

MAX DEMAND + FIRE @ 120

CHANGES FOR NEXT SIMULATION (Change Number = 2)

JUNCTION DEMANDS CHANGED - PLEASE SEE RESULTS TABLE

RESULTS OBTAINED AFTER 5 TRIALS: ACCURACY = 0.00000

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	845.45	0.49	0.00	2.40	1.64	1.64
P-2	15	20	-680.22	3.31	0.22	2.78	2.83	2.65
P-3	20	30	-288.04	2.68	0.16	1.84	1.70	1.60
P-4	30	40	-439.29	2.36	0.06	1.79	1.21	1.18
P-5	40	50	1385.35	19.75	1.24	3.93	4.33	4.07
P-6	50	60	341.97	1.97	0.05	1.40	0.76	0.74
P-7	60	70	-114.27	0.26	0.00	0.47	0.10	0.10
P-8	70	80	506.32	5.87	0.20	2.07	1.59	1.53
P-9	80	90	405.74	4.28	0.19	1.66	1.07	1.02
P-10	90	100	375.92	3.20	0.15	1.54	0.93	0.88
P-11	100	110	510.53	5.34	0.25	2.09	1.63	1.56
P-12	110	120	697.02	13.91	0.83	2.85	2.94	2.77
P-13	120	125	-1374.41	4.31	0.26	3.90	4.25	4.01
P-14	20	140	80.27	0.03	0.00	0.23	0.02	0.02
P-15	140	150	21.03	0.01	0.00	0.09	0.00	0.00
P-16	150	160	-84.07	0.14	0.00	0.34	0.06	0.06
P-17	60	170	430.86	9.36	0.38	2.75	3.51	3.37
P-18	180	185	-285.34	0.75	0.03	1.82	1.63	1.57
P-19	120	190	-324.26	0.69	0.02	1.32	0.69	0.67
P-20	185	190	638.22	20.95	0.62	4.07	7.19	6.98
P-21	90	170	-106.18	0.51	0.02	0.68	0.26	0.25
P-22	20	40	-570.15	4.97	0.29	2.33	2.02	1.91
P-23	170	175	220.84	2.62	0.09	1.41	1.01	0.98
P-24	100	175	-204.69	1.13	0.05	1.31	0.89	0.85
P-25	175	180	16.15	0.00	0.00	0.10	0.01	0.01
P-26	110	180	-266.37	6.51	0.26	1.70	1.44	1.38
P-27	160	165	-124.57	0.92	0.02	0.80	0.35	0.34
P-28	50	185	923.56	13.08	0.61	3.77	4.89	4.67
P-29	10	130	1519.63	37.08	0.84	4.31	4.97	4.86
P-30	130	offsite	132.00	0.55	0.02	0.84	0.39	0.38
P-31	R-1	40	2416.87	0.70	0.42	3.86	4.51	2.81
P-32	30	165	124.57	1.75	0.03	0.80	0.35	0.34
P-33-XX	70	165						
P-34-XX	50	30						
P-35	FGN2	70	722.29	11.70	0.17	2.05	1.24	1.22
P-36	10	15	-680.22	1.72	0.35	2.78	3.19	2.65
P-37	125	130	-1374.41	2.91	0.69	3.90	4.97	4.01

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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	138.01	26.00	112.01	48.54
15		0.00	140.08	6.00	134.08	58.10
20		97.70	143.62	26.00	117.62	50.97
30		26.68	146.46	26.00	120.46	52.20
40		22.08	148.87	26.00	122.87	53.24
50		119.82	127.88	26.00	101.88	44.15
60		25.38	125.86	26.00	99.86	43.27
70		101.70	126.13	26.00	100.13	43.39
80		100.58	120.06	26.00	94.06	40.76
90		136.00	115.60	26.00	89.60	38.83
100		70.08	112.24	26.00	86.24	37.37
110		79.88	106.65	26.00	80.65	34.95
120		2395.69 (7.06)	91.91	26.00	65.91	28.56
125		0.00	96.48	6.00	90.48	39.21
130		13.22	100.09	26.00	74.09	32.10
140		59.24	143.59	26.00	117.59	50.95
150		105.10	143.58	26.00	117.58	50.95
160		40.50	143.73	26.00	117.73	51.01
165		0.00	144.67	26.00	118.67	51.42
170		103.84	116.12	26.00	90.12	39.05
175		0.00	113.42	26.00	87.42	37.88
180		35.12	113.42	26.00	87.42	37.88
185		0.00	114.19	26.00	88.19	38.22
190		313.96	92.62	26.00	66.62	28.87
FGN1		----	138.50	30.00	108.50	47.02
FGN2		----	138.00	30.00	108.00	46.80
offsite		132.00	99.52	26.00	73.52	31.86
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	58.10	120	28.56
40	53.24	190	28.87
30	52.20	offsite	31.86
R-1	52.00	130	32.10
165	51.42	110	34.95

V E L O C I T I E S

PIPE	MAXIMUM	PIPE	MINIMUM
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MAX DEMAND + FIRE @ 120

NUMBER	VELOCITY (ft/s)	NUMBER	VELOCITY (ft/s)
P-29	4.31	P-15	0.09
P-20	4.07	P-25	0.10
P-5	3.93	P-14	0.23
P-13	3.90	P-16	0.34
P-37	3.90	P-7	0.47

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-20	7.19	P-15	0.00
P-29	4.97	P-25	0.01
P-37	4.97	P-14	0.02
P-28	4.89	P-16	0.06
P-31	4.51	P-7	0.10

H L / 1 0 0 0

PIPE NUMBER	MAXIMUM HL/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL/1000 (ft/ft)
P-20	6.98	P-15	0.00
P-29	4.86	P-25	0.01
P-28	4.67	P-14	0.02
P-5	4.07	P-16	0.06
P-13	4.01	P-7	0.10

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	845.45	
FGN2	722.29	
R-1	2416.87	

NET SYSTEM INFLOW = 3984.61
 NET SYSTEM OUTFLOW = 0.00
 NET SYSTEM DEMAND = 3984.61