

October 16, 2024

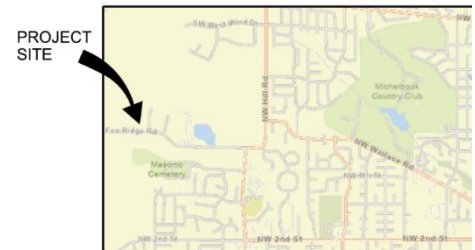
Craig Massie, PE  
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Suite 300  
Corvallis, OR 97330

*Letter sent via email only.*

**Re: Zone 2 Pump Station Improvements (PR#[132-2024](#))  
McMinnville Water & Light (PWS ID#[00497](#))  
Conditional Approval**

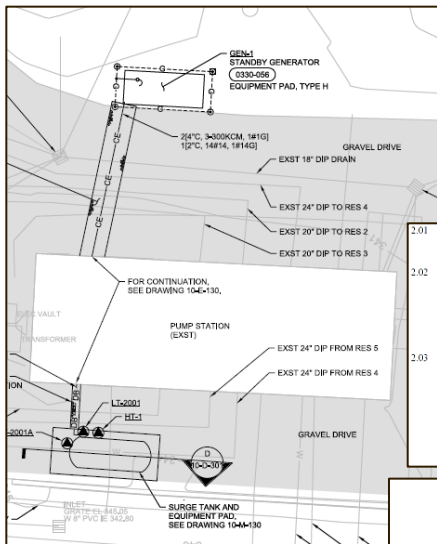
Dear Mr. Massie

Thank you for your submittal to the Oregon Health Authority's Drinking Water Services (DWS) of plan review information for the Zone 2 Pump Station Improvements for McMinnville Water & Light. On September 13, 2024, our office received the plans & specifications and on October 1, 2024, our office received a plan review fee of \$3,300. The project includes improvements made to an existing pump station located at 12302 NW Fox Ridge Rd in McMinnville to serve pressure Zone 2 of the distribution system, including:

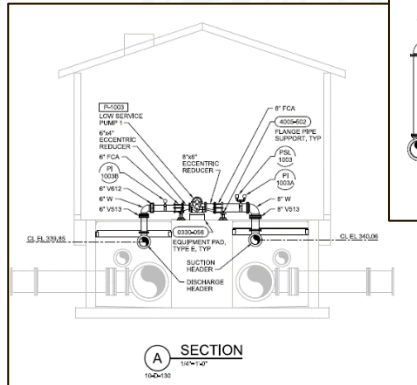
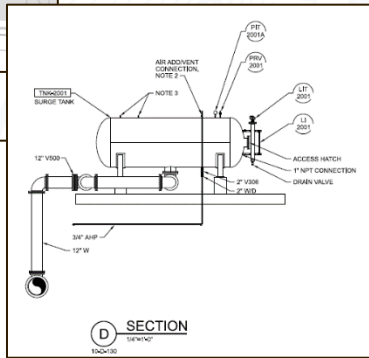


- Four new horizontal split-case centrifugal, water lubricated booster pumps (2 high service pumps, P1001 and P1002, rated for 1,500-gpm @ 176-ft TDH each) and 2 low service pumps, P1003 and P1004, rated for 350 gpm @ 165-ft TDH each) equipped with variable frequency drives;
- One Pulsco 150-psi horizontal bladder surge tank (sized 15-ft long x 5-ft in diameter and no less than 2,000-gallons in capacity to provide at least 850-gallons of surge mitigation and 160-gallons of useable volume for distribution system supply);
- One standby generator; and
- Related piping, valves, flow meters, and controls

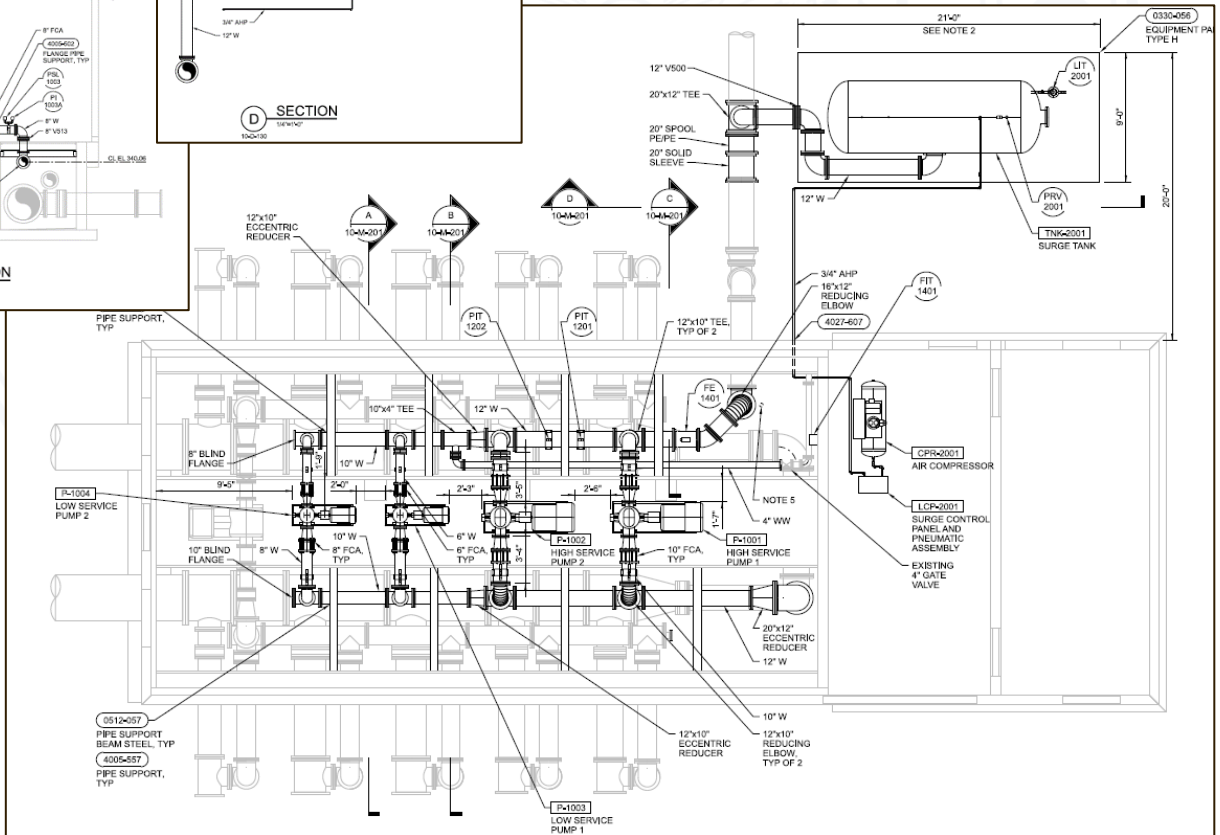
More detailed specifications and plans are shown below.



- 2.01 MANUFACTURERS**  
 A. Pulsco, Inc.
- 2.02 DESIGN CRITERIA**  
 A. System shall be sized to provide 850 gallons for surge mitigation and 160 gallons of usable volume for distribution system supply.  
 B. The Surge Control System shall be designed and supplied by a single manufacturer.
- 2.03 SURGE TANK**  
 A. Physical Data:  
 1. Net Volume: Not less than 2,000 gallons.  
 2. Configuration: Horizontal cylindrical shape with elliptical heads.  
 3. Diameter: Approximately 5 feet.  
 4. Sidewall Length: Approximately 15 feet.  
 5. Design Pressure: 150 psig MAWP.  
 6. Design Temperature: 70 degrees F.



DESIGN CRITERIA		
	PHASE 1	PHASE 2
<b>SYSTEM DEMANDS</b>		
NUMBER OF HOMES CONNECTED TO ZONE 2 DISTRIBUTION SYSTEM	150	308
AVERAGE DAY DEMAND, GPM	36	74
MAXIMUM DAY DEMAND, GPM	73	149
PEAK HOUR DEMAND, GPM	200	350
FIRE FLOW DEMAND, GPM	1500	1500
<b>ZONE 2 DISTRIBUTION SYSTEM</b>		
ZONE 2 NOMINAL HYDRAULIC GRADE LINE, FT	448	513
MAXIMUM WATER SERVICE METER ELEVATION, FT	345	421
MINIMUM WATER SERVICE METER ELEVATION, FT	263	263
MAXIMUM STATIC PRESSURE AT ANY SERVICE METER, PSI	80	108
MINIMUM STATIC PRESSURE AT ANY SERVICE METER, PSI	45	40
PRESSURE REDUCING VALVES ON INDIVIDUAL WATER SERVICES	REQUIRED	REQUIRED
<b>LOW SERVICE PUMPS</b>		
NO. OF PUMPS	2	2
MOTOR HP, EA PUMP	30	30
MOTOR DRIVES	VFDs	VFDs
NOMINAL DISCHARGE PRESSURE, PSI	45	73
DESIGN POINT, GPM	200	350
DESIGN POINT, FT TDH	86	165
<b>HIGH SERVICE PUMPS</b>		
NO. OF PUMPS	2	2
MOTOR HP, EA PUMP	125	125
MOTOR DRIVES	VARIABLE SPEED	VARIABLE SPEED
NOMINAL DISCHARGE PRESSURE, PSI	45	73
DESIGN POINT, GPM	1500	1500
DESIGN POINT, FT TDH	111	176
<b>HYDROPNEUMATIC TANK</b>		
TOTAL VOLUME, GAL	2000	
VOLUME RESERVED FOR SYSTEM SUPPLY, GAL	160	
VOLUME RESERVED FOR SURGE MITIGATION, GAL	850	
MAXIMUM ALLOWABLE WORKING PRESSURE, PSI	150	
TANK INLET/OUTLET SIZE, IN	12	
TANK ORIFICE SIZE, IN	6	
AIR COMPRESSOR, HP	2	



The plans are approved subject to the following condition:

1. Sampling results following disinfection of new facilities is provided after construction.

**Until we receive verification that the condition has been met and final approval has been issued, the pump station is not approved for use.** Upon completion of the project, please submit the post-disinfection coliform test results and the Request for Project Final Approval form available on our website at the following link:

<https://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/DRINKINGWATER/PLANREVIEW/Documents/project-update-form.pdf>

which will serve as verification that construction was completed according to the submitted plans. Please also submit a set of as-built plans (if substantial changes are made, a set of as-built drawings must be submitted). The request for project final approval form should reference Plan Review #132-2024 and water system #41-00497 and can be emailed to me at [evan.e.hofeld@oha.oregon.gov](mailto:evan.e.hofeld@oha.oregon.gov).

If you have any questions, please feel free to email me at [evan.e.hofeld@oha.oregon.gov](mailto:evan.e.hofeld@oha.oregon.gov) or call me at 971-200-0288.

Sincerely,



Evan Hofeld, PE  
Regional Engineer  
Drinking Water Services

CC: Ryan Sticka, McMinnville Water & Light, [rls@mc-power.com](mailto:rls@mc-power.com)  
James Burke, McMinnville Water & Light, [jwb@mc-power.com](mailto:jwb@mc-power.com)