

# PHASE 11 WATER SYSTEM IMPROVEMENTS

## CONTRACT 4 - BOOSTER STATION IMPROVEMENTS

FOR

# RATTLESNAKE RIDGE

# WATER DISTRICT

## CARTER COUNTY, KENTUCKY

BOARD MEMBERS

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GENERAL MANAGER

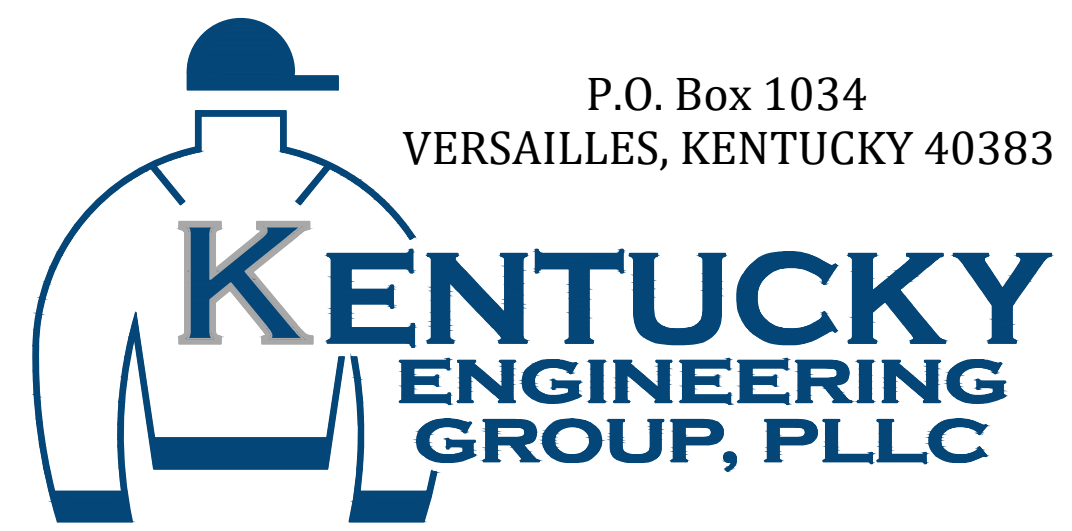
W. C. GILBERT

NOVEMBER, 2017

**RECORD DRAWINGS**

TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF THIS SET OF RECORD DRAWING SHOWS THE REPORTED LOCATION OF THE WORK AND SIGNIFICANT CHANGES MADE DURING THE CONSTRUCTION PROCESS. THESE RECORD DOCUMENTS ARE BASED ON UNVERIFIED INFORMATION PROVIDED BY OTHER PARTIES WHICH WILL BE ASSUMED RELIABLE. THE DESIGN PROFESSIONAL CANNOT AND DOES NOT WARRANT THEIR ACCURACY.

BY: BLUEGRASS ENGINEERING, PLLC      DATE: 01/20



PROJECT NO. 15036

RECORD DRAWINGS

	NO.	DATE	REVISIONS	BY
		JANUARY 2020	REVISIONS PER FIELD NOTES, RECORD DRAWING REVISIONS	BKL

B:\PROJECTS\Rattlesnake Ridge WD\18020-Phase 11 Water System Improvements\Drawings\Record Drawings\Contract 4\RD 15036-04-00.dwg KEG 6/30/20

**GENERAL NOTES**

- CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND THE ENGINEER TWO WORKING DAYS (MINIMUM) BEFORE BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF TRAFFIC IN ACCORDANCE WITH CITY, COUNTY AND STATE REQUIREMENTS.
- THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF CONSTRUCTION PLANS ON THE JOB SITE DURING ALL PHASES OF CONSTRUCTION.
- EXISTING UTILITIES, ESPECIALLY GAS LINES AND OIL LINES, MAY BE CATHODICALLY PROTECTED. THEREFORE, DUCTILE IRON PIPE, FITTINGS, GATE VALVES, AND/OR BOXES LAID WITHIN 100' OF LINES WITH CATHODIC PROTECTION SHALL BE WRAPPED IN POLYETHYLENE ENCASEMENT. MATERIALS AND INSTALLATION SHALL MEET THE REQUIREMENTS OF AWWA'S LATEST REVISION.
- ALL CONSTRUCTION AND INSTALLATION OF MATERIALS BEING USED SHALL BE IN CONFORMANCE WITH THE PLANS AND SPECIFICATIONS. SUBSTITUTIONS AND DEVIATION SHALL BE PERMITTED ONLY WHEN WRITTEN APPROVAL HAS BEEN ISSUED BY THE ENGINEER.
- SHOP DRAWINGS OF ALL MATERIALS BEING USED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
- EXISTING UTILITIES HAVE BEEN SHOWN IN THEIR APPROXIMATE LOCATION. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH A REPRESENTATIVE WHEN WORKING NEAR EXISTING UTILITIES.
- THE CONTRACTOR SHALL PROTECT ALL UTILITIES AND OTHER IMPROVEMENTS SHOWN ON THESE PLANS AND ALL OTHER UTILITIES AND OTHER IMPROVEMENTS NOT SHOWN. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR REPAIRS OF UTILITIES AND OTHER IMPROVEMENTS DAMAGED DURING CONSTRUCTION.
- UNLESS OTHERWISE NOTED, A SEPARATE BID ITEM HAS NOT BEEN ESTABLISHED FOR FITTINGS. THE FITTINGS INCLUDED BUT NOT LIMITED TO ARE: TEES, BENDS, PLUGS, REDUCERS, CROSSES, COUPLINGS, ETC. CONTRACTORS SHALL INCLUDE THE COST OF THESE ITEMS IN THE BID PRICE FOR THE PIPE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE TEMPORARY REMOVAL/RELOCATION OF TRAILERS, BUILDINGS, FENCES, TREES, SHRUBS, ETC. AND REPLACEMENT OF SAID ITEMS AFTER CONSTRUCTION ACTIVITIES.
- CONTRACTOR IS TO COORDINATE WITH THE PROPERTY OWNERS AS TO WHETHER OR NOT TEMPORARY FENCING IS REQUIRED AND CONSTRUCT IF NECESSARY.
- ALL PIPING SHALL HAVE 36" MINIMUM COVER.
- WHERE UNSTABLE MATERIAL IS ENCOUNTERED OR WHERE THE DEPTH OF EXCAVATION IN EARTH EXCEEDS FIVE (5) FEET, THE SIDES OF THE TRENCH OR EXCAVATION SHALL BE SUPPORTED BY SUBSTANTIAL SHEETING, BRACING, SHORING OR THE TRENCH SIDES SLOPED. SLOPING THE SIDES OF THE DITCH WILL NOT BE PERMITTED IN STREETS, ROADS, NARROW RIGHTS-OF-WAY OR OTHER CONSTRICTED AREAS UNLESS OTHERWISE SPECIFIED. THE STANDARDS OF THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT AND THE KENTUCKY LABOR CABINET SHALL BE FOLLOWED.
- ALL EXCAVATION IS UNCLASSIFIED. COMPENSATION FOR ALL EXCAVATION SHALL BE INCLUDED IN LUMP SUM BID.
- REGRADE OF SITE SHALL BE SUCH THAT DRAINAGE IS AWAY FROM ALL STRUCTURES.
- BACKFILL AROUND ALL STRUCTURES SHALL BE SUFFICIENTLY COMPACTED TO PRECLUDE SETTLEMENT AND PONDING OF WATER AROUND STRUCTURES AND GRADED TO DIVERT RUNOFF AWAY FROM THE STRUCTURES.
- DIMENSIONS, DETAILS AND REINFORCEMENT MAY VARY WITH MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL OBTAIN AND MAINTAIN ON SITE, APPROVED SHOP DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
- ALL VALVES & HYDRANTS SHALL BE LOCATED AT THE BACKSIDE OF THE DITCHLINE.
- FINAL LOCATION OF SERVICES, VALVES, & HYDRANT ORIENTATION ARE TO BE FIELD LOCATED DURING CONSTRUCTION & APPROVED BY THE ENGINEER.
- AT THE CONTRACTORS OPTION, CLASS 350 DUCTILE IRON PIPE MAY BE SUBSTITUTED FOR ANY PIPE PARTICULARLY SPECIFIED, BUT AT NO ADDITIONAL COST TO THE OWNER.
- NO PAY ITEM FOR EXTRA TRENCH DEPTH HAS BEEN SET UP. CONTRACTOR SHALL INCLUDE THE COST OF THE ADDITIONAL DEPTH IN HIS BID PRICE.
- ROCK SOUNDINGS WERE NOT PERFORMED BY THE ENGINEER, THE CONTRACTOR SHALL TAKE APPROPRIATE ACTION TO DETERMINE SUBSURFACE CONDITIONS.
- CONTRACTOR TO DIG/EXPOSE EXISTING WATER MAIN FAR ENOUGH AHEAD OF NEW WATER MAIN CONSTRUCTION TO AVOID DAMAGE TO EXISTING WATER MAIN AND/OR INTERRUPTION OF EXISTING CUSTOMER SERVICES.
- ALL NEW SERVICE LINE FROM THE NEW MAIN TO THE SETTERS SHALL BE 3/4" PE CTS TUBING UNLESS SHOWN DIFFERENTLY ON THE PLANS AND CLASS 250
- THE MAXIMUM ALLOWABLE LENGTH OF SERVICE LINE FROM THE WATER MAIN TO THE CUSTOMER'S METER SERVICE SHALL BE AS FOLLOWS:

SERVICE LINE DIAMETER	MAXIMUM LENGTH
1 INCH	150 FEET
1-1/2 INCH	200 FEET
2 INCH	250 FEET

- CONNECTIONS TO EXISTING DISTRIBUTION SYSTEM SHALL BE MADE AS FOLLOWS:
  - CONNECT TO EXISTING (SIZE) W.M. (WET TAP) - CONTRACTOR SHALL PROVIDE, FURNISH AND INSTALL ALL FITTINGS, VALVES AND APPURTENANCES TO CONNECT THE PROPOSED WATER MAIN TO THE EXISTING WATER MAIN UNDER PRESSURE.
  - CONNECT TO EXISTING (SIZE) W.M. - CONTRACTOR SHALL PROVIDE, FURNISH AND INSTALL ALL FITTINGS AND APPURTENANCES TO CONNECT THE PROPOSED WATER MAIN TO THE EXISTING WATER MAIN. VALVES ARE A SEPARATE PAY ITEM.
- NO BLASTING WILL BE PERMITTED ON THIS PROJECT
- GRIP RINGS SHALL BE INSTALLED ON ALL FITTINGS
- ALL NEW METERS SHALL BE 5/8" X 3/4" SENSUS RADIO READ
- ALL STEEL AND IRON ON THIS PROJECT SHALL COMPLY WITH AIS REQUIREMENTS.

**RECORD DRAWINGS**

TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF THIS SET OF RECORD DRAWING SHOWS THE REPORTED LOCATION OF THE WORK AND SIGNIFICANT CHANGES MADE DURING THE CONSTRUCTION PROCESS. THESE RECORD DOCUMENTS ARE BASED ON UNVERIFIED INFORMATION PROVIDED BY OTHER PARTIES WHICH WILL BE ASSUMED RELIABLE. THE DESIGN PROFESSIONAL CANNOT AND DOES NOT WARRANT THEIR ACCURACY.

BY: BLUEGRASS ENGINEERING, PLLC DATE: 01/20

**GENERAL NOTES (CONTINUED)**

- NEW LINE AND EXISTING LINES MUST REMAIN IN SERVICE UNTIL ALL METERS ASSEMBLED HAVE BEEN REPLACED AND RECONNECTED TO THE NEW LINE
- NO METERS CAN BE RECONNECTED TO THE NEW WATER MAIN UNTIL TESTING, STERILIZATION AND SAMPLING HAS BEEN SUCCESSFULLY COMPLETED
- COPIES OF ALL BACTIE RESULTS MUST BE PROVIDED TO THE ENGINEER PRIOR TO RECONNECTS OF ANY METER.
- A NO. 12 AWG INSULATED COPPER LOCATOR WIRE SHALL BE PLACED IN THE TRENCH SIX INCHES ABOVE ALL PLASTIC LINES. THE INSULATION SHALL BE BLUE FOR WATER. THE WIRE SHALL BE LOOPED INTO ALL VALVE BOXES W/ ENOUGH SLACK TO ALLOW ACCESS TO THE LOOPS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PLUMBING PERMITS NECESSARY TO RELOCATE OR RECONNECT ANY CUSTOMERS METER SERVICE OR SERVICE LINE. THE CONTRACTOR SHALL OBTAIN ALL PERMITS, PAY ALL FEES AND EMPLOY THE NECESSARY LICENSED PLUMBER.

**FINAL CLEANUP AND RESTORATION**

UNLESS SPECIFICALLY APPROVED BY THE OWNER AND ENGINEER, CLEANUP OF DISTURBED AREAS SHALL BE KEPT CURRENT WITH CONSTRUCTION AND RESTORATION EFFORTS BY THE CONTRACTOR INITIATED NO LONGER THAN SEVEN (7) DAYS AFTER THE TRENCH EXCAVATION WORK HAS STARTED. ALL EXCAVATED MATERIAL NOT REQUIRED FOR BACKFILLING OF THE TRENCH AND ANY LARGE ROCKS, STONES OR DEBRIS SHALL BE REMOVED FROM THE SITE, AND SHALL NOT BE A BURDEN TO THE PROPERTY OWNER(S) AND/OR ADJACENT PROPERTIES. THE CONTRACTOR MAY WINDROW OR TRACK-IN THE EXCAVATED MATERIAL OVER THE TRENCH PRIOR TO FINAL CLEANUP TO ALLOW FOR AND TO ASSIST IN THE INITIAL SETTLEMENT OF THE TRENCH. ALL DISTURBED AREAS MUST BE SEEDD AT LEAST WITH A TEMPORARY SEED MIX IF FOR SOME REASON THE AREA CANNOT BE PERMANENTLY SEEDD WITHIN TWO (2) WEEKS.

**DEPARTMENT OF HIGHWAYS - GENERAL NOTES**

- ALL EFFECTED KYTC DITCHLINES SHALL REMAIN FREE OF EXCESS SILT OR EROSION AND CONSTRUCTED TO THE NORMAL TYPICAL SECTION OF THE ROADWAY WITH A MINIMUM DEPTH OF 18 INCHES FROM THE SHOULDER BREAK POINT.
- ALL NECESSARY STEPS SHALL BE TAKEN TO PREVENT EROSION OR SILTATION OF THE PUBLIC RIGHT-OF-WAY, ADJOINING PROPERTY AND WATERWAYS.
- ALL VALVES TO BE FLUSH W/ EXISTING GRADE.
- ALL WATER LINE LOCATED WITHIN STATE HIGHWAY R.O.W. SHALL BE CONSTRUCTED OUT AND AROUND THE END OF ALL EXISTING CULVERTS AND HEADWALLS.
- UNDERGROUND UTILITIES INSTALLED INSIDE STATE RIGHT-OF-WAY SHALL BE LOCATED WITHIN 3-5 FEET FROM THE EDGE OF THE RIGHT-OF-WAY UNLESS OTHERWISE SHOWN ON THE PLANS.
- UNDERGROUND UTILITIES SHOWN MORE THAN 5 FEET FROM THE EDGE OF THE RIGHT-OF-WAY SHALL BE INSTALLED WITH A MINIMUM DEPTH OF COVER OF 42 INCHES WITH PRIOR APPROVAL ON A CASE BY CASE BASIS.
- UNDERGROUND UTILITIES CROSSING ANY ENTRANCE OR CROSSROAD PAVED WITH CONCRETE OR ASPHALT SURFACE INSIDE STATE RIGHT-OF-WAY SHALL BE INSTALLED BY BORING UNLESS WRITTEN PERMISSION TO OPEN CUT IS OBTAINED FROM THE PROPERTY OWNER AND APPROVED BY THE KYTC DISTRICT PERMITS ENGINEER.
- UNDERGROUND UTILITIES SHALL NOT BE INSTALLED IN EMBANKMENT FILLS OR BETWEEN EDGE OF PAVEMENT AND DITCHLINE UNLESS SPECIFICALLY NOTED ON PERMITTED PLANS.
- FIRE HYDRANTS OR UTILITY SERVICE BOXES SHALL BE LOCATED WITHIN 2 FEET FROM THE EDGE OF RIGHT-OF-WAY LINE, OR OFF RIGHT-OF-WAY.

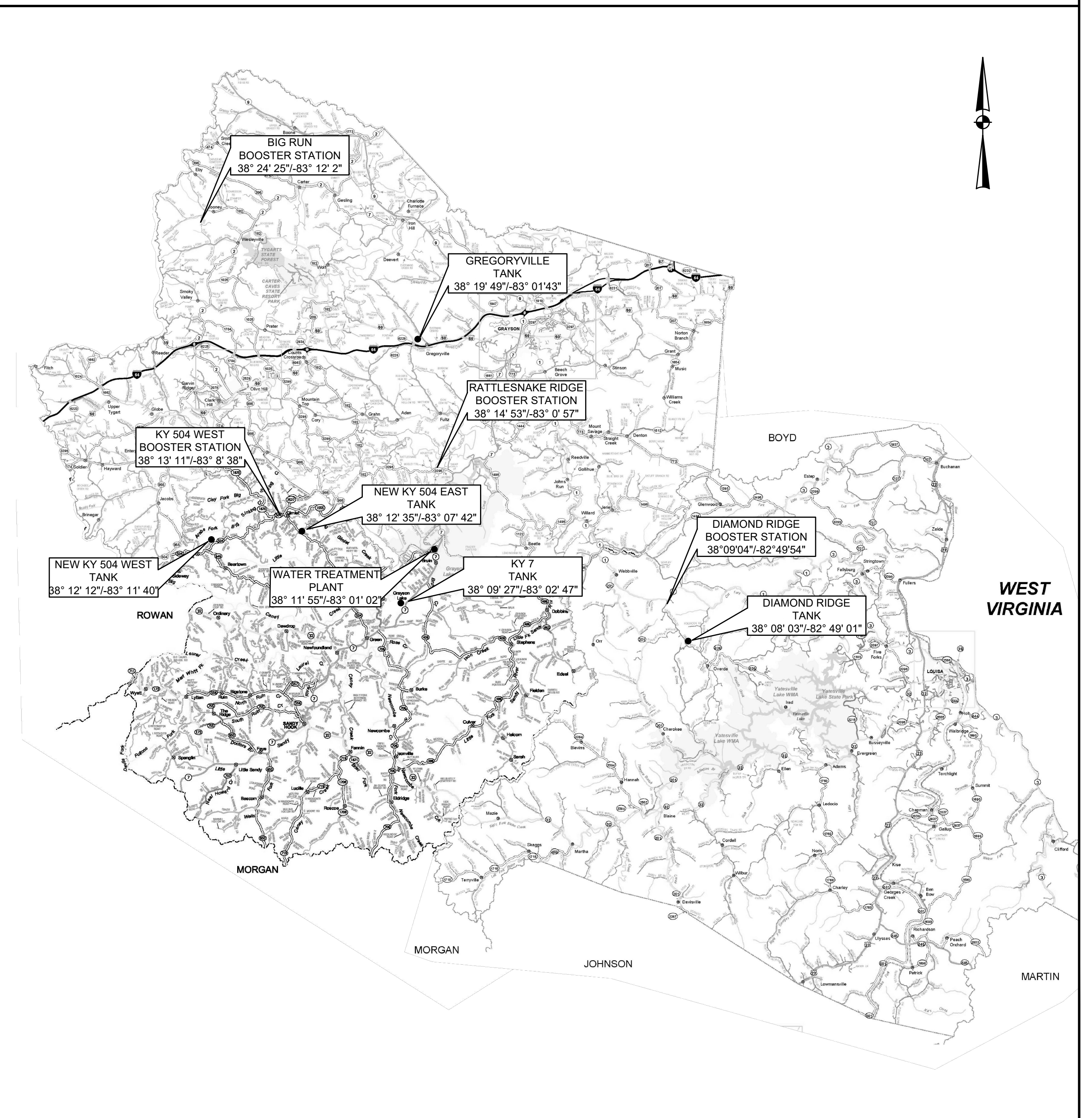
**INDEX OF DRAWINGS**

SHT. NO.	DESCRIPTION:
-	COVER
01	SHEET LOCATION MAP, INDEX OF DRAWINGS, UTILITIES and LEGEND
02	DIAMOND RIDGE BOOSTER STATION - SITE PLAN & PLAN VIEW
03	KY 504 WEST BOOSTER STATION - PLAN VIEWS PUMP SCHEDULE & ELECTRICAL SUPPLY
04	BIG RUN BOOSTER STATION
05	STANDARD DETAILS - PIPE



NO.	DATE	REVISIONS	BY
1	JANUARY 2020	REVISIONS PER FIELD NOTES, RECORD DRAWING REVISIONS	BKL

**SHEET LOCATION MAP**



**LEGEND**

EXISTING	PROPOSED	DESCRIPTION
PVC	PVC	POLYVINYL CHLORIDE
DIP	DIP	DUCTILE IRON PIPE
WM	WM	WATER MAIN
⊕	⊕	HYDRANT ASSEMBLY
⊕	⊕	FLUSHING/BLOWOFF ASSEMBLY
△	▲	AIR RELEASE VALVE (ARV)
⊗	⊗	GATE VALVE (GV)
---	---	WATER MAIN (WM)
---	---	SPECIAL CROSSING OR CASING PIPE
---	---	WATER MAIN TO BE ABANDONED
---	---	RIGHT-OF-WAY LINE
---	---	CENTERLINE
---	---	PROPERTY LINE
---	---	EASEMENT ACQUIRED

**UTILITIES**

**BUD - Before You Dig**  
**1-800-752-6007**  
**or DIAL 811**

**NOTE:**  
 IN ACCORDANCE WITH KENTUCKY STATE LAW, ANY ACTIVITY THAT RESULTS IN MOVEMENT, PLACEMENT, BORING, PROBING OR DIGGING IN OR ON THE GROUND SHALL CONTACT THE ONE CALL CENTER FOR UNDERGROUND UTILITY LOCATIONS.

**WATER DISTRICT**

RATTLESNAKE RIDGE WATER DISTRICT

PHONE: 606-474-7570  
 FAX: 606-474-8531

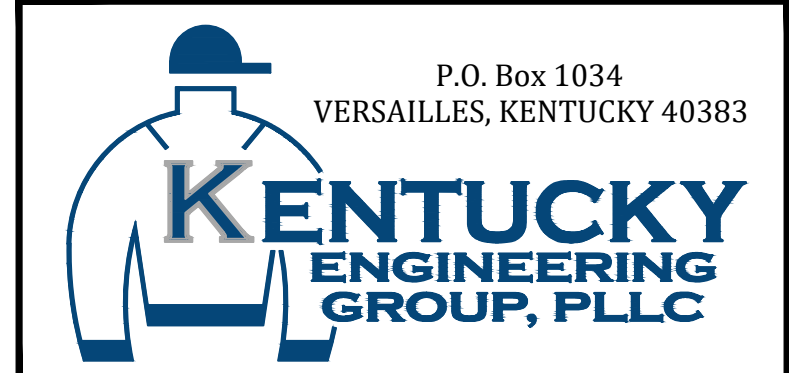
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NO.	DATE	REVISIONS	BY

DATE: NOVEMBER, 2017  
 PROJECT MGR: LRS  
 DRAWN BY: JAB  
 CHECKED BY: JCT  
 SCALE: AS NOTED  
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**PHASE 11 WATER SYSTEM IMPROVEMENTS**  
 FOR THE  
**RATTLESNAKE RIDGE WATER DISTRICT**

**CONTRACT 4 - BOOSTER STATION IMPROVEMENTS**

SHEET LOCATION MAP,  
 LEGEND, UTILITIES and  
 INDEX OF DRAWINGS

PROJECT NO.  
**15036**

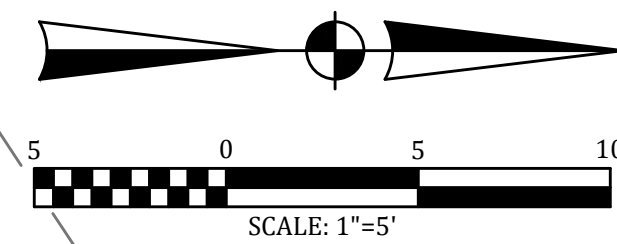
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PROJECT NO.  
**15036**

SHEET NO.  
**1**

BID DOCUMENTS

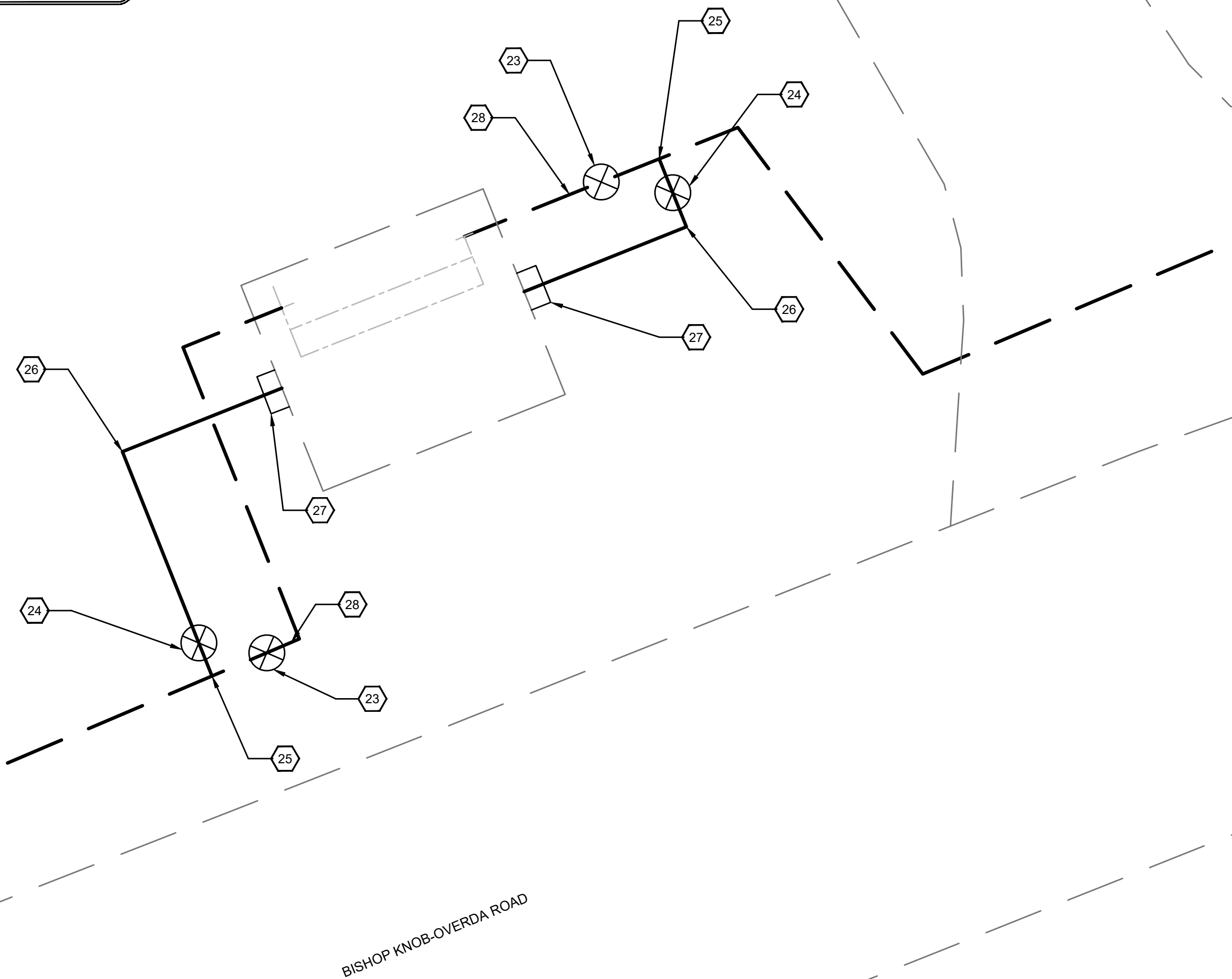
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BY: BLUEGRASS ENGINEERING, PLLC DATE: 01/20



**PLAN VIEW - YARD PIPING**

SCALE: 1" = 5'

**REFERENCE NOTES:**

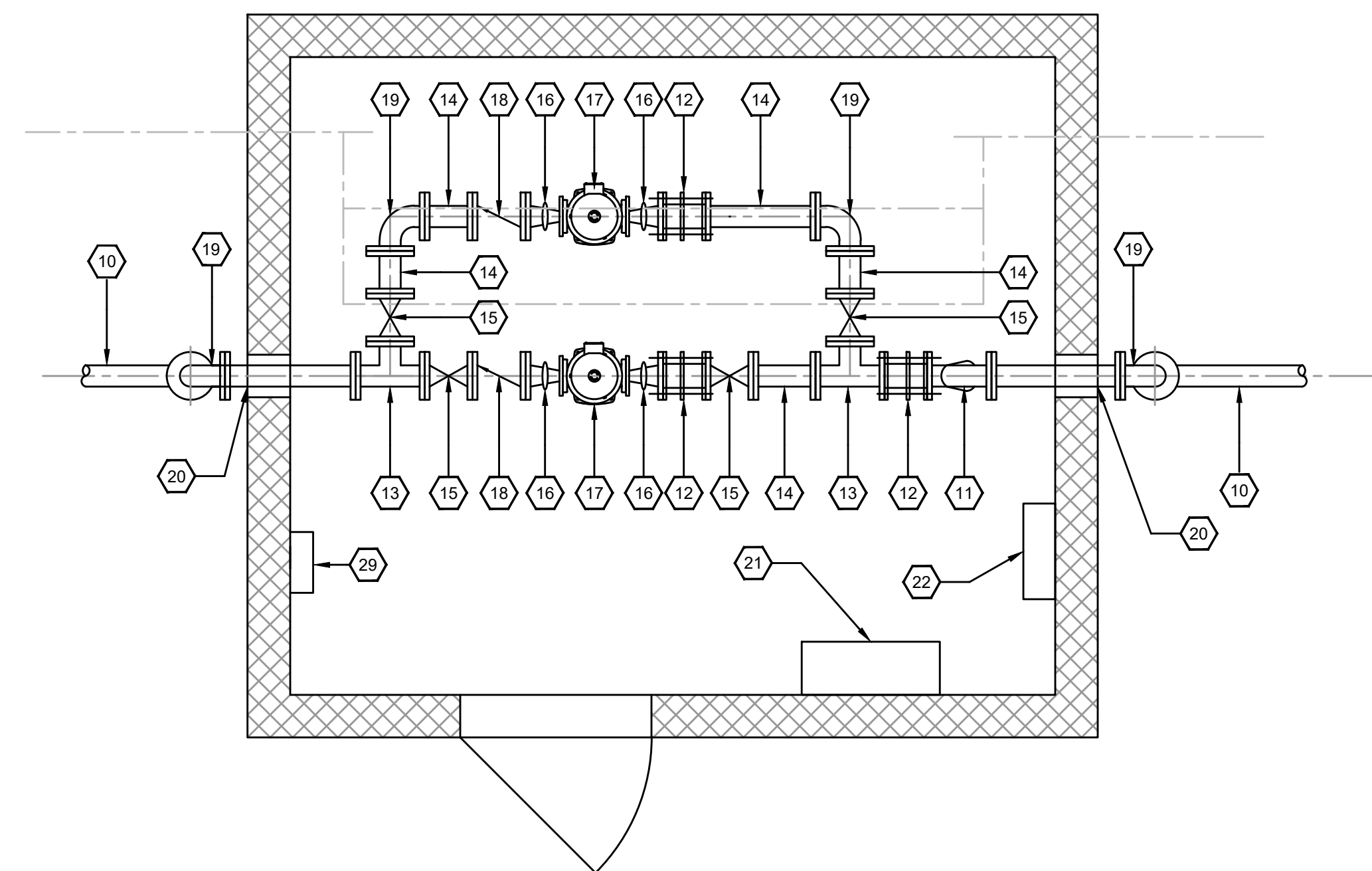
- EXISTING CMU BOOSTER STATION BUILDING
- EXISTING 4" PIPING
- EXISTING 2" PIPING
- EXISTING 2" BUTTERFLY VALVE
- EXISTING 2" STRAINER
- EXISTING PUMP #1
- EXISTING PUMP #2
- EXISTING CONTROL PANEL (TO BE REMOVED)
- EXISTING HEATER (TO BE REMOVED)
- NEW 4" D.I.P.
- NEW 4" D.I. FLG'D "Y" STRAINER
- NEW 4" D.I. FLG'D DISMANTLING JOINT
- NEW 4" D.I. FLG'D TEE
- NEW 4" D.I. FLG'D SPOOL
- NEW 4" D.I. FLG'D GATE VALVE W. HANDWHEEL
- NEW 4"x2" RUBBER ECCENTRIC REDUCER
- NEW CR 15-5 MULTI-STAGE CENTRIFUGAL PUMP BY GRUNDFOS
- NEW 4" D.I. FLG'D SWING SILENT CHECK VALVE
- NEW 4" D.I. FLG'D 90° FITTING
- CORE EXISTING CMU WALL
- NEW CONTROL PANEL
- NEW RTU
- EXISTING 4" GATE VALVE & BOX
- NEW 4" GATE VALVE & BOX
- TIE INTO EXISTING 4" W.M.
- NEW 4" DR-18 W.M.
- INSULATED EXTERIOR CONTAINMENT
- CUT & CAP W. THRUST BLOCK
- 10 KW WALL MOUNTED HEATER
- 3" MAG METER W/ DIGITAL DISPLAY VERTICALLY INSTALLED ON NEW INLET LINE

**GENERAL NOTES:**

- NEW 4" D.I.P. SHALL ENTER BUILDING THROUGH THE EXISTING CMU WALL. OPENING SHALL BE WATER TIGHT & A DOGHOUSE STRUCTURE SHALL BE UTILIZED WITH INSULATION TO PROTECT AGAINST FREEZING.
- EXISTING ELECTRICAL PANEL, CONTROL PANEL, RTU & ANTENNA SHALL REMAIN THE PROPERTY OF OWNER.
- BOOSTER STATION SHALL BE KEPT IN OPERATION DURING ALL CONSTRUCTION ACTIVITIES.
- ALL PIPING SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE & FEDERAL LAWS, IF OWNER DOES NOT TAKE POSSESSION
- ø OF NEW PIPING IS 26" FROM THE F.F.E.
- CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF A NEW RTU AT THE DIAMOND RIDGE TANK. (SEE STANDARD DETAIL SHEET 05)

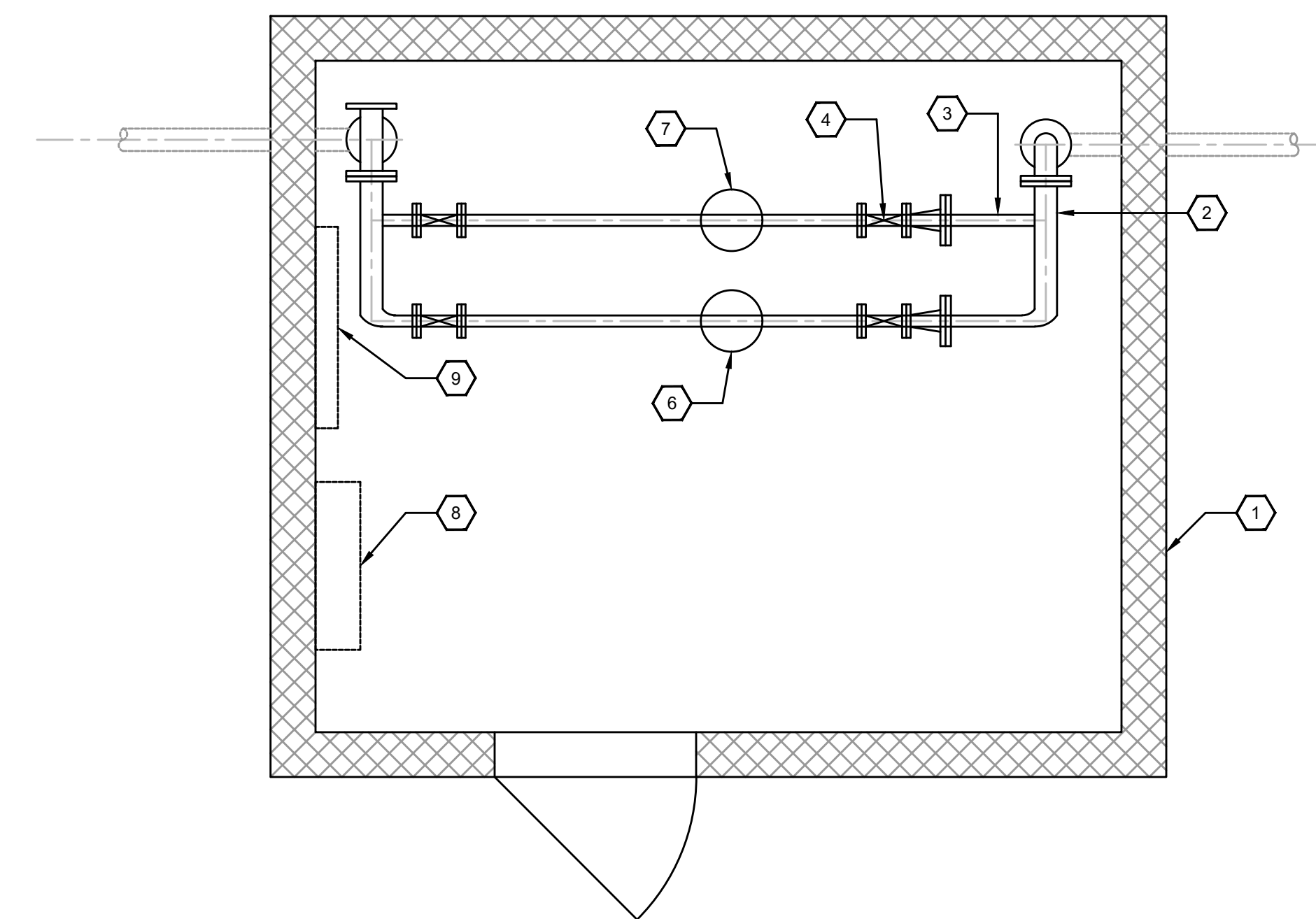
**SEQUENCE OF WORK:**

- WATER SERVICE MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.
- PRIOR TO CONTRACTOR BEGINNING ANY CONSTRUCTION ACTIVITIES THEY SHOULD VERIFY THE EXISTING PIPE SIZE, MATERIAL & LOCATION. NO RESTOCKING FEES WILL BE PAID FOR NON-VERIFIED PIPE.
- INSTALL NEW CONTROL PANEL, VFD, HEATER, RTU & ANTENNA FOR USE WITH NEW PUMPS & MOTORS.
- EXISTING PUMP #1 & ALL ASSOCIATED PIPING SHALL BE ISOLATED & THEN REMOVED.
- INSTALL NECESSARY EXTERIOR PIPING FOR NEW SUCTION & DISCHARGE PIPING. EXISTING CMU BLOCK WALL TO BE CORED BY CONTRACTOR TO ALLOW FOR ENTRANCE OF NEW 4" D.I.P.
- INSTALL INTERIOR 4" PIPING FOR NEW PUMP #1, INCLUDING SUPPORTS. NEW 4" GATE VALVES SHALL BE USED AS ISOLATION BETWEEN PUMP #1 & #2 PIPING.
- ONCE THE NEW PUMP #1 HAS BEEN PLACED IN SERVICE & ACCEPTED BY OWNER & ENGINEER, THEN EXISTING PUMP #2 & ASSOCIATED PIPING SHALL BE REMOVED.



**PLAN VIEW - NEW PIPING**

SCALE: 1/2" = 1'-0"



**PLAN VIEW - EXISTING PIPING**

SCALE: 1/2" = 1'-0"

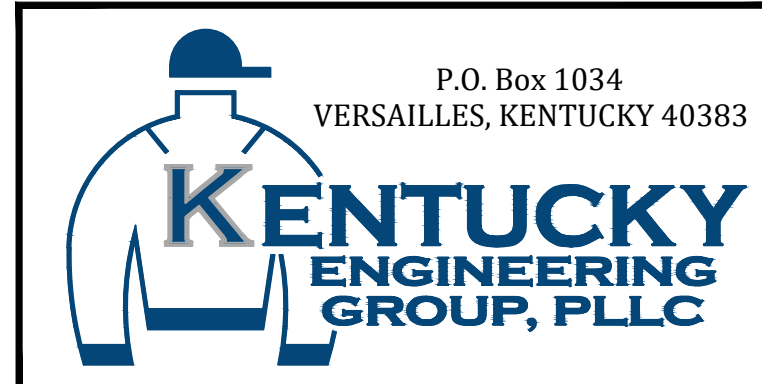
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NO.	DATE	REVISIONS	BY

DATE:	NOVEMBER, 2017
PROJECT MGR:	LRS
DRAWN BY:	JAB
CHECKED BY:	JCT
SCALE:	AS NOTED
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P.O. Box 1034  
VERSAILLES, KENTUCKY 40383

**PHASE 11 WATER SYSTEM IMPROVEMENTS**  
FOR THE  
RATTLESNAKE RIDGE WATER DISTRICT

**CONTRACT 4 - BOOSTER STATION IMPROVEMENTS**

DIAMOND RIDGE BOOSTER STATION  
SITE PLAN

PROJECT NO.  
**15036**

SHEET NO.  
**02**

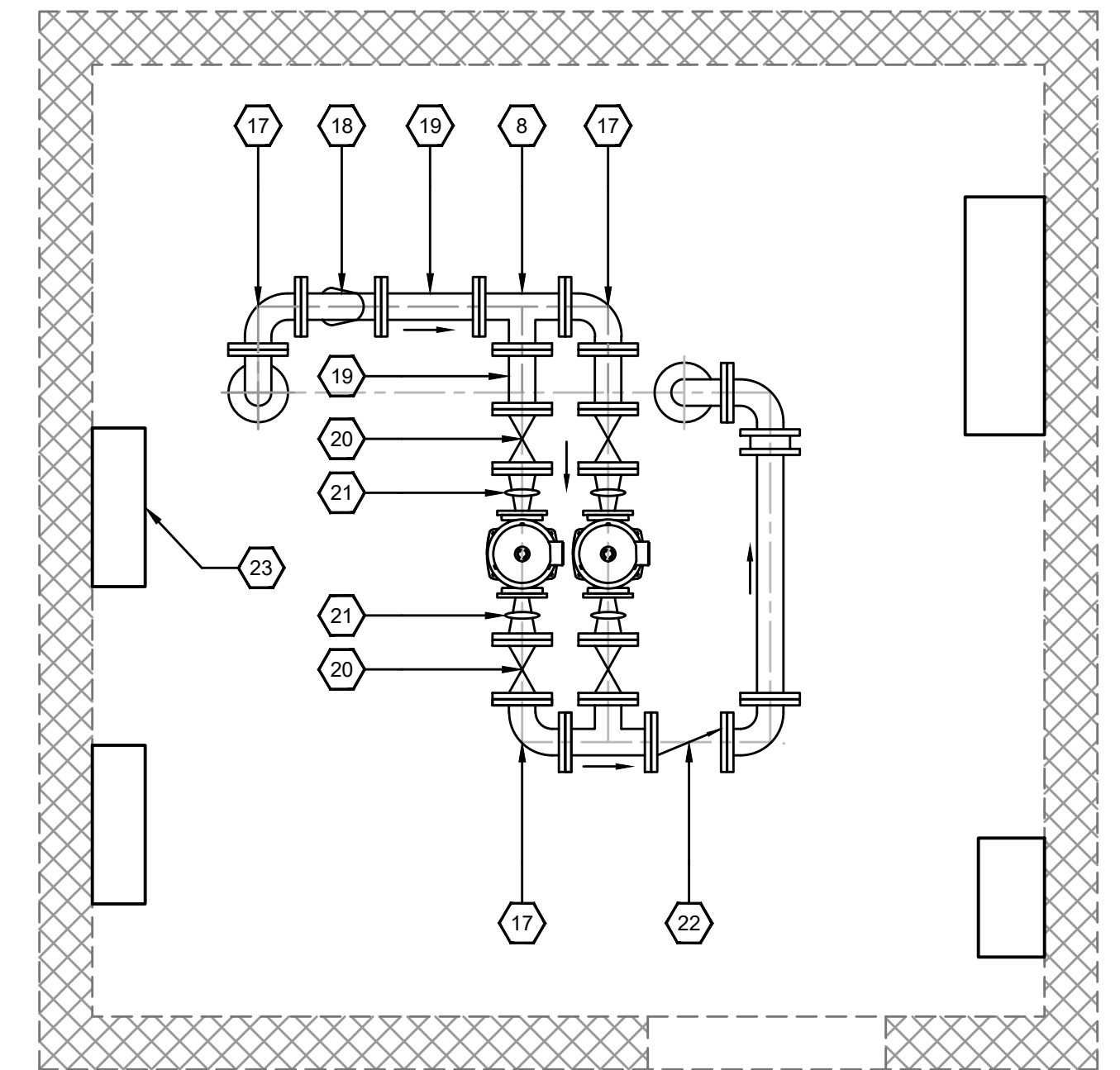
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PUMP SCHEDULE										
BOOSTER STATION NAME	PUMP #	PUMP MNFR	MODEL #	OPERATING FLOW RATE (GPM)	OPERATING TDH (FEET)	SHUTOFF HEAD	RPM	HORSEPOWER	PHASE	VOLTAGE
DIAMOND RIDGE	1	GRUNDFOS	CR15-5	90	254	330	3450	10	1	230
	2	GRUNDFOS	CR-15-5	90	254	330	3450	10	1	230
BIG RUN	1	GRUNDFOS	CR3-11	20	200	345	3450	2	1	240
	2	GRUNDFOS	CR3-11	20	200	345	3450	2	1	240
RATTLESNAKE RIDGE	1	GRUNDFOS	CR32-4-2	150	250	330	3450	15	1	230
	2	GRUNDFOS	CR32-4-2	150	250	330	3450	15	1	230
KY RT 504	1	GRUNDFOS	CR20-6	111	315	345	3450	15	3	480
	2	GRUNDFOS	CR20-6	111	315	345	3450	15	3	480

- NEW DANGFOSS VFD, SINGLE PHASE TO THREE PHASE 230 HP W/ 100 AMP BREAKER IN DISCONNECT BOX; CONDUIT, WIRING, TWO PRESSURE TRANSMITTERS, 2 PRESSURE GAUGES, AND LOW SUCTION PRESSURE CONTROL.

### REFERENCE NOTES:

- EXISTING CMU BOOSTER STATION BUILDING
- CONTROL PANEL
- DISCONNECT
- RTU PANEL
- EXISTING 4" 90° D.I. FLG'D FITTING
- EXISTING 4" BUTTERFLY VALVE
- EXISTING 4" D.I. SPOOL
- EXISTING 4" D.I. FLG'D TEE
- EXISTING 4" D.I. BLIND FLANGE
- EXISTING 4"x2" FLANGE ADAPTER
- EXISTING 2" BRASS BALL VALVE THREADED
- EXISTING 2" THREADED PIPE
- EXISTING PUMP #1
- EXISTING PUMP #2
- EXISTING 2" CHECK VALVE
- EXISTING 4" SWING CHECK VALVE FLG'D
- NEW 4" D.I. FLG'D 90° FITTING
- NEW 4" D.I. FLG'D "Y" STRAINER
- NEW 4" D.I. FLG'D SPOOL
- NEW 4" D.I. FLG'D GATE VALVE W. HANDWHEEL
- NEW 4"x2" RUBBER ECCENTRIC REDUCER
- NEW 4" D.I. FLG'D SWING SILENT CHECK VALVE
- NEW VFD CONTROLS

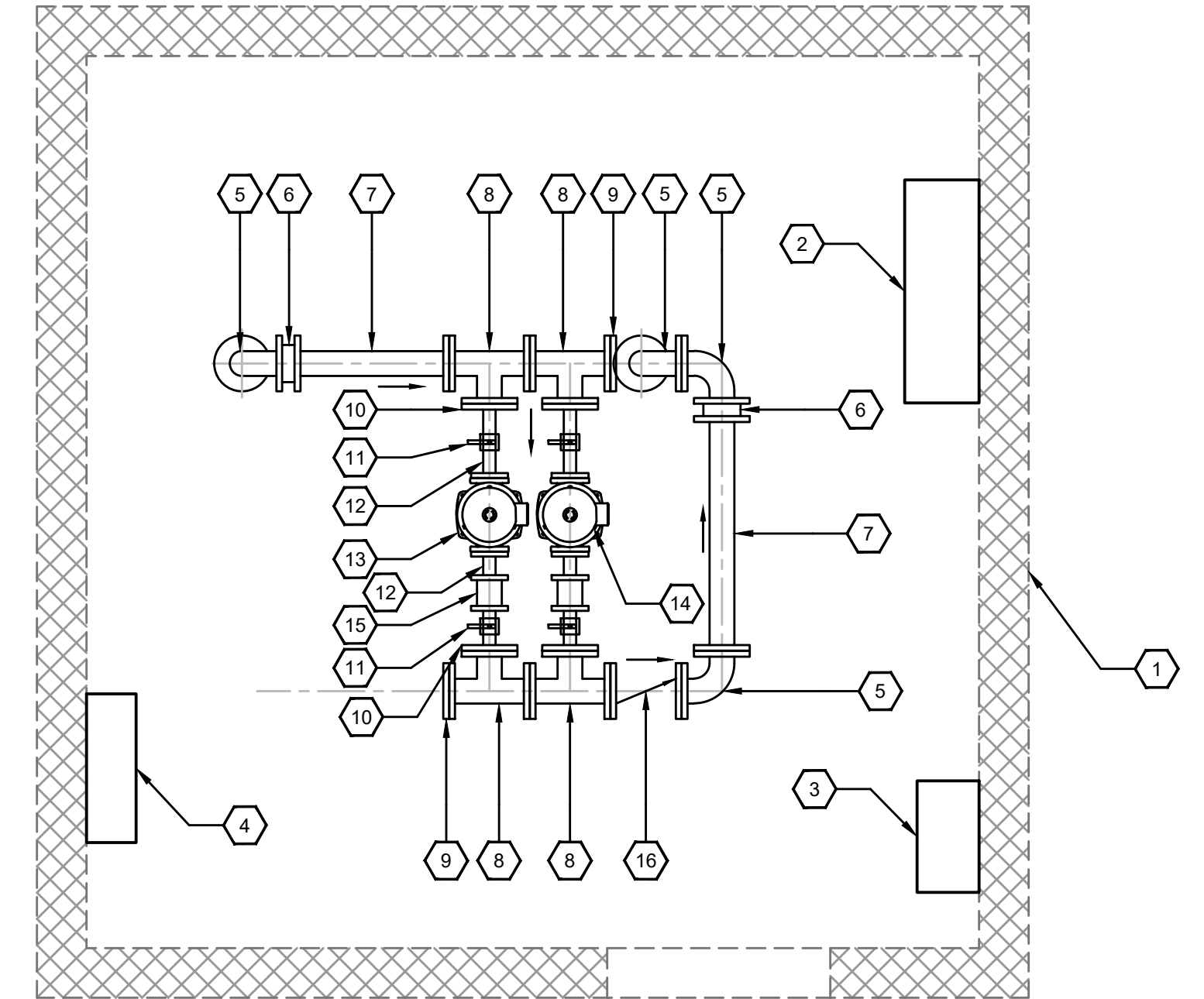


PLAN VIEW - NEW PIPING

SCALE: 1/2" = 1'-0"

### GENERAL NOTES:

- SERVICE TO ALL EXISTING CUSTOMERS MUST BE MAINTAINED AT ALL TIMES. IF A TEMPORARY SUSPENSION OF SERVICE IS REQUIRED, CONTRACTOR SHALL NOTIFY OWNER & ENGINEER IN WRITING 48 HOURS PRIOR.
- EXISTING ELECTRICAL PANEL, CONTROL PANEL, RTU & ANTENNA SHALL REMAIN AT CURRENT LOCATION.
- EXISTING 90° 4" FITTING SHALL BE ROTATED 90° TO MEET NEW SUCTION PIPING.
- CONTRACTOR SHALL REPLACE ALL BOLTS, NUTS & GASKETS.
- ALL EXISTING PIPING TO REMAIN IN SERVICE SHALL BE FIELD PAINTED IN ACCORDANCE WITH SPECIFICATION.
- ALL EXISTING PIPING THAT IS REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE & FEDERAL LAWS.



PLAN VIEW - EXISTING PIPING

SCALE: 1/2" = 1'-0"

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1	JANUARY 2020	REVISIONS PER FIELD NOTES, RECORD DRAWING REVISIONS	BKL

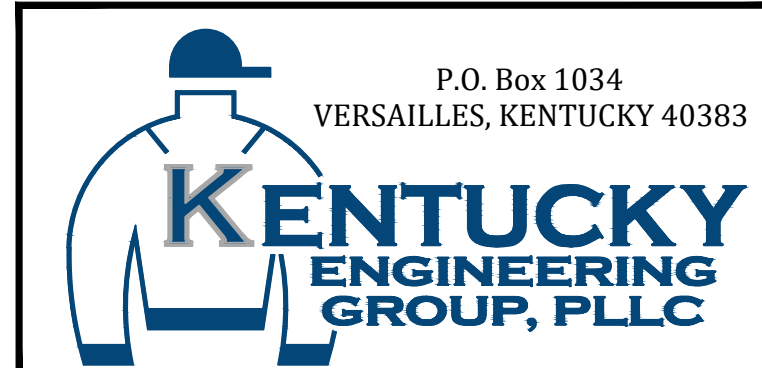
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NO.	DATE	REVISIONS	BY

DATE:	NOVEMBER, 2017
PROJECT MGR:	LRS
DRAWN BY:	JAB
CHECKED BY:	JCT
SCALE:	AS NOTED
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PHASE 11 WATER SYSTEM IMPROVEMENTS  
FOR THE RATTLESNAKE RIDGE WATER DISTRICT

CONTRACT 4 - BOOSTER STATION IMPROVEMENTS  
KY 504 WEST BOOSTER STATION

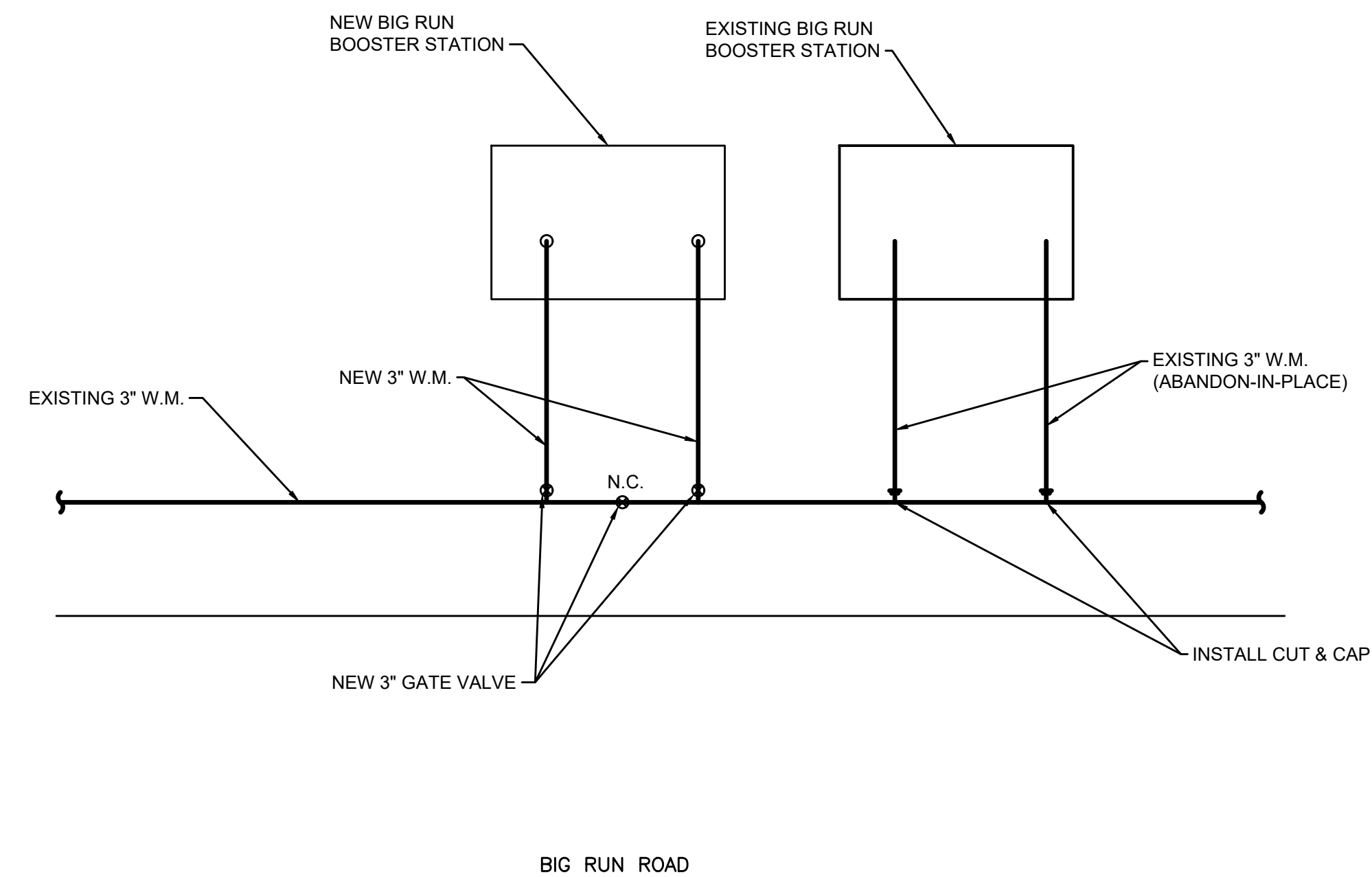
PROJECT NO.  
15036

SHEET NO.  
03

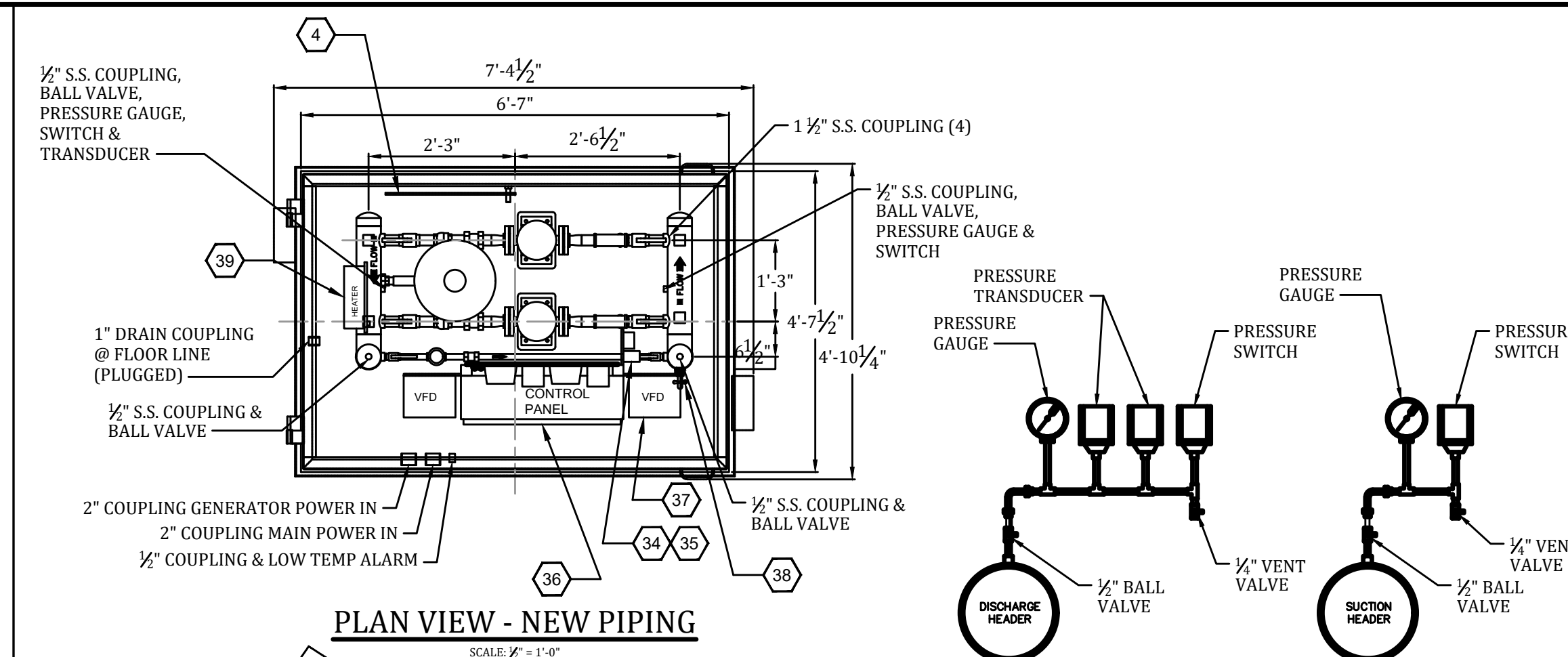
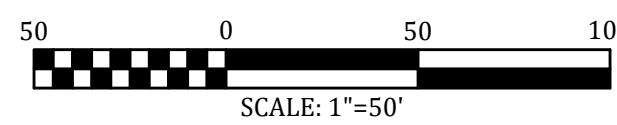
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15036

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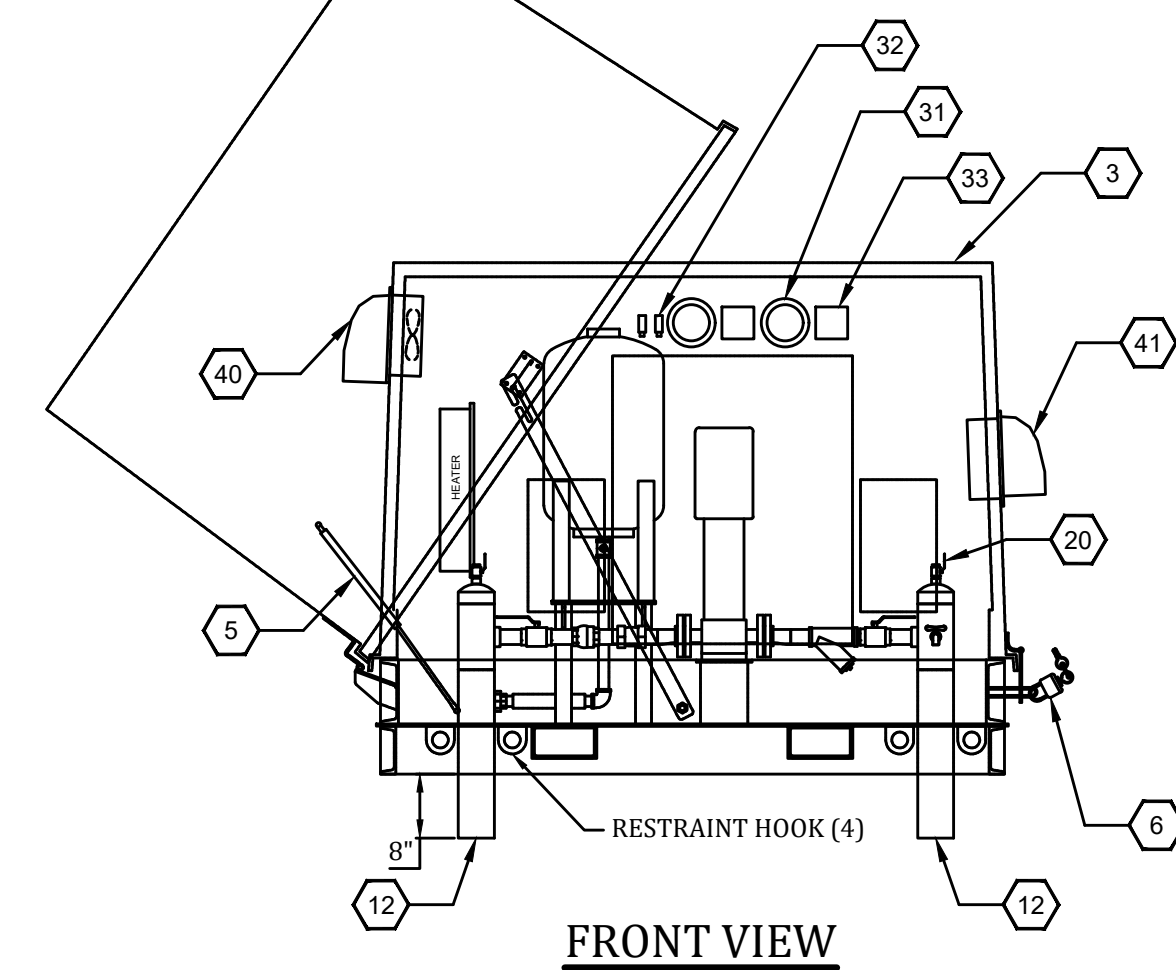
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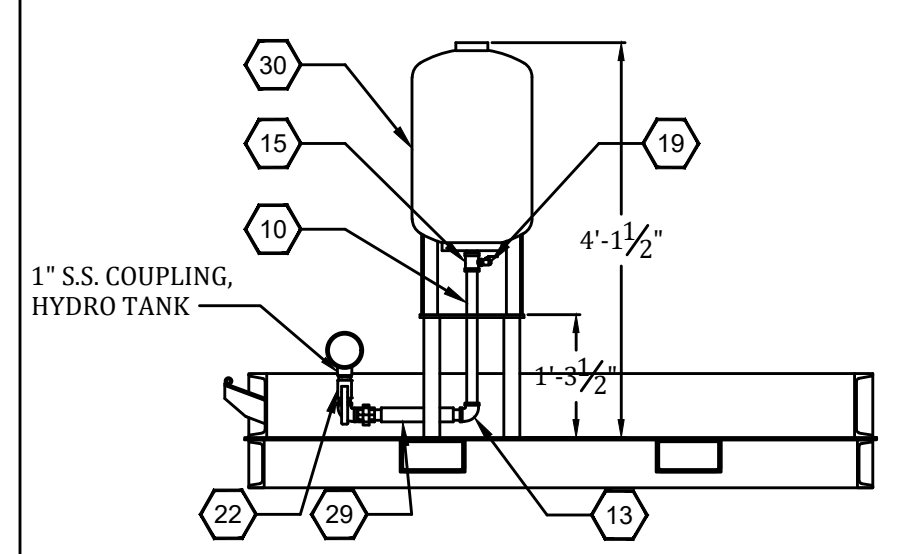
**SITE PLAN - BIG RUN BOOSTER STATION**  
SCALE: 1"=50'



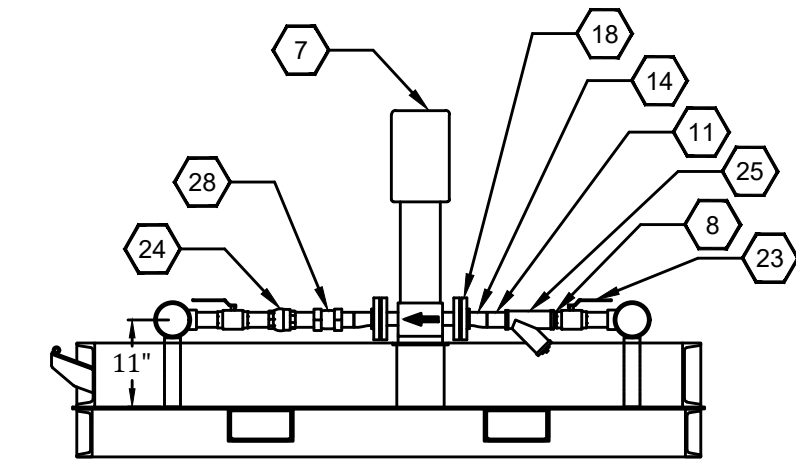
**PLAN VIEW - NEW PIPING**  
SCALE: 1/2"=1'-0"



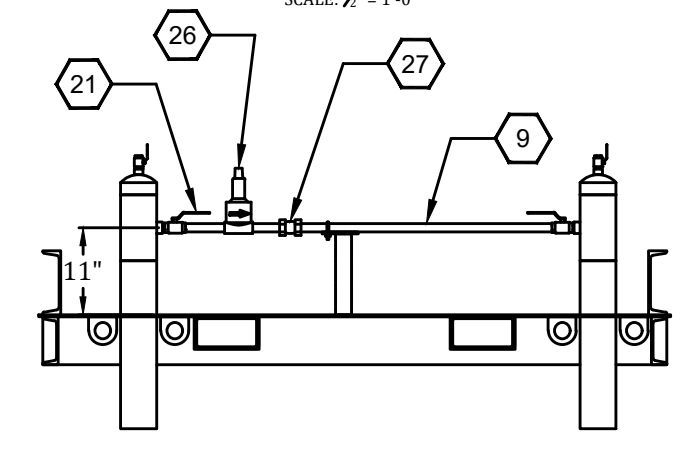
**FRONT VIEW**  
SCALE: 1/2"=1'-0"



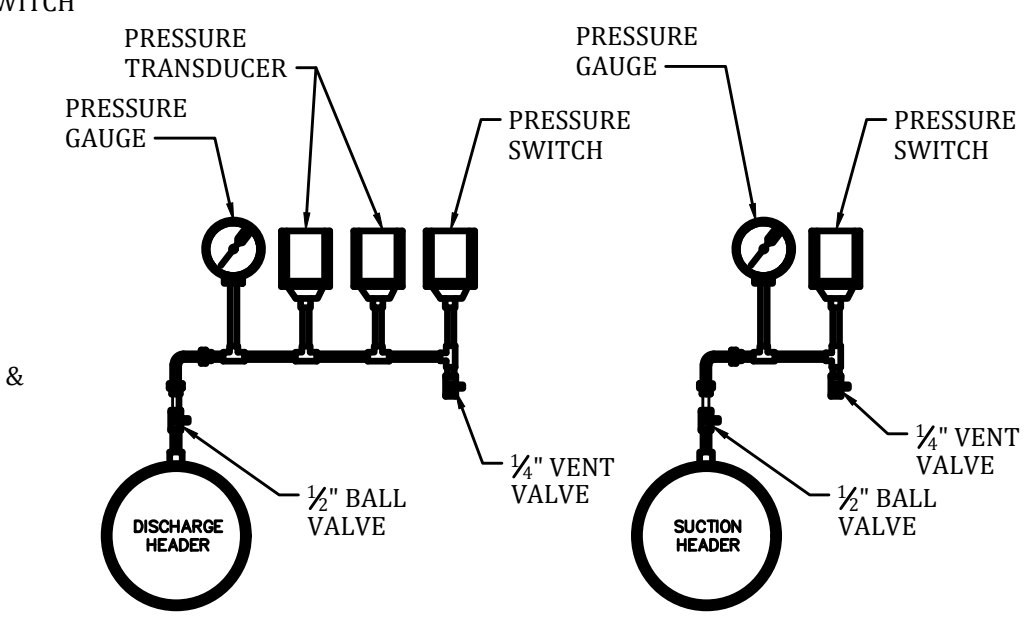
**HYDRO TANK DETAIL**  
SCALE: 1/2"=1'-0"



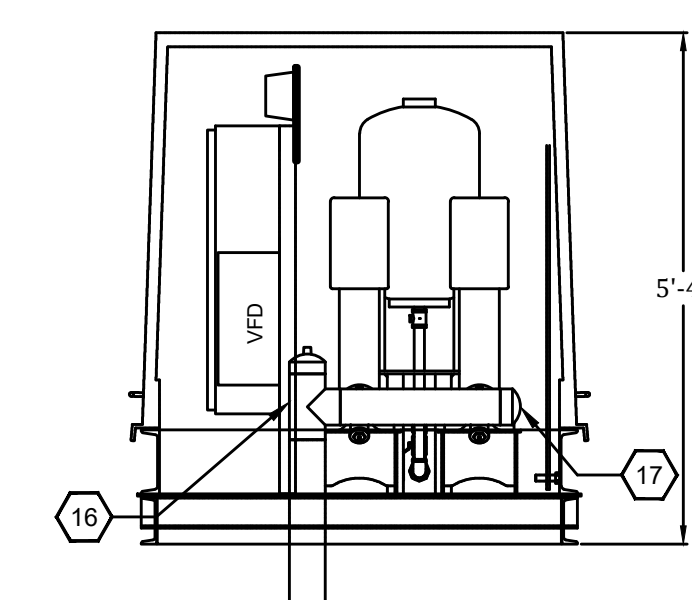
**PUMP & PIPING DETAIL**  
SCALE: 1/2"=1'-0"



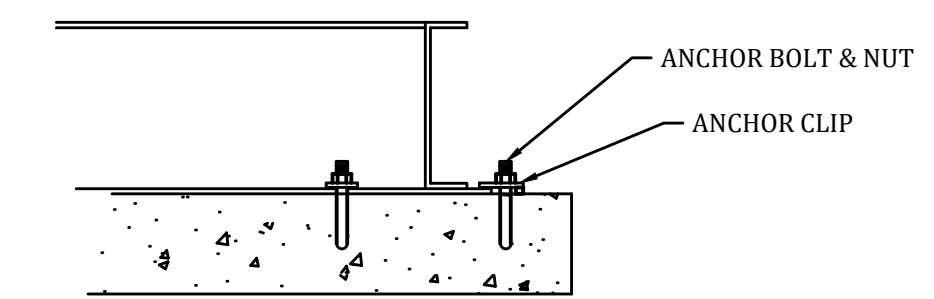
**PRESSURE RELIEF DETAIL**  
SCALE: 1/2"=1'-0"



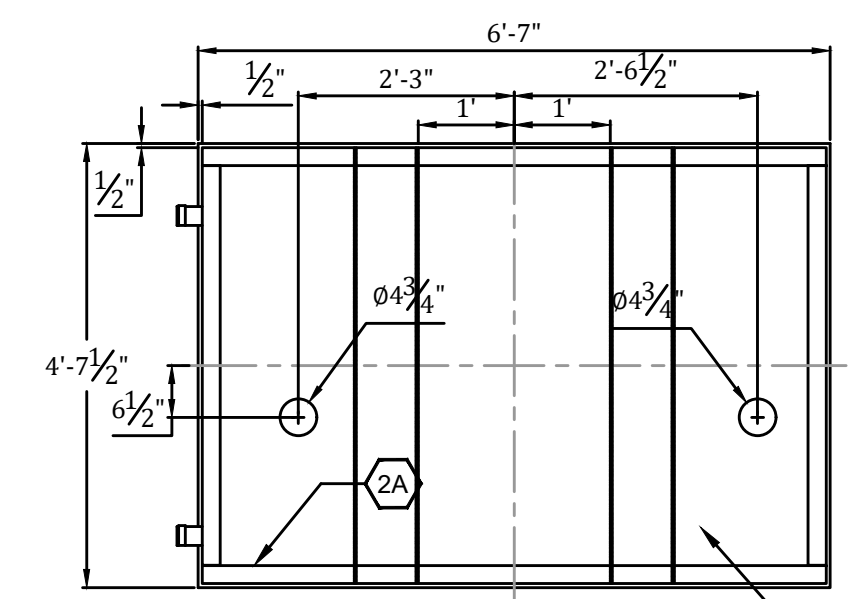
**DETAIL - PRESSURE GAUGE**  
NOT TO SCALE



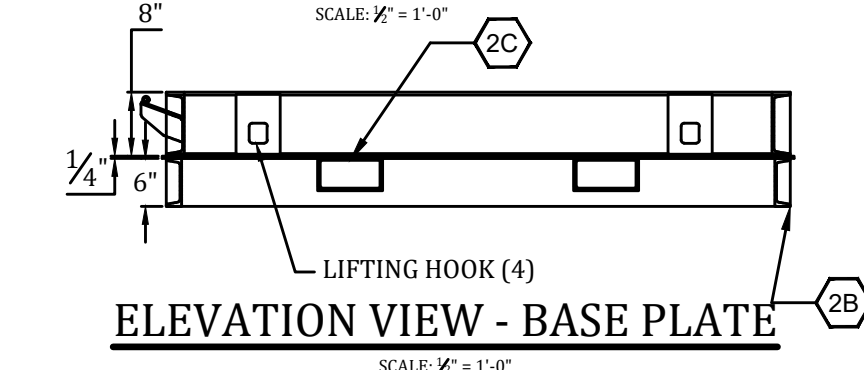
**END VIEW**  
SCALE: 1/2"=1'-0"



**DETAIL - ANCHOR**  
NOT TO SCALE



**PLAN VIEW - BASE PLATE**  
SCALE: 1/2"=1'-0"



**ELEVATION VIEW - BASE PLATE**  
SCALE: 1/2"=1'-0"

**REFERENCE NOTES:**

1. BASE PLATE, 1/2" A36
- 2A. CHANNEL, C8x11.5#
- 2B. CHANNEL, C6x8.2#
- 2C. TUBE 1/2"x4x8"
3. ENCLOSURE, FIBERGLASS HINGED, SMOOTH WHITE SURFACE.
4. HOLD OPEN ARM DEVICE
5. AIR CYLINDER LIFT ASSIST
6. LOCK HASP & PADLOCK
7. PUMP GRUNDFOS CR3-11, 2 HP
8. CLOSE NIPPLE, 1 1/2" 304 S.S.
9. PIPE 3/4" SCH 40, 304 S.S.
10. PIPE 1" SCH 40, 304 S.S.
11. PIPE 1 1/2" SCH 40, 304 S.S.
12. PIPE 4" SCH 40, 304 S.S.
13. ELBOW, 1x1" THREADED, 304 S.S.
14. REDUCER 1.5x1.25" SCH 40, 304 S.S.
15. TEE, 1x1x1/2" THREADED, 304 S.S.
16. TEE, 4x4x4" SCH 40, 304 S.S.
17. WELD CAP, 4" SCH 40, 304 S.S.
18. FLANGE, 1.25" 300# ANSI, 304 S.S.
19. VALVE, 1/2" BALL, HAMMOND, 304 S.S.
20. VALVE, 1/2" BALL, HAMMOND, 304 S.S.
21. VALVE, 3/4" BALL, HAMMOND, 304 S.S.
22. VALVE, 1" BALL, HAMMOND, 304 S.S.
23. VALVE, 1 1/2" BALL, HAMMOND, 304 S.S.
24. VALVE, 1 1/2" CHECK, NIBCO, 304 S.S.
25. STRAINER, 1 1/2", METRAFLEX, 304 S.S.
26. VALVE, 1/2" CLA-VAL 55F, PRESSURE RELIEF VALVE, 304 S.S.
27. COUPLING, 1/2" DRESSER 65, 304 S.S.
28. COUPLING, 1 1/2" DRESSER 65, 304 S.S.
29. BRAIDED HOSE, 1"
30. HYDRO TANK, 16 GALLON AA TANKS FX60V
31. PRESSURE GAUGE, 4 1/2" DIAL
32. PRESSURE TRANSDUCER
33. PRESSURE SWITCH (SUCTION & DISCHARGE)
34. THERMOSTAT, LOW TEMP
35. THERMOSTAT, VENT FAN
36. CONTROL PANEL
37. VARIABLE FREQUENCY DRIVES
38. HOSE BIB W. VACUUM BREAKER
39. HEATER, 3000W
40. EXHAUST FAN, 10" SHUTTER, DAYTON 1HLA1, RAIN HOOD
41. CENT INLET, 10" SHUTTER, DAYTON 2C517, RAIN HOOD
42. INSTALL NEW RTU & ANTENNA

**RECORD DRAWINGS**

TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF THIS SET OF RECORD DRAWING SHOWS THE REPORTED LOCATION OF THE WORK AND SIGNIFICANT CHANGES MADE DURING THE CONSTRUCTION PROCESS. THESE RECORD DOCUMENTS ARE BASED ON UNVERIFIED INFORMATION PROVIDED BY OTHER PARTIES WHICH WILL BE ASSUMED RELIABLE. THE DESIGN PROFESSIONAL CANNOT AND DOES NOT WARRANT THEIR ACCURACY.

BY: BLUEGRASS ENGINEERING, PLLC DATE: 01/20



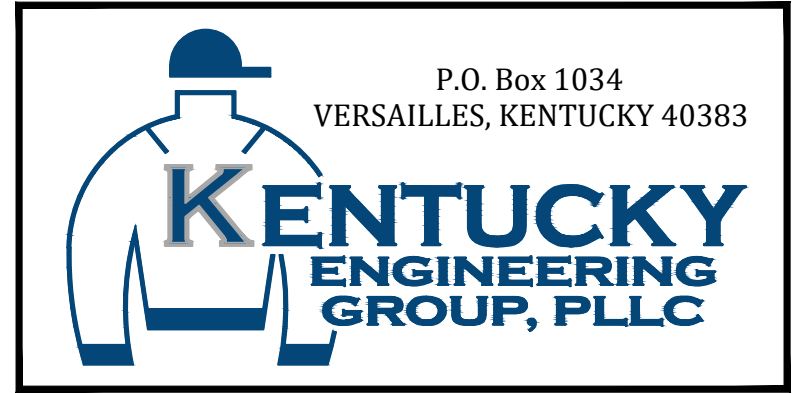
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**PHASE 11 WATER SYSTEM IMPROVEMENTS**  
FOR THE  
RATTLESNAKE RIDGE WATER DISTRICT

**CONTRACT 4 - BOOSTER STATION IMPROVEMENTS**  
BIG RUN BOOSTER STATION IMPROVEMENTS

PROJECT NO.	15036
SHEET NO.	04

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