

MAX DEMAND + FIRE @ 80

CHANGES FOR NEXT SIMULATION (Change Number = 1)

JUNCTION DEMANDS CHANGED - PLEASE SEE RESULTS TABLE

RESULTS OBTAINED AFTER 4 TRIALS: ACCURACY = 0.00004

PIPELINE RESULTS

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

PIPE NAME	NODE NUMBERS		FLOWRATE (gpm)	HEAD LOSS (ft)	MINOR LOSS (ft)	LINE VELO. (ft/s)	HL+ML/ 1000 (ft/ft)	HL/ 1000 (ft/ft)
	#1	#2						
P-1	FGN1	10	387.13	0.12	0.00	1.10	0.39	0.39
P-2	15	20	-661.32	3.14	0.21	2.70	2.68	2.52
P-3	20	30	-282.33	2.58	0.15	1.80	1.63	1.54
P-4	30	40	-431.27	2.28	0.05	1.76	1.17	1.14
P-5	40	50	1509.78	23.16	1.48	4.28	5.08	4.78
P-6	50	60	699.21	7.39	0.22	2.86	2.87	2.79
P-7	60	70	305.13	1.62	0.03	1.25	0.61	0.60
P-8	70	80	1238.26	30.75	1.18	5.06	8.35	8.04
P-9	80	90	-878.60	17.88	0.89	3.59	4.50	4.28
P-10	90	100	-570.31	6.93	0.35	2.33	2.01	1.91
P-11	100	110	-363.22	2.84	0.13	1.48	0.87	0.83
P-12	110	120	-340.30	3.69	0.20	1.39	0.77	0.74
P-13	120	125	-897.19	1.96	0.11	2.54	1.92	1.82
P-14	20	140	82.59	0.03	0.00	0.23	0.02	0.02
P-15	140	150	23.35	0.01	0.00	0.10	0.01	0.01
P-16	150	160	-81.75	0.13	0.00	0.33	0.05	0.05
P-17	60	170	368.71	7.01	0.28	2.35	2.63	2.53
P-18	180	185	-594.51	2.91	0.13	3.79	6.39	6.12
P-19	120	190	217.72	0.33	0.01	0.89	0.33	0.32
P-20	185	190	96.24	0.63	0.01	0.61	0.21	0.21
P-21	90	170	-444.29	7.19	0.33	2.84	3.73	3.57
P-22	20	40	-559.27	4.80	0.27	2.28	1.95	1.84
P-23	170	175	-179.43	1.78	0.06	1.15	0.69	0.67
P-24	100	175	-277.17	1.97	0.10	1.77	1.57	1.49
P-25	175	180	-456.60	1.97	0.08	2.91	3.90	3.76
P-26	110	180	-102.79	1.12	0.04	0.66	0.25	0.24
P-27	160	165	-122.25	0.89	0.02	0.78	0.33	0.33
P-28	50	185	690.75	7.64	0.34	2.82	2.85	2.73
P-29	10	130	1042.41	18.45	0.40	2.96	2.47	2.42
P-30	130	offsite	132.00	0.55	0.02	0.84	0.39	0.38
P-31	R-1	40	2522.40	0.76	0.46	4.02	4.89	3.04
P-32	30	165	122.25	1.69	0.03	0.78	0.33	0.33
P-33-XX	70	165						
P-34-XX	50	30						
P-35	FGN2	70	1034.83	22.78	0.35	2.94	2.41	2.37
P-36	10	15	-661.32	1.64	0.33	2.70	3.03	2.52
P-37	125	130	-897.19	1.32	0.30	2.54	2.23	1.82

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N O D E R E S U L T S

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	HYDRAULIC GRADE (ft)	NODE ELEVATION (ft)	PRESSURE HEAD (ft)	NODE PRESSURE (psi)
10		6.04	138.38	26.00	112.38	48.70
15		0.00	140.35	6.00	134.35	58.22
20		97.70	143.71	26.00	117.71	51.01
30		26.68	146.44	26.00	120.44	52.19
40		22.08	148.78	26.00	122.78	53.20
50		119.82	124.14	26.00	98.14	42.53
60		25.38	116.53	26.00	90.53	39.23
70		101.70	114.88	26.00	88.88	38.51
80		2116.86 (**)	82.95	26.00	56.95	24.68
90		136.00	101.72	26.00	75.72	32.81
100		70.08	109.00	26.00	83.00	35.97
110		79.88	111.97	26.00	85.97	37.25
120		339.16	115.86	26.00	89.86	38.94
125		0.00	117.92	6.00	111.92	48.50
130		13.22	119.54	26.00	93.54	40.53
140		59.24	143.67	26.00	117.67	50.99
150		105.10	143.67	26.00	117.67	50.99
160		40.50	143.80	26.00	117.80	51.05
165		0.00	144.72	26.00	118.72	51.44
170		103.84	109.24	26.00	83.24	36.07
175		0.00	111.08	26.00	85.08	36.87
180		35.12	113.13	26.00	87.13	37.75
185		0.00	116.16	26.00	90.16	39.07
190		313.96	115.52	26.00	89.52	38.79
FGN1		----	138.50	30.00	108.50	47.02
FGN2		----	138.00	30.00	108.00	46.80
offsite		132.00	118.97	26.00	92.97	40.29
R-1		----	150.00	30.00	120.00	52.00

M A X I M U M A N D M I N I M U M V A L U E S

P R E S S U R E S

JUNCTION NUMBER	MAXIMUM PRESSURES (psi)	JUNCTION NUMBER	MINIMUM PRESSURES (psi)
15	58.22	80	24.68
40	53.20	90	32.81
30	52.19	100	35.97
R-1	52.00	170	36.07
165	51.44	175	36.87

V E L O C I T I E S

PIPE	MAXIMUM	PIPE	MINIMUM
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MAX DEMAND + FIRE @ 80

NUMBER	VELOCITY (ft/s)	NUMBER	VELOCITY (ft/s)
P-8	5.06	P-15	0.10
P-5	4.28	P-14	0.23
P-31	4.02	P-16	0.33
P-18	3.79	P-20	0.61
P-9	3.59	P-26	0.66

H L + M L / 1 0 0 0

PIPE NUMBER	MAXIMUM HL+ML/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL+ML/1000 (ft/ft)
P-8	8.35	P-15	0.01
P-18	6.39	P-14	0.02
P-5	5.08	P-16	0.05
P-31	4.89	P-20	0.21
P-9	4.50	P-26	0.25

H L / 1 0 0 0

PIPE NUMBER	MAXIMUM HL/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL/1000 (ft/ft)
P-8	8.04	P-15	0.01
P-18	6.12	P-14	0.02
P-5	4.78	P-16	0.05
P-9	4.28	P-20	0.21
P-25	3.76	P-26	0.24

S U M M A R Y O F I N F L O W S A N D O U T F L O W S

- (+) INFLOWS INTO THE SYSTEM FROM SUPPLY NODES
- (-) OUTFLOWS FROM THE SYSTEM INTO SUPPLY NODES

NODE NAME	FLOWRATE (gpm)	NODE TITLE
FGN1	387.13	
FGN2	1034.83	
R-1	2522.40	

NET SYSTEM INFLOW = 3944.36
 NET SYSTEM OUTFLOW = 0.00
 NET SYSTEM DEMAND = 3944.36