



LAKE WHATCOM WATER & SEWER DISTRICT

1220 Lakeway Drive
Bellingham, WA, 98229

(360) 734-9224
Fax 738-8250

MEMORANDUM

Date: January 5, 2022

RE: Virtual Meeting Attendance

For the foreseeable future, Lake Whatcom Water & Sewer District's Board of Commissioners will be attending regular meetings by phone/video conference. Per Governor Inslee's [Proclamation No. 20-28.3](#), the District will provide access to interested public via phone/internet utilizing the GoToMeeting platform.

Attending a Meeting

If you would like to attend the January 12, 2022 regular board meeting, access details can be found below. In this evolving climate, we are committed to doing everything possible to provide opportunity for public comment as well as promote health and safety. As such, **the District requests that if possible, public submit comments in written form by noon the day before a scheduled meeting** for inclusion in the meeting discussion. This is *not a requirement* for making a public comment, but is helpful to the staff and commissioners for planning purposes.

January 12, 2022 Regular Board Meeting

Wed, Jan 12, 2022 6:30 PM – 8:30 PM (PST)

Join the meeting from your computer, tablet or smartphone.

<https://global.gotomeeting.com/join/133067693>

You can also dial in using your phone.

United States: [+1 \(669\) 224-3412](tel:+16692243412)

Access Code: 133-067-693

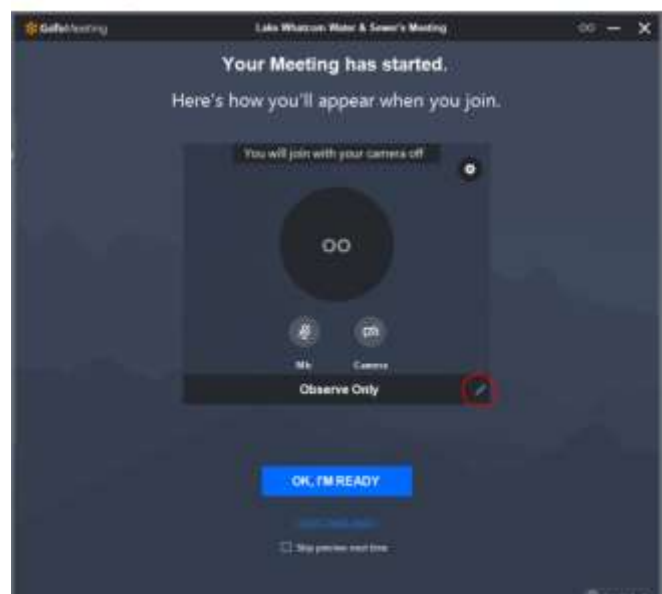
New to GoToMeeting? Get the app now and be ready when the meeting starts:

<https://global.gotomeeting.com/install/133067693>

Attending as an Observer only

If you wish to observe a meeting, but do not plan to speak or appear on video during the meeting, you may attend anonymously.

When you click the link to log in to the meeting, a black box will appear like the one pictured below. Click the pencil icon (circled) and change your name to "Observe Only." Also make sure that your microphone and camera icon are grey and not green. You will be muted by the meeting administrator and will not be included in the roll call.



We appreciate your understanding and patience during these uncertain times.

If you have any questions, please contact Administrative Assistant

Rachael Hope at rachael.hope@lwwsd.org or 360-734-9224.

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LAKE WHATCOM WATER AND SEWER DISTRICT

1220 Lakeway Drive
Bellingham, WA 98229

REGULAR MEETING OF THE BOARD OF COMMISSIONERS

AGENDA

January 12, 2022

6:30 p.m. – Regular Session


1. CALL TO ORDER
2. OATH OF OFFICE
 - A. Board of Commissioners Position Nos. 1 and 4
3. ROLL CALL
4. CONFIRMATION OF COMPLIANCE WITH REMOTE MEETING ATTENDANCE PROTOCOLS
5. PUBLIC COMMENT OPPORTUNITY

At this time, members of the public may address the Board of Commissioners. Please state your name prior to making comments.
6. ADDITIONS, DELETIONS, OR CHANGES TO THE AGENDA
7. CONSENT AGENDA
8. SPECIFIC ITEMS OF BUSINESS
 - A. Election of Officers
 - B. Appointment of Investment Committee Representatives
 - C. Appointment of Whatcom County Council of Governments and Lake Whatcom Management Program Policy Group Representatives
 - D. Conclusion of Emergency Declaration associated with November 2021 Flood Event
 - E. Eagleridge Water Booster Conversion Project Update
9. OTHER BUSINESS
10. STAFF REPORTS
 - A. General Manager
11. PUBLIC COMMENT OPPORTUNITY
12. ADJOURNMENT



**AGENDA
BILL
Item 2.A**

**Oath of Office—Board of
Commissioners Position Nos.
1 and 4**

DATE SUBMITTED:	December 29, 2021	MEETING DATE:	January 12, 2022
TO: BOARD OF COMMISSIONERS	FROM: Justin Clary, General Manager		
GENERAL MANAGER APPROVAL			
ATTACHED DOCUMENTS	1. None		
TYPE OF ACTION REQUESTED	RESOLUTION <input type="checkbox"/>	FORMAL ACTION/ MOTION <input checked="" type="checkbox"/>	INFORMATIONAL /OTHER <input type="checkbox"/>

BACKGROUND / EXPLANATION OF IMPACT

The District operates under the authority of [Revised Code of Washington \(RCW\) Title 57](#), Water-Sewer Districts. In accordance with [RCW 57.12.030](#), District commissioner terms of office are six years.

During the November 2021 general election, two District board of commissioner positions were filled (Position Nos. 1 and 4, both with the six-year terms expiring December 31, 2027). Laura Abele was elected to Position No. 1 and Leslie McRoberts was elected to Position No. 4. Newly elected officials are required to take an oath of office, which is typically completed at the first meeting of the year of their term.

I, _____, do solemnly swear that I will support the Constitution of the United States and the Constitution and laws of the State of Washington, and that I will faithfully and impartially perform and discharge the duties of the office of commissioner of the Lake Whatcom Water and Sewer District in and for the County of Whatcom, State of Washington, according to the law and the best of my ability.

FISCAL IMPACT

No fiscal impact is anticipated.

APPLICABLE EFFECTIVE UTILITY MANAGEMENT ATTRIBUTE(S)

Commissioner oaths of office support all ten EUM attributes at various levels.

RECOMMENDED BOARD ACTION

Staff recommends the oath of office be administered for Board of Commissioners Position Nos. 1 and 4 per statute.

PROPOSED MOTION

Not applicable.



**AGENDA
BILL
Item 6**

Consent Agenda

DATE SUBMITTED:	January 5, 2022	MEETING DATE:	January 12, 2022
TO: BOARD OF COMMISSIONERS	FROM: Rachael Hope		
GENERAL MANAGER APPROVAL			
ATTACHED DOCUMENTS	1. See below		
TYPE OF ACTION REQUESTED	RESOLUTION <input type="checkbox"/>	FORMAL ACTION/ MOTION <input checked="" type="checkbox"/>	INFORMATIONAL /OTHER <input type="checkbox"/>

****TO BE UPDATED 1.12.2022****

BACKGROUND / EXPLANATION OF IMPACT

- Minutes for the December 08, 2021 Regular Board Meeting
- Payroll for Pay Period #25 (11/27/2021 through 12/10/2021) totaling \$50,220.96
- Payroll Benefits for Pay Period #25 totaling \$53,062.96
- Payroll for Pay Period #26 (12/11/2021 through 12/24/2021) totaling \$53,19.63
- Payroll Benefits for Pay Period #26 totaling \$29,934.24
- Accounts Payable Vouchers totaling \$140,525.22
- Payroll for Pay Period #01 (12/25/2021 through 01/07/2022) total to be added
- Payroll Benefits for Pay Period #01 total to be added
- Accounts Payable Vouchers total to be added

FISCAL IMPACT

Fiscal impact is as indicated in the payroll/benefits/accounts payable quantities defined above. All costs are within the Board-approved 2021 Budget.

RECOMMENDED BOARD ACTION

Staff recommends the Board approve the Consent Agenda.

PROPOSED MOTION

A recommended motion is:

"I move to approve the Consent Agenda as presented."



LAKE WHATCOM WATER AND SEWER DISTRICT

1220 Lakeway Drive
Bellingham, WA 98229

REGULAR SESSION OF THE BOARD OF COMMISSIONERS

Minutes

December 8, 2021

Board President Laura Abele called the Regular Session to order at 6:30 p.m.

Attendees: Commissioner Laura Abele	General Manager Justin Clary
Commissioner Todd Citron	District Engineer/Assistant GM Bill Hunter
Commissioner John Carter	Finance Manager/Treasurer Jenny Signs
Commissioner Bruce Ford	Operations Manager Brent Winters
Commissioner Leslie McRoberts	Recording Secretary Rachael Hope

Also in attendance was Melanie Mankamyer of Wilson Engineering. All attendees participated remotely by phone or video conferencing.

Roll Call

General Manager Justin Clary performed a roll call to identify those in attendance, and then verbally confirmed that the meeting was noticed in accordance with Resolution No. 859 allowing remote meeting attendance, as well as in compliance with current statutory requirements. It was confirmed that all participants were able to be heard and hear each other clearly.

Consent Agenda

Action Taken

Carter moved, Citron seconded, approval of:

- Minutes for the November 10, 2021 Regular Board Meeting
- Minutes for the November 24, 2021 Regular Board Meeting
- Payroll for Pay Period #24 (11/13/2021 through 11/26/2021) totaling \$55,226.31
- Payroll Benefits for Pay Period #24 totaling \$56,770.42
- Accounts Payable Vouchers totaling \$104,151.48

Motion passed.

2022 Budget Presentation

Signs presented an updated draft of the Fiscal Year 2022 Budget for consideration. This budget was developed using projected revenues based upon rate increases adopted by Resolution No. 879 (increases of 4.5% and 3.75% to water and sewer rates, respectively), actual 2021 operating expenses, and projects defined in the District's water and sewer capital improvement plans. Earlier revisions of the budget were presented during regularly scheduled meetings of the Board held on November 10, 2021, and November 24, 2021. Comments

provided by the Board during those meetings were incorporated into the presented draft Fiscal Year 2022 Budget. Discussion followed.

Action Taken

Carter moved, Citron seconded, to adopt the 2022 Fiscal Year Budget, as presented. Motion passed.

2022-2027 Six-Year Strategic Business Plan

Clary explained that District management, in collaboration with staff, developed a draft six-year strategic business plan that was presented for Board comment during a work session held on September 8, 2021, and further refined through ongoing board discussion relative to the 2022-2026 rate study, updated six-year capital improvement programs for each utility, and current operational revenue and expenditure projections. The updated business plan included incorporation of Board comments and adjustment to reflect fiscal constraints. Discussion followed.

Action Taken

Citron moved, McRoberts seconded, to adopt the 2022-2027 Six-year Strategic Business Plan as presented. Motion passed.

Water Use Efficiency Plan Update

Clary recalled that in 2003, the Washington State Legislature adopted the Municipal Water Law, the goal of which was to address increasing demand on our state's water resources. The Municipal Water Law also directed the state Department of Health (DOH) to adopt an enforceable Water Use Efficiency (WUE) program. In 2007, DOH created the Washington State WUE Program to meet these requirements through ensuring safe and reliable drinking water by achieving a consistently high level of stewardship among all municipal water suppliers.

Following creation of the Washington State WUE Program, the District developed a WUE Plan specific to its three Group A water systems. With the District's current WUE Plan revision adopted in 2015, Staff embarked on an update to the Plan in 2021 to meet the review requirements and ensure that all DOH requirements remain met. A required component of the update process is to seek public input on the goals defined within the revised plan. The District provided notice on November 18 of the public comment opportunity via DOH's public forum process (meeting the two-week notice requirement). The revised Water Use Efficiency Plan was presented to the Board for discussion and consideration of adoption. Discussion followed.

Action Taken

McRoberts moved, Citron seconded, to adopt the 2021 Water Use Efficiency Plan as presented. Motion passed.

2022-2024 AFSCME Council 2 Local 114WD Collective Bargaining Agreement

Clary recounted that the majority of District staff are represented by the American Federation of State, County and Municipal Employees (AFSCME) Council 2 Local 114WD, which has a long history of partnering with the District in executing mutually beneficial collective bargaining agreements. With the current agreement (2019-2021) set to expire December 31, District management and union representatives embarked on negotiation of a successor agreement this past July. Following six negotiation sessions the two sides tentatively agreed upon a collective bargain agreement for January 1, 2022 through December 31, 2024. Union membership ratified the agreement the evening of December 2, 2021, and it was subsequently presented to the Board for consideration of approval.

Action Taken

McRoberts moved, Ford seconded, to authorize the general manager and Board President to execute the 2022 - 2024 collective bargaining agreement between the Lake Whatcom Water and Sewer District and AFSCME Council 2 Local 114WD as presented. Motion passed.

2022 Non-represented Staff Cost-of-Living-Adjustment

Clary explained that traditionally, District non-represented employees have received the same annual cost-of-living adjustment (COLA) increase as the represented (union) employees. Non-union employees include the General Manager, District Engineer/Assistant General Manager, Finance Manager/Treasurer, Operations & Maintenance Manager, and Administrative Assistant. For 2022 the represented employee's COLA will be 4%, per the collective bargaining agreement between AFSCME and the District. Discussion followed.

Action Taken

Citron moved, Carter seconded, to approve a salary adjustment for all non-represented District staff that is equal to an increase of 4% and effective January 1, 2022. Motion passed.

2022 Wilson Engineering Rates

Wilson Engineering provides on-call engineering services to the District through a professional services agreement executed on September 2, 2021, and effective through July 31, 2026. Per Section 8.4 of the agreement, Wilson Engineering may annually request revision to the approved rates to accommodate inflation and market conditions. Clary presented a letter from Wilson Engineering dated November 24, 2021 requesting revision to its rates and fees for 2022 for approval.

Action Taken

Carter moved, Citron seconded, to approve rates and fees to be effective January 1, 2022, for professional services performed by Wilson Engineering under the existing on-call professional services contract with the District, as presented in the November 24, 2021 letter from Wilson Engineering. Motion passed.

General Manager's Report

Clary updated the Board on several topics, including the District's continued response to the COVID-19 pandemic as well as an update on work after the November flood event, the District's receipt of the FEMA Hazard Mitigation Grant for Division 7 Reservoir Replacement, and the recent theft of a District vehicle. Clary proposed that the Board consider cancelling the December 29, 2021 Regular Board Meeting due to lack of agenda items. Discussion followed.

Action Taken

Carter moved, McRoberts seconded, to cancel the December 29, 2021 Regular Board Meeting. Motion passed.

With no further business, Abele adjourned the Regular Session 7:45 p.m.

Board President, Laura Abele

Attest: _____
Recording Secretary, Rachael Hope

Minutes approved by motion at ☐ Regular ☐ Special Board Meeting on _____
Date Minutes Approved

CHECK REGISTER

Lake Whatcom W-S District


Time: 16:00:48 Date: 12/13/2021

12/16/2021 To: 12/16/2021

Page: 1

Trans	Date	Type	Acct #	Chk #	Claimant	Amount	Memo
3775	12/16/2021	Payroll	5	EFT		329.88	11/27/2021 - 12/10/2021 PR 25
3776	12/16/2021	Payroll	5	EFT		466.52	11/27/2021 - 12/10/2021 PR 25
3777	12/16/2021	Payroll	5	EFT		353.09	11/27/2021 - 12/10/2021 PR 25
3778	12/16/2021	Payroll	5	EFT		3,987.08	11/27/2021 - 12/10/2021 PR 25
3779	12/16/2021	Payroll	5	EFT		2,530.17	11/27/2021 - 12/10/2021 PR 25
3780	12/16/2021	Payroll	5	EFT		3,854.53	11/27/2021 - 12/10/2021 PR 25
3782	12/16/2021	Payroll	5	EFT		3,223.65	11/27/2021 - 12/10/2021 PR 25
3784	12/16/2021	Payroll	5	EFT		1,643.91	11/27/2021 - 12/10/2021 PR 25
3785	12/16/2021	Payroll	5	EFT		1,974.61	11/27/2021 - 12/10/2021 PR 25
3786	12/16/2021	Payroll	5	EFT		2,916.94	11/27/2021 - 12/10/2021 PR 25
3787	12/16/2021	Payroll	5	EFT		2,123.37	11/27/2021 - 12/10/2021 PR 25
3788	12/16/2021	Payroll	5	EFT		3,316.92	11/27/2021 - 12/10/2021 PR 25
3789	12/16/2021	Payroll	5	EFT		1,988.83	11/27/2021 - 12/10/2021 PR 25
3790	12/16/2021	Payroll	5	EFT		3,119.85	11/27/2021 - 12/10/2021 PR 25
3791	12/16/2021	Payroll	5	EFT		470.80	11/27/2021 - 12/10/2021 PR 25
3792	12/16/2021	Payroll	5	EFT		3,230.23	11/27/2021 - 12/10/2021 PR 25
3793	12/16/2021	Payroll	5	EFT		1,355.08	11/27/2021 - 12/10/2021 PR 25
3794	12/16/2021	Payroll	5	EFT		2,100.23	11/27/2021 - 12/10/2021 PR 25
3795	12/16/2021	Payroll	5	EFT		3,178.10	11/27/2021 - 12/10/2021 PR 25
3796	12/16/2021	Payroll	5	EFT		2,869.74	11/27/2021 - 12/10/2021 PR 25
3797	12/16/2021	Payroll	5	EFT		3,186.09	11/27/2021 - 12/10/2021 PR 25
3781	12/16/2021	Payroll	5	12330		353.09	11/3/2021 11/20/2021 11/24/2024
3783	12/16/2021	Payroll	5	12331		1,648.25	11/27/2021 - 12/10/2021 PR 25
401 Water Fund						14,951.03	
402 Sewer Fund						35,269.93	
						50,220.96	Payroll: 50,220.96

I do hereby certify, under penalty of perjury, that the above is an unpaid, just, and due obligation as described herein, and that I am authorized to certify this claim.

Sign  Date 12/13/2021
General Manager, Justin Olafy

Board Authorization - The duly elected board for this district has reviewed the claims listed and approved the payment by motion at the meeting listed below:

Board President, Laura Abele

Attest : _____
Recording Secretary, Rachael Hope

Approved by motion at _____ Regular _____ Special Board Meeting on _____
Date Approved

CHECK REGISTER

BENEFITS

Lake Whatcom W-S District

12/16/2021 To: 12/16/2021

Time: 16:11:12 Date: 12/13/2021

Page: 1

Trans	Date	Type	Acct #	Chk #	Claimant	Amount	Memo
3798	12/16/2021	Payroll	5	EFT	UNITED STATES TREASURY	17,657.54	941 Deposit for Pay Cycle(s) 12/16/2021 - 12/16/2021
3799	12/16/2021	Payroll	5	EFT	WA ST SUPPORT ENFORCEMENT REGISTRY	208.34	Pay Cycle(s) 12/16/2021 To 12/16/2021 - SUP ENF
3800	12/16/2021	Payroll	5	12332	AFLAC	354.85	Pay Cycle(s) 12/16/2021 To 12/16/2021 - AFLAC Pre-Tax; Pay Cycle(s) 12/16/2021 To 12/16/2021 - AFLAC Post-Tax
3801	12/16/2021	Payroll	5	12333	AFSCME LOCAL	367.44	Pay Cycle(s) 12/16/2021 To 12/16/2021 - Union Dues; Pay Cycle(s) 12/16/2021 To 12/16/2021 - Union Fund
3802	12/16/2021	Payroll	5	12334	DEPARTMENT OF RETIREMENT SYSTEMS	4,766.00	Pay Cycle(s) 12/16/2021 To 12/16/2021 - DCP
3803	12/16/2021	Payroll	5	12335	HRA VEBA TRUST (PAYEE)	590.00	Pay Cycle(s) 12/16/2021 To 12/16/2021 - VEBA
3804	12/16/2021	Payroll	5	12336	VANTAGEPOINT TRANSFER AGENTS - 306798	100.00	Pay Cycle(s) 12/16/2021 To 12/16/2021 - ICMA
3805	12/16/2021	Payroll	5	12337	WA ST HEALTH CARE AUTHORITY	16,651.51	Pay Cycle(s) 12/16/2021 To 12/16/2021 - PEBB Medical; Pay Cycle(s) 12/16/2021 To 12/16/2021 - PEBB ADD LTD; Pay Cycle(s) 12/16/2021 To 12/16/2021 - PEBB SMK Surcharge; Pay Cycle(s) 12/16/2021 To 12/16
3806	12/16/2021	Payroll	5	12338	WA ST PUBLIC EMP RET PLAN 2	9,342.62	Pay Cycle(s) 12/16/2021 To 12/16/2021 - PERS 2
3807	12/16/2021	Payroll	5	12339	WA ST PUBLIC EMP RET PLAN 3	3,024.66	Pay Cycle(s) 12/16/2021 To 12/16/2021 - PERS 3
401 Water Fund						39,195.85	
402 Sewer Fund						13,867.11	

53,062.96 Payroll: 53,062.96

BENEFITS

CHECK REGISTER

Lake Whatcom W-S District


Time: 16:11:12 Date: 12/13/2021

12/16/2021 To: 12/16/2021

Page: 2

Trans	Date	Type	Acct #	Chk #	Claimant	Amount	Memo
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I do hereby certify, under penalty of perjury, that the above is an unpaid, just, and due obligation as described herein, and that I am authorized to certify this claim.

Sign  Date 12/13/2021
General Manager, Justin Clary

Board Authorization - The duly elected board for this district has reviewed the claims listed and approved the payment by motion at the meeting listed below:

Board President, Laura Abele

Attest : _____
Recording Secretary, Rachael Hope

Approved by motion at _____ Regular _____ Special Board Meeting on _____
Date Approved

CHECK REGISTER

PAYROLL

Lake Whatcom W-S District

Time: 13:41:44 Date: 12/27/2021


12/29/2021 To: 12/29/2021

Page: 1

Trans	Date	Type	Acct #	Chk #	Claimant	Amount	Memo
3884	12/29/2021	Payroll	5	EFT		4,576.72	12/11/2021 - 12/24/2021 PR 26
3885	12/29/2021	Payroll	5	EFT		3,991.79	12/11/2021 - 12/24/2021 PR 26
3886	12/29/2021	Payroll	5	EFT		2,799.05	12/11/2021 - 12/24/2021 PR 26
3887	12/29/2021	Payroll	5	EFT		2,001.51	12/11/2021 - 12/24/2021 PR 26
3889	12/29/2021	Payroll	5	EFT		1,906.35	12/11/2021 - 12/24/2021 PR 26
3890	12/29/2021	Payroll	5	EFT		1,780.38	12/11/2021 - 12/24/2021 PR 26
3891	12/29/2021	Payroll	5	EFT		3,080.71	12/11/2021 - 12/24/2021 PR 26
3892	12/29/2021	Payroll	5	EFT		2,310.48	12/11/2021 - 12/24/2021 PR 26
3893	12/29/2021	Payroll	5	EFT		4,345.94	12/11/2021 - 12/24/2021 PR 26
3894	12/29/2021	Payroll	5	EFT		4,029.63	12/11/2021 - 12/24/2021 PR 26
3895	12/29/2021	Payroll	5	EFT		2,414.43	12/11/2021 - 12/24/2021 PR 26
3896	12/29/2021	Payroll	5	EFT		2,769.44	12/11/2021 - 12/24/2021 PR 26
3897	12/29/2021	Payroll	5	EFT		1,967.07	12/11/2021 - 12/24/2021 PR 26
3898	12/29/2021	Payroll	5	EFT		2,602.66	12/11/2021 - 12/24/2021 PR 26
3899	12/29/2021	Payroll	5	EFT		3,212.41	12/11/2021 - 12/24/2021 PR 26
3900	12/29/2021	Payroll	5	EFT		2,976.74	12/11/2021 - 12/24/2021 PR 26
3901	12/29/2021	Payroll	5	EFT		4,206.97	12/11/2021 - 12/24/2021 PR 26
3888	12/29/2021	Payroll	5	12340		2,137.35	12/11/2021 - 12/24/2021 PR 26
401 Water Fund						20,220.25	
402 Sewer Fund						32,889.38	

53,109.63 Payroll: 53,109.63

I do hereby certify, under penalty of perjury, that the above is an unpaid, just, and due obligation as described herein, and that I am authorized to certify this claim.

Sign  Date 12/27/2021
General Manager, Justin Clary

Board Authorization - The duly elected board for this district has reviewed the claims listed and approved the payment by motion at the meeting listed below:

Board President, Laura Abele

Attest : _____
Recording Secretary, Rachael Hope

Approved by motion at _____ Regular _____ Special Board Meeting on _____
Date Approved

CHECK REGISTER

BENEFITS

Lake Whatcom W-S District

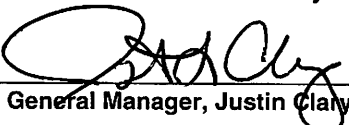
12/29/2021 To: 12/29/2021

Time: 13:50:29 Date: 12/27/2021

Page: 1

Trans	Date	Type	Acct #	Chk #	Claimant	Amount	Memo
3902	12/29/2021	Payroll	5	EFT	UNITED STATES TREASURY	17,618.13	941 Deposit for Pay Cycle(s) 12/29/2021 - 12/29/2021
3903	12/29/2021	Payroll	5	EFT	WA ST SUPPORT ENFORCEMENT REGISTRY	208.34	Pay Cycle(s) 12/29/2021 To 12/29/2021 - SUP ENF
3904	12/29/2021	Payroll	5	12341	WA ST PUBLIC EMP RET PLAN 2	9,072.04	Pay Cycle(s) 12/29/2021 To 12/29/2021 - PERS 2
3905	12/29/2021	Payroll	5	12342	WA ST PUBLIC EMP RET PLAN 3	3,035.73	Pay Cycle(s) 12/29/2021 To 12/29/2021 - PERS 3
						24,359.43	
						5,574.81	
						29,934.24	Payroll: 29,934.24

I do hereby certify, under penalty of perjury, that the above is an unpaid, just, and due obligation as described herein, and that I am authorized to certify this claim.

Sign  Date 12/27/2021
General Manager, Justin Clary

Board Authorization - The duly elected board for this district has reviewed the claims listed and approved the payment by motion at the meeting listed below:

Board President, Laura Abele

Attest : _____
Recording Secretary, Rachael Hope

Approved by motion at _____ Regular _____ Special Board Meeting on _____
Date Approved

CHECK REGISTER

ACCOUNTS

PAYABLE

Lake Whatcom W-S District

Time: 16:12:05 Day: 12/27/2021

12/29/2021 To: 12/31/2021

Page: 1

Trans	Date	Type	Acct #	Chk #	Claimant	Amount	Memo
3906	12/29/2021	Claims	5	12343	AMERICAN CRANE REPAIR	1,141.26	
3907	12/29/2021	Claims	5	12344	BUILDERS ALLIANCE	483.29	
3908	12/29/2021	Claims	5	12345	CASCADE NATURAL GAS CORP	14.01	
3909	12/29/2021	Claims	5	12346	CENTURYLINK	163.92	
3910	12/29/2021	Claims	5	12347	CITY OF BELLINGHAM- OFFICE	1,587.12	
3911	12/29/2021	Claims	5	12348	CITY OF BELLINGHAM	58,543.75	
3912	12/29/2021	Claims	5	12349	COMCAST - LAKEVIEW	219.99	
3913	12/29/2021	Claims	5	12350	COMCAST - MORNING BEACH	149.94	
3914	12/29/2021	Claims	5	12351	DATAPRO SOLUTIONS, INC	137.09	
3915	12/29/2021	Claims	5	12352	EDGE ANALYTICAL INC	224.00	
3916	12/29/2021	Claims	5	12353	ENVIRONMENTAL PEST CONTROL	62.99	
3917	12/29/2021	Claims	5	12354	EQUITY BUILDERS LLC	10,302.36	
3918	12/29/2021	Claims	5	12355	FROST ENGINEERING SERVICE	3,115.36	
3919	12/29/2021	Claims	5	12356	GRAINGER	14.71	
3920	12/29/2021	Claims	5	12357	MAC AND MAC ELECTRIC	4,588.25	
3921	12/29/2021	Claims	5	12358	MCI BUSINESS ACCOUNT	70.25	
3922	12/29/2021	Claims	5	12359	MOTOR TRUCKS	44.35	
3923	12/29/2021	Claims	5	12360	NW SAFETY SIGNS INC	930.99	
3924	12/29/2021	Claims	5	12361	OASYS INC.	88.78	
3925	12/29/2021	Claims	5	12362	PITNEY BOWES	114.24	
3926	12/29/2021	Claims	5	12363	PUGET SOUND ENERGY	19,813.37	
3927	12/29/2021	Claims	5	12364	RAIN FOR RENT	5,571.99	
3928	12/29/2021	Claims	5	12365	US BANK N.A. CUSTODY TREASURY DIV/MONEY	28.00	
3929	12/29/2021	Claims	5	12366	VERIZON WIRELESS	1,438.26	
3930	12/29/2021	Claims	5	12367	WEBCHECK, INC.	277.44	
3931	12/29/2021	Claims	5	12368	WRS	31,399.51	
401 Water Fund						114,185.87	
402 Sewer Fund						26,339.35	
						<u>140,525.22</u>	Claims: 140,525.22

CHECK REGISTER

ACCOUNTS

PAYABLE


Lake Whatcom W-S District

Time: 16:12:05 Date: 12/27/2021
Page: 2

12/29/2021 To: 12/31/2021

Trans	Date	Type	Acct #	Chk #	Claimant	Amount	Memo
-------	------	------	--------	-------	----------	--------	------

I do hereby certify, under penalty of perjury, that the above is an unpaid, just, and due obligation as described herein, and that I am authorized to certify this claim.

Sign  Date 12/27/2021
General Manager, Justin Clary

Board Authorization - The duly elected board for this district has reviewed the claims listed and approved the payment by motion at the meeting listed below:

Board President, Laura Abele


Attest : _____
Recording Secretary, Rachael Hope

Approved by motion at _____ Regular _____ Special Board Meeting on _____
Date Approved



**AGENDA
BILL
Item 8.A**

Election of Board Officers

DATE SUBMITTED:	December 29, 2021	MEETING DATE:	January 12, 2022
TO: BOARD OF COMMISSIONERS	FROM: Justin Clary, General Manager		
GENERAL MANAGER APPROVAL			
ATTACHED DOCUMENTS	1. None		
TYPE OF ACTION REQUESTED	RESOLUTION <input type="checkbox"/>	FORMAL ACTION/ MOTION <input checked="" type="checkbox"/>	INFORMATIONAL /OTHER <input type="checkbox"/>

BACKGROUND / EXPLANATION OF IMPACT

The District operates under the authority of [Revised Code of Washington \(RCW\) Title 57](#), Water-Sewer Districts. Under [RCW 57.12.10](#), Commissioners-President and Secretary-Compensation, "the board shall annually elect one of its members as president and another as secretary." The District has historically fulfilled this statutory obligation during its first meeting of the calendar year.

FISCAL IMPACT

No fiscal impact is anticipated.

APPLICABLE EFFECTIVE UTILITY MANAGEMENT ATTRIBUTE(S)

Election of board officers supports all ten EUM attributes at various levels.

RECOMMENDED BOARD ACTION

Staff recommends that the Board appoint a president and a secretary from amongst its membership.

PROPOSED MOTION

Recommended motions are:


"I move to appoint Commissioner _____ to serve as District Board president for the 2022 calendar year."

"I move to appoint Commissioner _____ to serve as District Board secretary for the 2022 calendar year."



**AGENDA
BILL
Item 8.B**

**Appointment of Board
Representatives to the District's
Investment Committee**

DATE SUBMITTED:	December 29, 2021	MEETING DATE:	January 12, 2022
TO: BOARD OF COMMISSIONERS	FROM: Justin Clary, General Manager		
GENERAL MANAGER APPROVAL			
ATTACHED DOCUMENTS	1. None		
TYPE OF ACTION REQUESTED	RESOLUTION <input type="checkbox"/>	FORMAL ACTION/ MOTION <input checked="" type="checkbox"/>	INFORMATIONAL /OTHER <input type="checkbox"/>

BACKGROUND / EXPLANATION OF IMPACT

[Chapter 2.14 of the District's administrative code](#) establishes an Investment Committee, which is comprised of the finance manager/treasurer, general manager, and two commissioners. Duties of the committee include, at a minimum, quarterly review of the District's investment portfolio and rate structure (Chapter 2.4) and annual review of the District's investment policy (Chapter 2.14).

FISCAL IMPACT

No fiscal impact is anticipated.

APPLICABLE EFFECTIVE UTILITY MANAGEMENT ATTRIBUTE(S)

Financial Viability

RECOMMENDED BOARD ACTION

Staff recommends that the Board appoint two representatives from amongst its membership to serve on the District's Investment Committee.

PROPOSED MOTION


A recommended motion is:

"I move to appoint Commissioner _____ and Commissioner _____ to serve as the Board's representatives on the District's Investment Committee for the 2022 calendar year."



**AGENDA
BILL
Item 8.C**

**Appointment of Board
Representatives to the Whatcom
County Council of Governments
and the Lake Whatcom
Management Program Policy Group**

DATE SUBMITTED:	December 29, 2021	MEETING DATE:	January 12, 2022
TO: BOARD OF COMMISSIONERS	FROM: Justin Clary, General Manager		
GENERAL MANAGER APPROVAL			
ATTACHED DOCUMENTS	1. None		
TYPE OF ACTION REQUESTED	RESOLUTION <input type="checkbox"/>	FORMAL ACTION/ MOTION <input checked="" type="checkbox"/>	INFORMATIONAL /OTHER <input type="checkbox"/>

BACKGROUND / EXPLANATION OF IMPACT

The District annually appoints a representative to serve on the Whatcom County Council of Governments and a representative to serve on the Lake Whatcom Management Program Policy Group.

FISCAL IMPACT

No fiscal impact is anticipated.

APPLICABLE EFFECTIVE UTILITY MANAGEMENT ATTRIBUTE(S)

Community Sustainability
Water Resource Sustainability
Stakeholder Understanding and Support

RECOMMENDED BOARD ACTION

Staff recommends that the Board appoint representatives from amongst its membership to serve on the Whatcom County Council of Governments and the Lake Whatcom Management Program Policy Group.

PROPOSED MOTION

Recommended motions are:


"I move to appoint Commissioner _____ to serve as the District's representative on the Whatcom County Council of Governments for the 2022 calendar year."

"I move to appoint Commissioner _____ to serve as the District's representative on the Lake Whatcom Management Program Policy Group for the 2022 calendar year."



**AGENDA
BILL
Item 8.D**

**Conclusion of Emergency
Declaration associated with the
November 2021 Flood Event**

DATE SUBMITTED:	January 3, 2022	MEETING DATE:	January 12, 2022
TO: BOARD OF COMMISSIONERS	FROM: Justin Clary, General Manager		
GENERAL MANAGER APPROVAL			
ATTACHED DOCUMENTS	1. none		
TYPE OF ACTION REQUESTED	RESOLUTION <input type="checkbox"/>	FORMAL ACTION/ MOTION <input checked="" type="checkbox"/>	INFORMATIONAL /OTHER <input type="checkbox"/>

BACKGROUND / EXPLANATION OF IMPACT

On or around November 12, 2021, a significant rain event began that caused flooding throughout Whatcom County and specifically within the District's service area. The flood event exceeded the capacity of the District's infrastructure, resulting in the need to procure assistance from external sources to assist the District in mitigating damage and other impacts.

Revised Code of Washington (RCW) 39.04.280 provides authority to the District to waive competitive bidding requirements when awarding public works contracts in the event of an emergency, and District Administrative Code Section 2.16.3(1) provides authority to the General Manager to issue a declaration of emergency and execute public works contracts necessary to address the emergency. The General Manager declared an emergency associated with the flood event on November 15, 2021, and executed public works contracts to assist the District in its response.

Per District Administrative Code Section 2.16.3(3), if an emergency contract is awarded without competitive bidding, the Board of Commissioners or its designee must enter a written finding of an emergency into the public record no later than two (2) weeks following the contract award." During its regularly scheduled meeting on November 24, 2021, the Board adopted Resolution No. 880, which affirmed the General Manager's emergency declaration.

Per Section 3, Timing and Effect, of Resolution No. 880, the emergency declaration shall "remain in full force and effect until a subsequent Board determination that the emergency has been adequately abated." While the District continues to recover from the impacts of the November 2021 flood event, response no longer warrants the need to waive statutory competitive bidding requirements. Therefore, it is appropriate for the Board to conclude the emergency declaration.

FISCAL IMPACT

The total costs resulting from the November 2021 flood event are still being determined.

APPLICABLE EFFECTIVE UTILITY MANAGEMENT ATTRIBUTE(S)

Product Quality

Customer Satisfaction

RECOMMENDED BOARD ACTION

Staff recommends that the Board formally conclude the emergency declaration associated with the November 2021 flood event.

PROPOSED MOTION


Recommended motion is:

“I move to conclude the emergency declaration associated with the November 2021 flood event.”



**AGENDA
BILL
Item 8.E**

**Eagleridge Water Booster Station
Conversion Project Update**

DATE SUBMITTED:	January 4, 2022	MEETING DATE:	January 12, 2022
TO: BOARD OF COMMISSIONERS	FROM: Justin Clary, General Manager		
GENERAL MANAGER APPROVAL			
ATTACHED DOCUMENTS	1. Eagleridge Booster Conversion Project report dated August 6, 2021		
	2. DOH Booster Conversion Project Approval letter dated November 23, 2021		
	3. Booster Conversion Project Notice letter to Eagleridge Water System Customers dated December 6, 2021 (revised January 4, 2022)		
TYPE OF ACTION REQUESTED	RESOLUTION <input type="checkbox"/>	FORMAL ACTION/ MOTION <input type="checkbox"/>	INFORMATIONAL /OTHER <input checked="" type="checkbox"/>

BACKGROUND / EXPLANATION OF IMPACT

The Eagleridge neighborhood, located within the District's service area, is a subdivision of 64 single family residential homes situated on the north shore of Lake Whatcom just outside of Bellingham city limits. The District provides water service to Eagleridge residents via an intertie with the City of Bellingham's water system. The neighborhood's water and sewer infrastructure was constructed by the private developer of the subdivision in 1988 and dedicated to the District.

The Eagleridge Water System is classified as a Group A water system regulated by the Washington State Department of Health (DOH) and serves the entire Eagleridge neighborhood, as well as six additional homes located immediately north of Donald Avenue (70 total homes). When the water system was originally designed and constructed, the City's water pressure at the location of the connection (intertie) between the two systems was not sufficient to serve the Eagleridge neighborhood. As a result, a booster pump station was constructed at the location of the intertie (2029 Northshore Road) that consists of a CMU (concrete masonry unit) building that houses three pumps for domestic (general) water service, two pumps for fire suppression, pump controls, and an auxiliary diesel generator (to ensure continuous water service throughout power outages).

At some point between infrastructure construction in 1988 and 2016, the City increased the water pressure in the service area the feeds the Eagleridge water system. During this same timeframe, the District began planning for replacement of the pump control system, which was approaching the end of its useful life. Based on this, a project was identified in

the District's most recent Water System Comprehensive Plan update (approved by DOH in 2018) to study whether part or all of the pump station could be decommissioned. In 2020, the District requested that Wilson Engineering perform a detailed hydraulic analysis to determine if the City's system pressure on their side of the intertie is sufficient to meet regulatory requirements in the Eagleridge system (Washington Administrative Code 246-290-230 requires that Group A water systems provide a minimum of 30 pounds per square inch [psi] pressure at service water meters).

Wilson Engineering's hydraulic analysis concluded that the domestic pumps are no longer necessary and can be removed from service, with the City's pressure being sufficient to meet regulatory requirements for the domestic demands of the Eagleridge system. However, the fire pumps must remain, as the analysis found that the City pressures were not sufficient to deliver the minimum required flow and pressure in a fire flow scenario. The hydraulic analysis did, however, find that the existing fire pumps are oversized, and concluded that the existing pump control valves for the fire pumps should be modified to add a pressure reducing function.

District Design and Construction Standards, as well as the District's Administrative Code establish a District-wide policy to provide a minimum of 30 pounds per square inch (psi) under peak hour demand at all water meters. The intent of this policy is to meet minimum design criteria defined in the "Water System Design Manual" published by the DOH and WAC Chapter 246-290. Based upon this policy, the District submitted a report to DOH in August 2021 seeking approval for removal of the domestic pumps. DOH granted project approval in November 2021. With the District's determination that system pressures meet current District policy and DOH's approval of the project, the District then provided outreach to Eagleridge system customers via a letter dated December 6, 2021. Since issuance of the December 6 letter, District staff have been contacted by a number of customers seeking additional information on the project.

FISCAL IMPACT

The estimated cost to retrofit the fire pumps and replace the domestic pumps is \$135,000, with operational costs of the 20-year planning horizon being \$50,000. The estimated cost to retrofit the fire pumps and remove the domestic pumps is \$13,000 with no associated operational costs anticipated. Therefore, removal of the domestic pumps would save the water utility approximately \$122,000 in near-term capital costs and \$50,000 in operational costs over the next 20 years.

APPLICABLE EFFECTIVE UTILITY MANAGEMENT ATTRIBUTE(S)

Product Quality
Customer Satisfaction
Operational Optimization
Financial Viability

RECOMMENDED BOARD ACTION

No action is recommended at this time.

PROPOSED MOTION

Not applicable.

Lake Whatcom Water and Sewer District

Eagleridge Booster Conversion Project

PROJECT REPORT

System ID: 08118 1

Bellingham, Washington



8/11/21

By

Wilson Engineering, LLC

August 2021

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PROJECT REPORT

This project report is submitted to the Washington State Department of Health (DOH) for approval for the Lake Whatcom Water and Sewer District (District) Eagleridge Booster Conversion Project. This project will modify the existing booster pump station to retrofit the existing fire pump control valves to better regulate pressure and remove the existing domestic pumps at the Eagleridge Booster Station because they are no longer needed to maintain sufficient pressure in the Eagleridge water system (DOH System ID 08118 1).

1. Project Description

1.1 Problem Description

EXISTING FACILITY

The Eagleridge Water System is served by water from the City of Bellingham water system (DOH System ID 056003) through a 6 inch diameter service line, feeding into the District-owned booster pump station through a strainer, a meter, and a backflow preventer (two parallel 6 inch double check valve assemblies [DCVAs]). The pump station is located at 2029 North Shore Drive, and consists of a CMU structure containing three pumps for domestic service, two pumps for fire suppression, pump controls, and an auxiliary diesel generator. The pump station feeds into a looped network consisting of approximately 5,000 lineal feet of mostly 8 inch diameter pipe, serving 70 single family residences and associated fire hydrants.



Figure 1: Exterior of Existing Eagleridge Booster Pump Station



Figure 2a: Interior of Existing Eagleridge Booster Pump Station

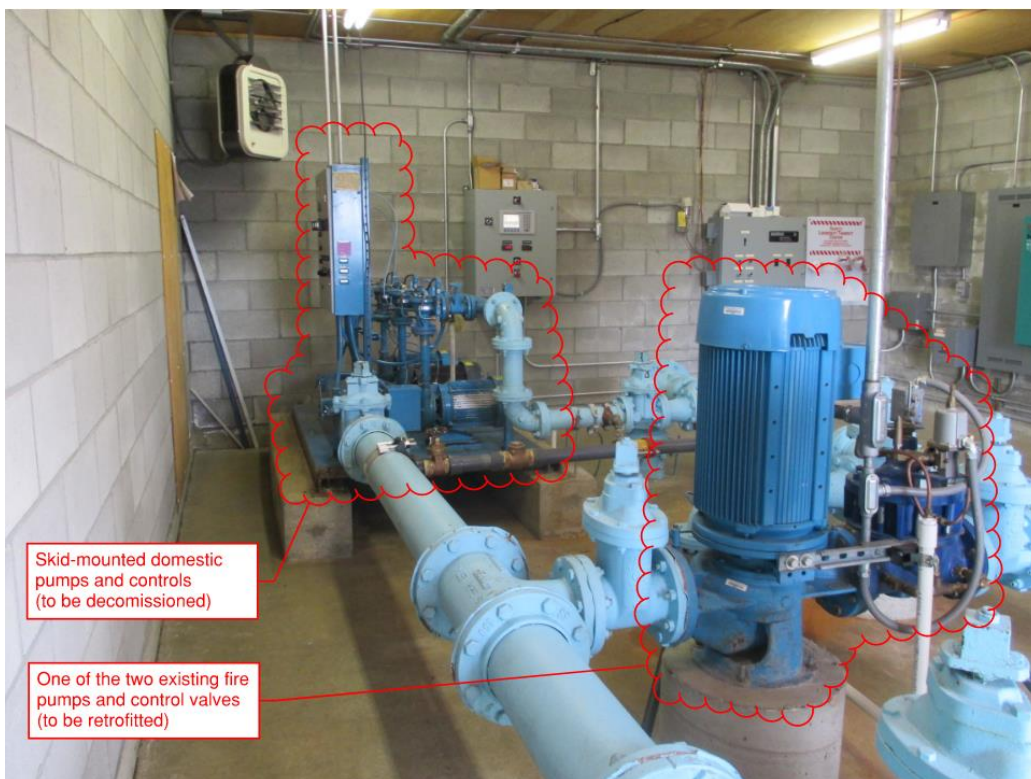


Figure 2b: Interior of Existing Eagleridge Booster Pump Station

PROJECT OBJECTIVE

The Eagleridge Booster Pump Station, along with the rest of the Eagleridge water system, was constructed in 1989. The station was originally built to deliver City of Bellingham water throughout the Eagleridge system because City water system pressures alone were not sufficient to meet minimum pressure and flow requirements. The Eagleridge community is situated on a hillside, with the highest service being approximately 80 feet higher than the intertie.

At some point between 1989 and 2016, the City of Bellingham increased the pressure in the service area that feeds the Eagleridge system. Based on this, a project was identified in the District's most recent Water System Comprehensive Plan update (approved by DOH on October 3, 2018) to study whether part or all of the pump station could be decommissioned. In 2020, the District requested Wilson Engineering perform a detailed hydraulic analysis using current system pressures at the City of Bellingham's system upstream of the Booster Pump Station. The detailed hydraulic analysis was conducted to determine if the City's higher pressures, on their side of the intertie, would be sufficient to meet the District's Eagleridge water system needs. This analysis is summarized in the technical memorandum "*Hydraulic Analysis of the Eagleridge Water System*", attached to this report in Appendix A.

Wilson Engineering's hydraulic analysis concluded that the domestic pumps are no longer necessary and can be removed, with the City's pressure being sufficient to serve the domestic demands of the Eagleridge system. However, the fire pumps must remain, as the hydraulic analysis found that the City pressures were not sufficient to deliver the minimum required flow and pressure in a fire flow scenario. The hydraulic analysis found the existing fire pumps to be oversized, and since they are simple on/off pumps (i.e., not controlled by a Variable Frequency Drive) with pump control valves (no pressure reducing function), they tend to create undesirable pressure spikes in the system. The analysis therefore concluded that the fire pumps could be replaced with modern and appropriately-sized pumps, or as a lower cost alternative, the existing pump control valves could be modified to add a pressure reducing function to prevent pressure spikes.

The project objective is twofold: 1) for domestic service, the objective is to minimize ongoing operating and maintenance costs while still meeting the minimum pressure and flow requirements; and 2) for fire service, the objective is to provide sufficient fire flow and pressure while eliminating over-pressurization of the system.

Recommendations and design parameters for both project objectives are detailed below.

1.2 Summary of Recommended Alternative, Construction Schedule, Estimated Project Cost and Method of Financing

Section 3 details the alternatives considered to achieve the project objectives. The recommended alternative to achieve the domestic service objective is to remove the domestic pumps from service. The recommended alternative to achieve the objective for the fire pumps is to retrofit the existing fire pump control valves with functionality to reduce and regulate the discharge pressure. In the future, when the fire pumps reach the end of their useful service life, the proposed action is to complete a full upgrade of both pumps and controls. This future replacement is not expected in the near future since the fire pumps and control panel appear to be in good condition.

The equipment to retrofit the fire pump control valves with pressure reducing and regulating functionality is included as Appendix B. Construction plans detailing the equipment to be decommissioned, and the

pipe and check valve that will replace the domestic pump station for the recommended projects is included as Appendix C.

The estimated total project cost for both project components (domestic pump decommissioning and fire pump control retrofits) is \$13,000, including design, construction, contingencies, sales tax, and construction administration. This estimate assumes that District staff will perform the decommissioning and bypass pipe work and that the control modifications will be performed using an outside contractor. The project will be funded by the District's Water Utility Fund 401.

The estimated project costs (including sales tax and contingency) are:

- Design and Construction (includes materials, contingencies and sales tax): \$13,000
- Construction Administration: \$0 (performed by District staff)
- TOTAL PROJECT Design and Construction COSTS: \$13,000

The domestic pumps will be scheduled for removal upon receipt of DOH project plan approval with a goal to complete the project by March 2022.

The anticipated schedule for the fire pump retrofit is below.

- DOH Approval: October 2021
- Construction – Fire pump control valves: October-December 2021

1.3 Project Relationship to Other System Components

The project will modify the existing Eagleridge booster pumping system because the pressure on the City's side of the intertie has been substantially increased since original construction of the Eagleridge booster pumping system. The project will not alter, nor is it anticipated to adversely impact, any other water system components. The project will improve the resiliency of the water distribution system because it will not be reliant on a pump system to provide sufficient pressure for domestic demand.

1.4 Statement of Change in Physical Capacity

This project will not change the physical capacity of the system.

1.5 State Environmental Policy Act (SEPA)

This project is categorically exempt from the Washington State Environmental Policy Act (SEPA) as supported by the following:

- Repair, remodeling, maintenance, or minor alteration of existing public structures, facilities or equipment, including utilities involving no material expansions or changes in use beyond that previously existing ([WAC 197-11-800 \(3\)](#)),
- Utility construction related to lines 12-inches or less in diameter – ([WAC 197-11-800 \(23\) \(b\)](#)).

1.6 Summary of Source Development

Not applicable to this project.

1.7 Description of Water Treatment System

Not applicable to this project.

2. Planning

The Project provides improvements to the existing Eagleridge booster station and increases water system resiliency by removing the unnecessary domestic pumps and retrofitting the existing fire pumps with pressure reducing and regulating functionality. The project will not affect the service area or modify the number of approved connections.

3. Analysis of Alternatives

Several alternatives were considered to meet the project objectives. These alternatives, and their advantages and disadvantages, are described as follows.

Alternative 1 – Replace fire pumps and domestic pumps

Replace the existing fire pumps with VFD-controlled pumps that are more appropriately sized for the system and the higher suction-side pressure. Replace the domestic pumps that are nearing the end of their useful life *and* the associated control panel that has already reached the end of its useful life. This alternative would result in domestic service system pressures exceeding system requirements.

The rough order of magnitude (ROM) capital cost for this option is \$275,000, and the ongoing electrical and maintenance ROM costs for the lifetime of the new domestic pumps (20 years) is estimated to be approximately \$50,000.

Alternative 2 – Retrofit fire pumps, replace domestic pumps

The control valves for the existing fire pumps would be retrofitted to both reduce and regulate the discharge pressure, as discussed. The domestic pumps are nearing the end of their useful life and associated control panel has already reached the end of its useful life, so under this alternative they would be replaced with a new pump system and domestic service would continue with higher than required pressures.

The ROM capital cost for this alternative is \$135,000, and the ongoing electrical and maintenance ROM costs for the lifetime of the new domestic pumps (20 years) would be approximately \$50,000.

Alternative 3 (Preferred) – Retrofit fire pumps, decommission domestic pumps

The control valves for the existing fire pumps would be retrofitted to both reduce and regulate the discharge pressure, as discussed. The fire pumps would be replaced and upgraded only once they have reached the end of the useful service life, which is not anticipated to occur within the next 10 years. The domestic pumps would be replaced with a simple piped connection and necessary appurtenances within the existing building.

The ROM capital cost for this alternative is \$13,000, assuming District labor. Because there would be no domestic pump system, there would be no ongoing operations and maintenance costs for that system. Operations and maintenance costs exist for the fire pumps and generator, but this is the case for any of the alternatives and therefore is not quantified.

Preferred Alternative:

Alternative 3 is the preferred alternative because it meets the regulatory requirements for domestic and fire flows and pressures at both the lowest capital and lowest O&M costs.

4. Water Quality

This project does not include any activities that will change the raw water or finished water quality.

5. Water Quantity and Water Rights

Water Quantity

This project does not involve changing the overall water quantity conditions in the District.

Water Rights

This project does not involve any activities that will change water rights or impact the use of available water rights for the District. The District's Water Right Self-Assessments are included in the current revision of the District's Water System Comprehensive Plan (WSCP), which was approved by the DOH on October 3, 2018.

6. Design Criteria

The design criteria for the Eagleridge area are detailed in Appendix A and are presented here for convenience:

MDD = 39.44 gpm (which is 71 ERUs [build-out] at 800 gallons/day per ERU)

PHD = 130.5 gpm at 30 psi minimum for full anticipated build-out of the Eagleridge system (71 ERUs)

Fire Flow = 500 gpm at 20 psi minimum system pressure

7. Engineering Calculations

Hydraulic Modeling

A detailed hydraulic analysis was completed in November, 2020. The modeling software used to perform the hydraulic analysis was Innovyze InfoWater Version 12.3 (for ArcGIS). The technical memorandum included in Appendix A (*Hydraulic Analysis of the Eagleridge Water System*) describes the scenarios modeled and includes the model results for removal of the existing domestic pumps.

The analysis results indicate that there is sufficient pressure provided by the City's water system to provide the minimum required 30 psi throughout the system while supplying the peak hour demand of 130.5 gpm. The minimum system pressure in this scenario was 34.4 psi. However, the analysis results also show that the City pressure is not sufficient to provide the minimum required flow and pressure in a fire flow scenario, so fire pumps must remain.

Equipment Sizing

The three existing domestic pumps are skid mounted. The skid is fed directly off of the 6 inch diameter service line. When the three domestic pumps are decommissioned, the skid will be removed and flow will instead be routed through a 3 inch diameter pipe and check valve, which will provide adequate capacity for domestic demands. This is shown in Appendix C.

The manufacturer's representative for the existing fire pump control valves was contacted for recommendations on a proposed configuration for adding a pressure reducing feature to the current fire pump control valves. The recommendation was to retrofit the existing control valve to match the functionality and specifications of the following model of control valve (which also provides pressure reducing and regulation):

- Cla-Val Co. Model #60-12 - Combination Pump Control and Pressure Reducing Valve

The product cut-sheet is included in Appendix B.

8. Legal Considerations

The project is within existing District property and is a modification to an existing facility.

9. Operation and Maintenance Considerations

The proposed improvements will reduce operation and maintenance efforts and associated costs since there will be three fewer pumps and associated appurtenances. The proposed retrofit to the existing fire pump control valves is not expected to create any additional operation or maintenance needs, and will minimize the risk of creating leaks due to over pressurization or water hammer.

APPENDIX A

HYDRAULIC ANALYSES

TO: LWWSD

FROM: Ben Gibson, PE, and Brian Smith, PE

SUBJECT: Hydraulic Analysis of the Eagleridge Water System

DATE: November 10, 2020

Introduction

The District's Eagleridge water system was installed in 1989, and currently serves 68 residences from an intertie with the City of Bellingham water system. Historically the City water system alone has not provided adequate pressure at the intertie, requiring the use of the existing Eagleridge booster pumps. However, upgrades to the City system over the past few decades have resulted in higher pressures, and as such, the necessity of these existing pumps has come into question. The purpose of this technical memorandum is to summarize the results of the hydraulic analysis performed to investigate the feasibility of removing the existing Eagleridge booster pumps.

Executive Summary

A hydraulic model was developed for the Eagleridge water system in order to simulate two scenarios: peak hourly demand, and fire flow with maximum day demand, both without the existing booster pumps. The model showed that for the peak hourly demand scenario, the minimum system pressure would be 34.42 psi, which is greater than the minimum requirement of 30 psi. For the fire flow demand scenario, the maximum available hydrant flow while maintaining the required minimum 20 psi throughout the system ranged from 341 gpm to 359 gpm, which is less than the minimum required 500 gpm.

Therefore, we conclude that the domestic pumps could be decommissioned and remain within regulatory requirements for pressure. Note that the normal system pressures will be about 30 psi lower than they are now and may be perceived as a reduction in "level of services" by a few customers. Since it appears that the fire pumps will remain necessary, when they eventually need to be replaced we recommend that the new pumps have VFD controls and are sized appropriately based on current suction-side pressures and fire flow needs.

Current Water System Operation

Overview

The Eagleridge Water System connects to the City of Bellingham system through a 6 inch service line, feeding into the pump station through a strainer, a meter, and a backflow preventer (two parallel six inch DCVAs). The pump station is located at 1708 North Shore Drive, and consists of a CMU structure containing three pumps for domestic service, two pumps for fire suppression, pump controls, and a diesel generator. The pump station feeds into a looped network consisting of approximately 5,000 lineal feet of mostly 8 inch pipe, serving approximately 68 residences and 6 fire hydrants. The existing system is shown in Figure 1.

Current System Performance

The system was modeled in its current configuration (with pumps) to determine the existing system pressures. The model verifies that the current system provides adequate pressure and flow in both the peak hour demand (PHD) and fire flow scenarios. Demands for both scenarios are discussed in the following section. According to the model, the lowest system pressures during the PHD and fire flow scenarios were 68.35 and 64.40 psi, respectively, which are well above the 30 psi and 20 psi minimum requirements. For the PHD scenario, only two of the three domestic pumps were set to run, with both fire pumps off (fire pumps are only set to turn on when system pressure at the pump house drops below 60 psi). Similarly, for the fire flow scenario, only a single fire pump was turned on, with all of the domestic pumps off. In reality the domestic pumps would also be on during a fire event, in addition to the fire pumps, but to be conservative and to more accurately represent a scenario where the domestic pumps are removed with just the fire pumps remaining in service (as discussed later in this memo), the fire flow scenario was run without the domestic pumps.

Critical Node

The minimum pressures for both of the scenarios discussed above occurred at node J-NE-19, as shown on Figure 1, which represents the highest elevation node in the Eagleridge water main distribution system at an approximate elevation of 409' and is the critical node for this model (both with and without pumps). This node is located at the approximate location of the meter for the residence at 1777 Donald Avenue, where the residence itself is at an elevation of approximately 421'. This is the highest meter in the system. While 1777 Donald Avenue has the highest elevation *meter*, and is therefore the critical node from a distribution main standpoint, it is not the highest elevation *residence*. The highest elevation residence is 1784 Donald Avenue at an elevation of approximately 440', which is included in the model as node J-

90, and shown in Figure 1 for reference. This is the highest point in the system and represents the worst case scenario in terms of level of service. It is not the critical node in terms of regulatory requirement since the meter for 1784 Donald is actually located much lower, on Eagleridge Way (see node J-88, Figure 1) with an elevation of approximately 375'.



LEGEND

WATER PIPE

MODEL NODE

345

1234

DATE
11-3-2020

SHEET
1

SCALE
AS SHOWN

WASHINGTON

JOB NUMBER
2020-080

OF
1

LWSD EAGLERIDGE

WHATCOM COUNTY

FIGURE 1

EXISTING WATER DISTRIBUTION SYSTEM

Coordinate System:
State Plane Washington,
North FIPS 460 1
North American Datum 1983

WILSON

ENGINEERING

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Hydraulic Model Inputs

Infrastructure

The system model was constructed using original record drawings from Weden Engineering, and is shown in Figure 1 – Existing Water System. The distribution network in the model is “skeletonized” to only include the mains, excluding the individual service lines (except for the worst-case service connection, J-90, as discussed previously). The distribution network consists mainly of 8 inch pipe, with a few short sections of 6 inch, and one section of 4 inch pipe. All piping is cement-lined ductile iron, and is modeled as having a Hazen-Williams roughness coefficient of 120. Pump curves were developed based on cut sheets for the existing pumps, but since the main intent of this analysis is to determine system performance without the pumps, they were only used to model the scenarios with the current configuration discussed previously.

Field Data

The system information that is needed to develop an accurate hydraulic model is fairly standard for most basic components such as pipe, bends, valves, etc. For other components such as pumps and meters, whose properties are make and model specific, the manufacturer will usually provide cut sheets with the necessary information. This was true for the Eagleridge pumps and DCVA, but information for the existing meter and strainer was not available.

A site visit was performed on August 4, 2020 with LWWSD staff, wherein a flow/pressure test was carried out to measure system pressures. A data logger was installed at two locations within the system to record pressures during known flow events, with the intent being to determine the actual headlosses within the system – specifically, for the portion between the City network and the pump station. Doing so results in a more accurate hydraulic model.

The first location where pressure was recorded was just upstream of the pumphouse, in the DCVA vault (immediately downstream of the DCVAs). A fire hydrant was opened at the intersection of Eagleridge Way and Aquila Court, and set to a flow of 220 gpm. Prior to opening the hydrant, the average recorded pressure at the DCVA was observed to be 75.6 psi. After opening the hydrant, the average recorded pressure at the DCVA was found to be 68.3 psi, which shows a pressure loss through the City system (City main, meter, DCVA) of 7.3 psi at a flow of 220 gpm.

The hydrant was then opened to a flow of approximately 393 gpm, which resulted in an average pressure at the DCVA of 58 psi, indicating a pressure loss across the City system (City main,

meter, DCVA) of 17.6 psi at a flow of 393 gpm. Using these two pressure loss data points (7.3 psi at 220 gpm, and 17.6 psi at 393 gpm), along with the other known headlosses, the minor headloss coefficient, K, for the water meter and strainer was calibrated in the model to reflect the observed headloss.

Demands

The demands used in the hydraulic model are based on the 2017 LWWSD Water System Plan Update (2017 WSP), which states that the Eagleridge community's expected build-out is 71 ERUs, with an average daily demand (ADD) of 250 gpd/ERU, a maximum daily demand (MDD) of 800 gpd/ERU, and a fire flow requirement of 500 gpm. Therefore, a system MDD of 39.44 gpm was used for the fire flow scenario (in addition to the 500 gpm fire demand), and a demand of 130.5 gpm was used for the PHD scenario.

City of Bellingham System Pressure

Based on input from the City of Bellingham Utility Operations Engineer, Jim Bergner, pressure at the City intertie during a fire flow scenario of 539 gpm (accounting for the 500 gpm fire flow in addition to the 39 gpm MDD flow) will be 59 psi, with a static pressure of 78 psi. Similarly, pressure at the intertie during the 130.5 gpm peak hourly demand will be 73 psi, again with a static pressure of 78 psi. These pressures are with reservoir levels that are the lowest observed reservoir levels. Exact levels with equalizing storage and fire suppression storage depleted were not quantified by the City, but it is expected that the lowest observed reservoir levels that are represented are at least approximately close to those conditions.

It should be noted that according to the City, portions of their hydraulic model have not been updated since 2004. As the attached correspondence shows, a workaround was used to generate the requested pressures. This method seems to have yielded fairly accurate results, considering that the calculated static pressure is within 3% of the static pressure observed in the field: 78 psi according to model, and 75.6 psi average observed downstream of the strainer, meter, and backflow assemblies.

Hydraulic Model Results

The hydraulic model was run for two scenarios: peak hourly demand and fire flow with maximum daily demand. For both models, in order to simulate the removal of the existing pumps, the model pumps were deactivated and flow was routed through an 8 inch bypass line as shown in Figure 2.

Peak Hourly Demand

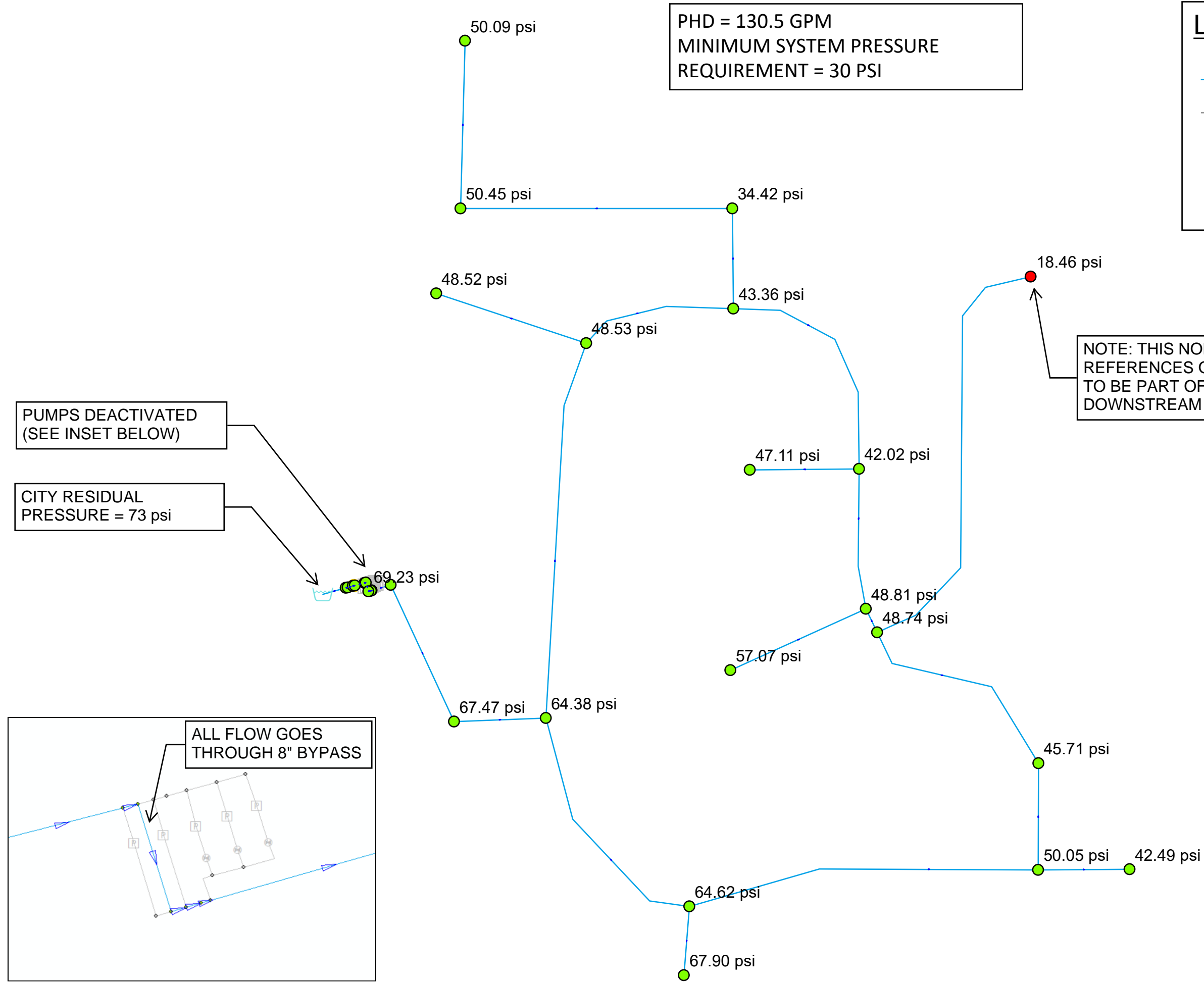
The District has adopted the Design Standards set forth in WAC 246-290-230. Paragraph 5 states that “New public water systems or additions to existing systems shall be designed with the capacity to deliver the design PHD quantity of water at 30 psi (210 kPa) under PHD flow conditions measured at all existing and proposed service water meters or along property lines adjacent to mains if no meter exists, and under the condition where all equalizing storage has been depleted.”

As Figure 2 shows, the lowest *system* pressure occurs at node J-NE-19 (the critical node for this model), with 34.42 psi, which is greater than the minimum required pressure. Based on these results, it appears that removing the domestic pumps is acceptable from a PHD minimum pressure standpoint. A summary of the PHD system pressures is shown in Table 1 below for both the scenario with domestic pumps (current configuration) and without the domestic pumps.

Table 1: PHD System Pressures With and Without Domestic Pumps

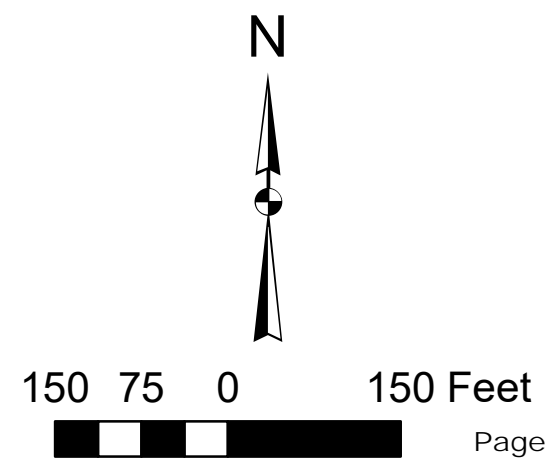
Node	PHD Pressure with Pumps (psi)	PHD Pressure without Pumps (psi)	Node	PHD Pressure with Pumps (psi)	PHD Pressure without Pumps (psi)
J-NE-3	100.00	69.23	J-NE-14	75.94	42.02
J-NE-4	101.39	67.47	J-NE-15	81.04	47.11
J-NE-6	98.31	64.38	J-NE-16	82.45	48.53
J-NE-7	98.55	64.62	J-NE-17	82.45	48.52
J-NE-8	101.82	67.90	J-NE-18	77.29	43.36
J-NE-9	89.97	50.05	J-NE-19	68.35	34.42
J-NE-10	76.42	42.49	J-NE-20	84.38	50.45
J-NE-11	79.64	45.71	J-NE-21	84.02	50.09
J-NE-12	82.74	48.81	J-88	82.67	48.74
J-NE-13	91.00	57.07	J-90	52.39	18.46*

*Note: Node J-90 is downstream of a service meter, and not subject to the 30 psi minimum.



LEGEND

- ACTIVE WATER PIPE
- DEACTIVATED WATER PIPE
- MODEL NODE GREATER THAN 30 PSI
- MODEL NODE LESS THAN 30 PSI



Fire Flow and Maximum Daily Demand

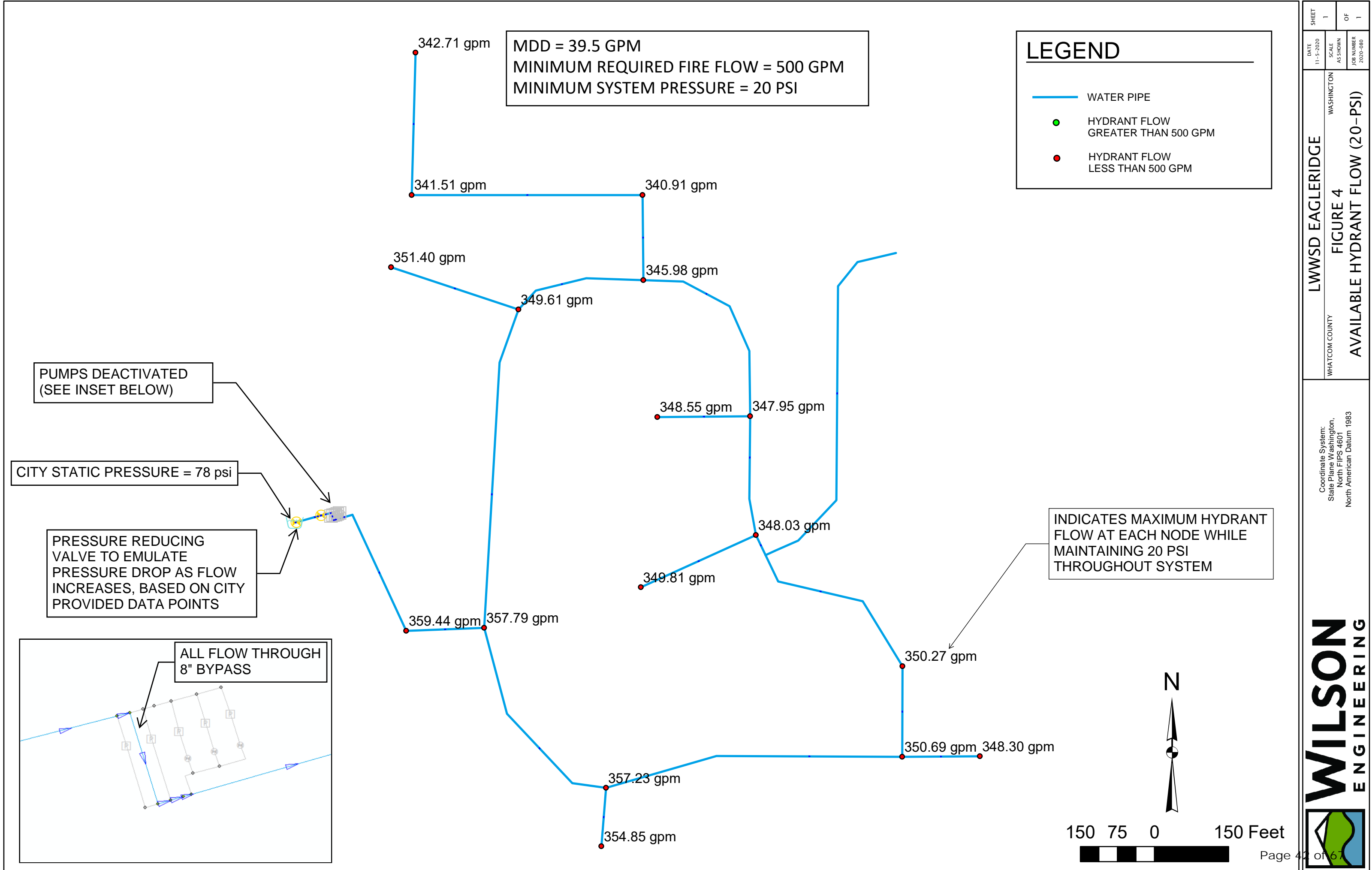
Paragraph 6 of WAC 246-290-230 states that “If fire flow is to be provided, the distribution system shall also provide maximum day demand (MDD) plus the required fire flow at a pressure of at least 20 psi (140 kPa) at all points throughout the distribution system, and under the condition where the designed volume of fire suppression and equalizing storage has been depleted.”

The hydraulic model allows for the analysis of fire flow scenarios in a number of ways. Figure 4 shows the maximum available hydrant flow at each node while maintaining a minimum pressure of 20 psi throughout the system. As Figure 4 shows, this maximum flow varies from 340.91 to 359.44 gpm, below the minimum required 500 gpm. Therefore, it appears that removing the fire suppression pumps is not acceptable.

Existing Fire Pumps

The existing two fire pumps are not very well suited to the current needs of the system and should be replaced when they reach the end of their useful life, at the latest. Since the existing fire pumps were installed when the fire flow requirement was 750 gpm (versus 500 gpm, now), and because the City water pressure has increased since this pumping system was designed and installed, it would appear that the existing fire pumps are significantly oversized. This is verified by the hydraulic model, which shows, with a single fire pump running, the available hydrant flow ranges from 1,112 gpm to 1,199 gpm while maintaining 20 psi throughout the system – over double the required flow.

Furthermore, the existing fire pumps are simple on-off controlled pumps. These are inefficient compared to modern variable frequency drive (VFD) controls, and since they do not have bladder tanks or precise controls to achieve a target discharge pressure, they tend to cause pressure spikes and dips. Figure 3 below shows a plot of the pressure recorded by a data logger at the hydrant. The pressure spike shown at approximately 9:40am on the plot represents one of the fire pumps turning on, where peak pressure exceeds 120 psi, which exceeds the DOH’s recommendation for maximum working pressure of 80 psi. Not only is the pressure excessive, but it could (and does, as shown) increase and decrease quickly, causing



MDD = 39.5 GPM
MINIMUM REQUIRED FIRE FLOW = 500 GPM
MINIMUM SYSTEM PRESSURE = 20 PSI

LEGEND

WATER PIPE

HYDRANT FLOW
GREATER THAN 500 GPM

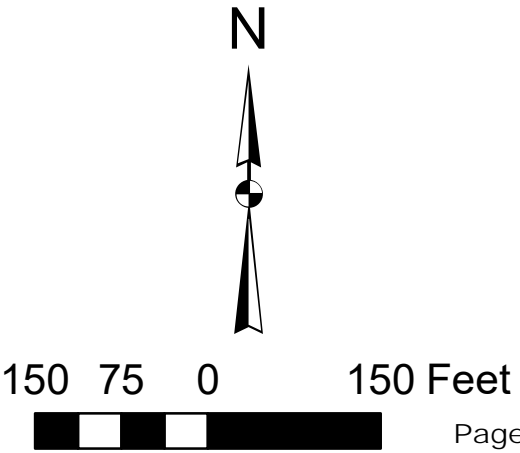
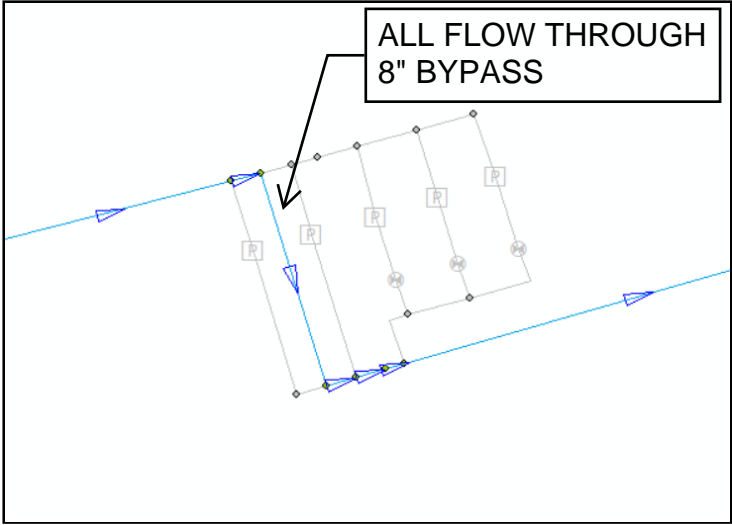
HYDRANT FLOW
LESS THAN 500 GPM

PUMPS DEACTIVATED
(SEE INSET BELOW)

CITY STATIC PRESSURE = 78 psi

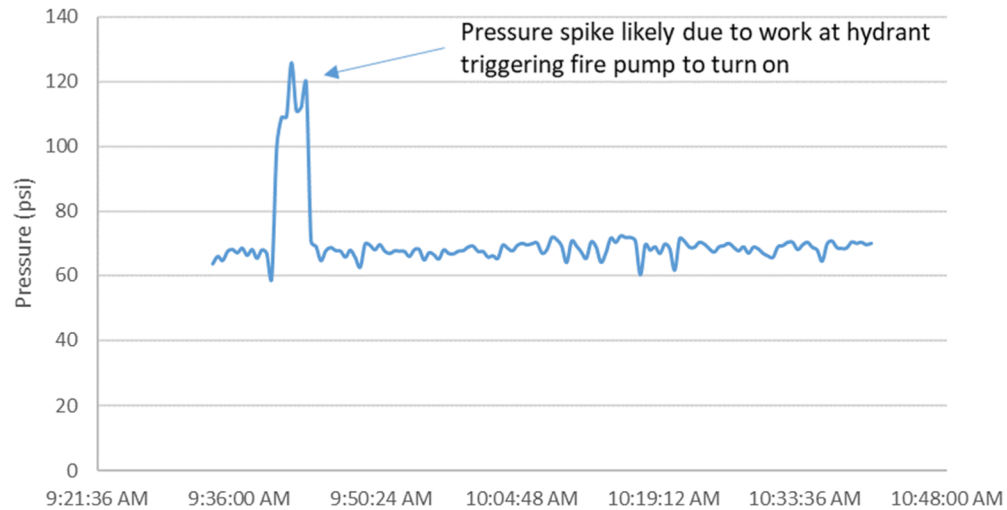
PRESSURE REDUCING
VALVE TO EMULATE
PRESSURE DROP AS FLOW
INCREASES, BASED ON CITY
PROVIDED DATA POINTS

INDICATES MAXIMUM HYDRANT
FLOW AT EACH NODE WHILE
MAINTAINING 20 PSI
THROUGHOUT SYSTEM



water hammer and potentially damaging the distribution system, services, or plumbing, causing leaks and water loss.

Figure 3 - Hydrant Pressure at Eagleridge Way and Altair Ct



Since it appears that the fire pumps will remain necessary, we recommend replacing them with appropriately sized pumps (based on current suction-side pressures and fire flow needs) with VFD controls.

Attachments

- Correspondence with City of Bellingham
 - Node J1 Pressure at fire flow (539 gpm), with explanation of model workaround
 - Node J1 Pressure at PHD (130.5 gpm)

Brian Smith <bsmith@wilsonengineering.com>

LWWSD water intertie at Eagleridge

Bergner, Jim P. <jbergner@cob.org>

Wed, Oct 14, 2020 at 1:43 PM

To: Brian Smith <bsmith@wilsonengineering.com>Cc: Melanie Mankamyler <mmankamyler@wilsonengineering.com>, Ben Gibson <bgibson@wilsonengineering.com>

Hi Brian,

Here's what you can expect to see at J1 with a demand of 539gpm.

Regards,

Jim Bergner*Utility Operations Engineer**Public Works - Engineering**104 W. Magnolia St., Suite 109, Bellingham, WA 98225**P: 360.778.7731*jbergner@cob.org*My incoming and outgoing email messages are subject to public disclosure requirements per RCW 42.56*

From: Brian Smith <bsmith@wilsonengineering.com>**Sent:** Tuesday, October 13, 2020 4:22 PM**To:** Bergner, Jim P. <jbergner@cob.org>**Cc:** Melanie Mankamyler <mmankamyler@wilsonengineering.com>; Ben Gibson <bgibson@wilsonengineering.com>**Subject:** Re: LWWSD water intertie at Eagleridge

Hi Jim,

Circling back with you on this. We did some field data collection last month, and have refined our analysis within the Eagleridge system. Now the key piece of the analysis depends on what the City-side pressure is.

City of Bellingham

LWWSD Northshore Dr. Intertie



J1
 Static Pressure = 78psi
 Demand of 539gpm = 59psi
 Demand of 750gpm = 45psi

Legend:

Water Mains

- City Watermains - Active
- - - City Watermains - Under Construction
- - - Private Watermains
- ★ Air Release
- ✱ Blow Off
- 💧 Water Meters
- + Water Fittings
- 🚰 Private Hydrant
- 🚰 City Owned Hydrant
- 🚰 Filling Station
- ☆ Fireline Valve
- ⊕ Hydrant Valve
- ⊗ Bypass Valve
- ⊕ Inline Valve
- ⊕ Tapping Valve
- ✕ Zone Valve
- Water Service Line
- Fireline Lateral
- Hydrant Lateral



Author: jbergner
 Date: 10/14/2020
 Project: Fire Flow Maps
 Page 46 of 67

One thing we discovered as we were digging in is that the Eagleridge fire flow standard is actually 500 gpm, not the 750 gpm we previously discussed. Could you re-check your scenario (where you got 45 psi at 750 gpm), and tell us pressure at J1 under 539 gpm (500 gpm fire flow plus 39 gpm MDD)?

Thanks,

Brian Smith, P.E.
Wilson Engineering, LLC

805 Dupont Street, Suite 7
Bellingham, WA 98225
Ph: (360) 733-6100 x216
www.wilsonengineering.com

Civil Engineering and Surveying Services Since 1967

On Wed, Aug 12, 2020 at 10:27 AM Bergner, Jim P. <jbergner@cob.org> wrote:

Hi Brian,

I'm still having issues with the MDD scenario in the model that I was trying to use. It got me thinking that maybe the scenario I was trying to use wasn't the best one to use. This particular scenario was created in 2004 with the development of our model. All the other MDD scenarios were also created in 2004. Well that was 16 years ago and as you are probably aware the system has changed a lot since then. Not only have we removed and added new reservoirs, but now all City water customers are now metered. This will all be addressed next year when we start the process to update our Water System Plan and model.

So with that said here is what I ended up doing. I reached out to the Water Treatment Plant manager and got the lowest water levels for the 2 Dakin reservoirs that provide water to this zone. I took those levels and the levels that are used in the ADD scenario that were used for your fire flow request at J1. I calculated out the difference to come up with a pressure of 45psi when flowing 750gpm.

I also ran a fire flow within that zone at Northshore and Academy to see what you should have available at J1. You are left with a pressure of 64psi but with only 450gpm.

Let me know if you have any question or if you need any additional information.

Regards,

Ben Gibson <bgibson@wilsonengineering.com>

RE: LWWSD water intertie at Eagleridge

Bergner, Jim P. <jbergner@cob.org>

Thu, Oct 22, 2020 at 3:18 PM

To: Brian Smith <bsmith@wilsonengineering.com>Cc: Melanie Mankamyler <mmankamyler@wilsonengineering.com>, Ben Gibson <bgibson@wilsonengineering.com>

Hi Brian,

Here's what you are looking at in the way of pressure with a demand at 130.5gpm at J1. I set the reservoir levels to 11.00 for Dakin 1 and 9.71 for Dakin 2. Those reservoirs typically don't go below 13' & 10'.

Regards,

Jim Bergner*Utility Operations Engineer**Public Works - Engineering**104 W. Magnolia St., Suite 109, Bellingham, WA 98225**P: 360.778.7731*jbergner@cob.org*My incoming and outgoing email messages are subject to public disclosure requirements per RCW 42.56*

From: Brian Smith <bsmith@wilsonengineering.com>**Sent:** Wednesday, October 21, 2020 3:11 PM**To:** Bergner, Jim P. <jbergner@cob.org>**Cc:** Melanie Mankamyler <mmankamyler@wilsonengineering.com>; Ben Gibson <bgibson@wilsonengineering.com>**Subject:** Re: LWWSD water intertie at Eagleridge

Hi Jim,

City of Bellingham

LWWSD Northshore Dr. Intertie



J1
 Static Pressure = 78psi
 Demand of 130.5gpm = 73psi

Legend:

Water Mains

- City Watermains - Active
- - - City Watermains - Under Construction
- - - Private Watermains
- ★ Air Release
- ✱ Blow Off
- 💧 Water Meters
- + Water Fittings
- 🚒 Private Hydrant
- 🚒 City Owned Hydrant
- 🚒 Filling Station
- ★ Fireline Valve
- ⊕ Hydrant Valve
- ⊗ Bypass Valve
- ⊕ Inline Valve
- ⊕ Tapping Valve
- ✕ Zone Valve
- Water Service Line
- Fireline Lateral
- Hydrant Lateral



Author: jbergner
 Date: 10/22/2020
 Project: Fire Flow Maps
 Page 49 of 67

APPENDIX B

EQUIPMENT

**CLA-VAL CO.**

NEWPORT BEACH, CALIFORNIA

CATALOG NO.

60-12

DRAWING NO.

95940

REV

D

TYPE OF VALVE AND MAIN FEATURES

COMBINATION PUMP CONTROL AND
PRESSURE REDUCING VALVE

DESIGN

DRAW

MGR

3-4-81

CHK'D

KD

3-6-81

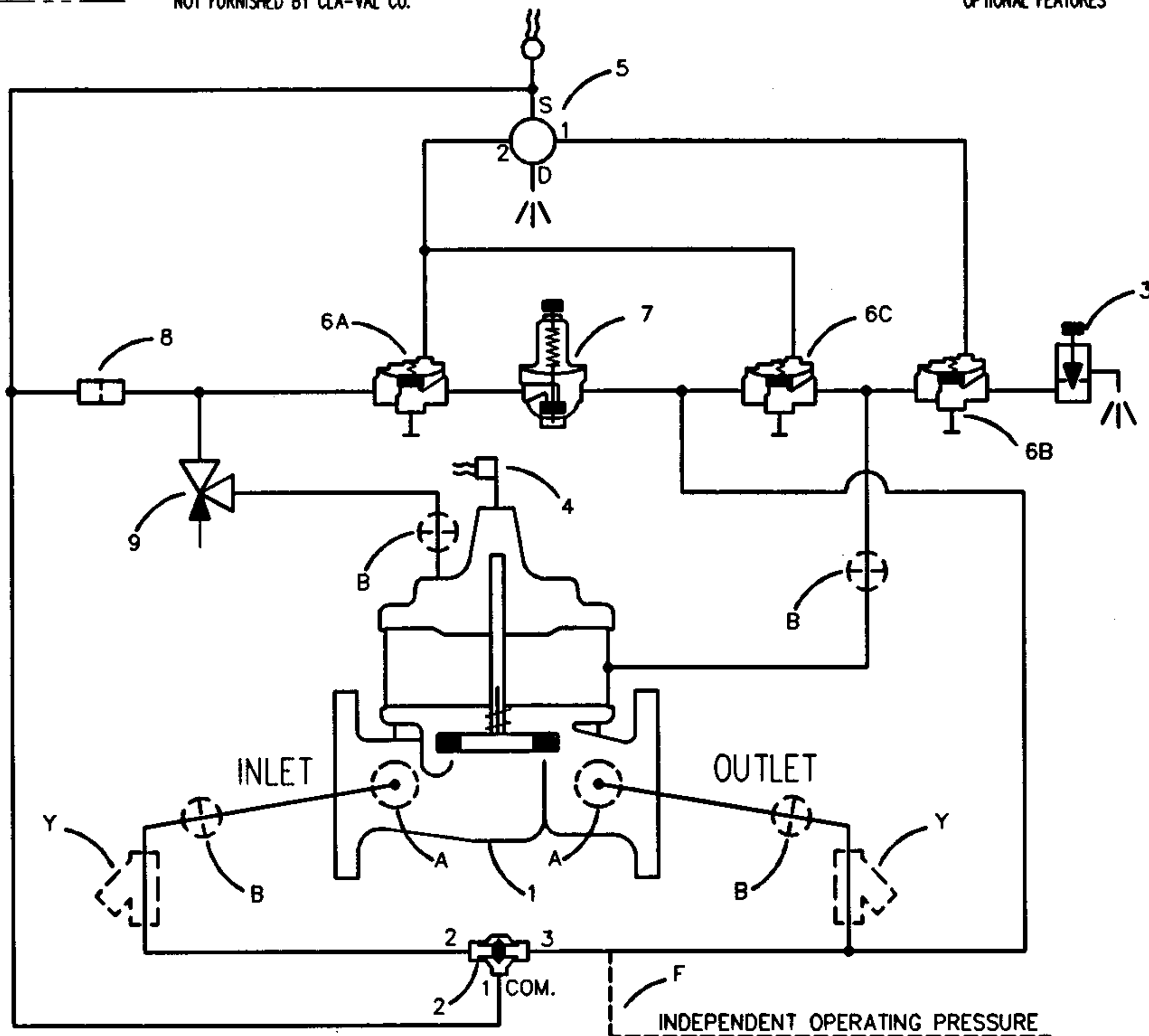
APVD

CH

3-12-81

NOT FURNISHED BY CLA-VAL CO.

OPTIONAL FEATURES



ITEM NO.	BASIC COMPONENTS	QTY
1	100-03 POWERCHECK (MAIN VALVE)	1
2	CVS-1 SHUTTLE VALVE	1
3	CNB NEEDLE VALVE (CLOSING)	1
4	X105LCW SWITCH ASSEMBLY	1
5	CSM11-A2-2 SOLENOID CONTROL	1
6	100-01 HYTROL (REVERSE FLOW)	3
7	CRD PRESSURE REDUCING CONTROL	1
8	X58C RESTRICTION ASSEMBLY	1

9	CV FLOW CONTROL (OPENING)	1

OPTIONAL FEATURE SUFFIX		ADDED TO CATALOG NUMBER	
A	X46A FLOW CLEAN STRAINER	2	
B	CK2 COCK (ISOLATION VALVE)	4	
F	INDEPENDENT OPERATING PRESSURE		
Y	X43 "Y" STRAINER	2	

CAD REVISION RECORD - DO NOT REVISE MANUALLY

DESCRIPTION

DATE

BY

AK 03-12-99

A-C SEE REVISION FILE
D REDRAWN ON CAD AND ADDED CK2 COCK (ECO 17587)

THIS DRAWING IS THE PROPERTY OF CLA-VAL CO. AND SAME AND COPIES MADE THEREOF, IF ANY, SHALL BE RETURNED TO IT UPON DEMAND. DELIVERY AND DISCLOSURE HEREOF ARE SOLELY UPON CONDITION THAT THE SAME SHALL NOT BE USED, COPIED OR REPRODUCED, NOR SHALL THE SUBJECT HEREOF BE DISCLOSED IN ANY MANNER TO ANYONE FOR ANY PURPOSE, EXCEPT AS HEREIN AUTHORIZED, WITHOUT PRIOR WRITTEN APPROVAL OF CLA-VAL CO. THIS DRAWING IS SUBMITTED CONFIDENTIALLY AND MAY NOT BE USED IN THE MANUFACTURE OF ANY MATERIAL OR PRODUCT OTHER THAN SUCH MATERIALS AND PRODUCTS FURNISHED TO CLA-VAL CO. WHETHER OR NOT THE EQUIPMENT OR INFORMATION SHOWN HEREON IS PATENTED OR OTHERWISE PROTECTED, FULL TITLE AND COPYRIGHTS, IF ANY, IN AND TO THIS DRAWING AND/OR INFORMATION DELIVERED OR SUBMITTED ARE FULLY RESERVED CLA-VAL CO.

**CLA-VAL CO.**

NEWPORT BEACH, CALIFORNIA

CATALOG NO.

60-12

DRAWING NO.

95940

REV

D

TYPE OF VALVE AND MAIN FEATURES

**COMBINATION PUMP CONTROL AND
PRESSURE REDUCING VALVE**

DESIGN

DRAW

WEP

5-29-86

CHK'D

CH

6-16-86

APVD

CH

6-16-86

OPERATING DATA**I. PUMP CONTROL FEATURE:****PUMP STARTING:**

SOLENOID CONTROL (5) IS ENERGIZED SIMULTANEOUSLY WITH PUMP STARTING. THIS RELIEVES CONTROL PRESSURE FROM VALVE (6A) AND (6C), PERMITTING THEM TO OPEN, AND APPLIES PRESSURE TO AND CLOSURES VALVE (6B). THE MAIN VALVE (1) OPENS.

PUMP RUNNING:

WHEN DOWNSTREAM PRESSURE REACHES THE SETTING OF REDUCING CONTROL (7), THE MAIN VALVE STOPS OPENING AND BEGINS TO MODULATE IN RESPONSE TO COMMANDS FROM CONTROL (7). DOWNSTREAM PRESSURE ACTING ON THE DIAPHRAGM OF CONTROL (7) VARIES THE FLOW THROUGH THE CONTROL SYSTEM, AND HENCE, THE MAIN VALVE COVER PRESSURE. THE MAIN VALVE RESPONDS TO SLIGHT DOWNSTREAM PRESSURE CHANGES AND MAINTAINS A CONSTANT DELIVERY PRESSURE WHILE THE PUMP IS RUNNING.

PUMP STOPPING:

WHEN SOLENOID CONTROL (5) IS DE-ENERGIZED, CONTROL PRESSURE IS APPLIED TO AND CLOSURES VALVES (6A) AND (6C), AND RELIEVES CONTROL PRESSURE FROM VALVE (6B) PERMITTING IT TO OPEN. MAIN VALVE STARTS CLOSING AT A RATE GOVERNED BY THE SETTING OF CLOSING SPEED CONTROL (3). DURING THIS OPERATION, THE PUMP IS KEPT RUNNING BY A RELAY IN THE ELECTRICAL CIRCUIT, WHICH IS HELD CLOSED BY MICRO SWITCH (4). WHEN THE VALVE IS ALMOST TIGHTLY CLOSED, THIS SWITCH OPENS RELEASING THE RELAY, SHUTTING OFF THE PUMP.

II. OPENING SPEED CONTROL:

FLOW CONTROL (9) CONTROLS THE OPENING SPEED OF THE MAIN VALVE. TURN THE ADJUSTING STEM CLOCKWISE TO MAKE THE MAIN VALVE OPEN SLOWER.

III. CHECK VALVE FEATURE:

THE MAIN VALVE (1) HAS A AN INTEGRAL CHECK FEATURE. WHEN OUTLET PRESSURE EXCEEDS INLET PRESSURE, THE MAIN VALVE CLOSURES PREVENTING REVERSE FLOW.

IV. DUAL SUPPLY FEATURE:

WHEN MAIN VALVE (1) INLET PRESSURE EXCEEDS OUTLET PRESSURE, SHUTTLE VALVE (2) SHIFTS INTERCONNECTING PORTS "1" AND "2". WHEN MAIN VALVE (1) OUTLET PRESSURE EXCEEDS INLET PRESSURE, SHUTTLE VALVE (2) SHIFTS INTERCONNECTING PORTS "1" AND "3". THIS DIRECTS THE HIGHEST PRESSURE INTO THE PILOT SYSTEM.

CAD REVISION RECORD - DO NOT REVERSE MANUALLY

DATE

BY

DESCRIPTION

SEE SHEET 1.

LTR

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NEWPORT BEACH, CALIFORNIA

CATALOG NO.

60-12

DRAWING NO.

95940

REV

D

TYPE OF VALVE AND MAIN FEATURES

COMBINATION PUMP CONTROL AND
PRESSURE REDUCING VALVE

DESIGN

DRAW

WEP

5-29-86

CHK'D

CH

6-16-86

APVD

CH

6-16-86

OPERATING DATA-CONTINUEDV. OPTIONAL FEATURE OPERATING DATA:SUFFIX A (FLOW CLEAN STRAINER)

A SELF-CLEANING STRAINER IS INSTALLED IN THE MAIN VALVE INLET AND OUTLET BODY BOSS WHICH PROTECTS THE PILOT SYSTEM FROM FOREIGN PARTICLES.

SUFFIX B (ISOLATION VALVES)

CK2 COCKS (B) ARE USED TO ISOLATE THE PILOT SYSTEM FROM MAIN LINE PRESSURE. THESE VALVES MUST BE OPEN DURING NORMAL OPERATION.

SUFFIX F (INDEPENDENT OPERATING PRESSURE)

PILOT SUPPLY PRESSURE IS OBTAINED FROM AN INDEPENDENT SOURCE. (PILOT SUPPLY PRESSURE IS OBTAINED FROM THE SHUTTLE VALVE (2) IF SUFFIX (F) IS NOT SPECIFIED.) NOTE: INDEPENDENT OPERATING PRESSURE MUST BE EQUAL TO OR GREATER THAN PRESSURE AT PORT 3 OF SHUTTLE VALVE (2).

SUFFIX Y (Y-STRAINER)

A Y-PATTERN STRAINER IS INSTALLED IN THE PILOT SUPPLY LINE TO PROTECT THE PILOT SYSTEM FROM FOREIGN PARTICLES. THE STRAINER SCREEN MUST BE CLEANED PERIODICALLY.

VI. CHECK LIST FOR PROPER OPERATION:

- () SYSTEM VALVES OPEN UPSTREAM AND DOWNSTREAM.
- () AIR REMOVED FROM THE MAIN VALVE COVER AND PILOT SYSTEM AT ALL HIGH POINTS.
- () CK2 COCKS (B) OPEN DURING NORMAL OPERATION (OPTIONAL FEATURE).
- () PERIODIC CLEANING OF STRAINER (Y) IS RECOMMENDED (OPTIONAL FEATURE).
- () VALVE (3) OPEN AT LEAST 1/4 TURN.
- () CORRECT VOLTAGE TO SOLENOID CONTROL (5).

CAD REVISION RECORD - DO NOT REVERSE MANUALLY

DESCRIPTION

DATE

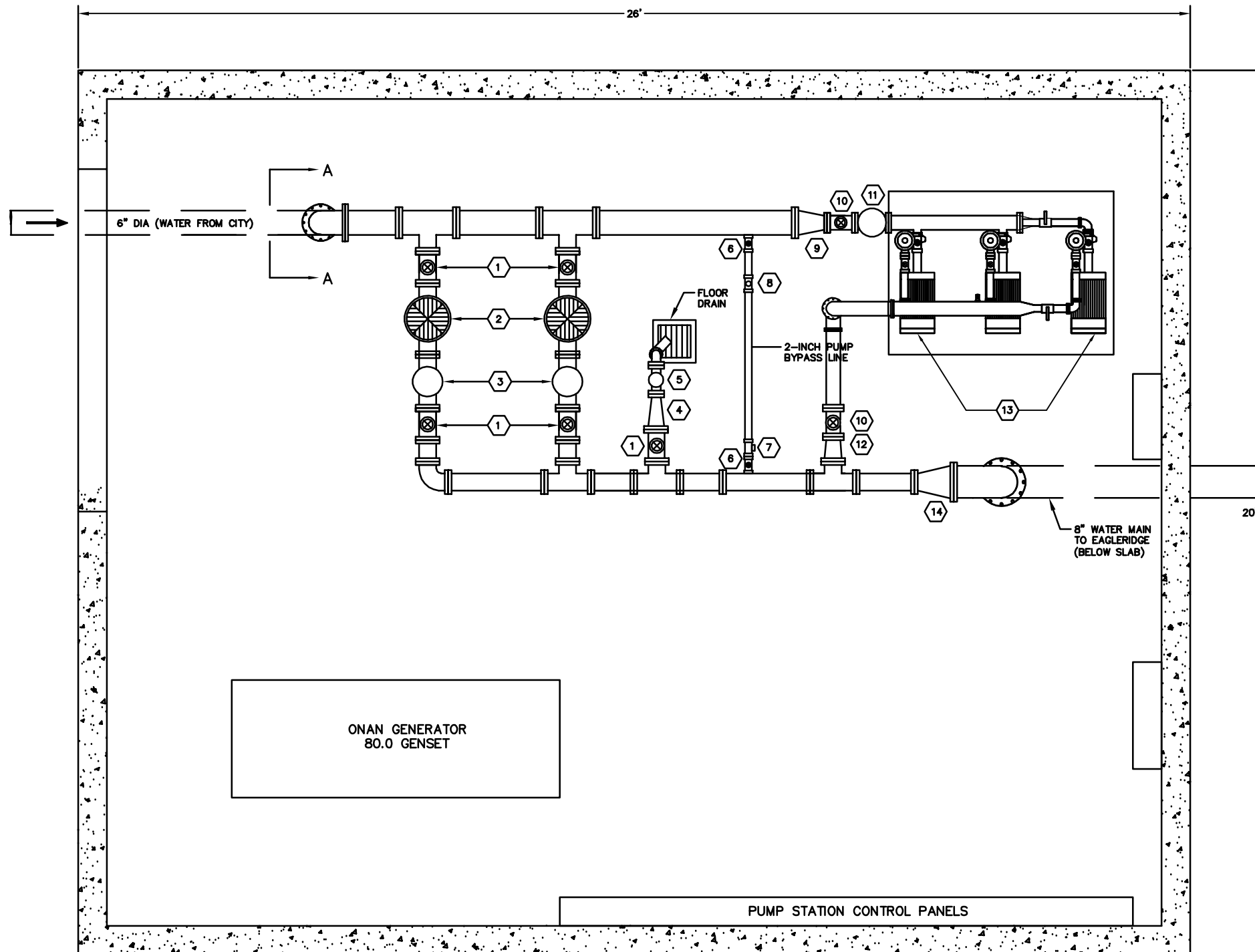
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LIR

SEE SHEET 1.

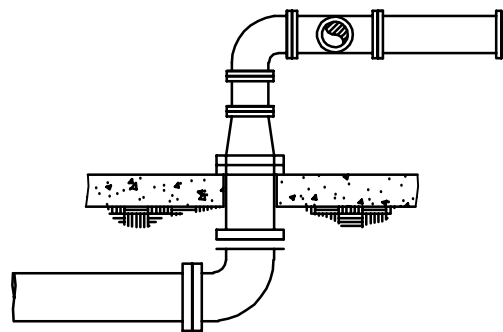
APPENDIX C

Domestic Pump Decommissioning Piping Modifications - Plans



**EAGLERIDGE PUMP STATION LAYOUT
(EXISTING)**

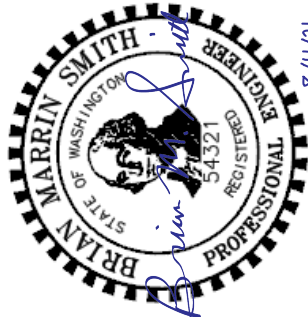
EXISTING PUMP STATION EQUIPMENT	
1	4-INCH GATE VALVE
2	STANDBY FIRE SUPPRESSION PUMP – PACO MODEL 4070-7 INLINE CENTRIFUGAL PUP, 30 BHP, 3500 RPM
3	PUMP CONTROL VALVE
4	REDUCER, 4-IN X 2-1/2 IN
5	CLA-VAL SURGE ANTICIPATION VALVE
6	2-INCH GATE VALVE
7	2-INCH X 2-INCH X 2-INCH TEE WITH 2-INCH GATE VALVE & SAMPLE TAP
8	2-INCH CHECK VALVE
9	REDUCER – 6-IN X 3-IN
10	3-INCH GATE VALVE
11	PACO FLOW SENSOR (TO BE REMOVED)
12	REDUCER – 4-IN X 3-IN
13	PACOFLO 9000 TRIPLEX BOOSTER SYSTEM, S/N 89A01443. TRIPLEX BOOSTER PUMPS (3 EA); 60 GPM @ 177 FEET TDH (77 PSI), IMPELLER DIA 6.75 INCHES (TO BE REMOVED)
14	REDUCER – 4-IN X 8-IN



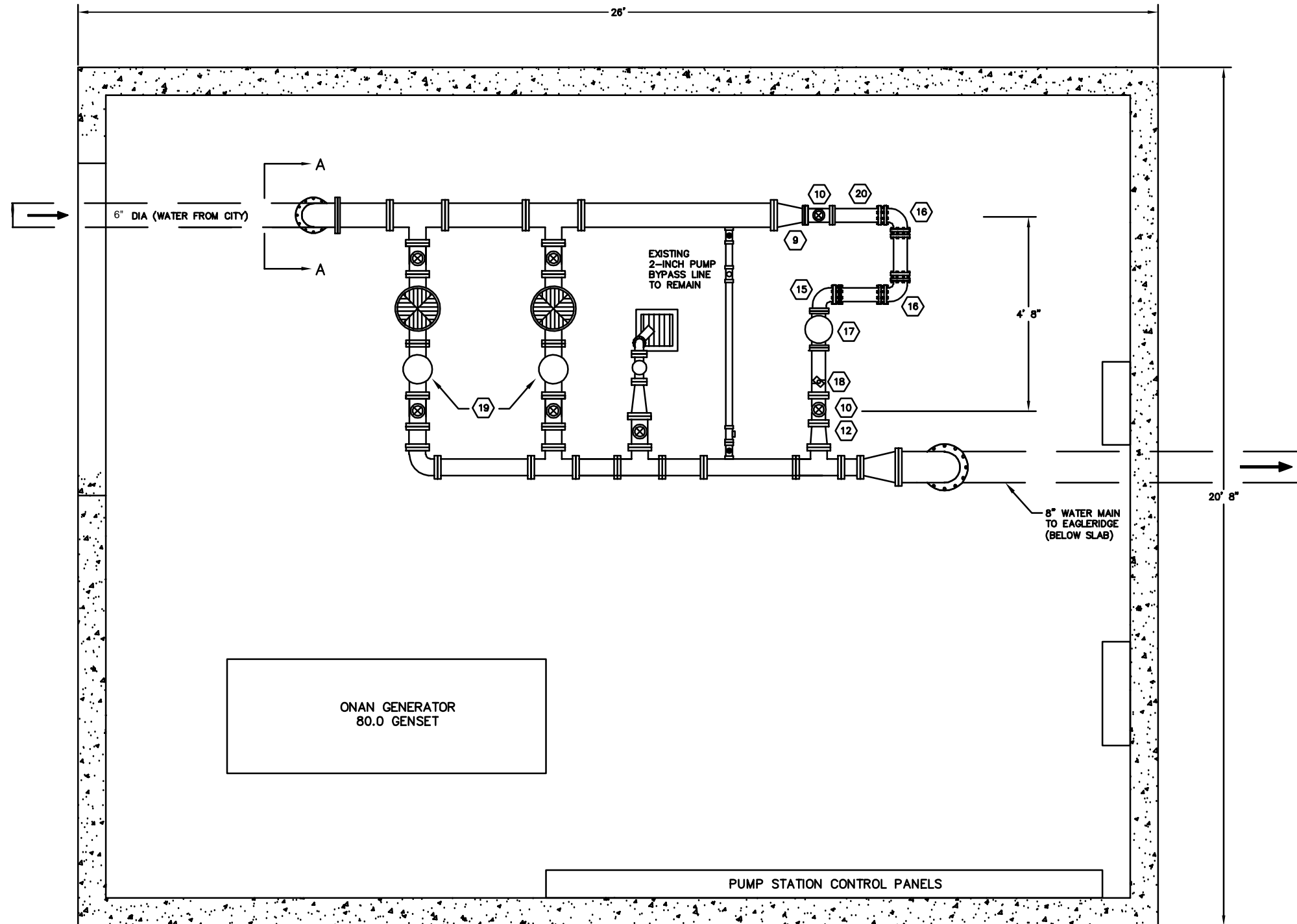
SECTION A-A



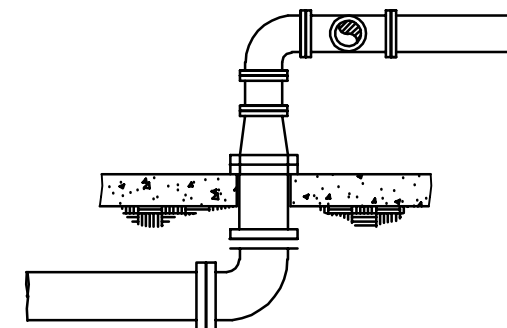
DATE: AUGUST 2021
SCALE: NOTED
DRAWN BY: KH
REVISION: N/A



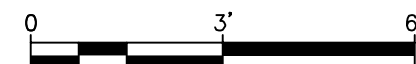
LAKE WHATCOM WATER & SEWER DISTRICT
WHATCOM COUNTY, WA
**EAGLERIDGE PUMP STATION
EXISTING SITE PLAN**



PUMP STATION MODIFICATIONS	
9	REDUCER - 6-IN X 3-IN (EXISTING)
10	3-INCH GATE VALVE (EXISTING, NORMALLY OPEN)
12	REDUCER - 4-IN X 3-IN (EXISTING)
15	3-IN DUCTILE IRON PIPE 90-DEGREE BEND, FLXMJ WITH WEDGE RESTRAINT KIT.
16	3-IN DUCTILE IRON PIPE 90-DEGREE BEND, MXXMJ WITH WEDGE RESTRAINT KITS, AND 3-INCH DUCTILE IRON PIPE STUBS FIELD CUT TO FIT.
17	3-IN SWING CHECK VALVE, M&H AWWA C508 RUBBER FACED
18	3-INCH X 12-INCH DUCTILE IRON PIPE SPOOL, WITH ROMAC 101S SERVICE SADDLE W/ 3/4" OUTLET, 3/8"x6" BRASS NIPPLE & 0-100 PSI PRESSURE GAUGE W/ ISOLATION VALVE.
19	ADD PRESSURE REDUCING FUNCTIONALITY TO EXISTING PUMP CONTROL VALVES.
20	3-INCH X 18-INCH DUCTILE IRON PIPE SPOOL, FLXPE, CUT TO FIELD FIT.



SECTION A-A



**EAGLERIDGE PUMP STATION LAYOUT
(PROPOSED)**

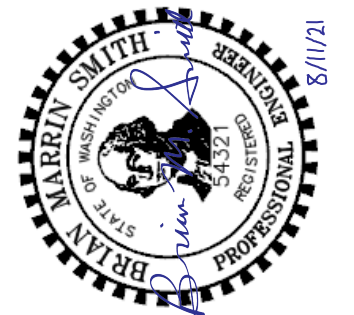


DATE: AUGUST 2021

SCALE: NOTED

DRAWN BY: KH

REVISION: N/A



LAKE WHATCOM WATER & SEWER DISTRICT
WHATCOM COUNTY, WA

**EAGLERIDGE PUMP STATION
PROPOSED SITE PLAN**

**SHEET C-2
2 OF 2**



State of Washington
DEPARTMENT OF HEALTH

NORTHWEST DRINKING WATER REGIONAL OPERATIONS
20425 72nd Avenue South, Suite 310 • Kent Washington 98032-2388

NOVEMBER 23, 2021

KEVIN COOK
LWWSO-EAGLERIDGE
1220 LAKEWAY DRIVE
BELLINGHAM WA 98229

Subject: LWWSO Eagleridge (ID#08118)
Whatcom County
Booster Conversion Project - **Approval**
Submittal #21-0811

Dear Kevin Cook:

Thank you for submitting the project report and construction documents for the proposed LWWSO - Eagleridge Booster Conversion project. The documents were prepared by your engineer, Brian Smith, PE and received in our office on August 20, 2021.

The project report and construction documents for the above project, were reviewed and, in accordance with the provisions of WAC 246-290 are hereby **APPROVED**. The approval issued herein is only valid as it relates to current standards outlined in WAC 246-290. Future revisions in the rules may be more stringent and require facility modifications or corrective action.

It is acknowledged that the Booster Conversion project is included in the District's 2018 Water System Plan (approved October 3, 2018).

Design Summary:

This project will modify the existing LWWSO - Eagleridge Booster Pump Station, located on North Shore Drive next to the intertie with the City of Bellingham. The project includes:

- Retrofitting the existing fire pump control valves to add pressure reducing function and to better regulate pressure.
- Removing the existing domestic booster pumps at the LWWSO - Eagleridge Booster Pump Station. Bellingham increased pressure at the intertie and the domestic booster pumps are no longer needed.

This project will not change the physical capacity of the system.

As required in WAC 246-290-120(5) within sixty days following the completion of and prior to the use of the above project or portions thereof, the enclosed construction report must be completed by a professional engineer and returned to this department. In addition, complete and submit the enclosed Pressure, Leakage, and Bacteriological Test Report form for applicable portions of this project.

The department's approval of your water system design does not confer or guarantee any right to a specific quantity of water. The approved number of service connections is based on your representation of available water quantity. If the Washington Department of Ecology, a local planning agency, or other authority responsible for determining water rights and water system adequacy determines that you have use of less water than you represented, the number of approved connections may be reduced commensurate with the actual amount of water and your legal right to use it.

Regulations establishing a schedule of fees for review of planning, engineering, and construction documents have been adopted (WAC 246-290-990). The total cost is \$589.00. An itemized invoice for the review of this project has been sent to the primary contact on file for your water system. Please remit complete payment in the form of a check or money order within thirty days of the date of this letter in the enclosed envelope or mail payment to: **WSDOH, Revenue Section, PO Box 1099, Olympia WA 99507-1099.**

WAC 246-290-120(8) provides that if construction of the project has not been started within two years of the date of this letter, this approval will become null and void unless you take action at that time to arrange for an extension of the approval in the manner prescribed.

Nothing in this approval shall be construed as satisfying other applicable federal, state, or local statutes, ordinances and regulations.

Sincerely,



Laura McLaughlin, PE
Regional Engineer
NW Office of Drinking Water

Enclosures: Construction completion report form
Invoice

cc: Laurette Rasmussen, Whatcom County Health
Brian Smith, PE, Wilson Engineering
Justin Clary, LWWSO



Office of Drinking Water
INVOICE

Engineering, Planning, and Sanitary Survey Review Form

TO: KEVIN COOK
LWWSO - EAGLERIDGE
1220 LAKEWAY DRIVE
BELLINGHAM WA 98229

Invoice Number	N03877
Invoice Date	November 23, 2021
Billing Period	30 days NW

DATE	DESCRIPTION	QTY	COST	AMOUNT
11/23/21	REVIEW AND/OR APPROVAL OF PROJECT REPORT LWWSO - EAGLERIDGE WHATCOM COUNTY BOOSTER PUMP CONVERSION SUBMITTAL #: 21-0811	1	1	\$589.00
	Total			\$589.00
Payment due within 30 days. Interest shall accrue at 1% per month after 30 days.				

Make Checks Payable to Department of Health

Return Lower Portion to:

Department of Health
PO Box 1099
Olympia, WA 98507-1099

Office of Drinking Water
Engineering, Planning, and Sanitary Survey Review Form

NAME	LWWSO - EAGLERIDGE
INVOICE NUMBER	N03877
INVOICE DATE	11/23/2021 21-0811 NW
AMOUNT	\$589.00

DOH Form #331-332

Return to:
Department of Health
Revenue Section
PO Box 1099
Olympia, WA 98507-1099

For persons with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TTY 1-800-833-6388).

NO 2877

DOH Staff Name: McLaughin, Laura
Sublog Number: 21-0811
Water System ID: 08118

System Name: LWSD - Eagleridge
County: Whatcom

Fixed Fee for Service

WATER SYSTEM PLANS			Approved?	
Project Type	Fee 1st Review	Fee 2nd Review	Number Hr 1st Review	Number Hr 2nd Review
Total Water system plans	\$0	\$0	0	0

SATELLITE MANAGEMENT AGENCY (SMA) PLANS			Approved?	
Project Type	Fee 1st Review	Fee 2nd Review	Number Hr 1st Review	Number Hr 2nd Review
Total SMA	\$0	\$0	0	0

PROJECT REPORTS			Approved?	
Project Type	Fee 1st Review	Fee 2nd Review	Number Hr 1st Review	Number Hr 2nd Review
(d)(4) System modifications including new source <100 Services	\$348		2.0	
Total Project Reports	\$348	\$0	2	0

CONSTRUCTION DOCUMENTS			Approved?	
Project Type	Fee 1st Review	Fee 2nd Review	Number Hr 1st Review	Number Hr 2nd Review
(f)(5) System modifications <100 Services	\$241		1.0	
Total Construction documents	\$241	\$0	1	0

EXISTING SYSTEM APPROVAL			Approved?	Yes
Project Type	Fee 1st Review	Fee 2nd Review	Number Hr 1st Review	Number Hr 2nd Review
Total of Existing System approval	\$0	\$0	0	0

GROUP B AND OTHER EVALUATIONS AND APPROVALS			Approved?	No
Project Type	Fee 1st Review	Fee 2nd Review	Number Hr 1st Review	Number Hr 2nd Review
Total of Other evaluations and approvals	\$0	\$0	0	0
Total Fixed Fee for Service	\$589	\$0	3	0

Hourly fee for service	Fee	# Hr	System Size	
Pay This Invoice Amount For This Review	\$589	0.0	3	0

Summary		Total for All Project Invoices	Total for All Project Hours
\$589		3	0

Construction Completion Report

In accordance with WAC 246-290-120 (5), a **Construction Completion Report** is required for all approved construction projects. Purveyors **must** submit a Construction Completion Report to the Office of Drinking Water (ODW) within sixty (60) days of completion and before use of any water system facility. This includes any source, water quality treatment, storage tanks, booster pump facilities, and distribution projects.

Please type or print legibly in ink:

LWWSD - EAGLERIDGE

DOH System ID No.: **08118**

Name of Water System

KEVIN COOK

DOH Project No.: **21-0811**

Name of Purveyor (Owner or System Contact)

(if applicable)

1220 LAKEWAY DRIVE

Date Construction Documents

Mailing Address

Approved by DOH **11/23/2021**

BELLINGHAM, WA 98229

(If applicable)

City

State

Zip

Project Name and Descriptive Title: BOOSTER PUMP CONVERSION

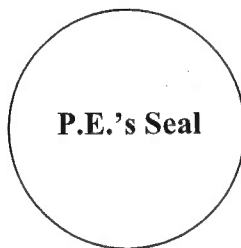
CHECK ONE: ☐ Entire Project Completed. ☐ Description of Portions Completed.

PROFESSIONAL ENGINEER'S ACKNOWLEDGMENT (Complete items below—Attach additional sheets as needed)

The undersigned professional engineer (PE), or their authorized agent, has inspected the above-described project which, as to layout, size and type of pipe, valves and materials, reservoir and other designed physical facilities, has been constructed and is substantially completed in accordance with construction documents reviewed by the purveyor's engineer or approved by the DOH. In the opinion of the undersigned engineer, the installation, physical testing procedures, water quality tests, and disinfection practices were carried out in accordance with state regulations and principles of standard engineering practice.

I have reviewed the disinfection procedures ☐, pressure test results ☐, and results of the bacteriological test(s) ☐ for this project and certify that they comply with the requirements of the construction standards/specifications approved by the DOH. (Check all boxes that apply that are consistent with the nature of the project.)

This project changes the physical capacity of the system to serve consumers. The system is now able to serve equivalent residential units (ERUs.) ☐ Not applicable



Date Signed

Name of Engineering Firm

Name of PE Acknowledging Construction

Mailing Address

City

State

Zip

Engineer's Signature

State/Federal Funding Type (if any) _____

Please return completed form to DOH regional office checked below.

☒ NWRO Drinking Water
Department of Health
20425 72nd Ave. S, Ste 310
Kent, WA 98032-2358
(253) 395-6750

☐ SWRO Drinking Water
Department of Health
PO Box 47823
Olympia, WA 98504-7823
(360) 236-3030

☐ ERO Drinking Water
Department of Health
16201 E Indiana Ave, Suite 1500
Spokane Valley, WA 99216
(509) 329-2100

For persons with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TTY 1-800-833-6388).

The purveyor must attach a completed Water Facilities Inventory (WFI) form in accordance with WAC 246-290-120(6), if applicable. Contact the regional office in your area for WFI forms or additional Construction Completion Report forms.



1220 Lakeway Drive
Bellingham, WA 98229
(360) 734-9224

December 6, 2021 (revised January 4, 2022)

Re: Eagleridge Water Booster Conversion Project

Dear Eagleridge Resident:

As a valued customer of the Lake Whatcom Water and Sewer District, please accept this letter as notice of a pending District project associated with the water distribution system serving the Eagleridge neighborhood.

Project Summary

The District provides water service to Eagleridge residents via a connection with the City of Bellingham's water system and sewer service via a series of gravity sewer mains that flow to the District's sewage conveyance infrastructure located in Northshore Road. The neighborhood's water and sewer infrastructure was constructed by the private developer of the subdivision in 1988 and dedicated to the District for operation and maintenance. When the water system was originally designed and constructed, the City's water pressure at the location of the connection between the two systems was not sufficient to serve Eagleridge. As a result, a booster pump station was constructed at the location of the connection that is comprised of three pumps for domestic (general) water service, two pumps for fire suppression, pump controls, and an auxiliary diesel generator (to ensure continuous service through power outages).

At some point between system construction in 1988 and 2016, the City increased the water pressure in the service area that feeds the Eagleridge water system. During that same timeframe, the District began planning for replacement of the pump control system, which was approaching the end of its useful life. As a component of this planning, the District performed a detailed hydraulic analysis to determine if the City's system pressure is sufficient to meet Washington State Department of Health (DOH) regulatory requirements throughout Eagleridge. The analysis concluded that the domestic pumps are no longer necessary and can be removed from service, with the City's pressure being sufficient to meet regulatory requirements for the domestic demands of the Eagleridge system. The fire pumps, however, must remain to ensure sufficient flow and pressure in a fire flow scenario. Based upon this analysis, DOH approved removal of the domestic pumps from service.

Project Benefits

The primary project benefit will be near- and long-term cost savings realized through not replacing the existing three domestic pumps that are approaching the end of their useful life, which is estimated at a replacement cost of \$122,000, as well as ongoing costs to operate the domestic pumps (electricity to operate and routine maintenance), which is estimated at \$50,000 over the next 20 years. An additional benefit will be increasing reliability in the water distribution

system—by shifting to an entirely gravity system under normal conditions, the system will no longer be reliant on mechanical pumps to feed the system.

Service Impacts

By converting to a gravity system that relies on the City of Bellingham water system pressure, you may notice a slight decrease in the water pressure at your home. When the project is complete average pressures at water meters throughout the Eaglridge subdivision will range from approximately 71 psi (pounds per square inch) in the lower elevations and 45 psi in the higher elevations. Pressures at water meters at the higher elevation on Donald Avenue will be around 37 psi on an average day. For reference, domestic water system pressures are typically between 40 and 70 psi.

Project Schedule

With DOH approval of the revision to the water system, the District anticipates completion of the project by Spring 2022.

Again, thank you for being a valued customer of the District and your understanding in the District's pursuit of limiting rate impacts through minimizing operational costs. Should you have any questions regarding this project, or any other questions related to District services, please do not hesitate to contact me at 360.734.9224. Also, additional information specific to this project is available on the District's website (www.lwwsd.org)—select the "Eagleridge Water Booster Conversion Project" from the "Projects" dropdown menu in the website banner.

Sincerely,

Lake Whatcom Water and Sewer District




Justin L. Clary
General Manager



**AGENDA
BILL
Item 9.A**

**General Manager's
Report**

DATE SUBMITTED:	January 5, 2022	MEETING DATE:	January 12, 2022
TO: BOARD OF COMMISSIONERS	FROM: Justin Clary, General Manager		
GENERAL MANAGER APPROVAL			
ATTACHED DOCUMENTS	1. General Manager's Report		
TYPE OF ACTION REQUESTED	RESOLUTION <input type="checkbox"/>	FORMAL ACTION/ MOTION <input type="checkbox"/>	INFORMATIONAL /OTHER <input checked="" type="checkbox"/>

BACKGROUND / EXPLANATION OF IMPACT

Updated information from the General Manager in advance of the Board meeting.

FISCAL IMPACT

None.

RECOMMENDED BOARD ACTION

None required.

PROPOSED MOTION

None.



LAKE WHATCOM WATER AND SEWER DISTRICT

General Manager's Report

Upcoming Dates & Announcements

Regular Meeting – Wednesday, January 12, 2022 – 6:30 p.m.

Important Upcoming Dates

Lake Whatcom Water & Sewer District			
Regular Board Meeting	Wed Jan 26, 2022	8:00 a.m.	Remote Attendance
Employee Staff Meeting	Thu Jan 13, 2022	8:00 a.m.	Remote Attendance Commissioner Abele to attend
Investment Comm. Meeting	Wed Jan 26, 2022	10:00 a.m.	Remote Attendance
Safety Committee Meeting	Thu Jan 20, 2022	8:00 a.m.	Remote Attendance
Lake Whatcom Management Program			
Policy Group Meeting	February 16, 2022	3:00 p.m.	Remote Attendance
Joint Councils Meeting	March 23 or 30, 2022	6:30 p.m.	Remote Attendance
Other Meetings			
WASWD Section III Meeting	Tue Jan 11, 2022	6:00 p.m.	Hybrid; Virtual/Silver Lake WSD
Whatcom Water Districts Caucus Meeting	Wed Jan 19, 2022	2:00 p.m.	Remote Attendance
Whatcom County Council of Governments Board Meeting	Wed Jan 19, 2022	3:00 p.m.	Remote Attendance

Committee Meeting Reports

Safety Committee:

- No committee meeting has been held since last board meeting.

Investment Committee:

- The committee met with Alex McCann, Time Value Investments, on December 27, 2021, to discuss investment strategies/approach associated with the upcoming bond investment.

Upcoming Board Meeting Topics

- Interlocal agreement with Whatcom Conservation District for water conservation services

2021 Initiatives Status

Administration and Operations

Six-Year Strategic Business Plan

- Develop department-specific business plans that define staffing, facility, and equipment needs necessary to meet level-of-service standards over the six-year planning horizon.
The board adopted the strategic plan during its December 8 meeting.

Rate Study

- Conduct a rate study for the water and sewer utilities for the six-year planning horizon, including funding strategies related to significant capital improvements anticipated during and beyond the planning horizon.

An updated master fees and charges schedule that reflects board-directed rates resulting from the rate study was adopted via Resolution No. 879 during the November 24 meeting.

Investment Policy Review

- Conduct a comprehensive review of the District's investment policy aimed at optimizing return on investments while sufficiently protecting District funds.

Resolution No. 473, which revised and incorporated the investment policy into the administrative code, was adopted by the board during its April 28, 2021 meeting.

Capital Improvement Program Support

- Support the Engineering Department through management of specific capital improvement project(s).

The general manager is managing the Eagleridge Water Booster-Metering Station Conversion project (District Project No. C2011), the Water Use Efficiency Plan update (District Project No. A2115), and the Commissioner Boundary update (District Project No. A2116).

Fill Anticipated Finance Manager Position Vacancy

- With the retirement of the District's Finance Manager anticipated in July 2021, engage in a recruitment and hiring process that allows for seamless transition of leadership in the Finance Department.

Jennifer Signs joined the District as the new Finance Manager on June 28.

Negotiate Successor District-AFSCME Agreement

- With the current labor agreement scheduled to expire December 31, 2021, negotiate a successor agreement that aligns with District financial capacity and Board goals.

The board approved the 2022-2024 collective bargaining agreement during its December 8 meeting.

Emergency Response/System Security

America's Water Infrastructure Act-compliant Risk Management Program

- Conduct a USEPA-compliant risk and resilience assessment by June 30, 2021.
Sewer and water utility assessments were certified on February 8.
- Develop a USEPA-compliant emergency response plan by December 31, 2021.
The District's emergency response plan update was certified on September 21.

Community/Public Relations

General

- Website
The District's web content is reviewed and updated on a regular basis.
- Social Media
Posts are made to District Facebook and LinkedIn pages regularly; Nextdoor is regularly monitored for District-related posts.

➤ **Press Releases**

Press releases were issued on February 24 (public notification of daytime road closures assoc. with Division 30 water main repairs), March 1 (EnviroStars certification), July 8 (J Signs hire) August 20 (J Clary appointment to Public Works Board), September 27 (TOP Award receipt), November 15 (health advisory for direct lake draw residents due to flood event), and December 8 (Division 7 Reservoir FEMA grant award).

Intergovernmental Relations

- *J Clary attended a Whatcom Water Alliance meeting on December 9.*
- *J Clary presented the District's 2022 legislative session agenda to Representatives Rule and Shewmake on December 9, and to Representative Ramel on December 10.*
- *J Clary met with City of Bellingham Public Works Director, Eric Johnston, on December 13.*
- *J Clary attended the City of Bellingham Public Works & Natural Resources committee meeting on December 13.*
- *J Clary attended a Whatcom Water Alliance planning meeting on January 5.*
- *J Clary scheduled to meet with the new Sudden Valley Community Association general manager, Dan Pike, on January 7.*
- *J Clary scheduled to attend a meeting with Congressman Larsen at the District office on January 7.*
- *J Clary scheduled to attend a WASWD general managers' meeting on January 10.*
- *J Clary scheduled to attend a Whatcom Water Alliance meeting on January 12.*

Public Works Board

- *Pursue appointment as WASWD representative on the Washington State Public Works Board. J Clary appointed to the Washington State Public Works Board by Governor Inslee on August 17.*

Lake Whatcom Water Quality

Management Program

- *Participate in meetings of Lake Whatcom Management Program partners. No LWMP-related meetings have been held since the last board meeting.*

Onsite Septic System Conversion Program

- *Pursue connection of the one remaining septic-served parcel located within 200 feet of District sewer system identified in the memorandum to the Board dated April 9, 2020. To be initiated.*