

# Water Master Plan

December 31, 2015  
Revised February 9, 2016  
Revised April 1, 2016  
Revised April 19, 2016

## The Ritz-Carlton Resort

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Expires: 6/30/18

## **EXECUTIVE SUMMARY**

The proposed Ritz Carlton Resort is a mixed land use development consisting of a resort hotel, single family and multi-family residences, retail and mixed uses. The resort will be constructed on 122.7 acres of undeveloped land on the southwest corner of Indian Bend and Scottsdale Roads. The majority of the property lies within the Town of Paradise Valley (105.3 acres) and the remaining portion lies within the City of Scottsdale (17.4 acres). Water service to the property is provided by EPCOR Water. A new looped 8-inch and 12-inch water system is proposed to serve the development. Connections to the existing EPCOR water system will be made at four locations: 1) the existing 8-inch waterline within Scottsdale Road; 2) the existing 16-inch waterline within Lincoln Drive; and 3) the existing 12-inch waterline within the Cactus Wren Alignment.

Demand calculations were prepared based on the design requirements of EPCOR Water. Fire flow demands are per the 2012 International Fire Code with City of Phoenix Amendments. The calculated demands are as follows:

- Average Day Demand: 349,240 gpd (243 gpm)
- Maximum Day Demand: 628,632 gpd (437 gpm)
- Peak Hour Demand: 1,047,720 gpd (728 gpm)
- Maximum Day + Fire Flow Demands:
  - 2,437 gpm (Commercial)
  - 1,937 gpm (Multi-Family)
  - 1,937 gpm (Single Family)
  - 3,437 gpm (Hotel)

Modeling of the system was conducted utilizing WaterCAD version 8i software. Pressures in the proposed development were found to range between 66 and 79 psi for the ADD, MDD and PHD scenarios. Pressures at Maximum Day Demand + Fire Flow for all fire flow scenarios were above 20 psi.

## 1.0 INTRODUCTION

### 1.1 General Description

The proposed Ritz Carlton Resort property is located on 122.7 acres of undeveloped land in Paradise Valley and Scottsdale, Arizona. The property will be developed for mixed uses including residential and commercial uses and a resort hotel. EPCOR will provide water service to the development.

### 1.2 Project Location

The Ritz Carlton Resort property is located in the Town of Paradise Valley and the City of Scottsdale, Maricopa County, Arizona in the northeast quarter of Section 10, Township 2 North, Range 4 East of the Gila and Salt River Base and Meridian. The property is bounded by Indian Bend Road on the north, Lincoln Drive on the south, Scottsdale Road on the east and 68<sup>th</sup> Street on the west as shown in Figure 1.

### 1.3 Land Use

The proposed Ritz Carlton Resort will consist of a resort hotel, resort-related single family residential, multi-family residential and mixed-use land uses as shown on Figure 2. Of the 123 acres, 105.3 acres is located in Paradise Valley and 17.4 acres is located in Scottsdale. A breakdown of the proposed land uses and number of dwelling units (DUs) or rooms are presented in Table 1.

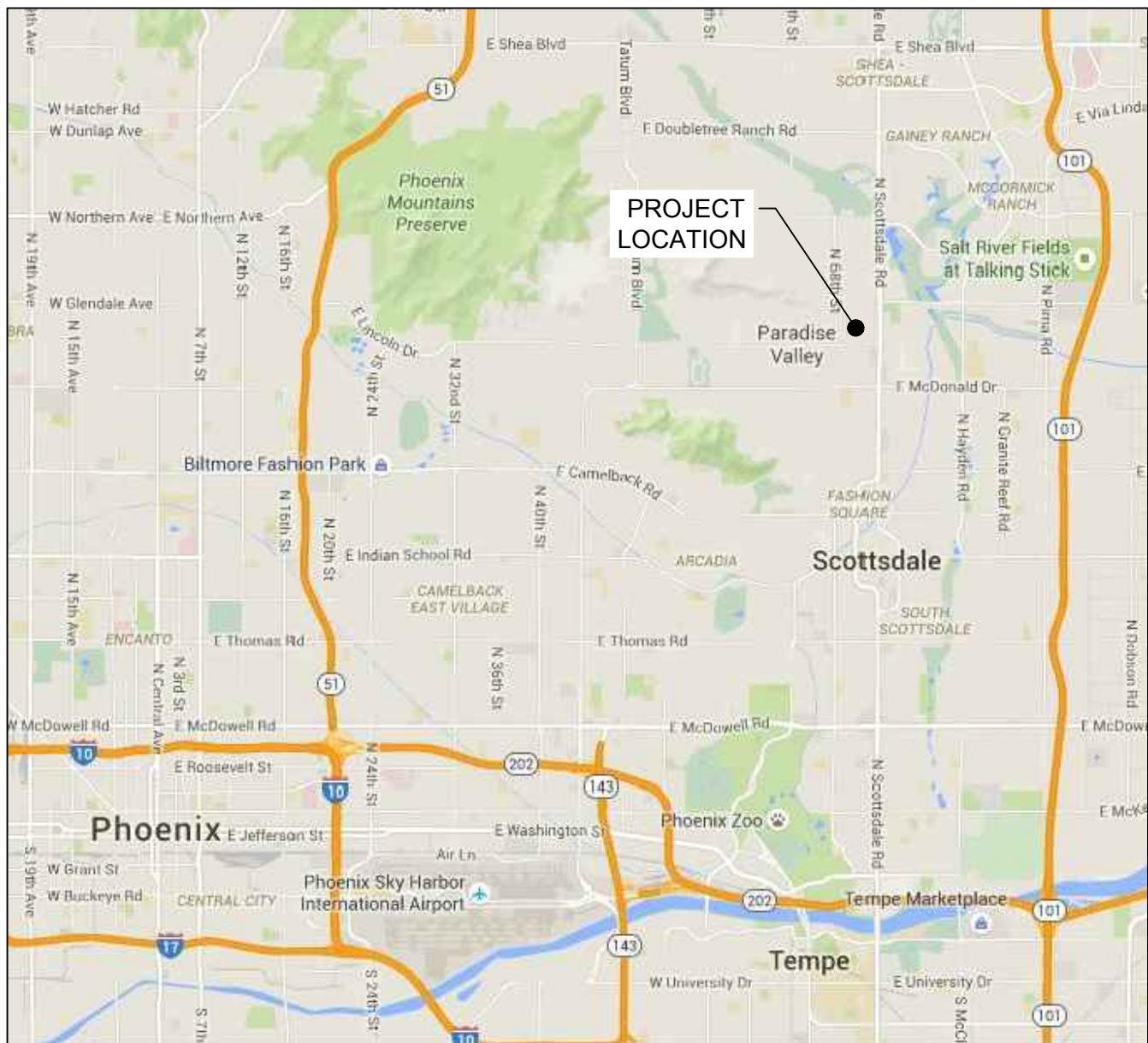
**Table 1 – Proposed Land Use**

Parcel	Land Use	Units	No. of Units	Acreage <sup>3</sup>	Density (units/acre)
<i>Town of Paradise Valley</i>					
A	Resort Hotel	Rooms	200	18.1	11.05
A1	Resort Villas	DUs	94	11.1	8.47
B	Single Family Residential	DUs	66	31.3	2.11
C	Single Family Residential	DUs	45	22.5	2.00
D	Multi-Family Residential	DUs	62	8.8	7.05
E1	Resort Retail	--	--	7.2	7.2
E2 <sup>1</sup>	Mixed-Use	--	--	5.7	5.7
<b>Subtotal (Net)</b>					<b>104.7</b>
<b>Subtotal (Gross)</b>					<b>105.3</b>
<i>City of Scottsdale</i>					
F <sup>1,2</sup>	Mixed-Use	--	--	17.4	--
<b>Subtotal (Gross)</b>					<b>17.4</b>
<b>TOTAL (Gross)</b>					<b>122.7</b>

<sup>1</sup>These parcels are deferred until more detailed planning is available.

<sup>2</sup>Parcel designation not specified on Figure 2, shown as Parcel F on Figure 3.

<sup>3</sup>Net acreage given unless otherwise specified.



SCALE: NTS

FIGURE 1

4550 North 12th Street  
Phoenix, Arizona 85014  
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RITZ CARLTON

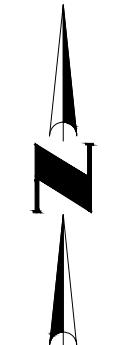
VICINITY MAP

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1.01.0268903

## RITZ CARLTON

## SITE MAP



SCOTTSDALE ROAD



## MASTER PLAN

Area	Description
A	Ritz-Carlton Resort Hotel
A1	Ritz-Carlton Resort Villas
B	Resort Related Luxury Homes
C	Ritz-Carlton Branded Homes
D	Resort Related Attached Residences
E1	Resort Related Retail
E2	Resort Related Mixed Use (Final Site Plan Deferred)

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**FIVE STAR  
DEVELOPMENT**

**The Ritz-Carlton Resort**  
Paradise Valley Special Use Permit Application  
Approved Plans

December 17, 2015



THE RITZ-CARLTON®

**MASTER PLAN**  
Land Use Plan  
D-1

## **1.4 Topographic Conditions**

The Ritz Carlton Resort property ranges in elevation from approximately 1,324 feet above mean sea level (MSL) on the southwest corner of the property to approximately 1,301 feet MSL on the northeast corner of the property. Overall, the property generally slopes to the east northeast toward Scottsdale Road. In order to enhance the views of Camelback Mountain and the Phoenix Mountain Preserve, the site will be raised. The highest elevation will be 1,336 feet MSL near the center of the site where the resort lobby, ballrooms and belowground parking will be.

## **1.5 Existing Infrastructure**

The Ritz Carlton Resort property is located in the EPCOR service area. No on-site water distribution infrastructure exists within the property boundaries. EPCOR has existing pumping, treatment, and storage facilities throughout the water service area. The Ritz Carlton project site is adjacent to several existing water distribution mains as presented on Figure 3 (see Section 4.0). Existing EPCOR water distribution lines significant to the Ritz Carlton development are described below:

- 8-inch waterline within Scottsdale Road; adjacent to the east boundary of the project area.
- 16-inch waterline within Lincoln Drive; adjacent to the south boundary of the project area.
- 6-inch waterline within Mockingbird Lane adjacent to the west boundary of the project area.
- 12-inch waterline in the Cactus Wren Alignment.

## 2.0 DESIGN CRITERIA

The design criteria are supplemented by requirements from EPCOR Water's 2015 Developer Guide. The base design criteria for the water main are as follows:

### 2.1 General

Diameter: 12 and 8-inch Ductile Iron Pipe, Pressure Class 350 (poly wrapped)

Depth: Minimum 4 feet of cover

### 2.2 Demands

EPCOR's demand criteria are presented in Table 2.

**Table 2 – Demand Criteria**

Land Use	Unit	Average Day Demand (gal/day/unit)	Max Day Peaking Factor	Peak Hour Peaking Factor
Single Family (1/2 acre)	Dwelling	1,050	1.8	3.0
Multi-Family	Dwelling	240	1.8	3.0
Resort Retail	Acre	3,500	1.8	3.0
Mixed Use	Acre	3,500	1.8	3.0
Resort Hotel	Room	446	1.8	3.0

### 2.3 Pressures

The water main has been designed to handle pressures of 300 psi, maximum. Normal operating pressures will range from 80-100 during winter months, and can peak at approximately 130 psi during high demand, summer months. Pressure reducing valves will be required.

### 2.4 Velocity and Headloss

The velocity will be no greater than 10 feet per second and the headloss will be no more than 10 feet per 1,000 linear feet for pipes less than 16 inches in diameter.

### 2.5 Hazen Williams Coefficient

The Hazen Williams coefficient of friction utilized in the modeling will be 130.

### 2.6 Fire Flow

The Town of Paradise Valley will provide fire protection to the site. The required fire flow for the Ritz Carlton Resort is 1,500 gpm for all residential land uses, 2,000 gpm for commercial land uses, and 3,000 gpm for the hotel water sprinkler systems in accordance with the 2012 International Fire Code with City of Phoenix Amendments.

### 3.0 WATER DEMANDS

Table 3 summarizes the domestic water demand for the land uses of the Proposed Site Plan. Table 4 presents the fire flow demand requirements.

**Table 3 – Water Demand Summary**

Parcel	Land Use	Unit	No. of Units	Unit Demand (gpd/unit)	Average Day Demand (gpd)	Maximum Day Demand (gpd)	Peak Hour Demand (gpd)
<b>Town of Paradise Valley</b>							
A	Resort Hotel	Rooms	200	446	89,200	160,560	267,600
A1	Resort Villas	DU	94	240	22,560	40,608	67,680
B	Single Family	DU	66	1,050	69,300	124,740	207,900
C	Single Family	DU	45	1,050	47,250	85,050	141,750
D	Multi-Family	DU	62	240	14,880	26,784	44,640
E1	Resort Retail <sup>1</sup>	AC	7.2	3,500	25,200	45,360	75,600
E2	Mixed Use <sup>1</sup>	AC	5.7	3,500	19,950	35,910	59,850
<b>Paradise Valley Subtotal</b>				--	<b>288,340</b>	<b>519,012</b>	<b>865,020</b>
<b>City of Scottsdale</b>							
F	Mixed Use <sup>1</sup>	AC	17.4	3,500	60,900	109,620	182,700
<b>Scottsdale Subtotal</b>				--	<b>60,900</b>	<b>109,620</b>	<b>182,700</b>
<b>TOTAL</b>				--	<b>349,240</b>	<b>628,632</b>	<b>1,047,720</b>

<sup>1</sup>These parcels are deferred until more detailed planning is available.

**Table 4 – Fire Flow Requirements**

Parcel	Land Use	Maximum Day Demand (gpm)	Fire Flow Requirement (gpm)	Maximum Day + Fire Flow (gpm)
<b>Town of Paradise Valley</b>				
A	Resort Hotel	112	3,000	3,112
A1	Resort Villas	28	1,500	1,528
B	Single Family	30	1,500	1,530
C	Single Family	20	1,500	1,520
D	Multi-Family	19	1,500	1,519
E1	Resort Retail <sup>1</sup>	15	2,000	3,015
E2	Mixed Use <sup>1</sup>	12	2,000	3,012
<b>Paradise Valley Subtotal</b>		<b>238</b>	<b>3,000</b>	<b>3,236</b>
<b>City of Scottsdale</b>				
F	Mixed Use <sup>1</sup>	37	2,000	3,037
<b>Scottsdale Subtotal</b>		<b>37</b>	<b>2,000</b>	<b>3,037</b>
<b>TOTAL</b>		<b>275</b>	<b>3,000</b>	<b>3,273</b>

<sup>1</sup>Assumes EPCOR Commercial fire flow criteria.

#### **4.0 WATER SYSTEM MODELING**

The network analysis for the distribution system was analyzed using WaterCAD version 8i. A computer model was created and modified, as necessary, to demonstrate that the water system meets the criteria previously established. See Figure 3 for the WaterCAD System Layout.

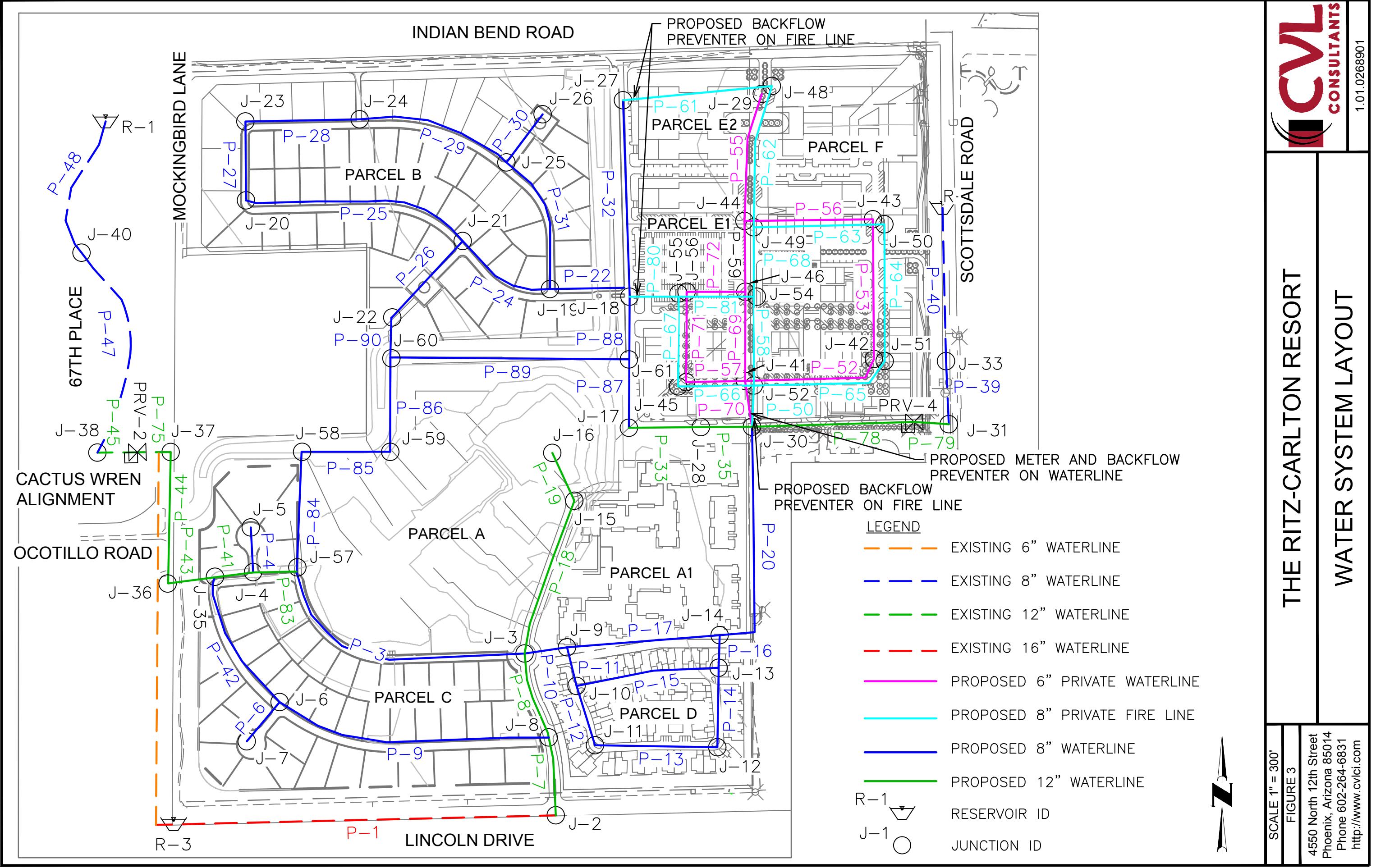
The development was analyzed for average day, maximum day, peak hour, and maximum day plus fire flow demand conditions. Hydraulic grade lines modeled in the system are based on approximate pressures in existing adjacent lines and were provided by EPCOR. A Fire flow test will be completed to confirm these results.

Input parameters of the water distribution system modeling include the following:

- Pipe Diameters (inches)
- Pipe lengths (feet)
- System Demands (as outlined above)
- Fire flows
- Hazen-Williams, C = 130

Output parameters include but are not limited to:

- Velocities (fps)
- Pressure (psig)
- Head loss (feet)
- Flow rates (gpm)



## 5.0 SUMMARY AND RESULTS

The detailed results of the computer network analysis for the Ritz Carlton Resort are presented in Appendices A and B. Tables 5 and 6 summarize the model output highlights.

**Table 5 – Results of WaterCAD Analysis (Normal)**

Scenario	Demand (gpm)	Pressure (psig)				Maximum Velocity (fps)	Pipe ID
		Minimum	Node	Maximum <sup>2</sup>	Node		
ADD	243	66	J-16	79	J-28	0.84	P-50
MDD	437	66	J-16	79	J-28	1.50	P-50
PHD	728	66	J-16	79	J-28	2.52	P-50
MDD + Residential FF <sup>1</sup>	1,937	63	J-23	76	J-17	9.63	P-30
MDD + Hotel FF	3,437	58	J-16	78	J-28	8.70	P-18
MDD + Commercial FF	2,437	68	J-48	75	J-52	9.58	P-40

<sup>1</sup>1,500 gpm fire flow was model for both single family and multi-family residential land uses.

<sup>2</sup>Excludes pressures in existing lines which range from 90 psi to 95 psi.

**Table 6 – Results of WaterCAD Analysis (Summer)**

Scenario	Demand (gpm)	Pressure (psig)				Maximum Velocity (fps)	Pipe ID
		Minimum	Node	Maximum	Node		
ADD	243	66	J-16	79	J-28	0.84	P-50
MDD	437	66	J-16	79	J-28	1.50	P-50
PHD	728	66	J-16	79	J-28	2.52	P-50
MDD + Residential FF <sup>1</sup>	1,937	63	J-23	76	J-17	9.63	P-30
MDD + Hotel FF	3,437	58	J-16	78	J-28	8.70	P-18
MDD + Commercial FF	2,437	68	J-48	75	J-52	9.58	P-40

<sup>1</sup>1,500 gpm fire flow was model for both single family and multi-family residential land uses.

<sup>2</sup>Excludes pressures in existing lines which range from 129 psi to 135 psi.

The following summarizes the findings of the Water Design Report:

- The proposed collection system is designed to meet the *EPCOR Water Developer Guide, 2015*.
- The proposed water distribution system is comprised of 8-inch and 12-inch water mains.
- Pressure Reducing Valves are required at all tie-in locations to the existing system.

- Isolation gate valves, fire hydrants, water service connections, backflow prevention devices and fire department connections will be provided per City of Scottsdale and City of Phoenix Fire Department requirements.
- The flow velocities of the proposed lines are less than 3 fps average day demand, maximum day demand and peak hour demand. The velocity at maximum day plus fire flow for all fire flow conditions is below 10 fps for the proposed system.
- The proposed distribution system pressure for average day, maximum day, and peak hour are between 66 and 79 psi Pressures for maximum day plus fire flow, for all fire flow scenarios, are greater than 58 psi.
- Off-site water will be used to supply this site through connections to the existing 16-inch main in Lincoln Drive, the existing 8-inch main in Scottsdale Road, and the existing 12-inch in the Cactus Wren Alignment.
- The demands for the Ritz Carlton Resort are estimated as follows:
  - Average Day Demand: 349,240 gpd (243 gpm)
  - Maximum Day Demand: 628,632 gpd (437 gpm)
  - Peak Hour Demand: 1,047,720 gpd (728 gpm)
  - Maximum Day + Fire Flow Demands: 2,437 gpm (Commercial)  
1,937 gpm (Multi-Family)  
1,937 gpm (Single Family)  
3,437 gpm (Hotel)

**APPENDIX A**

**WaterCAD Results - Normal**

**FlexTable: Reservoir Table**  
**Active Scenario: Average Day Demand**

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,530.00	43	1,530.00
R-2	1,530.00	102	1,530.00
R-3	1,530.00	98	1,530.00

**FlexTable: Junction Table**  
**Active Scenario: Average Day Demand**

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-2	1,315.00	0	1,529.99	93
J-3	1,315.00	20	1,490.11	76
J-4	1,321.00	18	1,490.11	73
J-5	1,321.00	4	1,490.11	73
J-6	1,321.00	6	1,490.11	73
J-7	1,321.00	4	1,490.11	73
J-8	1,315.00	4	1,490.12	76
J-9	1,314.00	5	1,490.11	76
J-10	1,314.00	3	1,490.11	76
J-11	1,314.00	3	1,490.11	76
J-12	1,311.00	3	1,490.11	77
J-13	1,310.00	3	1,490.11	78
J-14	1,311.00	5	1,490.11	77
J-15	1,335.00	21	1,490.11	67
J-16	1,337.00	15	1,490.11	66
J-17	1,310.00	0	1,490.11	78
J-18	1,309.00	0	1,490.09	78
J-19	1,313.00	7	1,490.09	77
J-20	1,318.00	7	1,490.08	74
J-21	1,314.00	11	1,490.09	76
J-22	1,315.00	3	1,490.09	76
J-23	1,318.00	6	1,490.08	74
J-24	1,315.00	8	1,490.08	76
J-25	1,311.00	7	1,490.08	77
J-26	1,310.00	4	1,490.08	78
J-27	1,309.00	0	1,490.09	78
J-28	1,308.00	0	1,490.11	79
J-29	1,310.00	20	1,489.94	78
J-30	1,309.00	0	1,490.11	78
J-31	1,310.00	0	1,529.80	95
J-33	1,310.00	0	1,529.86	95
J-35	1,321.00	4	1,490.11	73
J-36	1,321.00	0	1,490.12	73
J-37	1,322.00	0	1,490.12	73
J-38	1,322.00	0	1,529.93	90
J-40	1,322.00	0	1,529.97	90
J-41	1,309.11	6	1,490.01	78
J-42	1,309.00	6	1,489.99	78
J-43	1,310.00	6	1,489.97	78
J-44	1,309.53	12	1,489.97	78
J-45	1,309.00	9	1,490.00	78
J-46	1,309.31	6	1,489.99	78
J-48	1,310.00	0	1,490.11	78
J-49	1,309.53	0	1,490.11	78
J-50	1,310.00	0	1,490.11	78
J-51	1,309.00	0	1,490.11	78
J-52	1,309.11	0	1,490.11	78

**FlexTable: Junction Table**  
**Active Scenario: Average Day Demand**

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-53	1,309.00	0	1,490.11	78
J-54	1,310.00	0	1,490.11	78
J-55	1,309.50	9	1,489.99	78
J-56	1,310.00	0	1,490.11	78
J-57	1,320.22	0	1,490.11	74
J-58	1,320.00	0	1,490.11	74
J-59	1,319.00	0	1,490.10	74
J-60	1,318.00	0	1,490.10	74
J-61	1,309.35	0	1,490.10	78

**FlexTable: Pipe Table**  
**Active Scenario: Average Day Demand**

Label	Start Node	Stop Node	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Headloss Gradient (ft/ft)	Velocity (ft/s)
P-1	R-3	J-2	16.0	1,325	130.0	98	0.000	0.16
P-4	J-4	J-5	8.0	155	130.0	4	0.000	0.02
P-6	J-6	J-7	8.0	177	130.0	4	0.000	0.02
P-8	J-8	J-3	12.0	306	130.0	81	0.000	0.23
P-9	J-6	J-8	8.0	965	130.0	-13	0.000	0.08
P-10	J-3	J-9	8.0	149	130.0	25	0.000	0.16
P-11	J-9	J-10	8.0	138	130.0	12	0.000	0.08
P-12	J-10	J-11	8.0	215	130.0	5	0.000	0.03
P-13	J-11	J-12	8.0	424	130.0	3	0.000	0.02
P-14	J-12	J-13	8.0	276	130.0	0	0.000	0.00
P-15	J-13	J-10	8.0	498	130.0	-4	0.000	0.03
P-16	J-13	J-14	8.0	113	130.0	1	0.000	0.01
P-17	J-9	J-14	8.0	530	130.0	7	0.000	0.05
P-18	J-3	J-15	12.0	558	130.0	36	0.000	0.10
P-19	J-15	J-16	12.0	183	130.0	15	0.000	0.04
P-20	J-14	J-30	8.0	833	130.0	3	0.000	0.02
P-22	J-18	J-19	8.0	277	130.0	26	0.000	0.17
P-24	J-19	J-21	8.0	365	130.0	2	0.000	0.01
P-25	J-21	J-20	8.0	798	130.0	14	0.000	0.09
P-26	J-21	J-22	8.0	315	130.0	-23	0.000	0.15
P-27	J-20	J-23	8.0	274	130.0	8	0.000	0.05
P-28	J-23	J-24	8.0	396	130.0	2	0.000	0.01
P-29	J-24	J-25	8.0	549	130.0	-6	0.000	0.04
P-30	J-25	J-26	8.0	209	130.0	4	0.000	0.03
P-31	J-25	J-19	8.0	496	130.0	-18	0.000	0.11
P-32	J-18	J-27	8.0	675	130.0	0	0.000	0.00
P-33	J-17	J-28	12.0	249	130.0	-31	0.000	0.09
P-35	J-28	J-30	12.0	177	130.0	-31	0.000	0.09
P-39	J-31	J-33	8.0	218	130.0	-102	0.000	0.65
P-40	J-33	R-2	8.0	532	130.0	-102	0.000	0.65
P-41	J-4	J-35	12.0	163	130.0	-43	0.000	0.12
P-42	J-35	J-6	8.0	480	130.0	-3	0.000	0.02
P-43	J-36	J-35	12.0	142	130.0	43	0.000	0.12
P-44	J-36	J-37	12.0	464	130.0	-43	0.000	0.12
P-45	PRV-2	J-38	12.0	171	130.0	-43	0.000	0.12
P-47	J-38	J-40	8.0	762	130.0	-43	0.000	0.28
P-48	J-40	R-1	8.0	503	130.0	-43	0.000	0.28
P-50	J-30	J-41	6.0	164	130.0	74	0.001	0.84
P-52	J-41	J-42	6.0	472	130.0	20	0.000	0.22
P-53	J-42	J-43	6.0	477	130.0	14	0.000	0.16
P-55	J-44	J-29	6.0	526	130.0	20	0.000	0.23
P-56	J-43	J-44	6.0	461	130.0	8	0.000	0.09
P-57	J-41	J-45	6.0	251	130.0	22	0.000	0.25
P-58	J-41	J-46	6.0	289	130.0	26	0.000	0.29
P-59	J-46	J-44	6.0	216	130.0	24	0.000	0.28
P-61	J-27	J-48	8.0	481	130.0	0	0.000	0.00
P-62	J-48	J-49	8.0	516	130.0	0	0.000	0.00

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**FlexTable: Pipe Table**  
**Active Scenario: Average Day Demand**

Label	Start Node	Stop Node	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Headloss Gradient (ft/ft)	Velocity (ft/s)
P-63	J-49	J-50	8.0	447	130.0	0	0.000	0.00
P-64	J-50	J-51	8.0	470	130.0	0	0.000	0.00
P-65	J-52	J-51	8.0	487	130.0	0	0.000	0.00
P-66	J-52	J-53	8.0	243	130.0	0	0.000	0.00
P-67	J-53	J-56	8.0	309	130.0	0	0.000	0.00
P-68	J-54	J-49	8.0	223	130.0	0	0.000	0.00
P-69	J-52	J-54	8.0	292	130.0	0	0.000	0.00
P-70	J-30	J-52	8.0	162	130.0	0	0.000	0.00
P-71	J-45	J-55	6.0	310	130.0	13	0.000	0.15
P-72	J-55	J-46	6.0	240	130.0	5	0.000	0.05
P-73	J-2	PRV-1	12.0	116	130.0	98	0.000	0.28
P-74	PRV-1	J-8	12.0	156	130.0	98	0.000	0.28
P-75	PRV-2	J-37	12.0	218	130.0	43	0.000	0.12
P-78	J-30	PRV-4	12.0	562	130.0	-102	0.000	0.29
P-79	PRV-4	J-31	12.0	120	130.0	-102	0.000	0.29
P-80	J-18	J-56	8.0	169	130.0	0	0.000	0.00
P-81	J-56	J-54	8.0	244	130.0	0	0.000	0.00
P-82	J-3	J-57	8.0	964	130.0	0	0.000	0.00
P-83	J-57	J-4	12.0	145	130.0	-21	0.000	0.06
P-84	J-57	J-58	8.0	408	130.0	21	0.000	0.13
P-85	J-58	J-59	8.0	343	130.0	21	0.000	0.13
P-86	J-59	J-60	8.0	356	130.0	21	0.000	0.13
P-87	J-17	J-61	8.0	302	130.0	31	0.000	0.20
P-88	J-61	J-18	8.0	160	130.0	26	0.000	0.17
P-89	J-60	J-61	8.0	805	130.0	-5	0.000	0.03
P-90	J-60	J-22	8.0	143	130.0	26	0.000	0.17

**FlexTable: PRV Table**  
**Active Scenario: Average Day Demand**

Label	Elevation (ft)	Diameter (Valve) (in)	Hydraulic Grade Setting (Initial) (ft)	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
PRV-1	1,315.00	12.0	1,490.00	98	1,529.98	1,490.13	39.86
PRV-2	1,322.00	12.0	1,490.00	43	1,529.93	1,490.12	39.81
PRV-4	1,309.87	12.0	1,490.00	102	1,529.80	1,490.13	39.67

**FlexTable: Reservoir Table**  
**Active Scenario: Max Day Demand**

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,530.00	89	1,530.00
R-2	1,530.00	176	1,530.00
R-3	1,530.00	171	1,530.00

**FlexTable: Junction Table**  
**Active Scenario: Max Day Demand**

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-2	1,315.00	0	1,529.97	93
J-3	1,315.00	36	1,490.09	76
J-4	1,321.00	33	1,490.09	73
J-5	1,321.00	7	1,490.09	73
J-6	1,321.00	11	1,490.10	73
J-7	1,321.00	7	1,490.10	73
J-8	1,315.00	8	1,490.11	76
J-9	1,314.00	9	1,490.08	76
J-10	1,314.00	5	1,490.08	76
J-11	1,314.00	4	1,490.08	76
J-12	1,311.00	4	1,490.08	77
J-13	1,310.00	6	1,490.08	78
J-14	1,311.00	9	1,490.08	77
J-15	1,335.00	38	1,490.08	67
J-16	1,337.00	28	1,490.08	66
J-17	1,310.00	0	1,490.07	78
J-18	1,309.00	0	1,490.03	78
J-19	1,313.00	12	1,490.01	77
J-20	1,318.00	12	1,490.00	74
J-21	1,314.00	20	1,490.01	76
J-22	1,315.00	5	1,490.03	76
J-23	1,318.00	11	1,490.00	74
J-24	1,315.00	14	1,490.00	76
J-25	1,311.00	13	1,490.00	77
J-26	1,310.00	8	1,490.00	78
J-27	1,309.00	0	1,490.03	78
J-28	1,308.00	0	1,490.07	79
J-29	1,310.00	36	1,489.58	78
J-30	1,309.00	0	1,490.07	78
J-31	1,310.00	0	1,529.45	95
J-33	1,310.00	0	1,529.61	95
J-35	1,321.00	7	1,490.10	73
J-36	1,321.00	0	1,490.10	73
J-37	1,322.00	0	1,490.11	73
J-38	1,322.00	0	1,529.74	90
J-40	1,322.00	0	1,529.90	90
J-41	1,309.11	11	1,489.78	78
J-42	1,309.00	11	1,489.71	78
J-43	1,310.00	11	1,489.67	78
J-44	1,309.53	22	1,489.66	78
J-45	1,309.00	16	1,489.74	78
J-46	1,309.31	11	1,489.71	78
J-48	1,310.00	0	1,490.07	78
J-49	1,309.53	0	1,490.07	78
J-50	1,310.00	0	1,490.07	78
J-51	1,309.00	0	1,490.07	78
J-52	1,309.11	0	1,490.07	78

**FlexTable: Junction Table**  
**Active Scenario: Max Day Demand**

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-53	1,309.00	0	1,490.07	78
J-54	1,310.00	0	1,490.07	78
J-55	1,309.50	16	1,489.71	78
J-56	1,310.00	0	1,490.07	78
J-57	1,320.22	0	1,490.09	73
J-58	1,320.00	0	1,490.07	74
J-59	1,319.00	0	1,490.06	74
J-60	1,318.00	0	1,490.04	74
J-61	1,309.35	0	1,490.04	78

**FlexTable: Pipe Table**  
**Active Scenario: Max Day Demand**

Label	Start Node	Stop Node	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Headloss Gradient (ft/ft)	Velocity (ft/s)
P-1	R-3	J-2	16.0	1,325	130.0	171	0.000	0.27
P-4	J-4	J-5	8.0	155	130.0	7	0.000	0.04
P-6	J-6	J-7	8.0	177	130.0	7	0.000	0.04
P-8	J-8	J-3	12.0	306	130.0	143	0.000	0.41
P-9	J-6	J-8	8.0	965	130.0	-21	0.000	0.13
P-10	J-3	J-9	8.0	149	130.0	48	0.000	0.31
P-11	J-9	J-10	8.0	138	130.0	24	0.000	0.15
P-12	J-10	J-11	8.0	215	130.0	10	0.000	0.06
P-13	J-11	J-12	8.0	424	130.0	6	0.000	0.04
P-14	J-12	J-13	8.0	276	130.0	2	0.000	0.01
P-15	J-13	J-10	8.0	498	130.0	-9	0.000	0.06
P-16	J-13	J-14	8.0	113	130.0	5	0.000	0.03
P-17	J-9	J-14	8.0	530	130.0	15	0.000	0.10
P-18	J-3	J-15	12.0	558	130.0	66	0.000	0.19
P-19	J-15	J-16	12.0	183	130.0	28	0.000	0.08
P-20	J-14	J-30	8.0	833	130.0	11	0.000	0.07
P-22	J-18	J-19	8.0	277	130.0	47	0.000	0.30
P-24	J-19	J-21	8.0	365	130.0	3	0.000	0.02
P-25	J-21	J-20	8.0	798	130.0	25	0.000	0.16
P-26	J-21	J-22	8.0	315	130.0	-42	0.000	0.27
P-27	J-20	J-23	8.0	274	130.0	14	0.000	0.09
P-28	J-23	J-24	8.0	396	130.0	3	0.000	0.02
P-29	J-24	J-25	8.0	549	130.0	-11	0.000	0.07
P-30	J-25	J-26	8.0	209	130.0	8	0.000	0.05
P-31	J-25	J-19	8.0	496	130.0	-32	0.000	0.21
P-32	J-18	J-27	8.0	675	130.0	0	0.000	0.00
P-33	J-17	J-28	12.0	249	130.0	-55	0.000	0.16
P-35	J-28	J-30	12.0	177	130.0	-55	0.000	0.16
P-39	J-31	J-33	8.0	218	130.0	-176	0.001	1.13
P-40	J-33	R-2	8.0	532	130.0	-176	0.001	1.13
P-41	J-4	J-35	12.0	163	130.0	-86	0.000	0.24
P-42	J-35	J-6	8.0	480	130.0	-4	0.000	0.02
P-43	J-36	J-35	12.0	142	130.0	89	0.000	0.25
P-44	J-36	J-37	12.0	464	130.0	-89	0.000	0.25
P-45	PRV-2	J-38	12.0	171	130.0	-89	0.000	0.25
P-47	J-38	J-40	8.0	762	130.0	-89	0.000	0.57
P-48	J-40	R-1	8.0	503	130.0	-89	0.000	0.57
P-50	J-30	J-41	6.0	164	130.0	133	0.002	1.50
P-52	J-41	J-42	6.0	472	130.0	36	0.000	0.40
P-53	J-42	J-43	6.0	477	130.0	25	0.000	0.28
P-55	J-44	J-29	6.0	526	130.0	36	0.000	0.41
P-56	J-43	J-44	6.0	461	130.0	14	0.000	0.16
P-57	J-41	J-45	6.0	251	130.0	40	0.000	0.45
P-58	J-41	J-46	6.0	289	130.0	46	0.000	0.53
P-59	J-46	J-44	6.0	216	130.0	44	0.000	0.50
P-61	J-27	J-48	8.0	481	130.0	0	0.000	0.00
P-62	J-48	J-49	8.0	516	130.0	0	0.000	0.00

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**FlexTable: Pipe Table**  
**Active Scenario: Max Day Demand**

Label	Start Node	Stop Node	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Headloss Gradient (ft/ft)	Velocity (ft/s)
P-63	J-49	J-50	8.0	447	130.0	0	0.000	0.00
P-64	J-50	J-51	8.0	470	130.0	0	0.000	0.00
P-65	J-52	J-51	8.0	487	130.0	0	0.000	0.00
P-66	J-52	J-53	8.0	243	130.0	0	0.000	0.00
P-67	J-53	J-56	8.0	309	130.0	0	0.000	0.00
P-68	J-54	J-49	8.0	223	130.0	0	0.000	0.00
P-69	J-52	J-54	8.0	292	130.0	0	0.000	0.00
P-70	J-30	J-52	8.0	162	130.0	0	0.000	0.00
P-71	J-45	J-55	6.0	310	130.0	24	0.000	0.27
P-72	J-55	J-46	6.0	240	130.0	8	0.000	0.09
P-73	J-2	PRV-1	12.0	116	130.0	171	0.000	0.49
P-74	PRV-1	J-8	12.0	156	130.0	171	0.000	0.49
P-75	PRV-2	J-37	12.0	218	130.0	89	0.000	0.25
P-78	J-30	PRV-4	12.0	562	130.0	-176	0.000	0.50
P-79	PRV-4	J-31	12.0	120	130.0	-176	0.000	0.50
P-80	J-18	J-56	8.0	169	130.0	0	0.000	0.00
P-81	J-56	J-54	8.0	244	130.0	0	0.000	0.00
P-82	J-3	J-57	8.0	964	130.0	-7	0.000	0.04
P-83	J-57	J-4	12.0	145	130.0	-47	0.000	0.13
P-84	J-57	J-58	8.0	408	130.0	40	0.000	0.25
P-85	J-58	J-59	8.0	343	130.0	40	0.000	0.25
P-86	J-59	J-60	8.0	356	130.0	40	0.000	0.25
P-87	J-17	J-61	8.0	302	130.0	55	0.000	0.35
P-88	J-61	J-18	8.0	160	130.0	47	0.000	0.30
P-89	J-60	J-61	8.0	805	130.0	-8	0.000	0.05
P-90	J-60	J-22	8.0	143	130.0	48	0.000	0.30

## FlexTable: PRV Table

### Active Scenario: Max Day Demand

Label	Elevation (ft)	Diameter (Valve) (in)	Hydraulic Grade Setting (Initial) (ft)	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
PRV-1	1,315.00	12.0	1,490.00	171	1,529.96	1,490.13	39.83
PRV-2	1,322.00	12.0	1,490.00	89	1,529.73	1,490.12	39.61
PRV-4	1,309.87	12.0	1,490.00	176	1,529.44	1,490.13	39.31

**FlexTable: Reservoir Table****Active Scenario: Peak Hour Demand**

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,530.00	157	1,530.00
R-2	1,530.00	290	1,530.00
R-3	1,530.00	280	1,530.00

## FlexTable: Junction Table

### Active Scenario: Peak Hour Demand

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-2	1,315.00	0	1,529.92	93
J-3	1,315.00	60	1,490.04	76
J-4	1,321.00	55	1,490.05	73
J-5	1,321.00	11	1,490.05	73
J-6	1,321.00	18	1,490.06	73
J-7	1,321.00	11	1,490.06	73
J-8	1,315.00	13	1,490.09	76
J-9	1,314.00	16	1,490.01	76
J-10	1,314.00	9	1,490.00	76
J-11	1,314.00	7	1,490.00	76
J-12	1,311.00	7	1,490.00	77
J-13	1,310.00	10	1,490.00	78
J-14	1,311.00	16	1,490.00	77
J-15	1,335.00	62	1,490.01	67
J-16	1,337.00	46	1,490.01	66
J-17	1,310.00	0	1,489.97	78
J-18	1,309.00	0	1,489.89	78
J-19	1,313.00	20	1,489.84	77
J-20	1,318.00	20	1,489.80	74
J-21	1,314.00	31	1,489.84	76
J-22	1,315.00	9	1,489.88	76
J-23	1,318.00	18	1,489.80	74
J-24	1,315.00	24	1,489.79	76
J-25	1,311.00	22	1,489.80	77
J-26	1,310.00	13	1,489.80	78
J-27	1,309.00	0	1,489.89	78
J-28	1,308.00	0	1,489.98	79
J-29	1,310.00	60	1,488.71	77
J-30	1,309.00	0	1,489.99	78
J-31	1,310.00	0	1,528.61	95
J-33	1,310.00	0	1,529.02	95
J-35	1,321.00	11	1,490.06	73
J-36	1,321.00	0	1,490.07	73
J-37	1,322.00	0	1,490.11	73
J-38	1,322.00	0	1,529.25	90
J-40	1,322.00	0	1,529.70	90
J-41	1,309.11	18	1,489.24	78
J-42	1,309.00	19	1,489.05	78
J-43	1,310.00	18	1,488.95	77
J-44	1,309.53	36	1,488.92	78
J-45	1,309.00	27	1,489.11	78
J-46	1,309.31	18	1,489.05	78
J-48	1,310.00	0	1,489.99	78
J-49	1,309.53	0	1,489.99	78
J-50	1,310.00	0	1,489.99	78
J-51	1,309.00	0	1,489.99	78
J-52	1,309.11	0	1,489.99	78

## **FlexTable: Junction Table**

### **Active Scenario: Peak Hour Demand**

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-53	1,309.00	0	1,489.99	78
J-54	1,310.00	0	1,489.99	78
J-55	1,309.50	26	1,489.05	78
J-56	1,310.00	0	1,489.99	78
J-57	1,320.22	0	1,490.04	73
J-58	1,320.00	0	1,489.99	74
J-59	1,319.00	0	1,489.95	74
J-60	1,318.00	0	1,489.91	74
J-61	1,309.35	0	1,489.91	78

## FlexTable: Pipe Table

### Active Scenario: Peak Hour Demand

Label	Start Node	Stop Node	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Headloss Gradient (ft/ft)	Velocity (ft/s)
P-1	R-3	J-2	16.0	1,325	130.0	280	0.000	0.45
P-4	J-4	J-5	8.0	155	130.0	11	0.000	0.07
P-6	J-6	J-7	8.0	177	130.0	11	0.000	0.07
P-8	J-8	J-3	12.0	306	130.0	236	0.000	0.67
P-9	J-6	J-8	8.0	965	130.0	-31	0.000	0.20
P-10	J-3	J-9	8.0	149	130.0	83	0.000	0.53
P-11	J-9	J-10	8.0	138	130.0	41	0.000	0.26
P-12	J-10	J-11	8.0	215	130.0	17	0.000	0.11
P-13	J-11	J-12	8.0	424	130.0	11	0.000	0.07
P-14	J-12	J-13	8.0	276	130.0	4	0.000	0.03
P-15	J-13	J-10	8.0	498	130.0	-15	0.000	0.10
P-16	J-13	J-14	8.0	113	130.0	10	0.000	0.06
P-17	J-9	J-14	8.0	530	130.0	26	0.000	0.17
P-18	J-3	J-15	12.0	558	130.0	109	0.000	0.31
P-19	J-15	J-16	12.0	183	130.0	46	0.000	0.13
P-20	J-14	J-30	8.0	833	130.0	21	0.000	0.13
P-22	J-18	J-19	8.0	277	130.0	77	0.000	0.49
P-24	J-19	J-21	8.0	365	130.0	3	0.000	0.02
P-25	J-21	J-20	8.0	798	130.0	43	0.000	0.27
P-26	J-21	J-22	8.0	315	130.0	-70	0.000	0.45
P-27	J-20	J-23	8.0	274	130.0	23	0.000	0.14
P-28	J-23	J-24	8.0	396	130.0	5	0.000	0.03
P-29	J-24	J-25	8.0	549	130.0	-19	0.000	0.12
P-30	J-25	J-26	8.0	209	130.0	13	0.000	0.08
P-31	J-25	J-19	8.0	496	130.0	-54	0.000	0.34
P-32	J-18	J-27	8.0	675	130.0	0	0.000	0.00
P-33	J-17	J-28	12.0	249	130.0	-89	0.000	0.25
P-35	J-28	J-30	12.0	177	130.0	-89	0.000	0.25
P-39	J-31	J-33	8.0	218	130.0	-290	0.002	1.85
P-40	J-33	R-2	8.0	532	130.0	-290	0.002	1.85
P-41	J-4	J-35	12.0	163	130.0	-149	0.000	0.42
P-42	J-35	J-6	8.0	480	130.0	-3	0.000	0.02
P-43	J-36	J-35	12.0	142	130.0	157	0.000	0.45
P-44	J-36	J-37	12.0	464	130.0	-157	0.000	0.45
P-45	PRV-2	J-38	12.0	171	130.0	-157	0.000	0.45
P-47	J-38	J-40	8.0	762	130.0	-157	0.001	1.01
P-48	J-40	R-1	8.0	503	130.0	-157	0.001	1.01
P-50	J-30	J-41	6.0	164	130.0	222	0.005	2.52
P-52	J-41	J-42	6.0	472	130.0	60	0.000	0.68
P-53	J-42	J-43	6.0	477	130.0	41	0.000	0.47
P-55	J-44	J-29	6.0	526	130.0	60	0.000	0.68
P-56	J-43	J-44	6.0	461	130.0	23	0.000	0.26
P-57	J-41	J-45	6.0	251	130.0	67	0.000	0.76
P-58	J-41	J-46	6.0	289	130.0	78	0.001	0.88
P-59	J-46	J-44	6.0	216	130.0	73	0.001	0.83
P-61	J-27	J-48	8.0	481	130.0	0	0.000	0.00
P-62	J-48	J-49	8.0	516	130.0	0	0.000	0.00

Bentley Systems, Inc. Haestad Methods Solution Center

Bentley WaterCAD V8i (SELECTseries 6)

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**FlexTable: Pipe Table**  
**Active Scenario: Peak Hour Demand**

Label	Start Node	Stop Node	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Headloss Gradient (ft/ft)	Velocity (ft/s)
P-63	J-49	J-50	8.0	447	130.0	0	0.000	0.00
P-64	J-50	J-51	8.0	470	130.0	0	0.000	0.00
P-65	J-52	J-51	8.0	487	130.0	0	0.000	0.00
P-66	J-52	J-53	8.0	243	130.0	0	0.000	0.00
P-67	J-53	J-56	8.0	309	130.0	0	0.000	0.00
P-68	J-54	J-49	8.0	223	130.0	0	0.000	0.00
P-69	J-52	J-54	8.0	292	130.0	0	0.000	0.00
P-70	J-30	J-52	8.0	162	130.0	0	0.000	0.00
P-71	J-45	J-55	6.0	310	130.0	40	0.000	0.45
P-72	J-55	J-46	6.0	240	130.0	14	0.000	0.15
P-73	J-2	PRV-1	12.0	116	130.0	280	0.000	0.79
P-74	PRV-1	J-8	12.0	156	130.0	280	0.000	0.79
P-75	PRV-2	J-37	12.0	218	130.0	157	0.000	0.45
P-78	J-30	PRV-4	12.0	562	130.0	-290	0.000	0.82
P-79	PRV-4	J-31	12.0	120	130.0	-290	0.000	0.82
P-80	J-18	J-56	8.0	169	130.0	0	0.000	0.00
P-81	J-56	J-54	8.0	244	130.0	0	0.000	0.00
P-82	J-3	J-57	8.0	964	130.0	-16	0.000	0.10
P-83	J-57	J-4	12.0	145	130.0	-83	0.000	0.24
P-84	J-57	J-58	8.0	408	130.0	67	0.000	0.43
P-85	J-58	J-59	8.0	343	130.0	67	0.000	0.43
P-86	J-59	J-60	8.0	356	130.0	67	0.000	0.43
P-87	J-17	J-61	8.0	302	130.0	89	0.000	0.57
P-88	J-61	J-18	8.0	160	130.0	77	0.000	0.49
P-89	J-60	J-61	8.0	805	130.0	-12	0.000	0.07
P-90	J-60	J-22	8.0	143	130.0	79	0.000	0.50

## FlexTable: PRV Table

### Active Scenario: Peak Hour Demand

Label	Elevation (ft)	Diameter (Valve) (in)	Hydraulic Grade Setting (Initial) (ft)	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
PRV-1	1,315.00	12.0	1,490.00	280	1,529.89	1,490.13	39.77
PRV-2	1,322.00	12.0	1,490.00	157	1,529.24	1,490.12	39.12
PRV-4	1,309.87	12.0	1,490.00	290	1,528.58	1,490.13	38.45

**FlexTable: Reservoir Table**  
**Active Scenario: Max Day Demand + Res FF**

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,530.00	89	1,530.00
R-2	1,530.00	176	1,530.00
R-3	1,530.00	171	1,530.00

## Fire Flow Node FlexTable: Fire Flow Report

### Active Scenario: Max Day Demand + Res FF

Label	Fire Flow (Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Velocity of Maximum Pipe (ft/s)	Pipe w/ Maximum Velocity
J-2	1,500	1,501	20	92	66	J-16	2.67	P-1
J-3	1,500	1,537	20	75	66	J-16	3.35	P-8
J-4	1,500	1,534	20	72	66	J-16	5.63	P-48
J-5	1,500	1,508	20	70	70	J-5	9.62	P-4
J-6	1,500	1,511	20	70	66	J-16	5.62	P-42
J-7	1,500	1,508	20	67	66	J-16	9.62	P-6
J-8	1,500	1,509	20	75	66	J-16	3.67	P-74
J-9	1,500	1,510	20	74	66	J-16	7.00	P-10
J-10	1,500	1,506	20	73	66	J-16	6.80	P-10
J-11	1,500	1,505	20	72	66	J-16	6.71	P-10
J-12	1,500	1,505	20	73	66	J-16	6.65	P-10
J-13	1,500	1,507	20	75	66	J-16	6.51	P-10
J-14	1,500	1,510	20	75	66	J-16	6.26	P-10
J-15	1,500	1,539	20	65	64	J-16	4.44	P-18
J-16	1,500	1,529	20	64	65	J-15	4.44	P-18
J-17	1,500	1,501	20	76	66	J-16	7.41	P-40
J-18	1,500	1,501	20	73	66	J-16	7.13	P-88
J-19	1,500	1,513	20	70	66	J-16	6.42	P-87
J-20	1,500	1,513	20	63	64	J-23	6.37	P-87
J-21	1,500	1,521	20	70	66	J-16	6.32	P-87
J-22	1,500	1,506	20	70	66	J-16	6.59	P-90
J-23	1,500	1,511	20	63	64	J-20	6.38	P-87
J-24	1,500	1,515	20	64	64	J-23	6.38	P-87
J-25	1,500	1,514	20	67	66	J-16	6.66	P-31
J-26	1,500	1,509	20	64	66	J-16	9.63	P-30
J-27	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-28	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-29	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-30	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-31	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-33	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-35	1,500	1,508	20	72	66	J-16	5.90	P-48
J-36	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-37	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-38	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-40	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-41	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-42	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-43	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-44	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-45	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-46	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-48	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-49	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-50	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

## Fire Flow Node FlexTable: Fire Flow Report

### Active Scenario: Max Day Demand + Res FF

Label	Fire Flow (Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Velocity of Maximum Pipe (ft/s)	Pipe w/ Maximum Velocity
J-51	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-52	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-53	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-54	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-55	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-56	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-57	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-58	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-59	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-60	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-61	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

**FlexTable: PRV Table**  
**Active Scenario: Max Day Demand + Res FF**

Label	Elevation (ft)	Diameter (Valve) (in)	Hydraulic Grade Setting (Initial) (ft)	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
PRV-1	1,315.00	12.0	1,490.00	171	1,529.96	1,490.13	39.83
PRV-2	1,322.00	12.0	1,490.00	89	1,529.73	1,490.12	39.61
PRV-4	1,309.87	12.0	1,490.00	176	1,529.44	1,490.13	39.31

**FlexTable: Reservoir Table**  
**Active Scenario: Max Day Demand + Comm FF**

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,530.00	89	1,530.00
R-2	1,530.00	176	1,530.00
R-3	1,530.00	171	1,530.00

## Fire Flow Node FlexTable: Fire Flow Report

### Active Scenario: Max Day Demand + Comm FF

Label	Fire Flow (Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Velocity of Maximum Pipe (ft/s)	Pipe w/ Maximum Velocity
J-2	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-3	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-4	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-5	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-6	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-7	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-8	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-9	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-10	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-11	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-12	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-13	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-14	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-15	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-16	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-17	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-18	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-19	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-20	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-21	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-22	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-23	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-24	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-25	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-26	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-27	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-28	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-29	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-30	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-31	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-33	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-35	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-36	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-37	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-38	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-40	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-41	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-42	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-43	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-44	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-45	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-46	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-48	2,000	2,001	20	68	66	J-16	9.35	P-40
J-49	2,000	2,001	20	72	66	J-16	9.44	P-40
J-50	2,000	2,001	20	69	66	J-16	9.48	P-40

## Fire Flow Node FlexTable: Fire Flow Report

### Active Scenario: Max Day Demand + Comm FF

Label	Fire Flow (Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Velocity of Maximum Pipe (ft/s)	Pipe w/ Maximum Velocity
J-51	2,000	2,001	20	70	66	J-16	9.52	P-40
J-52	2,000	2,001	20	75	66	J-16	9.58	P-40
J-53	2,000	2,001	20	73	66	J-16	9.49	P-40
J-54	2,000	2,001	20	74	66	J-16	9.47	P-40
J-55	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-56	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-57	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-58	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-59	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-60	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-61	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

**FlexTable: PRV Table**  
**Active Scenario: Max Day Demand + Comm FF**

Label	Elevation (ft)	Diameter (Valve) (in)	Hydraulic Grade Setting (Initial) (ft)	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
PRV-1	1,315.00	12.0	1,490.00	171	1,529.96	1,490.13	39.83
PRV-2	1,322.00	12.0	1,490.00	89	1,529.73	1,490.12	39.61
PRV-4	1,309.87	12.0	1,490.00	176	1,529.44	1,490.13	39.31

**FlexTable: Reservoir Table**  
**Active Scenario: Max Day Demand + Hotel FF**

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,530.00	576	1,530.00
R-2	1,530.00	1,888	1,530.00
R-3	1,530.00	973	1,530.00

**FlexTable: Junction Table**  
**Active Scenario: Max Day Demand + Hotel FF**

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-2	1,315.00	0	1,526.68	92
J-3	1,315.00	36	1,485.07	74
J-4	1,321.00	33	1,489.18	73
J-5	1,321.00	7	1,489.18	73
J-6	1,321.00	11	1,488.99	73
J-7	1,321.00	7	1,488.99	73
J-8	1,315.00	8	1,488.54	75
J-9	1,314.00	9	1,485.57	74
J-10	1,314.00	5	1,485.72	74
J-11	1,314.00	4	1,485.76	74
J-12	1,311.00	4	1,485.86	76
J-13	1,310.00	6	1,485.92	76
J-14	1,311.00	9	1,486.06	76
J-15	1,335.00	38	1,473.81	60
J-16	1,337.00	3,028	1,470.20	58
J-17	1,310.00	0	1,489.36	78
J-18	1,309.00	0	1,489.20	78
J-19	1,313.00	12	1,489.16	76
J-20	1,318.00	12	1,489.14	74
J-21	1,314.00	20	1,489.15	76
J-22	1,315.00	5	1,489.15	75
J-23	1,318.00	11	1,489.14	74
J-24	1,315.00	14	1,489.14	75
J-25	1,311.00	13	1,489.14	77
J-26	1,310.00	8	1,489.14	78
J-27	1,309.00	0	1,489.20	78
J-28	1,308.00	0	1,489.37	78
J-29	1,310.00	36	1,488.89	77
J-30	1,309.00	0	1,489.38	78
J-31	1,310.00	0	1,522.83	92
J-33	1,310.00	0	1,524.92	93
J-35	1,321.00	7	1,489.27	73
J-36	1,321.00	0	1,489.42	73
J-37	1,322.00	0	1,489.90	73
J-38	1,322.00	0	1,520.62	86
J-40	1,322.00	0	1,526.27	88
J-41	1,309.11	11	1,489.09	78
J-42	1,309.00	11	1,489.02	78
J-43	1,310.00	11	1,488.99	77
J-44	1,309.53	22	1,488.97	78
J-45	1,309.00	16	1,489.05	78
J-46	1,309.31	11	1,489.02	78
J-48	1,310.00	0	1,489.38	78
J-49	1,309.53	0	1,489.38	78
J-50	1,310.00	0	1,489.38	78
J-51	1,309.00	0	1,489.38	78
J-52	1,309.11	0	1,489.38	78

**FlexTable: Junction Table**  
**Active Scenario: Max Day Demand + Hotel FF**

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-53	1,309.00	0	1,489.38	78
J-54	1,310.00	0	1,489.38	78
J-55	1,309.50	16	1,489.02	78
J-56	1,310.00	0	1,489.38	78
J-57	1,320.22	0	1,489.11	73
J-58	1,320.00	0	1,489.12	73
J-59	1,319.00	0	1,489.14	74
J-60	1,318.00	0	1,489.15	74
J-61	1,309.35	0	1,489.23	78

**FlexTable: Pipe Table**  
**Active Scenario: Max Day Demand + Hotel FF**

Label	Start Node	Stop Node	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Headloss Gradient (ft/ft)	Velocity (ft/s)
P-1	R-3	J-2	16.0	1,325	130.0	2,117	0.003	3.38
P-4	J-4	J-5	8.0	155	130.0	7	0.000	0.04
P-6	J-6	J-7	8.0	177	130.0	7	0.000	0.04
P-8	J-8	J-3	12.0	306	130.0	2,248	0.011	6.38
P-9	J-6	J-8	8.0	965	130.0	138	0.000	0.88
P-10	J-3	J-9	8.0	149	130.0	-402	0.003	2.57
P-11	J-9	J-10	8.0	138	130.0	-213	0.001	1.36
P-12	J-10	J-11	8.0	215	130.0	-89	0.000	0.57
P-13	J-11	J-12	8.0	424	130.0	-93	0.000	0.59
P-14	J-12	J-13	8.0	276	130.0	-97	0.000	0.62
P-15	J-13	J-10	8.0	498	130.0	129	0.000	0.82
P-16	J-13	J-14	8.0	113	130.0	-232	0.001	1.48
P-17	J-9	J-14	8.0	530	130.0	-199	0.001	1.27
P-18	J-3	J-15	12.0	558	130.0	3,066	0.020	8.70
P-19	J-15	J-16	12.0	183	130.0	3,028	0.020	8.59
P-20	J-14	J-30	8.0	833	130.0	-440	0.004	2.81
P-22	J-18	J-19	8.0	277	130.0	76	0.000	0.48
P-24	J-19	J-21	8.0	365	130.0	28	0.000	0.18
P-25	J-21	J-20	8.0	798	130.0	22	0.000	0.14
P-26	J-21	J-22	8.0	315	130.0	-13	0.000	0.09
P-27	J-20	J-23	8.0	274	130.0	10	0.000	0.07
P-28	J-23	J-24	8.0	396	130.0	0	0.000	0.00
P-29	J-24	J-25	8.0	549	130.0	-15	0.000	0.09
P-30	J-25	J-26	8.0	209	130.0	8	0.000	0.05
P-31	J-25	J-19	8.0	496	130.0	-36	0.000	0.23
P-32	J-18	J-27	8.0	675	130.0	0	0.000	0.00
P-33	J-17	J-28	12.0	249	130.0	-133	0.000	0.38
P-35	J-28	J-30	12.0	177	130.0	-133	0.000	0.38
P-39	J-31	J-33	8.0	218	130.0	-705	0.010	4.50
P-40	J-33	R-2	8.0	532	130.0	-705	0.010	4.50
P-41	J-4	J-35	12.0	163	130.0	-453	0.001	1.28
P-42	J-35	J-6	8.0	480	130.0	155	0.001	0.99
P-43	J-36	J-35	12.0	142	130.0	615	0.001	1.74
P-44	J-36	J-37	12.0	464	130.0	-615	0.001	1.74
P-45	PRV-2	J-38	12.0	171	130.0	-615	0.001	1.74
P-47	J-38	J-40	8.0	762	130.0	-615	0.007	3.92
P-48	J-40	R-1	8.0	503	130.0	-615	0.007	3.92
P-50	J-30	J-41	6.0	164	130.0	133	0.002	1.50
P-52	J-41	J-42	6.0	472	130.0	36	0.000	0.40
P-53	J-42	J-43	6.0	477	130.0	25	0.000	0.28
P-55	J-44	J-29	6.0	526	130.0	36	0.000	0.41
P-56	J-43	J-44	6.0	461	130.0	14	0.000	0.16
P-57	J-41	J-45	6.0	251	130.0	40	0.000	0.45
P-58	J-41	J-46	6.0	289	130.0	46	0.000	0.53
P-59	J-46	J-44	6.0	216	130.0	44	0.000	0.50
P-61	J-27	J-48	8.0	481	130.0	0	0.000	0.00
P-62	J-48	J-49	8.0	516	130.0	0	0.000	0.00

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**FlexTable: Pipe Table**  
**Active Scenario: Max Day Demand + Hotel FF**

Label	Start Node	Stop Node	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Headloss Gradient (ft/ft)	Velocity (ft/s)
P-63	J-49	J-50	8.0	447	130.0	-2	0.000	0.01
P-64	J-50	J-51	8.0	470	130.0	-2	0.000	0.01
P-65	J-52	J-51	8.0	487	130.0	2	0.000	0.01
P-66	J-52	J-53	8.0	243	130.0	1	0.000	0.01
P-67	J-53	J-56	8.0	309	130.0	1	0.000	0.01
P-68	J-54	J-49	8.0	223	130.0	-2	0.000	0.01
P-69	J-52	J-54	8.0	292	130.0	-3	0.000	0.02
P-70	J-30	J-52	8.0	162	130.0	0	0.000	0.00
P-71	J-45	J-55	6.0	310	130.0	24	0.000	0.27
P-72	J-55	J-46	6.0	240	130.0	8	0.000	0.09
P-73	J-2	PRV-1	12.0	116	130.0	2,117	0.010	6.01
P-74	PRV-1	J-8	12.0	156	130.0	2,117	0.010	6.01
P-75	PRV-2	J-37	12.0	218	130.0	615	0.001	1.74
P-78	J-30	PRV-4	12.0	562	130.0	-705	0.001	2.00
P-79	PRV-4	J-31	12.0	120	130.0	-705	0.001	2.00
P-80	J-18	J-56	8.0	169	130.0	0	0.000	0.00
P-81	J-56	J-54	8.0	244	130.0	1	0.000	0.01
P-82	J-3	J-57	8.0	964	130.0	-451	0.004	2.88
P-83	J-57	J-4	12.0	145	130.0	-413	0.000	1.17
P-84	J-57	J-58	8.0	408	130.0	-38	0.000	0.24
P-85	J-58	J-59	8.0	343	130.0	-38	0.000	0.24
P-86	J-59	J-60	8.0	356	130.0	-38	0.000	0.24
P-87	J-17	J-61	8.0	302	130.0	133	0.000	0.85
P-88	J-61	J-18	8.0	160	130.0	76	0.000	0.48
P-89	J-60	J-61	8.0	805	130.0	-57	0.000	0.36
P-90	J-60	J-22	8.0	143	130.0	19	0.000	0.12

**FlexTable: PRV Table**  
**Active Scenario: Max Day Demand + Hotel FF**

Label	Elevation (ft)	Diameter (Valve) (in)	Hydraulic Grade Setting (Initial) (ft)	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
PRV-1	1,315.00	12.0	1,490.00	2,117	1,525.50	1,490.13	35.37
PRV-2	1,322.00	12.0	1,490.00	615	1,520.44	1,490.12	30.32
PRV-4	1,309.87	12.0	1,490.00	705	1,522.67	1,490.13	32.54

**APPENDIX B**

**WaterCAD Results - Summer**

**FlexTable: Reservoir Table**  
**Active Scenario: Average Day Demand**

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,622.00	44	1,622.00
R-2	1,622.00	102	1,622.00
R-3	1,622.00	97	1,622.00

**FlexTable: Junction Table**  
**Active Scenario: Average Day Demand**

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-2	1,315.00	0	1,621.99	133
J-3	1,315.00	20	1,490.11	76
J-4	1,321.00	18	1,490.11	73
J-5	1,321.00	4	1,490.11	73
J-6	1,321.00	6	1,490.12	73
J-7	1,321.00	4	1,490.12	73
J-8	1,315.00	4	1,490.12	76
J-9	1,314.00	5	1,490.11	76
J-10	1,314.00	3	1,490.11	76
J-11	1,314.00	3	1,490.11	76
J-12	1,311.00	3	1,490.11	77
J-13	1,310.00	3	1,490.11	78
J-14	1,311.00	5	1,490.11	77
J-15	1,335.00	21	1,490.11	67
J-16	1,337.00	15	1,490.11	66
J-17	1,310.00	0	1,490.11	78
J-18	1,309.00	0	1,490.09	78
J-19	1,313.00	7	1,490.09	77
J-20	1,318.00	7	1,490.08	74
J-21	1,314.00	11	1,490.09	76
J-22	1,315.00	3	1,490.09	76
J-23	1,318.00	6	1,490.08	74
J-24	1,315.00	8	1,490.08	76
J-25	1,311.00	7	1,490.08	77
J-26	1,310.00	4	1,490.08	78
J-27	1,309.00	0	1,490.09	78
J-28	1,308.00	0	1,490.11	79
J-29	1,310.00	20	1,489.94	78
J-30	1,309.00	0	1,490.11	78
J-31	1,310.00	0	1,621.80	135
J-33	1,310.00	0	1,621.86	135
J-35	1,321.00	4	1,490.12	73
J-36	1,321.00	0	1,490.12	73
J-37	1,322.00	0	1,490.12	73
J-38	1,322.00	0	1,621.93	130
J-40	1,322.00	0	1,621.97	130
J-41	1,309.11	6	1,490.01	78
J-42	1,309.00	6	1,489.99	78
J-43	1,310.00	6	1,489.97	78
J-44	1,309.53	12	1,489.97	78
J-45	1,309.00	9	1,490.00	78
J-46	1,309.31	6	1,489.99	78
J-48	1,310.00	0	1,490.11	78
J-49	1,309.53	0	1,490.11	78
J-50	1,310.00	0	1,490.11	78
J-51	1,309.00	0	1,490.11	78
J-52	1,309.11	0	1,490.11	78

**FlexTable: Junction Table**  
**Active Scenario: Average Day Demand**

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-53	1,309.00	0	1,490.11	78
J-54	1,310.00	0	1,490.11	78
J-55	1,309.50	9	1,489.99	78
J-56	1,310.00	0	1,490.11	78
J-57	1,320.22	0	1,490.11	74
J-58	1,320.00	0	1,490.11	74
J-59	1,319.00	0	1,490.10	74
J-60	1,318.00	0	1,490.10	74
J-61	1,309.35	0	1,490.10	78

**FlexTable: Pipe Table**  
**Active Scenario: Average Day Demand**

Label	Start Node	Stop Node	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Headloss Gradient (ft/ft)	Velocity (ft/s)
P-1	R-3	J-2	16.0	1,325	130.0	97	0.000	0.16
P-4	J-4	J-5	8.0	143	130.0	4	0.000	0.02
P-6	J-6	J-7	8.0	177	130.0	4	0.000	0.02
P-8	J-8	J-3	12.0	306	130.0	80	0.000	0.23
P-9	J-6	J-8	8.0	965	130.0	-13	0.000	0.08
P-10	J-3	J-9	8.0	149	130.0	25	0.000	0.16
P-11	J-9	J-10	8.0	138	130.0	12	0.000	0.08
P-12	J-10	J-11	8.0	215	130.0	5	0.000	0.03
P-13	J-11	J-12	8.0	424	130.0	3	0.000	0.02
P-14	J-12	J-13	8.0	276	130.0	0	0.000	0.00
P-15	J-13	J-10	8.0	498	130.0	-4	0.000	0.03
P-16	J-13	J-14	8.0	113	130.0	1	0.000	0.01
P-17	J-9	J-14	8.0	530	130.0	7	0.000	0.05
P-18	J-3	J-15	12.0	558	130.0	36	0.000	0.10
P-19	J-15	J-16	12.0	183	130.0	15	0.000	0.04
P-20	J-14	J-30	8.0	833	130.0	3	0.000	0.02
P-22	J-18	J-19	8.0	277	130.0	26	0.000	0.17
P-24	J-19	J-21	8.0	365	130.0	2	0.000	0.01
P-25	J-21	J-20	8.0	798	130.0	14	0.000	0.09
P-26	J-21	J-22	8.0	315	130.0	-23	0.000	0.15
P-27	J-20	J-23	8.0	274	130.0	8	0.000	0.05
P-28	J-23	J-24	8.0	396	130.0	2	0.000	0.01
P-29	J-24	J-25	8.0	549	130.0	-6	0.000	0.04
P-30	J-25	J-26	8.0	209	130.0	4	0.000	0.03
P-31	J-25	J-19	8.0	496	130.0	-18	0.000	0.11
P-32	J-18	J-27	8.0	675	130.0	0	0.000	0.00
P-33	J-17	J-28	12.0	249	130.0	-31	0.000	0.09
P-35	J-28	J-30	12.0	177	130.0	-31	0.000	0.09
P-39	J-31	J-33	8.0	218	130.0	-102	0.000	0.65
P-40	J-33	R-2	8.0	532	130.0	-102	0.000	0.65
P-41	J-4	J-35	12.0	163	130.0	-44	0.000	0.12
P-42	J-35	J-6	8.0	480	130.0	-3	0.000	0.02
P-43	J-36	J-35	12.0	142	130.0	44	0.000	0.13
P-44	J-36	J-37	12.0	464	130.0	-44	0.000	0.13
P-45	PRV-2	J-38	12.0	108	130.0	-44	0.000	0.13
P-47	J-38	J-40	8.0	762	130.0	-44	0.000	0.28
P-48	J-40	R-1	8.0	503	130.0	-44	0.000	0.28
P-50	J-30	J-41	6.0	164	130.0	74	0.001	0.84
P-52	J-41	J-42	6.0	472	130.0	20	0.000	0.22
P-53	J-42	J-43	6.0	477	130.0	14	0.000	0.16
P-55	J-44	J-29	6.0	526	130.0	20	0.000	0.23
P-56	J-43	J-44	6.0	461	130.0	8	0.000	0.09
P-57	J-41	J-45	6.0	251	130.0	22	0.000	0.25
P-58	J-41	J-46	6.0	289	130.0	26	0.000	0.29
P-59	J-46	J-44	6.0	216	130.0	24	0.000	0.28
P-61	J-27	J-48	8.0	481	130.0	0	0.000	0.00
P-62	J-48	J-49	8.0	516	130.0	0	0.000	0.00

**FlexTable: Pipe Table**  
**Active Scenario: Average Day Demand**

Label	Start Node	Stop Node	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Headloss Gradient (ft/ft)	Velocity (ft/s)
P-63	J-49	J-50	8.0	447	130.0	0	0.000	0.00
P-64	J-50	J-51	8.0	470	130.0	0	0.000	0.00
P-65	J-52	J-51	8.0	487	130.0	0	0.000	0.00
P-66	J-52	J-53	8.0	243	130.0	0	0.000	0.00
P-67	J-53	J-56	8.0	309	130.0	0	0.000	0.00
P-68	J-54	J-49	8.0	223	130.0	0	0.000	0.00
P-69	J-52	J-54	8.0	292	130.0	0	0.000	0.00
P-70	J-30	J-52	8.0	162	130.0	0	0.000	0.00
P-71	J-45	J-55	6.0	310	130.0	13	0.000	0.15
P-72	J-55	J-46	6.0	240	130.0	5	0.000	0.05
P-73	J-2	PRV-1	12.0	116	130.0	97	0.000	0.28
P-74	PRV-1	J-8	12.0	156	130.0	97	0.000	0.28
P-75	PRV-2	J-37	12.0	145	130.0	44	0.000	0.13
P-78	J-30	PRV-4	12.0	562	130.0	-102	0.000	0.29
P-79	PRV-4	J-31	12.0	120	130.0	-102	0.000	0.29
P-80	J-18	J-56	8.0	169	130.0	0	0.000	0.00
P-81	J-56	J-54	8.0	244	130.0	0	0.000	0.00
P-82	J-3	J-57	8.0	964	130.0	-1	0.000	0.00
P-83	J-57	J-4	12.0	145	130.0	-22	0.000	0.06
P-84	J-57	J-58	8.0	408	130.0	21	0.000	0.14
P-85	J-58	J-59	8.0	343	130.0	21	0.000	0.14
P-86	J-59	J-60	8.0	356	130.0	21	0.000	0.14
P-87	J-17	J-61	8.0	302	130.0	31	0.000	0.20
P-88	J-61	J-18	8.0	160	130.0	26	0.000	0.17
P-89	J-60	J-61	8.0	805	130.0	-5	0.000	0.03
P-90	J-60	J-22	8.0	143	130.0	26	0.000	0.17

**FlexTable: PRV Table**  
**Active Scenario: Average Day Demand**

Label	Elevation (ft)	Diameter (Valve) (in)	Hydraulic Grade Setting (Initial) (ft)	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
PRV-1	1,315.00	12.0	1,490.00	97	1,621.98	1,490.13	131.86
PRV-2	1,322.00	12.0	1,490.00	44	1,621.93	1,490.12	131.81
PRV-4	1,309.87	12.0	1,490.00	102	1,621.80	1,490.13	131.67

**FlexTable: Reservoir Table**  
**Active Scenario: Max Day Demand**

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,622.00	91	1,622.00
R-2	1,622.00	176	1,622.00
R-3	1,622.00	170	1,622.00

**FlexTable: Junction Table**  
**Active Scenario: Max Day Demand**

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-2	1,315.00	0	1,621.97	133
J-3	1,315.00	36	1,490.09	76
J-4	1,321.00	33	1,490.09	73
J-5	1,321.00	7	1,490.09	73
J-6	1,321.00	11	1,490.10	73
J-7	1,321.00	7	1,490.10	73
J-8	1,315.00	8	1,490.11	76
J-9	1,314.00	9	1,490.08	76
J-10	1,314.00	5	1,490.08	76
J-11	1,314.00	4	1,490.08	76
J-12	1,311.00	4	1,490.08	77
J-13	1,310.00	6	1,490.08	78
J-14	1,311.00	9	1,490.08	77
J-15	1,335.00	38	1,490.08	67
J-16	1,337.00	28	1,490.08	66
J-17	1,310.00	0	1,490.07	78
J-18	1,309.00	0	1,490.03	78
J-19	1,313.00	12	1,490.01	77
J-20	1,318.00	12	1,490.00	74
J-21	1,314.00	20	1,490.01	76
J-22	1,315.00	5	1,490.03	76
J-23	1,318.00	11	1,490.00	74
J-24	1,315.00	14	1,490.00	76
J-25	1,311.00	13	1,490.00	77
J-26	1,310.00	8	1,490.00	78
J-27	1,309.00	0	1,490.03	78
J-28	1,308.00	0	1,490.07	79
J-29	1,310.00	36	1,489.58	78
J-30	1,309.00	0	1,490.07	78
J-31	1,310.00	0	1,621.45	135
J-33	1,310.00	0	1,621.61	135
J-35	1,321.00	7	1,490.10	73
J-36	1,321.00	0	1,490.10	73
J-37	1,322.00	0	1,490.12	73
J-38	1,322.00	0	1,621.73	130
J-40	1,322.00	0	1,621.89	130
J-41	1,309.11	11	1,489.78	78
J-42	1,309.00	11	1,489.71	78
J-43	1,310.00	11	1,489.67	78
J-44	1,309.53	22	1,489.66	78
J-45	1,309.00	16	1,489.74	78
J-46	1,309.31	11	1,489.71	78
J-48	1,310.00	0	1,490.07	78
J-49	1,309.53	0	1,490.07	78
J-50	1,310.00	0	1,490.07	78
J-51	1,309.00	0	1,490.07	78
J-52	1,309.11	0	1,490.07	78

**FlexTable: Junction Table**  
**Active Scenario: Max Day Demand**

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-53	1,309.00	0	1,490.07	78
J-54	1,310.00	0	1,490.07	78
J-55	1,309.50	16	1,489.71	78
J-56	1,310.00	0	1,490.07	78
J-57	1,320.22	0	1,490.09	73
J-58	1,320.00	0	1,490.07	74
J-59	1,319.00	0	1,490.06	74
J-60	1,318.00	0	1,490.04	74
J-61	1,309.35	0	1,490.04	78

**FlexTable: Pipe Table**  
**Active Scenario: Max Day Demand**

Label	Start Node	Stop Node	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Headloss Gradient (ft/ft)	Velocity (ft/s)
P-1	R-3	J-2	16.0	1,325	130.0	170	0.000	0.27
P-4	J-4	J-5	8.0	143	130.0	7	0.000	0.04
P-6	J-6	J-7	8.0	177	130.0	7	0.000	0.04
P-8	J-8	J-3	12.0	306	130.0	142	0.000	0.40
P-9	J-6	J-8	8.0	965	130.0	-20	0.000	0.13
P-10	J-3	J-9	8.0	149	130.0	48	0.000	0.31
P-11	J-9	J-10	8.0	138	130.0	24	0.000	0.15
P-12	J-10	J-11	8.0	215	130.0	10	0.000	0.06
P-13	J-11	J-12	8.0	424	130.0	6	0.000	0.04
P-14	J-12	J-13	8.0	276	130.0	2	0.000	0.01
P-15	J-13	J-10	8.0	498	130.0	-9	0.000	0.06
P-16	J-13	J-14	8.0	113	130.0	5	0.000	0.03
P-17	J-9	J-14	8.0	530	130.0	15	0.000	0.10
P-18	J-3	J-15	12.0	558	130.0	66	0.000	0.19
P-19	J-15	J-16	12.0	183	130.0	28	0.000	0.08
P-20	J-14	J-30	8.0	833	130.0	11	0.000	0.07
P-22	J-18	J-19	8.0	277	130.0	47	0.000	0.30
P-24	J-19	J-21	8.0	365	130.0	3	0.000	0.02
P-25	J-21	J-20	8.0	798	130.0	25	0.000	0.16
P-26	J-21	J-22	8.0	315	130.0	-42	0.000	0.27
P-27	J-20	J-23	8.0	274	130.0	14	0.000	0.09
P-28	J-23	J-24	8.0	396	130.0	3	0.000	0.02
P-29	J-24	J-25	8.0	549	130.0	-11	0.000	0.07
P-30	J-25	J-26	8.0	209	130.0	8	0.000	0.05
P-31	J-25	J-19	8.0	496	130.0	-32	0.000	0.21
P-32	J-18	J-27	8.0	675	130.0	0	0.000	0.00
P-33	J-17	J-28	12.0	249	130.0	-55	0.000	0.15
P-35	J-28	J-30	12.0	177	130.0	-55	0.000	0.15
P-39	J-31	J-33	8.0	218	130.0	-176	0.001	1.12
P-40	J-33	R-2	8.0	532	130.0	-176	0.001	1.12
P-41	J-4	J-35	12.0	163	130.0	-88	0.000	0.25
P-42	J-35	J-6	8.0	480	130.0	-3	0.000	0.02
P-43	J-36	J-35	12.0	142	130.0	91	0.000	0.26
P-44	J-36	J-37	12.0	464	130.0	-91	0.000	0.26
P-45	PRV-2	J-38	12.0	108	130.0	-91	0.000	0.26
P-47	J-38	J-40	8.0	762	130.0	-91	0.000	0.58
P-48	J-40	R-1	8.0	503	130.0	-91	0.000	0.58
P-50	J-30	J-41	6.0	164	130.0	133	0.002	1.50
P-52	J-41	J-42	6.0	472	130.0	36	0.000	0.40
P-53	J-42	J-43	6.0	477	130.0	25	0.000	0.28
P-55	J-44	J-29	6.0	526	130.0	36	0.000	0.41
P-56	J-43	J-44	6.0	461	130.0	14	0.000	0.16
P-57	J-41	J-45	6.0	251	130.0	40	0.000	0.45
P-58	J-41	J-46	6.0	289	130.0	46	0.000	0.53
P-59	J-46	J-44	6.0	216	130.0	44	0.000	0.50
P-61	J-27	J-48	8.0	481	130.0	0	0.000	0.00
P-62	J-48	J-49	8.0	516	130.0	0	0.000	0.00

**FlexTable: Pipe Table**  
**Active Scenario: Max Day Demand**

Label	Start Node	Stop Node	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Headloss Gradient (ft/ft)	Velocity (ft/s)
P-63	J-49	J-50	8.0	447	130.0	0	0.000	0.00
P-64	J-50	J-51	8.0	470	130.0	0	0.000	0.00
P-65	J-52	J-51	8.0	487	130.0	0	0.000	0.00
P-66	J-52	J-53	8.0	243	130.0	0	0.000	0.00
P-67	J-53	J-56	8.0	309	130.0	0	0.000	0.00
P-68	J-54	J-49	8.0	223	130.0	0	0.000	0.00
P-69	J-52	J-54	8.0	292	130.0	0	0.000	0.00
P-70	J-30	J-52	8.0	162	130.0	0	0.000	0.00
P-71	J-45	J-55	6.0	310	130.0	24	0.000	0.27
P-72	J-55	J-46	6.0	240	130.0	8	0.000	0.09
P-73	J-2	PRV-1	12.0	116	130.0	170	0.000	0.48
P-74	PRV-1	J-8	12.0	156	130.0	170	0.000	0.48
P-75	PRV-2	J-37	12.0	145	130.0	91	0.000	0.26
P-78	J-30	PRV-4	12.0	562	130.0	-176	0.000	0.50
P-79	PRV-4	J-31	12.0	120	130.0	-176	0.000	0.50
P-80	J-18	J-56	8.0	169	130.0	0	0.000	0.00
P-81	J-56	J-54	8.0	244	130.0	0	0.000	0.00
P-82	J-3	J-57	8.0	964	130.0	-8	0.000	0.05
P-83	J-57	J-4	12.0	145	130.0	-48	0.000	0.14
P-84	J-57	J-58	8.0	408	130.0	40	0.000	0.25
P-85	J-58	J-59	8.0	343	130.0	40	0.000	0.25
P-86	J-59	J-60	8.0	356	130.0	40	0.000	0.25
P-87	J-17	J-61	8.0	302	130.0	55	0.000	0.35
P-88	J-61	J-18	8.0	160	130.0	47	0.000	0.30
P-89	J-60	J-61	8.0	805	130.0	-8	0.000	0.05
P-90	J-60	J-22	8.0	143	130.0	48	0.000	0.30

## FlexTable: PRV Table

### Active Scenario: Max Day Demand

Label	Elevation (ft)	Diameter (Valve) (in)	Hydraulic Grade Setting (Initial) (ft)	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
PRV-1	1,315.00	12.0	1,490.00	170	1,621.96	1,490.13	131.83
PRV-2	1,322.00	12.0	1,490.00	91	1,621.72	1,490.12	131.60
PRV-4	1,309.87	12.0	1,490.00	176	1,621.44	1,490.13	131.31

**FlexTable: Reservoir Table****Active Scenario: Peak Hour Demand**

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,622.00	157	1,622.00
R-2	1,622.00	290	1,622.00
R-3	1,622.00	280	1,622.00

## FlexTable: Junction Table

### Active Scenario: Peak Hour Demand

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-2	1,315.00	0	1,621.92	133
J-3	1,315.00	60	1,490.04	76
J-4	1,321.00	55	1,490.05	73
J-5	1,321.00	11	1,490.05	73
J-6	1,321.00	18	1,490.06	73
J-7	1,321.00	11	1,490.06	73
J-8	1,315.00	13	1,490.09	76
J-9	1,314.00	16	1,490.01	76
J-10	1,314.00	9	1,490.00	76
J-11	1,314.00	7	1,490.00	76
J-12	1,311.00	7	1,490.00	77
J-13	1,310.00	10	1,490.00	78
J-14	1,311.00	16	1,490.00	77
J-15	1,335.00	62	1,490.01	67
J-16	1,337.00	46	1,490.01	66
J-17	1,310.00	0	1,489.97	78
J-18	1,309.00	0	1,489.89	78
J-19	1,313.00	20	1,489.84	77
J-20	1,318.00	20	1,489.80	74
J-21	1,314.00	31	1,489.84	76
J-22	1,315.00	9	1,489.88	76
J-23	1,318.00	18	1,489.79	74
J-24	1,315.00	24	1,489.79	76
J-25	1,311.00	22	1,489.80	77
J-26	1,310.00	13	1,489.80	78
J-27	1,309.00	0	1,489.89	78
J-28	1,308.00	0	1,489.98	79
J-29	1,310.00	60	1,488.71	77
J-30	1,309.00	0	1,489.99	78
J-31	1,310.00	0	1,620.61	134
J-33	1,310.00	0	1,621.02	135
J-35	1,321.00	11	1,490.06	73
J-36	1,321.00	0	1,490.07	73
J-37	1,322.00	0	1,490.11	73
J-38	1,322.00	0	1,621.25	129
J-40	1,322.00	0	1,621.70	130
J-41	1,309.11	18	1,489.23	78
J-42	1,309.00	19	1,489.05	78
J-43	1,310.00	18	1,488.95	77
J-44	1,309.53	36	1,488.92	78
J-45	1,309.00	27	1,489.11	78
J-46	1,309.31	18	1,489.05	78
J-48	1,310.00	0	1,489.99	78
J-49	1,309.53	0	1,489.99	78
J-50	1,310.00	0	1,489.99	78
J-51	1,309.00	0	1,489.99	78
J-52	1,309.11	0	1,489.99	78

## **FlexTable: Junction Table**

### **Active Scenario: Peak Hour Demand**

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-53	1,309.00	0	1,489.99	78
J-54	1,310.00	0	1,489.99	78
J-55	1,309.50	26	1,489.05	78
J-56	1,310.00	0	1,489.99	78
J-57	1,320.22	0	1,490.04	73
J-58	1,320.00	0	1,489.99	74
J-59	1,319.00	0	1,489.95	74
J-60	1,318.00	0	1,489.91	74
J-61	1,309.35	0	1,489.91	78

## FlexTable: Pipe Table

### Active Scenario: Peak Hour Demand

Label	Start Node	Stop Node	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Headloss Gradient (ft/ft)	Velocity (ft/s)
P-1	R-3	J-2	16.0	1,325	130.0	280	0.000	0.45
P-4	J-4	J-5	8.0	143	130.0	11	0.000	0.07
P-6	J-6	J-7	8.0	177	130.0	11	0.000	0.07
P-8	J-8	J-3	12.0	306	130.0	236	0.000	0.67
P-9	J-6	J-8	8.0	965	130.0	-31	0.000	0.20
P-10	J-3	J-9	8.0	149	130.0	83	0.000	0.53
P-11	J-9	J-10	8.0	138	130.0	41	0.000	0.26
P-12	J-10	J-11	8.0	215	130.0	17	0.000	0.11
P-13	J-11	J-12	8.0	424	130.0	11	0.000	0.07
P-14	J-12	J-13	8.0	276	130.0	4	0.000	0.03
P-15	J-13	J-10	8.0	498	130.0	-15	0.000	0.10
P-16	J-13	J-14	8.0	113	130.0	10	0.000	0.06
P-17	J-9	J-14	8.0	530	130.0	26	0.000	0.17
P-18	J-3	J-15	12.0	558	130.0	109	0.000	0.31
P-19	J-15	J-16	12.0	183	130.0	46	0.000	0.13
P-20	J-14	J-30	8.0	833	130.0	21	0.000	0.13
P-22	J-18	J-19	8.0	277	130.0	77	0.000	0.49
P-24	J-19	J-21	8.0	365	130.0	3	0.000	0.02
P-25	J-21	J-20	8.0	798	130.0	43	0.000	0.27
P-26	J-21	J-22	8.0	315	130.0	-70	0.000	0.45
P-27	J-20	J-23	8.0	274	130.0	23	0.000	0.14
P-28	J-23	J-24	8.0	396	130.0	5	0.000	0.03
P-29	J-24	J-25	8.0	549	130.0	-19	0.000	0.12
P-30	J-25	J-26	8.0	209	130.0	13	0.000	0.08
P-31	J-25	J-19	8.0	496	130.0	-54	0.000	0.34
P-32	J-18	J-27	8.0	675	130.0	0	0.000	0.00
P-33	J-17	J-28	12.0	249	130.0	-89	0.000	0.25
P-35	J-28	J-30	12.0	177	130.0	-89	0.000	0.25
P-39	J-31	J-33	8.0	218	130.0	-290	0.002	1.85
P-40	J-33	R-2	8.0	532	130.0	-290	0.002	1.85
P-41	J-4	J-35	12.0	163	130.0	-149	0.000	0.42
P-42	J-35	J-6	8.0	480	130.0	-3	0.000	0.02
P-43	J-36	J-35	12.0	142	130.0	157	0.000	0.45
P-44	J-36	J-37	12.0	464	130.0	-157	0.000	0.45
P-45	PRV-2	J-38	12.0	108	130.0	-157	0.000	0.45
P-47	J-38	J-40	8.0	762	130.0	-157	0.001	1.00
P-48	J-40	R-1	8.0	503	130.0	-157	0.001	1.00
P-50	J-30	J-41	6.0	164	130.0	222	0.005	2.52
P-52	J-41	J-42	6.0	472	130.0	60	0.000	0.68
P-53	J-42	J-43	6.0	477	130.0	41	0.000	0.47
P-55	J-44	J-29	6.0	526	130.0	60	0.000	0.68
P-56	J-43	J-44	6.0	461	130.0	23	0.000	0.26
P-57	J-41	J-45	6.0	251	130.0	67	0.000	0.76
P-58	J-41	J-46	6.0	289	130.0	78	0.001	0.88
P-59	J-46	J-44	6.0	216	130.0	73	0.001	0.83
P-61	J-27	J-48	8.0	481	130.0	0	0.000	0.00
P-62	J-48	J-49	8.0	516	130.0	0	0.000	0.00

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Bentley WaterCAD V8i (SELECTseries 6)

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## FlexTable: Pipe Table

### Active Scenario: Peak Hour Demand

Label	Start Node	Stop Node	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Headloss Gradient (ft/ft)	Velocity (ft/s)
P-63	J-49	J-50	8.0	447	130.0	0	0.000	0.00
P-64	J-50	J-51	8.0	470	130.0	0	0.000	0.00
P-65	J-52	J-51	8.0	487	130.0	0	0.000	0.00
P-66	J-52	J-53	8.0	243	130.0	0	0.000	0.00
P-67	J-53	J-56	8.0	309	130.0	0	0.000	0.00
P-68	J-54	J-49	8.0	223	130.0	0	0.000	0.00
P-69	J-52	J-54	8.0	292	130.0	0	0.000	0.00
P-70	J-30	J-52	8.0	162	130.0	0	0.000	0.00
P-71	J-45	J-55	6.0	310	130.0	40	0.000	0.45
P-72	J-55	J-46	6.0	240	130.0	14	0.000	0.15
P-73	J-2	PRV-1	12.0	116	130.0	280	0.000	0.80
P-74	PRV-1	J-8	12.0	156	130.0	280	0.000	0.80
P-75	PRV-2	J-37	12.0	145	130.0	157	0.000	0.45
P-78	J-30	PRV-4	12.0	562	130.0	-290	0.000	0.82
P-79	PRV-4	J-31	12.0	120	130.0	-290	0.000	0.82
P-80	J-18	J-56	8.0	169	130.0	0	0.000	0.00
P-81	J-56	J-54	8.0	244	130.0	0	0.000	0.00
P-82	J-3	J-57	8.0	964	130.0	-16	0.000	0.10
P-83	J-57	J-4	12.0	145	130.0	-83	0.000	0.24
P-84	J-57	J-58	8.0	408	130.0	67	0.000	0.43
P-85	J-58	J-59	8.0	343	130.0	67	0.000	0.43
P-86	J-59	J-60	8.0	356	130.0	67	0.000	0.43
P-87	J-17	J-61	8.0	302	130.0	89	0.000	0.57
P-88	J-61	J-18	8.0	160	130.0	77	0.000	0.49
P-89	J-60	J-61	8.0	805	130.0	-12	0.000	0.07
P-90	J-60	J-22	8.0	143	130.0	79	0.000	0.50

## FlexTable: PRV Table

### Active Scenario: Peak Hour Demand

Label	Elevation (ft)	Diameter (Valve) (in)	Hydraulic Grade Setting (Initial) (ft)	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
PRV-1	1,315.00	12.0	1,490.00	280	1,621.89	1,490.13	131.77
PRV-2	1,322.00	12.0	1,490.00	157	1,621.24	1,490.12	131.12
PRV-4	1,309.87	12.0	1,490.00	290	1,620.58	1,490.13	130.45

**FlexTable: Reservoir Table**  
**Active Scenario: Max Day Demand + Res FF**

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,622.00	91	1,622.00
R-2	1,622.00	176	1,622.00
R-3	1,622.00	170	1,622.00

## Fire Flow Node FlexTable: Fire Flow Report

### Active Scenario: Max Day Demand + Res FF

Label	Fire Flow (Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Velocity of Maximum Pipe (ft/s)	Pipe w/ Maximum Velocity
J-2	1,500	1,501	20	132	66	J-16	2.67	P-1
J-3	1,500	1,537	20	75	66	J-16	3.35	P-8
J-4	1,500	1,534	20	72	66	J-16	5.74	P-48
J-5	1,500	1,508	20	70	70	J-5	9.62	P-4
J-6	1,500	1,511	20	70	66	J-16	5.63	P-42
J-7	1,500	1,508	20	67	66	J-16	9.62	P-6
J-8	1,500	1,509	20	75	66	J-16	3.66	P-73
J-9	1,500	1,510	20	74	66	J-16	7.00	P-10
J-10	1,500	1,506	20	73	66	J-16	6.80	P-10
J-11	1,500	1,505	20	72	66	J-16	6.71	P-10
J-12	1,500	1,505	20	73	66	J-16	6.65	P-10
J-13	1,500	1,507	20	75	66	J-16	6.51	P-10
J-14	1,500	1,510	20	75	66	J-16	6.26	P-10
J-15	1,500	1,539	20	65	64	J-16	4.44	P-18
J-16	1,500	1,529	20	64	65	J-15	4.44	P-18
J-17	1,500	1,501	20	76	66	J-16	7.40	P-40
J-18	1,500	1,501	20	73	66	J-16	7.12	P-88
J-19	1,500	1,513	20	70	66	J-16	6.42	P-87
J-20	1,500	1,513	20	63	64	J-23	6.37	P-87
J-21	1,500	1,521	20	70	66	J-16	6.31	P-87
J-22	1,500	1,506	20	70	66	J-16	6.60	P-90
J-23	1,500	1,511	20	63	64	J-20	6.37	P-87
J-24	1,500	1,515	20	64	64	J-23	6.38	P-87
J-25	1,500	1,514	20	67	66	J-16	6.66	P-31
J-26	1,500	1,509	20	64	66	J-16	9.63	P-30
J-27	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-28	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-29	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-30	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-31	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-33	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-35	1,500	1,508	20	72	66	J-16	6.03	P-48
J-36	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-37	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-38	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-40	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-41	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-42	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-43	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-44	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-45	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-46	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-48	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-49	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-50	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

## Fire Flow Node FlexTable: Fire Flow Report

### Active Scenario: Max Day Demand + Res FF

Label	Fire Flow (Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Velocity of Maximum Pipe (ft/s)	Pipe w/ Maximum Velocity
J-51	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-52	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-53	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-54	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-55	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-56	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-57	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-58	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-59	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-60	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-61	1,500	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

**FlexTable: PRV Table**  
**Active Scenario: Max Day Demand + Res FF**

Label	Elevation (ft)	Diameter (Valve) (in)	Hydraulic Grade Setting (Initial) (ft)	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
PRV-1	1,315.00	12.0	1,490.00	170	1,621.96	1,490.13	131.83
PRV-2	1,322.00	12.0	1,490.00	91	1,621.72	1,490.12	131.60
PRV-4	1,309.87	12.0	1,490.00	176	1,621.44	1,490.13	131.31

**FlexTable: Reservoir Table**  
**Active Scenario: Max Day Demand + Comm FF**

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,622.00	91	1,622.00
R-2	1,622.00	176	1,622.00
R-3	1,622.00	170	1,622.00

## Fire Flow Node FlexTable: Fire Flow Report

### Active Scenario: Max Day Demand + Comm FF

Label	Fire Flow (Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Velocity of Maximum Pipe (ft/s)	Pipe w/ Maximum Velocity
J-2	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-3	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-4	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-5	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-6	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-7	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-8	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-9	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-10	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-11	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-12	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-13	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-14	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-15	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-16	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-17	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-18	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-19	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-20	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-21	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-22	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-23	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-24	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-25	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-26	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-27	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-28	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-29	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-30	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-31	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-33	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-35	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-36	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-37	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-38	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-40	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-41	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-42	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-43	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-44	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-45	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-46	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-48	2,000	2,001	20	68	66	J-16	9.34	P-40
J-49	2,000	2,001	20	72	66	J-16	9.44	P-40
J-50	2,000	2,001	20	69	66	J-16	9.48	P-40

## Fire Flow Node FlexTable: Fire Flow Report

### Active Scenario: Max Day Demand + Comm FF

Label	Fire Flow (Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Velocity of Maximum Pipe (ft/s)	Pipe w/ Maximum Velocity
J-51	2,000	2,001	20	70	66	J-16	9.52	P-40
J-52	2,000	2,001	20	75	66	J-16	9.58	P-40
J-53	2,000	2,001	20	73	66	J-16	9.49	P-40
J-54	2,000	2,001	20	74	66	J-16	9.46	P-40
J-55	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-56	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-57	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-58	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-59	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-60	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-61	2,000	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

**FlexTable: PRV Table**  
**Active Scenario: Max Day Demand + Comm FF**

Label	Elevation (ft)	Diameter (Valve) (in)	Hydraulic Grade Setting (Initial) (ft)	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
PRV-1	1,315.00	12.0	1,490.00	170	1,621.96	1,490.13	131.83
PRV-2	1,322.00	12.0	1,490.00	91	1,621.72	1,490.12	131.60
PRV-4	1,309.87	12.0	1,490.00	176	1,621.44	1,490.13	131.31

**FlexTable: Reservoir Table****Active Scenario: Max Day Demand + Hotel FF**

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,622.00	626	1,622.00
R-2	1,622.00	699	1,622.00
R-3	1,622.00	2,112	1,622.00

**FlexTable: Junction Table**  
**Active Scenario: Max Day Demand + Hotel FF**

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-2	1,315.00	0	1,618.70	131
J-3	1,315.00	36	1,485.08	74
J-4	1,321.00	33	1,489.22	73
J-5	1,321.00	7	1,489.22	73
J-6	1,321.00	11	1,489.03	73
J-7	1,321.00	7	1,489.03	73
J-8	1,315.00	8	1,488.55	75
J-9	1,314.00	9	1,485.59	74
J-10	1,314.00	5	1,485.73	74
J-11	1,314.00	4	1,485.77	74
J-12	1,311.00	4	1,485.87	76
J-13	1,310.00	6	1,485.94	76
J-14	1,311.00	9	1,486.07	76
J-15	1,335.00	38	1,473.82	60
J-16	1,337.00	3,028	1,470.22	58
J-17	1,310.00	0	1,489.37	78
J-18	1,309.00	0	1,489.23	78
J-19	1,313.00	12	1,489.19	76
J-20	1,318.00	12	1,489.17	74
J-21	1,314.00	20	1,489.18	76
J-22	1,315.00	5	1,489.18	75
J-23	1,318.00	11	1,489.17	74
J-24	1,315.00	14	1,489.17	75
J-25	1,311.00	13	1,489.17	77
J-26	1,310.00	8	1,489.17	78
J-27	1,309.00	0	1,489.23	78
J-28	1,308.00	0	1,489.39	78
J-29	1,310.00	36	1,488.90	77
J-30	1,309.00	0	1,489.39	78
J-31	1,310.00	0	1,614.94	132
J-33	1,310.00	0	1,616.99	133
J-35	1,321.00	7	1,489.32	73
J-36	1,321.00	0	1,489.47	73
J-37	1,322.00	0	1,489.97	73
J-38	1,322.00	0	1,612.29	126
J-40	1,322.00	0	1,618.14	128
J-41	1,309.11	11	1,489.11	78
J-42	1,309.00	11	1,489.03	78
J-43	1,310.00	11	1,489.00	77
J-44	1,309.53	22	1,488.98	78
J-45	1,309.00	16	1,489.06	78
J-46	1,309.31	11	1,489.03	78
J-48	1,310.00	0	1,489.39	78
J-49	1,309.53	0	1,489.39	78
J-50	1,310.00	0	1,489.39	78
J-51	1,309.00	0	1,489.39	78
J-52	1,309.11	0	1,489.39	78

**FlexTable: Junction Table**  
**Active Scenario: Max Day Demand + Hotel FF**

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-53	1,309.00	0	1,489.39	78
J-54	1,310.00	0	1,489.39	78
J-55	1,309.50	16	1,489.04	78
J-56	1,310.00	0	1,489.39	78
J-57	1,320.22	0	1,489.15	73
J-58	1,320.00	0	1,489.16	73
J-59	1,319.00	0	1,489.17	74
J-60	1,318.00	0	1,489.18	74
J-61	1,309.35	0	1,489.25	78

**FlexTable: Pipe Table**  
**Active Scenario: Max Day Demand + Hotel FF**

Label	Start Node	Stop Node	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Headloss Gradient (ft/ft)	Velocity (ft/s)
P-1	R-3	J-2	16.0	1,325	130.0	2,112	0.002	3.37
P-4	J-4	J-5	8.0	143	130.0	7	0.000	0.04
P-6	J-6	J-7	8.0	177	130.0	7	0.000	0.04
P-8	J-8	J-3	12.0	306	130.0	2,246	0.011	6.37
P-9	J-6	J-8	8.0	965	130.0	142	0.000	0.91
P-10	J-3	J-9	8.0	149	130.0	-402	0.003	2.57
P-11	J-9	J-10	8.0	138	130.0	-213	0.001	1.36
P-12	J-10	J-11	8.0	215	130.0	-89	0.000	0.57
P-13	J-11	J-12	8.0	424	130.0	-93	0.000	0.59
P-14	J-12	J-13	8.0	276	130.0	-97	0.000	0.62
P-15	J-13	J-10	8.0	498	130.0	129	0.000	0.82
P-16	J-13	J-14	8.0	113	130.0	-232	0.001	1.48
P-17	J-9	J-14	8.0	530	130.0	-199	0.001	1.27
P-18	J-3	J-15	12.0	558	130.0	3,066	0.020	8.70
P-19	J-15	J-16	12.0	183	130.0	3,028	0.020	8.59
P-20	J-14	J-30	8.0	833	130.0	-440	0.004	2.81
P-22	J-18	J-19	8.0	277	130.0	73	0.000	0.47
P-24	J-19	J-21	8.0	365	130.0	26	0.000	0.17
P-25	J-21	J-20	8.0	798	130.0	23	0.000	0.14
P-26	J-21	J-22	8.0	315	130.0	-16	0.000	0.10
P-27	J-20	J-23	8.0	274	130.0	11	0.000	0.07
P-28	J-23	J-24	8.0	396	130.0	0	0.000	0.00
P-29	J-24	J-25	8.0	549	130.0	-14	0.000	0.09
P-30	J-25	J-26	8.0	209	130.0	8	0.000	0.05
P-31	J-25	J-19	8.0	496	130.0	-35	0.000	0.22
P-32	J-18	J-27	8.0	675	130.0	0	0.000	0.00
P-33	J-17	J-28	12.0	249	130.0	-127	0.000	0.36
P-35	J-28	J-30	12.0	177	130.0	-127	0.000	0.36
P-39	J-31	J-33	8.0	218	130.0	-699	0.009	4.46
P-40	J-33	R-2	8.0	532	130.0	-699	0.009	4.46
P-41	J-4	J-35	12.0	163	130.0	-460	0.001	1.31
P-42	J-35	J-6	8.0	480	130.0	160	0.001	1.02
P-43	J-36	J-35	12.0	142	130.0	626	0.001	1.78
P-44	J-36	J-37	12.0	464	130.0	-626	0.001	1.78
P-45	PRV-2	J-38	12.0	108	130.0	-626	0.001	1.78
P-47	J-38	J-40	8.0	762	130.0	-626	0.008	4.00
P-48	J-40	R-1	8.0	503	130.0	-626	0.008	4.00
P-50	J-30	J-41	6.0	164	130.0	133	0.002	1.50
P-52	J-41	J-42	6.0	472	130.0	36	0.000	0.40
P-53	J-42	J-43	6.0	477	130.0	25	0.000	0.28
P-55	J-44	J-29	6.0	526	130.0	36	0.000	0.41
P-56	J-43	J-44	6.0	461	130.0	14	0.000	0.16
P-57	J-41	J-45	6.0	251	130.0	40	0.000	0.45
P-58	J-41	J-46	6.0	289	130.0	46	0.000	0.53
P-59	J-46	J-44	6.0	216	130.0	44	0.000	0.50
P-61	J-27	J-48	8.0	481	130.0	0	0.000	0.00
P-62	J-48	J-49	8.0	516	130.0	0	0.000	0.00

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**FlexTable: Pipe Table**  
**Active Scenario: Max Day Demand + Hotel FF**

Label	Start Node	Stop Node	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Headloss Gradient (ft/ft)	Velocity (ft/s)
P-63	J-49	J-50	8.0	447	130.0	-1	0.000	0.01
P-64	J-50	J-51	8.0	470	130.0	-1	0.000	0.01
P-65	J-52	J-51	8.0	487	130.0	1	0.000	0.01
P-66	J-52	J-53	8.0	243	130.0	1	0.000	0.01
P-67	J-53	J-56	8.0	309	130.0	1	0.000	0.01
P-68	J-54	J-49	8.0	223	130.0	-1	0.000	0.01
P-69	J-52	J-54	8.0	292	130.0	-3	0.000	0.02
P-70	J-30	J-52	8.0	162	130.0	0	0.000	0.00
P-71	J-45	J-55	6.0	310	130.0	24	0.000	0.27
P-72	J-55	J-46	6.0	240	130.0	8	0.000	0.09
P-73	J-2	PRV-1	12.0	116	130.0	2,112	0.010	5.99
P-74	PRV-1	J-8	12.0	156	130.0	2,112	0.010	5.99
P-75	PRV-2	J-37	12.0	145	130.0	626	0.001	1.78
P-78	J-30	PRV-4	12.0	562	130.0	-699	0.001	1.98
P-79	PRV-4	J-31	12.0	120	130.0	-699	0.001	1.98
P-80	J-18	J-56	8.0	169	130.0	0	0.000	0.00
P-81	J-56	J-54	8.0	244	130.0	1	0.000	0.01
P-82	J-3	J-57	8.0	964	130.0	-453	0.004	2.89
P-83	J-57	J-4	12.0	145	130.0	-420	0.001	1.19
P-84	J-57	J-58	8.0	408	130.0	-33	0.000	0.21
P-85	J-58	J-59	8.0	343	130.0	-33	0.000	0.21
P-86	J-59	J-60	8.0	356	130.0	-33	0.000	0.21
P-87	J-17	J-61	8.0	302	130.0	127	0.000	0.81
P-88	J-61	J-18	8.0	160	130.0	73	0.000	0.47
P-89	J-60	J-61	8.0	805	130.0	-54	0.000	0.34
P-90	J-60	J-22	8.0	143	130.0	21	0.000	0.14

**FlexTable: PRV Table**  
**Active Scenario: Max Day Demand + Hotel FF**

Label	Elevation (ft)	Diameter (Valve) (in)	Hydraulic Grade Setting (Initial) (ft)	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
PRV-1	1,315.00	12.0	1,490.00	2,112	1,617.52	1,490.13	127.39
PRV-2	1,322.00	12.0	1,490.00	626	1,612.17	1,490.12	122.05
PRV-4	1,309.87	12.0	1,490.00	699	1,614.78	1,490.13	124.65