

HYDRAULIC CALCULATIONS AT SPECIFIED FLOW

THE FOLLOWING SPRINKLERS ARE OPERATING IN:

TEST AREA 1 TEST AREA 2 TEST AREA 3 REMOTE AREA

Elevation of sprinklers = Elevation above water test.

REF. PT.	K	ELEV. ft	FLOW gpm	---- PRESSURE (psi)----		
				Total	Velocity	Normal
101	4.90	34.00	13.00	7.55	0.51	7.04
102	4.90	34.00	13.17	7.23	0.00	7.23

THE SPRINKLER SYSTEM FLOW IS 26.17 gpm

THE OUTSIDE HOSE FLOW AT REFERENCE POINT NO. 1 IS 0.00 gpm

THE INSIDE HOSE RACK SPKLR'S.

YARD HYDT. FLOW IS 0.00 gpm

THE FOLLOWING PRESSURES & FLOWS OCCUR

---> AT REF. PT. 1 <---

STATIC PRESSURE	75.00 psi	
RESIDUAL PRESSURE	35.00 psi	AT 1113.00 gpm
TOTAL SYSTEM FLOW	26.17 gpm	
AVAILABLE PRESSURE	74.96 psi	AT 26.17 gpm
OPERATING PRESSURE	63.58 psi	AT 26.17 gpm
PRESSURE REMAINING	11.38 psi	

THE ABOVE RESULTS INCLUDE 14.00 psi FRICTION LOSS AT REF. PT. # 2 FOR A

BACKFLOW PREVENTER METER
 DETECTOR CHECK VALVE OTHER DEVICE

FITTING Equivalent Length per NFPA 13 1994, 6-4.3

'-' Indicates Equivalent Length. 'T' Indicates Threaded Fitting

1=45 Elbow, 2=90 Elbow, 3='T'/Cross, 4=Butterfly Valve, 5=Gate Valve, 6=Swing Check Valve

FROM	TO	FLOW (gpm)	PIPE (ft)	FITS	EQV. (ft)	H-W C	PIPE TYPE	DIA. (in)	FRIC. (psi)	ELEV. (psi)	PRESSURE (psi)		
											Pt Pv Pn	Pt Pv Pn	DIFF
1	2	26.17	85.00	23	9.01	150	16	1.051	0.140	3.467	63.58	46.95	13.16
2	3	26.17	14.00	2246	22.45	150	9	1.109	0.108	3.467	46.95	25.56	17.93
3	4	26.17	6.00	3	5.01	150	9	1.109	0.108	0.000	25.56	24.37	1.19
4	5	26.17	5.00	2256	22.45	150	9	1.109	0.108	0.000	24.37	21.39	2.98
5	6	26.17	22.00	232	19.04	150	9	1.109	0.108	7.800	21.39	9.17	4.42
6	101	26.17	3.00	32	12.02	150	9	1.109	0.108	0.000	9.17	7.55	1.62
101	102	13.17	11.00	0	0.00	150	9	1.109	0.030	0.000	7.55	7.23	0.32

A MAX. VELOCITY OF 9.67 ft./sec. OCCURS BETWEEN REF. PT. 1 AND 2

Sprinkler-CALC Release 7.2 Win
 By Walsh Engineering Inc.
 North Kingstown R.I. U.S.A.

H Y D R A U L I C C A L C U L A T I O N S

C O V E R S H E E T

16 Castine Rd Portland Maine Test # 1

W A T E R S U P P L Y

STATIC PRESSURE (psi) 75
RESIDUAL PRESSURE (psi) 35
RESIDUAL FLOW (gpm) 1113

B O O S T E R P U M P S

NUMBER OF BOOSTER PUMPS 0

S P R I N K L E R S

MINIMUM FLOW PER SPRINKLER (gpm) 13
MINIMUM PRESSURE PER SPRINKLER (psi) 7.23

THIS SYSTEM OPERATES AT A FLOW OF 26.17 gpm AT A PRESSURE OF 46.95 psi
AT THE BASE OF THE RISER (REF. PT. 2)

PIPES USED FOR THIS SYSTEM

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016 POLYBUTYLENE
009 BLAZEMASTER CPVC

