

## Bristol Town Administrator

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**From:** Craig Jennings <cjennings@naylorbreen.com>  
**Sent:** Tuesday, March 14, 2023 3:27 PM  
**To:** Bristol Town Administrator  
**Cc:** Scott Durkee; Steve Palmer; Jill Marsano; bristolhighway@gmavt.net  
**Subject:** RE: Waterline Tie-in 118 Firehouse Drive  
**Attachments:** Stoney Hill FP Drawings.pdf; CALCS-STONEY-HILL-A.pdf

Also, not sure if Kevin provided these for you, but attached are the Engineered sprinkler drawings and calcs.

Thanks,  
Craig

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### Craig Jennings

Senior Project Manager  
O 802.247.6527 x2032 | C 802.779.8475  
[CJennings@naylorbreen.com](mailto:CJennings@naylorbreen.com)



191 Alta Woods | Brandon, Vermont 05733  
[www.naylorbreen.com](http://www.naylorbreen.com)

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**From:** Bristol Town Administrator <townadmin@bristolvt.org>  
**Sent:** Tuesday, March 14, 2023 2:44 PM  
**To:** Craig Jennings <cjennings@naylorbreen.com>  
**Cc:** Aaron Miner <aminer@naylorbreen.com>; Scott Durkee <sdurkee@naylorbreen.com>; Steve Palmer <spalmer@vtengineering.com>; Jill Marsano <jill@vtums.com>; bristolhighway@gmavt.net  
**Subject:** RE: Waterline Tie-in 118 Firehouse Drive

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Hi Craig,

Thank you for this information. Jill will be your primary contact for review of the specifics. The connection ultimately requires Water Commission/Selectboard approval, which is slated for the March 27 meeting. The order of agenda items will fall into place as we get closer to the meeting date.

Thanks,

--Valerie

Valerie Capels, Town Administrator  
Town of Bristol  
1 South Street  
P.O. Box 249  
Bristol, VT 05443

P: (802) 453-2410 Ext. 1  
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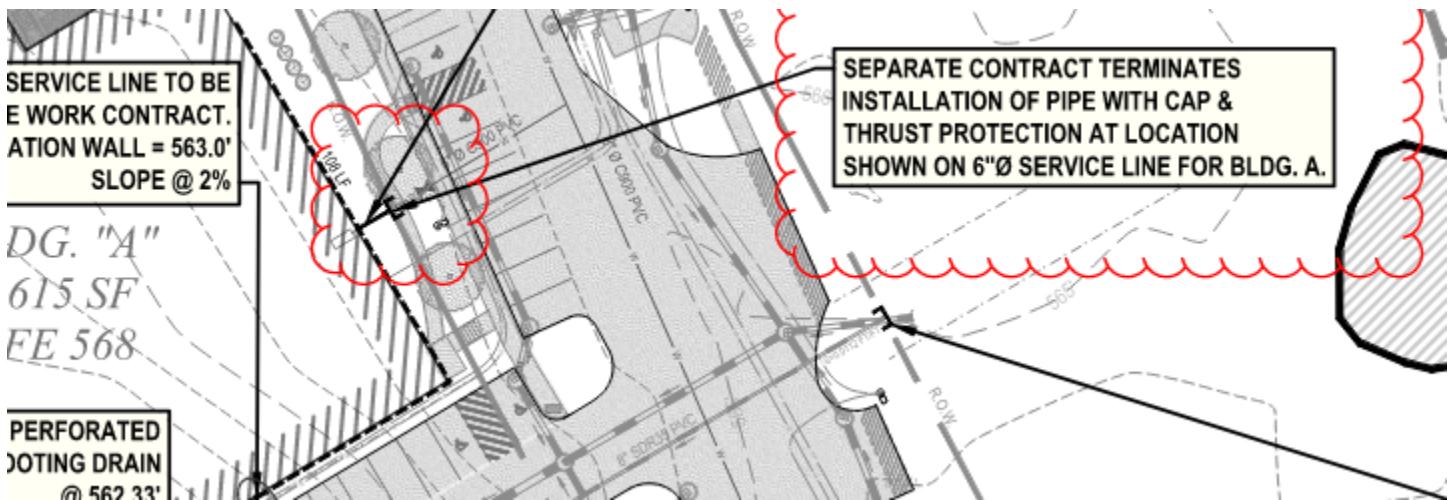
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**From:** Craig Jennings <[cjennings@naylorbreen.com](mailto:cjennings@naylorbreen.com)>  
**Sent:** Tuesday, March 14, 2023 2:34 PM  
**To:** Jill Marsano <[jill@vtums.com](mailto:jill@vtums.com)>; [bristolhighway@gmavt.net](mailto:bristolhighway@gmavt.net)  
**Cc:** Bristol Town Administrator <[townadmin@bristolvt.org](mailto:townadmin@bristolvt.org)>; Aaron Miner <[aminer@naylorbreen.com](mailto:aminer@naylorbreen.com)>; Scott Durkee <[sdurkee@naylorbreen.com](mailto:sdurkee@naylorbreen.com)>  
**Subject:** Waterline Tie-in 118 Firehouse Drive

Hey Jill,

Hope all is well. We are excavating for footings for the All Earth Renewables building at 118 Firehouse Drive. We will need to tie-into the already existing water line in order to get underneath the footings. Kevin Harper sent in the permit yesterday, along with the drawings. There is a sprinkler in this building.



Attached is the drawing. Do you have a contact info, so my site superintendent can contact you to go thru the Town requirements.?

Thank you.

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**Craig Jennings**  
Senior Project Manager  
O 802.247.6527 x2032 | C 802.779.8475

[CJennings@naylorbreen.com](mailto:CJennings@naylorbreen.com)



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SPRINKLER HYDRAULIC SERVICES, LLC  
198 SHARON DRIVE  
WILLISTON, VT 05495

HYDRAULIC CALCULATIONS FOR

STONEY HILL - BLDG. A  
BRISTOL, VERMONT

DRAWING NUMBER: FP-102 DATE: 3/8/2003  
-DESIGN DATA-

REMOTE AREA NUMBER: REMOTE AREA LOCATION:

SHILLAI SOF

OCCUPANCY CLASSIFICATION: OH 60.2

DENSITY: 70 gpm/sq. ft.

AREA OF APPLICATION: 1500 sq. ft.

COVERAGE PER SPRINKLER: 130 sq. ft.

TYPE OF SPRINKLERS CALCULATED: UPRIGHT, QUICK-RESPONSE, 125.6

NUMBER OF SPRINKLERS CALCULATED: 12

\*IN-RACK SPRINKLER DEMAND: 0 gpm

HOSE-STREAM DEMAND: 250 gpm

TOTAL WATER REQUIRED (INCLUDING HOSE): 568.9 gpm

FLOW AND PRESSURE (AT BASE OF RISER): 318.9 gpm @ 54.8 psi

TYPE OF SYSTEM: WET

\*VOLUME OF DRY OR PREACTION SYSTEM:

\*DETAILS:

WATER SUPPLY

Source: C.W Test Date: UNK Test By: TEST ON WEST STREET

Location:

Static: 115 psi Residual: 20 psi Flow: 1128 gpm

Source Elevation Relative to Finished Floor Level: 0 ft.

INSTALLING CONTRACTOR

Name: MOUNTAIN VALLEY SPRINKLER

Address: 474 SHUNPICK ROAD - WILLISTON, VT

Phone: (802) 865-3800 Certification number:

NAME OF DESIGNER: S. TRAWCZYNSKI - NICET # 078574

AUTHORITY HAVING JURISDICTION:

STATE OF VERMONT FIRE MARSHAL

NOTES:

Calculations performed by HASS under license # 16040304  
granted by HRS SYSTEMS, INC.

(Notes continue after pipe calculations results.)

(Notes continue after pipe calculations results.)

DATE: 3/7/2023

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JOB TITLE: STONEY HILL-BLDG A -BRISTOL, VERMONT-.20/1500+250

WATER SUPPLY DATA

SOURCE NODE TAG	STATIC PRESS. (PSI)	RESID. PRESS. (PSI)	FLOW @ (GPM)	AVAIL. PRESS. (PSI)	TOTAL @ DEMAND (GPM)	REQ'D PRESS. (PSI)
46	115.0	20.0	1128.0	88.2	568.9	57.1

AGGREGATE FLOW ANALYSIS:

TOTAL FLOW AT SOURCE	568.9 GPM
TOTAL HOSE STREAM ALLOWANCE AT SOURCE	250.0 GPM
OTHER HOSE STREAM ALLOWANCES	0.0 GPM
TOTAL DISCHARGE FROM ACTIVE SPRINKLERS	318.9 GPM

NODE ANALYSIS DATA

NODE TAG	ELEVATION (FT)	NODE TYPE	PRESSURE (PSI)	DISCHARGE (GPM)
1	17.0	- - - -	26.6	- - -
2	19.0	K= 5.60	22.1	26.3
3	19.0	K= 5.60	21.6	26.0
4	19.0	K= 5.60	21.6	26.0
5	19.0	K= 5.60	21.6	26.0
6	19.0	K= 5.60	22.1	26.3
7	17.0	- - - -	28.6	- - -
8	17.0	- - - -	26.8	- - -
9	19.0	K= 5.60	22.2	26.4
10	19.0	K= 5.60	21.8	26.1
11	19.0	K= 5.60	21.7	26.1
12	19.0	K= 5.60	21.8	26.1
13	19.0	K= 5.60	22.2	26.4
14	17.0	- - - -	28.7	- - -
15	17.0	- - - -	27.4	- - -
16	19.0	K= 5.60	25.9	28.5
17	19.0	K= 5.60	25.9	28.5
18	17.0	- - - -	29.4	- - -
19	17.0	- - - -	28.3	- - -
20	17.0	- - - -	30.3	- - -
21	17.0	- - - -	32.3	- - -
22	17.0	- - - -	31.4	- - -
23	17.0	- - - -	33.0	- - -
24	17.0	- - - -	32.5	- - -
25	17.0	- - - -	33.9	- - -
26	17.0	- - - -	33.4	- - -
27	17.0	- - - -	34.9	- - -
28	17.0	- - - -	34.2	- - -
29	17.0	- - - -	35.9	- - -
30	17.0	- - - -	34.9	- - -
31	17.0	- - - -	37.2	- - -
32	17.0	- - - -	35.5	- - -
33	17.0	- - - -	38.7	- - -
34	17.0	- - - -	35.9	- - -

DATE: 3/7/2023

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JOB TITLE: STONEY HILL-BLDG A -BRISTOL, VERMONT-.20/1500+250

NODE ANALYSIS DATA

NODE TAG	ELEVATION (FT)	NODE TYPE	PRESSURE (PSI)	DISCHARGE (GPM)
35	17.0	- - - -	41.3	- - -
46	0.0	SOURCE	57.1	318.9
37	17.0	- - - -	40.6	- - -
38	17.0	- - - -	36.2	- - -
39	17.0	- - - -	40.5	- - -
40	17.0	- - - -	36.3	- - -
41	17.0	- - - -	40.5	- - -
42	17.0	- - - -	36.4	- - -
43	4.0	- - - -	53.4	- - -
44	4.0	- - - -	47.4	- - -
45	1.0	- - - -	54.8	- - -

DATE: 3/7/2023

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JOB TITLE: STONEY HILL-BLDG A -BRISTOL, VERMONT-.20/1500+250

PIPE DATA

PIPE TAG	END	ELEV.	NOZ.	PT	DISC.	Q (GPM)	DIA (IN)	LENGTH	PRESS.		
	NODES	(FT)	(K)	(PSI)	(GPM)	VEL (FPS)	HW (C)	(FT)	SUM.		
							FL/FT		(PSI)		
	Pipe: 1					65.1	1.682	PL		PF	3.7
1		17.0	0.0	26.6	0.0	9.4	120	FTG	T	PE	-0.9
2		19.0	5.6	22.1	26.3		0.116	TL	32.00	PV	
	Pipe: 2					38.8	1.682	PL	10.00	PF	0.4
2		19.0	5.6	22.1	26.3	5.6	120	FTG	----	PE	0.0
3		19.0	5.6	21.6	26.0		0.045	TL	10.00	PV	
	Pipe: 3					12.8	1.682	PL	10.00	PF	0.1
3		19.0	5.6	21.6	26.0	1.8	120	FTG	----	PE	0.0
4		19.0	5.6	21.6	26.0		0.006	TL	10.00	PV	
	Pipe: 4					-13.2	1.682	PL	10.00	PF	0.1
4		19.0	5.6	21.6	26.0	1.9	120	FTG	----	PE	0.0
5		19.0	5.6	21.6	26.0		0.006	TL	10.00	PV	
	Pipe: 5					-39.2	1.682	PL	10.00	PF	0.5
5		19.0	5.6	21.6	26.0	5.7	120	FTG	----	PE	0.0
6		19.0	5.6	22.1	26.3		0.045	TL	10.00	PV	
	Pipe: 6					-65.6	1.682	PL	33.00	PF	5.6
6		19.0	5.6	22.1	26.3	9.5	120	FTG	ET	PE	0.9
7		17.0	0.0	28.6	0.0		0.117	TL	48.00	PV	
	Pipe: 7					65.1	2.635	PL	13.00	PF	0.2
8		17.0	0.0	26.8	0.0	3.8	120	FTG	----	PE	0.0
1		17.0	0.0	26.6	0.0		0.013	TL	13.00	PV	
	Pipe: 8					65.4	1.682	PL	22.00	PF	3.7
8		17.0	0.0	26.8	0.0	9.4	120	FTG	N	PE	-0.9
9		19.0	5.6	22.2	26.4		0.117	TL	32.00	PV	
	Pipe: 9					39.0	1.682	PL	10.00	PF	0.4
9		19.0	5.6	22.2	26.4	5.6	120	FTG	----	PE	0.0
10		19.0	5.6	21.8	26.1		0.045	TL	10.00	PV	
	Pipe: 10					12.9	1.682	PL	10.00	PF	0.1
10		19.0	5.6	21.8	26.1	1.9	120	FTG	----	PE	0.0
11		19.0	5.6	21.7	26.1		0.006	TL	10.00	PV	
	Pipe: 11					-13.2	1.682	PL	10.00	PF	0.1
11		19.0	5.6	21.7	26.1	1.9	120	FTG	----	PE	0.0
12		19.0	5.6	21.8	26.1		0.006	TL	10.00	PV	
	Pipe: 12					-39.3	1.682	PL	10.00	PF	0.5
12		19.0	5.6	21.8	26.1	5.7	120	FTG	----	PE	0.0
13		19.0	5.6	22.2	26.4		0.046	TL	10.00	PV	

DATE: 3/7/2023

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JOB TITLE: STONEY HILL-BLDG A -BRISTOL, VERMONT-.20/1500+250

PIPE TAG	Q (GPM)	DIA (IN)	LENGTH	PRESS.
END ELEV. NOZ. PT DISC. VEL (FPS) HW (C) (FT) SUM.				
NODES (FT) (K) (PSI) (GPM) FL/FT (PSI)				
Pipe: 13	-65.7	1.682	PL 33.00	PF 5.7
13 19.0 5.6 22.2 26.4 9.5 120 FTG			ET	PE 0.9
14 17.0 0.0 28.7 0.0 0.118 TL			48.00	PV
Pipe: 14	65.6	2.635	PL 13.00	PF 0.2
14 17.0 0.0 28.7 0.0 3.9 120 FTG			----	PE 0.0
7 17.0 0.0 28.6 0.0 0.013 TL			13.00	PV
Pipe: 15	130.5	2.635	PL 13.00	PF 0.6
15 17.0 0.0 27.4 0.0 7.7 120 FTG			----	PE 0.0
8 17.0 0.0 26.8 0.0 0.047 TL			13.00	PV
Pipe: 16	24.6	1.682	PL 22.00	PF 0.6
15 17.0 0.0 27.4 0.0 3.6 120 FTG			N	PE -0.9
16 19.0 5.6 25.9 28.5 0.019 TL			32.00	PV
Pipe: 17	-3.9	1.682	PL 10.00	PF 0.0
16 19.0 5.6 25.9 28.5 0.6 120 FTG			----	PE 0.0
17 19.0 5.6 25.9 28.5 0.001 TL			10.00	PV
Pipe: 18	-32.4	1.682	PL 65.00	PF 2.6
17 19.0 5.6 25.9 28.5 4.7 120 FTG			ET	PE 0.9
18 17.0 0.0 29.4 0.0 0.032 TL			80.00	PV
Pipe: 19	131.3	2.635	PL 13.00	PF 0.6
18 17.0 0.0 29.4 0.0 7.7 120 FTG			----	PE 0.0
14 17.0 0.0 28.7 0.0 0.048 TL			13.00	PV
Pipe: 20	155.1	2.635	PL 13.00	PF 0.8
19 17.0 0.0 28.3 0.0 9.1 120 FTG			----	PE 0.0
15 17.0 0.0 27.4 0.0 0.065 TL			13.00	PV
Pipe: 21	-19.5	1.682	PL 144.00	PF 2.0
19 17.0 0.0 28.3 0.0 2.8 120 FTG			2N	PE 0.0
20 17.0 0.0 30.3 0.0 0.012 TL			164.00	PV
Pipe: 22	163.7	2.635	PL 13.00	PF 0.9
20 17.0 0.0 30.3 0.0 9.6 120 FTG			----	PE 0.0
18 17.0 0.0 29.4 0.0 0.072 TL			13.00	PV
Pipe: 23	135.7	2.635	PL 63.00	PF 4.0
21 17.0 0.0 32.3 0.0 8.0 120 FTG			2E	PE 0.0
19 17.0 0.0 28.3 0.0 0.051 TL			79.00	PV
Pipe: 24	11.9	1.682	PL 144.00	PF 0.8
21 17.0 0.0 32.3 0.0 1.7 120 FTG			2N	PE 0.0
22 17.0 0.0 31.4 0.0 0.005 TL			164.00	PV
Pipe: 25	183.2	2.635	PL 13.00	PF 1.1
22 17.0 0.0 31.4 0.0 10.8 120 FTG			----	PE 0.0
20 17.0 0.0 30.3 0.0 0.088 TL			13.00	PV



DATE: 3/7/2023

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JOB TITLE: STONEY HILL-BLDG A -BRISTOL, VERMONT-.20/1500+250

PIPE TAG	Q (GPM)	DIA (IN)	LENGTH	PRESS.
END ELEV. NOZ. PT DISC. VEL (FPS) HW (C) (FT) SUM. (PSI)				
NODES (FT) (K) (PSI) (GPM) FL/FT				
Pipe: 26	147.6	2.635	PL 13.00	PF 0.8
23 17.0 0.0 33.0 0.0 8.7 120 FTG ----				PE 0.0
21 17.0 0.0 32.3 0.0 0.059 TL 13.00				PV
Pipe: 27	9.8	1.682	PL 144.00	PF 0.6
23 17.0 0.0 33.0 0.0 1.4 120 FTG 2N				PE 0.0
24 17.0 0.0 32.5 0.0 0.004 TL 164.00				PV
Pipe: 28	171.3	2.635	PL 13.00	PF 1.0
24 17.0 0.0 32.5 0.0 10.1 120 FTG ----				PE 0.0
22 17.0 0.0 31.4 0.0 0.078 TL 13.00				PV
Pipe: 29	157.4	2.635	PL 13.00	PF 0.9
25 17.0 0.0 33.9 0.0 9.3 120 FTG ----				PE 0.0
23 17.0 0.0 33.0 0.0 0.067 TL 13.00				PV
Pipe: 30	9.5	1.682	PL 144.00	PF 0.5
25 17.0 0.0 33.9 0.0 1.4 120 FTG 2N				PE 0.0
26 17.0 0.0 33.4 0.0 0.003 TL 164.00				PV
Pipe: 31	161.4	2.635	PL 13.00	PF 0.9
26 17.0 0.0 33.4 0.0 9.5 120 FTG ----				PE 0.0
24 17.0 0.0 32.5 0.0 0.070 TL 13.00				PV
Pipe: 32	166.9	2.635	PL 13.00	PF 1.0
27 17.0 0.0 34.9 0.0 9.8 120 FTG ----				PE 0.0
25 17.0 0.0 33.9 0.0 0.074 TL 13.00				PV
Pipe: 33	10.8	1.682	PL 144.00	PF 0.7
27 17.0 0.0 34.9 0.0 1.6 120 FTG 2N				PE 0.0
28 17.0 0.0 34.2 0.0 0.004 TL 164.00				PV
Pipe: 34	152.0	2.635	PL 13.00	PF 0.8
28 17.0 0.0 34.2 0.0 8.9 120 FTG ----				PE 0.0
26 17.0 0.0 33.4 0.0 0.062 TL 13.00				PV
Pipe: 35	177.7	2.635	PL 13.00	PF 1.1
29 17.0 0.0 35.9 0.0 10.5 120 FTG ----				PE 0.0
27 17.0 0.0 34.9 0.0 0.083 TL 13.00				PV
Pipe: 36	13.7	1.682	PL 144.00	PF 1.1
29 17.0 0.0 35.9 0.0 2.0 120 FTG 2N				PE 0.0
30 17.0 0.0 34.9 0.0 0.006 TL 164.00				PV
Pipe: 37	141.1	2.635	PL 13.00	PF 0.7
30 17.0 0.0 34.9 0.0 8.3 120 FTG ----				PE 0.0
28 17.0 0.0 34.2 0.0 0.054 TL 13.00				PV
Pipe: 38	191.4	2.635	PL 13.00	PF 1.2
31 17.0 0.0 37.2 0.0 11.3 120 FTG ----				PE 0.0
29 17.0 0.0 35.9 0.0 0.096 TL 13.00				PV

DATE: 3/7/2023

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JOB TITLE: STONEY HILL-BLDG A -BRISTOL, VERMONT-.20/1500+250

PIPE TAG	END	ELEV.	NOZ.	PT	DISC.	Q (GPM)	DIA (IN)	LENGTH	PRESS.
NODES	(FT)	(K)	(PSI)	(GPM)	VEL (FPS)	HW (C)	FL/FT	(FT)	SUM.
									(PSI)
Pipe: 39						17.8	1.682	PL 144.00	PF 1.7
31	17.0	0.0	37.2	0.0	2.6	120	FTG	2N	PE 0.0
32	17.0	0.0	35.5	0.0		0.011	TL	164.00	PV
Pipe: 40						127.4	2.635	PL 13.00	PF 0.6
32	17.0	0.0	35.5	0.0	7.5	120	FTG	----	PE 0.0
30	17.0	0.0	34.9	0.0		0.045	TL	13.00	PV
Pipe: 41						209.2	2.635	PL 13.00	PF 1.5
33	17.0	0.0	38.7	0.0	12.3	120	FTG	----	PE 0.0
31	17.0	0.0	37.2	0.0		0.113	TL	13.00	PV
Pipe: 42						22.9	1.682	PL 144.00	PF 2.7
33	17.0	0.0	38.7	0.0	3.3	120	FTG	2N	PE 0.0
34	17.0	0.0	35.9	0.0		0.017	TL	164.00	PV
Pipe: 43						109.6	2.635	PL 13.00	PF 0.4
34	17.0	0.0	35.9	0.0	6.5	120	FTG	----	PE 0.0
32	17.0	0.0	35.5	0.0		0.034	TL	13.00	PV
Pipe: 44						232.1	2.635	PL 2.00	PF 2.6
35	17.0	0.0	41.3	0.0	13.7	120	FTG	T	PE 0.0
33	17.0	0.0	38.7	0.0		0.137	TL	19.00	PV
Pipe: 45						-86.7	2.635	PL 11.00	PF 0.6
37	17.0	0.0	40.6	0.0	5.1	120	FTG	T	PE 0.0
35	17.0	0.0	41.3	0.0		0.022	TL	28.00	PV
Pipe: 46						29.7	1.682	PL 144.00	PF 4.4
37	17.0	0.0	40.6	0.0	4.3	120	FTG	2N	PE 0.0
38	17.0	0.0	36.2	0.0		0.027	TL	164.00	PV
Pipe: 47						86.7	2.635	PL 13.00	PF 0.3
38	17.0	0.0	36.2	0.0	5.1	120	FTG	----	PE 0.0
34	17.0	0.0	35.9	0.0		0.022	TL	13.00	PV
Pipe: 48						-57.1	2.635	PL 13.00	PF 0.1
39	17.0	0.0	40.5	0.0	3.4	120	FTG	----	PE 0.0
37	17.0	0.0	40.6	0.0		0.010	TL	13.00	PV
Pipe: 49						28.7	1.682	PL 144.00	PF 4.2
39	17.0	0.0	40.5	0.0	4.1	120	FTG	2N	PE 0.0
40	17.0	0.0	36.3	0.0		0.025	TL	164.00	PV
Pipe: 50						57.1	2.635	PL 13.00	PF 0.1
40	17.0	0.0	36.3	0.0	3.4	120	FTG	----	PE 0.0
38	17.0	0.0	36.2	0.0		0.010	TL	13.00	PV
Pipe: 51						-28.4	2.635	PL 13.00	PF 0.0
41	17.0	0.0	40.5	0.0	1.7	120	FTG	----	PE 0.0
39	17.0	0.0	40.5	0.0		0.003	TL	13.00	PV

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JOB TITLE: STONEY HILL-BLDG A -BRISTOL, VERMONT-.20/1500+250

PIPE TAG	Q (GPM)	DIA (IN)	LENGTH	PRESS.
END ELEV. NOZ. PT DISC. VEL (FPS) HW (C) (FT) SUM.				
NODES (FT) (K) (PSI) (GPM) FL/FT (PSI)				
Pipe: 52	28.4	1.682	PL 144.00	PF 4.1
41 17.0 0.0 40.5 0.0 4.1 120 FTG 2T				PE 0.0
42 17.0 0.0 36.4 0.0 0.025 TL 164.00				PV
Pipe: 53	28.4	2.635	PL 13.00	PF 0.0
42 17.0 0.0 36.4 0.0 1.7 120 FTG ----				PE 0.0
40 17.0 0.0 36.3 0.0 0.003 TL 13.00				PV
Pipe: 54	-318.8	4.026	PL 13.00	PF 0.5
35 17.0 0.0 41.3 0.0 8.0 120 FTG G				PE 5.6
44 4.0 0.0 47.4 0.0 0.031 TL 15.00				PV
Pipe: 55			FIXED PRESSURE LOSS DEVICE	
43 4.0 0.0 53.4 0.0 6.0 psi, 318.8 gpm				
44 4.0 0.0 47.4 0.0				
Pipe: 56	-318.8	4.026	PL 3.00	PF 0.2
43 4.0 0.0 53.4 0.0 8.0 120 FTG G				PE 1.3
45 1.0 0.0 54.8 0.0 0.031 TL 5.00				PV
Pipe: 57	-318.9	4.220	PL 100.00	PF 1.9
45 1.0 0.0 54.8 0.0 7.3 140 FTG ----				PE 0.4
46 0.0 SRCE 57.1 (N/A) 0.019 TL 100.00				PV

NOTES (HASS):

- (1) Calculations were performed by the HASS 2023 D computer program in accordance with (2020) under license no. 64622152 granted by  
 HRS Systems, Inc.  
 208 Southside Square  
 Petersburg, TN 37144  
 (931) 659-9760
- (2) The system has been calculated to provide an average imbalance at each node of 0.004 gpm and a maximum imbalance at any node of 0.164 gpm.
- (3) Total pressure at each node is used in balancing the system. Maximum water velocity is 13.7 ft/sec at pipe 44.
- (4) a. System remote area HAS been proven or 'peaked'.  
 b. Minimum pressure at any sprinkler: 21.556 psi  
 c. Minimum pressure with remote area shifted one sprinkler space toward left cross main: 21.635 psi  
 d. Minimum pressure with remote area shifted one sprinkler space toward right cross main: 21.599 psi

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JOB TITLE: STONEY HILL-BLDG A -BRISTOL, VERMONT-.20/1500+250

(5) Items listed in bold print on the cover sheet

are automatically transferred from the calculation report.

(6) Available pressure at source node 46 under full flow conditions is 80.72 psi with a flow of 650.20 gpm.

(7) PIPE FITTINGS TABLE

HASS Pipe Table Name: standard

PAGE: A MATERIAL: S40 HWC: 120

Diameter (in)	Equivalent Fitting Lengths in Feet								
	E Ell	T Tee	L LngEll	C ChkVlv	B BfyVlv	G GatVlv	A AlmChk	D DPVlv	N NTee
	-----								
	F								
	F45Ell								
4.026	10.00	20.00	6.00	22.00	12.00	2.00	20.00	20.00	20.00
	5.00								

PAGE: B MATERIAL: THNWL HWC: 120

Diameter (in)	Equivalent Fitting Lengths in Feet								
	E Ell	T Tee	L LngEll	C ChkVlv	B BfyVlv	G GatVlv	A AlmChk	D DPVlv	N NPTee
	-----								
	F								
	F45Ell								
1.682	5.00	10.00	3.00	11.00	8.00	1.00	12.00	12.00	10.00
	2.50								
2.635	8.00	17.00	6.00	19.00	10.00	1.00	14.00	14.00	17.00
	4.00								

PAGE: D MATERIAL: DIRON HWC: 140

Diameter (in)	Equivalent Fitting Lengths in Feet								
	E Ell	T Tee	L LngEll	C ChkVlv	B BfyVlv	G GatVlv	N NPTee	F F45Ell	
4.220	17.00	34.00	10.00	37.00	20.00	3.00	34.00	8.50	

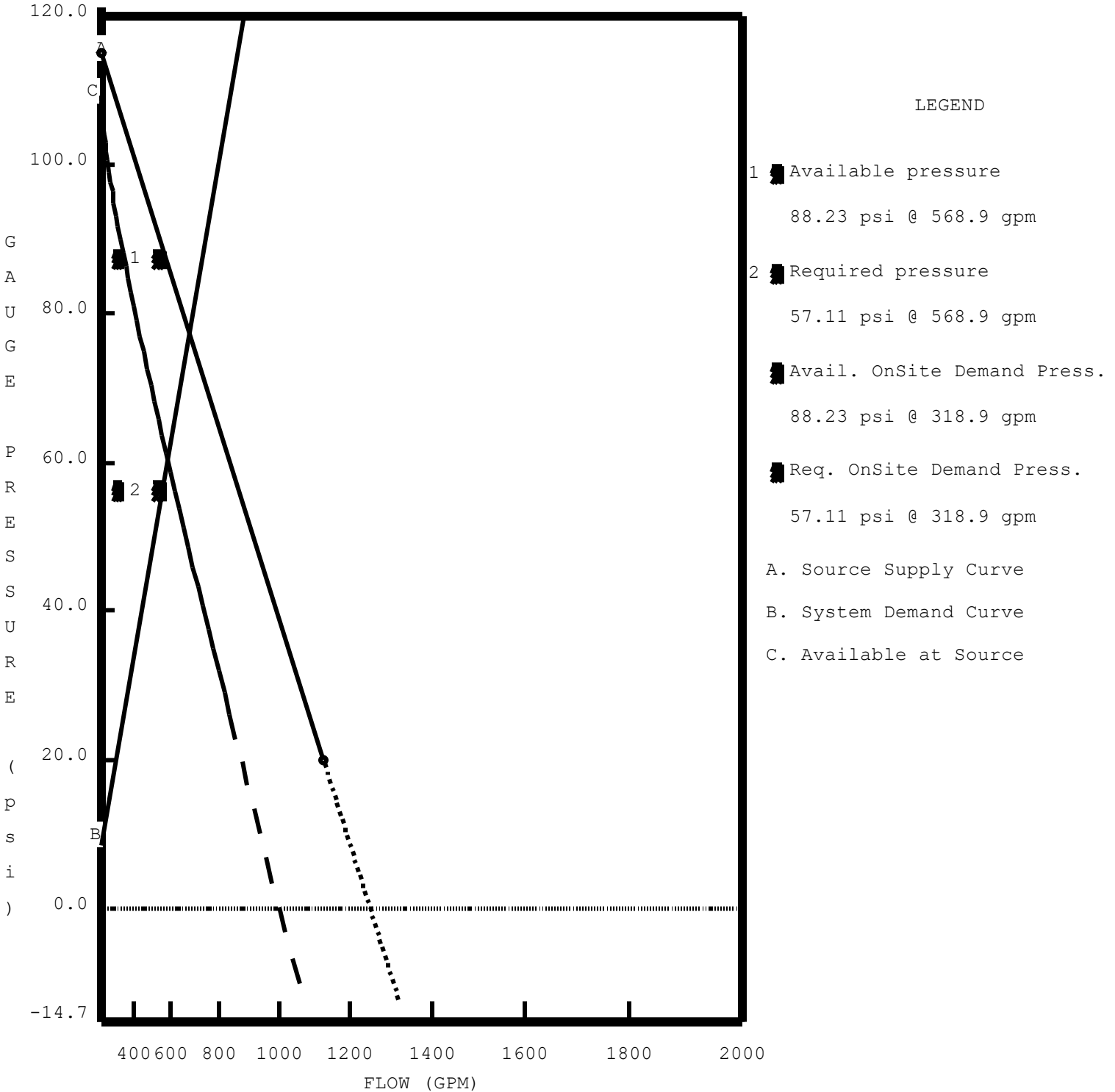
DATE: 3/7/2023

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JOB TITLE: STONEY HILL-BLDG A -BRISTOL, VERMONT-.20/1500+250

WATER SUPPLY ANALYSIS

Static: 115.00 psi Resid: 20.00 psi Flow: 1128.0 gpm



Note: (1) Dashed Lines indicate extrapolated values from Test Results

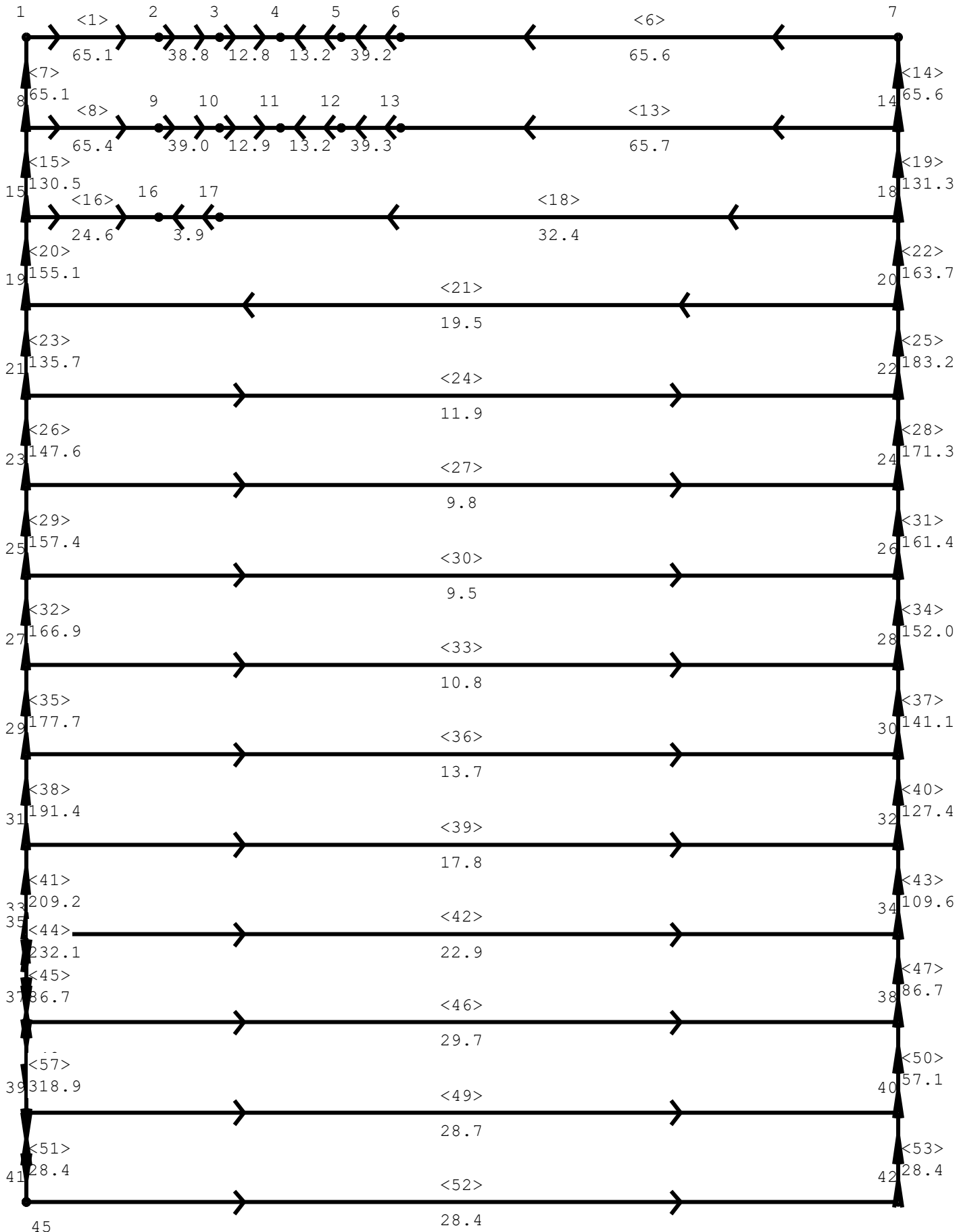
(2) On Site pressures are based on hose stream deduction at the source

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JOB TITLE: STONEY HILL-BLDG A -BRISTOL, VERMONT-.20/1500+250

SPRINKLER SYSTEM DIAGRAM WITH FLOWPLOT

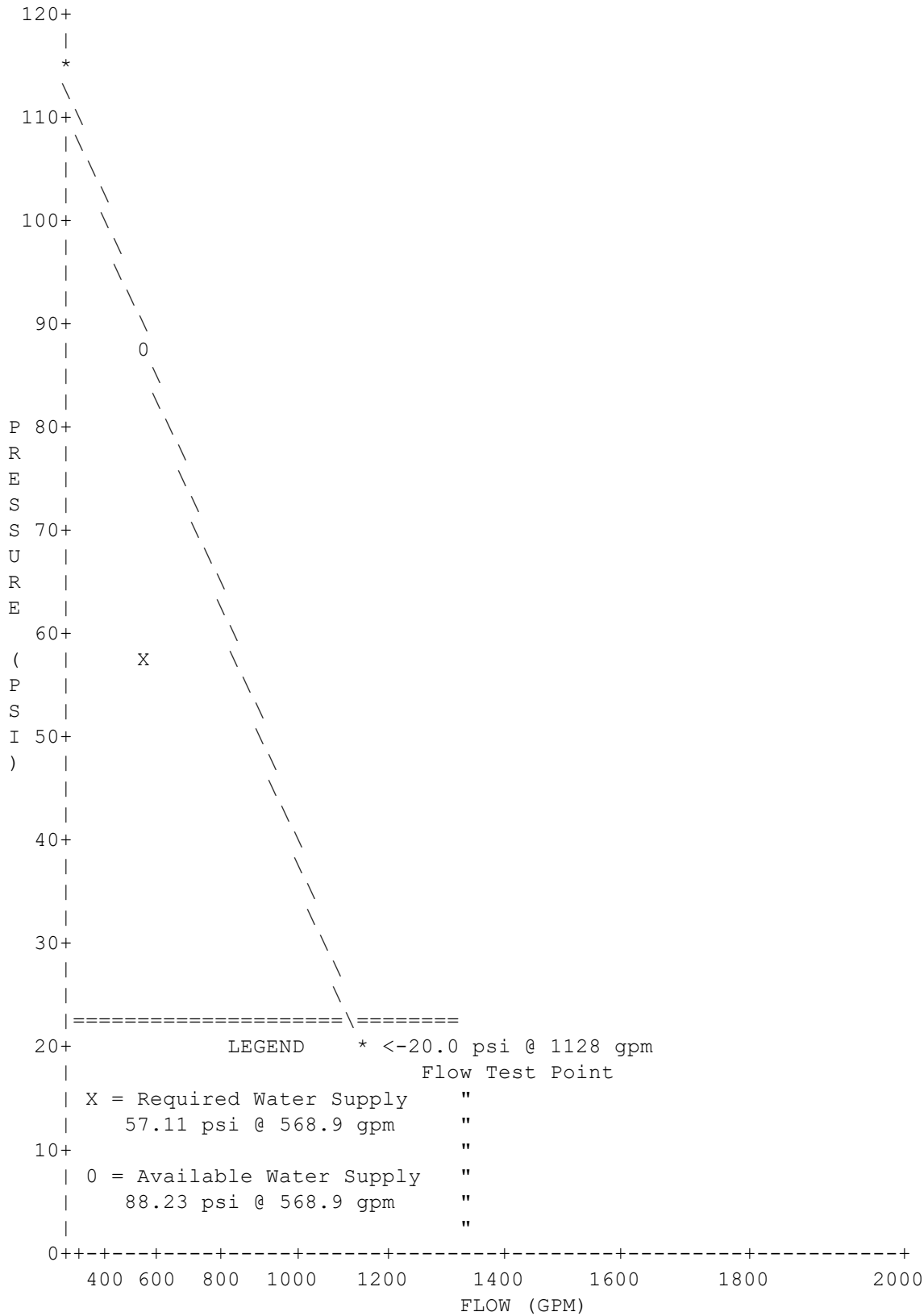


DATE: 3/7/2023

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JOB TITLE: STONEY HILL-BLDG A -BRISTOL, VERMONT-.20/1500+250

WATER SUPPLY CURVE



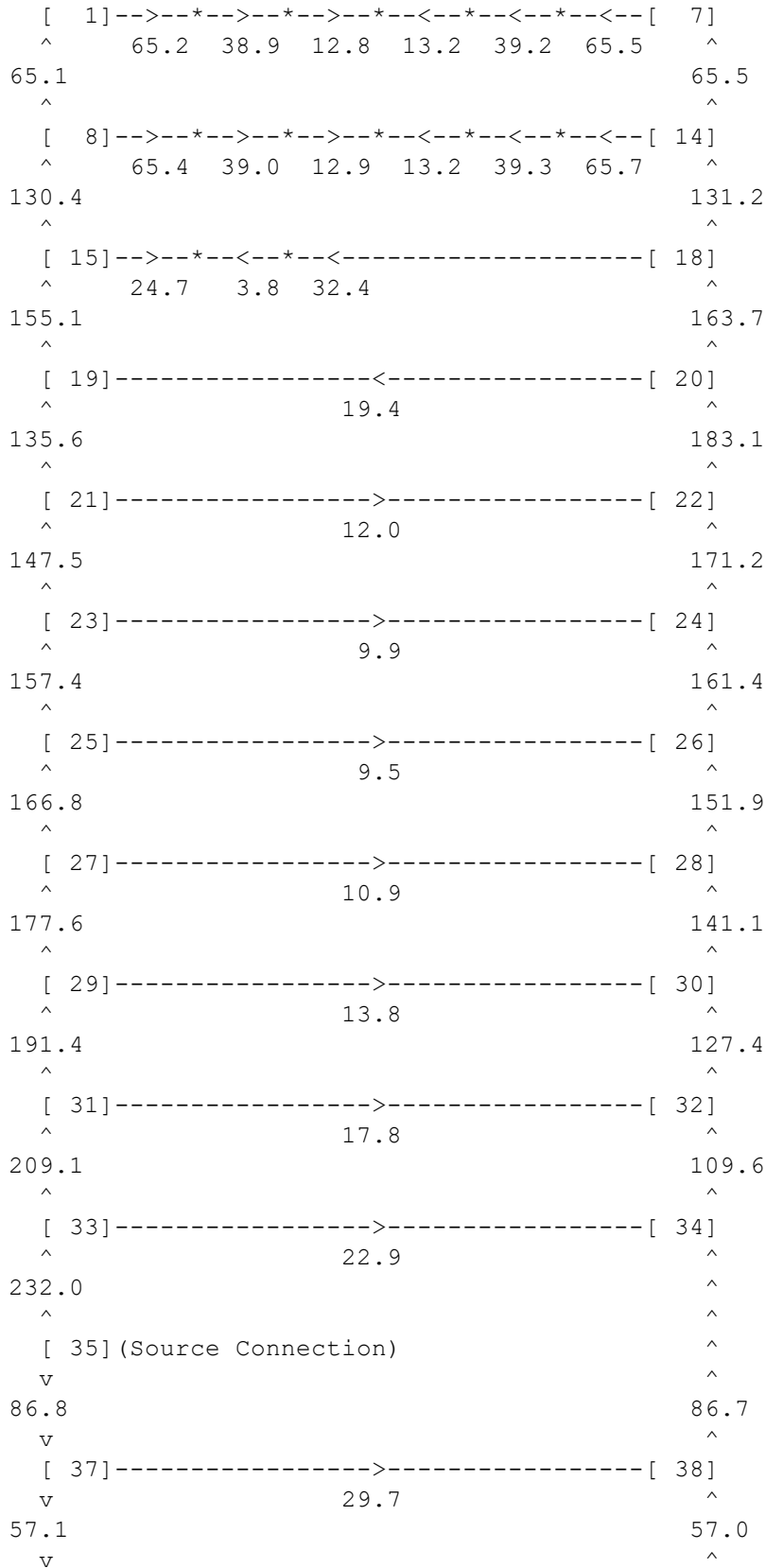
DATE: 3/7/2023

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JOB TITLE: STONEY HILL-BLDG A -BRISTOL, VERMONT-.20/1500+250

GRID FLOW DIAGRAM

[XXX] - Node Numbers





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JOB TITLE: STONEY HILL-BLDG A -BRISTOL, VERMONT-.20/1500+250

[ 39]	----->	-----	[ 40]
v		28.7	^
28.5			28.4
v			^
[ 41]	----->	-----	[ 42]
		28.5	