BLD18-3996-DFOZ
As-Built

Dashboard Hydraulics

Hydraulics Summary Sheet

Project Information

WINTERS RESIDENCE 4558 BRIGHTON DRIVE SANTA ROSA, CA. contract #	Calculation Date: 10/2/2019 10:23 AM system ID AREA 3 drawing ref FS-2 building construction COMBUSTIBLE occupancy RESIDENCE authority

Contractor Information

GATEWAY FIRE EQUIPMENT

41 E. 15TH STREET
MERCED, CA. 95340

calculated by DJJ
telephone 209-722-9533
fax
email

Hydraulics Criteria

density .05 GPM/ft²	system type WET
remote area 1 HEAD ft²	design std NFPA 13D, 2016 ED.
spr coverage 18' X 18' ft²	hazard N/A
sprs flowing 1	
	figure N/A
	curve

Flow Test

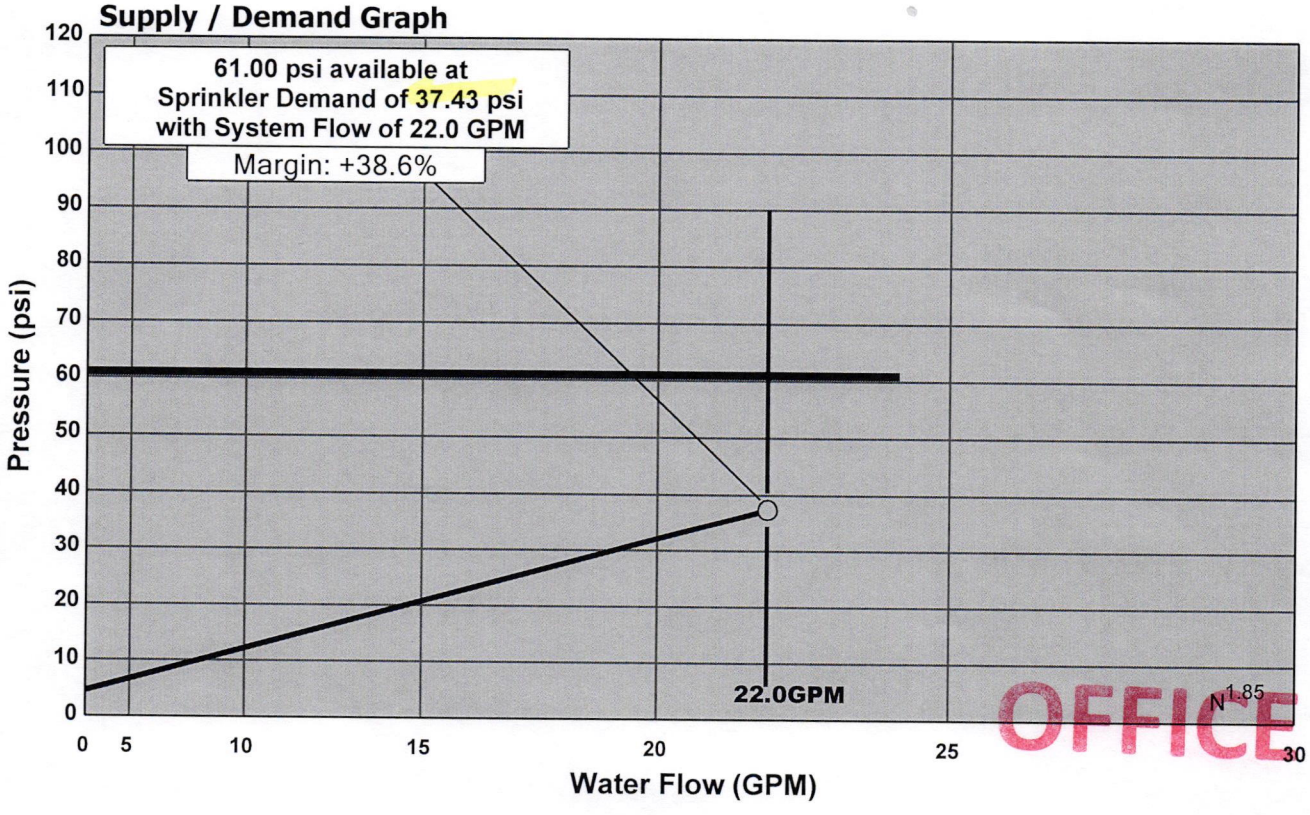
static pressure	61.00 psi
residual pressure	59.00 psi
quantity flowing	969.0 GPM

REVIEWED FOR CODE COMPLIANCE
OCT 15 2019
RESILIENCY PERMIT CENTER

Sprinklers in Remote

No.	Mfgr	Mod	SIN#	Size	K
1	SENJU	RC-RES	SS8464	1/2"	4.90

Supply / Demand Graph



OFFICE

Dashboard Hydraulics

Supply Analysis

WINTERS RESIDENCE
4558 BRIGHTON DRIVE

Source Node	Static Pressure	Residual Pressure	Quantity Flowing	Pressure Available	Total System Flow	Total Pressure Required
Zero	**61.00psi**	**59.00psi**	**969.0GPM**	**61.00psi**	**22.0GPM**	**37.43psi**

Sprinkler Flow:	17.0GPM	Additional Flows:	5.0 GPM
Hose Flow at Zero:	None	Total System Flow:	22.0GPM

Maximum velocity in pipe 3-4 is 9.1 ft/sec

Nodes Analysis

Node	Elev ft	Device	KFactor	Minimum Flow GPM	Node Pressure psi	Actual Discharge GPM	Notes
8	3.00	Hose Flow			23.54	5.0	
28	10.00	Sprinkler	4.90	17.00	12.04	17.00	

Σ8800™ Dashboard Hydraulics

Pipe Information

WINTERS RESIDENCE
4558 BRIGHTON DRIVE

From / To	Elev1 ft / Elev2 ft	Pipe ID / Type	Flows Added GPM / Total	Diameter in	Fittings	Length ft / Fitting ft / Total ft	C Value / Friction psi/ft	Total (Pt) psi / Elev (Pe) psi / Frict (Pf) psi	Notes
27	**10.50**	1" CPVC		1.1010	E	Len 0.5 Ftg 7.0 Tota 7.5	C = 150 0.05037	Pt 28) 12.037 Pe -0.217 Pf 0.378	
28	**10.00**	DR	17.0						
11	**10.50**	1" CPVC		1.1010	T	Len 3.5 Ftg 5.0 Tota 8.5	C = 150 0.05037	Pt 27) 12.198 Pe 0.000 Pf 0.428	
27	**10.50**	BN	17.0						
						Total Pressure at Node 11) 12.626 psi			
9	**10.50**	1" CPVC		1.1010	3E, 2TR	Len 23.0 Ftg 23.0 Tota 46.0	C = 150 0.05037	Pt 10) 13.614 Pe 0.000 Pf 2.317	
10	**10.50**	BN	17.0						
						Total Pressure at Node 9) 15.931 psi			
12	**10.50**	1" CPVC		1.1010	T,3E, 5TR	Len 66.8 Ftg 31.0 Tota 97.8	C = 150 0.00463	Pt 11) 12.626 Pe 0.000 Pf 0.453	
11	**10.50**	BL	4.7						
13	**10.50**	1" CPVC		1.1010	2TR	Len 13.1 Ftg 2.0 Tota 15.1	C = 150 0.00463	Pt 12) 13.079 Pe 0.000 Pf 0.070	
12	**10.50**	BL	4.7						
14	**10.50**	1" CPVC		1.1010	2TR	Len 8.0 Ftg 2.0 Tota 10.0	C = 150 0.00463	Pt 13) 13.149 Pe 0.000 Pf 0.046	
13	**10.50**	BL	4.7						
10	**10.50**	1" CPVC		1.1010	T,2E, 8TR	Len 63.5 Ftg 27.0 Tota 90.5	C = 150 0.00463	Pt 14) 13.195 Pe 0.000 Pf 0.419	
14	**10.50**	BL	4.7						
						Total Pressure at Node 10) 13.614 psi			
10	**10.50**	1" CPVC		1.1010	T,5TR	Len 25.6 Ftg 10.0 Tota 35.6	C = 150 0.02777	Pt 11) 12.626 Pe 0.000 Pf 0.988	
11	**10.50**	BL	12.3						
						Total Pressure at Node 10) 13.614 psi			
8	**3.00**	1" Type K		0.9950	2E,CV, FS	Len 7.5 Ftg 9.0 Tota 16.5	C = 150 0.08247	Pt 9) 15.931 Pe 3.250 Pf 1.361	Flow Switch : Loss = 3.00
9	**10.50**	FR	17.0						
7	**1.00**	1" Type K	5.0	0.9950	E,GV	Len 2.0 Ftg 3.2 Tota 5.2	C = 150 0.13288	Pt 8) 23.542 Pe 0.867 Pf 0.687	
8	**3.00**	FR	22.0						

Σ8800™ Dashboard Hydraulics

Pipe Information

WINTERS RESIDENCE
4558 BRIGHTON DRIVE

From / To	Elev1 ft / Elev2 ft	Pipe ID / Type	Flows Added GPM / Total	Diameter in	Fittings	Length ft / Fitting ft / Total ft	C Value / Friction Loss psi/ft	Total (Pt) psi / Elev (Pe) psi / Frict (Pf) psi	Notes
6	0.00	1.25"SCH. 80 PVC		1.2780	3E	Len 30.0 Ftg 24.0	C = 150	Pt 7) 25.095 Pe 0.433	
7	1.00	UN	22.0			Tota 54.0	0.03927	Pf 2.121	
5	0.00	1" Type K		0.9950	WDC	Len 1.0 Ftg 0.0	C = 150	Pt 6) 27.649 Pe 0.000	Double Check Valve Watts 007M1QT: Loss = 3.82
6	0.00	UN	22.0			Tota 1.0	0.13288	Pf 0.133	
4	0.00	1" Type K		0.9950	3E	Len 5.0 Ftg 6.0	C = 150	Pt 5) 31.602 Pe 0.000	
5	0.00	UN	22.0			Tota 11.0	0.13288	Pf 1.462	
3	0.00	1" Type K		0.9950		Len 18.0 Ftg 0.0	C = 150	Pt 4) 33.063 Pe 0.000	
4	0.00	UN	22.0			Tota 18.0	0.13288	Pf 2.392	
2	0.00	1½" Type K		1.4810	BWM	Len 1.0 Ftg 0.0	C = 150	Pt 3) 35.455 Pe 0.000	WATER METER BADGER M120: Loss = 0.56
3	0.00	UN	22.0			Tota 1.0	0.01915	Pf 0.019	
1	0.00	1½" Type K		1.4810		Len 18.0 Ftg 0.0	C = 150	Pt 2) 36.034 Pe 0.000	
2	0.00	UN	22.0			Tota 18.0	0.01915	Pf 0.345	
0	0.00	1½" Type K		1.4810	T,CS	Len 10.1 Ftg 8.0	C = 150	Pt 1) 36.379 Pe 0.000	Corporation Stop : Loss = 0.70
1	0.00	UN	22.0			Tota 18.1	0.01915	Pf 0.347	

Total Pressure at Node 0) 37.426 psi