



J-U-B FAMILY OF COMPANIES

ADDENDUM NO. 2

Harper Ward Well Equipping Project

March 7, 2025

BEAR RIVER WATER
CONSERVANCY DISTRICT

Addendum No. 2 to the Plans, Contract Documents, and Specifications prepared by J U-B ENGINEERS, Inc. is hereby submitted for use in bid preparation and submittal. Contractor must acknowledge receipt of all Addenda on the Bid Form.

The following clarifications, additions, and/or deletions are hereby made part of the **Harper Ward Well Equipping Project** as fully and completely as if the same were entirely set forth in the Contract Documents and Specifications.

BID OPENING DATE

1. The bid opening date for the project has been changed to **Wednesday, March 26th @ 1:00pm**. This has been updated in the advertisement for the project.

LAST DAY FOR QUESTIONS AND FINAL ADDENDUM DATE

1. The last day for questions has been updated to **Wednesday, March 12th @ 5:00pm**.
2. The final addendum will be posted by **Friday, March 14th EOD**.

SPEC 33 12 20 WATER UTILITY DISTRIBUTION PUMPS

1. The pump has been changed to a **vertical turbine submersible multistage centrifugal pump and motor**. An updated specification reflecting those changes is attached with this addendum.
2. Other affected plans and specifications will be submitted in the future final addendum.

SHEET UPDATES (D-101, D-503)

1. The new pump will not require a water **pre-lube system** and has been **removed** from the plans.
 - a. Sheets D-101 and D-503 have been updated to show the removal of the 1½" water pre-lube line, motor control solenoid, flow switch, strap on meter, bypass line and fittings, and associated appurtenances.
 - b. The updated sheets D-101 and D-503 have been attached with this addendum.

QUESTIONS

1. For the purpose of securing the bid bond, what is the estimated budget for the project?
 - a. **\$1,145,668.00**
2. Is this project tax exempt?
 - a. **No**



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- 3. There isn't a line item on the bid schedule for Well Building Excavation. What item should that be included in?
 - a. **Include costs with Bid Item #10 "BUILDING CONCRETE & REINFORCING"**
- 4. There are details calling for some framing on the interior of the masonry, but no bid item provided on the schedule. Please provide.
 - a. **Include costs with Bid Item #16 "RIGID INSULATION"**
- 5. The top of footing elevation on sheet S101 is 6" different than what is shown on S301. Please clarify which elevation to use.
 - a. **Use elevations shown on S-301.**
- 6. There is a note on sheet C501 that calls for 10 mil vapor barrier under the generator slab. Will this be required?
 - a. **Yes, the vapor barrier will be required.**
- 7. I'm working on the VFDs and generator supply for this project and wanted to send you a written request for approval on provide Mitsubishi and/or Galt Electric variable frequency drives on the project.

We have a number of projects we have supplied all up and down the Wasatch front and surrounding states. I have attached some brochures and a photo of our work for reference. Please let me know if there are any other requirements you need for us to be approved.

- a. **The following VFD suppliers have been preliminary accepted for this project. It is the bidder's responsibility to ensure that all proposed equipment meets the requirements as set forth in the contract documents, specifications and plans, including BABA funding requirements. This acceptance does not qualify as final acceptance of equipment for the project, and will be subject to review during construction.**
 - i. **Schneider**
 - ii. **ABB**
 - iii. **Allen Bradley**
 - iv. **Mitsubishi**

ADDENDUM ATTACHMENTS:

- 1. Bid Advertisement
- 2. Specification 33 12 20 - Water Utility Distribution Pumps
- 3. Sheet D-101
- 4. Sheet D-503

ADVERTISEMENT FOR BIDS
BEAR RIVER WATER CONSERVANCY DISTRICT
BRIGHAM CITY, UTAH

General Notice

Bear River Water Conservancy District (Owner) is requesting Bids for the construction of the following Project: **Harper Ward Well Equipping**

Bids for the construction of the Project will be received at the BRWCD Offices located at **102 W Forest St, Brigham City, UT 84302**, until ~~Wednesday, March 5th~~ **Wednesday, March 26th at 1:00pm** local time. At that time the Bids received will be publicly opened and read.

The project consists of installing a CMU well house, interior well piping and equipment, well pump and motor in an existing well casing, HVAC system, electrical system, standby generator, buried piping, concrete work, site grading, and connection to existing piping.

The Project has a substantial completion date of **November 21, 2025** and final completion date of **December 12, 2025**.

Funding Requirements

This agreement is for services related to a project that is subject to the Build America, Buy America Act (BABAA) requirements under Title IX of the Infrastructure Investment and Jobs Act (“IIJA”), Pub. L. 177-58. Absent an approved waiver, all iron, steel, manufactured products, and construction materials used in this project must be produced in the United States, as further outlined by the Office of Management and Budget’s Memorandum M-22-11, Initial Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure, April 18, 2022.

Obtaining the Bidding Documents

Information and Bidding Documents for the Project can be found at the following designated website:
www.jub.com – Select “Plans” tab at top of page, Quest Number #9521588

The designated website will be updated periodically with addenda, lists of registered plan holders, reports, and other information relevant to submitting a Bid for the Project. All official notifications, addenda, and other Bidding Documents will be offered only through the designated website. Neither Owner nor Engineer will be responsible for Bidding Documents, including addenda, if any, obtained from sources other than the designated website.

Pre-bid Conference

A pre-bid conference for the Project will be held on **Wednesday, February 12, 2025 at 1:00pm** at the BRWCD Offices located at **102 W Forest St, Brigham City, UT 84302**. Attendance at the pre-bid conference is encouraged but not required. A site visit will be conducted following the pre-bid conference.

This Advertisement is issued by:

Owner: Bear River Water Conservancy District
By: Chance Baxter
Title: General Manager
Date: 1/31/2025

SECTION 33 12 20 WATER UTILITY DISTRIBUTION PUMPS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Vertical turbine submersible multistage centrifugal pump and motor

1.2 RELATED SECTIONS

- A. Section 01 22 00 – Measurement and Payment
- B. Section 01 33 00 – Submittal Procedures
- C. Section 01 40 00 – Quality Requirements
- D. Section 01 70 00 – Execution and Closeout Requirements
- E. Section 33 11 16 – Water Utility Distribution Piping
- F. Division 26 – Electrical

1.3 REFERENCES

- A. AWWA Standard E102 – Submersible Vertical Turbine Pumps
- B. AWWA Standard E103 – Horizontal Centrifugal and Vertical Line Shaft Pumps
- C. AWWA Standard C110 – Ductile Iron and Gray-Iron Fittings for Water
- D. ANME/ANSI B16.5 – Pipe Flanges and Flanged Fittings
- E. NEMA MG-1 Motor and Generators
- F. ANSI/HI 9.6.4 Rotodynamic Pumps for Vibration Measurements and Allowable Values
- G. ANSI/HI 9.6.6 Rotodynamic Pumps for Pump Piping
- H. ANSI/HI 9.8 Pump Intake Design
- I. ANSI/HI 14.6 Rotodynamic Pumps for Hydraulic Performance Acceptance Tests

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 33 00.
- B. Manufacturer’s Certificate: Certify that products meet or exceed specified requirements and are suitable for the intended use.

- C. Submit pump and motor performance and nameplate data, pump curves showing operating points with impeller trim, NPSH curve, submergence requirements, bhp, efficiencies, gravitational weight of the rotating parts, hydraulic down thrust during normal operation and at shut-off head, type and size of motor, size and dimensions of suction intake, and bearing life calculations.
- D. Submit pump and motor manufacturer and model number, number of pump stages, pump and motor size and dimensioning data, and motor protection and efficiency.
- E. Submit certified pump curve associated with a factory non-witness performance test showing that performance requirements are satisfied. Curves shall include flow, head, efficiency, net positive suction head (NPSH) required and brake horsepower. The curve from the performance test shall be approved by the Engineer prior to shipment. Certify that pump will perform in accordance with the submitted curve and data. The pump test acceptance grade shall be 1E as described in Table 14.6.3.4 of ANSI/HI 14.6-2011 Rotodynamic Pumps for Hydraulic Performance Acceptance Tests. The guarantee requirements for the test parameters, rate of flow and total head, are mandatory in ANSI/HI 14.6 Table 14.6.3.4 while power or efficiency are optional. Efficiency as a guarantee requirement at the same acceptance grade is hereby expressly required for this project.
- F. Submit a copy of this specification section, with addendum updates included, with each paragraph clearly marked to indicate specification compliance or marked to indicate requested deviations from specification requirements. If deviations from the specifications are indicated and, therefore requested by the Contractor, the submittal shall be accompanied by a detailed, written justification for each deviation. Failure to include a copy of the marked-up specification sections, along with justification for any requested deviations to the specification requirements, with the submittal shall be cause for rejection of the entire submittal with no further consideration. The Owner retains the right to reject any proposed deviations in favor of this specification as written.

1.5 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in the manufacturing of the pumps and motors specified in this section, with a minimum of ten (10) years documented experience.
- B. Install and operate pumps and motors in accordance with the manufacturer’s recommendations.
- C. Manufacturer will provide a factory trained representative to inspect and certify the installation and oversee the startup of the pumping equipment.
- D. Manufacturer: Provide vertical turbine and vertical in-line multistage pumps and motors meeting the requirements of this specification from one of the following, or an equal pre-approved prior to bid opening:
 - 1. Submersible Vertical Turbine

- a. Flowserve Corporation
 - b. National Pump
 - c. Peerless Pump
 - d. Simflo Pump
 - e. Xylem Goulds Pump
2. Vertical in-line multistage
- a. Grundfos

1.6 WARRANTY

- A. Warranty: Include coverage of all pump and motor system including but not limited to pump, motor, impellers, bearings, seals, wear plates, wear rings, and pump and motor shafts for a period of one (1) years from the date of the final pay request. Warranty shall cover any problems created from vibration, manufacturing defects, improper installation, or other defective work.

1.7 PERFORMANCE REQUIREMENTS

- A. Submit under provisions of Section 01 33 00.
- B. Vertical Turbine Multistage Pump and Submersible Motor.
1. Design Duty Point

Design flow capacity, gpm	1,500
Total Dynamic Head (TDH), ft	375
Estimated Pumping Water Level, ft	350
Minimum shut off head, ft	500
Maximum NPSH (absolute) required at design point, ft	33
Minimum pump efficiency, %	76
Maximum nominal pump speed, rpm	3,600
Number of pump stages	2-4
Maximum motor size, BHP	200

2. Pump Dimensions

Pump Setting (from discharge head flange to pump inlet), ft	395
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Maximum column diameter, in.	8
Min. wall thickness of steel column pipe, in.	0.37
Discharge flange size, in.	8
Discharge flange rating ANSI	150#
Minimum line shaft diameter, in.	N/A
Maximum bowl and cable guard dimension, in.	9.85

3. Operating Conditions

Operational Design	Variable speed
Ambient environment (well house)	Indoors, ventilated and heated (40°F – 104°F)
Fluid service	Culinary water
Fluid temperature, degrees F	45 to 65
Project site elevation	4603 ft

C. Vertical In-Line Multistage Pump and Motor – Chlorine Booster

1. Grundfos CR 1-7, or pre-approved equal
2. Design Point

Design flow capacity, gpm	9
Total Dynamic Head (TDH), ft	155
Minimum shut off head, ft	200
Maximum NPSH (absolute) required at design point, ft	5
Minimum pump efficiency, %	47

Maximum nominal pump speed, rpm	3600
Number of pump stages	6 - 8
Maximum motor size, BHP	1

3. Operating Conditions

Operational Design	Constant speed
Ambient environment	Indoors, ventilated and heated (40°F – 104°F)
Fluid service	Culinary water
Fluid temperature, degrees F	45 to 65
Project site elevation	4603 ft

D. Vertical In-Line Multistage Pump and Motor – Hydropneumatic system

1. Grundfos CR 3-7, or pre-approved equal
2. Design Point

Design flow capacity, gpm	16
Total Dynamic Head (TDH), ft	160
Minimum shut off head, ft	220
Maximum NPSH (absolute) required at design point, ft	7
Minimum pump efficiency, %	60
Maximum nominal pump speed, rpm	3600
Number of pump stages	6 - 8
Maximum motor size, BHP	1.5

3. Operating Conditions

Operational Design	Constant speed
Ambient environment	Indoors, ventilated and heated (40°F – 104°F)
Fluid service	Culinary water
Fluid temperature, degrees F	45 to 65
Project site elevation	4603 ft

PART 2 PRODUCTS

2.1 VERTICAL TURBINE SUBMERSIBLE MULTISTAGE PUMP AND MOTOR

- A. Deep well vertical turbine pump with a bowl assembly and submersible motor as specified. The pump shall be designed and constructed to operate satisfactorily with a reasonable service life when installed in a typical submersible pump deep well application. The pump shall be produced by a manufacturer regularly engaged in production and marketing of submersible pumps. The pump shall be of new construction and shall have factory trained service available within one hundred (100) miles of the project.
- B. The pump shall meet the requirements of NSF/ANSI 61.
- C. Unless otherwise stated herein, the pump shall in all respects conform to AWWA Standard E102 – Submersible Vertical Turbine Pumps.
- D. Bowl assembly
 - 1. Each stage bowl shall be the flanged type constructed of close grain, ASTM A48 Class 30 cast iron, ductile iron ASTM A536, or 304 stainless steel, free from blow holes, sand holes and all faults, accurately machined and fitted to close tolerances.
 - 2. The pump bowls shall be capable of withstanding the greater of a hydrostatic pressure equal to twice the pressure at rated flow or 1.5 times the shut-off head.
 - 3. The pump bowls shall have enamel lined waterways.
- E. Pump shaft
 - 1. The pump shaft shall be Type 416 stainless steel, turned, ground, and polished. It shall be supported by bronze bearings above and below each impeller and meet sizing requirements of AWWA E102.
- F. Impeller

1. ASTM B584 bronze, enclosed type. Free from defects and accurately cast, machined, balanced, and filed for optimum performance and minimum vibration, balanced to grade G6.3 of ISO 1940 as minimum. Securely fastened to the bowl shaft with taper locks.
- G. Discharge Column
1. The discharge column shall be ASTM A53 standard wall Schedule 40 steel pipe. Thread shall be a .75" taper National Pipe Thread.
- H. Check Valve
1. Ductile iron construction with bronze break off plug located on the column pipe as recommended by the pump manufacturer.
 2. For column lengths over 300 feet intermediate check valves shall be placed at intervals no greater than 200 feet. Intermediate check valves shall be of ductile iron construction and shall include a bronze break off plug.
- I. Motor Shroud
1. Provide 416 stainless steel motor shroud of size recommended by motor manufacturer for the design flow to ensure proper cooling velocity past the motor. Motor shroud may need to be custom fabricated. Maximum allowable outside diameter is 11.0".
- J. Sounder Tube
1. One (1) PVC sounder tubes shall be installed with the column. Each sounder tube shall be a 3/4" flush thread PVC pipe. Threads shall conform to ASTM F480. The sounder tube shall extend from the top of the pump assembly to the surface. The bottom of the sounder tube shall be capped. The bottom 10 feet of the sounder tube(s) shall be slotted. Slot size shall be .020", and conform to ASTM F-480. The sounder tube(s) shall be strapped to each discharge column section with stainless steel bands.
- K. Discharge Elbow
1. A fabricated steel discharge elbow shall be provided. Discharge elbow shall be constructed to support 150% of the weight of all items in the well. Tapping for electrical wire, instrumentation, sounder tube and venting shall be provided. A screened vent cap shall be included. The discharge head shall have lifting eyes. The discharge head shall rest on a sole plate welded to the well casing. A .25" neoprene gasket and cadmium plated bolts w/ nuts shall seal the discharge elbow to the sole plate. If the well casing below the discharge head is to be encased in concrete the sole plate shall have tapped bolt holes. The discharge outlet shall be as shown in the drawings and compatible with an ANSI 150# 16.5 flange.
- L. Other Pump Materials shall meet the following:

Item	Material	ASTM Conformance Requirement
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Shaft coupling	Stainless Steel	A582-S41600
Suction adapter	Ductile Iron	A536 Gr 65-4-12
Intermediate bowl bearing	Bronze	B584 C89835
Impeller lock collet	Steel	A108
Upthrust collar	Polyethylene	
Suction bearing	Bronze	B505 or B584
Discharge bowl bearing	Bronze	B584 C89835
Suction strainer	Stainless Steel	A240 Type 316 or 304
Sand collar	Bronze	B505 or B584
Top bowl bearing	Bronze	B505
Impeller lock collet	Stainless Steel	Type 316 or 416
Upper strainer interconnector bearing	Bronze	B505 or B584

M. Motor

1. Manufactured by Hitachi or approved equivalent. The motor shall be the rewindable water-tight type. The motor shall be a squirrel cage induction motor designed for continuous underwater operation in conformance with NEMA standards. A Kingsbury type thrust bearing shall be used to carry the pump down thrust load. The bearing shall be rated for a minimum of 130% of the maximum pump down thrust load. Motor shall be filled with a water & propylene glycol solution for cooling and lubrication. No oils or grease lubrication shall be used. A flexible diaphragm shall be provided to permit expansion of internal motor fluid. The shaft seal shall be a nitrile rubber lip seal or a Nitrile, Carbon, Carbide and/or Ceramic face seal. A mercury type shaft seal will not be acceptable.
2. The nameplate horsepower shall not be exceeded at any point on the pump curve
3. Horsepower: As stated in Section 1.7.B.
4. Time rating: Continuous
5. Nominal speed: 3600 rpm
6. Frequency: 60 hz
7. Phases: 3
8. Voltage: 460
9. Service Factor: 1.15

N. Power Cable

1. The motor lead to electrical cable splice shall conform to IEEE and NEC standards. The electrical wire shall be annealed bare 19 stranded copper conductors insulated with PVC. All power conductors plus a ground conductor shall be jacketed in a flat heavy-duty PVC jacketing. All cable shall be UL listed

per UL83 Type TW Construction A, as Deep Well Submersible Cable. Power conductors shall be sized to allow no more than 5% of voltage loss in the entire length. Grounding conductor shall be sized per Table 24.3 of UL83. The electrical cable shall be strapped to the discharge column at 10 foot intervals by stainless steel or rubber clamps or ties.

2. Power cable guard shall be Type 304 or Type 316 stainless steel.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify all pumps, motors, and materials are present and meet the requirements of the Specifications.

3.2 INSTALLATION

- A. Install pumps, motors, and materials in accordance with shop drawings and manufacturer's recommendations.
- B. Install electrical and pump controls in accordance with the manufacturer's recommendations and Division 26 - Electrical of these Technical Specifications.
- C. Test installation per section 01 70 00 – Execution and Closeout Requirements.

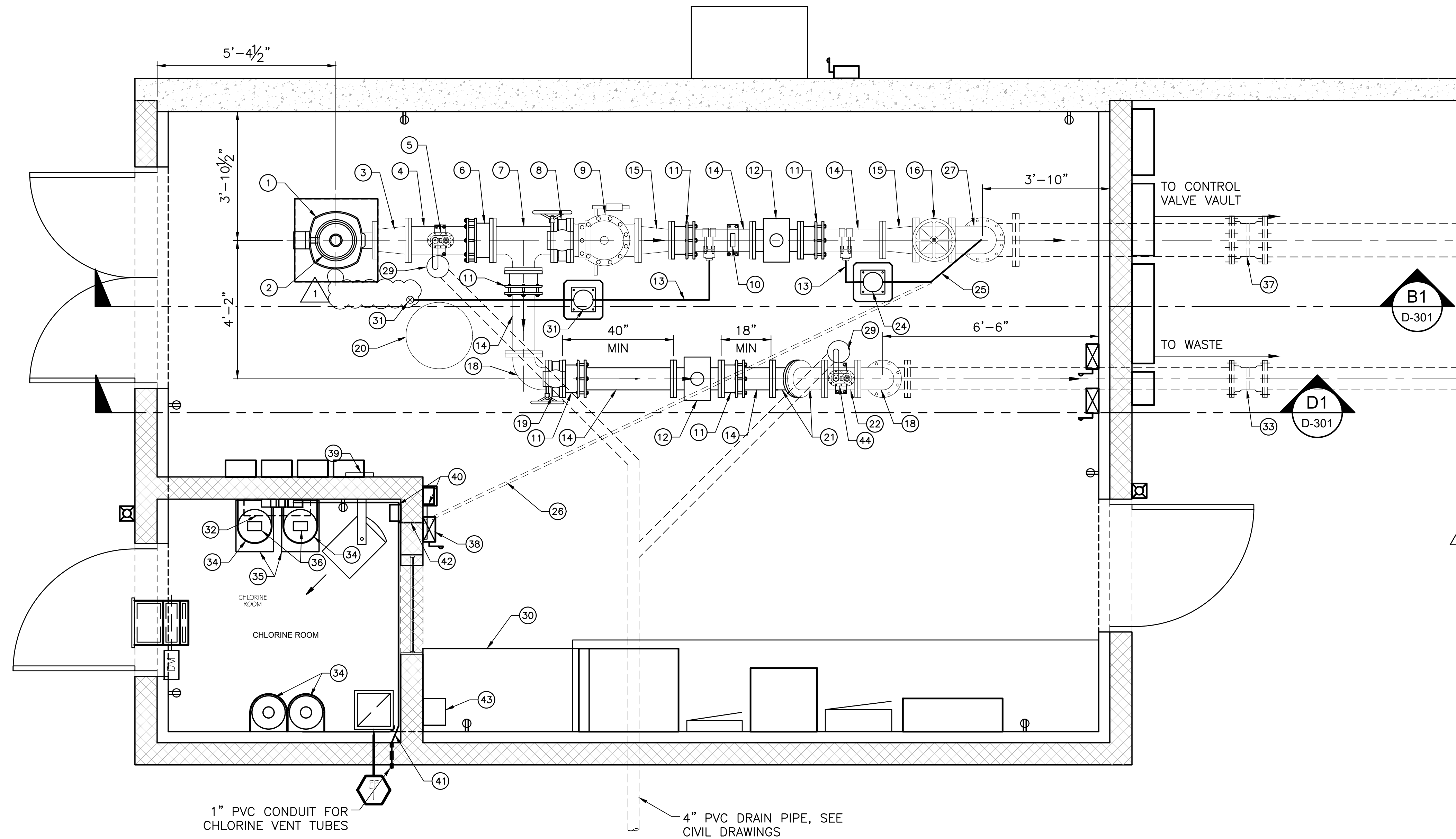
3.3 STARTUP SERVICES

- A. The Contractor shall start the system to ensure that all aspects of the system are operating according to manufacturer's recommendations. The Contractor shall check the volume and pressure capacities of the pumping equipment and submit to Engineer.
- B. Provide a factory-trained representative to inspect and to certify the installation of pump and motor. Prior to operator training, demonstrate to the Engineer that the equipment is ready for operation.
- C. Provide a factory-trained representative to oversee start-up and demonstrate operation and maintenance of the pump and motor for a minimum of 8 hours at the project site and make necessary adjustments to pump setting, lateral impeller clearances (if applicable), etc. to provide proper system operation.
- D. Prior to owner acceptance and formal pump station start-up, all equipment shall be inspected for proper alignment, quiet operation, proper connection, and satisfactory performance by means of a function test. A start up report showing function testing, motor voltages, running amperages and well water levels shall be provided to the engineer after pump station start-up.
- E. Provide four (4) copies of Equipment Operation and Maintenance Manuals to the Engineer.

END OF SECTION

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Plot Date: 2/27/2025 1:20 PM Plotted By: Jason Miller
 Date Created: 1/23/2025 JUB.COM\CENTRAL\CALCULATORS\BEAR RIVER\WATER CONSERVATION\DISTRICT PROJECTS\57-22-023 BRWC020222\WELLS\035-HARPER WARD\DESIGN\CAD SHEET WELLS\EQUIPPING\57-22-023 D-10X.DWG



GENERAL NOTES:

- PROCESS MECHANICAL EQUIPMENT AND DIMENSIONS SHOWN IS SCHEMATIC. CONTRACTOR IS RESPONSIBLE FOR CORRECT QUANTITIES AND PIPE SPOOL LENGTHS AS REQUIRED FOR A FULLY FUNCTIONAL INSTALLATION. VERIFY ALL DIMENSIONS (BOTH VERTICAL AND HORIZONTAL). VERIFY MANUFACTURERS CONNECTION DETAIL AND INSTALLATION REQUIREMENTS. PROVIDE A DIMENSIONED DRAWING SHOWING ALL VALVES, FITTINGS, PIPE SPOOLS, AND PUMP CONNECTIONS WITH SHOP DRAWING SUBMITTAL.
- NOT ALL STRUCTURAL, ARCHITECTURAL, MECHANICAL HVAC, AND ELECTRICAL/INSTRUMENTATION COMPONENTS ARE SHOWN. COORDINATE ALL WORK WITH RELATED TRADES TO AVOID CONFLICTS.
- BURIED CONDUITS SHALL MEET STANDARD DETAILS AND SPECIFICATIONS.

KEYED NOTES

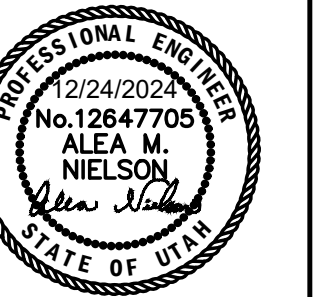
- WELL PUMP DISCHARGE HEAD AND MOTOR, SEE DETAIL B1/D-502.
- WELL PUMP, FABRICATED DISCHARGE HEAD AND MOTOR, SEE SPECS.
- CONTRACTOR TO VERIFY FLANGE SIZE OF DISCHARGE HEAD AND PROVIDE DI CONCENTRIC REDUCER SIZED ACCORDINGLY IF NEEDED.
- 10" DI PIPE (FLXPE).
- 1" WELL SERVICE AIR VALVE ASSEMBLY, SEE DETAIL A4/D-501.
- 10" FLANGE COUPLING ADAPTER (FLXFL).
- 10"x8" REDUCING TEE (FLXFL).
- 10" MOTOR ACTUATED BUTTERFLY VALVE (FLXFL).
- 10" SWING CHECK VALVE (FLXFL), SEE SPECIFICATIONS.
- PRESSURE GAUGE SAMPLE TAP ASSEMBLY, SEE DETAIL A3/D-501.
- 8" RESTRAINED FLANGE COUPLING ADAPTER (FLXFL).
- 8" MAG FLOW METER, SEE SPECS.
- PUMP WATER SUPPLY, SEE DETAIL B3/D-502.
- 8" DI PIPE (FLXPE).
- 10"x8" CONCENTRIC REDUCER (FLXFL).
- 10" GATE VALVE (FLXFL).
- 10" 90° BEND (FLXFL).
- 8" 90° BEND (FLXFL).
- 8" MOTOR ACTUATED BUTTERFLY VALVE (FLXFL).
- HYDROPNEUMATIC TANK, SEE DETAIL B1/D-503.
- 8" 45° BEND (FLXFL).
- 8" DI SPOOL (FLXFL).
- PIPE SUPPORT, SEE DETAIL A1/D-501.
- CHLORINE BOOSTER PUMP, SEE DETAIL D1/D-502.
- CHLORINE INJECTOR ASSEMBLY, SEE DETAIL D2/D-502.
- BURIED 1 1/2" CONDUIT WITH 1/4" CHLORINE VACUUM LINE.
- 12"x10" 90° BEND (FLXFL).
- 12" FLANGE COUPLING ADAPTER (FLXFL).
- FLOOR DRAIN, SEE DETAIL D1/D-501.
- 5'x2'-6" INDUSTRIAL PACKING TABLE FOR OPERATOR USAGE. TABLE SHALL BE TYPE 304 AND INCLUDE 1 1/8" THICK SS TOP, WOOD CORE, 14" BOTTOM SHELF FOR ADDITIONAL STORAGE, ADJUSTABLE STEEL LEGS.
- THREADED HOSE BIB SEE DETAIL B1/D-503.
- 18 GAUGE 2'x6" SS SHELF ABOVE CHLORINE REGULATOR. PROVIDE EACH 225401 CHLORINE DROP TEST KIT.
- 8" RESTRAINED COUPLING. SEE PIPE TRANSITION DETAIL A1/C-501.
- OWNER PROVIDED 150 LB CHLORINE GAS CYLINDERS. CONTRACTOR TO PROVIDE JUSTRITE STEEL GAS CYLINDER STAND BOLTED TO FLOOR (2 CYLINDER CAPACITY MODEL 35288).
- CHLORINE SCALE. ACCUPRO 5000 OR APPROVED EQUAL.
- CHLORINE REGULATOR, REGAL OR APPROVED EQUAL.
- 12" RESTRAINED COUPLING, SEE PIPE TRANSITION DETAIL A1/C-501.
- CHLORINE GAS ROTAMETER AND CONTROL VALVE, SEE D3/D-502.
- CHLORINE GAS DETECTION DISPLAY.
- CHLORINE SENSOR SET 12" ABOVE FLOOR.
- ROUTE CHLORINE VENT TUBE TO AND THROUGH PVC CONDUIT TO DAYLIGHT. PROVIDE #14 SS MESH SCREEN ON OUTLET.
- 1/4" CHLORINE VACUUM LINE.
- ALLEGRO RESPIRATOR WALL STORAGE CASE. PROVIDE LARGE MSA CHIN-TYPE ADVANTAGE 3100 GAS MASK AND TWO CHLORINE CARTRIDGES.
- 1" AIR VALVE ASSEMBLY, SEE DETAIL D4/D-501.

D1 WELL HOUSE EQUIPPING PLAN
SCALE: 1/2"=1'-0" AT FULL SIZE



J-U-B ENGINEERS, INC.
 1047 South 100 West
 Suite 180
 Logan, UT 84321
 Phone: 435.713.9514
 www.jub.com

BID SET

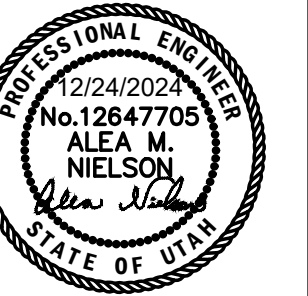


NO.	ADDENDUM ?	DESCRIPTION	DATE
1			02-27-25

HARPER WARD WELL EQUIPPING
BEAR RIVER WATER CONSERVANCY DISTRICT
WELL HOUSE EQUIPPING PLAN

FILE: 57-22-023 D-100X
 JUB PROJ. #: 57-22-023
 DRAWN BY: ###
 DESIGN BY: ###
 CHECKED BY: ###
 AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
 LAST UPDATED: 1/23/2025
SHEET NUMBER:
D-101

BID SET



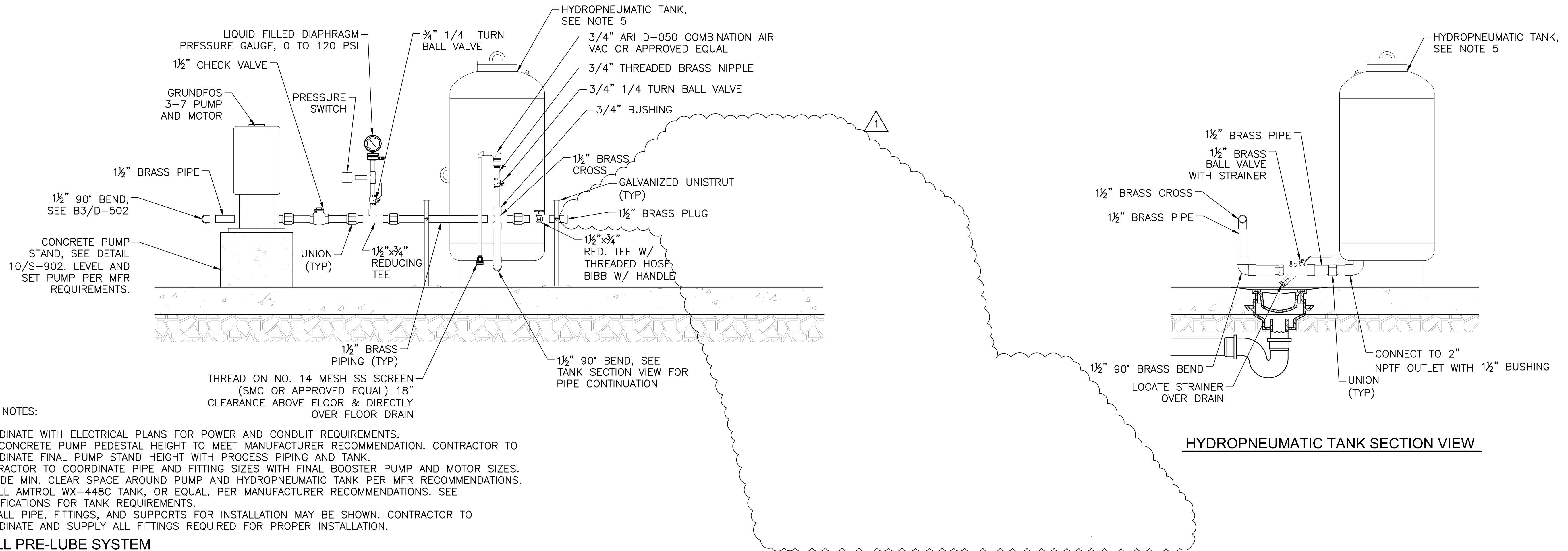
REUSE OF DRAWINGS
 JUB SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT, AND OTHER RIGHTS IN THIS DRAWING. NO PART OF THIS DRAWING SHALL BE REUSED WITHOUT JUB'S PRIOR WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

NO.	ADDENDUM ?	DESCRIPTION	DATE
1			2/27/2025

HARPER WARD WELL EQUIPPING
 BEAR RIVER WATER CONSERVANCY DISTRICT
 WELL EQUIPPING DETAILS

FILE : 57-22-023_D-500X
 JUB PROJ. # : 57-22-023
 DRAWN BY: ###
 DESIGN BY: ###
 CHECKED BY: ###
 AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
 LAST UPDATED: 2/27/2025

SHEET NUMBER:
D-503



HYDROPNEUMATIC TANK SECTION VIEW

GENERAL NOTES:

- COORDINATE WITH ELECTRICAL PLANS FOR POWER AND CONDUIT REQUIREMENTS.
- MIN. CONCRETE PUMP PEDESTAL HEIGHT TO MEET MANUFACTURER RECOMMENDATION. CONTRACTOR TO COORDINATE FINAL PUMP STAND HEIGHT WITH PROCESS PIPING AND TANK.
- CONTRACTOR TO COORDINATE PIPE AND FITTING SIZES WITH FINAL BOOSTER PUMP AND MOTOR SIZES.
- PROVIDE MIN. CLEAR SPACE AROUND PUMP AND HYDROPNEUMATIC TANK PER MFR RECOMMENDATIONS.
- INSTALL AMTROL WX-448C TANK, OR EQUAL, PER MANUFACTURER RECOMMENDATIONS. SEE SPECIFICATIONS FOR TANK REQUIREMENTS.
- NOT ALL PIPE, FITTINGS, AND SUPPORTS FOR INSTALLATION MAY BE SHOWN. CONTRACTOR TO COORDINATE AND SUPPLY ALL FITTINGS REQUIRED FOR PROPER INSTALLATION.

B1 WELL PRE-LUBE SYSTEM
 SCALE: N.T.S.

Plot Date: 2/27/2025 4:18 PM Plotted By: Jason Miller
 Date Created: 2/27/2025 JUB.COM\CENTRAL\Clients\UT\BEAR RIVER\WATER CONSERVANCY\DISTRICT\PROJECTS\57-22-023 BRWD02022\WELLS\035-HARPER WARD\DESIGN\CAD SHEET WELLS\EQUIPPING\57-22-023_D-500X.DWG