

MAX DEMAND + FIRE @ 160

CHANGES FOR NEXT SIMULATION (Change Number = 3)

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	908.50	0.56	0.00	2.58	1.88	1.88
P-2	15	20	444.41	1.51	0.09	1.82	1.28	1.21
P-3	20	30	-297.22	2.84	0.17	1.90	1.80	1.70
P-4	30	40	-949.10	9.82	0.27	3.88	5.05	4.91
P-5	40	50	899.77	8.88	0.52	2.55	1.94	1.83
P-6	50	60	341.35	1.96	0.05	1.39	0.76	0.74
P-7	60	70	126.21	0.32	0.01	0.52	0.12	0.12
P-8	70	80	237.44	1.44	0.04	0.97	0.39	0.38
P-9	80	90	136.86	0.57	0.02	0.56	0.14	0.14
P-10	90	100	76.23	0.17	0.01	0.31	0.05	0.05
P-11	100	110	126.83	0.40	0.02	0.52	0.12	0.12
P-12	110	120	142.56	0.74	0.03	0.58	0.15	0.15
P-13	120	125	-312.82	0.28	0.01	0.89	0.27	0.26
P-14	20	140	1575.52	7.23	0.82	4.47	5.75	5.17
P-15	140	150	1516.28	15.21	0.89	6.19	12.38	11.70
P-16	150	160	1411.18	26.37	0.95	5.76	10.61	10.24
P-17	60	170	189.75	2.05	0.07	1.21	0.76	0.74
P-18	180	185	-240.86	0.55	0.02	1.54	1.19	1.15
P-19	120	190	116.22	0.10	0.00	0.47	0.10	0.10
P-20	185	190	197.74	2.39	0.06	1.26	0.82	0.80
P-21	90	170	-75.37	0.27	0.01	0.48	0.14	0.13
P-22	20	40	-931.59	12.34	0.76	3.81	5.04	4.75
P-23	170	175	10.54	0.01	0.00	0.07	0.00	0.00
P-24	100	175	-120.68	0.42	0.02	0.77	0.33	0.32
P-25	175	180	-110.14	0.14	0.00	0.70	0.28	0.27
P-26	110	180	-95.60	0.98	0.03	0.61	0.21	0.21
P-27	160	165	-625.20	18.32	0.55	3.99	6.92	6.72
P-28	50	185	438.60	3.29	0.14	1.79	1.23	1.18
P-29	10	130	458.04	4.02	0.08	1.30	0.54	0.53
P-30	130	offsite	132.00	0.55	0.02	0.84	0.39	0.38
P-31	R-1	40	2802.53	0.92	0.57	4.47	5.98	3.70
P-32	30	165	625.20	34.78	0.82	3.99	6.88	6.72
P-33-XX	70	165						
P-34-XX	50	30						
P-35	FGN2	70	212.93	1.22	0.01	0.60	0.13	0.13
P-36	10	15	444.41	0.78	0.15	1.82	1.44	1.21
P-37	125	130	-312.82	0.19	0.04	0.89	0.31	0.26

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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	137.94	26.00	111.94	48.51
15		0.00	137.00	6.00	131.00	56.77
20		97.70	135.40	26.00	109.40	47.41
30		26.68	138.41	26.00	112.41	48.71
40		22.08	148.50	26.00	122.50	53.09
50		119.82	139.10	26.00	113.10	49.01
60		25.38	137.09	26.00	111.09	48.14
70		101.70	136.77	26.00	110.77	48.00
80		100.58	135.28	26.00	109.28	47.35
90		136.00	134.69	26.00	108.69	47.10
100		70.08	134.51	26.00	108.51	47.02
110		79.88	134.09	26.00	108.09	46.84
120		339.16	133.32	26.00	107.32	46.51
125		0.00	133.61	6.00	127.61	55.30
130		13.22	133.84	26.00	107.84	46.73
140		59.24	127.35	26.00	101.35	43.92
150		105.10	111.26	26.00	85.26	36.94
160		2036.38 (**)	83.94	26.00	57.94	25.11
165		0.00	102.81	26.00	76.81	33.28
170		103.84	134.97	26.00	108.97	47.22
175		0.00	134.96	26.00	108.96	47.21
180		35.12	135.10	26.00	109.10	47.28
185		0.00	135.67	26.00	109.67	47.52
190		313.96	133.22	26.00	107.22	46.46
FGN1		----	138.50	30.00	108.50	47.02
FGN2		----	138.00	30.00	108.00	46.80
offsite		132.00	133.27	26.00	107.27	46.48
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	56.77	160	25.11
125	55.30	165	33.28
40	53.09	150	36.94
R-1	52.00	140	43.92
50	49.01	190	46.46

V E L O C I T I E S

PIPE	MAXIMUM	PIPE	MINIMUM
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MAX DEMAND + FIRE @ 160

NUMBER	VELOCITY (ft/s)	NUMBER	VELOCITY (ft/s)
P-15	6.19	P-23	0.07
P-16	5.76	P-10	0.31
P-31	4.47	P-19	0.47
P-14	4.47	P-21	0.48
P-27	3.99	P-7	0.52

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-15	12.38	P-23	0.00
P-16	10.61	P-10	0.05
P-27	6.92	P-19	0.10
P-32	6.88	P-7	0.12
P-31	5.98	P-11	0.12

H L / 1 0 0 0

PIPE NUMBER	MAXIMUM HL/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL/1000 (ft/ft)
P-15	11.70	P-23	0.00
P-16	10.24	P-10	0.05
P-27	6.72	P-19	0.10
P-32	6.72	P-7	0.12
P-14	5.17	P-11	0.12

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	908.50	
FGN2	212.93	
R-1	2802.53	

NET SYSTEM INFLOW = 3923.96
 NET SYSTEM OUTFLOW = 0.00
 NET SYSTEM DEMAND = 3923.96