FINAL UTILITY REPORT
FOR
SADDLEHORN RANCH
FILINGS 3, 4 & 5
(FULL BUILD OUT)

Prepared for:

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Job Number 25142.07

ENGINEER'S STATEMENT:
The attached utility plan and report were prepared under my direction and supervision and are correct to the best of my knowledge and belief. Said utility report has been prepared according to the criteria established by Colorado Springs Utilities Criteria and said report is in conformity with the master plans for water distribution and wastewater collection for the affected area. I accept responsibility for any liability caused by any negligent acts, errors, or omissions on my part in preparing this report.

Bryan T. Law, Colorado P.E. # 25043
For and On Behalf of JR Engineering, LLC

Date

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GENERAL LOCATION AND DESCRIPTION

This report presents the utility system analysis for the water distribution for the proposed Filings 3, 4 & 5 of Saddlehorn Ranch development. The Saddlehorn Ranch development was previously modeled in the Saddlehorn Ranch Master Utility Report by JR Engineering, dated November 2019. Proposed lot counts and known densities are used in calculations presented in this report for planning areas that were previously based on approved planning densities. This report has been prepared to demonstrate compliance with the Master Utility Report for Saddlehorn Ranch.

Project Location and Description

This report presents the utility system analysis for the water system for the full build out of Saddlehorn Ranch. Saddlehorn Ranch is comprised of approximately 769 developed acres with filing 1 being comprised of 123 acres, filing 2 being 176 acres, filing 3 having 179 acres, filing 4 making up 166 acres and filing 5 consisting of 125 acres. The Saddlehorn Ranch filings are in the middle of Saddlehorn Ranch, located in portions of Section 3 and Section 10 of Township 13 South, Range 65 West of the 6th P.M., El Paso County, Colorado. This report accounts for a total of 217 SFE. The site is bounded on the west by Curtis Road, on the north by Judge Orr Road, and on the east and south by undeveloped land and low density houses. See Appendix A for the Site Vicinity Map.

Easements or tracts necessary for utilities will be provided at time of final platting in accordance with the El Paso County standards regarding location and size of easements and tracts.

The purpose of this study is to analyze the water demands of the proposed development. The water system was analyzed for 3 scenarios at 2 different pressures for a total of 6 scenarios. The results of this study have been compared to Colorado Springs Utilities Hydraulic Analysis Report Modeling Criteria to demonstrate design compliance. See Appendix B for relevant exhibits.

All proposed on-site lots will use septic systems in lieu of a sanitary sewer; therefore no analysis of a sanitary network was done for this development.

WATER SYSTEM ANALYSIS

Existing Water System

A water system has been proposed for Filing 1 of Saddlehorn Ranch which is currently under construction and filings 2 through 5 of Saddlehorn Ranch will tie into filing 1. The final Utility Report for Saddlehorn Ranch Filings 1 and 2 are being used as the basis for this study.

Proposed Water System

A total of 217 SFE's are estimated for the proposed water system collection for the entirety of the Saddlehorn development. Of this 217 SFE's, filing 3 has 39, filing 4 has 45, and filing 5 has 36. The proposed water distribution system for the Saddlehorn Ranch development will be fed by an onsite water treatment plant in the southwest corner of the site to be designed by others. The proposed water system will include a series of 12 and 8-inch water mains and will be looped to allow for all areas to be serviced with a critical pipe out of service. The total required storage volume at full build out is 77,261 gallons. The site's elevation ranges approximately 70 feet from 6,661 to 6,773 feet. The WaterCAD model map as well as junction demands and storage volumes have been provided within Appendix B. The proposed water system is being designed as its own metro district which future filings and potentially adjacent developments will be a part of.

Hydraulic Design

Design criteria used to analyze the hydraulics of the site was established using the "Colorado Springs Utilities Waterline Extension and Service Standards." The following is a summary of the criteria.

Hydraulic Condition	**Pressure (psi)**
Minimum dynamic pressures (based on 20% tank stage):	
Max Daily Demand + fire flow	20
Peak Hour Demand	60

Maximum Velocities and Head losses	**Unit**
Maximum velocity with Max Day Demands	5 fps
Maximum velocity with Max Day + Fire Flow Demands	20 fps
Maximum head loss through 8", 12", 16" (transmission):	3.0ft/1000ft
Hazen Williams 'C' factor: 120 (8" PVC), 123 (12" PVC)	
Required Fire Flow = 1,500 gpm	

Domestic Demand Design

Water System demands were established using the "Colorado Springs Utilities Waterline Extension and Service Standards." Design criteria for the analysis are summarized in Table 1 below.

Table 1: Water System Design Criteria

Type of Use	Average Daily Flow (gpd/DU)	Peaking Factor (Max Day/Avg. Day)
Residential: Single Family	595	2.65

Design Scenarios

The water distribution systems utilized Bentley's WaterCAD V.8 to model and analyze the system. Three scenarios were completed; one for Average Daily Flow, one for Max Day flow, and one for Max Day flow plus fire flow. The scenarios were analyzed at two different pressures, 85psi and 105psi, which are the proposed upper and lower bounds of operating pressure for the proposed water treatment plant to be designed by others. To determine the operating pressures, a minimum ground elevation of 6768.50 was assumed for the water treatment plant and a conversion factor of 2.3ft/psi was applied. The tank HGL for the model was 6964.0 and 7010.0 for the 85psi and 105psi scenarios,

respectively. The WaterCAD model map showing the analysis area is included within Appendix B. Since the development is outside of any existing pressure zone, none was used to determine required pressure in the tank, while the peaking factor (2.65) was assumed to be the highest out of the available pressure zones. Specific site demands for scenarios of average day, max day, and fire flows are found in Appendix B and a summary of the results are found in the tables below.

Table 1: Filing 1-5 Total Demand Summary Table

Saddlehorn Filings 1-5 Water Demand				
Dwelling Units	**Unit Demand (gpd/DU)**	**Avg. Day Demand (gpd)**	**Peaking Factor**	**Max Day Demand (gpd)**
217	595	129115	2.65	342155

85 PSI

Average Day

Average demands were assigned to the system consistent with those presented in Appendix B. The minimum pressure within the system for the average day scenario was calculated to be at junction J-262 at 82.9 psi. This exceeds the minimum of 60 psi. The maximum pressure within the system occurred at junction J-327 at 128.2 psi, and is below the maximum pressure of 180 psi. The maximum velocity in this scenario of 0.26 fps occurred in pipe P-264. The maximum allowable velocity within a pipe as designated by the CSU standards is 5 fps. There was no absolute headloss found in this scenario.

Max Day

Max day demands were assigned to the system consistent with those presented in Appendix B. The minimum pressure within the system for the max day scenario was calculated to be at junction J-262 at 82.7 psi. This exceeds the minimum of 60 psi. The maximum pressure within the system occurred at junction J-327 at 128.0 psi, and is below the maximum pressure of 180 psi. The maximum velocity in this scenario of 0.68 fps occurred in pipe P-264. The maximum allowable velocity within a pipe as designated by the CSU standards is 5 fps. There was no absolute headloss found in this scenario.

Max Day + Fire Flow

The fire flow used was governed by the IFC s Table B105.1 "minimum required fire-flow and flow duration for buildings". The required storage for fire flow represents 1,500 gpm for a two-hour period of time or 180,000 gallons. Max day demands were assigned to the system consistent with those presented in Appendix B. Additionally, a fire flow of 1,500 gpm was iteratively applied to individual proposed hydrant locations in order to determine the worst case condition. Under all scenarios, all points in the system exceeded the required 20 psi residual pressure. The max day plus the fire flow scenario that produced the lowest residual pressure in the system occurred when the fire flow of 1,500 gpm was applied to J-262 resulting in a residual pressure of 22.3 psi at J-262. The maximum velocity in this scenario of 9.62 fps occurred in pipe P-299. The maximum allowable velocity within a pipe as designated by the CSU standards is 20 fps. Fire flow test results demonstrate that the proposed system is capable of providing the required flows under modeled conditions. Refer to Appendix B for both the fire flow test and pressure test results.

105 PSI

Average Day

Average demands were assigned to the system consistent with those presented in Appendix B. The minimum pressure within the system for the average day scenario was calculated to be at junction J-262 at 102.8 psi. This exceeds the minimum of 60 psi. The maximum pressure within the system occurred at junction J-327 at 148.1 psi, and is below the maximum pressure of 180 psi. The maximum velocity in this scenario of 0.26 fps occurred in pipe P-264. The maximum allowable velocity within a pipe as designated by the CSU standards is 5 fps. There was no absolute headloss found in this scenario.

Max Day

Max day demands were assigned to the system consistent with those presented in Appendix B. The minimum pressure within the system for the max day scenario was calculated to be at junction J-262 at 102.6 psi. This exceeds the minimum of 60 psi. The maximum pressure within the system

occurred at junction J-327 at 147.9 psi, and is below the maximum pressure of 180 psi. The maximum velocity in this scenario of 0.68 fps occurred in pipe P-264. The maximum allowable velocity within a pipe as designated by the CSU standards is 5 fps. There was no absolute headloss found in this scenario.

Max Day + Fire Flow

The fire flow used was governed by the IFC s Table B105.1 "minimum required fire-flow and flow duration for buildings". The required storage for fire flow represents 1,500 gpm for a two-hour period of time or 180,000 gallons. Max day demands were assigned to the system consistent with those presented in Appendix B. Additionally, a fire flow of 1,500 gpm was iteratively applied to individual proposed hydrant locations in order to determine the worst case condition. Under all scenarios, all points in the system exceeded the required 20 psi residual pressure. The max day plus the fire flow scenario that produced the lowest residual pressure in the system occurred when the fire flow of 1,500 gpm was applied to J-262 resulting in a residual pressure of 42.2 psi at J-262. The maximum velocity in this scenario of 9.62 fps occurred in pipe P-299. The maximum allowable velocity within a pipe as designated by the CSU standards is 20 fps. Fire flow test results demonstrate that the proposed system is capable of providing the required flows under modeled conditions. Refer to Appendix B for both the fire flow test and pressure test results.

Pressure Reducing Valves

Per Colorado Springs Utilities standards, a water pressure reducing valve rated for 250 psi shall be installed in all water services lines except for fire service lines. The size of the pressure reducing valve shall be equal to or one size greater than the size of the water meter. If no meter is present then the reducing valve shall be equal in size to the water service line. The pressure reducing valve is to be installed after the first shut off valve and before the meter and under no circumstances shall the pressure exceed 80 psi at the inlet side of the meter.

Potential SIA Items and Permitting

There are no off-site improvements necessary to complete this project.

Phasing Plan

Filing 1 of Saddlehorn Ranch is currently being constructed and once it is completed the next phase will be to construct filing 2. Once filing 2 is completed then the project will move onto complete filing 3. Once the first 3 filings are completed then filing 4 and 5 will be constructed back to back with filing 5 being the final filing.

CONCLUSION

The proposed water system that will service the full build out of the Saddlehorn Ranch site has been demonstrated to be in compliance with the standards set forth by Colorado Springs Utilities and the Master Utility Report by JR Engineering, dated April 2019. The Utilities Department and Saddlehorn Metro District is not responsible or liable for assumptions made by the Developer regarding utility information associated with the proposed development.

REFERENCES

1. Water Line Extension and Service Standards. Colorado Springs Utilities. 2018.

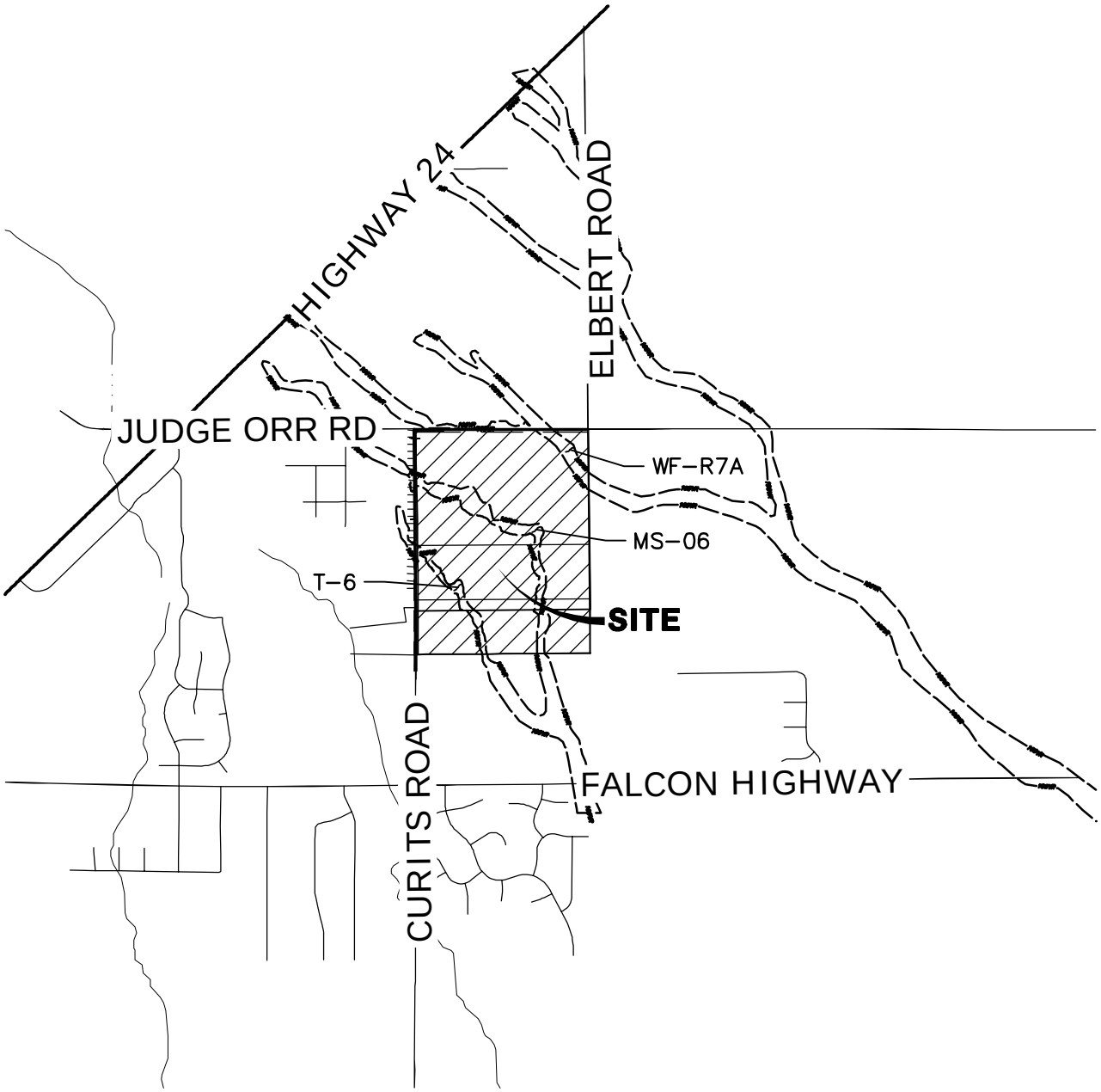
2. Hydraulic Analysis Report Modeling Criteria. Colorado Springs Utilities. 2012.

3. Final Utility Report for Saddlehorn Ranch. JR Engineering. November 27, 2019.

4. Final Utility Report for Saddlehorn Ranch Filing 1. JR Engineering. November 27, 2019.

5. Saddlehorn Ranch Filing 2 Utility Report. JR Engineering. June 4, 2021

APPENDIX A
VICINITY MAP



5000 2500 0 5000 10000

ORIGINAL SCALE: 1" = 5000'

VICINITY MAP
SADDLEHORN RANCH FULL BUILD OUT
25142.02
01/01/2022
SHEET 1 OF 1

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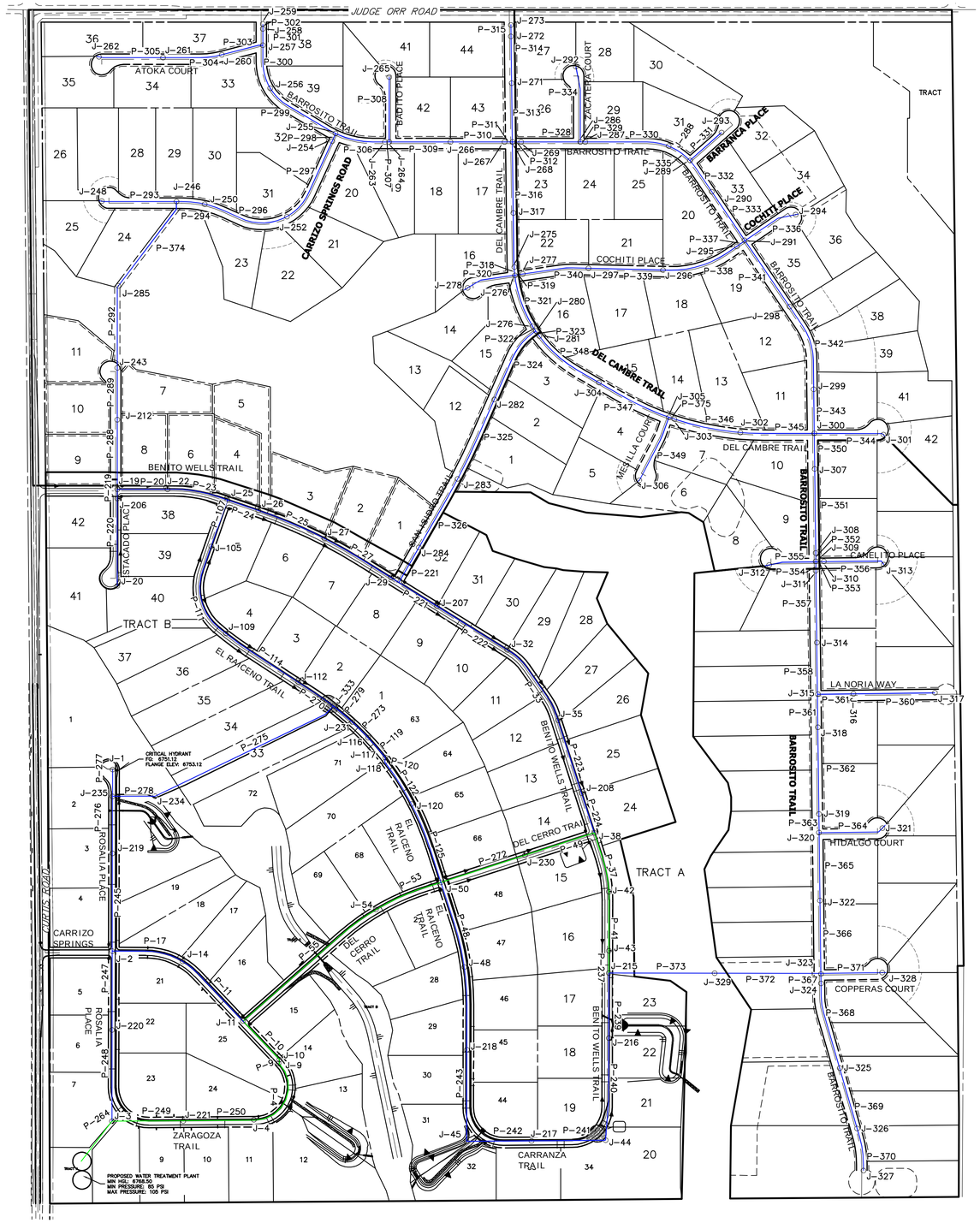
APPENDIX B

WATER SYSTEM DATA

SADDLEHORN RANCH FILINGS 1-5 (FULL BUILD OUT)

WATER SYSTEM MAP



COLORADO SPRINGS UTILITIES HYDRAULIC MODELING CRITERIA		
Max Day (85 PSI)	**Ultimate Buildout**	**Filing 1&2 Standalone**
Minimum System Pressure (PSI)	81.6	87.2
Maximum System Pressure (PSI)	129.9	120.5
Maximum System Velocity (FT/S)	0.68	0.30
Maximum System Headloss (FT)	0.100	0.02
Max Day + Fire Flow (85 PSI)		
Minimum System Pressure (PSI)	43.5	79.7
Number of Junctions Less than 20 psi	0	0
Maximum System Pressure (PSI)	120.6	116.8
Maximum System Velocity (FT/S)	9.62	9.59
Maximum System Headloss (FT)	22.1	9.42

LEGEND

- P-1 — 12-IN PVC WATERLINE
- P-1 — 8-IN PVC WATERLINE
- J-1 — WATERCAD JUNCTION
- PROPERTY LINE
- RIGHT-OF-WAY LINE

N

350 175 0 350 700

ORIGINAL SCALE: 1" = 350'

WATER SYSTEM MAP
SADDLEHORN RANCH
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1/1/2022
SHEET 1 OF 1

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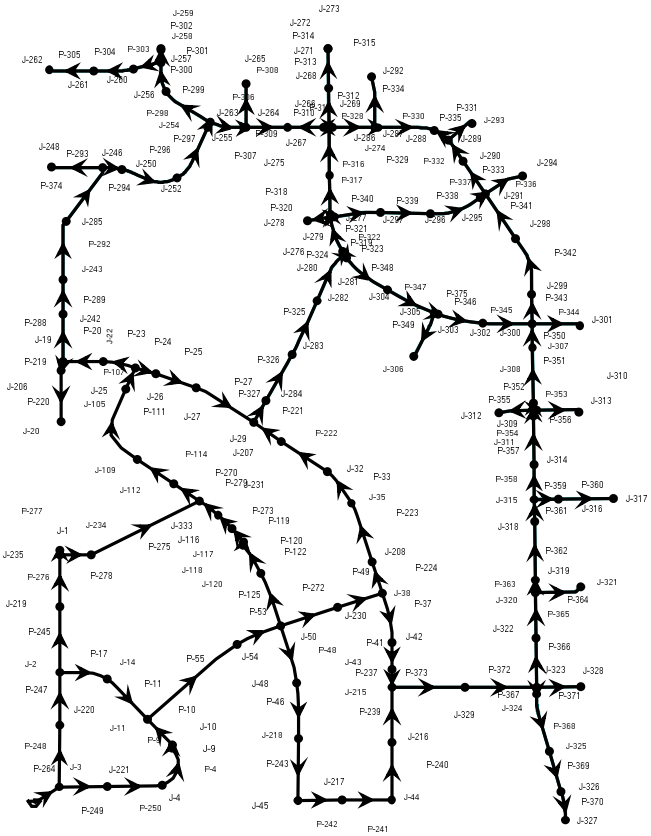
MAX DAY
105 PSI



Scenario: Average Day 85 psi
Current Time Step: 0.000 h
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-327	6,667.7	0.83	6,963.9	128.2
J-326	6,675.9	0.83	6,963.9	124.6
J-325	6,683.2	1.65	6,963.9	121.5
J-329	6,685.2	0.00	6,963.9	120.6
J-216	6,685.5	1.65	6,963.9	120.5
J-215	6,686.6	0.00	6,963.9	120.0
J-43	6,687.9	0.00	6,963.9	119.4
J-42	6,691.4	0.83	6,963.9	117.9
J-324	6,693.3	0.83	6,963.9	117.1
J-45	6,694.6	1.24	6,963.9	116.5
J-323	6,694.8	0.00	6,963.9	116.4
J-44	6,696.3	1.65	6,963.9	115.8
J-38	6,697.8	0.00	6,963.9	115.2
J-217	6,698.9	0.41	6,963.9	114.7
J-328	6,699.1	1.24	6,963.9	114.6
J-230	6,700.8	0.41	6,963.9	113.9
J-218	6,700.9	1.65	6,963.9	113.8
J-208	6,701.5	1.24	6,963.9	113.6
J-322	6,705.2	2.07	6,963.9	111.9
J-35	6,706.3	1.65	6,963.9	111.5
J-48	6,706.3	0.83	6,963.9	111.5
J-50	6,710.8	1.65	6,963.9	109.5
J-32	6,711.3	1.65	6,963.9	109.3
J-4	6,713.7	0.83	6,964.0	108.3
J-294	6,714.5	0.83	6,963.9	107.9
J-320	6,714.6	0.00	6,963.9	107.9
J-319	6,715.8	1.24	6,963.9	107.3
J-54	6,716.4	1.24	6,964.0	107.1
J-305	6,718.4	0.00	6,963.9	106.2
J-303	6,718.6	0.83	6,963.9	106.1
J-207	6,718.9	1.24	6,963.9	106.0
J-120	6,719.2	1.24	6,963.9	105.9
J-291	6,720.3	0.00	6,963.9	105.4
J-295	6,720.4	0.83	6,963.9	105.4
J-293	6,721.0	0.83	6,963.9	105.1
J-318	6,721.2	0.83	6,963.9	105.0
J-9	6,721.6	0.00	6,964.0	104.9
J-10	6,721.6	0.83	6,964.0	104.9
J-306	6,721.6	0.83	6,963.9	104.8
J-304	6,722.6	1.24	6,963.9	104.4
J-312	6,723.1	1.24	6,963.9	104.2
J-315	6,723.3	0.00	6,963.9	104.1
J-321	6,723.5	1.24	6,963.9	104.0
J-290	6,723.5	0.41	6,963.9	104.0
J-29	6,724.1	0.83	6,963.9	103.8
J-231	6,724.3	0.00	6,963.9	103.7
J-298	6,724.6	1.65	6,963.9	103.5
J-296	6,725.0	1.24	6,963.9	103.4
J-302	6,725.3	0.41	6,963.9	103.3
J-289	6,725.7	0.00	6,963.9	103.1
J-314	6,726.5	0.83	6,963.9	102.7
J-333	6,726.7	1.24	6,963.9	102.6
J-116	6,726.8	1.24	6,963.9	102.6
J-117	6,727.0	0.00	6,963.9	102.5
J-118	6,727.0	0.00	6,963.9	102.5
J-281	6,727.0	0.00	6,963.9	102.5
J-288	6,727.1	0.83	6,963.9	102.5

J-11	6,727.2	0.83	6,964.0	102.4
J-280	6,727.3	0.00	6,963.9	102.4
J-279	6,727.7	0.41	6,963.9	102.2
J-283	6,728.0	0.41	6,963.9	102.1
J-316	6,728.5	0.83	6,963.9	101.8
J-297	6,729.3	0.83	6,963.9	101.5
J-311	6,729.7	0.00	6,963.9	101.3
J-310	6,729.8	0.00	6,963.9	101.3
J-284	6,729.9	0.00	6,963.9	101.2
J-299	6,729.9	1.24	6,963.9	101.2
J-309	6,730.2	0.00	6,963.9	101.1
J-308	6,730.5	0.83	6,963.9	101.0
J-112	6,730.8	1.24	6,963.9	100.9
J-276	6,730.8	0.00	6,963.9	100.9
J-275	6,731.1	0.41	6,963.9	100.7
J-282	6,731.2	0.83	6,963.9	100.7
J-27	6,731.4	1.24	6,963.9	100.6
J-300	6,732.5	0.00	6,963.9	100.1
J-287	6,732.6	1.65	6,963.9	100.1
J-286	6,733.0	0.00	6,963.9	99.9
J-277	6,733.2	0.00	6,963.9	99.8
J-274	6,734.4	0.41	6,963.9	99.3
J-301	6,734.5	1.24	6,963.9	99.3
J-307	6,734.6	0.83	6,963.9	99.2
J-278	6,735.7	0.41	6,963.9	98.7
J-221	6,736.5	1.24	6,964.0	98.4
J-109	6,736.7	1.24	6,963.9	98.3
J-313	6,736.9	1.65	6,963.9	98.2
J-14	6,737.8	1.24	6,964.0	97.9
J-26	6,738.0	1.24	6,963.9	97.8
J-269	6,738.0	0.00	6,963.9	97.7
J-268	6,738.4	0.00	6,963.9	97.6
J-234	6,738.5	0.00	6,964.0	97.5
J-267	6,738.9	0.41	6,963.9	97.3
J-292	6,739.2	0.83	6,963.9	97.2
J-25	6,740.6	0.00	6,963.9	96.6
J-105	6,741.4	0.41	6,963.9	96.3
J-273	6,741.7	0.00	6,963.9	96.1
J-266	6,741.9	0.83	6,963.9	96.0
J-271	6,743.1	0.00	6,963.9	95.5
J-272	6,743.4	0.41	6,963.9	95.4
J-317	6,745.1	0.83	6,963.9	94.7
J-22	6,745.5	0.83	6,963.9	94.5
J-264	6,745.5	0.00	6,963.9	94.5
J-263	6,745.7	0.41	6,963.9	94.4
J-254	6,748.0	0.83	6,963.9	93.4
J-255	6,748.6	0.00	6,963.9	93.1
J-265	6,748.8	0.83	6,963.9	93.1
J-206	6,749.1	0.83	6,963.9	93.0
J-19	6,749.5	0.00	6,963.9	92.8
J-235	6,750.3	0.00	6,964.0	92.4
J-20	6,750.5	1.24	6,963.9	92.3
J-219	6,751.8	0.83	6,964.0	91.8
J-1	6,752.4	0.83	6,964.0	91.5
J-252	6,753.1	1.24	6,963.9	91.2
J-256	6,757.6	0.41	6,963.9	89.3
J-242	6,757.7	1.24	6,963.9	89.2
J-250	6,758.1	1.65	6,963.9	89.0
J-2	6,758.7	1.24	6,964.0	88.8
J-246	6,759.7	0.00	6,963.9	88.3
J-285	6,760.1	0.00	6,963.9	88.2
J-243	6,760.6	0.83	6,963.9	88.0
J-220	6,761.4	0.83	6,964.0	87.6
J-3	6,762.4	1.65	6,964.0	87.2
J-248	6,763.5	1.65	6,963.9	86.7
J-257	6,764.1	0.00	6,963.9	86.4
J-259	6,765.4	0.00	6,963.9	85.9

	6,765.9	0.83	6,963.9	85.7
J-258	6,766.8	0.41	6,963.9	85.3
J-261	6,769.2	0.41	6,963.9	84.2
J-262	6,772.2	0.83	6,963.9	82.9

X:\2510000.all\2514207\WaterCAD\251420.07 Filing 5.wtg

Scenario: Average Day 85 psi
Current Time Step: 0.000 h
FlexTable: Pipe Table

Label	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (Maximum) (ft/s)	Headloss Gradient (ft/ft)
P-264	257	12.0	PVC	123.0	90.05	0.26	0.000
P-55	993	12.0	PVC	123.0	62.63	0.18	0.000
P-249	407	12.0	PVC	123.0	62.05	0.18	0.000
P-53	403	12.0	PVC	123.0	61.39	0.17	0.000
P-250	467	12.0	PVC	123.0	60.81	0.17	0.000
P-4	390	12.0	PVC	123.0	59.99	0.17	0.000
P-9	26	12.0	PVC	123.0	59.99	0.17	0.000
P-248	522	8.0	PVC	120.0	26.34	0.17	0.000
P-10	301	12.0	PVC	123.0	59.16	0.17	0.000
P-247	451	8.0	PVC	120.0	25.52	0.16	0.000
P-270	242	8.0	PVC	120.0	22.42	0.14	0.000
P-372	607	8.0	PVC	120.0	21.74	0.14	0.000
P-373	619	8.0	PVC	120.0	21.74	0.14	0.000
P-114	500	8.0	PVC	120.0	21.18	0.14	0.000
P-224	238	8.0	PVC	120.0	20.28	0.13	0.000
P-111	560	8.0	PVC	120.0	19.94	0.13	0.000
P-107	282	8.0	PVC	120.0	19.53	0.12	0.000
P-223	438	8.0	PVC	120.0	19.04	0.12	0.000
P-245	559	8.0	PVC	120.0	18.75	0.12	0.000
P-276	439	8.0	PVC	120.0	17.92	0.11	0.000
P-272	505	12.0	PVC	123.0	40.09	0.11	0.000
P-49	417	12.0	PVC	123.0	39.67	0.11	0.000
P-33	505	8.0	PVC	120.0	17.39	0.11	0.000
P-275	1,027	8.0	PVC	120.0	17.09	0.11	0.000
P-278	265	8.0	PVC	120.0	17.09	0.11	0.000
P-366	417	8.0	PVC	120.0	16.37	0.10	0.000
P-222	472	8.0	PVC	120.0	15.74	0.10	0.000
P-326	450	8.0	PVC	120.0	15.52	0.10	0.000
P-327	213	8.0	PVC	120.0	15.52	0.10	0.000
P-23	351	8.0	PVC	120.0	15.21	0.10	0.000
P-325	501	8.0	PVC	120.0	15.10	0.10	0.000
P-221	311	8.0	PVC	120.0	14.50	0.09	0.000
P-20	287	8.0	PVC	120.0	14.38	0.09	0.000
P-365	388	8.0	PVC	120.0	14.31	0.09	0.000
P-324	465	8.0	PVC	120.0	14.28	0.09	0.000
P-363	106	8.0	PVC	120.0	13.07	0.08	0.000
P-288	401	8.0	PVC	120.0	12.32	0.08	0.000
P-362	496	8.0	PVC	120.0	11.83	0.08	0.000
P-289	293	8.0	PVC	120.0	11.08	0.07	0.000
P-361	189	8.0	PVC	120.0	11.00	0.07	0.000
P-48	504	8.0	PVC	120.0	10.61	0.07	0.000
P-292	506	8.0	PVC	120.0	10.25	0.07	0.000
P-374	558	8.0	PVC	120.0	10.25	0.07	0.000
P-46	473	8.0	PVC	120.0	9.78	0.06	0.000
P-358	297	8.0	PVC	120.0	9.35	0.06	0.000
P-322	34	8.0	PVC	120.0	9.11	0.06	0.000
P-125	479	8.0	PVC	120.0	9.04	0.06	0.000
P-321	312	8.0	PVC	120.0	8.70	0.06	0.000
P-37	348	12.0	PVC	123.0	19.39	0.06	0.000
P-294	162	8.0	PVC	120.0	8.60	0.05	0.000
P-354	48	8.0	PVC	120.0	8.52	0.05	0.000
P-357	413	8.0	PVC	120.0	8.52	0.05	0.000
P-41	338	12.0	PVC	123.0	18.57	0.05	0.000
P-237	151	12.0	PVC	123.0	18.57	0.05	0.000
P-243	524	8.0	PVC	120.0	8.13	0.05	0.000
P-119	150	8.0	PVC	120.0	7.80	0.05	0.000
P-120	27	8.0	PVC	120.0	7.80	0.05	0.000

P-122	284	8.0	PVC	120.0	7.80	0.05	0.000
P-296	496	8.0	PVC	120.0	6.95	0.04	0.000
P-242	371	8.0	PVC	120.0	6.89	0.04	0.000
P-279	238	8.0	PVC	120.0	6.56	0.04	0.000
P-273	126	8.0	PVC	120.0	6.56	0.04	0.000
P-241	423	8.0	PVC	120.0	6.48	0.04	0.000
P-297	513	8.0	PVC	120.0	5.71	0.04	0.000
P-352	62	8.0	PVC	120.0	5.63	0.04	0.000
P-17	413	8.0	PVC	120.0	5.53	0.04	0.000
P-323	30	8.0	PVC	120.0	5.16	0.03	0.000
P-348	441	8.0	PVC	120.0	5.16	0.03	0.000
P-298	48	8.0	PVC	120.0	4.88	0.03	0.000
P-240	584	8.0	PVC	120.0	4.83	0.03	0.000
P-351	469	8.0	PVC	120.0	4.81	0.03	0.000
P-343	252	8.0	PVC	120.0	4.60	0.03	0.000
P-318	26	8.0	PVC	120.0	4.41	0.03	0.000
P-24	187	8.0	PVC	120.0	4.32	0.03	0.000
P-11	486	8.0	PVC	120.0	4.29	0.03	0.000
P-367	57	8.0	PVC	120.0	4.13	0.03	0.000
P-317	329	8.0	PVC	120.0	4.00	0.03	0.000
P-350	203	8.0	PVC	120.0	3.98	0.03	0.000
P-347	447	8.0	PVC	120.0	3.92	0.03	0.000
P-319	30	8.0	PVC	120.0	3.87	0.02	0.000
P-340	394	8.0	PVC	120.0	3.87	0.02	0.000
P-316	406	8.0	PVC	120.0	3.59	0.02	0.000
P-342	508	8.0	PVC	120.0	3.36	0.02	0.000
P-368	499	8.0	PVC	120.0	3.30	0.02	0.000
P-239	373	8.0	PVC	120.0	3.18	0.02	0.000
P-375	32	8.0	PVC	120.0	3.10	0.02	0.000
P-25	411	8.0	PVC	120.0	3.08	0.02	0.000
P-339	425	8.0	PVC	120.0	3.05	0.02	0.000
P-299	459	8.0	PVC	120.0	2.90	0.02	0.000
P-312	30	8.0	PVC	120.0	2.68	0.02	0.000
P-328	359	8.0	PVC	120.0	2.68	0.02	0.000
P-300	254	8.0	PVC	120.0	2.48	0.02	0.000
P-346	387	8.0	PVC	120.0	2.27	0.01	0.000
P-219	52	8.0	PVC	120.0	2.07	0.01	0.000
P-303	242	8.0	PVC	120.0	2.07	0.01	0.000
P-306	289	8.0	PVC	120.0	1.98	0.01	0.000
P-333	339	8.0	PVC	120.0	1.87	0.01	0.000
P-345	421	8.0	PVC	120.0	1.86	0.01	0.000
P-329	28	8.0	PVC	120.0	1.85	0.01	0.000
P-27	439	8.0	PVC	120.0	1.84	0.01	0.000
P-338	454	8.0	PVC	120.0	1.81	0.01	0.000
P-341	455	8.0	PVC	120.0	1.71	0.01	0.000
P-293	438	8.0	PVC	120.0	1.65	0.01	0.000
P-353	30	8.0	PVC	120.0	1.65	0.01	0.000
P-356	370	8.0	PVC	120.0	1.65	0.01	0.000
P-359	205	8.0	PVC	120.0	1.65	0.01	0.000
P-369	359	8.0	PVC	120.0	1.65	0.01	0.000
P-307	24	8.0	PVC	120.0	1.57	0.01	0.000
P-332	218	8.0	PVC	120.0	1.45	0.01	0.000
P-220	500	8.0	PVC	120.0	1.24	0.01	0.000
P-304	337	8.0	PVC	120.0	1.24	0.01	0.000
P-344	410	8.0	PVC	120.0	1.24	0.01	0.000
P-355	294	8.0	PVC	120.0	1.24	0.01	0.000
P-364	400	8.0	PVC	120.0	1.24	0.01	0.000
P-371	374	8.0	PVC	120.0	1.24	0.01	0.000
P-337	56	8.0	PVC	120.0	0.98	0.01	0.000
P-277	40	8.0	PVC	120.0	0.83	0.01	0.000
P-305	379	8.0	PVC	120.0	0.83	0.01	0.000
P-308	371	8.0	PVC	120.0	0.83	0.01	0.000
P-334	433	8.0	PVC	120.0	0.83	0.01	0.000
P-335	269	8.0	PVC	120.0	0.83	0.01	0.000
P-336	356	8.0	PVC	120.0	0.83	0.01	0.000
P-349	408	8.0	PVC	120.0	0.83	0.01	0.000
P-360	466	8.0	PVC	120.0	0.83	0.01	0.000
P-370	245	8.0	PVC	120.0	0.83	0.01	0.000

	351	8.0	PVC	120.0	0.75	0.00	0.000
P-331	147	8.0	PVC	120.0	0.63	0.00	0.000
P-311	45	8.0	PVC	120.0	0.49	0.00	0.000
P-301	108	8.0	PVC	120.0	0.42	0.00	0.000
P-314	333	8.0	PVC	120.0	0.42	0.00	0.000
P-313	337	8.0	PVC	120.0	0.42	0.00	0.000
P-320	198	8.0	PVC	120.0	0.41	0.00	0.000
P-330	480	8.0	PVC	120.0	0.20	0.00	0.000
P-310	308	8.0	PVC	120.0	0.08	0.00	0.000
P-315	4	6.0	PVC	120.0	0.00	0.00	0.000
P-302	13	8.0	PVC	120.0	0.00	0.00	0.000

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Scenario: Max Day 85 psi
Current Time Step: 0.000 h
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-327	6,667.7	2.19	6,963.5	128.0
J-326	6,675.9	2.19	6,963.5	124.4
J-325	6,683.2	4.38	6,963.5	121.3
J-329	6,685.2	0.00	6,963.5	120.4
J-216	6,685.5	4.38	6,963.6	120.3
J-215	6,686.6	0.00	6,963.6	119.9
J-43	6,687.9	0.00	6,963.6	119.3
J-42	6,691.4	2.19	6,963.6	117.8
J-324	6,693.3	2.19	6,963.5	116.9
J-45	6,694.6	3.28	6,963.6	116.4
J-323	6,694.8	0.00	6,963.5	116.2
J-44	6,696.3	4.38	6,963.6	115.7
J-38	6,697.8	0.00	6,963.6	115.0
J-217	6,698.9	1.09	6,963.6	114.5
J-328	6,699.1	3.28	6,963.5	114.4
J-230	6,700.8	1.09	6,963.6	113.7
J-218	6,700.9	4.38	6,963.6	113.7
J-208	6,701.5	3.28	6,963.6	113.4
J-322	6,705.2	5.47	6,963.5	111.7
J-48	6,706.3	2.19	6,963.6	111.3
J-35	6,706.3	4.38	6,963.6	111.3
J-50	6,710.8	4.38	6,963.7	109.4
J-32	6,711.3	4.38	6,963.5	109.1
J-4	6,713.7	2.19	6,963.9	108.2
J-294	6,714.5	2.19	6,963.4	107.7
J-320	6,714.6	0.00	6,963.4	107.7
J-319	6,715.8	3.28	6,963.4	107.1
J-54	6,716.4	3.28	6,963.7	107.0
J-305	6,718.4	0.00	6,963.4	106.0
J-303	6,718.6	2.19	6,963.4	105.9
J-207	6,718.9	3.28	6,963.5	105.8
J-120	6,719.2	3.28	6,963.6	105.8
J-291	6,720.3	0.00	6,963.4	105.2
J-295	6,720.4	2.19	6,963.4	105.1
J-293	6,721.0	2.19	6,963.4	104.9
J-9	6,721.6	0.00	6,963.8	104.8
J-10	6,721.6	2.19	6,963.8	104.8
J-318	6,721.2	2.19	6,963.4	104.8
J-306	6,721.6	2.19	6,963.4	104.6
J-304	6,722.6	3.28	6,963.4	104.2
J-312	6,723.1	3.28	6,963.4	104.0
J-315	6,723.3	0.00	6,963.4	103.9
J-321	6,723.5	3.28	6,963.4	103.8
J-290	6,723.5	1.09	6,963.4	103.8
J-29	6,724.1	2.19	6,963.5	103.6
J-231	6,724.3	0.00	6,963.6	103.6
J-298	6,724.6	4.38	6,963.4	103.3
J-296	6,725.0	3.28	6,963.4	103.1
J-302	6,725.3	1.09	6,963.4	103.0
J-289	6,725.7	0.00	6,963.4	102.8
J-333	6,726.7	3.28	6,963.6	102.5
J-314	6,726.5	2.19	6,963.4	102.5
J-116	6,726.8	3.28	6,963.6	102.5
J-118	6,727.0	0.00	6,963.6	102.4
J-117	6,727.0	0.00	6,963.6	102.4
J-11	6,727.2	2.19	6,963.8	102.4
J-281	6,727.0	0.00	6,963.4	102.3

J-288	6,727.1	2.19	6,963.4	102.2
J-280	6,727.3	0.00	6,963.4	102.1
J-279	6,727.7	1.09	6,963.4	102.0
J-283	6,728.0	1.09	6,963.4	101.9
J-316	6,728.5	2.19	6,963.4	101.6
J-297	6,729.3	2.19	6,963.4	101.3
J-311	6,729.7	0.00	6,963.4	101.1
J-310	6,729.8	0.00	6,963.4	101.1
J-284	6,729.9	0.00	6,963.5	101.1
J-299	6,729.9	3.28	6,963.4	101.0
J-309	6,730.2	0.00	6,963.4	100.9
J-308	6,730.5	2.19	6,963.4	100.8
J-112	6,730.8	3.28	6,963.6	100.7
J-276	6,730.8	0.00	6,963.4	100.6
J-275	6,731.1	1.09	6,963.4	100.5
J-282	6,731.2	2.19	6,963.4	100.5
J-27	6,731.4	3.28	6,963.5	100.4
J-300	6,732.5	0.00	6,963.4	99.9
J-287	6,732.6	4.38	6,963.4	99.8
J-286	6,733.0	0.00	6,963.4	99.7
J-277	6,733.2	0.00	6,963.4	99.6
J-274	6,734.4	1.09	6,963.4	99.1
J-301	6,734.5	3.28	6,963.4	99.0
J-307	6,734.6	2.19	6,963.4	99.0
J-278	6,735.7	1.09	6,963.4	98.5
J-221	6,736.5	3.28	6,963.9	98.4
J-109	6,736.7	3.28	6,963.6	98.2
J-313	6,736.9	4.38	6,963.4	98.0
J-14	6,737.8	3.28	6,963.8	97.8
J-26	6,738.0	3.28	6,963.5	97.6
J-269	6,738.0	0.00	6,963.4	97.5
J-234	6,738.5	0.00	6,963.7	97.4
J-268	6,738.4	0.00	6,963.4	97.3
J-267	6,738.9	1.09	6,963.4	97.1
J-292	6,739.2	2.19	6,963.4	97.0
J-25	6,740.6	0.00	6,963.5	96.4
J-105	6,741.4	1.09	6,963.5	96.1
J-273	6,741.7	0.00	6,963.4	95.9
J-266	6,741.9	2.19	6,963.4	95.8
J-271	6,743.1	0.00	6,963.4	95.3
J-272	6,743.4	1.09	6,963.4	95.2
J-317	6,745.1	2.19	6,963.4	94.5
J-22	6,745.5	2.19	6,963.5	94.3
J-264	6,745.5	0.00	6,963.4	94.3
J-263	6,745.7	1.09	6,963.4	94.2
J-254	6,748.0	2.19	6,963.4	93.2
J-255	6,748.6	0.00	6,963.4	92.9
J-265	6,748.8	2.19	6,963.4	92.8
J-206	6,749.1	2.19	6,963.4	92.8
J-19	6,749.5	0.00	6,963.4	92.6
J-235	6,750.3	0.00	6,963.7	92.3
J-20	6,750.5	3.28	6,963.4	92.2
J-219	6,751.8	2.19	6,963.8	91.7
J-1	6,752.4	2.19	6,963.7	91.4
J-252	6,753.1	3.28	6,963.4	91.0
J-256	6,757.6	1.09	6,963.4	89.0
J-242	6,757.7	3.28	6,963.4	89.0
J-250	6,758.1	4.38	6,963.4	88.8
J-2	6,758.7	3.28	6,963.8	88.7
J-246	6,759.7	0.00	6,963.4	88.1
J-285	6,760.1	0.00	6,963.4	88.0
J-243	6,760.6	2.19	6,963.4	87.8
J-220	6,761.4	2.19	6,963.9	87.6
J-3	6,762.4	4.38	6,963.9	87.2
J-248	6,763.5	4.38	6,963.4	86.5
J-257	6,764.1	0.00	6,963.4	86.2
J-259	6,765.4	0.00	6,963.4	85.7

	6,765.9	2.19	6,963.4	85.4
J-258	6,766.8	1.09	6,963.4	85.1
J-261	6,769.2	1.09	6,963.4	84.0
J-262	6,772.2	2.19	6,963.4	82.7

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Scenario: Max Day 85 psi
Current Time Step: 0.000 h
FlexTable: Pipe Table

Label	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (Maximum) (ft/s)	Headloss Gradient (ft/ft)
P-264	257	12.0	PVC	123.0	238.60	0.68	0.000
P-55	993	12.0	PVC	123.0	165.94	0.47	0.000
P-249	407	12.0	PVC	123.0	164.42	0.47	0.000
P-53	403	12.0	PVC	123.0	162.66	0.46	0.000
P-250	467	12.0	PVC	123.0	161.13	0.46	0.000
P-4	390	12.0	PVC	123.0	158.94	0.45	0.000
P-9	26	12.0	PVC	123.0	158.94	0.45	0.000
P-248	522	8.0	PVC	120.0	69.80	0.45	0.000
P-10	301	12.0	PVC	123.0	156.76	0.44	0.000
P-247	451	8.0	PVC	120.0	67.61	0.43	0.000
P-270	242	8.0	PVC	120.0	59.39	0.38	0.000
P-372	607	8.0	PVC	120.0	57.61	0.37	0.000
P-373	619	8.0	PVC	120.0	57.61	0.37	0.000
P-114	500	8.0	PVC	120.0	56.11	0.36	0.000
P-224	238	8.0	PVC	120.0	53.74	0.34	0.000
P-111	560	8.0	PVC	120.0	52.83	0.34	0.000
P-107	282	8.0	PVC	120.0	51.73	0.33	0.000
P-223	438	8.0	PVC	120.0	50.46	0.32	0.000
P-245	559	8.0	PVC	120.0	49.67	0.32	0.000
P-276	439	8.0	PVC	120.0	47.48	0.30	0.000
P-272	505	12.0	PVC	123.0	106.22	0.30	0.000
P-49	417	12.0	PVC	123.0	105.12	0.30	0.000
P-33	505	8.0	PVC	120.0	46.08	0.29	0.000
P-275	1,027	8.0	PVC	120.0	45.29	0.29	0.000
P-278	265	8.0	PVC	120.0	45.29	0.29	0.000
P-366	417	8.0	PVC	120.0	43.38	0.28	0.000
P-222	472	8.0	PVC	120.0	41.70	0.27	0.000
P-326	450	8.0	PVC	120.0	41.11	0.26	0.000
P-327	213	8.0	PVC	120.0	41.11	0.26	0.000
P-23	351	8.0	PVC	120.0	40.29	0.26	0.000
P-325	501	8.0	PVC	120.0	40.01	0.26	0.000
P-221	311	8.0	PVC	120.0	38.42	0.25	0.000
P-20	287	8.0	PVC	120.0	38.10	0.24	0.000
P-365	388	8.0	PVC	120.0	37.91	0.24	0.000
P-324	465	8.0	PVC	120.0	37.82	0.24	0.000
P-363	106	8.0	PVC	120.0	34.62	0.22	0.000
P-288	401	8.0	PVC	120.0	32.63	0.21	0.000
P-362	496	8.0	PVC	120.0	31.34	0.20	0.000
P-289	293	8.0	PVC	120.0	29.34	0.19	0.000
P-361	189	8.0	PVC	120.0	29.15	0.19	0.000
P-48	504	8.0	PVC	120.0	28.11	0.18	0.000
P-292	506	8.0	PVC	120.0	27.15	0.17	0.000
P-374	558	8.0	PVC	120.0	27.15	0.17	0.000
P-46	473	8.0	PVC	120.0	25.92	0.17	0.000
P-358	297	8.0	PVC	120.0	24.77	0.16	0.000
P-322	34	8.0	PVC	120.0	24.14	0.15	0.000
P-125	479	8.0	PVC	120.0	23.95	0.15	0.000
P-321	312	8.0	PVC	120.0	23.05	0.15	0.000
P-37	348	12.0	PVC	123.0	51.38	0.15	0.000
P-294	162	8.0	PVC	120.0	22.78	0.15	0.000
P-354	48	8.0	PVC	120.0	22.58	0.14	0.000
P-357	413	8.0	PVC	120.0	22.58	0.14	0.000
P-41	338	12.0	PVC	123.0	49.19	0.14	0.000
P-237	151	12.0	PVC	123.0	49.19	0.14	0.000
P-243	524	8.0	PVC	120.0	21.54	0.14	0.000
P-119	150	8.0	PVC	120.0	20.67	0.13	0.000
P-120	27	8.0	PVC	120.0	20.67	0.13	0.000

P-122	284	8.0	PVC	120.0	20.67	0.13	0.000
P-296	496	8.0	PVC	120.0	18.40	0.12	0.000
P-242	371	8.0	PVC	120.0	18.26	0.12	0.000
P-279	238	8.0	PVC	120.0	17.39	0.11	0.000
P-273	126	8.0	PVC	120.0	17.39	0.11	0.000
P-241	423	8.0	PVC	120.0	17.17	0.11	0.000
P-297	513	8.0	PVC	120.0	15.12	0.10	0.000
P-352	62	8.0	PVC	120.0	14.92	0.10	0.000
P-17	413	8.0	PVC	120.0	14.66	0.09	0.000
P-323	30	8.0	PVC	120.0	13.68	0.09	0.000
P-348	441	8.0	PVC	120.0	13.68	0.09	0.000
P-298	48	8.0	PVC	120.0	12.93	0.08	0.000
P-240	584	8.0	PVC	120.0	12.79	0.08	0.000
P-351	469	8.0	PVC	120.0	12.73	0.08	0.000
P-343	252	8.0	PVC	120.0	12.19	0.08	0.000
P-318	26	8.0	PVC	120.0	11.69	0.07	0.000
P-24	187	8.0	PVC	120.0	11.44	0.07	0.000
P-11	486	8.0	PVC	120.0	11.38	0.07	0.000
P-367	57	8.0	PVC	120.0	10.94	0.07	0.000
P-317	329	8.0	PVC	120.0	10.60	0.07	0.000
P-350	203	8.0	PVC	120.0	10.54	0.07	0.000
P-347	447	8.0	PVC	120.0	10.40	0.07	0.000
P-319	30	8.0	PVC	120.0	10.26	0.07	0.000
P-340	394	8.0	PVC	120.0	10.26	0.07	0.000
P-316	406	8.0	PVC	120.0	9.50	0.06	0.000
P-342	508	8.0	PVC	120.0	8.91	0.06	0.000
P-368	499	8.0	PVC	120.0	8.76	0.06	0.000
P-239	373	8.0	PVC	120.0	8.41	0.05	0.000
P-375	32	8.0	PVC	120.0	8.21	0.05	0.000
P-25	411	8.0	PVC	120.0	8.16	0.05	0.000
P-339	425	8.0	PVC	120.0	8.07	0.05	0.000
P-299	459	8.0	PVC	120.0	7.66	0.05	0.000
P-312	30	8.0	PVC	120.0	7.10	0.05	0.000
P-328	359	8.0	PVC	120.0	7.10	0.05	0.000
P-300	254	8.0	PVC	120.0	6.57	0.04	0.000
P-346	387	8.0	PVC	120.0	6.02	0.04	0.000
P-219	52	8.0	PVC	120.0	5.47	0.03	0.000
P-303	242	8.0	PVC	120.0	5.47	0.03	0.000
P-306	289	8.0	PVC	120.0	5.27	0.03	0.000
P-333	339	8.0	PVC	120.0	4.94	0.03	0.000
P-345	421	8.0	PVC	120.0	4.93	0.03	0.000
P-329	28	8.0	PVC	120.0	4.91	0.03	0.000
P-27	439	8.0	PVC	120.0	4.88	0.03	0.000
P-338	454	8.0	PVC	120.0	4.79	0.03	0.000
P-341	455	8.0	PVC	120.0	4.53	0.03	0.000
P-293	438	8.0	PVC	120.0	4.38	0.03	0.000
P-353	30	8.0	PVC	120.0	4.38	0.03	0.000
P-356	370	8.0	PVC	120.0	4.38	0.03	0.000
P-359	205	8.0	PVC	120.0	4.38	0.03	0.000
P-369	359	8.0	PVC	120.0	4.38	0.03	0.000
P-307	24	8.0	PVC	120.0	4.17	0.03	0.000
P-332	218	8.0	PVC	120.0	3.84	0.02	0.000
P-220	500	8.0	PVC	120.0	3.28	0.02	0.000
P-304	337	8.0	PVC	120.0	3.28	0.02	0.000
P-344	410	8.0	PVC	120.0	3.28	0.02	0.000
P-355	294	8.0	PVC	120.0	3.28	0.02	0.000
P-364	400	8.0	PVC	120.0	3.28	0.02	0.000
P-371	374	8.0	PVC	120.0	3.28	0.02	0.000
P-337	56	8.0	PVC	120.0	2.60	0.02	0.000
P-305	379	8.0	PVC	120.0	2.19	0.01	0.000
P-308	371	8.0	PVC	120.0	2.19	0.01	0.000
P-334	433	8.0	PVC	120.0	2.19	0.01	0.000
P-335	269	8.0	PVC	120.0	2.19	0.01	0.000
P-336	356	8.0	PVC	120.0	2.19	0.01	0.000
P-349	408	8.0	PVC	120.0	2.19	0.01	0.000
P-360	466	8.0	PVC	120.0	2.19	0.01	0.000
P-370	245	8.0	PVC	120.0	2.19	0.01	0.000
P-277	40	8.0	PVC	120.0	2.19	0.01	0.000

	351	8.0	PVC	120.0	1.98	0.01	0.000
P-331	147	8.0	PVC	120.0	1.66	0.01	0.000
P-311	45	8.0	PVC	120.0	1.30	0.01	0.000
P-313	337	8.0	PVC	120.0	1.10	0.01	0.000
P-314	333	8.0	PVC	120.0	1.10	0.01	0.000
P-320	198	8.0	PVC	120.0	1.09	0.01	0.000
P-301	108	8.0	PVC	120.0	1.09	0.01	0.000
P-330	480	8.0	PVC	120.0	0.53	0.00	0.000
P-310	308	8.0	PVC	120.0	0.21	0.00	0.000
P-315	4	6.0	PVC	120.0	0.00	0.00	0.000
P-302	13	8.0	PVC	120.0	0.00	0.00	0.000

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Scenario: Max Day + Fire Flow 85 psi
Current Time Step: 0.000 h
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-327	6,667.7	2.19	6,939.8	117.7
J-326	6,675.9	2.19	6,939.8	114.2
J-216	6,685.5	4.38	6,946.9	113.1
J-215	6,686.6	0.00	6,946.7	112.5
J-43	6,687.9	0.00	6,946.7	112.0
J-329	6,685.2	0.00	6,943.2	111.6
J-325	6,683.2	4.38	6,939.8	111.0
J-42	6,691.4	2.19	6,946.9	110.5
J-45	6,694.6	3.28	6,947.9	109.6
J-44	6,696.3	4.38	6,947.3	108.6
J-38	6,697.8	0.00	6,947.0	107.8
J-217	6,698.9	1.09	6,947.6	107.6
J-218	6,700.9	4.38	6,948.3	107.0
J-230	6,700.8	1.09	6,947.9	106.9
J-324	6,693.3	2.19	6,939.8	106.7
J-323	6,694.8	0.00	6,939.8	106.0
J-4	6,713.7	2.19	6,958.5	105.9
J-208	6,701.5	3.28	6,945.3	105.5
J-48	6,706.3	2.19	6,948.7	104.9
J-328	6,699.1	3.28	6,939.8	104.2
J-50	6,710.8	4.38	6,949.1	103.1
J-35	6,706.3	4.38	6,942.2	102.1
J-9	6,721.6	0.00	6,956.9	101.8
J-10	6,721.6	2.19	6,956.8	101.8
J-54	6,716.4	3.28	6,951.0	101.5
J-322	6,705.2	5.47	6,937.6	100.6
J-120	6,719.2	3.28	6,948.4	99.2
J-11	6,727.2	2.19	6,955.6	98.8
J-32	6,711.3	4.38	6,938.7	98.4
J-221	6,736.5	3.28	6,960.3	96.8
J-231	6,724.3	0.00	6,947.5	96.6
J-320	6,714.6	0.00	6,935.6	95.6
J-118	6,727.0	0.00	6,947.9	95.6
J-117	6,727.0	0.00	6,947.9	95.6
J-116	6,726.8	3.28	6,947.7	95.6
J-333	6,726.7	3.28	6,947.2	95.4
J-319	6,715.8	3.28	6,935.1	94.9
J-14	6,737.8	3.28	6,955.8	94.3
J-207	6,718.9	3.28	6,935.4	93.7
J-112	6,730.8	3.28	6,945.0	92.7
J-234	6,738.5	0.00	6,951.1	92.0
J-321	6,723.5	3.28	6,935.6	91.8
J-318	6,721.2	2.19	6,932.6	91.5
J-29	6,724.1	2.19	6,933.3	90.5
J-315	6,723.3	0.00	6,931.6	90.1
J-294	6,714.5	2.19	6,921.2	89.4
J-305	6,718.4	0.00	6,924.3	89.1
J-303	6,718.6	2.19	6,924.3	89.0
J-312	6,723.1	3.28	6,927.9	88.6
J-109	6,736.7	3.28	6,940.6	88.2
J-314	6,726.5	2.19	6,930.2	88.1
J-316	6,728.5	2.19	6,931.6	87.9
J-306	6,721.6	2.19	6,924.3	87.7
J-284	6,729.9	0.00	6,932.1	87.5
J-219	6,751.8	2.19	6,953.8	87.4
J-27	6,731.4	3.28	6,933.3	87.4
J-235	6,750.3	0.00	6,952.1	87.3

J-304	6,722.6	3.28	6,924.1	87.2
J-283	6,728.0	1.09	6,929.5	87.2
J-291	6,720.3	0.00	6,921.2	86.9
J-295	6,720.4	2.19	6,921.2	86.9
J-1	6,752.4	2.19	6,952.1	86.4
J-3	6,762.4	4.38	6,962.0	86.4
J-302	6,725.3	1.09	6,924.4	86.2
J-311	6,729.7	0.00	6,928.2	85.9
J-293	6,721.0	2.19	6,919.4	85.9
J-310	6,729.8	0.00	6,927.9	85.7
J-298	6,724.6	4.38	6,922.4	85.6
J-309	6,730.2	0.00	6,927.9	85.6
J-220	6,761.4	2.19	6,958.7	85.4
J-2	6,758.7	3.28	6,955.9	85.3
J-308	6,730.5	2.19	6,927.6	85.3
J-281	6,727.0	0.00	6,924.0	85.2
J-280	6,727.3	0.00	6,924.0	85.1
J-290	6,723.5	1.09	6,920.1	85.1
J-296	6,725.0	3.28	6,921.3	84.9
J-279	6,727.7	1.09	6,923.7	84.8
J-282	6,731.2	2.19	6,926.6	84.6
J-26	6,738.0	3.28	6,933.2	84.5
J-105	6,741.4	1.09	6,935.7	84.1
J-299	6,729.9	3.28	6,923.8	83.9
J-289	6,725.7	0.00	6,919.4	83.8
J-25	6,740.6	0.00	6,933.2	83.3
J-300	6,732.5	0.00	6,924.5	83.1
J-297	6,729.3	2.19	6,921.3	83.1
J-288	6,727.1	2.19	6,919.0	83.0
J-313	6,736.9	4.38	6,927.9	82.7
J-307	6,734.6	2.19	6,925.5	82.6
J-276	6,730.8	0.00	6,921.3	82.4
J-275	6,731.1	1.09	6,921.1	82.2
J-301	6,734.5	3.28	6,924.5	82.2
J-277	6,733.2	0.00	6,921.3	81.4
J-317	6,745.1	2.19	6,931.6	80.7
J-278	6,735.7	1.09	6,921.3	80.3
J-287	6,732.6	4.38	6,917.5	80.0
J-274	6,734.4	1.09	6,918.9	79.8
J-286	6,733.0	0.00	6,917.4	79.8
J-22	6,745.5	2.19	6,929.8	79.8
J-269	6,738.0	0.00	6,916.3	77.1
J-292	6,739.2	2.19	6,917.4	77.1
J-206	6,749.1	2.19	6,927.0	77.0
J-268	6,738.4	0.00	6,916.2	76.9
J-19	6,749.5	0.00	6,927.0	76.8
J-267	6,738.9	1.09	6,915.5	76.4
J-20	6,750.5	3.28	6,927.0	76.4
J-273	6,741.7	0.00	6,916.2	75.5
J-271	6,743.1	0.00	6,916.2	74.9
J-272	6,743.4	1.09	6,916.2	74.8
J-266	6,741.9	2.19	6,910.3	72.9
J-242	6,757.7	3.28	6,923.2	71.6
J-243	6,760.6	2.19	6,920.4	69.1
J-264	6,745.5	0.00	6,904.4	68.8
J-263	6,745.7	1.09	6,904.0	68.5
J-265	6,748.8	2.19	6,904.4	67.3
J-285	6,760.1	0.00	6,915.6	67.3
J-254	6,748.0	2.19	6,899.7	65.6
J-252	6,753.1	3.28	6,904.3	65.4
J-250	6,758.1	4.38	6,908.9	65.2
J-246	6,759.7	0.00	6,910.4	65.2
J-255	6,748.6	0.00	6,899.2	65.2
J-248	6,763.5	4.38	6,910.4	63.6
J-256	6,757.6	1.09	6,878.5	52.3
J-257	6,764.1	0.00	6,867.0	44.5
J-259	6,765.4	0.00	6,867.0	43.9

	6,766.8	1.09	6,867.0	43.3
J-260	6,765.9	2.19	6,856.0	39.0
J-261	6,769.2	1.09	6,840.8	31.0
J-262	6,772.2	1,502.19	6,823.8	22.3

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Scenario: Max Day + Fire Flow 85 psi
Current Time Step: 0.000 h
FlexTable: Pipe Table

Label	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (Maximum) (ft/s)	Headloss Gradient (ft/ft)
P-299	459	8.0	PVC	120.0	1,507.67	9.62	0.045
P-300	254	8.0	PVC	120.0	1,506.57	9.62	0.045
P-303	242	8.0	PVC	120.0	1,505.47	9.61	0.045
P-304	337	8.0	PVC	120.0	1,503.28	9.60	0.045
P-305	379	8.0	PVC	120.0	1,502.19	9.59	0.045
P-311	45	8.0	PVC	120.0	883.18	5.64	0.017
P-310	308	8.0	PVC	120.0	882.09	5.63	0.017
P-309	351	8.0	PVC	120.0	879.90	5.62	0.017
P-307	24	8.0	PVC	120.0	877.71	5.60	0.017
P-306	289	8.0	PVC	120.0	876.62	5.60	0.017
P-264	257	12.0	PVC	123.0	1,738.60	4.93	0.008
P-23	351	8.0	PVC	120.0	658.41	4.20	0.010
P-20	287	8.0	PVC	120.0	656.22	4.19	0.010
P-288	401	8.0	PVC	120.0	650.75	4.15	0.010
P-289	293	8.0	PVC	120.0	647.47	4.13	0.009
P-292	506	8.0	PVC	120.0	645.28	4.12	0.009
P-374	558	8.0	PVC	120.0	645.28	4.12	0.009
P-294	162	8.0	PVC	120.0	640.90	4.09	0.009
P-296	496	8.0	PVC	120.0	636.52	4.06	0.009
P-297	513	8.0	PVC	120.0	633.24	4.04	0.009
P-298	48	8.0	PVC	120.0	631.05	4.03	0.009
P-270	242	8.0	PVC	120.0	626.87	4.00	0.009
P-114	500	8.0	PVC	120.0	623.58	3.98	0.009
P-111	560	8.0	PVC	120.0	620.30	3.96	0.009
P-107	282	8.0	PVC	120.0	619.20	3.95	0.009
P-55	993	12.0	PVC	123.0	1,315.68	3.73	0.005
P-322	34	8.0	PVC	120.0	584.47	3.73	0.008
P-321	312	8.0	PVC	120.0	583.38	3.72	0.008
P-53	403	12.0	PVC	123.0	1,312.40	3.72	0.005
P-224	238	8.0	PVC	120.0	556.96	3.55	0.007
P-223	438	8.0	PVC	120.0	553.68	3.53	0.007
P-33	505	8.0	PVC	120.0	549.30	3.51	0.007
P-222	472	8.0	PVC	120.0	544.93	3.48	0.007
P-221	311	8.0	PVC	120.0	541.64	3.46	0.007
P-249	407	12.0	PVC	123.0	1,216.62	3.45	0.004
P-250	467	12.0	PVC	123.0	1,213.33	3.44	0.004
P-4	390	12.0	PVC	123.0	1,211.14	3.44	0.004
P-9	26	12.0	PVC	123.0	1,211.14	3.44	0.004
P-318	26	8.0	PVC	120.0	537.63	3.43	0.007
P-10	301	12.0	PVC	123.0	1,208.96	3.43	0.004
P-317	329	8.0	PVC	120.0	536.54	3.42	0.007
P-316	406	8.0	PVC	120.0	535.45	3.42	0.007
P-248	522	8.0	PVC	120.0	517.61	3.30	0.006
P-247	451	8.0	PVC	120.0	515.42	3.29	0.006
P-326	450	8.0	PVC	120.0	493.68	3.15	0.006
P-327	213	8.0	PVC	120.0	493.68	3.15	0.006
P-325	501	8.0	PVC	120.0	492.59	3.14	0.006
P-324	465	8.0	PVC	120.0	490.40	3.13	0.006
P-372	607	8.0	PVC	120.0	486.92	3.11	0.006
P-373	619	8.0	PVC	120.0	486.92	3.11	0.006
P-366	417	8.0	PVC	120.0	472.69	3.02	0.005
P-365	388	8.0	PVC	120.0	467.22	2.98	0.005
P-363	106	8.0	PVC	120.0	463.93	2.96	0.005
P-362	496	8.0	PVC	120.0	460.65	2.94	0.005
P-361	189	8.0	PVC	120.0	458.46	2.93	0.005
P-358	297	8.0	PVC	120.0	454.08	2.90	0.005
P-354	48	8.0	PVC	120.0	451.89	2.88	0.005

P-357	413	8.0	PVC	120.0	451.89	2.88	0.005
P-352	62	8.0	PVC	120.0	444.23	2.84	0.005
P-351	469	8.0	PVC	120.0	442.04	2.82	0.005
P-350	203	8.0	PVC	120.0	439.85	2.81	0.005
P-245	559	8.0	PVC	120.0	399.93	2.55	0.004
P-276	439	8.0	PVC	120.0	397.75	2.54	0.004
P-272	505	12.0	PVC	123.0	894.38	2.54	0.002
P-49	417	12.0	PVC	123.0	893.28	2.53	0.002
P-275	1,027	8.0	PVC	120.0	395.56	2.52	0.004
P-278	265	8.0	PVC	120.0	395.56	2.52	0.004
P-333	339	8.0	PVC	120.0	360.88	2.30	0.003
P-332	218	8.0	PVC	120.0	359.78	2.30	0.003
P-331	147	8.0	PVC	120.0	357.60	2.28	0.003
P-330	480	8.0	PVC	120.0	355.41	2.27	0.003
P-329	28	8.0	PVC	120.0	351.03	2.24	0.003
P-312	30	8.0	PVC	120.0	348.84	2.23	0.003
P-328	359	8.0	PVC	120.0	348.84	2.23	0.003
P-343	252	8.0	PVC	120.0	333.74	2.13	0.003
P-342	508	8.0	PVC	120.0	330.46	2.11	0.003
P-341	455	8.0	PVC	120.0	326.08	2.08	0.003
P-125	479	8.0	PVC	120.0	241.16	1.54	0.002
P-119	150	8.0	PVC	120.0	237.88	1.52	0.001
P-120	27	8.0	PVC	120.0	237.88	1.52	0.001
P-122	284	8.0	PVC	120.0	237.88	1.52	0.001
P-279	238	8.0	PVC	120.0	234.59	1.50	0.001
P-273	126	8.0	PVC	120.0	234.59	1.50	0.001
P-48	504	8.0	PVC	120.0	172.49	1.10	0.001
P-46	473	8.0	PVC	120.0	170.30	1.09	0.001
P-243	524	8.0	PVC	120.0	165.92	1.06	0.001
P-242	371	8.0	PVC	120.0	162.64	1.04	0.001
P-241	423	8.0	PVC	120.0	161.54	1.03	0.001
P-240	584	8.0	PVC	120.0	157.16	1.00	0.001
P-239	373	8.0	PVC	120.0	152.79	0.98	0.001
P-37	348	12.0	PVC	123.0	336.32	0.95	0.000
P-41	338	12.0	PVC	123.0	334.13	0.95	0.000
P-237	151	12.0	PVC	123.0	334.13	0.95	0.000
P-17	413	8.0	PVC	120.0	112.20	0.72	0.000
P-11	486	8.0	PVC	120.0	108.92	0.70	0.000
P-345	421	8.0	PVC	120.0	102.83	0.66	0.000
P-346	387	8.0	PVC	120.0	101.74	0.65	0.000
P-375	32	8.0	PVC	120.0	99.55	0.64	0.000
P-347	447	8.0	PVC	120.0	97.36	0.62	0.000
P-323	30	8.0	PVC	120.0	94.08	0.60	0.000
P-348	441	8.0	PVC	120.0	94.08	0.60	0.000
P-27	439	8.0	PVC	120.0	45.77	0.29	0.000
P-319	30	8.0	PVC	120.0	44.65	0.28	0.000
P-340	394	8.0	PVC	120.0	44.65	0.28	0.000
P-25	411	8.0	PVC	120.0	42.49	0.27	0.000
P-339	425	8.0	PVC	120.0	42.46	0.27	0.000
P-24	187	8.0	PVC	120.0	39.21	0.25	0.000
P-338	454	8.0	PVC	120.0	39.18	0.25	0.000
P-337	56	8.0	PVC	120.0	36.99	0.24	0.000
P-367	57	8.0	PVC	120.0	10.94	0.07	0.000
P-368	499	8.0	PVC	120.0	8.76	0.06	0.000
P-219	52	8.0	PVC	120.0	5.47	0.03	0.000
P-293	438	8.0	PVC	120.0	4.38	0.03	0.000
P-353	30	8.0	PVC	120.0	4.38	0.03	0.000
P-356	370	8.0	PVC	120.0	4.38	0.03	0.000
P-359	205	8.0	PVC	120.0	4.38	0.03	0.000
P-369	359	8.0	PVC	120.0	4.38	0.03	0.000
P-220	500	8.0	PVC	120.0	3.28	0.02	0.000
P-344	410	8.0	PVC	120.0	3.28	0.02	0.000
P-355	294	8.0	PVC	120.0	3.28	0.02	0.000
P-364	400	8.0	PVC	120.0	3.28	0.02	0.000
P-371	374	8.0	PVC	120.0	3.28	0.02	0.000
P-308	371	8.0	PVC	120.0	2.19	0.01	0.000
P-334	433	8.0	PVC	120.0	2.19	0.01	0.000
P-335	269	8.0	PVC	120.0	2.19	0.01	0.000

	356	8.0	PVC	120.0	2.19	0.01	0.000
P-349	408	8.0	PVC	120.0	2.19	0.01	0.000
P-360	466	8.0	PVC	120.0	2.19	0.01	0.000
P-370	245	8.0	PVC	120.0	2.19	0.01	0.000
P-277	40	8.0	PVC	120.0	2.19	0.01	0.000
P-314	333	8.0	PVC	120.0	1.10	0.01	0.000
P-313	337	8.0	PVC	120.0	1.10	0.01	0.000
P-301	108	8.0	PVC	120.0	1.10	0.01	0.000
P-320	198	8.0	PVC	120.0	1.09	0.01	0.000
P-315	4	6.0	PVC	120.0	0.00	0.00	0.000
P-302	13	8.0	PVC	120.0	0.00	0.00	0.000

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Scenario: Average Day 105 psi
Current Time Step: 0.000 h
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-327	6,667.7	0.83	7,009.9	148.1
J-326	6,675.9	0.83	7,009.9	144.5
J-325	6,683.2	1.65	7,009.9	141.4
J-329	6,685.2	0.00	7,009.9	140.5
J-216	6,685.5	1.65	7,009.9	140.4
J-215	6,686.6	0.00	7,009.9	139.9
J-43	6,687.9	0.00	7,009.9	139.3
J-42	6,691.4	0.83	7,009.9	137.8
J-324	6,693.3	0.83	7,009.9	137.0
J-45	6,694.6	1.24	7,009.9	136.4
J-323	6,694.8	0.00	7,009.9	136.3
J-44	6,696.3	1.65	7,009.9	135.7
J-38	6,697.8	0.00	7,009.9	135.1
J-217	6,698.9	0.41	7,009.9	134.6
J-328	6,699.1	1.24	7,009.9	134.5
J-230	6,700.8	0.41	7,009.9	133.8
J-218	6,700.9	1.65	7,009.9	133.7
J-208	6,701.5	1.24	7,009.9	133.5
J-322	6,705.2	2.07	7,009.9	131.8
J-35	6,706.3	1.65	7,009.9	131.4
J-48	6,706.3	0.83	7,009.9	131.4
J-50	6,710.8	1.65	7,009.9	129.4
J-32	6,711.3	1.65	7,009.9	129.2
J-4	6,713.7	0.83	7,010.0	128.2
J-294	6,714.5	0.83	7,009.9	127.8
J-320	6,714.6	0.00	7,009.9	127.8
J-319	6,715.8	1.24	7,009.9	127.2
J-54	6,716.4	1.24	7,010.0	127.0
J-305	6,718.4	0.00	7,009.9	126.1
J-303	6,718.6	0.83	7,009.9	126.0
J-207	6,718.9	1.24	7,009.9	125.9
J-120	6,719.2	1.24	7,009.9	125.8
J-291	6,720.3	0.00	7,009.9	125.3
J-295	6,720.4	0.83	7,009.9	125.3
J-293	6,721.0	0.83	7,009.9	125.0
J-318	6,721.2	0.83	7,009.9	124.9
J-9	6,721.6	0.00	7,010.0	124.8
J-10	6,721.6	0.83	7,010.0	124.8
J-306	6,721.6	0.83	7,009.9	124.7
J-304	6,722.6	1.24	7,009.9	124.3
J-312	6,723.1	1.24	7,009.9	124.1
J-315	6,723.3	0.00	7,009.9	124.0
J-321	6,723.5	1.24	7,009.9	123.9
J-290	6,723.5	0.41	7,009.9	123.9
J-29	6,724.1	0.83	7,009.9	123.7
J-231	6,724.3	0.00	7,009.9	123.6
J-298	6,724.6	1.65	7,009.9	123.4
J-296	6,725.0	1.24	7,009.9	123.3
J-302	6,725.3	0.41	7,009.9	123.2
J-289	6,725.7	0.00	7,009.9	123.0
J-314	6,726.5	0.83	7,009.9	122.6
J-333	6,726.7	1.24	7,009.9	122.5
J-116	6,726.8	1.24	7,009.9	122.5
J-117	6,727.0	0.00	7,009.9	122.4
J-118	6,727.0	0.00	7,009.9	122.4
J-281	6,727.0	0.00	7,009.9	122.4
J-288	6,727.1	0.83	7,009.9	122.4

J-11	6,727.2	0.83	7,010.0	122.3
J-280	6,727.3	0.00	7,009.9	122.3
J-279	6,727.7	0.41	7,009.9	122.1
J-283	6,728.0	0.41	7,009.9	122.0
J-316	6,728.5	0.83	7,009.9	121.7
J-297	6,729.3	0.83	7,009.9	121.4
J-311	6,729.7	0.00	7,009.9	121.2
J-310	6,729.8	0.00	7,009.9	121.2
J-284	6,729.9	0.00	7,009.9	121.1
J-299	6,729.9	1.24	7,009.9	121.1
J-309	6,730.2	0.00	7,009.9	121.0
J-308	6,730.5	0.83	7,009.9	120.9
J-112	6,730.8	1.24	7,009.9	120.8
J-276	6,730.8	0.00	7,009.9	120.8
J-275	6,731.1	0.41	7,009.9	120.6
J-282	6,731.2	0.83	7,009.9	120.6
J-27	6,731.4	1.24	7,009.9	120.5
J-300	6,732.5	0.00	7,009.9	120.0
J-287	6,732.6	1.65	7,009.9	120.0
J-286	6,733.0	0.00	7,009.9	119.8
J-277	6,733.2	0.00	7,009.9	119.7
J-274	6,734.4	0.41	7,009.9	119.2
J-301	6,734.5	1.24	7,009.9	119.2
J-307	6,734.6	0.83	7,009.9	119.1
J-278	6,735.7	0.41	7,009.9	118.6
J-221	6,736.5	1.24	7,010.0	118.3
J-109	6,736.7	1.24	7,009.9	118.2
J-313	6,736.9	1.65	7,009.9	118.1
J-14	6,737.8	1.24	7,010.0	117.8
J-26	6,738.0	1.24	7,009.9	117.7
J-269	6,738.0	0.00	7,009.9	117.6
J-268	6,738.4	0.00	7,009.9	117.5
J-234	6,738.5	0.00	7,010.0	117.4
J-267	6,738.9	0.41	7,009.9	117.2
J-292	6,739.2	0.83	7,009.9	117.1
J-25	6,740.6	0.00	7,009.9	116.5
J-105	6,741.4	0.41	7,009.9	116.2
J-273	6,741.7	0.00	7,009.9	116.0
J-266	6,741.9	0.83	7,009.9	116.0
J-271	6,743.1	0.00	7,009.9	115.4
J-272	6,743.4	0.41	7,009.9	115.3
J-317	6,745.1	0.83	7,009.9	114.6
J-22	6,745.5	0.83	7,009.9	114.4
J-264	6,745.5	0.00	7,009.9	114.4
J-263	6,745.7	0.41	7,009.9	114.3
J-254	6,748.0	0.83	7,009.9	113.3
J-255	6,748.6	0.00	7,009.9	113.1
J-265	6,748.8	0.83	7,009.9	113.0
J-206	6,749.1	0.83	7,009.9	112.9
J-19	6,749.5	0.00	7,009.9	112.7
J-235	6,750.3	0.00	7,010.0	112.3
J-20	6,750.5	1.24	7,009.9	112.3
J-219	6,751.8	0.83	7,010.0	111.7
J-1	6,752.4	0.83	7,010.0	111.4
J-252	6,753.1	1.24	7,009.9	111.1
J-256	6,757.6	0.41	7,009.9	109.2
J-242	6,757.7	1.24	7,009.9	109.1
J-250	6,758.1	1.65	7,009.9	108.9
J-2	6,758.7	1.24	7,010.0	108.7
J-246	6,759.7	0.00	7,009.9	108.2
J-285	6,760.1	0.00	7,009.9	108.1
J-243	6,760.6	0.83	7,009.9	107.9
J-220	6,761.4	0.83	7,010.0	107.5
J-3	6,762.4	1.65	7,010.0	107.1
J-248	6,763.5	1.65	7,009.9	106.6
J-257	6,764.1	0.00	7,009.9	106.3
J-259	6,765.4	0.00	7,009.9	105.8

	6,765.9	0.83	7,009.9	105.6
J-258	6,766.8	0.41	7,009.9	105.2
J-261	6,769.2	0.41	7,009.9	104.1
J-262	6,772.2	0.83	7,009.9	102.8

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Scenario: Average Day 105 psi
Current Time Step: 0.000 h
FlexTable: Pipe Table

Label	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (Maximum) (ft/s)	Headloss Gradient (ft/ft)
P-264	257	12.0	PVC	123.0	90.05	0.26	0.000
P-55	993	12.0	PVC	123.0	62.63	0.18	0.000
P-249	407	12.0	PVC	123.0	62.05	0.18	0.000
P-53	403	12.0	PVC	123.0	61.39	0.17	0.000
P-250	467	12.0	PVC	123.0	60.81	0.17	0.000
P-4	390	12.0	PVC	123.0	59.99	0.17	0.000
P-9	26	12.0	PVC	123.0	59.99	0.17	0.000
P-248	522	8.0	PVC	120.0	26.34	0.17	0.000
P-10	301	12.0	PVC	123.0	59.16	0.17	0.000
P-247	451	8.0	PVC	120.0	25.52	0.16	0.000
P-270	242	8.0	PVC	120.0	22.42	0.14	0.000
P-372	607	8.0	PVC	120.0	21.74	0.14	0.000
P-373	619	8.0	PVC	120.0	21.74	0.14	0.000
P-114	500	8.0	PVC	120.0	21.18	0.14	0.000
P-224	238	8.0	PVC	120.0	20.28	0.13	0.000
P-111	560	8.0	PVC	120.0	19.94	0.13	0.000
P-107	282	8.0	PVC	120.0	19.53	0.12	0.000
P-223	438	8.0	PVC	120.0	19.04	0.12	0.000
P-245	559	8.0	PVC	120.0	18.75	0.12	0.000
P-276	439	8.0	PVC	120.0	17.92	0.11	0.000
P-272	505	12.0	PVC	123.0	40.09	0.11	0.000
P-49	417	12.0	PVC	123.0	39.67	0.11	0.000
P-33	505	8.0	PVC	120.0	17.39	0.11	0.000
P-275	1,027	8.0	PVC	120.0	17.09	0.11	0.000
P-278	265	8.0	PVC	120.0	17.09	0.11	0.000
P-366	417	8.0	PVC	120.0	16.37	0.10	0.000
P-222	472	8.0	PVC	120.0	15.74	0.10	0.000
P-326	450	8.0	PVC	120.0	15.52	0.10	0.000
P-327	213	8.0	PVC	120.0	15.52	0.10	0.000
P-23	351	8.0	PVC	120.0	15.21	0.10	0.000
P-325	501	8.0	PVC	120.0	15.10	0.10	0.000
P-221	311	8.0	PVC	120.0	14.50	0.09	0.000
P-20	287	8.0	PVC	120.0	14.38	0.09	0.000
P-365	388	8.0	PVC	120.0	14.31	0.09	0.000
P-324	465	8.0	PVC	120.0	14.28	0.09	0.000
P-363	106	8.0	PVC	120.0	13.07	0.08	0.000
P-288	401	8.0	PVC	120.0	12.32	0.08	0.000
P-362	496	8.0	PVC	120.0	11.83	0.08	0.000
P-289	293	8.0	PVC	120.0	11.08	0.07	0.000
P-361	189	8.0	PVC	120.0	11.00	0.07	0.000
P-48	504	8.0	PVC	120.0	10.61	0.07	0.000
P-292	506	8.0	PVC	120.0	10.25	0.07	0.000
P-374	558	8.0	PVC	120.0	10.25	0.07	0.000
P-46	473	8.0	PVC	120.0	9.78	0.06	0.000
P-358	297	8.0	PVC	120.0	9.35	0.06	0.000
P-322	34	8.0	PVC	120.0	9.11	0.06	0.000
P-125	479	8.0	PVC	120.0	9.04	0.06	0.000
P-321	312	8.0	PVC	120.0	8.70	0.06	0.000
P-37	348	12.0	PVC	123.0	19.39	0.06	0.000
P-294	162	8.0	PVC	120.0	8.60	0.05	0.000
P-354	48	8.0	PVC	120.0	8.52	0.05	0.000
P-357	413	8.0	PVC	120.0	8.52	0.05	0.000
P-41	338	12.0	PVC	123.0	18.57	0.05	0.000
P-237	151	12.0	PVC	123.0	18.57	0.05	0.000
P-243	524	8.0	PVC	120.0	8.13	0.05	0.000
P-119	150	8.0	PVC	120.0	7.80	0.05	0.000
P-120	27	8.0	PVC	120.0	7.80	0.05	0.000

P-122	284	8.0	PVC	120.0	7.80	0.05	0.000
P-296	496	8.0	PVC	120.0	6.95	0.04	0.000
P-242	371	8.0	PVC	120.0	6.89	0.04	0.000
P-279	238	8.0	PVC	120.0	6.56	0.04	0.000
P-273	126	8.0	PVC	120.0	6.56	0.04	0.000
P-241	423	8.0	PVC	120.0	6.48	0.04	0.000
P-297	513	8.0	PVC	120.0	5.71	0.04	0.000
P-352	62	8.0	PVC	120.0	5.63	0.04	0.000
P-17	413	8.0	PVC	120.0	5.53	0.04	0.000
P-323	30	8.0	PVC	120.0	5.16	0.03	0.000
P-348	441	8.0	PVC	120.0	5.16	0.03	0.000
P-298	48	8.0	PVC	120.0	4.88	0.03	0.000
P-240	584	8.0	PVC	120.0	4.83	0.03	0.000
P-351	469	8.0	PVC	120.0	4.81	0.03	0.000
P-343	252	8.0	PVC	120.0	4.60	0.03	0.000
P-318	26	8.0	PVC	120.0	4.41	0.03	0.000
P-24	187	8.0	PVC	120.0	4.32	0.03	0.000
P-11	486	8.0	PVC	120.0	4.29	0.03	0.000
P-367	57	8.0	PVC	120.0	4.13	0.03	0.000
P-317	329	8.0	PVC	120.0	4.00	0.03	0.000
P-350	203	8.0	PVC	120.0	3.98	0.03	0.000
P-347	447	8.0	PVC	120.0	3.92	0.03	0.000
P-319	30	8.0	PVC	120.0	3.87	0.02	0.000
P-340	394	8.0	PVC	120.0	3.87	0.02	0.000
P-316	406	8.0	PVC	120.0	3.59	0.02	0.000
P-342	508	8.0	PVC	120.0	3.36	0.02	0.000
P-368	499	8.0	PVC	120.0	3.30	0.02	0.000
P-239	373	8.0	PVC	120.0	3.18	0.02	0.000
P-375	32	8.0	PVC	120.0	3.10	0.02	0.000
P-25	411	8.0	PVC	120.0	3.08	0.02	0.000
P-339	425	8.0	PVC	120.0	3.05	0.02	0.000
P-299	459	8.0	PVC	120.0	2.90	0.02	0.000
P-312	30	8.0	PVC	120.0	2.68	0.02	0.000
P-328	359	8.0	PVC	120.0	2.68	0.02	0.000
P-300	254	8.0	PVC	120.0	2.48	0.02	0.000
P-346	387	8.0	PVC	120.0	2.27	0.01	0.000
P-219	52	8.0	PVC	120.0	2.07	0.01	0.000
P-303	242	8.0	PVC	120.0	2.07	0.01	0.000
P-306	289	8.0	PVC	120.0	1.98	0.01	0.000
P-333	339	8.0	PVC	120.0	1.87	0.01	0.000
P-345	421	8.0	PVC	120.0	1.86	0.01	0.000
P-329	28	8.0	PVC	120.0	1.85	0.01	0.000
P-27	439	8.0	PVC	120.0	1.84	0.01	0.000
P-338	454	8.0	PVC	120.0	1.81	0.01	0.000
P-341	455	8.0	PVC	120.0	1.71	0.01	0.000
P-353	30	8.0	PVC	120.0	1.65	0.01	0.000
P-293	438	8.0	PVC	120.0	1.65	0.01	0.000
P-356	370	8.0	PVC	120.0	1.65	0.01	0.000
P-359	205	8.0	PVC	120.0	1.65	0.01	0.000
P-369	359	8.0	PVC	120.0	1.65	0.01	0.000
P-307	24	8.0	PVC	120.0	1.57	0.01	0.000
P-332	218	8.0	PVC	120.0	1.45	0.01	0.000
P-220	500	8.0	PVC	120.0	1.24	0.01	0.000
P-304	337	8.0	PVC	120.0	1.24	0.01	0.000
P-344	410	8.0	PVC	120.0	1.24	0.01	0.000
P-355	294	8.0	PVC	120.0	1.24	0.01	0.000
P-364	400	8.0	PVC	120.0	1.24	0.01	0.000
P-371	374	8.0	PVC	120.0	1.24	0.01	0.000
P-337	56	8.0	PVC	120.0	0.98	0.01	0.000
P-370	245	8.0	PVC	120.0	0.83	0.01	0.000
P-277	40	8.0	PVC	120.0	0.83	0.01	0.000
P-305	379	8.0	PVC	120.0	0.83	0.01	0.000
P-308	371	8.0	PVC	120.0	0.83	0.01	0.000
P-334	433	8.0	PVC	120.0	0.83	0.01	0.000
P-335	269	8.0	PVC	120.0	0.83	0.01	0.000
P-336	356	8.0	PVC	120.0	0.83	0.01	0.000
P-349	408	8.0	PVC	120.0	0.83	0.01	0.000
P-360	466	8.0	PVC	120.0	0.83	0.01	0.000

	351	8.0	PVC	120.0	0.75	0.00	0.000
P-331	147	8.0	PVC	120.0	0.63	0.00	0.000
P-311	45	8.0	PVC	120.0	0.49	0.00	0.000
P-301	108	8.0	PVC	120.0	0.42	0.00	0.000
P-314	333	8.0	PVC	120.0	0.42	0.00	0.000
P-313	337	8.0	PVC	120.0	0.42	0.00	0.000
P-320	198	8.0	PVC	120.0	0.41	0.00	0.000
P-330	480	8.0	PVC	120.0	0.20	0.00	0.000
P-310	308	8.0	PVC	120.0	0.08	0.00	0.000
P-315	4	6.0	PVC	120.0	0.00	0.00	0.000
P-302	13	8.0	PVC	120.0	0.00	0.00	0.000

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Scenario: Max Day
Current Time Step: 0.000 h
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-327	6,667.7	2.19	7,009.5	147.9
J-326	6,675.9	2.19	7,009.5	144.3
J-325	6,683.2	4.38	7,009.5	141.2
J-329	6,685.2	0.00	7,009.5	140.3
J-216	6,685.5	4.38	7,009.6	140.2
J-215	6,686.6	0.00	7,009.6	139.8
J-43	6,687.9	0.00	7,009.6	139.2
J-42	6,691.4	2.19	7,009.6	137.7
J-324	6,693.3	2.19	7,009.5	136.8
J-45	6,694.6	3.28	7,009.6	136.3
J-323	6,694.8	0.00	7,009.5	136.1
J-44	6,696.3	4.38	7,009.6	135.6
J-38	6,697.8	0.00	7,009.6	134.9
J-217	6,698.9	1.09	7,009.6	134.4
J-328	6,699.1	3.28	7,009.5	134.3
J-230	6,700.8	1.09	7,009.6	133.6
J-218	6,700.9	4.38	7,009.6	133.6
J-208	6,701.5	3.28	7,009.6	133.3
J-322	6,705.2	5.47	7,009.5	131.6
J-48	6,706.3	2.19	7,009.6	131.2
J-35	6,706.3	4.38	7,009.6	131.2
J-50	6,710.8	4.38	7,009.7	129.3
J-32	6,711.3	4.38	7,009.5	129.0
J-4	6,713.7	2.19	7,009.9	128.1
J-294	6,714.5	2.19	7,009.4	127.6
J-320	6,714.6	0.00	7,009.4	127.6
J-319	6,715.8	3.28	7,009.4	127.0
J-54	6,716.4	3.28	7,009.7	126.9
J-305	6,718.4	0.00	7,009.4	125.9
J-303	6,718.6	2.19	7,009.4	125.8
J-207	6,718.9	3.28	7,009.5	125.7
J-120	6,719.2	3.28	7,009.6	125.7
J-291	6,720.3	0.00	7,009.4	125.1
J-295	6,720.4	2.19	7,009.4	125.0
J-293	6,721.0	2.19	7,009.4	124.8
J-9	6,721.6	0.00	7,009.8	124.7
J-10	6,721.6	2.19	7,009.8	124.7
J-318	6,721.2	2.19	7,009.4	124.7
J-306	6,721.6	2.19	7,009.4	124.5
J-304	6,722.6	3.28	7,009.4	124.1
J-312	6,723.1	3.28	7,009.4	123.9
J-315	6,723.3	0.00	7,009.4	123.8
J-321	6,723.5	3.28	7,009.4	123.7
J-290	6,723.5	1.09	7,009.4	123.7
J-29	6,724.1	2.19	7,009.5	123.5
J-231	6,724.3	0.00	7,009.6	123.5
J-298	6,724.6	4.38	7,009.4	123.2
J-296	6,725.0	3.28	7,009.4	123.0
J-302	6,725.3	1.09	7,009.4	122.9
J-289	6,725.7	0.00	7,009.4	122.7
J-333	6,726.7	3.28	7,009.6	122.4
J-314	6,726.5	2.19	7,009.4	122.4
J-116	6,726.8	3.28	7,009.6	122.4
J-118	6,727.0	0.00	7,009.6	122.3
J-117	6,727.0	0.00	7,009.6	122.3
J-11	6,727.2	2.19	7,009.8	122.3
J-281	6,727.0	0.00	7,009.4	122.2

J-288	6,727.1	2.19	7,009.4	122.1
J-280	6,727.3	0.00	7,009.4	122.0
J-279	6,727.7	1.09	7,009.4	121.9
J-283	6,728.0	1.09	7,009.4	121.8
J-316	6,728.5	2.19	7,009.4	121.5
J-297	6,729.3	2.19	7,009.4	121.2
J-311	6,729.7	0.00	7,009.4	121.0
J-310	6,729.8	0.00	7,009.4	121.0
J-284	6,729.9	0.00	7,009.5	121.0
J-299	6,729.9	3.28	7,009.4	120.9
J-309	6,730.2	0.00	7,009.4	120.8
J-308	6,730.5	2.19	7,009.4	120.7
J-112	6,730.8	3.28	7,009.6	120.6
J-276	6,730.8	0.00	7,009.4	120.5
J-275	6,731.1	1.09	7,009.4	120.4
J-282	6,731.2	2.19	7,009.4	120.4
J-27	6,731.4	3.28	7,009.5	120.3
J-300	6,732.5	0.00	7,009.4	119.8
J-287	6,732.6	4.38	7,009.4	119.7
J-286	6,733.0	0.00	7,009.4	119.6
J-277	6,733.2	0.00	7,009.4	119.5
J-274	6,734.4	1.09	7,009.4	119.0
J-301	6,734.5	3.28	7,009.4	118.9
J-307	6,734.6	2.19	7,009.4	118.9
J-278	6,735.7	1.09	7,009.4	118.4
J-221	6,736.5	3.28	7,009.9	118.3
J-109	6,736.7	3.28	7,009.6	118.1
J-313	6,736.9	4.38	7,009.4	117.9
J-14	6,737.8	3.28	7,009.8	117.7
J-26	6,738.0	3.28	7,009.5	117.5
J-269	6,738.0	0.00	7,009.4	117.4
J-234	6,738.5	0.00	7,009.7	117.3
J-268	6,738.4	0.00	7,009.4	117.2
J-267	6,738.9	1.09	7,009.4	117.0
J-292	6,739.2	2.19	7,009.4	116.9
J-25	6,740.6	0.00	7,009.5	116.3
J-105	6,741.4	1.09	7,009.5	116.0
J-273	6,741.7	0.00	7,009.4	115.8
J-266	6,741.9	2.19	7,009.4	115.7
J-271	6,743.1	0.00	7,009.4	115.2
J-272	6,743.4	1.09	7,009.4	115.1
J-317	6,745.1	2.19	7,009.4	114.4
J-22	6,745.5	2.19	7,009.5	114.2
J-264	6,745.5	0.00	7,009.4	114.2
J-263	6,745.7	1.09	7,009.4	114.1
J-254	6,748.0	2.19	7,009.4	113.1
J-255	6,748.6	0.00	7,009.4	112.8
J-265	6,748.8	2.19	7,009.4	112.7
J-206	6,749.1	2.19	7,009.4	112.7
J-19	6,749.5	0.00	7,009.4	112.5
J-235	6,750.3	0.00	7,009.7	112.2
J-20	6,750.5	3.28	7,009.4	112.1
J-219	6,751.8	2.19	7,009.8	111.6
J-1	6,752.4	2.19	7,009.7	111.3
J-252	6,753.1	3.28	7,009.4	110.9
J-256	6,757.6	1.09	7,009.4	108.9
J-242	6,757.7	3.28	7,009.4	108.9
J-250	6,758.1	4.38	7,009.4	108.7
J-2	6,758.7	3.28	7,009.8	108.6
J-246	6,759.7	0.00	7,009.4	108.0
J-285	6,760.1	0.00	7,009.4	107.9
J-243	6,760.6	2.19	7,009.4	107.7
J-220	6,761.4	2.19	7,009.9	107.5
J-3	6,762.4	4.38	7,009.9	107.1
J-248	6,763.5	4.38	7,009.4	106.4
J-257	6,764.1	0.00	7,009.4	106.1
J-259	6,765.4	0.00	7,009.4	105.6

	6,765.9	2.19	7,009.4	105.3
J-258	6,766.8	1.09	7,009.4	105.0
J-261	6,769.2	1.09	7,009.4	103.9
J-262	6,772.2	2.19	7,009.4	102.6

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Scenario: Max Day 105 psi
Current Time Step: 0.000 h
FlexTable: Pipe Table

Label	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (Maximum) (ft/s)	Headloss Gradient (ft/ft)
P-264	257	12.0	PVC	123.0	238.59	0.68	0.000
P-55	993	12.0	PVC	123.0	165.94	0.47	0.000
P-249	407	12.0	PVC	123.0	164.41	0.47	0.000
P-53	403	12.0	PVC	123.0	162.66	0.46	0.000
P-250	467	12.0	PVC	123.0	161.13	0.46	0.000
P-4	390	12.0	PVC	123.0	158.94	0.45	0.000
P-9	26	12.0	PVC	123.0	158.94	0.45	0.000
P-248	522	8.0	PVC	120.0	69.80	0.45	0.000
P-10	301	12.0	PVC	123.0	156.75	0.44	0.000
P-247	451	8.0	PVC	120.0	67.61	0.43	0.000
P-270	242	8.0	PVC	120.0	59.39	0.38	0.000
P-372	607	8.0	PVC	120.0	57.60	0.37	0.000
P-373	619	8.0	PVC	120.0	57.60	0.37	0.000
P-114	500	8.0	PVC	120.0	56.11	0.36	0.000
P-224	238	8.0	PVC	120.0	53.74	0.34	0.000
P-111	560	8.0	PVC	120.0	52.83	0.34	0.000
P-107	282	8.0	PVC	120.0	51.73	0.33	0.000
P-223	438	8.0	PVC	120.0	50.45	0.32	0.000
P-245	559	8.0	PVC	120.0	49.67	0.32	0.000
P-276	439	8.0	PVC	120.0	47.48	0.30	0.000
P-272	505	12.0	PVC	123.0	106.21	0.30	0.000
P-49	417	12.0	PVC	123.0	105.12	0.30	0.000
P-33	505	8.0	PVC	120.0	46.08	0.29	0.000
P-275	1,027	8.0	PVC	120.0	45.29	0.29	0.000
P-278	265	8.0	PVC	120.0	45.29	0.29	0.000
P-366	417	8.0	PVC	120.0	43.38	0.28	0.000
P-222	472	8.0	PVC	120.0	41.70	0.27	0.000
P-326	450	8.0	PVC	120.0	41.11	0.26	0.000
P-327	213	8.0	PVC	120.0	41.11	0.26	0.000
P-23	351	8.0	PVC	120.0	40.29	0.26	0.000
P-325	501	8.0	PVC	120.0	40.01	0.26	0.000
P-221	311	8.0	PVC	120.0	38.42	0.25	0.000
P-20	287	8.0	PVC	120.0	38.10	0.24	0.000
P-365	388	8.0	PVC	120.0	37.90	0.24	0.000
P-324	465	8.0	PVC	120.0	37.82	0.24	0.000
P-363	106	8.0	PVC	120.0	34.62	0.22	0.000
P-288	401	8.0	PVC	120.0	32.63	0.21	0.000
P-362	496	8.0	PVC	120.0	31.34	0.20	0.000
P-289	293	8.0	PVC	120.0	29.34	0.19	0.000
P-361	189	8.0	PVC	120.0	29.15	0.19	0.000
P-48	504	8.0	PVC	120.0	28.11	0.18	0.000
P-292	506	8.0	PVC	120.0	27.15	0.17	0.000
P-374	558	8.0	PVC	120.0	27.15	0.17	0.000
P-46	473	8.0	PVC	120.0	25.92	0.17	0.000
P-358	297	8.0	PVC	120.0	24.77	0.16	0.000
P-322	34	8.0	PVC	120.0	24.14	0.15	0.000
P-125	479	8.0	PVC	120.0	23.95	0.15	0.000
P-321	312	8.0	PVC	120.0	23.04	0.15	0.000
P-37	348	12.0	PVC	123.0	51.38	0.15	0.000
P-294	162	8.0	PVC	120.0	22.78	0.15	0.000
P-354	48	8.0	PVC	120.0	22.58	0.14	0.000
P-357	413	8.0	PVC	120.0	22.58	0.14	0.000
P-41	338	12.0	PVC	123.0	49.19	0.14	0.000
P-237	151	12.0	PVC	123.0	49.19	0.14	0.000
P-243	524	8.0	PVC	120.0	21.54	0.14	0.000
P-119	150	8.0	PVC	120.0	20.67	0.13	0.000
P-120	27	8.0	PVC	120.0	20.67	0.13	0.000

P-122	284	8.0	PVC	120.0	20.67	0.13	0.000
P-296	496	8.0	PVC	120.0	18.40	0.12	0.000
P-242	371	8.0	PVC	120.0	18.26	0.12	0.000
P-279	238	8.0	PVC	120.0	17.39	0.11	0.000
P-273	126	8.0	PVC	120.0	17.39	0.11	0.000
P-241	423	8.0	PVC	120.0	17.17	0.11	0.000
P-297	513	8.0	PVC	120.0	15.11	0.10	0.000
P-352	62	8.0	PVC	120.0	14.92	0.10	0.000
P-17	413	8.0	PVC	120.0	14.66	0.09	0.000
P-323	30	8.0	PVC	120.0	13.68	0.09	0.000
P-348	441	8.0	PVC	120.0	13.68	0.09	0.000
P-298	48	8.0	PVC	120.0	12.93	0.08	0.000
P-240	584	8.0	PVC	120.0	12.79	0.08	0.000
P-351	469	8.0	PVC	120.0	12.73	0.08	0.000
P-343	252	8.0	PVC	120.0	12.19	0.08	0.000
P-318	26	8.0	PVC	120.0	11.69	0.07	0.000
P-24	187	8.0	PVC	120.0	11.44	0.07	0.000
P-11	486	8.0	PVC	120.0	11.38	0.07	0.000
P-367	57	8.0	PVC	120.0	10.94	0.07	0.000
P-317	329	8.0	PVC	120.0	10.59	0.07	0.000
P-350	203	8.0	PVC	120.0	10.54	0.07	0.000
P-347	447	8.0	PVC	120.0	10.40	0.07	0.000
P-319	30	8.0	PVC	120.0	10.26	0.07	0.000
P-340	394	8.0	PVC	120.0	10.26	0.07	0.000
P-316	406	8.0	PVC	120.0	9.50	0.06	0.000
P-342	508	8.0	PVC	120.0	8.90	0.06	0.000
P-368	499	8.0	PVC	120.0	8.76	0.06	0.000
P-239	373	8.0	PVC	120.0	8.41	0.05	0.000
P-375	32	8.0	PVC	120.0	8.21	0.05	0.000
P-25	411	8.0	PVC	120.0	8.16	0.05	0.000
P-339	425	8.0	PVC	120.0	8.07	0.05	0.000
P-299	459	8.0	PVC	120.0	7.66	0.05	0.000
P-312	30	8.0	PVC	120.0	7.10	0.05	0.000
P-328	359	8.0	PVC	120.0	7.10	0.05	0.000
P-300	254	8.0	PVC	120.0	6.57	0.04	0.000
P-346	387	8.0	PVC	120.0	6.02	0.04	0.000
P-219	52	8.0	PVC	120.0	5.47	0.03	0.000
P-303	242	8.0	PVC	120.0	5.47	0.03	0.000
P-306	289	8.0	PVC	120.0	5.26	0.03	0.000
P-333	339	8.0	PVC	120.0	4.94	0.03	0.000
P-345	421	8.0	PVC	120.0	4.93	0.03	0.000
P-329	28	8.0	PVC	120.0	4.91	0.03	0.000
P-27	439	8.0	PVC	120.0	4.88	0.03	0.000
P-338	454	8.0	PVC	120.0	4.79	0.03	0.000
P-341	455	8.0	PVC	120.0	4.53	0.03	0.000
P-293	438	8.0	PVC	120.0	4.38	0.03	0.000
P-353	30	8.0	PVC	120.0	4.38	0.03	0.000
P-356	370	8.0	PVC	120.0	4.38	0.03	0.000
P-359	205	8.0	PVC	120.0	4.38	0.03	0.000
P-369	359	8.0	PVC	120.0	4.38	0.03	0.000
P-307	24	8.0	PVC	120.0	4.17	0.03	0.000
P-332	218	8.0	PVC	120.0	3.84	0.02	0.000
P-220	500	8.0	PVC	120.0	3.28	0.02	0.000
P-304	337	8.0	PVC	120.0	3.28	0.02	0.000
P-344	410	8.0	PVC	120.0	3.28	0.02	0.000
P-355	294	8.0	PVC	120.0	3.28	0.02	0.000
P-364	400	8.0	PVC	120.0	3.28	0.02	0.000
P-371	374	8.0	PVC	120.0	3.28	0.02	0.000
P-337	56	8.0	PVC	120.0	2.60	0.02	0.000
P-305	379	8.0	PVC	120.0	2.19	0.01	0.000
P-308	371	8.0	PVC	120.0	2.19	0.01	0.000
P-334	433	8.0	PVC	120.0	2.19	0.01	0.000
P-335	269	8.0	PVC	120.0	2.19	0.01	0.000
P-336	356	8.0	PVC	120.0	2.19	0.01	0.000
P-349	408	8.0	PVC	120.0	2.19	0.01	0.000
P-360	466	8.0	PVC	120.0	2.19	0.01	0.000
P-370	245	8.0	PVC	120.0	2.19	0.01	0.000
P-277	40	8.0	PVC	120.0	2.19	0.01	0.000

	351	8.0	PVC	120.0	1.98	0.01	0.000
P-331	147	8.0	PVC	120.0	1.65	0.01	0.000
P-311	45	8.0	PVC	120.0	1.30	0.01	0.000
P-301	108	8.0	PVC	120.0	1.09	0.01	0.000
P-313	337	8.0	PVC	120.0	1.09	0.01	0.000
P-314	333	8.0	PVC	120.0	1.09	0.01	0.000
P-320	198	8.0	PVC	120.0	1.09	0.01	0.000
P-330	480	8.0	PVC	120.0	0.53	0.00	0.000
P-310	308	8.0	PVC	120.0	0.21	0.00	0.000
P-302	13	8.0	PVC	120.0	0.00	0.00	0.000
P-315	4	6.0	PVC	120.0	0.00	0.00	0.000

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Scenario: Max Day + Fire Flow 105 psi
Current Time Step: 0.000 h
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-327	6,667.7	2.19	6,985.8	137.6
J-326	6,675.9	2.19	6,985.8	134.1
J-216	6,685.5	4.38	6,992.9	133.0
J-215	6,686.6	0.00	6,992.7	132.4
J-43	6,687.9	0.00	6,992.7	131.9
J-329	6,685.2	0.00	6,989.2	131.5
J-325	6,683.2	4.38	6,985.8	130.9
J-42	6,691.4	2.19	6,992.9	130.4
J-45	6,694.6	3.28	6,993.9	129.5
J-44	6,696.3	4.38	6,993.3	128.5
J-38	6,697.8	0.00	6,993.0	127.7
J-217	6,698.9	1.09	6,993.6	127.5
J-218	6,700.9	4.38	6,994.3	126.9
J-230	6,700.8	1.09	6,993.9	126.8
J-324	6,693.3	2.19	6,985.8	126.6
J-323	6,694.8	0.00	6,985.8	125.9
J-4	6,713.7	2.19	7,004.5	125.8
J-208	6,701.5	3.28	6,991.3	125.4
J-48	6,706.3	2.19	6,994.7	124.8
J-328	6,699.1	3.28	6,985.8	124.1
J-50	6,710.8	4.38	6,995.1	123.0
J-35	6,706.3	4.38	6,988.2	122.0
J-9	6,721.6	0.00	7,002.9	121.7
J-10	6,721.6	2.19	7,002.8	121.7
J-54	6,716.4	3.28	6,997.0	121.4
J-322	6,705.2	5.47	6,983.6	120.5
J-120	6,719.2	3.28	6,994.4	119.1
J-11	6,727.2	2.19	7,001.6	118.7
J-32	6,711.3	4.38	6,984.7	118.3
J-221	6,736.5	3.28	7,006.3	116.8
J-231	6,724.3	0.00	6,993.5	116.5
J-320	6,714.6	0.00	6,981.6	115.5
J-118	6,727.0	0.00	6,993.9	115.5
J-117	6,727.0	0.00	6,993.9	115.5
J-116	6,726.8	3.28	6,993.7	115.5
J-333	6,726.7	3.28	6,993.2	115.3
J-319	6,715.8	3.28	6,981.1	114.8
J-14	6,737.8	3.28	7,001.8	114.2
J-207	6,718.9	3.28	6,981.4	113.6
J-112	6,730.8	3.28	6,991.0	112.6
J-234	6,738.5	0.00	6,997.1	111.9
J-321	6,723.5	3.28	6,981.6	111.7
J-318	6,721.2	2.19	6,978.6	111.4
J-29	6,724.1	2.19	6,979.3	110.4
J-315	6,723.3	0.00	6,977.6	110.0
J-294	6,714.5	2.19	6,967.2	109.3
J-305	6,718.4	0.00	6,970.3	109.0
J-303	6,718.6	2.19	6,970.3	108.9
J-312	6,723.1	3.28	6,973.9	108.5
J-109	6,736.7	3.28	6,986.6	108.1
J-314	6,726.5	2.19	6,976.2	108.0
J-316	6,728.5	2.19	6,977.6	107.8
J-306	6,721.6	2.19	6,970.3	107.6
J-284	6,729.9	0.00	6,978.1	107.4
J-219	6,751.8	2.19	6,999.8	107.3
J-27	6,731.4	3.28	6,979.3	107.3
J-235	6,750.3	0.00	6,998.1	107.2

J-304	6,722.6	3.28	6,970.1	107.1
J-283	6,728.0	1.09	6,975.5	107.1
J-291	6,720.3	0.00	6,967.2	106.8
J-295	6,720.4	2.19	6,967.2	106.8
J-1	6,752.4	2.19	6,998.1	106.3
J-3	6,762.4	4.38	7,008.0	106.3
J-302	6,725.3	1.09	6,970.4	106.1
J-311	6,729.7	0.00	6,974.2	105.8
J-293	6,721.0	2.19	6,965.4	105.8
J-310	6,729.8	0.00	6,973.9	105.6
J-298	6,724.6	4.38	6,968.4	105.5
J-309	6,730.2	0.00	6,973.9	105.5
J-220	6,761.4	2.19	7,004.7	105.3
J-2	6,758.7	3.28	7,001.9	105.2
J-308	6,730.5	2.19	6,973.6	105.2
J-281	6,727.0	0.00	6,970.0	105.1
J-280	6,727.3	0.00	6,970.0	105.0
J-290	6,723.5	1.09	6,966.1	105.0
J-296	6,725.0	3.28	6,967.3	104.8
J-279	6,727.7	1.09	6,969.7	104.7
J-282	6,731.2	2.19	6,972.6	104.5
J-26	6,738.0	3.28	6,979.2	104.4
J-105	6,741.4	1.09	6,981.7	104.0
J-299	6,729.9	3.28	6,969.8	103.8
J-289	6,725.7	0.00	6,965.4	103.7
J-25	6,740.6	0.00	6,979.2	103.2
J-300	6,732.5	0.00	6,970.5	103.0
J-297	6,729.3	2.19	6,967.3	103.0
J-288	6,727.1	2.19	6,965.0	102.9
J-313	6,736.9	4.38	6,973.9	102.6
J-307	6,734.6	2.19	6,971.5	102.5
J-276	6,730.8	0.00	6,967.3	102.3
J-275	6,731.1	1.09	6,967.1	102.1
J-301	6,734.5	3.28	6,970.5	102.1
J-277	6,733.2	0.00	6,967.3	101.3
J-317	6,745.1	2.19	6,977.6	100.6
J-278	6,735.7	1.09	6,967.3	100.2
J-287	6,732.6	4.38	6,963.5	99.9
J-274	6,734.4	1.09	6,964.9	99.7
J-286	6,733.0	0.00	6,963.4	99.7
J-22	6,745.5	2.19	6,975.8	99.7
J-269	6,738.0	0.00	6,962.3	97.1
J-292	6,739.2	2.19	6,963.4	97.0
J-206	6,749.1	2.19	6,973.0	96.9
J-268	6,738.4	0.00	6,962.2	96.8
J-19	6,749.5	0.00	6,973.0	96.7
J-267	6,738.9	1.09	6,961.5	96.3
J-20	6,750.5	3.28	6,973.0	96.3
J-273	6,741.7	0.00	6,962.2	95.4
J-271	6,743.1	0.00	6,962.2	94.8
J-272	6,743.4	1.09	6,962.2	94.7
J-266	6,741.9	2.19	6,956.3	92.8
J-242	6,757.7	3.28	6,969.2	91.5
J-243	6,760.6	2.19	6,966.4	89.0
J-264	6,745.5	0.00	6,950.4	88.7
J-263	6,745.7	1.09	6,950.0	88.4
J-265	6,748.8	2.19	6,950.4	87.2
J-285	6,760.1	0.00	6,961.6	87.2
J-254	6,748.0	2.19	6,945.7	85.5
J-252	6,753.1	3.28	6,950.3	85.3
J-250	6,758.1	4.38	6,954.9	85.1
J-246	6,759.7	0.00	6,956.4	85.1
J-255	6,748.6	0.00	6,945.2	85.1
J-248	6,763.5	4.38	6,956.4	83.5
J-256	6,757.6	1.09	6,924.5	72.2
J-257	6,764.1	0.00	6,913.0	64.4
J-259	6,765.4	0.00	6,913.0	63.8

	6,766.8	1.09	6,913.0	63.2
J-260	6,765.9	2.19	6,902.0	58.9
J-261	6,769.2	1.09	6,886.8	50.9
J-262	6,772.2	1,502.19	6,869.8	42.2

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Scenario: Max Day + Fire Flow 105 psi
Current Time Step: 0.000 h
FlexTable: Pipe Table

Label	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (Maximum) (ft/s)	Headloss Gradient (ft/ft)
P-299	459	8.0	PVC	120.0	1,507.66	9.62	0.045
P-300	254	8.0	PVC	120.0	1,506.57	9.62	0.045
P-303	242	8.0	PVC	120.0	1,505.47	9.61	0.045
P-304	337	8.0	PVC	120.0	1,503.28	9.60	0.045
P-305	379	8.0	PVC	120.0	1,502.19	9.59	0.045
P-311	45	8.0	PVC	120.0	883.18	5.64	0.017
P-310	308	8.0	PVC	120.0	882.09	5.63	0.017
P-309	351	8.0	PVC	120.0	879.90	5.62	0.017
P-307	24	8.0	PVC	120.0	877.71	5.60	0.017
P-306	289	8.0	PVC	120.0	876.61	5.60	0.017
P-264	257	12.0	PVC	123.0	1,738.60	4.93	0.008
P-23	351	8.0	PVC	120.0	658.41	4.20	0.010
P-20	287	8.0	PVC	120.0	656.22	4.19	0.010
P-288	401	8.0	PVC	120.0	650.75	4.15	0.010
P-289	293	8.0	PVC	120.0	647.46	4.13	0.009
P-292	506	8.0	PVC	120.0	645.27	4.12	0.009
P-374	558	8.0	PVC	120.0	645.27	4.12	0.009
P-294	162	8.0	PVC	120.0	640.90	4.09	0.009
P-296	496	8.0	PVC	120.0	636.52	4.06	0.009
P-297	513	8.0	PVC	120.0	633.24	4.04	0.009
P-298	48	8.0	PVC	120.0	631.05	4.03	0.009
P-270	242	8.0	PVC	120.0	626.86	4.00	0.009
P-114	500	8.0	PVC	120.0	623.58	3.98	0.009
P-111	560	8.0	PVC	120.0	620.30	3.96	0.009
P-107	282	8.0	PVC	120.0	619.20	3.95	0.009
P-55	993	12.0	PVC	123.0	1,315.68	3.73	0.005
P-322	34	8.0	PVC	120.0	584.47	3.73	0.008
P-321	312	8.0	PVC	120.0	583.38	3.72	0.008
P-53	403	12.0	PVC	123.0	1,312.40	3.72	0.005
P-224	238	8.0	PVC	120.0	556.96	3.55	0.007
P-223	438	8.0	PVC	120.0	553.68	3.53	0.007
P-33	505	8.0	PVC	120.0	549.30	3.51	0.007
P-222	472	8.0	PVC	120.0	544.92	3.48	0.007
P-221	311	8.0	PVC	120.0	541.64	3.46	0.007
P-249	407	12.0	PVC	123.0	1,216.61	3.45	0.004
P-250	467	12.0	PVC	123.0	1,213.33	3.44	0.004
P-4	390	12.0	PVC	123.0	1,211.14	3.44	0.004
P-9	26	12.0	PVC	123.0	1,211.14	3.44	0.004
P-318	26	8.0	PVC	120.0	537.63	3.43	0.007
P-10	301	12.0	PVC	123.0	1,208.95	3.43	0.004
P-317	329	8.0	PVC	120.0	536.54	3.42	0.007
P-316	406	8.0	PVC	120.0	535.44	3.42	0.007
P-248	522	8.0	PVC	120.0	517.61	3.30	0.006
P-247	451	8.0	PVC	120.0	515.42	3.29	0.006
P-326	450	8.0	PVC	120.0	493.68	3.15	0.006
P-327	213	8.0	PVC	120.0	493.68	3.15	0.006
P-325	501	8.0	PVC	120.0	492.58	3.14	0.006
P-324	465	8.0	PVC	120.0	490.40	3.13	0.006
P-372	607	8.0	PVC	120.0	486.91	3.11	0.006
P-373	619	8.0	PVC	120.0	486.91	3.11	0.006
P-366	417	8.0	PVC	120.0	472.69	3.02	0.005
P-365	388	8.0	PVC	120.0	467.21	2.98	0.005
P-363	106	8.0	PVC	120.0	463.93	2.96	0.005
P-362	496	8.0	PVC	120.0	460.65	2.94	0.005
P-361	189	8.0	PVC	120.0	458.46	2.93	0.005
P-358	297	8.0	PVC	120.0	454.08	2.90	0.005
P-354	48	8.0	PVC	120.0	451.89	2.88	0.005

P-357	413	8.0	PVC	120.0	451.89	2.88	0.005
P-352	62	8.0	PVC	120.0	444.23	2.84	0.005
P-351	469	8.0	PVC	120.0	442.04	2.82	0.005
P-350	203	8.0	PVC	120.0	439.85	2.81	0.005
P-245	559	8.0	PVC	120.0	399.93	2.55	0.004
P-276	439	8.0	PVC	120.0	397.74	2.54	0.004
P-272	505	12.0	PVC	123.0	894.37	2.54	0.002
P-49	417	12.0	PVC	123.0	893.28	2.53	0.002
P-275	1,027	8.0	PVC	120.0	395.56	2.52	0.004
P-278	265	8.0	PVC	120.0	395.56	2.52	0.004
P-333	339	8.0	PVC	120.0	360.88	2.30	0.003
P-332	218	8.0	PVC	120.0	359.78	2.30	0.003
P-331	147	8.0	PVC	120.0	357.59	2.28	0.003
P-330	480	8.0	PVC	120.0	355.41	2.27	0.003
P-329	28	8.0	PVC	120.0	351.03	2.24	0.003
P-312	30	8.0	PVC	120.0	348.84	2.23	0.003
P-328	359	8.0	PVC	120.0	348.84	2.23	0.003
P-343	252	8.0	PVC	120.0	333.74	2.13	0.003
P-342	508	8.0	PVC	120.0	330.46	2.11	0.003
P-341	455	8.0	PVC	120.0	326.08	2.08	0.003
P-125	479	8.0	PVC	120.0	241.16	1.54	0.002
P-119	150	8.0	PVC	120.0	237.87	1.52	0.001
P-120	27	8.0	PVC	120.0	237.87	1.52	0.001
P-122	284	8.0	PVC	120.0	237.87	1.52	0.001
P-279	238	8.0	PVC	120.0	234.59	1.50	0.001
P-273	126	8.0	PVC	120.0	234.59	1.50	0.001
P-48	504	8.0	PVC	120.0	172.49	1.10	0.001
P-46	473	8.0	PVC	120.0	170.30	1.09	0.001
P-243	524	8.0	PVC	120.0	165.92	1.06	0.001
P-242	371	8.0	PVC	120.0	162.64	1.04	0.001
P-241	423	8.0	PVC	120.0	161.54	1.03	0.001
P-240	584	8.0	PVC	120.0	157.16	1.00	0.001
P-239	373	8.0	PVC	120.0	152.79	0.98	0.001
P-37	348	12.0	PVC	123.0	336.32	0.95	0.000
P-41	338	12.0	PVC	123.0	334.13	0.95	0.000
P-237	151	12.0	PVC	123.0	334.13	0.95	0.000
P-17	413	8.0	PVC	120.0	112.20	0.72	0.000
P-11	486	8.0	PVC	120.0	108.92	0.70	0.000
P-345	421	8.0	PVC	120.0	102.83	0.66	0.000
P-346	387	8.0	PVC	120.0	101.74	0.65	0.000
P-375	32	8.0	PVC	120.0	99.55	0.64	0.000
P-347	447	8.0	PVC	120.0	97.36	0.62	0.000
P-323	30	8.0	PVC	120.0	94.07	0.60	0.000
P-348	441	8.0	PVC	120.0	94.07	0.60	0.000
P-27	439	8.0	PVC	120.0	45.77	0.29	0.000
P-319	30	8.0	PVC	120.0	44.65	0.28	0.000
P-340	394	8.0	PVC	120.0	44.65	0.28	0.000
P-25	411	8.0	PVC	120.0	42.49	0.27	0.000
P-339	425	8.0	PVC	120.0	42.46	0.27	0.000
P-24	187	8.0	PVC	120.0	39.21	0.25	0.000
P-338	454	8.0	PVC	120.0	39.18	0.25	0.000
P-337	56	8.0	PVC	120.0	36.99	0.24	0.000
P-367	57	8.0	PVC	120.0	10.94	0.07	0.000
P-368	499	8.0	PVC	120.0	8.76	0.06	0.000
P-219	52	8.0	PVC	120.0	5.47	0.03	0.000
P-293	438	8.0	PVC	120.0	4.38	0.03	0.000
P-353	30	8.0	PVC	120.0	4.38	0.03	0.000
P-356	370	8.0	PVC	120.0	4.38	0.03	0.000
P-359	205	8.0	PVC	120.0	4.38	0.03	0.000
P-369	359	8.0	PVC	120.0	4.38	0.03	0.000
P-220	500	8.0	PVC	120.0	3.28	0.02	0.000
P-344	410	8.0	PVC	120.0	3.28	0.02	0.000
P-355	294	8.0	PVC	120.0	3.28	0.02	0.000
P-364	400	8.0	PVC	120.0	3.28	0.02	0.000
P-371	374	8.0	PVC	120.0	3.28	0.02	0.000
P-308	371	8.0	PVC	120.0	2.19	0.01	0.000
P-334	433	8.0	PVC	120.0	2.19	0.01	0.000
P-335	269	8.0	PVC	120.0	2.19	0.01	0.000

	356	8.0	PVC	120.0	2.19	0.01	0.000
P-349	408	8.0	PVC	120.0	2.19	0.01	0.000
P-360	466	8.0	PVC	120.0	2.19	0.01	0.000
P-370	245	8.0	PVC	120.0	2.19	0.01	0.000
P-277	40	8.0	PVC	120.0	2.19	0.01	0.000
P-313	337	8.0	PVC	120.0	1.10	0.01	0.000
P-314	333	8.0	PVC	120.0	1.10	0.01	0.000
P-301	108	8.0	PVC	120.0	1.09	0.01	0.000
P-320	198	8.0	PVC	120.0	1.09	0.01	0.000
P-315	4	6.0	PVC	120.0	0.00	0.00	0.000
P-302	13	8.0	PVC	120.0	0.00	0.00	0.000

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Saddlehorn Ranch Filings 1-5
Water System Demands

Filing 1 **Filing 2** **Filling 3**
Filing 4 **Filling 5**

Junction	# Units Served	Average Day (GPD)	Average Day (GPM)	Max Day (GPD)	Max Day (GPM)
1	2	1,190	0.83	3,154	2.19
2	3	1,785	1.24	4,730	3.28
3	4	2,380	1.65	6,307	4.38
4	2	1,190	0.83	3,154	2.19
9	0	0	0.00	0	0.00
10	2	1,190	0.83	3,154	2.19
11	2	1,190	0.83	3,154	2.19
14	3	1,785	1.24	4,730	3.28
44	4	2,380	1.65	6,307	4.38
45	3	1,785	1.24	4,730	3.28
48	2	1,190	0.83	3,154	2.19
50	4	2,380	1.65	6,307	4.38
54	3	1,785	1.24	4,730	3.28
116	3	1,785	1.24	4,730	3.28
117	0	0	0.00	0	0.00
118	0	0	0.00	0	0.00
120	3	1,785	1.24	4,730	3.28
217	1	595	0.41	1,577	1.09
218	4	2,380	1.65	6,307	4.38
219	2	1,190	0.83	3,154	2.19
220	2	1,190	0.83	3,154	2.19
221	3	1,785	1.24	4,730	3.28
333	3	1,785	1.24	4,730	3.28
231	0	0	0.00	0	0.00
Filing 1 Total	**55**	**32,725**	**22.73**	**86,721**	**60.22**
19	0	0	0.00	0	0.00
20	3	1,785	1.24	4,730	3.28
22	2	1,190	0.83	3,154	2.19
25	0	0	0.00	0	0.00
26	2	1,190	0.83	3,154	2.19
27	3	1,785	1.24	4,730	3.28
29	2	1,190	0.83	3,154	2.19
30	0	0	0.00	0	0.00
32	4	2,380	1.65	6,307	4.38
35	4	2,380	1.65	6,307	4.38
38	0	0	0.00	0	0.00
42	2	1,190	0.83	3,154	2.19
43	0	0	0.00	0	0.00
105	1	595	0.41	1,577	1.09
109	3	1,785	1.24	4,730	3.28
112	3	1,785	1.24	4,730	3.28
206	2	1,190	0.83	3,154	2.19
207	3	1,785	1.24	4,730	3.28
208	3	1,785	1.24	4,730	3.28
215	0	0	0.00	0	0.00
216	4	2,380	1.65	6,307	4.38
230	1	595	0.41	1,577	1.09
Filing 2 Total	**42**	**24,990**	**17.35**	**66,224**	**45.99**
212	3	1,785	1.24	4,730	3.28
243	2	1,190	0.83	3,154	2.19
250	4	2,380	1.65	6,307	4.38

248	4	2,380	1.65	6,307	4.38
252	3	1,785	1.24	4,730	3.28
254	2	1,190	0.83	3,154	2.19
256	1	595	0.41	1,577	1.09
258	1	595	0.41	1,577	1.09
260	2	1,190	0.83	3,154	2.19
261	1	595	0.41	1,577	1.09
262	2	1,190	0.83	3,154	2.19
263	1	595	0.41	1,577	1.09
265	2	1,190	0.83	3,154	2.19
266	2	1,190	0.83	3,154	2.19
267	1	595	0.41	1,577	1.09
272	1	595	0.41	1,577	1.09
317	1	595	0.41	1,577	1.09
271	0	0	0.00	0	0.00
275	1	595	0.41	1,577	1.09
278	1	595	0.41	1,577	1.09
276	1	595	0.41	1,577	1.09
282	2	1,190	0.83	3,154	2.19
283	1	595	0.41	1,577	1.09
284	0	0	0.00	0	0.00
285	0	0	0.00	0	0.00
246	0	0	0.00	0	0.00
255	0	0	0.00	0	0.00
257	0	0	0.00	0	0.00
264	0	0	0.00	0	0.00
268	0	0	0.00	0	0.00
269	0	0	0.00	0	0.00
273	0	0	0.00	0	0.00
276	0	0	0.00	0	0.00
277	0	0	0.00	0	0.00
280	0	0	0.00	0	0.00
281	0	0	0.00	0	0.00
Filing 3 Total	**39**	**23,205**	**16.11**	**61,493**	**42.70**
287	4	2,380	1.65	6,307	4.38
292	2	1,190	0.83	3,154	2.19
288	2	1,190	0.83	3,154	2.19
293	2	1,190	0.83	3,154	2.19
290	1	595	0.41	1,577	1.09
295	2	1,190	0.83	3,154	2.19
298	4	2,380	1.65	6,307	4.38
294	2	1,190	0.83	3,154	2.19
296	3	1,785	1.24	4,730	3.28
297	2	1,190	0.83	3,154	2.19
299	3	1,785	1.24	4,730	3.28
301	3	1,785	1.24	4,730	3.28
307	2	1,190	0.83	3,154	2.19
308	2	1,190	0.83	3,154	2.19
312	3	1,785	1.24	4,730	3.28
302	1	595	0.41	1,577	1.09
305	2	1,190	0.83	3,154	2.19
306	2	1,190	0.83	3,154	2.19
304	3	1,785	1.24	4,730	3.28
286	0	0	0.00	0	0.00
289	0	0	0.00	0	0.00

291	0	0	0.00	0	0.00
300	0	0	0.00	0	0.00
305	0	0	0.00	0	0.00
309	0	0	0.00	0	0.00
310	0	0	0.00	0	0.00
311	0	0	0.00	0	0.00
Filing 4 Total	**45**	26,775	18.59	70,954	49.27
313	4	2,380	1.65	6,307	4.38
314	2	1,190	0.83	3,154	2.19
316	2	1,190	0.83	3,154	2.19
317	2	1,190	0.83	3,154	2.19
318	2	1,190	0.83	3,154	2.19
319	3	1,785	1.24	4,730	3.28
321	3	1,785	1.24	4,730	3.28
322	5	2,975	2.07	7,884	5.47
324	2	1,190	0.83	3,154	2.19
328	3	1,785	1.24	4,730	3.28
325	4	2,380	1.65	6,307	4.38
326	2	1,190	0.83	3,154	2.19
327	2	1,190	0.83	3,154	2.19
315	0	0	0.00	0	0.00
320	0	0	0.00	0	0.00
323	0	0	0.00	0	0.00
329	0	0	0.00	0	0.00
Filing 5 Total	**36**	21,420	14.88	56,763	39.42
Total	**217**	**129,115**	**89.66**	**342,155**	**237.61**

APPENDIX C
REFERENCE MATERIAL

Hydraulic Analysis Report Modeling Criteria

Junction Inputs

Water Demands

Land use categories with typical densities and water demands are summarized in Tables 1 through 4.

Specific land use information with estimated dwelling units per acre should be use when available. If the number of dwelling units per acre is not known, the demand rate for different land uses should be calculated on a per acre basis.

Based on a mix of 60% Residential, 30% Commercial and 10% Parks, the water demand for raw land without specific land use, should be 1800/Gal/Day/Acre.

Table 1 - Residential Demand

Classification	DU/Acre	Avg Gal/Day/Unit	Avg Gal/Day/Acre
Multi Family	6+	290	1800
Medium Residential	6+	290	1800
Low Residential	2 to 5	475	1700
Very Low Residential	<2	700	750

Note: Dwelling Units per acre are based on use of 60% of an acre being buildable.

Table 2 - Commercial Demand

Classification	Avg Gal/Day/Acre
Retail	1500
Restaurant	3900
Office	1900
Lodging	2500
Convenience Grocery Stores	6500
Car Wash	9000
Storage/Warehouse	1700
Fitness Club	2500
Office/Industrial Average	1800
Raw Land w/out Specific Land Use	1800

Table 3 - School Demand

School Type	Average Acres	Average Gal/Day/Acre
Elementary School	10	2000
Middle School	15	2000
High School	40	2000

Note – School usage will vary depending upon installation of sports fields. The above use numbers are based on sports fields being installed. However, each school will vary and a more accurate water demand can be determined when the number and type of sports fields are determined for the individual site.

Table 4 - Parks/Recreational Demand

Use Type	Average Gal/Day/Acre
Golf Course	2200
Neighborhood Park	2200
Community Park	2200
Trail	100
Open Space	100

Input average day demands to model junctions. Input demands in the model should be expressed in million gallons per day, mgd. Model output demands can be expressed as mgd, and/or gpm. Demands should be entered only at junctions on pipes 16" or smaller, and only where demands are expected. Demands are not added at junctions on pipes greater than 16" as these pipes are typically transmission lines. Do not add demands on hydrant nodes, unless it is at the end of a street or cul de sac.

To model max day demands, use the maximum day to average day (MD/AD) peaking factors as shown in Table 5, or as determined by Water Planning & Design and as specified on HGL Response Form Peaking factors are pressure zone specific.

Table 5 - Peaking Factors

Pressure Zone	MD/AD
BRGT	2.65
TMPL	2.65
NFLD	2.50
HILN	2.20
LOLN	2.00

Note: From 2009 Finished Water Master Plan Update

Junction Elevation

Use proposed ground surface elevation

For elevations at hydrants, add 2 feet to the hydrant flange elevation

Pipe Inputs

Diameter

For DIP and PVC, use nominal diameters, for HDPE DR 9, use inside diameters.

HDPE DR 9 Nominal diameter, (inches)	Inside Diameter, ID, (inches)
6	5.274
8	6.917
12	10.090
16	13.302
20	16.528
24	19.722

Roughness

Nominal Pipe Diameter (inches)	**Hazen- Williams Roughness Coefficients (C)**
6	118
8	120
12	123
16	124
24	126
36, 42	128
54	130

Minor Losses

Enter minor losses on hydrant laterals only. Use 4.1 on hydrant laterals.

Pressure Requirements

- Maintain a minimum pressure of 60 psi under maximum day demands.
- Maintain a minimum pressure of 20 psi under maximum day demands plus fire flow.
- Pressure should not exceed 180 psi. To avoid pressures greater than 180 psi, PRV's may be required. When pressure exceeds 170 psi, DIP is required. Contact Water Planning and Design if pressures exceed 170 psi.

Head Loss and Velocity Requirements

- Size pipelines for the worst-case scenario of maximum day demand conditions plus fire flow.
- Maintain headloss less than or equal to 3 ft/1000 ft for 8", 12" and 16" pipelines, for maximum day conditions without fire flow.
- Desired velocities are <5 ft/sec for maximum day conditions.
- Desired maximum velocities of 20 ft/sec under maximum day conditions plus fire flow, or other emergency conditions.

Fire Flow Modeling Criteria

Fire flow calculations will be required at all critical hydrants under full-build out conditions and partial build out conditions. Critical hydrants are typically those with the largest required fire flow, and/or the highest flange elevation, in each building area and/or phase. Modeled fire flows should be reduced by 10% then rounded down to whole hundred. For example, a modeled fire flow of 2,663 gpm reduced by 10% is 2,396.7 gpm, which rounded down to whole hundred is 2,300 gpm.