DEDHAM-WESTWOOD WATER DISTRICT

WHITE LODGE WTP PFAS TREATMENT

DWSRF-16739

ADDENDUM NO. 4

To be considered as part of the contract drawings and specifications for the White Lodge WTP PFAS Treatment, DWSRF-16739.

NOTIFICATIONS

N/A

SPECIFICATIONS

Replace the following specifications in their entirety with the attached revised specifications:

- SECTION 40 05 23.13 VALVES & APPURTENANCES FOR POTABLE WATER

Edit the following specification sections as indicated below in this addendum:

Specification Section 43 21 13.13 , Paragraph 1.05 B.2:
REPLACE: "The electrical variable speed drive equipment specified in Section 40 92 49.13 VARIABLE SPEED DRIVES (including a/c drive induction motor specified herein) shall be designed and sized by the pump supplier who shall have successfully manufactured, installed and started-up at least ten systems similar to this installation in the past five years. The pump and motor supplier shall assume responsibility for correct operation of the entire a/c drive system."

WITH: "The electrical variable speed drive equipment specified in Section 26 29 23 VARIABLE-FREQUENCY MOTOR CONTROLLERS (including a/c drive induction motor specified herein) shall be designed and sized by the pump supplier who shall have successfully manufactured, installed and started-up at least ten systems similar to this installation in the past five years. The pump and motor supplier shall assume responsibility for correct operation of the entire a/c drive system."

QUESTIONS AND ANSWERS

Q1: Please confirm that the electrical FSB is responsible for the VFDs on the project. Specification section 43 21 13.13 1.05 B.2 refers to spec 40 92 49.13 Variable Speed Drives, however, this specification section does not exist. Please confirm that the VFDs are to be provided by the electrical FSB for specification 43 23 57.
A1: The electrical FSB is responsible for the VFDs on the project and shall be furnished under Specification Section 26 29 23, Variable-Frequency Motor Controllers.

ATTACHMENTS

- FILED SUB BID RESULTS

SPECIFICATIONS

- SECTION 40 05 23.13 Valves and Appurtenances for Potable Water Work

DRAWINGS

The following drawings are to be replaced in their entirety:

- S101 – FOUNDATION PLAN
- S102 – SLAB PLAN
- S301 – CONCRETE SECTIONS & DETAILS I
- M001 – LEGEND, NOTES, AND ABBREVIATIONS
- M300 – PROCESS PIPING SECTIONS

FILED SUB BID TABULATION

Dedham-Westwood Water District
White Lodge WTP PFAS Treatment, DWSRF No. 16739

Filed Sub-bid Results
April 24, 2025

Company	Trade Type	Bid Price (whole dollar)	Bidders excluded from using this bid:	Bid restricted to:
Fernandes Masonry Inc., 1031 Phillips Road, New Bedford, MA 02745	04 00 01 MASONRY	$528,000.00		
Cenedella Masonry Inc, 177 Central Street, Milford, MA 01757	04 00 01 MASONRY	$534,900.00		
Costa Brothers Masonry Inc., 2 Lambeth Park Drive, Fairhaven, MA 02719	04 00 01 MASONRY	$541,000.00		
Marmelo Bros. Construction, 13 Ventura Drive, North Dartmouth, MA 02747	04 00 01 MASONRY	$544,000.00		
B & B Commercial Masonry Inc., 54 Oakville Street, Lynn, MA 01905	04 00 01 MASONRY	$634,750.00		
Waterline Industries Corp., 7 London Lane, Seabrook, NH 03874	05 00 01 MISCELLANEOUS AND ORNAMENTAL IRON	$77,777.00		Waterline Industries Corporation
L & L Contracting Inc., 25 Hayward Street , Braintree, MA 02043	05 00 01 MISCELLANEOUS AND ORNAMENTAL IRON	$148,800.00		
Quinn Brothers of Essex Inc., 239 Western Avenue, Essex, MA 01929	05 00 01 MISCELLANEOUS AND ORNAMENTAL IRON	$194,000.00		
P.J. Spillane Co. Inc., 97 Tileston Street, Everett, MA 02149	07 00 01 WATERPROOFING DAMPPROOFING CAULKING	$83,465.00		
Folan Waterproofing, 795 Washington Street, S. Easton, MA 02375	07 00 01 WATERPROOFING DAMPPROOFING CAULKING	$108,900.00		
Waterline Industries Corp., 7 London Lane, Seabrook, NH 03874	07 00 02 ROOFING AND FLASHING	$197,777.00		Waterline Industries Corporation
Capeway Roofing Systems Inc., 664 Sanford Road, Westport, MA 02790	07 00 02 ROOFING AND FLASHING	$306,200.00		
Young Developers LLC, 9 Hamden Park Drive, Hamden, CT 06517	07 00 02 ROOFING AND FLASHING	$324,043.00		
Silktown Roofing Inc., 27 Pleasant Street, Manchester, CT 06040	07 00 02 ROOFING AND FLASHING	$362,400.00	CTA Const., Hutter Const. and Greenwood Industries	
Rockwell Roofing Inc., 44 Pond Street, Leominster, MA 01453	07 00 02 ROOFING AND FLASHING	$382,000.00	Greenwood Industries	
Stanley Roofing Company, 42 Mitchell Road, Ipswich, MA 01938	07 00 02 ROOFING AND FLASHING	$383,000.00		
Keltic Painting LLC, 189 Hill Road, Thompson, CT 06277	09 00 00 PAINTING	$76,890.00		
John W. Egan Co. Inc., 3 Border Street, West Newton , MA 02465	09 00 00 PAINTING	$84,800.00		
Soep Painting Corporation, 263 Commercial Street, Malden, MA 02148	09 00 00 PAINTING	$114,000.00		
MG Painting Contractors LLC, 28 Reilly Avenue, Blackstone, MA 01504	09 00 00 PAINTING	$151,700.00		

Dedham-Westwood Water District
White Lodge WTP PFAS Treatment, DWSRF No. 16739

Filed Sub-bid Results
April 24, 2025

Johnson Controls Fire Protection LP, 95 Shawmut Road, Canton, MA 02021	21 00 01 FIRE PROTECTION	$40,514.00		
Boston Fire Sprinkler Protection Co., 1415 Hanover Street, Hanover, MA 02339	21 00 01 FIRE PROTECTION	$58,000.00		
Xcel Fire Protection Inc., 11A Industrial Way, Salem, NH 03079	21 00 01 FIRE PROTECTION	$73,880.00		
Carlysle Engineering, 132 Brookside Avenue, Boston, MA 02130	21 00 01 FIRE PROTECTION	$97,500.00		
LaPan Mechanical Inc., 3 Bethany Street, Worcester, MA 01604	22 00 01 PLUMBING	$99,000.00		
Waterline Industries Corp., 7 London Lane, Seabrook, NH 03874	22 00 01 PLUMBING	$147,677.00		Waterline Industries Corporation
Robert W. Irvine & Sons Inc., 147 Blossom Street, Lynn, MA 01902	22 00 01 PLUMBING	$147,700.00		
G & H Heating & Cooling, 133 County Road, East Freetown, MA 02717	23 00 01 HVAC	$168,650.00	MECO Enviromental Services R.Zoppo Corp Builders Systems Inc.	
CAM H.V.A.C. & Construction Inc., 116 Lydia Ann Road, Smithfield, RI 02917	23 00 01 HVAC	$217,400.00	New England Builders BC Construction	
Waterline Industries Corp., 7 London Lane, Seabrook, NH 03874	23 00 01 HVAC	$237,777.00		Waterline Industries Corporation
Waterline Industries Corp., 7 London Lane, Seabrook, NH 03874	26 00 01 ELECTRICAL	$927,677.00		Waterline Industries Corporation
Wayne J. Griffin Electric Inc., 116 Hopping Brook Road, Holliston, MA 01746	26 00 01 ELECTRICAL	$1,489,824.00		
Elm Electrical Inc., 68 Union Street, Westfield, MA 01085	26 00 01 ELECTRICAL	$1,654,200.00		
Amp Electrical Inc., 1420 Union Street Ext., Wests Springfield, MA 01089	26 00 01 ELECTRICAL	$1,750,000.00	D.A. Sullivan and Waterline Industries Corporation	
Watermark Electric Co. Inc., PO Box 458, Somerset, MA 02726	26 00 01 ELECTRICAL	$2,082,000.00		

ADDENDUM # 4

SPECIFICATIONS

SECTION 40 05 23.13

VALVES AND APPURTENANCES FOR POTABLE WATER WORK

PART 1 - GENERAL

1.01 WORK INCLUDED:

A. This Section covers the furnishing and installation of all process valves and appurtenances as indicated on the drawings and as specified herein. **All valves shall open counterclockwise unless otherwise indicated.**

1.02 RELATED WORK:

A. Section 01 33 23, SUBMITTALS

B. Section 09 90 00, PAINTING

C. Section 22 00 00, PLUMBING

D. Division 26, ELECTRICAL

E. Section 40 05 13.53, PROCESS PIPE AND FITTINGS

F. Section 40 91 00, FIELD INSTRUMENTS AND EQUIPMENT

G. Section 46 33 00, CHEMICAL FEED EQUIPMENT

1.03 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF SECTION 01 33 23 SUBMITTALS, SUBMIT THE FOLLOWING:

A. SHOP DRAWINGS:

1. Include manufacturers scale drawings and descriptive literature showing characteristics, materials, and dimensions.

2. Include proper tag or identification number on each drawing.

B. Operation and maintenance manuals for each item supplied. The manual shall be subject to review by the Engineer.

C. Proof of successful operating experience during the last five years with a minimum of five installations comparable to that specified shall be submitted to the Engineer.

1.04 REFERENCES:

A. The following standards form a part of this specification and indicate the minimum standards required:

American Society of Mechanical Engineers (ASME) (ANSI)

ASME	B16.1	Gray Iron Pipe Flanges and Flanged Fittings

ASTM International (ASTM)

ASTM	A48	Gray Iron Castings
ASTM	A126	Gray Iron Castings for Valves, Flanges, and Pipe Fittings
ASTM	A216	Steel Castings Suitable for Fusion Welding for High-Temperature Service
ASTM	A351	Castings, Austenitic, for Pressure-Containing Parts
ASTM	A536	Ductile Iron Castings
ASTM	A564	Hot-Rolled and Cold-Finished Age- Hardening Stainless Steel Bars and Shapes
ASTM	B16	Free-Cutting Brass Rod, Bar, and Shapes for Use in Screw Machines
ASTM	B61	Steam and Valve Bronze Castings
ASTM	B62	Composition Bronze or Ounce Metal Castings
ASTM	D429	Std. Test Methods for Rubber Property - Adhesion to Rigid Substrates

American Water Works Association (AWWA)

AWWA	C500	Metal Seated Gate Valves for Water Supply Service
AWWA	C504	Rubber-Seated Butterfly Valves, 3-inch Through 72-inch
AWWA	C509	Resilient-Seated Gate Valves for Water Supply Service
AWWA	C550	Protective Interior Coatings for Valves and Hydrants.

PART 2 - PRODUCTS

2.01 RESILIENT SEAT GATE VALVES:

A. See Resilient seat, wedge-type gate valves shall be manufactured to meet all applicable requirements of AWWA C509. Valves 12-inches and smaller shall be bubble-tight at 200 psi water working pressure, tested in both directions.

B. Valve bodies shall be of cast iron and shall have non-rising threaded bronze stems acting through a bronze stem nut. Operation shall be by handwheel and shall open as specified above. All valves within structures shall have flanged ends.

C. The wedge shall be of cast iron with resilient seating surfaces permanently bonded to the wedge in strict accordance with ASTM D429 or attached to the face of the wedge with stainless steel screws. Each valve shall have a smooth, unobstructed water way free from any sediment pockets.

D. Valves shall have low friction, torque-reduction thrust bearings. All O-rings and gaskets located above the stem collar shall be removable without taking the valve out of service.

E. The interior and exterior surfaces of the valves shall have a non-toxic epoxy coating, which is safe for potable water in accordance with AWWA C550.

F. Resilient seat gate valves shall be as manufactured by Clow Valve Co., Oskaloosa, IA; Mueller Co., Decatur, IL; American Valve and Hydrant, Birmingham, AL; Waterous Co., South St. Paul, MN; or approved equal.

G. Gate Valves to be supplied under this Specification include the following: **Exterior valves shall open right (clockwise). Interior valves shall open left (counterclockwise).**

Tag	**Description**	**Size**
BP-300	PFAS Building Bypass Valve	20”
~~**BP-301**~~	~~**Ion Exchange System Bypass Valve**~~	~~**16”**~~
EFF-300	Ion Exchange System Effluent Isolation Valve	16”
FIN-300	Finished Water Valve	20”
INF-300	Ion Exchange System Influent Isolation Valve	16”

2.02 BUTTERFLY VALVES:

A. Butterfly valves shall have a cast iron body and shall conform to AWWA C504, except as otherwise specified herein. The valves shall have flanged ends.

B. The valves shall be Class 150B, suitable for non-shock shut-off pressure of 150 psi. The valves shall provide bubble-tight shut-off in both directions at 150 psi.

C. Butterfly valve designs utilizing continuous linings on internal body surfaces and extending over the flanges will NOT be acceptable.

D. Valve seats shall be removable and constructed of molded rubber. The rubber seat shall be attached to the disk or body and shall be adjustable in either direction. The seat ring on the body shall be of stainless steel.

E. Valve discs shall be of either cast ductile iron conforming to ASTM A536, or type 316 stainless steel as indicated on the drawings. Discs shall seat at an angle of 90 degrees to the axis of the pipe.

F. Rubber seats mounted on the disk shall be continuous and securely clamped to the disk or body. All clamps, retaining rings and their fasteners shall be Series 300 stainless steel.

G. All shaft bearings shall be of the self-lubricating corrosion-resistant, sleeve type. Bearings shall be designed to handle all shaft loadings.

H. Valves 24-inches and smaller shall utilize self-adjusting packing.

I. The valve shaft shall be Series 300 stainless steel. The valve disk and shaft connection shall be by means of mechanically secured taper pins extending through the disk and shaft designed to provide a shake proof connection without impairing shaft strength. Taper pins, lock washers and nuts shall be 18-8 stainless steel. The shaft seals shall be designed for the use of standard chevron type packing or standard O-ring seals.

J. The manual operation mechanism shall be firmly fixed to the valve body. Orientation of the manual operator shall be submitted with the shop drawings and approved by the Engineer. The operator shall be permanently lubricated, totally enclosed with a cast iron case, and the hand wheel or chain operator for valves more than 6 feet from the floor shall turn counterclockwise to open. The operator shall allow up to 300 foot-pounds of input torque at open and close positions without damage to the valve or operator. The operator shall be capable of producing torques listed in Table 1 of AWWA C504.

K. All valves shall be subjected to hydrostatic and leak tests in accordance with AWWA C504 and shall be rejected if they do not pass this test.

L. For consistency with existing plant equipment the butterfly valves shall be Pratt as manufactured by Henry Pratt Company, Aurora, IL; Auma, Canonsburg, PA; or approved equal.

M. Butterfly Valves to be supplied under this Specification include the following:

Tag	**Description**	**Size**	**Operation**
MOV-13	Greensand Filter 1 High Rinse Inlet	6”	Electric O/C
MOV-23	Greensand Filter 2 High Rinse Inlet	6”	Electric O/C
MOV-33	Greensand Filter 3 High Rinse Inlet	6”	Electric O/C

MOV-43	Greensand Filter 4 High Rinse Inlet	6”	Electric O/C
MOV-53	Greensand Filter 5 High Rinse Inlet	6”	Electric O/C
MOV-63	Greensand Filter 6 High Rinse Inlet	6”	Electric O/C
MOV-73	Greensand Filter 7 High Rinse Inlet	6”	Electric O/C
MOV-83	Greensand Filter 8 High Rinse Inlet	6”	Electric O/C
MOV-14	Greensand Filter 1 Backwash Supply	6”	Electric O/C
MOV-24	Greensand Filter 2 Backwash Supply	6”	Electric O/C
MOV-34	Greensand Filter 3 Backwash Supply	6”	Electric O/C
MOV-44	Greensand Filter 4 Backwash Supply	6”	Electric O/C
MOV-54	Greensand Filter 5 Backwash Supply	6”	Electric O/C
MOV-64	Greensand Filter 6 Backwash Supply	6”	Electric O/C
MOV-74	Greensand Filter 7 Backwash Supply	6”	Electric O/C
MOV-84	Greensand Filter 8 Backwash Supply	6”	Electric O/C
MOV-15	Greensand Filter 1 Backwash Waste	6”	Electric O/C
MOV-25	Greensand Filter 2 Backwash Waste	6”	Electric O/C
MOV-35	Greensand Filter 3 Backwash Waste	6”	Electric O/C
MOV-45	Greensand Filter 4 Backwash Waste	6”	Electric O/C
MOV-55	Greensand Filter 5 Backwash Waste	6”	Electric O/C
MOV-65	Greensand Filter 6 Backwash Waste	6”	Electric O/C
MOV-75	Greensand Filter 7 Backwash Waste	6”	Electric O/C
MOV-85	Greensand Filter 8 Backwash Waste	6”	Electric O/C
MOV-17	Greensand Filter 1 High Rinse Outlet	6”	Electric O/C
MOV-27	Greensand Filter 2 High Rinse Outlet	6”	Electric O/C
MOV-37	Greensand Filter 3 High Rinse Outlet	6”	Electric O/C
MOV-47	Greensand Filter 4 High Rinse Outlet	6”	Electric O/C
MOV-57	Greensand Filter 5 High Rinse Outlet	6”	Electric O/C
MOV-67	Greensand Filter 6 High Rinse Outlet	6”	Electric O/C
MOV-77	Greensand Filter 7 High Rinse Outlet	6”	Electric O/C
MOV-87	Greensand Filter 8 High Rinse Outlet	6”	Electric O/C
BV-5-1	Greensand Filter 1 Filter Effluent	6”	Manual Gear
BV-5-2	Greensand Filter 2 Filter Effluent	6”	Manual Gear
BV-5-3	Greensand Filter 3 Filter Effluent	6”	Manual Gear
BV-5-4	Greensand Filter 4 Filter Effluent	6”	Manual Gear
BV-5-5	Greensand Filter 5 Filter Effluent	6”	Manual Gear
BV-5-6	Greensand Filter 6 Filter Effluent	6”	Manual Gear
BV-5-7	Greensand Filter 7 Filter Effluent	6”	Manual Gear
BV-5-8	Greensand Filter 8 Filter Effluent	6”	Manual Gear
FCV-12	Greensand Filter 1 Filter Effluent Flow Control	6”	Modulating Motor
FCV-22	Greensand Filter 2 Filter Effluent Flow Control	6”	Modulating Motor
FCV-32	Greensand Filter 3 Filter Effluent Flow Control	6”	Modulating Motor
FCV-42	Greensand Filter 4 Filter Effluent Flow Control	6”	Modulating Motor
FCV-52	Greensand Filter 5 Filter Effluent Flow Control	6”	Modulating Motor

FCV-62	Greensand Filter 6 Filter Effluent Flow Control	6”	Modulating Motor
FCV-72	Greensand Filter 7 Filter Effluent Flow Control	6”	Modulating Motor
FCV-82	Greensand Filter 8 Filter Effluent Flow Control	6”	Modulating Motor
BV-9	Greensand Row 1 Combined Effluent Valve	8”	Manual Gear
BV-10	Greensand Row 2 Combined Effluent Valve	8”	Manual Gear
BV-16	Greensand Filter Backwash Supply Series Isolation	6”	Manual Gear
BV-17	Greensand Filter Backwash Supply Isolation from Raw	6”	Manual Gear
FCV-90	Greensand Filter Bakwash Waste Flow Control	6”	Modulating Motor
BV-24	Greensand Filters 2 & 4 Isolation	14”	Manual Gear
BV-68	Greensand Filters 6 & 8 Isolation	10”	Manual Gear
BV-31	Greensand Filters 1 & 3 Isolation	14”	Manual Gear
BV-57	Greensand Filters 5 & 7 Isolation	10”	Manual Gear
INF-100	Ion Exchange System 100 Influent	10”	Manual Gear
INF-200	Ion Exchange System 200 Influent	10”	Manual Gear
FCV-100	Ion Exchange System 100 Effluent Flow Control	10”	Modulating Motor
FCV-200	Ion Exchange System 200 Effluent Flow Control	10”	Modulating Motor
FCV-400	Ion Exchange System Backwash Waste Flow Control	6”	Modulating Motor
BP-301	**Ion Exchange System Bypass Valve**	**16”**	**Manual Gear**
BP-302	Ion Exchange System Influent Bypass	16”	Manual Gear
BP-303	Ion Exchange System Effluent Bypass	16”	Manual Gear
INF-301	Ion Exchange System Influent Flow Control	16”	Manual Gear
BP-500	Cartridge Filter System Bypass	10”	Manual Gear
EFF-500	Cartridge Filter System Effluent Isolation	10”	Manual Gear
INF-501	Cartridge Filter 501 Influent	10”	Manual Gear
EFF-501	Cartridge Filter 501 Effluent	10”	Manual Gear
INF-502	Cartridge Filter 502 Influent	10”	Manual Gear
EFF-502	Cartridge Filter 502 Effluent	10”	Manual Gear

2.03 AIR CUSHIONED SWING CHECK VALVES:

A. The valves shall have heavy duty bodies, constructed of high-strength cast iron conforming to ASTM A126 Class B, with integral flanges, faced and drilled per ANSI B16.1 Class 125 and be suitable for horizontal or vertical installation.

B. The valve bodies shall be the full waterway type, designed to provide a net flow area not less than the nominal inlet pipe size when swung open no more than 25 degrees. The valves shall have replaceable stainless steel body seats.

C. Valve disks shall be cast iron, faced with a renewable resilient seat ring of rubber or other suitable material, held in place by a follower ring and stainless steel screws.

D. The disk arm shall be ductile iron or steel, suspended from and keyed to an austenitic stainless-steel shaft, which is completely above the waterway and supported at each end by heavy bronze bushings. The shaft key shall be secured with a setscrew. The shaft shall rotate freely without the need for external lubrication. The shaft shall be sealed where it passes through the body by means of a stuffing box and adjustable packing. Simple O-ring shaft seals are not acceptable.

E. The valves shall be supplied with an outside lever and adjustable counterweight to initiate valve closure. Final closure shall be dampened by means of a single, side-mounted bronze air-cushion assembly directly mounted to the valve body on machined pads. The amount of cushioning shall be easily adjustable without the need for pre-charged air chambers. Commercial air cylinders, which pivot and/or are attached with fabricated brackets, are not acceptable.

F. The valves shall swing open smoothly at pump start and close quickly and quietly upon pump shutdown, to prevent flow reversal. When closed, the valves shall seal drop tight.

G. The valves shall be GA Industries, Inc. Figure 250-DS, or approved equal.

H. Swing Check Valves to be supplied under this Specification Section include the following:

Tag	**Description**	**Size**
CKV-90	Greensand Filter System Backwash Waste	6”
BWW-100	Ion Exchange System 100 Backwash Waste Isolation	10”
BWW-200	Ion Exchange System 200 Backwash Waste Isolation	10”

2.04 PRESSURE REDUCING VALVES:

A. Pressure Reducing Valves larger than 2-inch shall consist of a main valve assembly and a pilot system, completely assembled, tested as a unit and ready for field installation.

B. Main valve bodies shall be globe style, constructed of high-strength cast iron conforming to ASTM A126 Class B with integral flanges, faced and drilled per ANSI B16.1 Class 125. The valves shall be “full-ported” with a flow area through the valves no less than the area of its nominal pipe size and have an integral bottom pad or feet to permit support directly beneath the body.

C. The main valves shall operate on the differential piston principle such that the area on the underside of the piston is no less than the pipe area and the area on the upper surface is greater than that of the underside. There shall be no diaphragms or springs in the main valves.

D. The valve pistons shall be fully guided on the outside diameter and all guiding and sealing surfaces shall be bronze. To minimize the consequences of throttling, throttling

shall be by long, stationary vee-ports located downstream of the seat and not by the seat itself. Sawtooth attachments or other add-on devices are not acceptable.

E. The valves shall be fully capable of operating in any position without the need of springs and shall not incorporate stems, stem guides or spokes in the waterway. A visual position indicator shall be provided.

F. The main valves shall be serviceable in the line through a single flanged cover, which provides easy access to all internal components.

G. Provide a system of pilots and controls to enable the valves to perform the function listed below. All controls and control piping shall be non-corrosive and suitable for the working pressure.

H. The system shall include a normally open, direct-acting, diaphragm operated, spring loaded bronze pressure reducing pilot. Pilots shall be easily field adjustable from near zero to a minimum of 10% above the factory setting. Controls shall include adjustable closing speed control, y-strainer and pilot isolating valves.

I. The valves shall function to reduce a higher, fluctuating inlet pressure to a lower, steady outlet pressure regardless of variations in demand.

J. The valves shall be GA Industries Figure 4500-D, or approved equal.

K. Pressure reducing valves to be supplied under this Specification Section include the following:

Tag	**Description**	**Size**
PRV-500	Cartridge Filter Assembly Influent	16”

2.05 AIR RELEASE AND VACUUM RELEASE VALVES:

A. Valves shall be pressure air valves or a dual combination of deep well air type valve and a pressure air valve. The valves shall release the surge of air from an empty line when filling, relieve the vacuum when the line is draining and release the accumulation of air when the system is under pressure.

B. Valves shall have a cast iron body, cover and baffle meeting ASTM A48 Class 30, and a stainless steel float.

C. Pressure air valves shall have stainless steel seats with Buna-N rubber plungers. The deep well air valves shall have HI-CAR rubber seats.

D. The floats shall be constructed so as to withstand a pressure of 1000 psi.

E. Deep well air valves shall operate by sealing the HI-CAR rubber orifice with an unguided ball float. The valves shall have a throttling device on the discharge side to control the volume of air exiting the pump.

F. Pressure air valves shall operate through a compound lever system with valve sealing faces of an adjustable HI-CAR rubber valve and stainless steel. Needle valves used to seal the orifice are not acceptable.

G. Inlet and discharge connections shall be normal-pipe-thread (NPT) screwed, sizes as shown on the plans.

H. The air release valves on the finish water discharge lines shall shut off tight at a pressure of 100 psi and have a maximum shut-off pressure of 180 psi. The valves on the backwash water lines shall shut off tight at a pressure of 15 psi and have a maximum shut-off pressure of 70 psi.

I. All air release valves shall have an in-line gate valve the same size as the air release valve. Connections to piping shall be by NPT connections the same size as the air release valve unless otherwise noted.

L. Deep well air valves and pressure air valves shall be as manufactured by APCO Valve and Primer Corp., Schaumburg, IL; Valmatic Valve and Manufacturing Corp, Lyons, IL; Crispin Air Valves (Multiplex Manufacturing Company), Berwick, PA; or approved equal.

M. Air release valves to be furnished under this Specification Section include the following

Tag	**Description**	**Size**
ARV-500	Cartridge Filter System Air Release	2”

2.06 ELECTRIC OPERATORS (EO):

A. To maintain consistency, electric motor operators shall be manufactured by Pratt as manufactured by Henry Pratt Company, Aurora, IL; Auma, Canonsburg, PA; or approved equal.

B. Provide electric operator according to the following criteria:

1. Electric motor operator shall be designed to move the valve from fully open to fully closed when electrical power is applied and hold the valve in any intermediate position between fully open and closed without creeping or fluttering. Reducer, electric motor operator (actuator) or accessories shall be furnished complete, ready for installation, from a single manufacturer.

2. The actuator shall be suitable for use on a 460V, three phase, 60-Hertz power supply. The actuator shall be capable of functioning in an ambient temperature ranging from 20 degrees Fahrenheit through 140 degrees Fahrenheit and shall be capable of being mounted in any position.

3. The actuator shall be sized to operate at the specified differential pressure with an adequate margin of safety. Operating time shall be approximately 12-inches per minute.

4. The electric motor shall be Class F insulated with a time rating of 15 minutes as a minimum.

5. Motor protection devices shall be incorporated by either an imbedded thermostat or thermal overload relays.

6. Gearing shall be heavy duty, single-state worm gear totally enclosed in an oil-filled gear case fitted with filling and drain plugs, suitable for operation at any angle.

7. The drive shall incorporate a lost motion device to allow the motor to obtain full speed before engaging the load.

8. Manual operation shall be available by hand wheels or chain wheels as shown on the drawings. The hand or chain wheel shall not rotate during power operation and shall be operable on motor gearing failure. The hand or chain wheel shall operate in a clockwise direction to close.

9. Each electric motor shall have double torque switches and torque switch protection in each direction.

10. A mechanical dial position indicator shall be provided as standard. Two limit switches shall be provided at each end of travel for remote indication.

11. Position/limit switch protection shall be provided as required. Limit switches shall also be provided for remote indication at each end of travel. These shall be independent of the torque switches and position limiting switches.

12. Included in the actuator shall be a reversing contractor, control transformer, local-off-remote selector switch, and three button maintain contact - two light pushbutton station. A monitor relay shall be provided so that the actuator is constantly monitored for functionality.

13. An emergency shutdown override terminal shall be provided which shall override any other signal in an emergency and close the valve. This override shall function without regard to the status of the thermostat, control transformer on local, or remote control stations.

14. Each actuator shall be provided such that only the power supply need be provided for functioning. The terminations shall be brought out of a clearly marked terminal area, which is sealed from the environment. The actuator shall have a device, which shall automatically correct the incoming three-phase power.

15. A quarter-turn gear operator shall be included with all actuators for butterfly valves. This gear shall be a heavy-duty gear operator of cast iron construction, fully lubricated, and sealed. All gearing shall be cast iron, steel or both. If it is mounted on an AWWA valve, it shall conform to applicable AWWA C-504 specification. Operating time shall be 60 to 120 seconds unless otherwise noted.

16. The actuator for the filter effluent valves only shall be provided with a solid-state controller, which shall accept a 4 to 20 mA signal and throttle the valve. The device shall incorporate a deadband feature to inhibit overshooting by the actuator.

17. Each actuator shall be tested and the test certificate shall be shipped with each actuator. As a minimum, the certificate shall include: no-load current, current at max torque setting, stall current, stall torque, test voltage, motor flash test and actuator output speed.

18. A two-year warranty shall be provided from date of start-up. The manufacturer shall provide an employee to assist in field calibration and switch setting. This service shall be included in the lump sum price to the electric operator purchaser.

19. The Contractor shall be responsible to ensure that all motor operated valves and gates on the project are provided with actuators by the same manufacturer.

20. The actuator shall respond to either 2, 3 or 4-wire control, as shown on the electrical drawings.

2.07 CORPORATION STOPS:

Corporation stops shall be of bronze and shall be by Mueller Co., Decatur, IL; Red Hed Mfg. Co., Boston, MA; or approved equal. The outlet shall have I.P.S. thread and the inlet shall have tapered thread.

2.08 PRESSURE GAUGES:

A. A phosphor bronze Bourdon tube type of measuring element shall have a 4-1/2-inch dial size with approximately 80 divisions and an accuracy of 1/2 one percent of full scale. Dial shall be calibrated in feet and shall include a re-zeroing pointer and pointer-puller tool.

B. Pressure gauge shall have a 1/2-inch bottom connection and shall be fitted with a snubber of either the restrictive type using a tiny needle valve orifice or the type, which uses a small plug of metallic porous sponge.

C. Liquid fill shall be glycerin.

D. Pressure gauge shall include a diaphragm with 316 stainless steel seal and housing. The lower half of the diaphragm seat shall be fitted with a bleed screw.

E. Gauge range shall be 0 to 50,100 or 150 psi as required by the Engineer for all gauges.

F. The gauge valve shall be a ball valve. The ball valve shall have a bronze body, stainless steel ball and Teflon seats with a spring-closing handle.

G. A stainless steel nipple shall be installed below the gauge valve with a double stainless steel strap.

2.09 SAMPLE TAPS:

A. Sample taps shall have a smooth nose at the end.

B. Sample tap valve shall be a ball valve. The ball valve shall have a bronze body, stainless steel ball and EPDM seats with a spring-closing handle.

C. Use of Teflon or PFTE for sample ports and valving is not permitted.

D. Sample taps to be furnished under this Specification Section include the following:

Tag	**Description**	**Size & Type**
ST-300	Ion Exchange Resin System Influent	½" Ball Valve
ST-400	Ion Exchange Resin System Backwash Waste	½" Ball Valve
ST-501-INF	Cartridge Filter 501 Influent	½" Ball Valve
ST-502-INF	Cartridge Filter 502 Influent	½" Ball Valve
ST-501-EFF	Cartridge Filter 501 Effluent	½" Ball Valve
ST-502-EFF	Cartridge Filter 502 Effluent	½" Ball Valve
ST-301	Spare Finished Water Tap Relocated from Hatch	½" Ball Valve
ST-302	Spare Finished Water Tap Relocated from Hatch	½" Ball Valve
ST-303	Spare Finished Water Tap Relocated from Hatch	½" Ball Valve

2.10 PAINTING:

A. Interior surfaces of valves and miscellaneous piping appurtenances shall be given a shop finish of an epoxy in accordance with AWWA C550, Protective Coatings for Valves and Hydrants.

B. Parts customarily finished at the shop shall be given coats of paint filler and enamel or other approved treatment customary with the manufacturer.

C. Ferrous surfaces obviously not to be painted shall be given a shop coat of grease or other suitable rust-resistant coating.

E. Field painting is specified under Section 09 90 00 PAINTING.

2.11 QUICK CONNECTIONS

A. The existing quick connections on the Greensand filter effluent headers shall be replaced. The new 90-degree ductile iron bends will be fitted with hose connections and

cap as noted on Drawing Sheet M101. These connectors will be 4" Quick Disconnect Adaptors constructed of aluminum as manufactured by Dover Corp. as Kamlock connectors or equal.

PART 3 - EXECUTION

3.01 INSTALLATION:

Valves shall be carefully erected and supported in their respective positions free from distortion and strain. Care shall be taken to prevent damage or injury to the valves and appurtenances during handling and installation. Valve boxes shall be set plumb and centered over the valve-operating nut.

3.02 FIELD QUALITY CONTROL:

A. Valves shall be operated for five complete cycles to check for proper functioning prior to testing for water tightness.

B. All material shall be carefully inspected for defects in workmanship and materials, all debris and foreign material shall be cleaned out of valve openings and seats, and all operating mechanisms operated to check their proper functioning. Equipment, which does not operate easily or is otherwise defective shall be repaired or replaced at the Contractor's expense.

C. The manufacturer of the electric operators shall supply the services of a field service technician for a minimum period of one eight-hour day.

1. The technician shall first check the installation and operation of the electric operators. If any deficiencies are found, a written report by the service technician, outlining his finding shall be submitted to the Engineer.

2. On completion of the inspection, the service technician shall instruct plant operating personnel on the operation and maintenance of the electric operators.

3. If more time is required for the manufacturer's services, it shall be provided at no additional cost to the Owner.

3.03 SPARE PARTS:

A. One set of the following spare parts shall be provided for the electric operators.

1. One Seat Kit

2. One Switch Mechanism

3. One Reversing Controller

4. One Control Transformer

5. One Complete Pushbutton Station

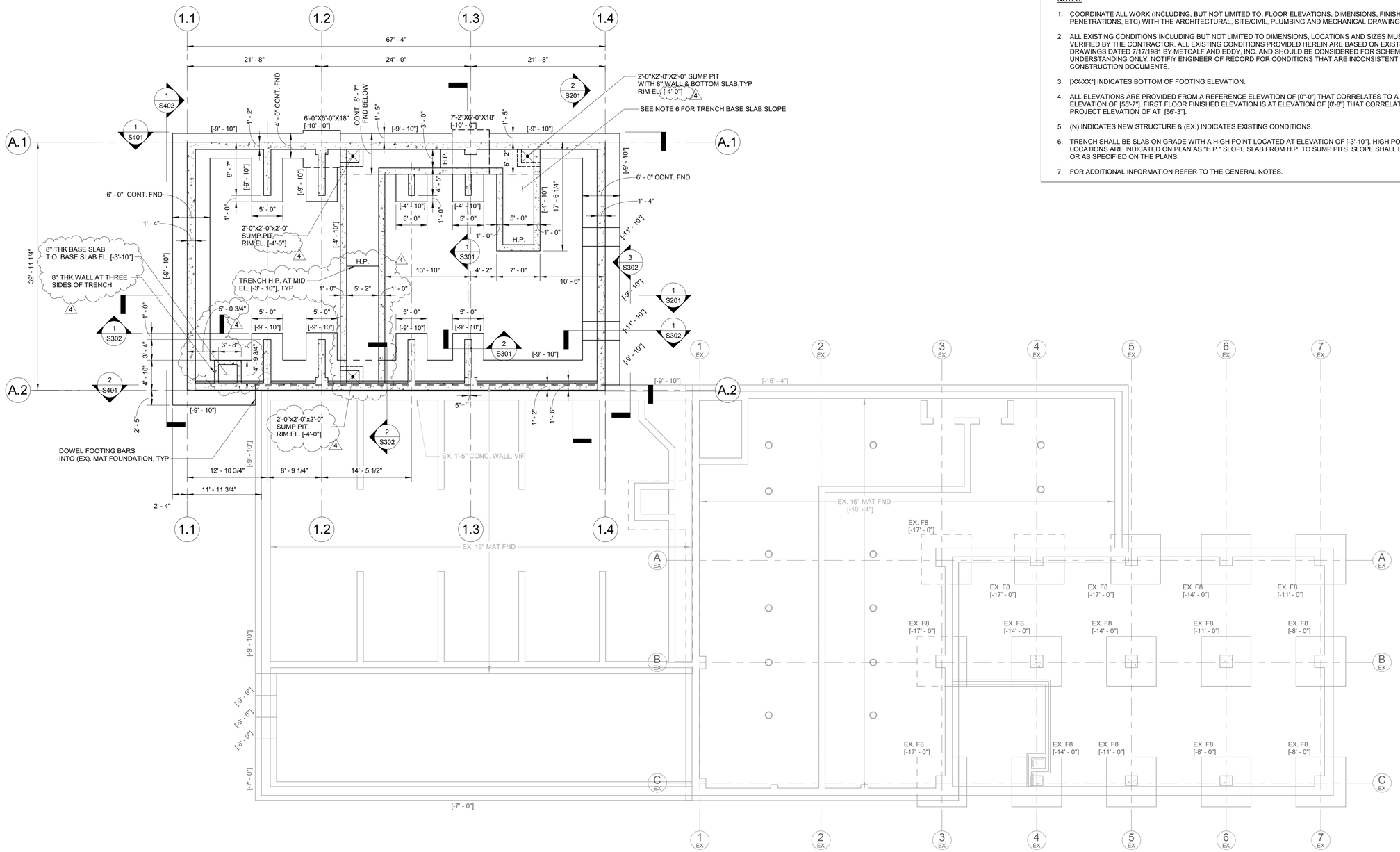
B. One complete change of seat and packing per valve shall be supplied for valves with field replaceable seats and packing.

END OF SECTION

P:\MA\DWWD\2230579 - White Lodge PFAS Design\04 - Design\Specifications\Div-40 Process Integration\40 05 23.13 Valves and Appurtenances for Potable Water Work.docx

ADDENDUM # 4

PLANS



1 FOUNDATION PLAN

SCALE: 1/8" = 1'-0"

NOTES:

1. COORDINATE ALL WORK (INCLUDING, BUT NOT LIMITED TO, FLOOR ELEVATIONS, DIMENSIONS, FINISH DETAILS, PENETRATIONS, ETC) WITH THE ARCHITECTURAL, SITE/CIVIL, PLUMBING AND MECHANICAL DRAWINGS.
2. ALL EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO DIMENSIONS, LOCATIONS AND SIZES MUST BE FIELD VERIFIED BY THE CONTRACTOR. ALL EXISTING CONDITIONS PROVIDED HEREIN ARE BASED ON EXISTING DRAWINGS DATED 7/17/1981 BY METCALF AND EDDY, INC. AND SHOULD BE CONSIDERED FOR SCHEMATIC UNDERSTANDING ONLY. NOTIFIY ENGINEER OF RECORD FOR CONDITIONS THAT ARE INCONSISTENT WITH THE CONSTRUCTION DOCUMENTS.
3. [XX-XX"] INDICATES BOTTOM OF FOOTING ELEVATION.
4. ALL ELEVATIONS ARE PROVIDED FROM A REFERENCE ELEVATION OF [0"-0"] THAT CORRELATES TO A PROJECT ELEVATION OF [55'-7"]. FIRST FLOOR FINISHED ELEVATION IS AT ELEVATION OF [0'-8"] THAT CORRELATES TO A PROJECT ELEVATION OF AT [56'-3"].
5. (N) INDICATES NEW STRUCTURE & (EX.) INDICATES EXISTING CONDITIONS.
6. TRENCH SHALL BE SLAB ON GRADE WITH A HIGH POINT LOCATED AT ELEVATION OF [-3'-10"]. HIGH POINT LOCATIONS ARE INDICATED ON PLAN AS "H.P." SLOPE SLAB FROM H.P. TO SUMP PITS. SLOPE SHALL BE 1/8" PER FT OR AS SPECIFIED ON THE PLANS.
7. FOR ADDITIONAL INFORMATION REFER TO THE GENERAL NOTES.

Project:
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BOARD OF WATER COMMISSIONERS
WHITE LODGE PFAS REMEDIATION PROJECT
154 UNIVERSITY AVE, WESTWOOD, MA 02090

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Consultants:

Revisions:

No.	Date	Description
4	4/24/2025	ADDENDUM 4

COA:

Seal:
COMMONWEALTH OF MASSACHUSETTS
NATHAN M. SEIFERT
STRUCTURAL
No. 41693
REGISTERED PROFESSIONAL ENGINEER
2/26/2025

Issued For: BID

Scale: 1/8" = 1'-0"

Key Plan:

Date:	02/26/2025
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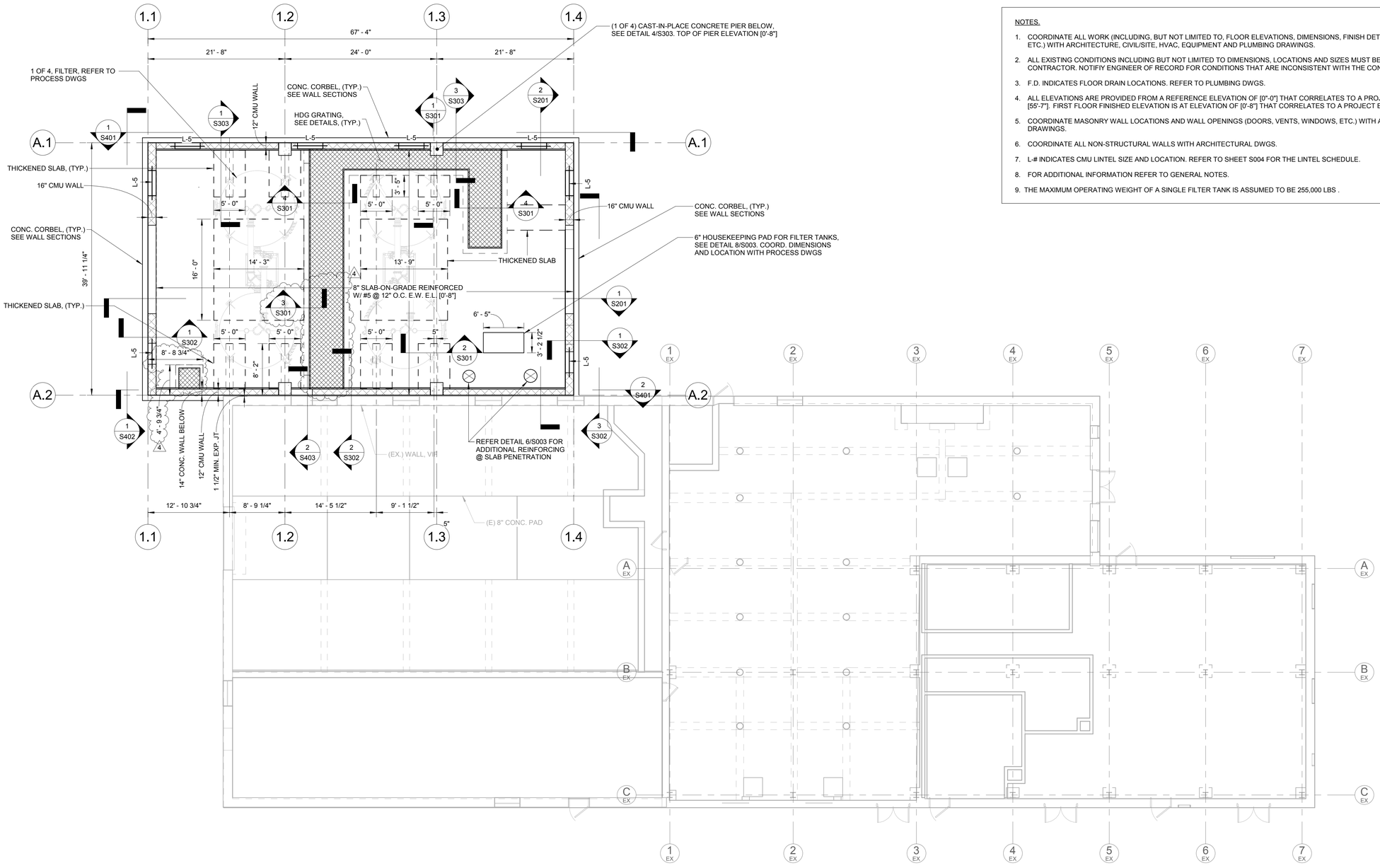
Reviewed By:	KMC
Approved By:	NMS
W&S Project No.:	ENG23-0579
W&S File No.:	XXX

Drawing Title: FOUNDATION PLAN

Sheet Number: S101



1 FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

NOTES.

1. COORDINATE ALL WORK (INCLUDING, BUT NOT LIMITED TO, FLOOR ELEVATIONS, DIMENSIONS, FINISH DETAILS, PENETRATIONS, ETC.) WITH ARCHITECTURE, CIVIL/SITE, HVAC, EQUIPMENT AND PLUMBING DRAWINGS.
2. ALL EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO DIMENSIONS, LOCATIONS AND SIZES MUST BE FIELD VERIFIED BY THE CONTRACTOR. NOTIFIY ENGINEER OF RECORD FOR CONDITIONS THAT ARE INCONSISTENT WITH THE CONSTRUCTION DOCUMENTS.
3. F.D. INDICATES FLOOR DRAIN LOCATIONS. REFER TO PLUMBING DWGS.
4. ALL ELEVATIONS ARE PROVIDED FROM A REFERENCE ELEVATION OF [0"-0"] THAT CORRELATES TO A PROJECT ELEVATION OF [55'-7"]. FIRST FLOOR FINISHED ELEVATION IS AT ELEVATION OF [0'-8"] THAT CORRELATES TO A PROJECT ELEVATION OF AT [56'-3"].
5. COORDINATE MASONRY WALL LOCATIONS AND WALL OPENINGS (DOORS, VENTS, WINDOWS, ETC.) WITH ARCHITECTURE AND MEP DRAWINGS.
6. COORDINATE ALL NON-STRUCTURAL WALLS WITH ARCHITECTURAL DWGS.
7. L-# INDICATES CMU LINTEL SIZE AND LOCATION. REFER TO SHEET S004 FOR THE LINTEL SCHEDULE.
8. FOR ADDITIONAL INFORMATION REFER TO GENERAL NOTES.
9. THE MAXIMUM OPERATING WEIGHT OF A SINGLE FILTER TANK IS ASSUMED TO BE 255,000 LBS .

Project:

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BOARD OF WATER COMMISSIONERS

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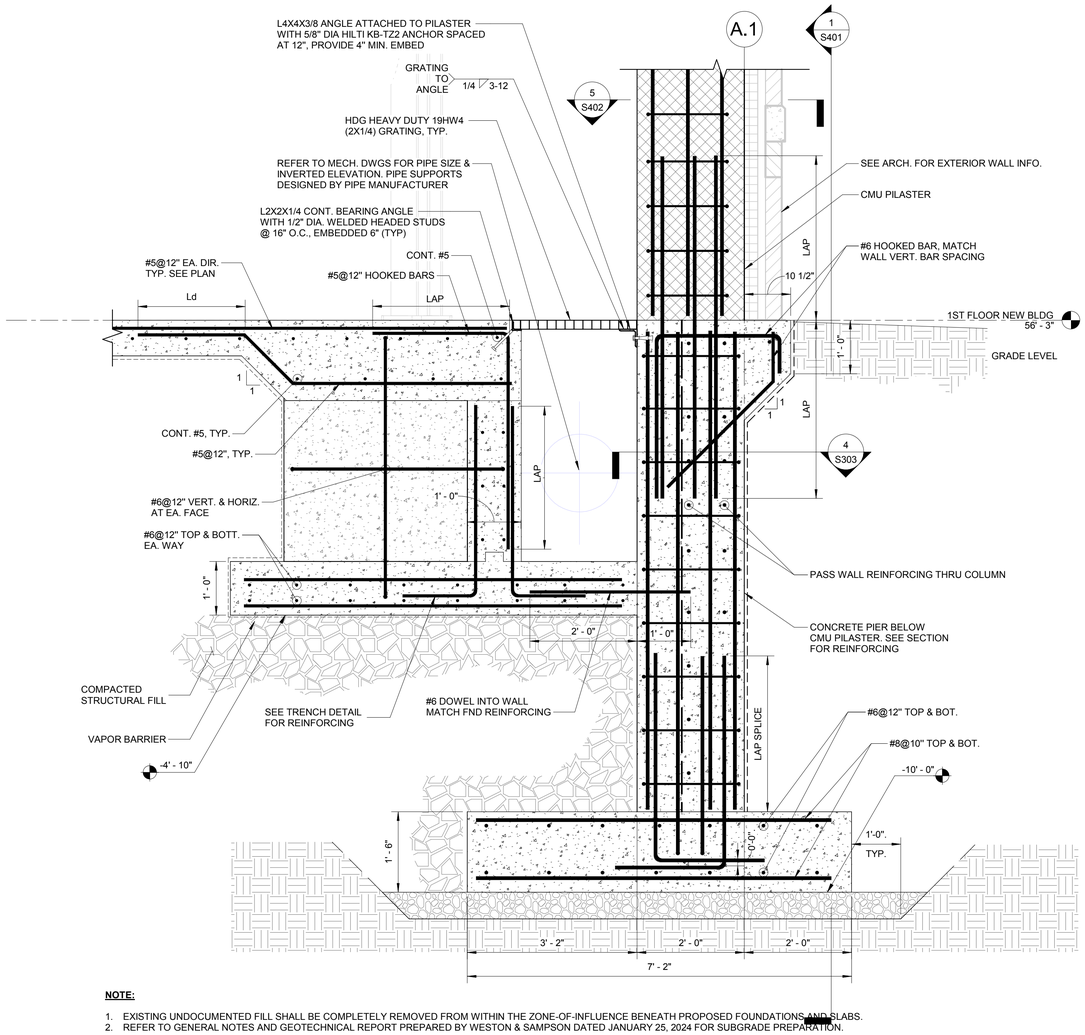
Drawing Title: SLAB PLAN

Sheet Number: S102

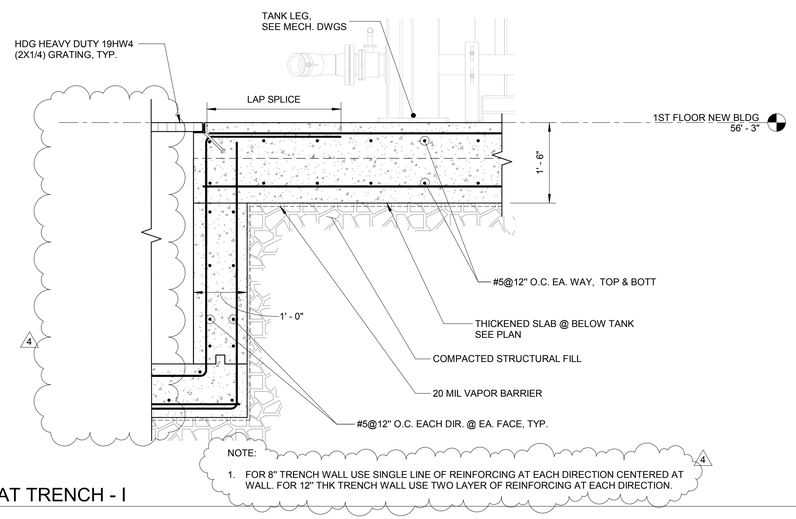


NOTE:

1. EXISTING UNDOCUMENTED FILL SHALL BE COMPLETELY REMOVED FROM WITHIN THE ZONE-OF-INFLUENCE BENEATH PROPOSED FOUNDATIONS AND SLABS.
2. REFER TO GENERAL NOTES AND GEOTECHNICAL REPORT PREPARED BY WESTON & SAMPSON DATED JANUARY 25, 2024 FOR SUBGRADE PREPARATION.

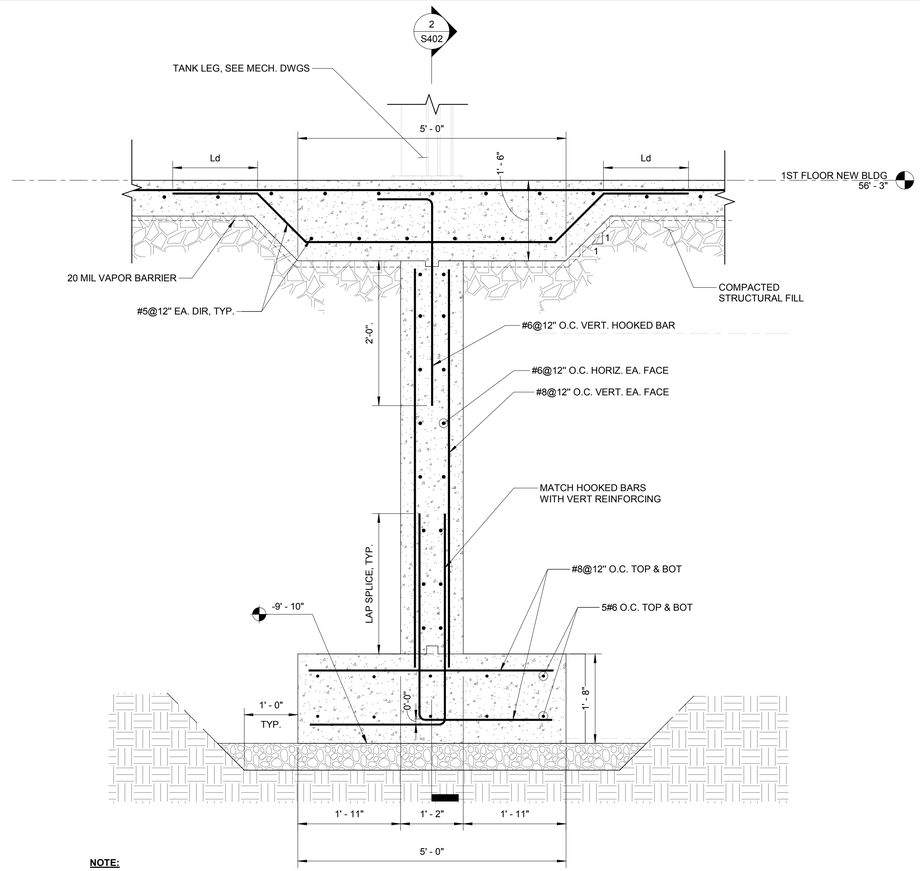
1 FOUNDATION SECTION AT PIPE TRENCH

SCALE: 3/4" = 1'-0"



3 TYPICAL SECTION AT TRENCH - I

SCALE: 3/4" = 1'-0"

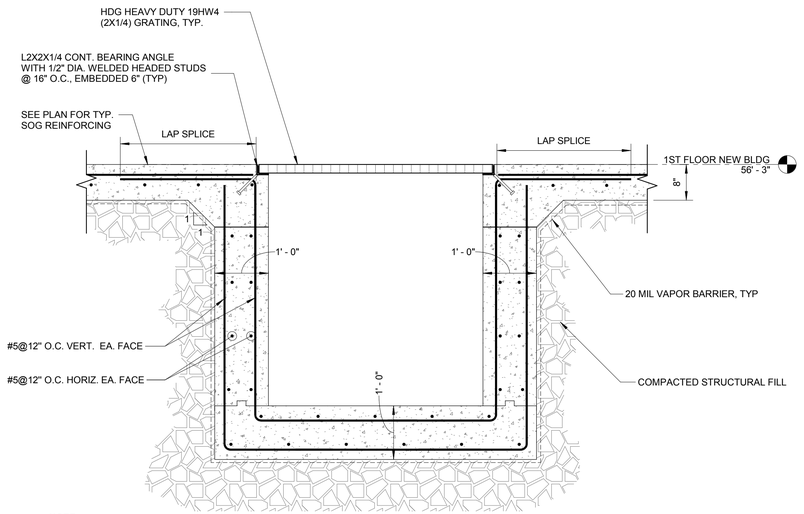


NOTE:

1. EXISTING UNDOCUMENTED FILL SHALL BE COMPLETELY REMOVED FROM WITHIN THE ZONE-OF-INFLUENCE BENEATH PROPOSED FOUNDATIONS AND SLABS.
2. REFER TO GENERAL NOTES AND GEOTECHNICAL REPORT PREPARED BY WESTON & SAMPSON DATED JANUARY 25, 2024 FOR SUBGRADE PREPARATION.

2 SECTION AT BUTTRESS WALL NEAR (E) BUILDING

SCALE: 3/4" = 1'-0"



NOTE:

1. EXISTING UNDOCUMENTED FILL SHALL BE COMPLETELY REMOVED FROM WITHIN THE ZONE-OF-INFLUENCE BENEATH PROPOSED FOUNDATIONS AND SLABS.
2. REFER TO GENERAL NOTES AND GEOTECHNICAL REPORT PREPARED BY WESTON & SAMPSON DATED JANUARY 25, 2024 FOR SUBGRADE PREPARATION.
3. REFER TO PLAN FOR TRENCH BASE AND RIM ELEVATIONS AND SLOPE REQUIREMENTS.
4. FOR 8" TRENCH WALL USE SINGLE LINE OF REINFORCING AT EACH DIRECTION CENTERED AT WALL. FOR 12" THK TRENCH WALL USE TWO LAYER OF REINFORCING AT EACH DIRECTION.

4

4 TYPICAL SECTION AT TRENCH - II

SCALE: 3/4" = 1'-0"

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Approved By:	NMS
W&S Project No.:	ENG23-0579
W&S File No.:	XXX

Drawing Title:
CONCRETE SECTIONS & DETAILS I

Sheet Number:
S301

PROCESS GENERAL DEMOLITION NOTES:

1. REFER TO INDIVIDUAL DRAWINGS FOR SPECIFIC DEMOLITION NOTES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL DEMOLISHED PIPING, EQUIPMENT AND MATERIALS. THE OWNER RESERVES THE RIGHT TO RETAIN PIPING, EQUIPMENT AND/OR MATERIALS ON SITE FOR THEIR USE. SUCH MATERIAL TO BE RETAINED SHALL BE PLACED IN AN ON-SITE STORAGE AREA, REVIEWED/COORDINATED WITH, AND ACCEPTABLE TO THE OWNER AND ENGINEER. RETAINED EQUIPMENT SHALL BE REMOVED IN SUCH A WAY AS NECESSARY TO MAINTAIN ITS FUNCTIONAL AND PHYSICAL INTEGRITY.
3. THE CONTRACTOR SHALL KEEP A RECORD OF DEMOLITION AND LOCATION OF UTILITIES FOUND AS PART OF THE PROJECT RECORD DOCUMENTS, AS SPECIFIED IN SPECIFICATION SECTION 01 78 39.
4. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING EXISTING UTILITIES. THE SIZES, LOCATIONS, AND MATERIALS OF CONSTRUCTION INDICATED ARE FROM THE BEST AVAILABLE INFORMATION AND MAY NOT BE COMPLETE OR ACCURATE. ALL SIZES, LOCATIONS, AND MATERIALS OF CONSTRUCTION SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD AS REQUIRED. ALL EXISTING UTILITIES THAT ARE TO REMAIN, AND ARE DAMAGED BY THE CONTRACTORS ACTIVITIES, SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
5. SEVERING THE EXISTING UTILITIES FOR ABANDONMENT, OR REMOVAL OF A SEGMENT FROM SERVICE, SHALL BE PERFORMED IN SUCH A MANNER AS TO ALLOW THE REMAINING ACTIVE SEGMENT TO CONTINUE IN ITS INTENDED SERVICE. CAP ACTIVE SEGMENTS WITH APPROPRIATE FITTING, JOINT RESTRAINT, ETC. TO ENSURE THEIR INTEGRITY. THE METHOD OF CAPPING SHALL BE REVIEWED WITH, AND ACCEPTABLE TO, THE ENGINEER.
6. ALL PIPING, EQUIPMENT AND MATERIALS TO BE DEMOLISHED AND/OR REMOVED FROM SERVICE MUST BE COORDINATED WITH THE OWNER AND ENGINEER BEFOREHAND.
7. THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO ENSURE THAT ALL FLOWS, FLOW METERING AND LEVEL CONTROLS ARE MAINTAINED DURING CONSTRUCTION. GRAVITY, PUMPED BYPASSES OR OTHER MEANS OF FLOW MAINTENANCE SHALL BE REVIEWED WITH, AND ACCEPTABLE TO, THE ENGINEER. THE CONTRACTOR SHALL COORDINATE ANY TEMPORARY STOPPAGES WITH THE OWNER AND ENGINEER. CONTRACTOR SHALL VERIFY WITH OWNER/ENGINEER ALL VALVES, GATES, EQUIPMENT, ETC., ARE FUNCTIONAL PRIOR TO ASSUMING UTILIZATION FOR FLOW ISOLATION.
8. WHERE PIPING OR CONDUIT THAT IS TO BE REMOVED PASSES THROUGH THE WALL OF THE STRUCTURE, IT SHALL BE CUT OFF AS NEAR TO THE WALL AS PRACTICAL AND PROPERLY SEALED ON EACH SIDE OF THE WALL, OR AS SHOWN ON THE DRAWINGS. SEAL METHOD SHALL BE SUBJECT TO REVIEW AND ACCEPTANCE OF THE ENGINEER.
9. ALL WALL AND/OR FLOOR PENETRATIONS REMAINING AFTER THE REMOVAL OF PIPING OR CONDUIT ARE TO BE PATCHED AND FINISHED FLUSH TO MATCH EXISTING SURFACES.
10. REMOVE ALL PUMP AND EQUIPMENT PADS NOT BEING RE-USED AND FINISH FLUSH TO FLOOR LEVEL. REMOVE ALL WALL BRACKETS, PIPE HANGERS AND PIPE SUPPORTS NOT BEING RE-USED. PATCH BOLT HOLES TO MATCH THE EXISTING SURFACE.
11. ALL WALL AND FLOOR SURFACES DAMAGED OR DISTURBED AS A RESULT OF DEMOLITION BY THE CONTRACTOR OR ITS SUB-CONTRACTORS, SHALL BE PATCHED AND PAINTED PER SPECIFICATION SECTION 09 90 00.
12. WHERE PIPING AND/OR EQUIPMENT THAT IS NOTED AS ABANDONED INTERFERES WITH THE CONTRACTOR'S CONSTRUCTION ACTIVITIES, CONTRACTOR SHALL REMOVE AND DISPOSE OF AS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.

PROCESS GENERAL NOTES:

1. ALL EQUIPMENT AND PIPING LAYOUT DIMENSIONS SHALL BE FIELD VERIFIED AND COORDINATED WITH EQUIPMENT SUPPLIED, AND/OR EXISTING CONDITIONS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AS REQUIRED PRIOR TO BEGINNING CONSTRUCTION OF NEW FACILITIES, EQUIPMENT OR PIPING THAT MAY BE AFFECTED.
2. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DIMENSIONS, LAYOUT OR ELEVATION CHANGES REQUIRED TO SUIT THE SPECIFIC EQUIPMENT BEING PROVIDED UNDER THIS CONTRACT. WHEN SUCH EQUIPMENT REQUIRES PADS, PIERS, CURBING, ETC., THAT DIFFERS FROM THAT SHOWN ON THE CONSTRUCTION DRAWINGS, THE CONTRACTOR SHALL COORDINATE THE STEEL REINFORCING SHOP DRAWINGS ACCORDINGLY.
3. ALL BURIED CONNECTIONS TO STRUCTURES SHALL HAVE SLEEVE TYPE FLEXIBLE CONNECTIONS APPROXIMATELY 4-FEET FROM THE STRUCTURES. ALL SLEEVE TYPE COUPLINGS ON PRESSURE LINES SHALL BE RESTRAINED (SOLID SLEEVE TYPE). REFER TO SPECIFICATION SECTION 40 05 13.53
4. PROVIDE CAST OR DUCTILE IRON WALL CASTINGS, OR GALVANIZED STEEL PIPE SLEEVES, FOR ALL PIPE PENETRATIONS MADE THROUGH CONCRETE FOUNDATIONS, WALLS AND SLABS, UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL WALL SLEEVES AND WALL CASTINGS SHALL HAVE SEALING/ANCHORING COLLARS. SEE PROCESS, MECHANICAL, PLUMBING AND STRUCTURAL DRAWINGS FOR LOCATIONS OF PENETRATIONS. NEW PENETRATIONS THROUGH EXISTING STRUCTURE WALLS SHALL BE BY CORING MACHINE AND LINK TYPE COMPRESSION SEALS, UNLESS OTHERWISE INDICATED. OPENINGS TO BE COMPATIBLE WITH REQUIRED PIPING AND STANDARD LINK SEAL SIZES. FOR ADDITIONAL INFORMATION, REFER TO SPECIFICATION SECTION 40 05 13.53
5. ALL MAGNETIC FLOW ELEMENTS SHALL BE LOCATED A MINIMUM OF TWO PIPE DIAMETERS DOWNSTREAM AND FIVE DIAMETERS UPSTREAM OF ANY HYDRAULIC DISTURBANCE, EXCEPT IN SITUATIONS WHERE DIMENSIONAL CONSTRAINTS PRECLUDE THESE SEPARATION DISTANCES. IN THESE CASES, THE ENGINEER WILL REVIEW THE LAYOUT AND PROVIDE REVISED MINIMUM SEPARATION DISTANCES.
6. PROVIDE DRIP PANS, WITH CENTRAL COLLECTION POINT AND DRAIN TO FLOOR, FOR ELECTRICAL AND INSTRUMENTATION EQUIPMENT LOCATED BENEATH LIQUID CARRYING PIPES.
7. INSTALL CORPORATION COCKS ON ALL BUILDING AND STRUCTURE INTERIOR PIPING HIGH POINTS TO PREVENT AIR BINDING. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXACT NUMBER AND LOCATIONS OF THESE CORPORATION COCKS BASED UPON INFORMATION DEPICTED ON DRAWINGS AND ACTUAL FIELD ROUTING OF PIPING. REVIEW LOCATIONS WITH ENGINEER BEFORE INSTALLATION. THESE MANUAL AIR RELEASES SHALL INCLUDE A 1/2-INCH BRASS CORPORATION COCK WITH 1/2-INCH COPPER TUBING ADEQUATELY SUPPORTED, EXTENDING TO A LOCAL AREA DRAIN. ROUTING OF TUBING AND SELECTED DRAIN TO BE REVIEWED WITH, AND ACCEPTED BY, ENGINEER.
8. PIPES 3-INCH IN DIAMETER AND UNDER SHALL HAVE UNIONS INSTALLED ADJACENT TO EQUIPMENT AND TANKS, UNLESS OTHERWISE NOTED ON DRAWINGS. FLANGES ARE ACCEPTABLE ON 3-INCH DIAMETER PIPING.
9. ALL PIPES SHALL BE ADEQUATELY RESTRAINED AND SUPPORTED IN ACCORDANCE WITH SPECIFICATION SECTION 40 06 21.
10. AFTER INSTALLATION, ALL PIPELINES SHALL BE PRESSURE TESTED FOR TIGHTNESS IN ACCORDANCE WITH SPECIFICATION SECTIONS 33 11 13.13 AND 40 05 13.53. ALL LEAKS SHALL BE CORRECTED AND RETESTED UNTIL PRESSURE TEST IS SATISFACTORILY COMPLETED.
11. ALL PIPING SHALL BE CLEANED, TO THE SATISFACTION OF THE ENGINEER, BEFORE TESTING.
12. PROVIDE 4-INCH HIGH (MIN.) REINFORCED CONCRETE PAD UNDER ALL EQUIPMENT, CONTROL PANELS, PIPE AND EQUIPMENT SUPPORTS, TANKS, ETC. UNLESS OTHERWISE INDICATED.
13. ALL REDUCERS SHALL BE CONCENTRIC TYPE UNLESS DESIGNATED AS ECCENTRIC (ECC) ON THE DRAWINGS. ECCENTRIC REDUCERS SHALL BE INSTALLED WITH FLAT SIDE UP.
14. WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH, AND INSTALL ADAPTERS, FITTINGS AND ADDITIONAL PIPE AS REQUIRED TO COMPLETE THE INSTALLATION. THE USE OF UNI-FLANGES WILL NOT BE ALLOWED UNLESS INDICATED ON THE DRAWINGS.
15. ALL STAINLESS STEEL FASTENERS FOR PIPING, EQUIPMENT, SUPPORTS, ETC., SHALL BE HAND TIGHTENED IN ORDER TO LIMIT THE POTENTIAL FOR GALLING.
16. CONTRACTOR TO NOTE THAT ALL EXISTING INFORMATION ON THE DRAWINGS IS SHOWN WITH A LIGHTER LINE WEIGHT. THE EXCEPTION IS WHEN SCANNED IMAGES ARE UTILIZED FROM THE PREVIOUS CONSTRUCTION PROJECTS NOTED IN GENERAL NOTE NO. 1, ABOVE. WHEN REVIEWING DRAWINGS NOTED AS "SCANNED" UNDER DRAWING TITLE, THE CONTRACTOR SHALL IGNORE ANY REFERENCE TO PREVIOUS CONTRACT WORK. SCANNED IMAGES ARE NOT TO SCALE; HOWEVER, AN APPROXIMATE SCALE MAY BE GIVEN FOR CONVENIENCE.
17. CONTRACTOR SHALL COORDINATE INSTRUMENTATION MOUNTING DETAILS WITH THE INSTRUMENTATION SUPPLIER AND THE ELECTRICAL CONTRACTOR. REFER TO DETAILS ON THE INSTRUMENTATION DRAWINGS, AND/OR EQUIPMENT MANUFACTURER MOUNT DETAILS AND REQUIREMENTS.
18. ALL CHECK VALVES SHALL BE SWING TYPE CHECK VALVES UNLESS SPECIFICALLY CALLED OUT ON THE DRAWINGS.
19. DO NOT SCALE DISTANCES OR DIMENSIONS FROM THE DRAWINGS. WRITTEN DIMENSIONS SHALL PREVAIL. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
20. THE CENTERLINE ELEVATION OF THE SUCTION AND DISCHARGE PIPELINES SHALL BE COORDINATED BY THE GENERAL CONTRACTOR TO SUIT THE SUPPLIED EQUIPMENT.
21. FLANGED PIPING AND FITTINGS BENEATH GRATING SHALL BE FASTENED WITH STAINLESS STEEL OR ZINC COATED HARDWARE.
22. ALL EQUIPMENT PADS AND CONCRETE STRUCTURES SHALL BE CONSTRUCTED WITH A CHAMFERED EDGE UNLESS OTHERWISE SPECIFIED.

EQUIPMENT TAGS - VALVES

TAG	DESCRIPTION	EQUIPMENT
V1-100	IX SYSTEM 100 INFLUENT CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V2-100	IX-102 INFLUENT CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V3-100	IX-102 EFFLUENT CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V4-100	IX-101 EFFLUENT CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V5-100	IX-101 BACKWASH EFFLUENT CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V6-100	IX-102 BACKWASH EFFLUENT CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V7-100	IX-101 BACKWASH SUPPLY CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V8-100	IX-102 BACKWASH SUPPLY CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V9-100	IX-101 INFLUENT LEAD/LAG CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V10-100	IX-102 INFLUENT LEAD/LAG CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V11-100	IX-101 FILTER INFLUENT ISOLATION	10-INCH MANUAL GEAR BUTTERFLY VALVE
V12-100	IX-101 FILTER EFFLUENT ISOLATION	10-INCH MANUAL GEAR BUTTERFLY VALVE
V13-100	IX-102 FILTER INFLUENT ISOLATION	10-INCH MANUAL GEAR BUTTERFLY VALVE
V14-100	IX-102 FILTER EFFLUENT ISOLATION	10-INCH MANUAL GEAR BUTTERFLY VALVE
V1-200	IX SYSTEM 200 INFLUENT CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V2-200	IX-202 INFLUENT CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V3-200	IX-202 EFFLUENT CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V4-200	IX-201 EFFLUENT CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V5-200	IX-201 BACKWASH EFFLUENT CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V6-200	IX-202 BACKWASH EFFLUENT CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V7-200	IX-201 BACKWASH SUPPLY CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V8-200	IX-202 BACKWASH SUPPLY CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V9-200	IX-201 INFLUENT LEAD/LAG CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V10-200	IX-202 INFLUENT LEAD/LAG CONTROL VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
V11-200	IX-201 FILTER INFLUENT ISOLATION	10-INCH MANUAL GEAR BUTTERFLY VALVE
V12-200	IX-201 FILTER EFFLUENT ISOLATION	10-INCH MANUAL GEAR BUTTERFLY VALVE
V13-200	IX-202 FILTER INFLUENT ISOLATION	10-INCH MANUAL GEAR BUTTERFLY VALVE
V14-200	IX-202 FILTER EFFLUENT ISOLATION	10-INCH MANUAL GEAR BUTTERFLY VALVE
INF-100	IX SYSTEM 100 INFLUENT VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
INF-200	IX SYSTEM 200 INFLUENT VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
FCV-100	IX SYSTEM 100 EFFLUENT VALVE	10-INCH ELECTRIC MODULATING BUTTERFLY VALVE
FCV-200	IX SYSTEM 200 EFFLUENT VALVE	10-INCH ELECTRIC MODULATING BUTTERFLY VALVE
FCV-300 DOES NOT EXIST. FE/FIT IS LCOATED ON PFAS EFFLUENT LINE, NO FCV NEEDED.		
FCV-400	BACKWASH WASTE FLOW CONTROL VALVE	6-INCH ELECTRIC MODULATING BUTTERFLY VALVE
BWW-100	IX SYSTEM 100 BACKWASH WASTE ISOLATION VALVE	10-INCH MANUAL CUSHIONED SWING CHECK VALVE
BWW-200	IX SYSTEM 200 BACKWASH WASTE ISOLATION VALVE	10-INCH MANUAL CUSHIONED SWING CHECK VALVE
BP-300	PFAS BUILDING BYPASS VALVE	20-INCH GATE VALVE
BP-301	IX SYSTEM BYPASS VALVE	16-INCH MANUAL BUTTERFLY VALVE
BP-302	IX SYSTEM INFLUENT BYPASS VALVE	16-INCH MANUAL BUTTERFLY VALVE
BP-303	IX SYSTEM EFFLUENT BYPASS VALVE	16-INCH MANUAL BUTTERFLY VALVE
EFF-300	IX SYSTEM EFFLUENT ISOLATION VALVE	16-INCH GATE VALVE
FIN-300	FINISHED WATER VALVE	20-INCH GATE VALVE
INF-300	IX SYSTEM INFLUENT ISOLATION VALVE	16-INCH GATE VALVE
INF-301	IX SYSTEM INFLUENT FLOW CONTROL VALVE	16-INCH MANUAL GEAR BUTTERFLY VALVE
BP-500	CF SYSTEM BYPASS VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
EFF-500	CF SYSTEM EFFLUENT ISOLATION VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
INF-501	CF 501 INFLUENT VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
EFF-501	CF 501 EFFLUENT VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
INF-502	CF 502 EFFLUENT VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
EFF-502	CF 502 EFFLUENT VALVE	10-INCH MANUAL GEAR BUTTERFLY VALVE
ARV-100	IX PAIR 100 AIR RELIEF VALVE	2-INCH AIR RELIEF VALVE
ARV-101	IX-101 AIR RELIEF VALVE	2-INCH AIR RELIEF VALVE
ARV-102	IX-102 AIR RELIEF VALVE	2-INCH AIR RELIEF VALVE
ARV-200	IX PAIR 200 AIR RELIEF VALVE	2-INCH AIR RELIEF VALVE
ARV-201	IX-201 AIR RELIEF VALVE	2-INCH AIR RELIEF VALVE
ARV-202	IX-202 AIR RELIEF VALVE	2-INCH AIR RELIEF VALVE
ARV-500	CARTRIDGE FILTER AIR RELIEF VALVE	2-INCH AIR RELIEF VALVE
PRV-101	IX-101 PRESSURE RELIEF VALVE	4-INCH PRESSURE RELIEF VALVE
PRV-102	IX-101 PRESSURE RELIEF VALVE	4-INCH PRESSURE RELIEF VALVE
PRV-201	IX-201 PRESSURE RELIEF VALVE	4-INCH PRESSURE RELIEF VALVE
PRV-202	IX-202 PRESSURE RELIEF VALVE	4-INCH PRESSURE RELIEF VALVE
PRV-500	CARTRIDGE FILTER INFLUENT PRESSURE RELIEF	16-INCH PRESSURE RELIEF VALVE

EQUIPMENT TAGS - MONITORING

TAG	DESCRIPTION	EQUIPMENT
FE/FIT-100	IX SYSTEM 100 INFLUENT FLOW	10-INCH MAGNETIC FLOWMETER
FE/FIT-200	IX SYSTEM 200 INFLUENT FLOW	10-INCH MAGNETIC FLOWMETER
FE/FIT-300	IX EFFLUENT (COMBINED) FLOW	16-INCH MAGNETIC FLOWMETER
FE/FIT-400	IX BACKWASH WASTE FLOW	6-INCH MAGNETIC FLOWMETER
PDIT-101	IX-101 DIFFERENTIAL PRESSURE	PRESSURE DIFFERENTIAL INDICATING TRANSMITTER
PDIT-102	IX-102 DIFFERENTIAL PRESSURE	PRESSURE DIFFERENTIAL INDICATING TRANSMITTER
PDIT-201	IX-201 DIFFERENTIAL PRESSURE	PRESSURE DIFFERENTIAL INDICATING TRANSMITTER
PDIT-202	IX-202 DIFFERENTIAL PRESSURE	PRESSURE DIFFERENTIAL INDICATING TRANSMITTER
PDIT-501	CF 501 DIFFERENTIAL PRESSURE	PRESSURE DIFFERENTIAL INDICATING TRANSMITTER
PDIT-502	CF 502 DIFFERENTIAL PRESSURE	PRESSURE DIFFERENTIAL INDICATING TRANSMITTER
PIT-301	IX SYSTEM INFLUENT PRESSURE	PRESSURE INDICATING TRANSMITTER
ST-101-25	IX-101 25% SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-101-50	IX-101 50% SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-101-75	IX-101 75% SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-101-EFF	IX-101 EFFLUENT SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-102-25	IX-102 25% SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-102-50	IX-102 50% SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-102-75	IX-102 75% SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-102-EFF	IX-102 EFFLUENT SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-201-25	IX-201 25% SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-201-50	IX-201 50% SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-201-75	IX-201 75% SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-201-EFF	IX-201 EFFLUENT SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-202-25	IX-202 25% SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-202-50	IX-202 50% SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-202-75	IX-202 75% SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-202-EFF	IX-202 EFFLUENT SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-300	IX SYSTEM COMBINED INFLUENT SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-400	IX BACKWASH WASTE SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-501-INF	CF-501 INFLUENT SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-502-INF	CF-502 INFLUENT SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-501-EFF	CF-501 EFFLUENT SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
ST-502-EFF	CF-502 EFFLUENT SAMPLE TAP	1/2-INCH BALL VALVE SAMPLE TAP
FS-1	SUMP PIT FLOAT SWITCH	FLOAT SWITCH
FS-2	SUMP PIT FLOAT SWITCH	FLOAT SWITCH
FS-3	SUMP PIT FLOAT SWITCH	FLOAT SWITCH

3

EQUIPMENT TAGS - GENERAL

TAG	DESCRIPTION	EQUIPMENT
IX-101	IX-101 PRESSURE VESSEL	12-FT DIAMETER
IX-102	IX-102 PRESSURE VESSEL	12-FT DIAMETER
IX-201	IX-201 PRESSURE VESSEL	12-FT DIAMETER
IX-202	IX-202 PRESSURE VESSEL	12-FT DIAMETER
CF-501	CARTRIDGE FILTER 501	2.5-FT DIAMETER
CF-502	CARTRIDGE FILTER 502	2.5-FT DIAMETER
CP-PFAS	PFAS TREATMENT ROOM CONTROL PANEL	CONTROL PANEL

GREENSAND / EXISTING SYSTEM EQUIPMENT

TAG	DESCRIPTION	EQUIPMENT	ACTION
MOV-10, 20, 30, 40, 50, 60, 70, 80	RAW WATER INLET	6-INCH ELECTRIC MOTOR BFV	RETAIN
MOV-13, 23, 33, 43, 53, 63, 73, 83	HIGH RINSE INLET	6-INCH ELECTRIC MOTOR BFV	REPLACE
MOV-14, 24, 34, 44, 54, 64, 74, 84	BACKWASH SUPPLY	6-INCH ELECTRIC MOTOR BFV	REPLACE
MOV-15, 25, 35, 45, 55, 65, 75, 85	BACKWASH WASTE	6-INCH ELECTRIC MOTOR BFV	REPLACE
MOV-16, 26, 36, 46, 56, 66, 76, 86	KMNO4 INJECTION	2-INCH ELECTRIC MOTOR BV	RETAIN
MOV-17, 27, 37, 47, 57, 67, 77, 87	HIGH RINSE OUT	6-INCH ELECTRIC MOTOR BFV	REPLACE
BV-4-1, -2, -3, -4, -5, -6, -7, -8	FILTER INFLUENT	6-INCH MANUAL GEAR BFV	RETAIN
BV-5-1, -2, -3, -4, -5, -6, -7, -8	FILTER EFFLUENT	6-INCH MANUAL GEAR BFV	REPLACE
FCV-12, 22, 32, 42, 52, 62, 72, 82	FLOW CONTROL VALVE	6-INCH MODULATING MOTOR BFV	REPLACE
FE/FIT-12, 22, 32, 42, 52, 62, 72, 82	FLOW METER	PITOT FLOW METER	REPLACE WITH 6-INCH MAGMETER
FE/FIT-301	FLOW METER	INSERTION FLOW METER	RELOCATE FROM HATCH
BV-6	BACKWASH SUPPLY	6-INCH MANUAL GEAR BFV	RETAIN
BV-9	FILTER EFFLUENT	8-INCH MANUAL GEAR BFV	REPLACE
BV-10	FILTER EFFLUENT	8-INCH MANUAL GEAR BFV	REPLACE
BV-16	BWS ISOLATION (SERIES)	6-INCH MANUAL GEAR BFV	NEW
BV-17	BWS (SERIES)	6-INCH MANUAL GEAR BFV	NEW
FCV-90	FLOW CONTROL VALVE	6-INCH MODULATING MOTOR BFV	NEW
BV-24	FILTERS 2 & 4 ISOLATION	14-INCH MANUAL GEAR BFV	REPLACE
BV-68	FILTERS 6 & 8 ISOLATION	10-INCH MANUAL GEAR BFV	REPLACE
BV-31	FILTERS 1 & 3 ISOLATION	14-INCH MANUAL GEAR BFV	REPLACE
CKV-90	BACKWASH WASTE	6-INCH CUSIONED SWING CKV	NEW
BV-57	FILTERS 5 & 7 ISOLATION	10-INCH MANUAL GEAR BFV	REPLACE
PIT-300	PRESSURE	PRESSURE TRANSDUCER	RETAIN
PIT-302	PRESSURE	PRESSURE TRANSMITTER	RELOCATE FROM HATCH
ST-301	SPARE	SAMPLE TAP	RELOCATE
ST-302	SPARE	SAMPLE TAP	RELOCATE
ST-303	SPARE	SAMPLE TAP	RELOCATE
HSP-1	HIGH SERVICE PUMP 1	VERTICAL TURBINE PUMP	REPLACE
HSP-2	HIGH SERVICE PUMP 2	VERTICAL TURBINE PUMP	REPLACE
HSP-3	HIGH SERVICE PUMP 3	VERTICAL TURBINE PUMP	REPLACE
HSP-4	HIGH SERVICE PUMP 4	VERTICAL TURBINE PUMP	REPLACE
WWP-1	WASHWATER PUMP 1	PROGRESSIING CAVITY PUMP	REPLACE
WWP-2	WASHWATER PUMP 2	PROGRESSIING CAVITY PUMP	REPLACE

Project:

DEDHAM-WESTWOOD WATER DISTRICT

DWWD - White Lodge Water Treatment Plant
PFAS Treatment, DWSRF-16739
154 UNIVERSITY AVENUE
WESTWOOD, MA

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Consultants:

Revisions:

No.	Date	Description
3	4/28/25	ADDENDUM 4

COA:

Seal:

Issued For: BIDDING

Scale: NTS

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Date: 2/26/2025
Drawn By: SKF
Reviewed By: AG
Approved By: MAM
W&S Project No.: ENG23-0579
W&S File No.: -

Drawing Title:

LEGEND, NOTES AND ABBREVIATIONS

Sheet Number:

M001

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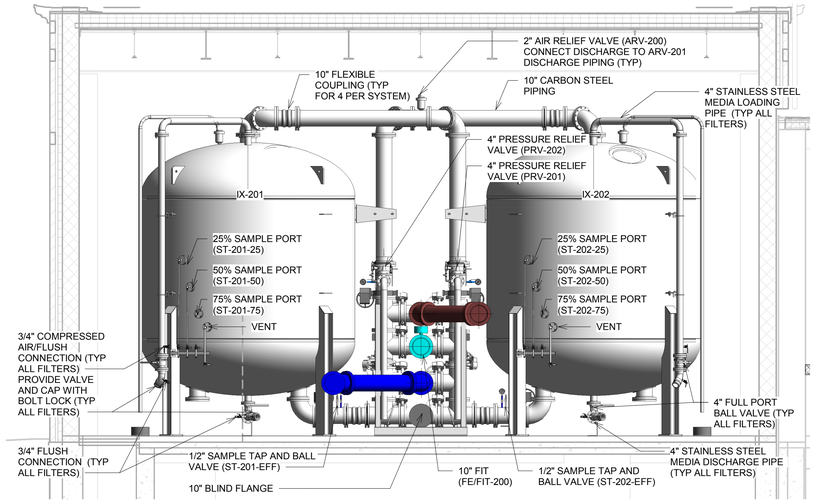
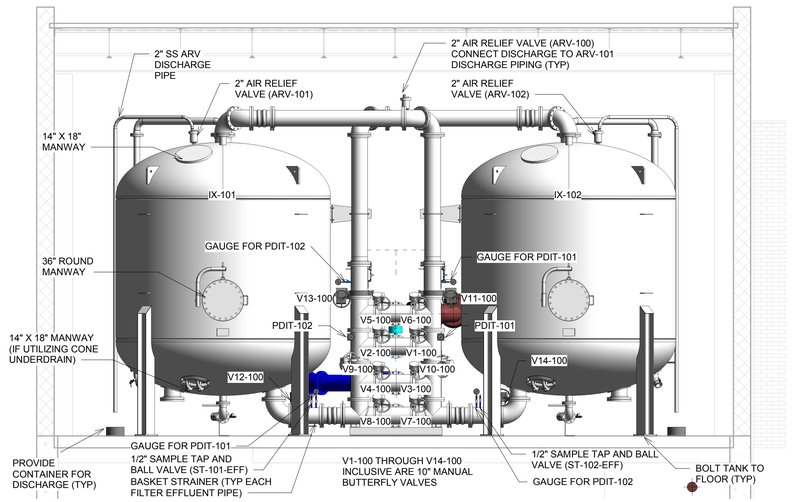
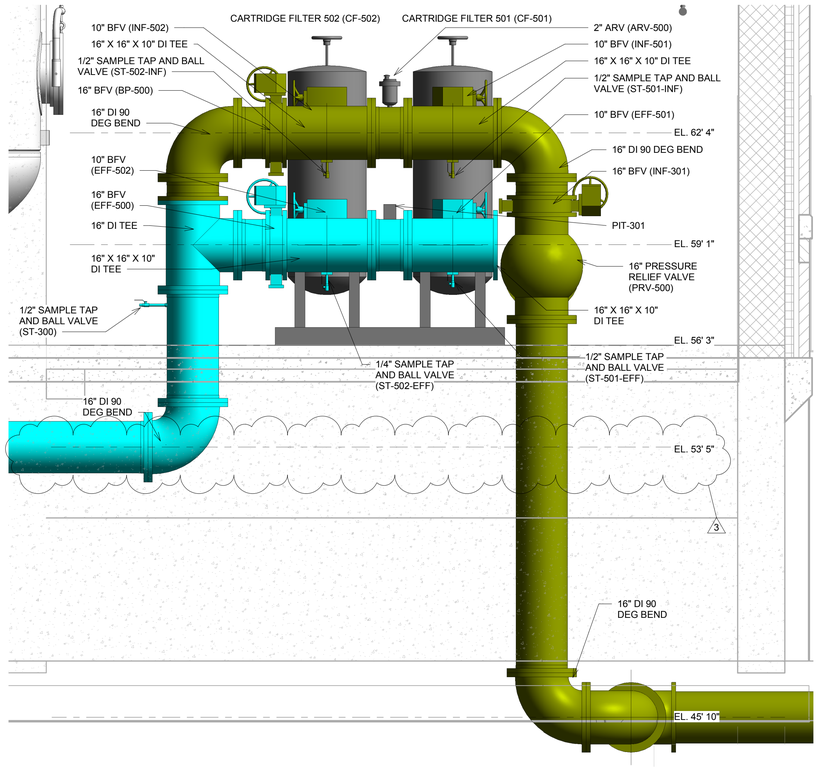


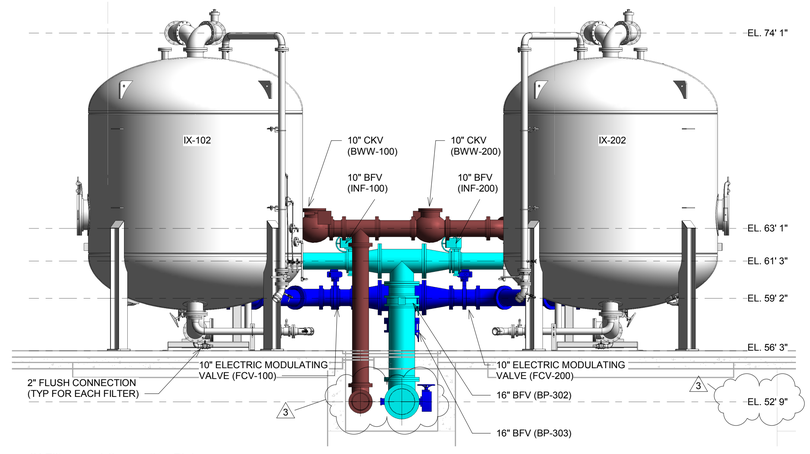
1 IX Filters Back
1/4" = 1'-0" 1/ M100



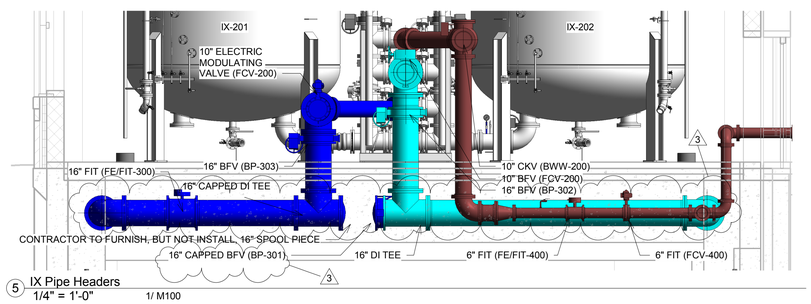
2 IX Filters Front
1/4" = 1'-0" 1/ M100



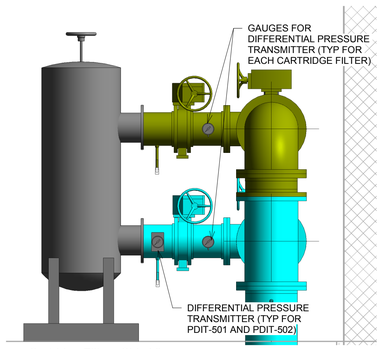
3 Cartridge Filters
1/2" = 1'-0" 1/ M100



4 IX Filters and Connecting Piping
1/4" = 1'-0" 1/ M100



5 IX Pipe Headers
1/4" = 1'-0" 1/ M100



7 Cartridge Filters Side View
1/2" = 1'-0" 1/ M100

CARTRIDGE FILTER EFFLUENT
WHITE LODGE WTP EFFLUENT
BACKWASH WASTE
IX FILTER EFFLUENT

6 M300 Pipe Legend
NTS

Project:
DEDHAM-WESTWOOD WATER DISTRICT
DWWD - White Lodge Water Treatment Plant
PFAS Treatment, DWSRF-16739
154 UNIVERSITY AVENUE
WESTWOOD, MA

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Consultants:

Revisions:

No.	Date	Description
3	4/28/25	ADDENDUM 4

COA:

Seal:

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PROCESS PIPING SECTIONS

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M300

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