOSTAT (BY M.C.)	4'-0" TO TOP
●	MOTOR	
	CONDUIT RUN 2#12 & 1#12 GRD.-1/2"C.	CEIL./WALL
	CONDUIT RUN 2 CIRCUIT,3#12 & 1#12 GRD.-1/2"C.	EARTH/FLOOR
	PARTIAL HOMERUN (MULTIPLE LOAD LOCATIONS)	
#10 30/3	SEE NOTE #7	
XXX	FEEDER IDENTIFICATION, SEE SCHEDULE	
WP	WEATHERPROOF	
a,b,c	INDICATES SWITCHING SCHEME	

GENERAL NOTES

ICE- PIKE ADDITION

1. ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) & THE AMERCIANS WITH DISABILITIES ACT (ADA).
2. REFER TO RELATED ARCHITECTURAL, MECHANICAL, AND STRUCTURAL DRAWINGS FOR RELATED INFORMATION.
3. REFER TO THE SPECIFICATIONS FOR DATA NOT ON THE DRAWINGS.
4. 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.
5. COORDINATE OUTLET BOX LOCATIONS WITH MASONRY TO MINIMIZE CUTTING OF BRICK OR BLOCK.
6. ALL MOUNTING HEIGHTS TO CENTERLINE OF ITEM UNLESS OTHERWISE NOTED. VERIFY ALL OUTLET LOCATIONS ON THE JOB PRIOR TO ROUGH-IN.
7. CONDUIT RUN W/ CONDUCTORS AS INDICATED & GROUND WIRE SIZED PER N.E.C. 250-122 (2017); CONDUIT SIZE AS REQUIRED.
8. 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.
9. CONTRACTOR SHALL BUILD TO ALL CURRENT NATIONAL, STATE, AND LOCAL CODES.



A ELECTRICAL SITE PLAN LAYOUT DIAGRAM

SCALE: 1"=10'

NORTH

PHILIP JOHN VOEGELI LICENSED 11701 KANSAS PROFESSIONAL ENGINEER

EXPIRES: 04-30-2021

20040.00-015

Integrated Consulting Engineers, Inc.
349 South Hydraulic • Wichita, KS 67211
316.264.3588 • 316.264.3948 • www.iconengineers.net

Baughman

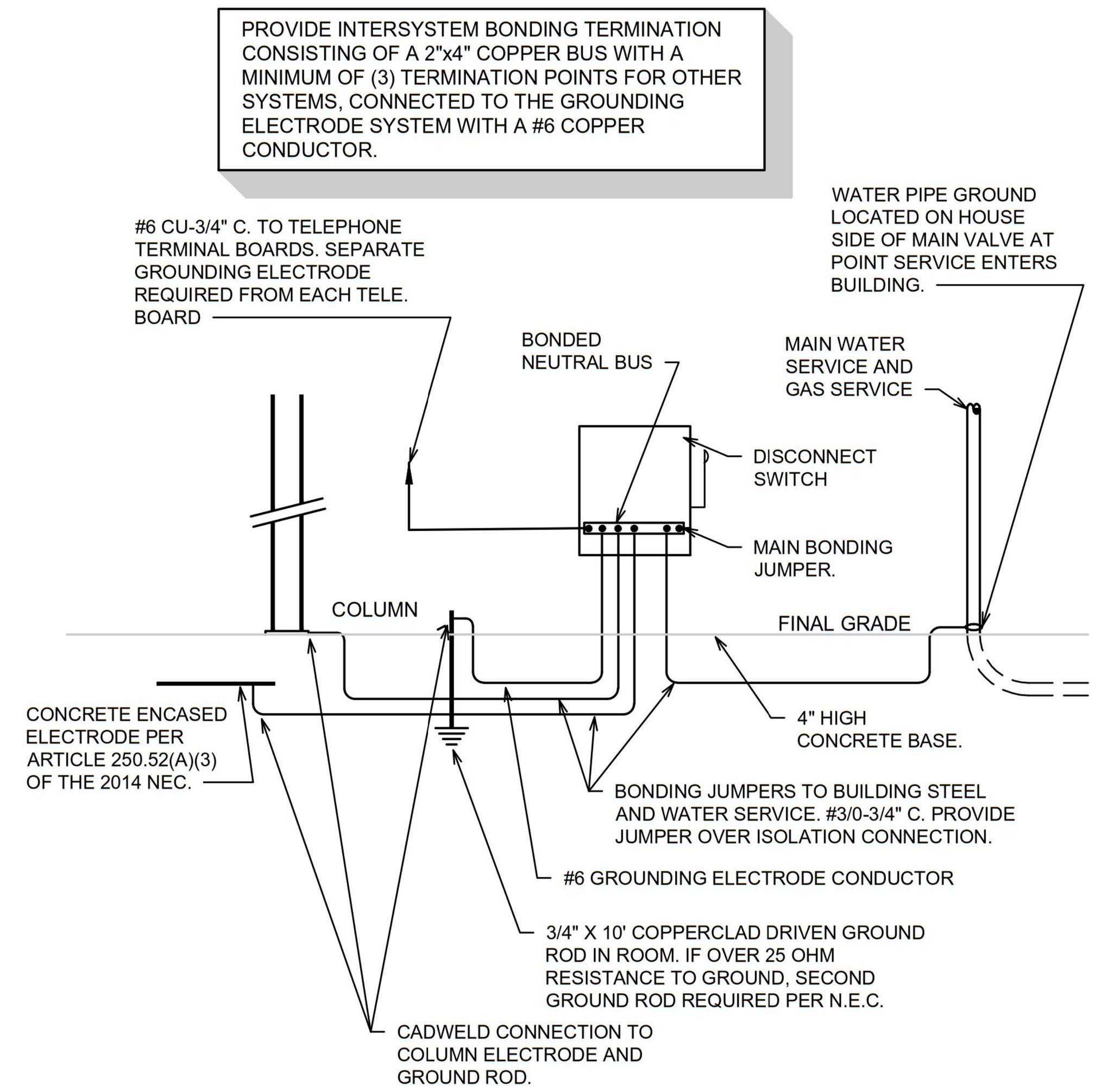
Pike Addition
ELEC. SCHEDULES
Sanitary Sewer Improvements

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

REVISIONS:

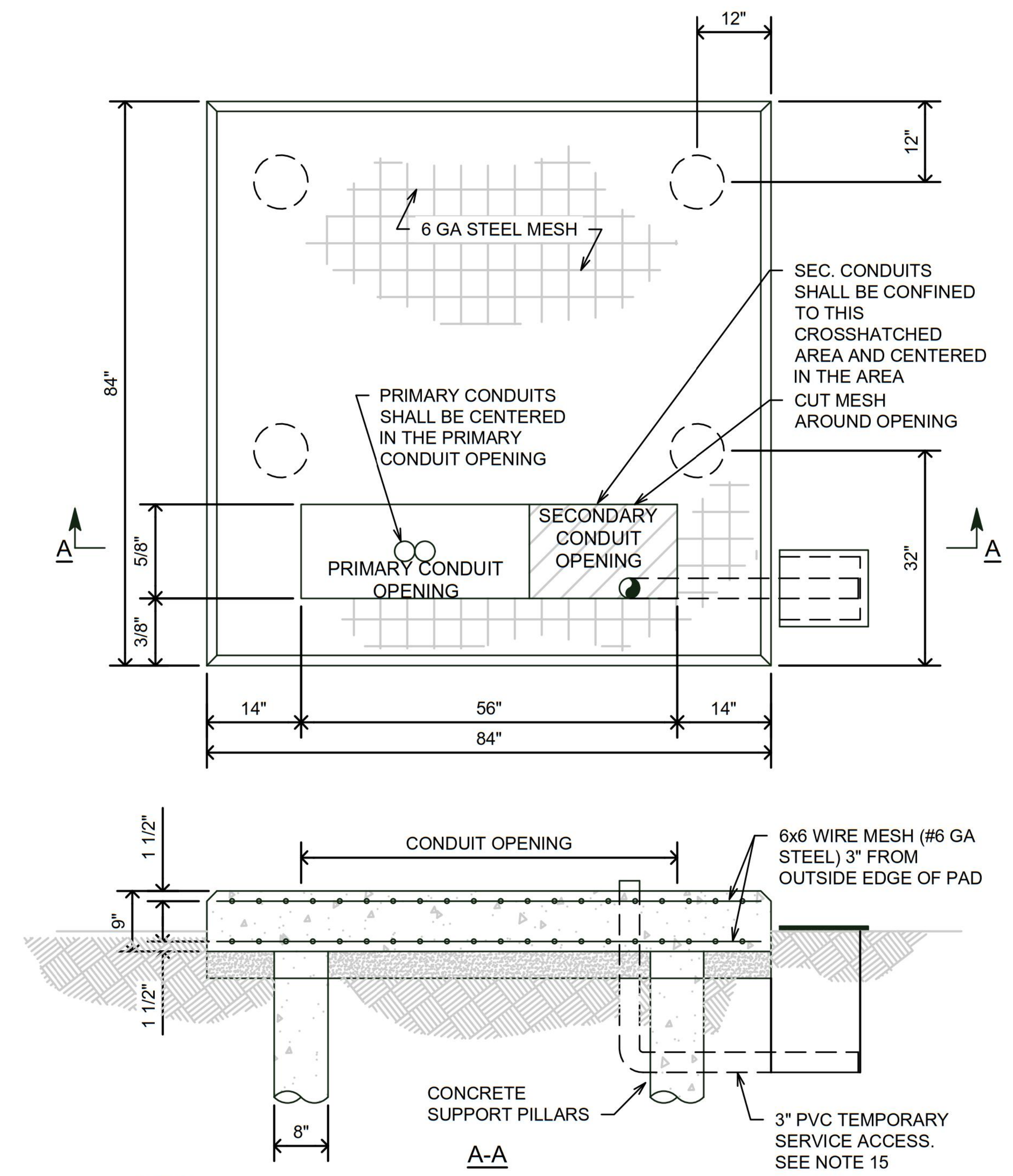
DESIGN GS
DRAWN
APPROVED PJV
DATE 02-14-2020
SCALE AS NOTED
SHEET 12 OF 24



3 SYSTEM GROUNDING DETAIL-DISCONNECT

SCALE: N.T.S.

NOTE: PROVIDE OTHER GROUND CONNECTIONS AS SPECIFIED IN N.E.C. ARTICLE 250.50 (2014)

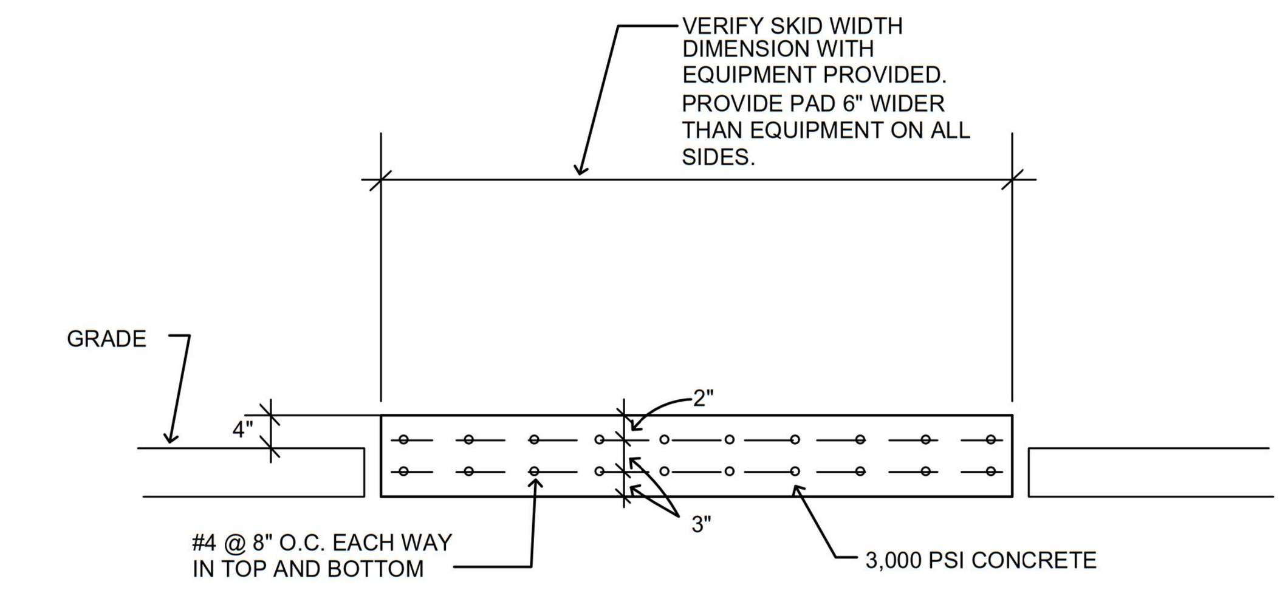


NOTES:

1. PAD LOCATION SHALL BE APPROVED BY LOCAL UTILITY COMPANY.
2. TRANSFORMER SHALL BE INSTALLED NEAR THE CUSTOMER'S SERVICE ENTRANCE.
3. IF TRANSFORMER PAD IS INSTALLED IN AN AREA SUBJECT TO VEHICULAR TRAFFIC, THE INSTALLATION SHALL BE PROTECTED WITH A PIPE-RAIL GUARD. (SEE SS-77.9)
4. FOR PROPER CLEARANCE AROUND THE TRANSFORMER, REFER TO SS-75.0.
5. CONTRACTOR SHALL EXTEND FORMS DOWN TO AT LEAST 3" BELOW AVERAGE GROUND LINE.
6. CONCRETE SHALL BE A MINIMUM OF 3,000 LB. MIX.
7. TOP OF TRANSFORMER PAD SHALL RECEIVE A SMOOTH TROWEL FINISH. CORNERS AND EDGES SHALL BE ROUNDED OR BEVELED.
8. CONDUIT OPENING SHALL BE FREE AND CLEAR OF CONCRETE.
9. TOPS OF THE CONDUIT SHALL BE FLUSH WITH THE TOP OF THE CONCRETE PAD.
10. NUMBER OF CONDUITS NECESSARY IS DEPENDENT ON THE MAXIMUM NUMBER OF SERVICE CONDUCTORS ALLOWED IN THE LOW-VOLTAGE COMPARTMENT OF THE TRANSFORMER. REFER TO SS-73.1 FOR MAXIMUM NUMBER. INSTALL 1" METERING CONDUIT FROM PAD TO METER ENCLOSURE WHEN TRANSFORMER RATED METERING IS SET ON ADJACENT BUILDING OR STAND & METERING TRANSFORMERS ARE IN THE PADMOUNT TRANSFORMER. (SEE SS-74.0)
11. PILLARS ARE FORMED BY AUGERING AND 8" DIAMETER HOLE TO A DEPTH OF UNDISTURBED EARTH. A SEPARATOR, SUCH AS TAR PAPER, SHOULD BE PLACED BETWEEN THE PILLAR AND THE PAD SO THAT THE PAD CAN BE LEVELED AT A LATER TIME IF NECESSARY.
12. LOCAL UTILITY RESERVES THE RIGHT NOT TO ACCEPT THE CONDITION OF THE CONCRETE PAD IF IT FAILS TO MEET THE REQUIREMENTS STATED IN THIS STANDARD.
13. THE 6" ABOVE GRAD CAN BE REDUCED TO 4" ABOVE FINISHED PAVEMENT.
14. CONDUIT OPENING DIMENSIONS PERTAIN TO ABB & GE (1991 & NEWER) TRANSFORMERS. CHECK WITH LOCAL UTILITY SERVICE CENTER TO BE SURE THAT THE OPENING IS THE CORRECT SIZE FOR THE TRANSFORMER DESIGNATED FOR THE JOB. CALL LOCAL SERVICE CENTER TO CONFIRM PAD DIMENSIONS BEFORE PAD IS POURED.
15. CONDUIT TO EXTEND 1' TO 2' BEYOND EDGE OF PAD. DO NOT BACKFILL. USE MIN. 3/4" PLYWOOD OR COMPARABLE COVER TO SECURE THE HOLE.

2 TRANSFORMER PAD DETAIL

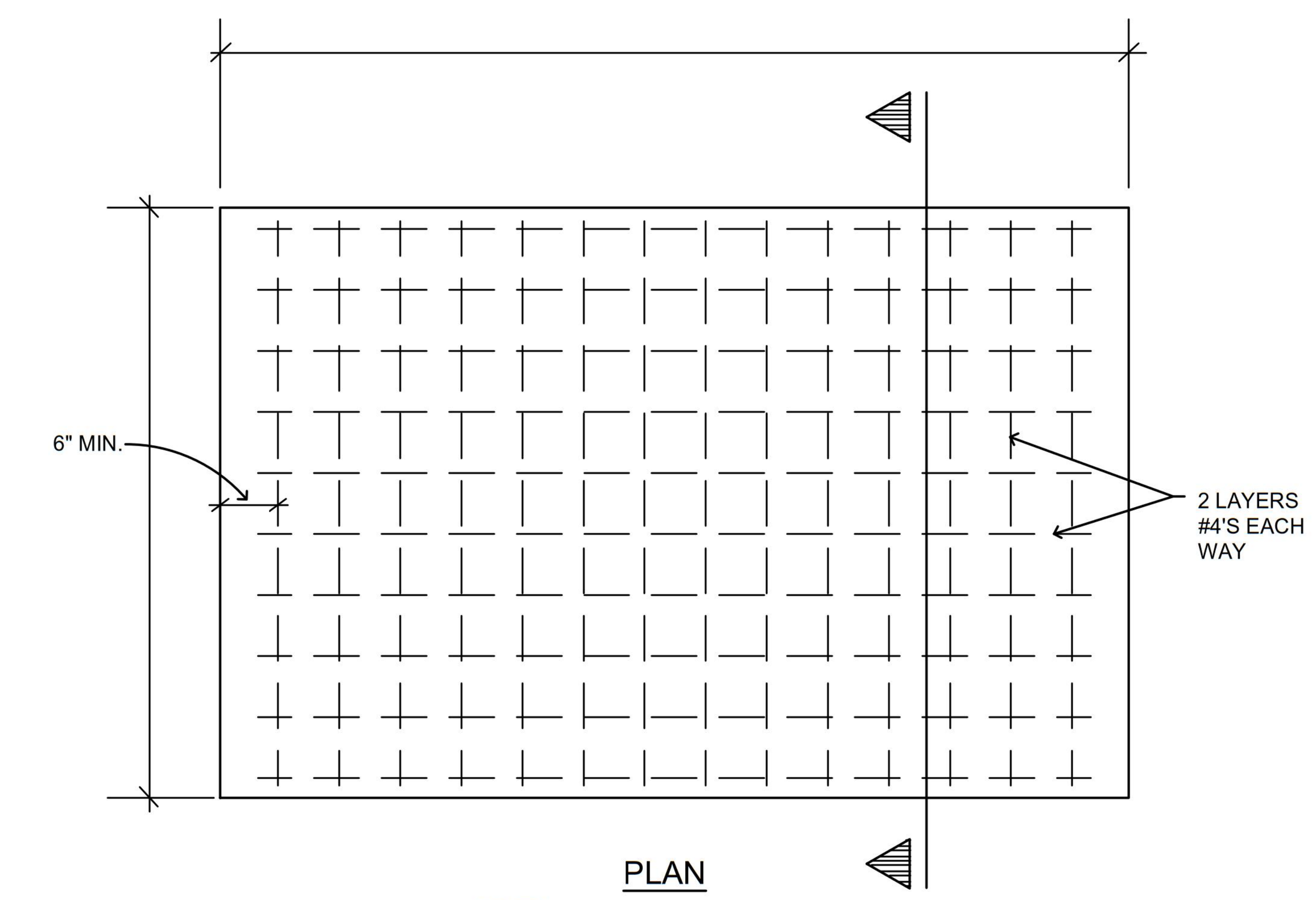
SCALE: NONE



SECTION

NOTES: 1. PAD BY G.C./E.C. TO VERIFY ALL REQUIREMENTS WITH EQUIPMENT PROVIDED PRIOR TO G.C. POURING PAD.

2. THICKNESS AND STEEL MUST BE SIZED PER GENERATOR SIZE.

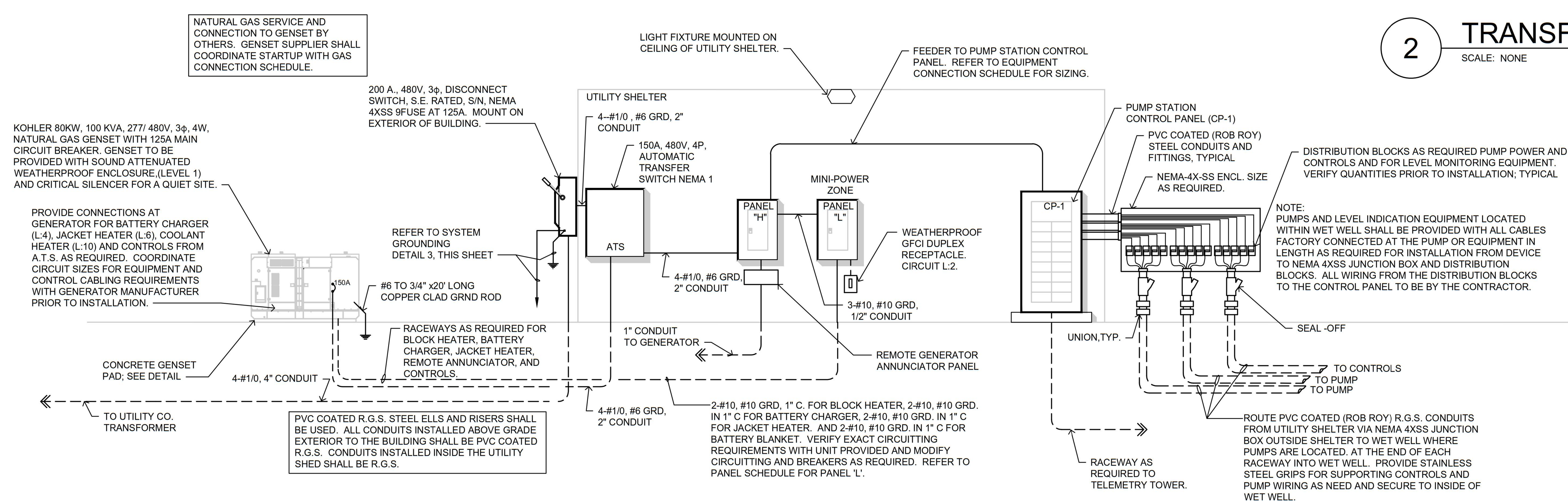


PLAN

NOTES:
1. INSTALL 1/4 X 1/4 REMOVABLE WIRE FENCING AROUND GENERATOR AND PAD AND ANY OPENINGS TO STOP RODENT ENTRY.

1 ENGINE GENERATOR PAD DETAIL

SCALE: NONE

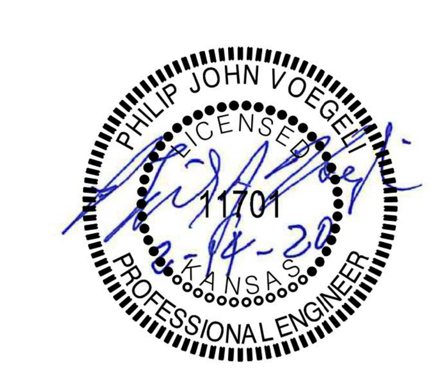


A ELECTRICAL RISER DIAGRAM

SCALE: NONE

SERVICE VOLTAGE: 277/480 V, 3φ, 4W.

ELECTRICAL CONTRACTOR SHALL VERIFY CONDUIT QUANTITIES NEEDED. ALL CONDUITS REQUIRED MAY NOT BE SHOWN IN THIS RISER DIAGRAM.



EXPIRES: 04-30-2021

20040.00-015

Integrated Consulting Engineers, Inc.
349 South Hydraulic • Wichita, KS 67211
316.264.3588 • 316.264.3948 • www.iceengineers.net

Baughman

Pike Addition

ELEC. DETAILS

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 GS	DRAWN
REVISIONS:	APPROVED PJV	DATE 02-14-2020
	SCALE AS NOTED	
	SHEET 13 OF 24	