1. Meeting Materials

    Documents:

    CORDAVILLE_ROAD_PROJECT_PROPOSED_FOR_2023_ANNUAL_TOWN_MEETING_FUNDING_DOCUMENT.PDF
    FORMATION_OF_AD·HOC_COMMUNITY_CENTER_EXPLORATORY_COMMITTEE_DOCUMENT.PDF
    SOUTHBOROUGH_WATER_SYSTEM_MASTER_PLAN_PRESENTATION.PDF
    SOUTHBOROUGH_WATER_SYSTEM_MASTER_PLAN_UPDATE_APRIL_2022.PDF
    SUMMARY_OF_ROAD_PROJECTS_AND_COST_ESTIMATES_CURRENTLY_UNDER_REVIEW_FOR_FY23.PDF
    TOWN_OF_SOUTHBOROUGH_DPW_SUMMARY_DOCUMENT_OF_HOPKINTON_WATER_INTERCONNECTION_PROPOSAL.PDF
    2022.07.18_CAPITAL_PLANNING_AGENDA.PDF
    2022.07.18_CAPITAL_PLANNING_REVISED_AGENDA.PDF

TOWN OF SOUTHBOROUGH

CAPITAL PLANNING COMMITTEE

TOWN HOUSE · 17 COMMON STREET · SOUTHBOROUGH, MASSACHUSETTS 01772-1662
(508) 485-0710 · FAX (508) 480-0161 · jmalinowski@southboroughma.com

To: Members of the Capital Planning Committee and Public Works Planning Board

From: Jason Malinowski, Chair, Capital Planning Committee

Cc: Mark Purple and Karen Galligan

Date: July 14, 2022

Re: Cordaville Road Project Proposed for 2023 Annual Town Meeting Funding

For discussion at our joint meeting on July 18, 2022, I would like to propose we follow the outlined process below for public vetting of the Cordaville Road Project.

July 2022 –

Capital Planning and PWPB meet to determine recommended process and publicize process after consensus at meeting.

Discussion about federal grant program

Discussion about joint meeting process moving forward.

August 2022 –

DPW to post all available materials for public to start their review and get general understanding of project.

Review of all potentially impacted trees using MIIA Grant, with report and tagging to be posted prior to the first September hearing.

September 2022 –

Public Information Session with overview of project. Residents will have the ability to submit questions/comments up to one week in advance of the publicized date if they are not able to attend live and it'll be recorded.

Conservation Hearings begin. Mark any additional trees that may be impacted due to Conservation requests.

October 2022 –

> 2nd Public Information Session to respond to feedback from first session. Residents will have the ability to submit questions/comments up to one week in advance of the publicized date if they are not able to attend live and it'll be recorded.

November 2022 - Receive final probably cost estimates

December 2022 - Presentation to Select Board and Advisory

CHARGE

TOWN OF SOUTHBOROUGH
COMMUNITY CENTER EXPLORATORY COMMITTEE
AD-HOC

The Community Center Exploration Committee ("CC Committee") shall be an ad-hoc committee made up of seven (7) members, all appointed by the Board of Selectmen. The membership shall consist of the following makeup:

Capital Planning Committee/Capital Improvement and Planning Committee – 1
Library Board Trustee – 1
Recreation Commission Member – 1
Council on Aging Member – 1
Residents at Large - 3

At no point in time shall two members of another Board, Committee, or Commission occupy seats on this Committee.

The CC Committee shall elect its own Chair, Vice Chair, and Clerk.

The positions shall be filled by residents of the community who are willing to volunteer their time in assisting to build a vision and a plan, in a financially responsible way on proposed next steps to developing a Community Center, which is a key priority of the recently completed Master Plan and multiple Capital Planning surveys.

The Library Director, Recreation Director, and Council on Aging Director shall act as ex-officio members of the CC Committee. As such, these positions will not count toward the quorum, nor will they have a vote on committee matters.

CHARGE
The primary charge of the CC Committee is as follows:

- Review and understand the results and feedback received during the Capital Planning Committee's Space Needs Study presented in January 2022;
- Incorporate the potential needs of all town departments, boards, committees, and commissions that were part of the 2021 Space Needs Study.
- Consider existing infrastructure, new construction, or renovation of existing infrastructure not currently owned by the Town;

- Understand the financial constraints of the Town and bring forward one or more fiscally responsible plans to advance a project for further consideration by the taxpayers of Southborough, including consideration of a public/private partnership;
- Options must consider at least one scenario where the Woodward School is available for reuse and another scenario where it is not available for reuse;
- Communication must be maintained with the Neary Building Committee as the work of the CC Committee will be considered as part of the Feasibility Study that will kick off shortly; and
- CC Committee should make a preliminary presentation by December 2022 in a public meeting of the Select Board, with the expectation that all work should be completed by June 2023.

TERM

The Community Center Exploration Committee Charge expires on June 30, 2023.

Approved by Select Board on July 12, 2022

Water System Master Plan Update Presentation

Joint Meeting of the Capital Planning Committee and the Public Works Planning Board

Southborough, MA

Presented by
Timothy P. Thies, P.E.
Pare Corporation

July 18, 2022

PARE CORPORATION

System Background

- Southborough has 10,450 people, 85% are connected to the system.
- 100 percent of the system water is purchased from MWRA
- Two services areas with different hydraulic grades (High Service Area and Low Service Area)
- Two pump stations with 6 total pumps
- Three storage tanks, 1 in the HSA and 2 in the LSA
- 87 miles of pipe

N

LOW SERVICE
HIGH SERVICE

MARLBOROUGH

MARLBORO ROAD

SUDBURY RESERVOIR

CLEAR HILL
0.46 MG STORAGE TANK
OVERFLOW=493.3 FT

LEDGE HILL PRV

HULTMAN AQUEDUCT

BOLAND PUMP STATION

SEARS ROAD

FRAMINGHAM ROAD

METROWEST WATER SUPPLY TUNNEL

HOSMER PUMP STATION

FAYVILLE DAM

MAIN STREET

TOWN SQUARE PRV

MAIN STREET

CORDAVILLE ROAD

FRAMINGHAM

TARA ROAD
1.3 MG STORAGE TANK
OVERFLOW=515.0 FT

DPW GARAGE

OAKHILL ROAD

OAK HILL
0.275 MG STORAGE TANK
OVERFLOW=492.7 FT

WESTBOROUGH

PARKERVILLE ROAD

MT. VICKERY PRV

WOODLAND ROAD

ASHLAND
INTERCONNECTION

PARKERVILLE ROAD PRV

HIGH SERVICE
LOW SERVICE

SOUTHVILLE ROAD

HOPKINTON

ASHLAND

Legend

- Valve
- Water Storage Tank
- Pump Station
- PRV
- Hydrant
- Water Main
- Major Roads
- Town Boundary

1 inch = 1,000 feet

1,000 500 0 1,000 2,000 3,000 4,000 Feet

PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
8 BLACKSTONE VALLEY PLACE
LICOLN, RI 02865
401-334-4100

TOWN OF SOUTHBOROUGH
WATER SYSTEM MAP

SOUTHBOROUGH, MASSACHUSETTS

REVISIONS:

PROJECT NO: 08176.20
DATE: DECEMBER 2021
SCALE: AS NOTED

DRAWING TITLE: WATER SYSTEM MAP

APPENDIX A

Water System Master Plan Purpose

- Assess the performance of the water system under “existing conditions”.
- Assess the performance of the water system under future “build-out conditions”.
- Identify deficiencies under existing and future scenarios.
- Evaluate potential system improvements to correct system deficiencies.

Performance Factors Include:

- Supply capacity (in this case pump capacity)
- Storage capacity
- System pressure
- Available fire flow
- Pipe network performance

Southborough Water System Demand

- Existing Conditions

Southborough Water System Demand		
	Water Demand (2016-2019)	
	Total Volume (MGD)	System Demand (gpm)
Average Day	0.915	635
Maximum Day	2.17	1,507
Peak Hour	5.46	3,793

Southborough Water Demand by Service Area				
	Percentage	Average Day (GPD)	Maximum Day (GPD)	Peak Hour (GPD)
High Service Area	47%	430,050	1,019,900	2,566,200
Low Service Area	53%	484,950	1,150,100	2,893,800
TOTAL		**915,000**	**2,170,000**	**5,460,000**

Southborough Water System Demand

- Build-Out Conditions

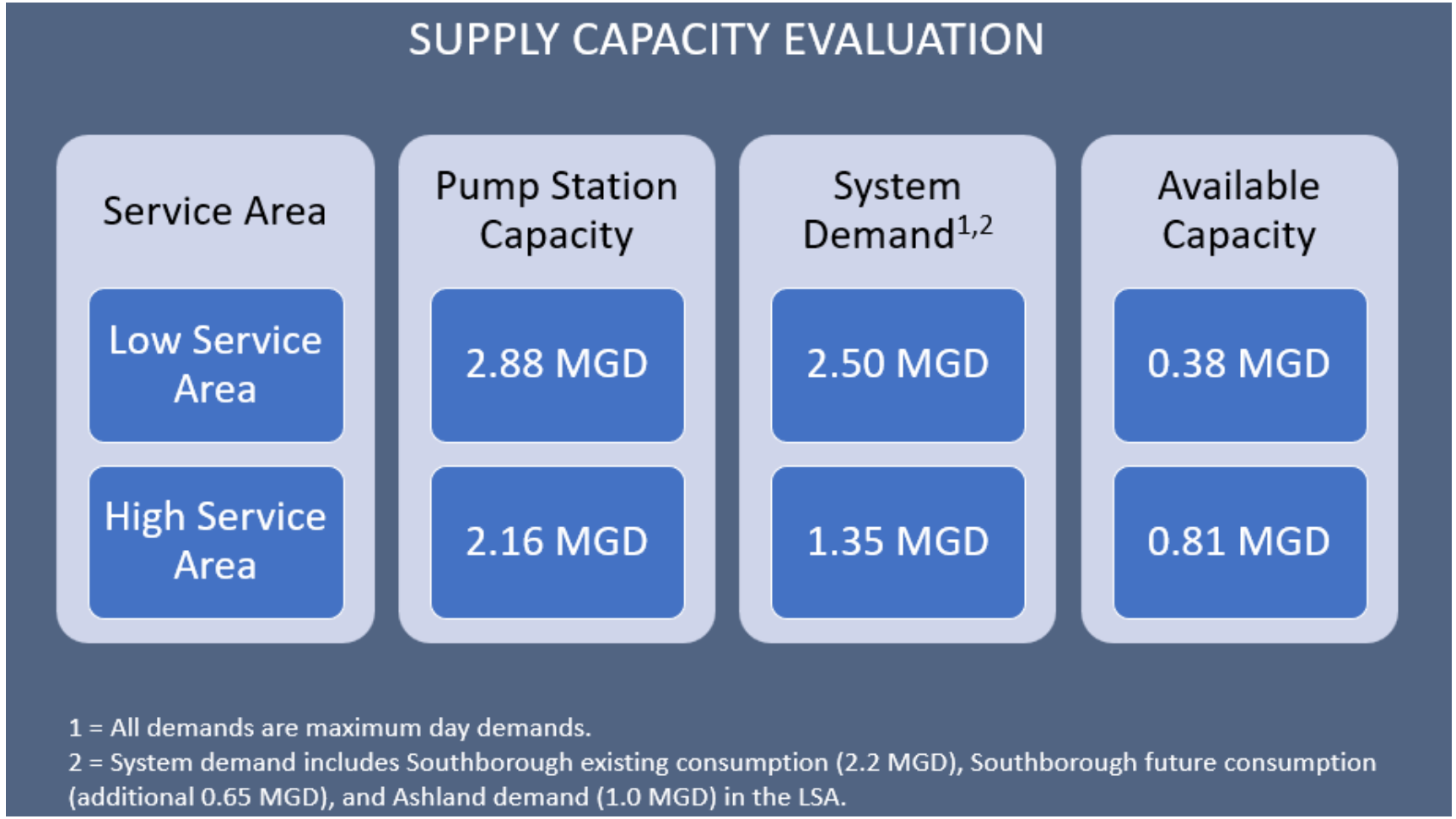
Future Water Demand in Southborough by Service Area			
	Average Day (GPD)	Maximum Day (GPD)	Peak Hour (GPD)
High Service Area	566,920	1,343,610	3,384,530
Low Service Area	639,300	1,515,130	3,816,600
Ashland Reserve Capacity	N/A	1,000,000	1,000,000
TOTAL	**1,206,220**	**3,858,740**	**8,201,130**

Southborough Supply Capacity

- Breakdown of Southborough Pumps, which is a measure of the System's Supply Capacity

Southborough Distribution Pumps						
Station	Flow	Head	Horse Power	Pump Manufacturer	Motor Manufacturer	Date Installed
Boland						
No. 1	750 gpm	257 ft	75 HP	Aurora	Weg	2014
No. 2	750 gpm	257 ft	75 HP	Aurora	Weg	2014
No. 3	750 gpm	257 ft	75 HP	Aurora	Weg	2014
Hosmer						
No. 1	1000 gpm	265 ft	100 HP	Aurora	US Motor	2021
No. 2	1000 gpm	265 ft	100 HP	Aurora	US Motor	2021
No. 3	1000 gpm	265 ft	100 HP	Aurora	US Motor	2021

Southborough Supply Capacity



Southborough Storage Capacity

Southborough System Storage Tanks			
	Tara Road (Fiddler's Green)	Clear Hill (Overlook)	Oak Hill
Nominal Size	1.300 MG	0.460 MG	0.275 MG
Diameter	67 ft	40 ft	25 ft
Base Elevation	467 ft	451 ft	418 ft
Overflow Elevation	515.0 ft	493.3 ft	492.7 ft
Operating Range	503.0 to 510.0 ft	482.0 to 488.0 ft	482.0 to 488.0 ft
Style	Standpipe	Standpipe	Standpipe
Year Built	1960	1930	1930
Location	Tara Road	Overlook Drive	Oak Hill Road
Condition*	Very Good	Good	Good

* Condition provided in tank inspection reports prepared by Underwater Solutions Inc.

Southborough Storage Capacity (cont…)

- Storage tanks have three components:
  - Equalization storage, normal every-day storage (equal to about 15 percent of MDD).
  - Fire Storage, water in reserve for fighting a significant fire (equal to the flow rate x duration of the largest fire event in the system or service area).
  - Emergency Storage, storage for significant disruptions in supply, like water main breaks, pump failure, etc. (equal 20 percent of ADD).
- Only storage above 20 psi is considered “usable” of “effective”.

Southborough Storage Capacity (cont…)

- HSA
  - Equalization storage = 195,000 gallons
  - Fire Storage = 540,000 gallons
  - Emergency storage = 112,000 gallons
  - Total Usable Storage = 850,000 gallon
- LSA
  - Equalization storage = 368,000 gallons
  - Fire Storage = 630,000 gallons
  - Emergency storage = 328,000 gallons
  - Total Usable Storage = 1,330,000 gallons

Southborough Storage Capacity (cont…)

- Only storage above 20 psi is available for use.

Storage Tank Evaluation Summary			
Service Area	Available Storage (MG)	Recommended Storage (MG)	Storage Deficit (MG)
High Service Area	500,000	850,000	350,000
Low Service Area	480,000	1,330,000	850,000
TOTAL	**980,000**	**2,180,000**	**1,200,000**

Southborough Evaluation (Steady State Analysis)

- Hydraulic Analysis Summary of Existing Conditions

System Evaluation (Steady State Analysis)				
	Average Day Demand	Maximum Day Demand	Peak Hour Demand	Available Fire Flow
Pressure Range (HSA)	23 - 111 psi	23 - 115 psi	23 - 112 psi	572 - 3,500 gpm
Pressure Range (LSA)	31 - 130 psi	31 - 133 psi	31 - 130 psi	665 – 3,500 gpm
Tank Filling Rate (HSA)	482 gpm	682 gpm	-281 gpm	
Tank Filling Rate (LSA)	717 gpm	1,142 gpm	-62 gpm	

Southborough Evaluation (Steady State Analysis)

- Hydraulic Analysis Summary of Build-Out Conditions

Future System Evaluation (Steady State Analysis)				
	Average Day Demand	Maximum Day Demand	Peak Hour Demand	Available Fire Flow
Pressure Range (HSA)	23 - 111 psi	23 - 115 psi	23 - 110 psi	547 - 3,500 gpm
Pressure Range (LSA)	31 - 130 psi	31 - 131 psi	29 - 128 psi	613 – 3,500 gpm
Tank Filling Rate (HSA)	393 gpm	482 gpm	-798 gpm	
Tank Filling Rate (LSA)	608 gpm	207 gpm	-1,390 gpm	

N

LOW SERVICE
HIGH SERVICE

MARLBOROUGH

MARLBORO ROAD

SUDBURY RESERVOIR

LEDGE HILL PRV

CLEAR HILL
0.46 MG STORAGE TANK
OVERFLOW=493.3 FT

HULTMAN AQUEDUCT

BOLAND PUMP STATION

METROWEST WATER SUPPLY TUNNEL

SEARS ROAD

FRAMINGHAM ROAD

HOSMER PUMP STATION

FAYVILLE DAM

MAIN STREET

TOWN SQUARE PRV

CORDAVILLE ROAD

FRAMINGHAM

495

TARA ROAD
1.3 MG STORAGE TANK
OVERFLOW=515.0 FT

9

DPW GARAGE

OAKHILL ROAD

OAK HILL
0.275 MG STORAGE TANK
OVERFLOW=492.7 FT

WESTBOROUGH

PARKERVILLE ROAD

MT. VICKERY PRV

WOODLAND ROAD

ASHLAND INTERCONNECTION

90

PARKERVILLE ROAD PRV

ASHLAND

HIGH SERVICE
LOW SERVICE

SOUTHVILLE ROAD

HOPKINTON

Legend

Available Fire Flow

- <=1000 GPM
- <=2000 GPM
- <=3000 GPM
- <=3500 GPM
- Water Storage Tank
- Pump Station
- PRV
- Water Main
- Major Roads
- Town Boundary

1 inch = 1,000 feet

1,000 500 0 1,000 2,000 3,000 4,000 Feet

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ENGINEERS - SCIENTISTS - PLANNERS
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TOWN OF SOUTHBOROUGH
WATER SYSTEM MAP

SOUTHBOROUGH, MASSACHUSETTS

REVISIONS:

PROJECT NO: 08176.20
DATE: DECEMBER 2021
SCALE: AS NOTED

DRAWING TITLE:
AVAILABLE FIRE FLOW

APPENDIX I

Summary of Fire Flow Analysis

- Available Fire Flow in six ISO areas of the System

Summary of Fire Flow Analysis			
Location	Needed Fire Flow based on ISO Requirements	Available Fire Flow	
		Based on ISO's Flow Tests	Based on Model Results
1. Marlborough Road @ St. Marks School	2,500 gpm	2,100 gpm**	**3,500 gpm***
2. Trottier School	3,000 gpm	1,900 gpm***	1,560 gpm
3. Mary E. Finn School	2,250 gpm	1,500 gpm**	**2,578 gpm**
4. Highland Street @ Parkerville Road	1,500 gpm	1,200 gpm**	**1,950 gpm**
5. Mt. Vickery Road @ Cordaville Road	3,500 gpm	1,600 gpm**	2,539 gpm
6. Oregon Road @ Woodland Road	1,250 gpm	1,100 gpm***	**2,775 gpm**

* Results in bold text indicate that the required fire flow, as determined by ISO, is available at that location.
** ISO tests conducted in March 2002
*** ISO tests conducted in March 1990

Southborough Pipe Assessment

- Minimum Criteria for Pipe Assessment
  - No velocities greater than 5 ft/sec;
  - No head losses greater than 10 ft/1,000 ft; or
  - Large-diameter pipes (i.e., 16-inch or greater) having head losses greater than 3 ft/1,000 ft.

- Pare utilized the Town's hydraulic model and our ranking system to identify pipes that should be the focus of future pipe replacement program.

PIPE INDEX				PIPE INFORMATION								PIPE SCORING BASED ON PHYSICAL ATTRIBUTES						ATTRIBUTE SCORE	RELATIVE IMPORTANCE	PERFORMANCE FACTORS			PIPE SCORING BASED ON IMPORTANCE AND PERFORMANCE				PERFORMANCE /IMPORTANCE SCORE	TOTAL SCORE	TOTAL RANK
Pipe ID	STREET	FROM STREET	TO STREET	LENGTH	SIZE	MATERIAL	YR INST	AGE	DEAD END	MAIN BREAK	LOCATION	SIZE	AGE	BREAK	MATERIAL	LOCATION	DEAD END		AVG FLOW CARRIED (gpm)	VELOCITY (ft/s)	PIPE ROUGHNESS	HEADLOSS GRADIENT (ft/1000 ft)	FLOW	VELOCITY	ROUGHNESS	HEADLOSS			
P-50	Main Street	EASEMENT	JOHNSON RD	102	12	AC	0	*47*	Y	0	High Service	0	2	0	5	5	5	**2.5000**	1342	3.81	100	7.1	5.00	3.81	2	3.55	**3.8590**	**6.3590**	**1**
14	Northboro Road	0 NORTHBORO RD	OLD NORTHBORO RD	718	12	AC	0	*47*	N	0	High Service	0	2	0	5	5	0	**2.0000**	1344	3.81	110	5.97	5.00	3.81	2	2.985	**3.7178**	**5.7178**	**2**
30	Johnson Road	OLD NORTHBORO RD	MAIN ST	1660	12	AC	0	*47*	N	0	High Service	0	2	0	5	5	0	**2.0000**	1342	3.81	110	5.95	5.00	3.81	2	2.975	**3.7153**	**5.7153**	**3**
P-51	Easement (Main St to Lynbrook Rd)	MAIN ST	LYNBROOK RD	48	12	AC	0	*47*	N	0	High Service	0	2	0	5	5	0	**2.0000**	1270	3.6	110	5.38	5.00	3.60	2	2.69	**3.6125**	**5.6125**	**4**
P-325				62	8	DI	0	18		0	High Service	0	0	0	0	5	5	**0.7500**	1412	9.01	130	34.6	5.00	5.00	1	5	**4.2000**	**4.9500**	**5**
P-320	Boland			14	6	DI	0	*18*		0	High Service	2.5	0	0	0	5	5	**1.0000**	711	8.07	130	39.42	3.56	5.00	1	5	**3.6220**	**4.6220**	**6**
P-322	Boland			15	6	DI	0	*18*		0	High Service	2.5	0	0	0	5	5	**1.0000**	701	7.96	130	38.43	3.51	5.00	1	5	**3.6020**	**4.6020**	**7**
226	Lovers Lane	LYNBROOK RD	JACOBS LN	2488	12	AC	1960	58	N	0	High Service	0	2	0	5	5	0	**2.0000**	764	2.17	110	2.1	3.82	2.17	2	1.05	**2.5160**	**4.5160**	**8**
662	Lovers Lane	JACOBS LN	BLACKTHORN DR	1488	12	AC	1960	58	N	0	High Service	0	2	0	5	5	0	**2.0000**	757	2.15	110	2.06	3.79	2.15	2	1.03	**2.4940**	**4.4940**	**9**
438	Tara Tank	TARA RD	DEAD END	82	12	AC	1978	40	Y	0	High Service	0	2	0	5	5	5	**2.5000**	604	1.71	120	1.15	3.02	1.71	1	0.575	**1.8083**	**4.3083**	**10**
P-319	Boland			14	8	DI	0	*18*		0	High Service	0	0	0	0	5	5	**0.7500**	711	4.54	130	9.71	3.56	4.54	1	4.855	**3.5168**	**4.2668**	**11**
P-317	Boland			17	8	DI	0	18		0	High Service	0	0	0	0	5	5	**0.7500**	711	4.54	130	9.7	3.56	4.54	1	4.85	**3.5155**	**4.2655**	**12**
P-52	Easement (Main St to Lynbrook Rd)	MAIN ST	LYNBROOK RD	1364	12	AC	0	*47*	N	0	High Service	0	2	0	5	5	0	**2.0000**	662	1.88	110	1.61	3.31	1.88	2	0.805	**2.2073**	**4.2073**	**13**
758	Lynbrook Road	Easement (Main St to Lynbrook Rd)	LOVERS LN	589	12	AC	1960	58	N	0	High Service	0	2	0	5	5	0	**2.0000**	662	1.88	110	1.61	3.31	1.88	2	0.805	**2.2073**	**4.2073**	**14**
P-321	Boland			14	8	DI	0	*18*		0	High Service	0	0	0	0	5	5	**0.7500**	701	4.48	130	9.46	3.51	4.48	1	4.73	**3.4565**	**4.2065**	**15**
P-308	Boland			13	12	DI	0	*18*		0	High Service	0	0	0	0	5	5	**0.7500**	1412	4.01	130	4.8	5.00	4.01	1	2.4	**3.4015**	**4.1515**	**16**
P-311	Boland			13	12	DI	0	*18*		0	High Service	0	0	0	0	5	5	**0.7500**	1412	4.01	130	4.8	5.00	4.01	1	2.4	**3.4015**	**4.1515**	**17**
P-335	Hosmer			9	8	DI	0	18		0	Low Service	0	0	0	0	0	5	**0.5000**	692	4.42	130	9.24	3.46	4.42	1	4.62	**3.4020**	**3.9020**	**18**
P-336	Hosmer			10	8	DI	0	*18*		0	Low Service	0	0	0	0	0	5	**0.5000**	692	4.42	130	9.24	3.46	4.42	1	4.62	**3.4020**	**3.9020**	**19**
486	Woodbury Road	VALE TERR	SOUTHVILLE RD	239	6	AC	0	*47*	N	3	Low Service	2.5	2	5	5	0	0	**3.2500**	-34	0.38	90	0.27	-0.17	0.38	3	0.135	**0.6228**	**3.8728**	**20**
408	Main Street	87 MAIN ST	SEARS RD	544	10	AC	0	*47*	N	0.5	High Service	0	2	0.5	5	5	0	**2.1250**	427	1.74	120	1.48	2.14	1.74	1	0.74	**1.5000**	**3.6250**	**21**
432	Main Street	MAIN ST	CHESTNUT HILL RD	609	12	AC	0	*47*	N	0	High Service	0	2	0	5	5	0	**2.0000**	458	1.3	110	0.81	2.29	1.30	2	0.405	**1.6123**	**3.6123**	**22**
665	Main Street	CHESTNUT HILL RD	WYNDEMERE DR	1837	12	AC	0	*47*	N	0	High Service	0	2	0	5	5	0	**2.0000**	449	1.27	110	0.78	2.25	1.27	2	0.39	**1.5860**	**3.5860**	**23**
P-331	Hosmer			15	30	Steel	0	*0*		0	Low Service	0	0	0	5	0	5	**1.7500**	692	0.31	100	0.02	3.46	0.31	2	0.01	**1.8330**	**3.5830**	**24**
207	Tara Road	BLACKTHORN DR	TARA TANK	884	12	AC	1978	40	N	0	High Service	0	2	0	5	5	0	**2.0000**	442	1.25	110	0.76	2.21	1.25	2	0.38	**1.5665**	**3.5665**	**25**
P-117	DEERFOOT RD	0 DEERFOOT RD	MAIN ST	2090	8	CI	0	*87*	N	0	High Service	0	4	0	3.5	5	0	**2.1250**	252	1.61	100	2.32	1.26	1.61	2	1.16	**1.4355**	**3.5605**	**26**
P-310	Boland			17	16	DI	0	*18*		0	High Service	0	0	0	0	5	5	**0.7500**	1412	2.25	130	1.18	5.00	2.25	1	0.59	**2.6850**	**3.4350**	**27**
224	Main Street	WYNDEMERE DR	87 MAIN ST	437	12	AC	0	*47*	N	0	High Service	0	2	0	5	5	0	**2.0000**	431	1.22	120	0.62	2.16	1.22	1	0.31	**1.3225**	**3.3225**	**28**
P-59	Flagg Road			5	12	DI	0	*21*		0	High Service	0	1	0	0	5	5	**1.0000**	757	2.15	120	1.76	3.79	2.15	1	0.88	**2.2565**	**3.2565**	**29**
409	Main Street	94 MAIN ST	DEERFOOT RD	559	10	CI	0	*87*	N	0	High Service	0	4	0	3.5	5	0	**2.1250**	315	1.29	120	0.84	1.58	1.29	1	0.42	**1.1285**	**3.2535**	**30**
395	MWRA			413	6	CI	0	*87*		0	Low Service	2.5	4	0	3.5	0	5	**2.6250**	4	0.05	80	0.01	0.02	0.05	3	0.005	**0.6168**	**3.2418**	**31**
P-176	Cordaville Road	NEARY SCHOOL	GENERAL HENRY KNOX RD	1068	8	AC	0	*47*	Y	0	High Service	0	2	0	5	5	5	**2.5000**	97	0.62	100	0.39	0.49	0.62	2	0.195	**0.7358**	**3.2358**	**32**
344	Winter Street	TURNPIKE RD	16 WINTER ST	189	6	CI	0	*87*	N	0	Low Service	2.5	4	0	3.5	0	0	**2.1250**	20	0.23	60	0.22	0.10	0.23	5	0.11	**1.1020**	**3.2270**	**33**
335	Central Street			118	6	CI	0	*87*		0	Low Service	2.5	4	0	3.5	0	5	**2.6250**	0	0	80	0	0.00	0.00	3	0	**0.6000**	**3.2250**	**34**
425	Coslin Drive			325	8	CI	0	*87*		0	High Service	0	4	0	3.5	5	5	**2.6250**	0	0	80	0	0.00	0.00	3	0	**0.6000**	**3.2250**	**35**
429	Coslin Drive			425	8	CI	0	*87*		0	High Service	0	4	0	3.5	5	5	**2.6250**	0	0	80	0	0.00	0.00	3	0	**0.6000**	**3.2250**	**36**
P-142	Turnpike Road			780	6	AC	0	*47*		0	High Service	2.5	2	0	5	5	5	**2.7500**	15	0.17	100	0.05	0.08	0.17	2	0.025	**0.4618**	**3.2118**	**37**
P-64	Flagg Road	EASTBROOK FARM LN	42 FLAGG RD	313	6	CI	0	*87*	N	0	High Service	2.5	4	0	3.5	5	0	**2.3750**	79	0.9	100	1.1	0.40	0.90	2	0.55	**0.8305**	**3.2055**	**38**
534	Davine Lane	DEAD END	MIDDLE RD	135	2	PVC	1997	21	Y	0	High Service	5	1	0	4	5	5	**2.5000**	6	0.56	101	1.65	0.03	0.56	2	0.825	**0.7023**	**3.2023**	**39**
P-353				48	10	CI	0	*87*		0	High Service	0	4	0	3.5	5	5	**2.6250**	-38	0.15	90	0.03	-0.19	0.15	3	0.015	**0.5503**	**3.1753**	**40**
100	St Marks School	ST MARKS SCHOOL	DEAD END	673	6	AC	0	*47*	Y	0	High Service	2.5	2	0	5	5	5	**2.7500**	-34	0.39	100	0.23	-0.17	0.39	2	0.115	**0.4193**	**3.1693**	**41**
P-118	DEERFOOT RD	49 DEERFOOT RD	0 DEERFOOT RD	447	8	CI	0	*87*	N	0	High Service	0	4	0	3.5	5	0	**2.1250**	170	1.09	100	1.12	0.85	1.09	2	0.56	**1.0435**	**3.1685**	**42**
420	Easement (Strawberry Hill to Deerfoot)			722	8	AC	0	*47*		0	High Service	0	2	0	5	5	5	**2.5000**	78	0.5	100	0.27	0.39	0.50	2	0.135	**0.6648**	**3.1648**	**43**
P-139	Turnpike Road			1	6	AC	0	*47*		0	High Service	2.5	2	0	5	5	5	**2.7500**	3	0.03	100	0	0.02	0.03	2	0	**0.4105**	**3.1605**	**44**
764	Middle Road	79 MIDDLE RD	STUBTOE LN	1000	6	AC	0	*47*	Y	0	High Service	2.5	2	0	5	5	5	**2.7500**	1	0.02	100	0	0.01	0.02	2	0	**0.4050**	**3.1550**	**45**
P-141	Turnpike Road			1	6	AC	0	*47*		0	High Service	2.5	2	0	5	5	5	**2.7500**	-3	0.03	100	0	-0.02	0.03	2	0	**0.3985**	**3.1485**	**46**
666	Main Street	SEARS RD	94 MAIN ST	89	10	AC	0	*47*	N	0	High Service	0	2	0	5	5	0	**2.0000**	317	1.3	120	0.85	1.59	1.30	1	0.425	**1.1353**	**3.1353**	**47**
367	Winter Street	2 WINTER ST	CENTRAL ST	299	6	AC	0	*47*	N	0	Low Service	2.5	2	0	5	0	0	**2.0000**	24	0.27	60	0.3	0.12	0.27	5	0.15	**1.1260**	**3.1260**	**48**
P-77	Flagg Road	TURNPIKE RD	EASTBROOK FARM LN	2063	6	CI	0	87	N	0	High Service	2.5	4	0	3.5	5	0	**2.3750**	67	0.76	100	0.81	0.34	0.76	2	0.405	**0.7493**	**3.1243**	**49**
210	Deerfoot Road	CLIFFORD ST	77 DEERFOOT RD	385	6	AC	0	*47*	N	0	High Service	2.5	2	0	5	5	0	**2.2500**	87	0.99	110	1.11	0.44	0.99	2	0.555	**0.8613**	**3.1113**	**50**
572	Oak Hill Road	HILLTOP DR	TOWN LINE	317	6	AC	0	*47*	Y	0	Low Service	2.5	2	0	5	0	5	**2.5000**	1	0.01	90	0	0.01	0.01	3	0	**0.6035**	**3.1035**	**51**
P-48	Main Street	PAST EASEMENT	EASEMENT	419	12	AC	0	*47*	Y	0	High Service	0	2	0	5	5	5	**2.5000**	72	0.2	100	0.03	0.36	0.20	2	0.015	**0.5778**	**3.0778**	**52**
255	Cordaville Road	9 CORDAVILLE RD	9 CORDAVILLE RD	199	2	CI	0	*87*	Y	0	Low Service	5	4	0	3.5	0	5	**2.8750**	0	0	130	0	0.00	0.00	1	0	**0.2000**	**3.0750**	**53**
P-280	Parkerville Road	196 PARKERVILLE RD	HUBLEY LN	14	8	CI	0	*87*	Y	0	High Service	0	4	0	3.5	5	5	**2.6250**	3	0.02	100	0	0.02	0.02	2	0	**0.4090**	**3.0340**	**54**
547	Wood Street	5 WOOD ST	FAY CT	347	6	CI	0	*87*	Y	0	Low Service	2.5	4	0	3.5	0	5	**2.6250**	1	0.02	100	0	0.01	0.02	2	0	**0.4050**	**3.0300**	**55**
7	Coslin Way	WASHINGTON ST	DEAD END	546	8	CI	0	*87*	Y	0	High Service	0	4	0	3.5	5	5	**2.6250**	0	0	110	0	0.00	0.00	2	0	**0.4000**	**3.0250**	**56**
P-201	Lyman Street	DEAD END	HILLSIDE AVE	190	6	CI	0	*87*	Y	0	Low Service	2.5	4	0	3.5	0	5	**2.6250**	-4	0.04	100	0	-0.02	0.04	2	0	**0.3980**	**3.0230**	**57**
P-277	Parkerville Road	HUBLEY LN	200 PARKERVILLE RD	66	8	CI	0	*87*	Y	0	High Service	0	4	0	3.5	5	5	**2.6250**	-5	0.03	100	0	-0.03	0.03	2	0	**0.3945**	**3.0195**	**58**
334	Boston Road			33	8	CI	0	*87*		0	Low Service	0	4	0	3.5	0	5	**2.3750**	-168	1.07	80	1.66	-0.84	1.07	3	0.83	**0.6320**	**3.0070**	**59**
118	Neary School			92	4	AC	0	*47*		0	High Service	5	2	0	5	5	5	**3.0000**	0	0	140	0	0.00	0.00	0	0	**0.0000**	**3.0000**	**60**
243	Atwood Street			154	8	CI	0	*87*		0	Low Service	0	4	0	3.5	0	5	**2.3750**	2	0.01	80	0	0.01	0.01	3	0	**0.6055**	**2.9805**	**61**
P-20	St Marks School			52	8	CI	0	*87*		0	Low Service	0	4	0	3.5	0	5	**2.3750**	1	0.01	80	0	0.01	0.01	3	0	**0.6035**	**2.9785**	**62**
P-19	St Marks School			170	8	CI	0	*87*		0	Low Service	0	4	0	3.5	0	5	**2.3750**	1	0.01	80	0	0.01	0.01	3	0	**0.6035**	**2.9785**	**63**
P-18	St Marks School			40	8	CI	0	*87*		0	Low Service	0	4	0	3.5	0	5	**2.3750**	0	0	80	0	0.00	0.00	3	0	**0.6000**	**2.9750**	**64**
P-9	St Marks School			44	8	CI	0	*87*		0	Low Service	0	4	0	3.5	0	5	**2.3750**	0	0	80	0	0.00	0.00	3	0	**0.6000**	**2.9750**	**65**
P-17	St Marks School			230	8	CI	0	*87*		0	Low Service	0	4	0	3.5	0	5	**2.3750**	0	0	80	0	0.00	0.00	3	0	**0.6000**	**2.9750**	**66**
P-13	St Marks School			5	8	CI	0	87		0	Low Service	0	4	0	3.5	0	5	**2.3750**	-1	0.01	80	0	-0.01	0.01	3	0	**0.5995**	**2.9745**	**67**
248	St Marks School			201	8	CI	0	*87*		0	Low Service	0	4	0	3.5	0	5	**2.3750**	-1	0.01	80	0	-0.01	0.01	3	0	**0.5995**	**2.9745**	**68**
P-10	St Marks School			357	8	CI	0	*87*		0	Low Service	0	4	0	3.5	0	5	**2.3750**	-1	0.01	80	0	-0.01	0.01	3	0	**0.5995**	**2.9745**	**69**
270	Mount Vickery Road	ADMIRALS LN	BREAKNECK HILL RD	1583	8	CI	0	*87*	N	1	Low Service	0	4	1	3.5	0	0	**2.1250**	125	0.8	100	0.63	0.63	0.80	2	0.315	**0.8488**	**2.9738**	**70**
476	Southville Road			3	8	CI	0	*87*		0	Low Service	0	4	0	3.5	0	5	**2.3750**	-26	0.17	80	0.05	-0.13	0.17	3	0.025	**0.5798**	**2.9548**	**71**
227	Lynbrook Road	LYNBROOK RD	LYNBROOK RD	32	12	AC	0	*47*		0	High Service	0	2	0	5	5	5	**2.5000**	14	0.04	101	0	0.07	0.04	2	0	**0.4340**	**2.9340**	**72**
247	Easement (Newton St to Overlook Dr)	NEWTON ST	DEAD END	629	10	CI	0	*87*	Y	0	Low Service	0	4	0	3.5	0	5	**2.3750**	-32	0.13	90	0.02	-0.16	0.13	3	0.01	**0.5580**	**2.9330**	**73**
52	Turnpike Road			19	8	AC	0	*47*		0	High Service	0	2	0	5	5	5	**2.5000**	10	0.07	100	0.01	0.05	0.07	2	0.005	**0.4318**	**2.9318**	**74**
302	View Hill Road	DEAD END	BREAKNECK HILL RD	356	6	AC	0	*47*	Y	0	Low Service	2.5	2	0	5	0	5	**2.5000**	5	0.05	101	0.01	0.03	0.05	2	0.005	**0.4188**	**2.9188**	**75**
P-57	Lovers Lane	20 LOVERS LN (DEAD END)	FLAGG RD	1121	8	AC	1960	*58*	Y	0	High Service	0	2	0	5	5	5	**2.5000**	4	0.03	110	0	0.02	0.03	2	0	**0.4125**	**2.9125**	**76**
83	Stub Toe Lane	MIDDLE RD	8 STUB TOE LN	351	6	AC	0	*47*	N	1	High Service	2.5	2	1	5	5	0	**2.5000**	3	0.04	101	0	0.02	0.04	2	0	**0.4120**	**2.9120**	**77**
578	Brook Lane	TURNPIKE RD	DEAD END	683	6	AC	0	*47*	Y	0	Low Service	2.5	2	0	5	0	5	**2.5000**	3	0.03	101	0	0.02	0.03	2	0	**0.4105**	**2.9105**	**78**
144	Neary School			7	8	AC	0	*47*		0	High Service	0	2	0	5	5	5	**2.5000**	123	0.79	140	0.33	0.62	0.79	0	0.165	**0.4058**	**2.9058**	**79**
P-75	Washington Street	DEAD END	TURNPIKE RD	453	12	AC	0	*47*	Y	0	High Service	0	2	0	5	5	5	**2.5000**	2	0.01	100	0	0.01	0.01	2	0	**0.4055**	**2.9055**	**80**
447	Brigham Street	BRIGHAM RD	GRANVAILE RD	90	10	AC	0	*47*	Y	0	High Service	0	2	0	5	5	5	**2.5000**	1	0	101	0	0.01	0.00	2	0	**0.4020**	**2.9020**	**81**
452	Brigham Street	WARD RD	2 BRIGHAM ST	95	10	AC	0	*47*	Y	0	High Service	0	2	0	5	5	5	**2.5000**	1	0	101	0	0.01	0.00	2	0	**0.4020**	**2.9020**	**82**
47	Old Northboro Road	NORTHBORO RD	DEAD END	89	12	AC	0	*47*	Y	0	High Service	0	2	0	5	5	5	**2.5000**	1	0	101	0	0.01	0.00	2	0	**0.4020**	**2.9020**	**83**
P-58	Lovers Lane	20 LOVERS LN (DEAD END)	FLAGG RD	20	8	AC	1960	*58*	Y	0	High Service	0	2	0	5	5	5	**2.5000**	0	0	110	0	0.00	0.00	2	0	**0.4000**	**2.9000**	**84**
P-49	Main Street	PAST EASEMENT	JOHNSON RD	40	12	AC	0	*47*	Y	0	High Service	0	2	0	5	5	5	**2.5000**	0	0	100	0	0.00	0.00	2	0	**0.4000**	**2.9000**	**85**
P-174	Middle Road	CEMETERY	DEAD END	128	8	AC	0	*47*	Y	0	High Service	0	2	0	5	5	5	**2.5000**	0	0	100	0	0.00	0.00	2	0	**0.4000**	**2.9000**	**86**

N

LOW SERVICE
HIGH SERVICE

MARLBOROUGH

MARLBORO ROAD

LEDGE HILL PRV

CLEAR HILL
0.46 MG STORAGE TANK
OVERFLOW=493.3 FT

SUDBURY
RESERVOIR

HULTMAN
AQUEDUCT

P BOLAND PUMP STATION

METROWEST WATER SUPPLY TUNNEL

SEARS ROAD

FRAMINGHAM ROAD

P HOSMER PUMP STATION

FAYVILLE DAM

MAIN STREET

TOWN SQUARE PRV

MAIN STREET

495

CORDAVILLE ROAD

FRAMINGHAM

TARA ROAD
1.3 MG STORAGE TANK
OVERFLOW=515.0 FT

9

9

OAKHILL ROAD

DPW GARAGE

OAK HILL
0.275 MG STORAGE TANK
OVERFLOW=492.7 FT

PARKERVILLE ROAD

MT. VICKERY PRV

WOODLAND ROAD

ASHLAND
INTERCONNECTION

CORDAVILLE ROAD

90

WOODLAND ROAD

PARKERVILLE ROAD PRV

WESTBOROUGH

ASHLAND

HIGH SERVICE
LOW SERVICE

SOUTHVILLE ROAD

HOPKINTON

Legend

Pipe

- Most Critical
- Least Critical
- Water Storage Tank
- P Pump Station
- PRV
- Major Roads
- Town Boundary

1 inch = 1,000 feet

1,000 500 0 1,000 2,000 3,000 4,000 Feet

PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
8 BLACKSTONE VALLEY PLACE
LICOLN, RI 02865
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TOWN OF SOUTHBOROUGH
WATER SYSTEM MAP

SOUTHBOROUGH, MASSACHUSETTS

REVISIONS:

PROJECT NO: 08176.20
DATE: DECEMBER 2021
SCALE: AS NOTED

DRAWING TITLE:
PIPE RANKING FIGURE

APPENDIX H

Conclusions

1. Approximately 5,400 feet of existing cast iron water main on Newton Street is in poor condition and is the cause of pressure and fire flow issues on and around Newton Street.
2. Storage deficit in the Low Service Area.
3. Storage deficit in the High Service Area.
4. Poor system circulation and redundancy in the High Service Area from the Boland Pump Station to the northeast quadrant of the HSA.

Conclusions (cont…)

5. The Lovers Lane water main is the most critical pipe in the system. This pipe is 50 years old asbestos cement, which is reaching the end of its service life, and is the main feed to the Tara tank. This main was identified in the pipe ranking evaluation as being critical due to several factors including age, material, and total flow carried.
6. The available fire flow at Trottier School and Cordaville Road is below ISO's fire flow requirements.

Recommendations

1. Institute a capital improvements program to address the immediate and long-term needs of the system, including the development of a priority plan and implementation schedule;
2. Perform an evaluation of the Town's flushing program to address water quality concerns in the winter (this could also include the development of a unidirectional flushing program); and
3. Address the insufficient fire flow at Trottier School and Cordaville Rd. by conducting additional field tests to verify the results of the model, coordinate with ISO to reevaluate the required fire flow at these locations, and isolate the Fairview/Skylar Drive neighborhood with check valves and a small pump station.

Recommendations for Specific Capital Projects

1. Replace water main on Newton Street between East Main Street and Framingham Road;
2. Upgrade system storage in the Low Service Area;
3. Upgrade system storage in the High Service Area;
4. Install a new 12-inch water main between Presidential Drive and Fisher Road;
5. Replace 12-inch water main on Lovers Lane.
6. Install new pitless booster pump station for the Fairview/Skylar Drive neighborhood.

Questions?

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- or –
(508) 543-1755

REPORT

Pare Project No. 08176.20

WATER SYSTEM MASTER PLAN UPDATE

FOR THE
TOWN OF SOUTHBOROUGH
WATER DEPARTMENT

147 Cordaville Road

Southborough, MA 01772

Prepared by:

Pare Corporation

8 Blackstone Valley Place

Lincoln, RI 02865

APRIL 2022

PARE CORPORATION

CELEBRATING 50 YEARS

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- Ms. Karen Galligan – DPW Superintendent
- Mr. Paul Harding – Water Superintendent

EXECUTIVE SUMMARY

The Southborough Water Department recently engaged Pare Corporation (Pare) to prepare an updated Water System Master Plan (WSMP) to provide an overview of their water system's performance, identify system deficiencies, and provide an evaluation of potential system improvements.

According to the US Census Bureau's 2020 Census of Population, the Town has a population of 10,450 people, of which approximately 85 percent are connected to the water distribution system. The Town's current sole source of supply is the Massachusetts Water Resource Authority (MWRA) via two connections to the Hultman Aqueduct, one connection to the Metrowest Water Supply Tunnel, and one direct connection to the John J. Carroll Water Treatment Plant. Existing customers are served by three water storage tanks, two pump stations, and 87 miles of transmission and distribution piping.

The system is operated as two distinct pressure zones, referred to as the High Service Area (HSA) and the Low Service Area (LSA). The Low Service Area operates at a hydraulic grade line (HGL) of 493 ft mean sea level (MSL) and is served by the Hosmer Pump Station and the Oak Hill and Clear Hill storage tanks. The High Service Area operates at a HGL of 515 ft MSL and is served by the Boland Pump Station and the Tara Road storage tank. There are four pressure-reducing valves in the system that transfers water from the High Service Area to the Low Service Area during periods of peak demand in the Low Service Area.

Based on water system meter records for the years 2016 - 2019, as well as pump station meter records and storage tank charts, average daily water demand in the system is approximately 0.915 million gallons per day (MGD). The maximum day demand over that same time period was 2.17 MGD. Residential water demand is approximately 240 gallons per day (gpd) per service connection and non-residential water demand is approximately 370 gpd per acre (gross lot area).

Future system water demand was estimated by conducting a limited build-out evaluation of the Town. Pare utilized existing water consumption rates established for residential customers (240 gpd/service connection) and non-residential customers (370 gpd/acre) to project future water demand. Based on our build-out evaluation, residential water demand could increase by as much

as 132,960 gpd and non-residential water demand could increase by as much as 158,260 gpd. The total future average daily water demand is estimated to be 1.2 MGD, or 31 percent more than the current average day demand.

The Town's existing hydraulic model was updated in general accordance with American Water Works Association (AWWA) Document M32 – *Distribution Network Analysis for Water Utilities*. The model was used to evaluate system performance. In addition, *Recommended Standards for Water Works (Ten States)* was utilized as a guideline in performing the system evaluation. Ten States recommends that system pressure range from 35-80 psi during normal operating conditions and never below 20 psi during emergency conditions. Both AWWA and Ten States recommend that a water system be capable of supplying the maximum day demand with the largest pump in each pump station offline.

It appears the Town's system operates generally within the range of 35-80 psi which is within the range that Ten States recommends. The only areas of Town that are below 35-psi on a regular basis are those areas near the Oak Hill and Tara Road storage tanks, as well as the Fariview/Skylar Drive neighborhood. There are no areas of Town that operate at a pressure below 20 psi on a regular basis. While the towns typical pressure range is 35-80 psi, there are some sizable areas of Town that operate above 80 psi, particularly around the Sudbury Reservoir and the Hopkinton town-line. The highest pressure in Town is approximately 134 psi and is located at the base of the Sudbury Reservoir dam. At build-out, system pressures are not anticipated to change significantly from what they are now (less than 1 psi change over current system pressure).

In the 2009 WSMP Pare noted that there was a supply capacity deficit in the Low Service Area and in the system as a whole. Due to the upgrades to the Boland and Hosmer Stations that have since taken place, this is no longer the case. In the High Service Area pump capacity is 2.16 MGD. MDD for the High Service Area is approximately 1 MGD (46 percent of the stations capacity). In the Low Service Area pump capacity is 2.9 MGD. MDD for the Low Service Area is approximately 1.15 MGD (40 percent of the stations capacity). An additional 1 MGD of capacity is allocated in Hosmer for Ashland's use. Maximum day demand when including Ashland's demand is 2.15 MG, or 74 percent of the Hosmer Station's capacity. At build-out, during an MDD scenario, it appears the existing pumps would be able to keep up with system

demand. The build-out maximum day demand in the High Service Area is expected to be 1.34 MGD which is 62 percent of the station's capacity (2.16 MGD). The Low Service Area is anticipated to be able to meet the build-out maximum day demand of 2.5 MG (including Ashland's demand), which is 86 percent of the LSA's pump capacity (2.9 MGD).

The future available (usable) storage capacity in the system is approximately 0.98 million gallons (MG). If we assume storage should be able to provide the maximum day demand and a fire event, an appropriate amount of storage would be approximately 2.18 MG, a deficit of approximately 1.2 MG. The HSA's storage deficit is approximately 0.35 MG, while the LSA's storage deficit is approximately 0.85 MG.

The available fire flow in the system ranges from 593 gpm to more than 3,500 gpm, with 682 of the total 745 system nodes in the hydraulic model that have an available fire flow over 1,000 gpm. While fire flow appears to be generally adequate for a primarily residential system like Southborough, there are six locations that Insurance Services Offices, Inc (ISO) has determined require exceptionally high fire flows, up to 3,500 gpm. Those locations include:

1. Marlborough Road at St. Marks School;
2. Trottier School;
3. Mary E. Finn School;
4. Highland Street at Parkerville Road;
5. Mt. Vickery Road at Cordaville Road; and
6. Oregon Road at Woodland Road.

Of these six locations, the required fire flow, as determined in the hydraulic model, is available at four – Marlborough Road, the Finn School, Highland Street at Parkerville Road, and Oregon Road. Adequate fire flow is unavailable at Trottier School and Cordaville Road. To address the insufficient fire flow at these locations, the Town can conduct additional field testing, coordinate with ISO to reevaluate the required fire flow needs, and isolate the Fairview/Skylar Drive neighborhood with check valves and a small pump station.

Pare reviewed the system for critical pipe segments, or segments that provide the sole sources of water to large areas of Town, or that provide a critical path for fire flow. While not currently

causing significant adverse impact on the system, there are certain critical pipes that may be undersized or that do not have significant redundancy. Provided below is a list of system pipes that appear to be critical and are either old, undersized, or do not have substantial redundancy.

1. The 12-inch water main on Lovers Lane between Lynbrook Road and Blackthorn Drive (4,000 lf) – a loss of this water main would case a significant disruption in service in the High Service Area;
2. The 12-inch water main on Lynbrook Road between Lovers Lane and the easement (600 lf) – this water main has some redundancy in the system; however, a break in the main could cause a serious disruption in service to customers along Rt. 9;
3. The 12-inch water main on Northboro Road (750 lf) between Old Northboro Road and Jericho Hill Road – this main is the sole source of supply to the northwest part of the Town. If this pipe were taken offline, customers would be entirely without water;
4. The 12-inch water main on Johnson Road between Old Northboro Road and Main Street along with the short sections of 12-inch water main on Main Street and the nearby easement (1,800 lf) – along with the pipe segment on Northboro Road, this main is the sole source of supply to the northwest part of the Town and would leave customers entirely without water if it were to be taken offline.

To address the existing system deficiencies, Pare has three recommendations;

1. Institute a capital improvements program to address the immediate and long-term needs of the system;
2. Perform an evaluation of the Town's flushing program to address water quality concerns in the winter (this could also include the development of a unidirectional flushing program); and
3. Address the insufficient fire flow at Trottier School and Cordaville Rd by conducting additional field tests to verify the results of the model and coordinate with ISO to reevaluate the required fire flow at these locations.

The capital improvements program should have the dual purpose of addressing the immediate needs of the distribution system as well as addressing the system's long-term needs. The program should prioritize capital improvements based on which improvements would provide the

maximum benefit for the least cost and which ones would address the most critical system deficiencies. At a minimum, the capital improvements should include the following;

- Replace water main on Newton Street between East Main Street and Framingham Road;
- Upgrade system storage in the Low Service Area
- Upgrade system storage in the High Service Area;
- Install a new 12-inch water main between Presidential Drive and Fisher Road;
- Replace 12-inch water main on Lovers Lane;
- Install new pitless booster pump station for the Fairview/Skylar Drive neighborhood.

Pare recommends that the Town perform an evaluation of their flushing program to identify the most effective means of circulating water in the southern half of Town by the Hopkinton town-line and along the western half of Rt. 9. The Town is using this as an opportunity to create a unidirectional flushing (UDF) program, which would optimize the flushing program town-wide, not just in areas of elevated water age. The development of the UDF program is on-going.

To address the insufficient fire flow at Trottier School and Cordaville Rd, Pare recommends the Town conduct additional field testing to verify the results of the model and coordinate with ISO to reevaluate the required fire flow at these locations. After coordinating with ISO and analyzing field testing results, Pare can assist the Town in implementing one of three options: work with ISO to revise the required fire flow at these locations; develop an operational plan for fighting fires; or make improvements to the system to increase fire flow at these locations. Additionally, the Town may want to consider isolating the Fairview/Skylar Drive neighborhood, which could increase the available fire flow of the Trottier School. This could be accomplished by installing a small pump station for the neighborhood and isolating the neighborhood with check valves. Additional evaluation would be required to determine the exact impact of such improvements and the scope of the project.

SECTION 1.0
INTRODUCTION AND BACKGROUND

The Southborough Department of Public Works recently engaged Pare Corporation (Pare) to prepare an Updated Water System Master Plan. The purpose of the Plan is to provide an overview of water system performance, identify system deficiencies, and provide an evaluation of potential system improvements to ensure consistent high-quality service to the existing and future customer base. The following sections of this Plan will provide the following information:

- System history;
- System description;
- Recent system upgrades;
- Pare's recent update of the Town's computerized hydraulic model;
- Pare's evaluation of the existing system;
- Pare's build-out analysis of the water distribution system, and
- Possible future capital improvements for the system.

1.1 SYSTEM OVERVIEW

The Town of Southborough owns and operates a water distribution system that serves a population of approximately 10,450 people. The Town is characterized by low-density residential development in the north and medium-density residential development in the south. While the Town is primarily residential, some dense commercial development exists along the Boston Worcester Turnpike (Rt. 9). Of the Town's current population, approximately 85 percent is connected to the distribution system.

Over the last three years, system-wide consumption averaged approximately 0.915 million gallons per day (MGD) and increased to approximately 2.17 MGD in the summer. The Town's current sole source of supply is the Massachusetts Water Resource Authority (MWRA) via two connections to the Hultman Aqueduct, one connection to the Metrowest Water Supply Tunnel, and one direct connection to the John J. Carroll Water Treatment Plant. Existing customers are served by three water storage tanks, two pump stations, and approximately 87 miles of transmission and distribution piping.

The system is operated as two distinct pressure zones, referred to as the High Service Area and the Low Service Area. The boundary between the High and Low Service Areas runs generally north-south along Rt. 85 from the Marlborough town-line to I-90. From I-90, the boundary runs roughly east-west from Rt. 85 to the Westborough town-line. The eastern half of the Town and locations south of I-90 are in the Low Service Area. The remaining area north of I-90 and west of Cordaville Road is in the High Service Area (refer to Appendix A – Water System Map).

The Low Service Area encompasses approximately 53 percent of the overall Town by area, and 60 percent of the population. The Low Service Area operates at a hydraulic grade line (HGL) of 493 ft mean sea level (MSL) and is served by the Hosmer Pump Station and the Oak Hill and Clear Hill storage tanks.

The High Service Area encompasses approximately 47 percent of the overall Town by area, and 40 percent of the population. The High Service Area operates at an HGL of 515 ft MSL and is served by the Boland Pump Station and the Tara Road storage tank.

The following sections provide a detailed description of the system's primary components.

1.1.1 *Supply Sources*

The Town of Southborough obtains all its water supply by direct connection to the MWRA's Hultman Aqueduct, Metrowest Water Supply Tunnel (MWWST), and John J. Carroll Treatment Plant. The Hultman Aqueduct and the MWWST are also connected to the John J. Carroll Treatment Plant and transport water from the Plant in Marlborough to the Norumbega storage facility in Weston. The Town currently has a ten-year contract with MWRA that expires at the end of 2026. As of the date of this report (2021), the Town is allowed to purchase up to 400 million gallons per year (MGY), not to exceed 3.0 MGD on a single day. The average annual limit will increase to 450 MGY in 2022. The maximum daily limit will increase to 3.5 MGD in 2022. The average annual and maximum daily limit will remain at 450 MGY and 3.5 MGD, respectively, until 2026. A copy of the MWRA Water Use Agreement is provided in Appendix B.

Hultman Aqueduct

Southborough has two connections to the Hultman Aqueduct, one at the Boland Station and one

at the Hosmer Station. At the Hosmer Station in the Low Service Area, the aqueduct is reported to be a 14-ft diameter concreted pressure duct. The depth of the aqueduct ranges from 250 to 300 feet below grade. The connection is made through a vertical shaft, referred to as Shaft No.3, approximately 150 feet north of the station. Inside the shaft is a 20-inch cast-iron pipe that connects directly to the aqueduct. Outside the shaft, the 20-inch pipe reduces to a 16-inch pipe and maintains that diameter until it enters the station.

At the Boland Station, the Hultman Aqueduct is reported to be a 12.5-ft diameter duct and is relatively shallow compared to its depth at the Hosmer Station. The aqueduct itself is higher than the surrounding grade; however, the soil is mounded around the aqueduct to maintain a consistent burial depth of approximately 4 ft. The connection is made via a 16-inch pipe that connects directly to the aqueduct. Between the station and the aqueduct, the 16-inch pipe reduces to a 12-inch pipe until it enters the station. The connection to the aqueduct is made approximately 50 ft north of the station.

Metrowest Water Supply Tunnel

The Town of Southborough's connection to the MWWST at the Hosmer Station was made in 2003. The MWWST is a 14-ft diameter concrete pressure pipe that ranges in depth from 200 to 500 ft below grade. The connection is made approximately 500 feet south of the station at a vertical shaft above the tunnel. The connection is made via a 24-inch diameter pipe that connects to the 16-inch pipe behind the Station, the same pipe that connects to the Hultman Aqueduct.

John J. Carroll Water Treatment Plant

While the water in the Hultman Aqueduct and the MWWST originates at the John J. Carroll Water Treatment Plant (Plant), the Town of Southborough also has a direct connection to the Plant. The Boland Station is connected to the Plant via 6,000 ft of 24-inch ductile iron water main. The 24-inch pipe is connected to the 16-inch pipe between the Hultman Aqueduct and the Station.

1.1.2 *Pump Stations*

The Town of Southborough operates two booster pump stations. The purpose of each station is to

increase the HGL of the MWRA supply to the HGL of the Southborough system. The following two sections describe each of the pump stations. Table 1-1 provides an overview of the pumps in each station.

Thomas J. Boland Pump Station

The Thomas J. Boland Pump Station (Boland) is located off Northborough Road in the northwest section of Town. Boland was constructed in 1960. The station supplies water to the High Service Area and fills the Tara Road Tank. The pumping system in Boland is comprised of three 750-gpm capacity pumps. The station also has an emergency generator and automatic transfer switch. The incoming HGL of the MWRA supply, as measured in the station, ranges from 295 to 303 ft. The MWRA uses the Boston City Base (BCB) datum when measuring their HGL, which is 5.65 ft lower than the US Geological Survey's MSL, which is the datum that Southborough uses to measure their HGL. Therefore, the HGL of the incoming supply, as measured relative to MSL, is 5.65 ft lower than reported in the station, or in this case 289 to 297 ft MSL.

The Boland Pump Station underwent comprehensive upgrades in 2013 and 2014, which included: three new 750-gpm capacity pumps with electric motors; pipe-work to connect the station to the existing piping; a new emergency generator and automatic transfer switch; a new motor control center and programmable logic control system; electrical work to provide power and control wiring; reprogramming of the station's SCADA system; minor structural repairs; and removal and disposal of the exterior gasoline underground storage tank. These upgrades were identified and recommended in the 2009 Water System Master Plan.

Arthur L. Hosmer Pump Station

The Arthur L. Hosmer Station (Hosmer) is located off Boston Road in the northeast corner of Town, adjacent to the Sudbury Reservoir. Hosmer was constructed in 1977. Substantial upgrades to the Hosmer Station were completed in 2021 as part of the Southborough/Ashland Interconnection project. The station upgrades included three new 1000-gpm capacity centrifugal pumps, a new emergency generator, and automatic transfer switch; a new motor control center and programmable logic control system; electrical work to provide power and control wiring; and reprogramming of the station's SCADA system The station supplies water to the Low Service Area and fills the Oak Hill and Clear Hill Tanks. The incoming HGL of the

MWRA supply, as measured in the station, ranges from 291 to 303 ft BCB, or 285 to 297 ft MSL.

TABLE 1-1: Southborough Distribution Pumps

Station	Flow	Head	Horse Power	Pump Manufacturer	Motor Manufacturer	Date Installed
Boland						
No. 1	750 gpm	257 ft	75 HP	Aurora	Weg	2014
No. 2	750 gpm	257 ft	75 HP	Aurora	Weg	2014
No. 3	750 gpm	257 ft	75 HP	Aurora	Weg	2014
Hosmer						
No. 1	1000 gpm	265 ft	100 HP	Aurora	US Motor	2021
No. 2	1000 gpm	265 ft	100 HP	Aurora	US Motor	2021
No. 3	1000 gpm	265 ft	100 HP	Aurora	US Motor	2021

1.1.3 *Tanks*

The Town of Southborough has three water storage tanks, the Tara Road Tank (Fiddler's Green), the Oak Hill Tank, and the Clear Hill Tank. The Tara Road Tank is in the High Service Area of Town, while the Oak Hill Tank and the Clear Hill Tank are both located in the Low Service Area of Town. The following table describes the three water storage tanks.

TABLE 1-2: Southborough System Storage Tanks

	Tara Road (Fiddler's Green)	Clear Hill	Oak Hill
Nominal Size	1.300 MG	0.460 MG	0.275 MG
Diameter	67 ft	40 ft	25 ft
Base Elevation	467 ft	451 ft	418 ft
Overflow Elevation	515.0 ft	493.3 ft	492.7 ft
Operating Range	503.0 to 510.0 ft	482.0 to 488.0 ft	482.0 to 488.0 ft
Style	Standpipe	Standpipe	Standpipe
Year Built	1960	1930	1930
Location	Tara Road	Overlook Drive	Oak Hill Road
Condition*	Very Good	Good	Good

* Condition provided in tank inspection reports prepared by Underwater Solutions Inc.

The most recent tank inspection and cleaning reports are provided in Appendix C.

The Oak Hill Tank underwent a removal of its interior and exterior coatings in 2010, which was performed by abrasive blasting. The rehabilitation project included a complete recoating of the tank's interior and exterior, pitting repaired near the eastern manway, a lock installed on the roof hatch, repair and reinsertion of sections of fiberglass roof to eliminate the potential for rainwater entry, and disposal of the removed material. The project also involved miscellaneous upgrades to the Clear Hill tank, which had its exterior stripped and recoated two years prior.

1.1.4 *Transmission and Distribution Mains*

The Town of Southborough's water distribution system is made up of approximately 87 miles of water main, ranging in size from 6-inches to 12-inches in diameter. In addition, there are short sections of 16 and 24-inch pipes that feed both pump stations from the MWRA system. Table 1-3 provides a relative breakdown of the piping size as a percentage of the total. Typical pipe material in the system includes ductile iron (DI), unlined cast iron (CI), cement-lined CI, polyvinyl chloride (PVC), and asbestos cement (AC).

TABLE 1-3: Distribution Piping

Size	% of System
2-inch	1
4-inch	<1
6-inch	10
8-inch	52
10-inch	6
12-inch	30
>12-inch	<1

1.1.5 *Pressure-Reducing Valves*

The Town of Southborough's water system has four pressure-reducing valves (PRVs) that, when working properly, transfer water from the High Service Area to the Low Service Area during times of peak water demand. The PRVs were manufactured by Golden Anderson Industries, Inc.

and installed over a two-year period around 1990. Each PRV is located within an underground concrete vault with interior dimensions 8 ft by 8 ft, and a 7-ft ceiling height. The Town replaced these four PRVs in 2010 with valves manufactured by OCV Control Valves, with limit switches to monitor open and closed positions. The valves can operate remotely through SCADA. All the electrical wiring and equipment for each vault were moved to a service equipment cabinet at each location.

The following sections describe each of the PRVs.

Ledge Hill Road PRV

The Ledge Hill Road PRV vault is located within a landscaped area to the northwest of the intersection of Marlboro Road (Rt. 85) and Ledge Hill Road. The PRV is 6-inches in size, and the interior piping is 6-inch DI. This represents the northernmost PRV in the Town of Southborough.

Town Square PRV

The Town Square PRV vault is in a grassed area within the VFW Memorial Park between Main Street and Common Street. The PRV is 10-inches in size, and the interior piping is 10-inch DI.

Mount Vickery Road PRV

The Mount Vickery Road PRV vault is in a grassed area to the northwest of the intersection of Cordaville Road (Rt. 85) and Mount Vickery Road. The PRV is 6-inches in size, and the interior piping is 6-inch DI.

Parkerville Road PRV

The Parkerville Road PRV is in a grassed area to the northeast of the intersection of Parkerville Road and Richards Road, adjacent to the Finn School. The PRV is 8-inches, and the interior piping is 8-inch DI. This represents the southernmost PRV in the Town of Southborough.

1.2 SYSTEM HISTORY

Provided below is a brief timeline of the development of the Southborough water supply system.

1898 The Fayville Dam is completed, producing several reservoirs, primary of which is the Sudbury Reservoir. The Sudbury Reservoir is the primary water supply for the Town of Southborough until 1962.

1908 The Wachusett Reservoir in Clinton and Boylston is completed. The Wachusett Reservoir, which was created by the Metropolitan Water District to serve the growing population of Boston, is currently one of two reservoirs that provide water to Boston and Towns west of Boston, including Southborough. The Wachusett Reservoir is currently operated by the Massachusetts Water Resources Authority (MWRA), but the land around the Reservoir is owned and maintained by the Massachusetts Department of Conservation and Recreation (MA DCR).

1930 The Oak Hill standpipe is completed. The Oak Hill Standpipe is a 0.275 MG storage tank on Oak Hill Road that is still in use today.

1930 The Clear Hill standpipe is completed. The Clear Hill Standpipe is a 0.46 MG storage tank on Overlook Drive that is still in use today.

1930 The Atwood Elevated Tank is completed. The Atwood Elevated Tank was a 150,000-gallon elevated tank on Atwood Street that was demolished in 1990.

1941 The Hultman Aqueduct is completed. The Hultman Aqueduct is one of two aqueducts that transport water from the Wachusett Reservoir to the Norumbega Reservoir in Weston. The Hultman Aqueduct also has a branch that feeds the Weston Reservoir.

1946 The Quabbin Reservoir is completed. The Quabbin Reservoir is the primary water supply for the City of Boston. Like the Wachusett Reservoir, the Quabbin is operated by the MWRA, but the land around the Reservoir is owned and maintained

by the MA DCR. The Quabbin Reservoir flows by gravity to the Wachusett Reservoir through the Quabbin Aqueduct.

1959 A report prepared by Whitman and Howard recommended that the Town abandon the Sudbury Reservoir due to poor water quality. The report suggested that that the Town construct a pumping station adjacent to Hultman Aqueduct and make a connection to the aqueduct at Shaft No. 3.

1960 The Tara Road Tank, also referred to as Fiddler's Green Reservoir is completed. The reservoir, which is a 1.3 MG standpipe, was built with a higher overflow elevation than the other tanks in the system to better serve the higher elevations around Tara Road. When the tank was constructed, there were plans to construct a booster pump station to serve the higher tank, which would effectively create a new pressure zone in Town. However, the booster pump station was never constructed. As a result, the tank was operated with only ±26 feet of water in it to match the overflow elevations of the other system water tanks.

1962 The Thomas J. Boland Pump Station is completed. The Boland Station, which is still in service today, originally pumped water solely from the Hultman Aqueduct, but now pumps from the Hultman Aqueduct and a direct connection to the John J. Carroll Treatment Plant. It is noted that this is <u>not</u> the pump station that Whitman and Howard recommended in 1959; this station is located on the opposite side of Town.

1977 The Arthur L. Hosmer Pump Station is completed. This is the pump station recommended by Whitman and Howard in their 1959 report. The Hosmer Station was originally pumped solely from the Hultman Aqueduct from Shaft No.3, but now pumps from both the Hultman Aqueduct and the Metrowest Water Supply Tunnel. The Hosmer Station is still in service today and is the sole source of supply for the Low Service Area in Town.

1978 The Town acquires the property on Fairview Hill for a future tank site.

1988 A report prepared by Whitman and Howard recommended that the Town create two pressure zones, which are now the High Service Area and a Low Service Area. The report recommends that the High Service Area be served by the Tara Road Tank, which has an overflow elevation of 515 ft MSL but has been operating since its construction at an HGL of approximately 493 ft MSL.

1990 The Atwood Tank is demolished. The tank is no longer considered cost-effective to maintain.

1990 The Town installs four pressure-reducing valves over a two-year period. The pressure reducing valves effectively divide the Town into two service areas, the High Service Area and the Low Service Area, as recommended in Whitman and Howard's 1988 report. The pressure reducing valves are intended to transfer water from the High Service Area to the Low Service Area in times of peak water demand.

1993 The water main between the Hosmer Pump Station and the Oak Hill standpipe is upgraded from 8-inches to 12-inches.

1997 The MWRA and the Town install water mains along Sears Road, Valley Road, Bigelow Road, Pinehill Road, Johnson Road, and Main Street.

2003 The Metrowest Water Supply Tunnel (MWWST) is completed. The MWWST is the second of two aqueducts that bring water from the Wachusett Reservoir to the Norumbega Reservoir (the Hultman Aqueduct being the first). The Town makes a connection to the MWWST near the Hosmer Station that provides a second source of supply to the station.

1.2.1 *System Upgrades Since 2009 Master Plan*

Since the 2009 Master Plan, a number of upgrades have been made to the Town system. These upgrades include:

2010 Upgrades to the PRVs

2012 Installation of a system-wide SCADA system

2012 Rehabilitation for the Oak Hill Tank

2014 Upgrades to the Boland Pump Station

2015 Installation of a new water main on Rt. 9 between Willow and Winter

2015 Installation of a 12" water main on Rt. 9 between the Framingham town line and Breakneck Hill Rd

2018 Installation of an 8" water main on Cordaville Rd

2020 Water main on Main Street (between Sears Road and Cordaville) upgraded to 12".

2021 Ashland interconnection project (12 in water main to Hosmer PS, Hosmer PS upgrades, control valve at Clear Hill tank, and interconnection vault on Oregon Rd)

SECTION 2
HYDRAULIC MODEL UPDATE

As part of the 2009 Water System Master Plan, Pare updated the Town of Southborough's computerized hydraulic model, which had been created by others. An important component to providing a comprehensive evaluation of the distribution system is developing a computerized hydraulic model to assist with the evaluation of complex hydraulic situations. The hydraulic model was updated in general accordance with American Water Works Association (AWWA) Document M32 – *Distribution Network Analysis for Water Utilities*. Since 2009, Pare has maintained the model on behalf of the Town, which includes periodic revisions as capital improvements have been made on the system, including: pump station upgrades, PRV installations, and water main replacements. As part of the current Master Planning efforts, Pare has updated the model with current demand and build-out projections.

The model was used to evaluate the system's performance relative to guidelines and standards established by AWWA, as well as *Recommended Standards for Water Works (Ten State Standards)* and the Massachusetts Department of Environmental Protection's *2001 Guidelines and Policies for Public Water Systems*.

As part of the system evaluation, Pare evaluated system-wide water demand. From our evaluation of system water demand, Pare updated the demand database in the hydraulic model.

2.1 WATER DEMAND EVALUATION / DEMAND DATABASE UPDATE

When evaluating system demand and establishing a demand database, there are three primary water demand scenarios – average day demand (ADD), maximum day demand (MDD), and peak hour demand (PHD). The ADD, as defined by AWWA M32, is "…the annual water consumption divided by 365 days." and represents the average water demand that a given water distribution system experiences over a one-day period. The MDD is defined as, "…the water consumption, in volume of water used on the highest consumption day in a year." The MDD is typically the most critical water demand scenario and is usually the scenario by which system adequacy is measured. The PHD is defined as, "…the maximum total 1-hour water demand, in units of volume per day, a given distribution system experienced or would experience during a particular year or other time

period." The PHD is a higher consumption rate than MDD but given the short duration of high water demand (i.e., 1-hour), it is not considered as critical as the MDD.

Pare reviewed the following information provided by the Town as part of our water demand evaluation and demand database update:

- Customer meter records for the years 2016, 2017, 2018, and 2019;
- Pump Station Logs for the years 206 to 2019 (refer to Appendix D).; and
- Tank chart records from all three water storage tanks – the Tara Road Tank, the Clear Hill Tank, and the Oak Hill Tank, for select days (refer to Appendix E).

2.1.1 Average Day Demand

Based on the information provided in the Annual Statistical Reports, the Town pumped a total of 1,000 million gallons (MG) from the MWRA between 2016 and 2019. The average daily pumpage, which was used for the average day demand (ADD), was **0.915 MGD**, or 635 gpm.

2.1.2 Maximum Day Demand

The maximum day demand was obtained by identifying the single highest day of purchased water from the MWRA between 2016 and 2019, which occurred on July 11, 2018. On that day, the MWRA supplied 2.14 MG. In addition, over the course of that day, the system storage tanks drained by a net volume of 31,300 gallons. The total water supplied less the amount going into the system tanks is the total system demand on a maximum day, in this case, **2.17 MGD** or 1,507 gpm. The maximum day multiplier for the system is calculated by dividing the maximum day demand by the average day demand, in this case 2.37. Therefore, Pare used a maximum day multiplier of 2.37 in the hydraulic model.

2.1.3 Peak Hour Demand

The peak hour demand is typically a time when system water sources are supplying water at full, or near full capacity and system storage tanks are draining at their highest, or near highest rates. The single highest hour of water demand between 2016 and 2019 occurred on July 25, 2016, between

4:00 and 5:00 pm. Over that hour, the MWRA supplied water at a rate of approximately 1,760 gpm, and the system storage tanks drained at a rate of approximately 2,033 gpm, for a net system demand of approximately **3,793 gpm,** or 5.46 MGD. The peak hour multiplier for the system is the peak hour demand divided by the average day demand, in this case 5.97. Therefore, Pare used a peak hour multiplier of 5.97 in the hydraulic model.

The table below summarizes Southborough's water demand and the demand scenarios Pare utilized as part of the hydraulic model development.

TABLE 2-1: Southborough Water System Demand

	Water Demand (2016-2019)	
	Total Volume (MGD)	System Demand (gpm)
Average Day	0.915	635
Maximum Day	2.17	1,507
Peak Hour	5.46	3,793

2.2 SERVICE AREAS

To further define system demand patterns, Pare subdivided the system in the model into two (2) service areas, the High Service Area and the Low Service Area. Pare distributed the total system demand into each of the service areas based on the percentage of total metered water use in that area. The customers in High Service Area used approximately 47 percent of the total metered water use in the system between 2016 and 2019. Therefore, Pare allocated 47 percent of the total system demand to the High Service Area and 53 percent to the Low Service Area.

Table 2-2 provides the total water demand for each service area for an average day, maximum day, and peak hour.

TABLE 2-2: Southborough Water Demand by Service Area				
	Percentage	Average Day (GPD)	Maximum Day (GPD)	Peak Hour (GPD)
High Service Area	47%	430,050	1,019,900	2,566,200
Low Service Area	53%	484,950	1,150,100	2,893,800
TOTAL		**915,000**	**2,170,000**	**5,460,000**

2.3 RESIDENTIAL/NON-RESIDENTIAL WATER USE

System-wide, residential customers consumed approximately 79 percent of the total water demand, or approximately 722,850 gpd. Non-residential customers consumed approximately 21 percent of the total water, or approximately 192,150 gpd. The average number of residential customers based on meter records provided by the Town for 2016, 2017, 2018, and 2019 is 3,009. Therefore, the average residential water demand in Southborough's system is approximately 240 gpd per service connection. Based on the current population, approximately 10,450, the average residential per capita water demand is approximately 69.2 gpd.

As of 2008, which is the Town of Southborough's most recent Town-wide Master Plan, the total area in Town that is currently developed for non-residential use is 520 acres, out of a total of 948 acres zoned for non-residential use. Therefore, the average non-residential water demand in Southborough's system is approximately 370 gpd/acre (gross lot area).

The per service water demand for residential customers and per acre water demand for non-residential customers identified here will be used to project future water demand as part of our system build-out evaluation.

2.4 UNACCOUNTED / UNMETERED WATER USE

In any system there is some unmetered and unaccounted water use. To ensure that Southborough's unaccounted/unmetered water use was included in the model, Pare utilized the meter records from the MWRA (in the Annual Statistical Reports), not the customer meter records, to establish the actual system demand. However, Pare distributed water use throughout the system based on customer meter records and address information. Therefore, each area is

assigned a portion of the total unaccounted/unmetered water, based solely on how much water they consumed as a percentage of the total system demand. For example, customers in the system consumed approximately 791,120 gpd, based on their metered water usage. The total water supplied to the system is 915,000 gpd, a difference of approximately 123,880 gpd. The difference is the systems' unmetered water use.

The total unmetered water use that Pare estimated for the model is approximately 14 percent of the total system use. Please note that this should not be considered unaccounted water in the same sense as the MA DEP indicates in their Water System Annual Statistical Reports. This is the percentage of total water supplied to the system that Pare could not assign to a specific node in the model. A portion of this unmetered water is attributable to normal system operations, such as hydrant flushing, water main breaks, temporary construction services, etc. The actual unaccounted-for water in the system, as defined by MA DEP, is lower than 14 percent.

2.5 MAJOR USERS

An important component of the hydraulic model development is an evaluation of major users, which are customers that use over 1 million gallons per year (MGY). Major users represent large load centers in the model, which can have a substantial impact on system hydraulics. In some cases, major users might use so much water that they dictate the size and/or configuration of certain infrastructure components, such as pipes, tanks, pumps, etc. Based on the meter records provided by the Town, there are currently 11 major users in the Town of Southborough. This is a decrease of eight (8) major users from the 2009 WSMP. The table on the following page is a list of the system's major users, their location, usage type, and designation in the model.

Based on meter records, and as illustrated in Table 2-3, major users consume approximately 10 percent of total water use. Eight (8) of the eleven (11) major users are in the Low Service Area and three (3) major users are in the High Service Area. It is noted that the St. Marks School, which is in the Low Service Area, used 26% of the total water by major users between 2016 and 2019. It is also noted that the EMC Corporation property, which is in the High Service Area, used 13 percent of the total water used by major users between 2016 and 2019.

TABLE 2-3: Southborough Major Users					
Name	Address	Service Area	Use Type	Water Use MGY	Water Use GPD
St. Marks School	Marlboro Rd and School St	Low	School	8.60	23,551
EMC Corporation	Coslin Drive	High	Office Park	4.31	11,807
Shrubs and Trees[1]	110 Turnpike Road	Low	Comm./Agri.	7.39	20,258
Curo Turnpike LLC	118 Turnpike Road	Low	Commercial	1.00	2,741
Carriage Hill Condos	2 Carriage Hill Circle	Low	Residential	2.28	6,249
Red Roof Inn	367 Turnpike Road	High	Commercial	2.00	5,489
Meeting House Farm Condo Trust	Meeting House Lane	High	Residential	1.21	3,325
Southboro Medical Group	24 Newton Street	Low	Non-Res Inst.	2.47	6,765
NE Center for Children	33 Turnpike Road	Low	School	1.69	4,619
Southborough Meadows	16 Blueberry Land	Low	Residential	1.08	2,946
144 Turnpike Road Holdings LLC	144 Turnpike Road	Low	Commercial	1.12	3,065
Total				33.2	90,815

Note

1. Although Shrubs and Trees is considered a major user from 2016 to 2019. They will most likely not be considered a major user in the next revision of this plan because their water use has been trending downward.

SECTION 3.0
EXISTING SYSTEM EVALUATION

After updating the demand information in the model, Pare used the hydraulic model to evaluate system performance. Pare evaluated an average day demand (ADD) scenario, a maximum day demand (MDD) scenario, a peak hour (PH) demand scenario, and a fire flow analysis. Pare evaluated the available pressure throughout the system, as well as the available fire flow. Pare also evaluated the performance of the system pump stations and the rate at which the system storage tanks either filled or drained during each scenario.

AWWA Document M32 – *Distribution Network Analysis for Water Utilities* and *Recommended Standards for Water Works (Ten State Standards)* were used as guidelines in performing the hydraulic analysis. These documents dictate that the maximum day demands should be afforded through the system's source capacity, not distribution storage. Distribution storage shall provide the additional peak hour demands and fire flow. These documents also dictate that the fire flow at any given point in the system would be the rate of flow of water obtainable at a minimum residual pressure of 20 psi. Furthermore, these documents require that all points in the distribution system also maintain a minimum residual pressure of 20 psi during fire flow conditions.

Pare conducted two types of hydraulic analyses for the Town of Southborough, a steady-state analysis and an extended period analysis. A description of each analysis is provided below.

3.1 STEADY STATE ANALYSIS

The most common type of hydraulic model analysis is a steady state analysis. A steady state analysis provides a "snapshot" or an overview of system performance during an average day, maximum day, or peak hour demand scenario. A steady state analysis is a useful tool because it provides a reasonable representation of system performance during each of the demand scenarios. Pare created a steady state demand scenario for the ADD, MDD, and PHD demand scenarios. The demand scenarios were established by dividing the total system demand for the ADD, MDD, and PHD over the entire model network.

Pare modified the approach to distribute demand within the hydraulic model. Instead of distributing demand evenly amongst the nodes, demand was distributed geo-spatially. Each address with water service usage was given X, Y coordinates based on their location within the system. These demands were then allocated to the nearest system node. This method of distributing demand is slightly more accurate than the previous method. In addition, this new method allows for a better understanding of demand at varying elevations throughout the system, providing a spatial relationship between demand and topography.

It should also be noted that the model incorporated wholesale pumping records for system water usage in place of meter records. The use of wholesale pumping records allows the model to factor in unaccounted/unmetered water usage. The meter records were used, however, to determine the portion of the wholesale pumping flow to be assigned at each specific node.

3.1.1 *Hydraulic Evaluation*

Pare used a steady state analysis to evaluate typical system pressures and the net change in system storage for the ADD and MDD scenarios. AWWA M32 recommends that a water system should have the capability of meeting system demands while having the largest active pump in each pump station offline. All remaining pumps within the pump stations may be active as required. This is consistent with Ten States, which recommends that system components be sized to provide the peak water demands with one pump in each station offline. Therefore, Pare evaluated the system with the largest pump in each station offline. In this case, one of the three 1000-gpm pumps in the Hosmer Station were turned off, with the remaining two 1000-gpm pumps left on. Two of the three 750-gpm pumps in the Boland Station were left on while the third 750-gpm pump was left offline.

For the steady state analysis, each of the three water system storage tanks were set to the bottom of their respective equalization levels, or 508 ft for Tara Road, 485 ft for Oak Hill, and 486 ft for Clear Hill.

The results of the steady state analysis evaluation for existing conditions are summarized in the table below and the hydraulic model reports are attached in Appendix F.

TABLE 3-1: System Evaluation (Steady State Analysis)				
	Average Day Demand	Maximum Day Demand	Peak Hour Demand	Available Fire Flow
Pressure Range (HSA)	23 - 111 psi	23 - 115 psi	23 - 112 psi	572 - 3,500 gpm
Pressure Range (LSA)	31 - 130 psi	31 - 133 psi	31 - 130 psi	665 – 3,500 gpm
Tank Filling Rate (HSA)	482 gpm	682 gpm	-281 gpm	
Tank Filling Rate (LSA)	717 gpm	1,142 gpm	-62 gpm	

Ten States recommend that systems operate within a pressure range of 35 to 80 psi, which is consistent with the MA DEP regulations. Relative to Ten States and MA DEP regulations, it appears most of the system is operating within an acceptable pressure range during ADD, MDD, and PH demand scenarios. The pressure in the High Service Area ranges from 23 to 111 psi, with 14 nodes (out of 343 nodes) falling below 35 psi and 187 nodes above 80 psi on a regular basis. The pressure in the Low Service Area ranges from 31 to 130 psi, with 3 nodes (out of 423 nodes) falling below 35 psi and 258 nodes above 80 psi on a regular basis.

The area of Town in the Low Service Area with low pressure is along Oak Hill Road, which is near the Oak Hill Tank. The ground elevation in this portion of Town ranges from 400 to 434 ft MSL. The overflow of the Oak Hill Tank is 493 ft MSL and the bottom of the normal operating range is 485, therefore the highest elevation in the Low Service Area that will routinely experience a static pressure as low as 35-psi is approximately 404 feet. Portions of the Low Service Area that experiences high pressure are areas around the Sudbury Reservoir and some areas along the Hopkinton town-line. Portions of the Low Service Area below 308 ft MSL will routinely experience pressure above 80 psi.

The area of Town in the High Service Area with low pressure is along Tara Road, which is near the Tara Road Tank. The ground elevation in this portion of Town ranges from 440 to 450 ft MSL. Additionally, the Fairview Drive and Skylar Drive neighborhood, which is located in the southern portion of the High Service Area, regularly experiences pressure below 35 psi. The ground elevation in this portion of Town ranges from 417 to 442 ft MSL. The overflow of the Tara Road Tank is 515 ft MSL and the bottom of the normal operating range is 508 ft, therefore the highest elevation in the High Service Area that will routinely experience pressure as low as 35-psi is approximately 427 feet. There are several areas in the High Service Area that

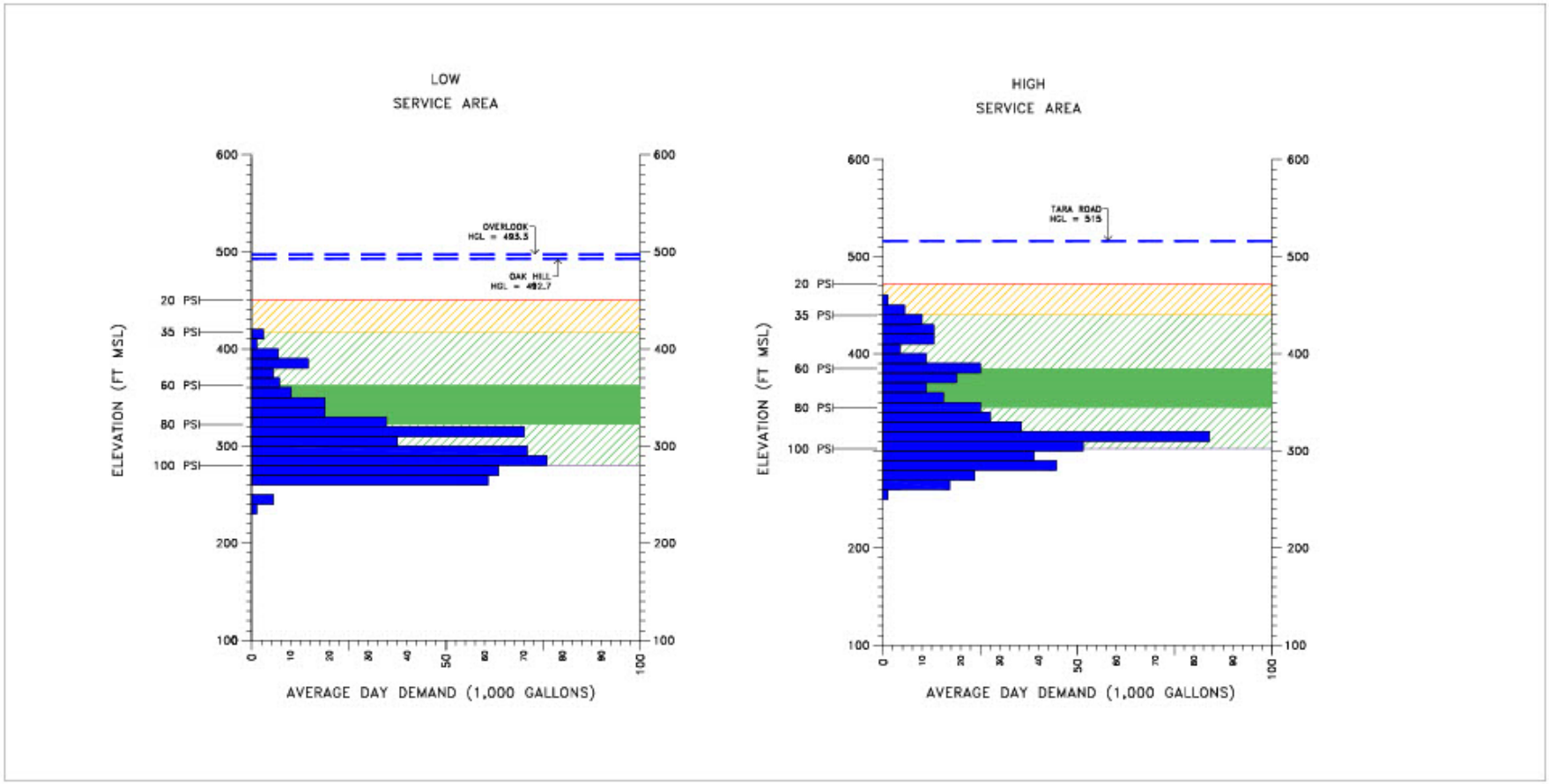
experience pressure above 80 psi, including Fisher Road and most of the area between Main Street and Rt. 9, except for the area around the Tara Road tank. Portions of the High Service Area below 330 ft MSL will routinely experience pressure above 80 psi.

Figure 3-1 depicts demand by service area in relation to elevation for both the High and Low Service Areas. The High Service Area provides 37 percent of its demand within the optimal pressure range of 35 psi to 80 psi. The Low Service Area provides 42 percent of its demand within the same optimal pressure range. 100 percent of the customer range is above 20 psi, which is the minimum allowed by Mass DEP.

Appendix G provides a color-coded system map that indicates available system pressure on a maximum day.

Figure 3-1

SOUTHBOROUGH MASTER PLAN UPDATE - 2021
DEMAND BY SERVICE AREA (ADD) VERSUS ELEVATION



3.1.2 *Supply Evaluation*

During an ADD scenario, the system pumps can keep up with system demand, as is evident by the net filling rate of the system storage tanks. In the 2009 WSMP Pare noted that there was a supply capacity deficit in the Low Service Area and the system as a whole. Due to the upgrades to the Boland and Hosmer Stations that have since taken place, this is no longer the case.

The Boland Station in the High Service Area has a capacity of approximately 2.16 MGD, or 1,500 gpm (with one pump offline). The MDD for the High Service Area is approximately 1 MGD, or 46 percent of the station's capacity.

The Hosmer Station, in the Low Service Area, has a capacity of approximately 2.9 MGD, or 2,000 gpm (with one pump offline). The maximum day demand for the Low Service Area is approximately 1.15 MG, or 40 percent of the station's capacity. As part of the Intermunicipal Agreement between Southborough and the Town of Ashland (see Section 4.4), Southborough must allocate 1 MGD of capacity for Ashland's use. Therefore, 1 MGD must be available in Hosmer to meet Ashland's demand. Maximum day demand when including Ashland's demand is 2.15 MG, or 74 percent of the Hosmer Station's capacity.

Based on these results, it appears the Boland Station and Hosmer Station have more than adequate capacity to supply the maximum day demand to the High and Low Service Areas with one-pump offline at each station. When the existing PRVs between the High Service Area and the Low Service Area allows water to be shared between the two service areas, the total pump station capacity in the system is approximately 5.06 MGD.

3.1.3 *Storage Tank Evaluation*

The distribution system currently has 2.04 MG of storage capacity in three tanks, the Tara Road tank in the High Service Area, and the Oak Hill and Clear Hill tanks in the Low Service Area. Pare evaluated the usable storage volume in both service areas. The usable volume is defined by AWWA as the volume above an elevation that would provide a minimum of 20 psi to the entire service area. To determine the usable storage, Pare took the elevation of the highest service

connection and added 46 feet (i.e., 20 psi x 2.31) to establish the minimum usable water level in the system tanks.

As stated in previous reports on system storage, there is no set requirement for how much storage a system must have to operate; it is typically considered prudent to size storage for normal use (equalization), fire flow events, and emergency conditions. Each system, depending on its size and the adequacy of its supply pumps, will determine how much storage is necessary to satisfy these requirements. For this evaluation, Pare calculated the required storage for the system as described below.

Equalization storage: Equalization storage is the amount of water required to meet demands greater than the production capability. Currently, Southborough's production capacity is greater than the system's maximum day demand. Therefore, the amount of storage required for normal use should be at least enough to meet demands above maximum day demand up to peak hour demands (which is generally the system's highest short-term demand scenario). Based on the water use patterns in the system, which were last evaluated as part of the 2009 WSMP and AWWA's standards for water storage, the volume of equalization storage required to meet peak hour demands is approximately 15 percent of maximum day demand.

Fire storage: The quantity of distribution system storage necessary for fire protection is based on the fire flow requirements established by the Insurance Services Office (ISO). The required fire storage volume is determined by multiplying the required flow duration (in minutes) by the maximum fire flow (in gallon per minute) in the service area.

Emergency storage: Finally, a system should have adequate emergency storage to prevent serious disruptions in service in the event of a water main break or other emergency situation. In this case, Pare assumed 20 percent of an average day would be adequate for emergency volume to initiate emergency response. Therefore, in the event that all effective storage was depleted, the Town would have to rely on the ineffective storage, which may result in system pressure dropping below 20 psi for some customers.

3.1.3.1 *High Service Area*

The distribution system currently has 1.30 MG of storage capacity in the HSA in one tank, the Tara Road tank. In the HSA, the highest service connection is approximately 450 feet MSL. Based on this service connection, the lowest water elevation in the Tara Road tank that can provide all customers with 20 psi is approximately 496 feet MSL. Therefore, the total effective storage volume in the HSA is about 0.50 MG (out of a total of 1.30 MG). The water stored in the tank below elevation 496 feet MSL (0.80 MG) would be considered ineffective, or unusable. This means that only the top 19 feet (38 percent) of the Tara Road tank is considered usable – if the water level falls below this level, customers will start to experience unacceptably low pressure (i.e., below 20 psi).

For this evaluation, Pare calculated the required storage for the system as described below. Please note that as a planning tool, Pare utilized projected demand information for a scenario in the future when the Town is built out to its maximum density based on current zoning. This was done to make sure that future storage is sized appropriately for current and future system demand.

Equalization storage: The build-out maximum day demand in the HSA is projected to be approximately 1.3 MGD (refer to section 5.1.3.), and therefore equalization storage should be approximately 195,000 gallons (1,300,000 gallons x 0.15).

Fire storage: Based on ISO's report dated March 1990, the highest required fire flow in the HSA is near the Trottier School and is 3,000 gpm. As referenced in AWWA M31 Distribution System Requirements for Fire Protection, the required flow duration for a required fire flow of 3,000 gpm is 3 hours (180 minutes), which results in a required storage volume in the HSA of 540,000 gallons.

Emergency Storage: The build-out average day demand in the HSA is projected to be approximately 0.56 MG (refer to section 5.1.3.), and therefore, the recommended emergency storage is approximately 112,000 gallons (560,000 gallons x 0.20).

The total effective volume of storage recommended in the HSA is approximately 0.85 MG (0.195 + 0.54 + 0.112). The total available volume of storage currently in the HSA is approximately 0.5 MG. The total deficit in recommended effective storage is approximately 0.35 MG (0.85 – 0.5). To achieve the total volume of effective storage recommended in the HSA, the Town would have to add approximately 0.35 MG of effective storage.

3.1.3.2 *Low Service Area*

The distribution system currently has 0.735 MG of storage capacity in the LSA storage capacity in two tanks, the Oak Hill tank and the Clear Hill tank. In the LSA, the highest service connection is approximately 414 feet MSL. Based on this service connection, the lowest water elevation in the Oak Hill and Clear Hill tanks that can provide all customers with 20 psi is approximately 460 feet MSL. Therefore, the effective storage volume is about 0.36 MG (out of a total of 0.46 MG) in the Clear Hill tank and about 0.12 MG (out of a total of 0.275 MG) in the Oak Hill Tank. The water stored in the tanks below elevation 460 feet MSL (0.25 MG) would be considered ineffective, or unusable. This means that only the top 33 feet (79 percent) of the Clear Hill tank and the top 33 feet (44 percent) of the Oak Hill Tank are considered usable – if the water level falls below this level, customers will start to experience unacceptably low pressure (i.e., below 20 psi).

Equalization storage: The future maximum day demand in the LSA is projected to be approximately 2.45 MGD (refer to section 5.1.3), including 1 MGD for Ashland, and therefore equalization storage should be approximately 368,000 gallons (2,450,000 gallons x 0.15).

Fire storage: Based on ISO's report dated March 1990, the highest required fire flow in the LSA is near the intersection of Mt Vickery Road and Cordaville Road and is 3,500 gpm. As referenced in AWWA M31 Distribution System Requirements for Fire Protection, the required flow duration for a required fire flow of 3,500 gpm is 3 hours (180 minutes), which results in a required storage volume in the LSA of 630,000 gallons.

Emergency Storage: The future average day demand in the LSA is projected to be approximately 0.64 MGD (refer to section 5.1.3). Accounting for an additional 1 MGD for Ashland, the recommended emergency storage in the LSA is approximately 328,000 gallons (1,640,000 gallons x 0.20).

The total effective volume of storage recommended in the LSA is approximately 1.33 MG (0.368 + 0.63 + 0.328). The total available volume of storage currently in the LSA is approximately 0.48 MG. The total deficit in recommended effective storage is approximately 0.85 MG (1.33 – 0.48). To achieve the total volume of effective storage recommended in the LSA, the Town would have to add approximately 0.85 MG of effective storage.

TABLE 3-2: Storage Tank Evaluation Summary			
Service Area	Available Storage (MG)	Recommended Storage (MG)	Storage Deficit (MG)
High Service Area	500,000	850,000	350,000
Low Service Area	480,000	1,330,000	850,000
TOTAL	**980,000**	**2,180,000**	**1,200,000**

3.1.4 *Pipe Evaluation*

AWWA Document M32 was used as a guide in evaluating the adequacy of the piping in the distribution system. AWWA suggests that pipe segments are deficient, or limiting if they have any of the following conditions:

- Velocities greater than 5 ft/sec;
- Head losses greater than 10 ft/1,000 ft; or
- Large-diameter pipes (i.e., 16-inch or greater) having head losses greater than 3 ft/1,000 ft.

Please note that pipes inside pump stations may routinely exceed the conditions described above, given that these pipes usually carry large volumes of water. However, given that these pipe sections are generally short, the overall impact on the system is generally small, and therefore pipes inside pump stations were not considered in this evaluation.

Pare used the hydraulic model to evaluate the system's piping network. The evaluation was conducted during a MDD scenario. Based on the model results, there are no water mains in the system that have velocities greater than 5 ft/sec. There are two pipes with head losses greater than 10 ft/1,000 ft. A pipe at the intersection of Central St and Learned St (13.70 ft/ 1000 ft) and a pipe at the intersection of Central St and Boston Rd (12.40 ft/ 1000 ft). In addition, there are no pipe segments with a diameter of 16 inches or greater.

As there are many more criteria that should be considered in identifying deficient pipe segments in the system, Pare created a ranking database (refer to Appendix H for Pipe Ranking Figure). This database considers both a pipe segment's physical attributes as well as its importance and performance in the system. The physical attributes consist of pipe size, age, material, location in the

HSA or LSA, break history, as well as if a pipe segment is part of a dead end. Importance and performance factors consist of the average flow carried in each pipe segment, velocity, headloss gradient, and pipe roughness. All these criteria are given a score, and these scores are then weighted based on their relative importance to the system. The pipe segments with the highest scores are given priority to be replaced in the system.

Pare created a map of the Town system using data from the ranking database to visually identify deficient pipe segments. Segments ranking in the top 2 percent of scores appear red on the map. These segments are considered by Pare to be of the highest priority for replacement.

In addition to these segments, Pare strongly recommends a capital improvement project to connect the piping on Presidential Drive to the piping on Fisher Road. This connection will create a loop in an area of Town containing large system dead ends and will add redundancy to the system and relieve pressure from the pumps. If the water main on Northboro Road were taken offline, the Boland Pump Station would be separated from the majority of the system. The Boland Pump Station fills the Tara Road Storage Tank, which is the sole supply reservoir in the HSA. Without this connection, the pump station will not be able to fill the Tara Road Tank in this scenario, which could result in a significant decrease in system supply.

Pare also reviewed the system for critical pipe segments or segments that provide the sole sources of water to large areas of Town, or that provide a critical path for fire flow. While not currently causing a significant adverse impact on the system, certain critical pipes that may be undersized or may not have significant redundancy.

In addition to reviewing the system for critical pipe segments through the pipe ranking database, Pare did a physical assessment of the pipe on Newton Street from Framingham Road to East Main Street. The existing water main is in poor condition and is the cause of pressure and fire flow issues on and around Newton Street. The pipe provides a second feed to the Clear Hill storage tank, but because of the pipe's poor condition, the tank has circulation and turnover issues.

Provided below is a list of system pipes that are critical to the system but appear to be either old or do not have substantial redundancy:

1. The 12-inch water main on Lovers Lane between Lynbrook Road and Blackthorn Drive (4,000 lf) – a loss of this water main would case a significant disruption in service in the High Service Area;
2. The 12-inch water main on Lynbrook Road between Lovers Lane and the easement (600 lf) – this water main has some redundancy in the system; however, a break in the main could cause a serious disruption in service to customers along Rt. 9;
3. The 12-inch water main on Northboro Road (750 lf) between Old Northboro Road and Jericho Hill Road – this main is the sole source of supply to the northwest part of the Town. If this pipe were taken offline, customers would be entirely without water;
4. The 12-inch water main on Johnson Road between Old Northboro Road and Main Street along with the short sections of 12-inch water main on Main Street and the nearby easement (1,800 lf) – along with the pipe segment on Northboro Road, this main is the sole source of supply to the northwest part of the Town and would leave customers entirely without water if it were to be taken offline.

As part of Section 6 of this report, Pare evaluated potential capital improvements to either replace these system pipes or install redundant system pipes elsewhere in the system. The critical nature of Northboro Rd water main will be addressed with the installation of the connection at Presidential Drive and Fisher Road. Therefore, the replacement of the main on Northoboro Road was not included in the capital improvements proposed by Pare in Section 6.

3.1.5 *Fire Flow Evaluation*

A fire flow demand that occurs during a MDD scenario is considered a limiting condition for service pumps and a piping system. Therefore, AWWA recommends that a fire flow analysis be conducted for a MDD scenario, to gauge a system's ability to meet critical water demands. Pare evaluated the available fire flow at each node in both service areas. As recommended by AWWA, the water level in each of the system storage tanks were set to the bottom of their equalization volumes, to represent a time of day when system storage tanks have been depleted by customer use. Furthermore, AWWA indicates that a water system should have the capability of meeting system demands with any one pump – preferably the largest pump – off-line. Therefore, Pare evaluated the available fire flow with the one pump offline in the Boland Station and one pump offline in the Hosmer Station.

Since 2009, the Town made the following improvements to the system to improve fire flow: replacing the existing PRVs; upgrading select pipes sizes; and increasing pump capacity in both the High and Low Service Areas. Since the 2009 WSMP, Pare updated the node elevation information and piping configuration (location and length) in the model. This resulted in making the model more accurate in the means by which it calculates fire flow.

The results indicated that the available fire flow in the High Service Area ranges from 593 gpm to 3,500 gpm and in the Low Service Area range from 662 gpm to 3,500 gpm. AWWA Document M31 – *Distribution System Requirements for Fire Protection*, indicates that 500 gpm is considered by some experts to be the minimum amount of water that can safely and effectively control any fire. It appears the system can provide at least 500 gpm to every node that would need to supply a fire flow in the model. In addition, 682 of the total 745 system nodes have an available fire flow of 1,000 gpm or greater. Therefore, it appears fire flow is generally adequate in most areas of Town. Appendix I provides a color-coded system map that indicates available fire flow system-wide.

The area of town with the lowest available fire flow is the Fairview Drive and Skylar Drive neighborhood, which is located in the southern portion of the High Service Area. The cause of this low fire flow may be the neighborhood's high elevation. Additionally, this may lower the available fire flow in nearby areas of the system as the model strives to keep these customers' pressure above 20 psi in a fire flow event.

Pare conducted a separate fire flow for six specific locations that require significant fire flow volumes above 1,000 gpm. These locations, which are indicated in Table 3-2, were identified by the Insurance Services Office (ISO) as having insufficient fire flow. A copy of ISO's hydrant fire flow test reports is provided in Appendix J. Based on the model results, it appears the required fire flow is available at 4 of the 6 locations. Of the two locations that fire flow is not available, it appears existing piping near the locations may be undersized. Section 6 – Capital Improvements, will identify potential system improvements that could be made to provide adequate fire flow to these locations.

TABLE 3-3: Summary of Fire Flow Analysis			
Location	Needed Fire Flow based on ISO Requirements	Available Fire Flow	
		Based on ISO's Flow Tests	Based on Model Results
1. Marlborough Road @ St. Marks School	2,500 gpm	2,100 gpm**	**3,500 gpm***
2. Trottier School	3,000 gpm	1,900 gpm***	1,560 gpm
3. Mary E. Finn School	2,250 gpm	1,500 gpm**	**2,578 gpm**
4. Highland Street @ Parkerville Road	1,500 gpm	1,200 gpm**	**1,950 gpm**
5. Mt. Vickery Road @ Cordaville Road	3,500 gpm	1,600 gpm**	2,539 gpm
6. Oregon Road @ Woodland Road	1,250 gpm	1,100 gpm***	**2,775 gpm**

* Results in bold text indicate that the required fire flow, as determined by ISO, is available at that location.
** ISO tests conducted in March 2002
*** ISO tests conducted in March 1990

The model does not consider losses in the hydrant and hydrant branch, which can lead to a higher available fire flow than ISO's tests. However, the model predicts the pressure in the actual water main, which is more critical to protecting public health than the pressure at the hydrant outlet. Therefore, for the purposes of this evaluation, Pare is going to utilize the results of the hydraulic model to assess which locations fire flow is available and which locations fire flow is unavailable. Pare considers the available fire flow at St. Mark's School, Finn School, Highland Street, and Oregon Road to be adequate, based on the results of the model evaluation. The available fire flow at Trottier School and Cordaville Road is considered inadequate.

Due to the improvements made by the Town, most of the locations assessed by ISO experienced an increase in available fire flow since 2009. However, based on the results of the hydraulic model it would appear that the available fire flow at the Trottier School went down. This is likely due to the updates Pare made to the model, which made the model more accurate. Therefore, it is unlikely that there was a change to the system that resulted in a decrease in fire flow at this location, but rather the available fire flow was previously overestimated.

Additionally, it appears that the available fire flow at several of these locations may be impacted by the Fairview/Skylar Drive neighborhood previously mentioned. In particular, the Trottier School,

which is in close proximity to this neighborhood, may be negatively impacted with regards to available fire flow.

To address the insufficient fire flow at Trottier School and Cordaville Rd, Pare recommends the Town conduct additional field testing to verify the results of the model. This may include hydrant flow testing at these locations and recording pressures at nearby hydrants. The Town can also coordinate with ISO to reevaluate the required fire flow at these locations. After coordinating with ISO and analyzing field testing results, Pare can assist the Town in implementing one of three options: work with ISO to revise the required fire flow at these locations; develop an operational plan for fighting fires; or make improvements to the system to increase fire flow at these locations. Additionally, the Town may want to consider isolating the Fairview/Skylar Drive neighborhood, which could increase the available fire flow of the Trottier School. This could be accomplished by installing a small pump station for the neighborhood and isolating it with check valves.

3.2 EXTENDED PERIOD ANALYSIS

While a steady state analysis is a valuable tool for evaluating system performance, it is important to understand its limitations. Because a steady state analysis provides only a "snapshot" of system performance, it cannot be used to evaluate tank fill/drain cycles, pump controls, water age, contaminant movement, etc. For these types of analyses, an extended period simulation is utilized. An extended period simulation provides a dynamic evaluation of system performance over a fixed time period, usually anywhere from 24 to 72 hours. An extended period simulation can be used to determine how quickly the system tanks fill/drain, when system pumps turn on and off, the age of the water in any given section of the system, and fluctuations in pressure over the course of a given time period. In addition, an extended period simulation can be a valuable tool for predicting contaminant movement within a system, in the event that the Town experiences a contamination event. While an extended period analysis can do all these things, Pare utilized the extended period analysis primarily as a tool to measure water age in the system. However, in the event that the Town needs to conduct any of the other types of analyses described above, the model has the necessary extended period scenarios established for future evaluations.

Pare established an extended period analysis for the average day and maximum day demand scenarios. In addition, Pare created a minimum day demand scenario to evaluate water age.

Typically, when system demand is lowest water age is highest, which can result in unpleasant water quality and possibly bacteriological growth at the ends of the system.

To perform an extended period analysis, Pare evaluated water demand over a typical 24-hour period. By reviewing pump records and tank charts for several different days between 2016 and 2019, Pare was able to evaluate the amount of water used by the Town for each hour of a typical day. The demands used during our steady state analysis were used as a base demand at each node in the model. For each hour of the day, the base demand was adjusted by a peaking factor to represent the typical water demand during that time of day. For example, during the late-night and early morning hours when water demand is low, the base demand on each node was multiplied by a factor less than 1 (i.e., 0.3, 0.6, 0.7, etc.). During high water demand times, such as between 7:00 am and 10:00 am and around dinnertime, the base water demand was multiplied by a factor greater than 1 (i.e., 1.25, 1.6, 1.7, etc). Pare established a unique multiplier for each hour of the day by reviewing water meter records and tank charts as described in section 2.1. Table 3-3 shows the hourly multiplier for each hour of a typical minimum, average, and maximum day scenario. Appendix K provides a graph of typical hourly peaking factors for the Town of Southborough over the course of a 24-hour period.

TABLE 3-4: Hourly Peaking Factors	
Hour	Peaking Factor
0-1	0.46
1-2	0.63
2-3	0.81
3-4	1.50
4-5	1.93
5-6	2.05
6-7	1.62
7-8	1.20
8-9	1.02
9-10	0.95
10-11	0.88
11-12	0.76
12-13	0.68
13-14	0.84
14-15	0.94
15-16	0.84
16-17	1.07
17-18	1.02
18-19	1.09
19-20	0.81
20-21	0.80
21-22	0.72
22-23	0.77
23-24	0.62

3.2.1 *Water Age Evaluation*

An important indicator in the overall performance of a system is the age of the water in the pipes, also known as the hydraulic residence time. The US Environmental Protection Agency (EPA) conducted a study in 2002 in which they reported that based on a survey of 800 utilities in the US the average hydraulic residence time was 1.3 days, with a maximum time of 3 days. The report also suggests that water age increases as the size of the system decreases. The EPA study cites one example of a system with a population of 24,000 that has a water age of 12-24 days. While there is no set requirement for minimum or maximum water age, utilities should be cognizant of their system's water age because elevated water age can lead to taste and odor complaints,

increases in temperature, increases in disinfection byproducts, decreases in disinfection residual, and other water quality issues. The appropriate water age for any system is a function of the age and material of the pipes, the type of disinfection utilized (i.e., chloramines, chlorine, etc.), and the amount of organic matter in the system.

Pare utilized the model to estimate the age of water throughout the Southborough system. During the minimum day scenario, which is generally representative of the winter months, the oldest water in the system is located between Rt. 9 and the Hopkinton town-line, as well as the southern half of the High Service Area. Water, which is the oldest in the system, ranges in age from 12-18 days. Water along the Hopkinton town-line ranges in age from 6-12 days. During an average day scenario, water age in the southern half of the High Service Area ranges from 6-12 days, and during a maximum day demand scenario, ranges from 3 to 6 days. The modest increase in calculated water age from the 2009 WSMP isn't attributed to an adverse change in the system, but rather the way the demand was allocated in this model versus the previous model. The previous model likely underestimated water age in dead-end pipes with little or no demand allocated to them. However, to determine more precisely the actual water age and the impact of water age on water quality, the Town would need to undertake a more comprehensive study of hydraulic residence time, which may include trace analysis for chlorine residual and disinfection byproducts, pH, temperature, and total organic carbon.

It appears the age of water in the system in the winter is significantly higher than during the other months of the year. As a result, the Town could experience water quality problems in the southern half of the High Service Area and along the Hopkinton town-line. The reason water age is elevated in the winter months is that there is essentially too much water in the system and not enough demand. To decrease water age, the Town can do two things – reduce the amount of water in the system or increase system demand. It's probably impractical for the Town to reduce the amount of water in the system. To reduce the amount of water in the system the Town would need to eliminate pipes, particularly large diameter pipes. However, this would have an adverse impact on fire protection Town-wide and would eliminate service to some customers. Therefore, the Town must increase demand to reduce hydraulic residence time. The Town cannot mandate that customers increase their water consumption to reduce water age, but the Town can artificially increase demand by increasing the frequency of hydrant flushing or installing permanent blow-off valves on dead-end mains.

Therefore, Pare recommends that the Town perform an evaluation of their flushing program to identify the most effective means of circulating water in the southern half of Town by the Hopkinton town-line and along the western half of Rt. 9. The evaluation should consider what time of year pipes are flushed, the direction in which pipes are flushed, and the frequency of flushing.

The Town could also use this as an opportunity to create a unidirectional flushing (UDF) program, which would optimize the flushing program town-wide, not just in areas of elevated water age. The purpose of a UDF program is to optimize the Town's existing hydrant flushing program. It focuses on using the minimum amount of water to flush the system while attaining the maximum removal of sediment, bio-film, and stagnant water. The central premise behind a UDF is to move water in one direction, away from the source to the ends of the system by closing specific valves to direct the flow of water in the system. A well planned and executed UDF program can save a substantial amount of water and can significantly increase scouring velocities over a traditional flushing program. Another benefit of a UDF is that in the event of a contamination event, the UDF program can be utilized to effectively isolate and contain the contaminant outbreak and efficiently remove it from the system through flushing.

SECTION 4.0
SYSTEM BUILD-OUT EVALUATION

As part of the 2009 Water System Master Plan, Pare conducted a comprehensive build-out evaluation of the Town to estimate future water demands and evaluate the future needs of the distribution system. This evaluation consisted of the review of the Town of Southborough 2008 Master Plan (Town Master Plan) and coordination with the Town Planner. The Town Master Plan includes town-wide build-out analysis, which was prepared to accurately assess local growth potential on a parcel-by-parcel basis, which reflects local knowledge about existing land use, ownership patterns, and soil conditions (for suitability for on-site septic disposal), as well as zoning (residential zoning is limited to construction of single-family dwelling units). In the years since this evaluation, zoning in the Town has not changed, nor has the Town issued an update to its Master Plan. Therefore, it can be assumed that the maximum build-out remains the same.

This section describes Pare's build-out evaluation of the Town; Section 5 of the Plan describes Pare's evaluation of system performance after build-out.

4.1 RESIDENTIAL BUILD-OUT

In the 2009 evaluation, it was determined that an additional 729 residential units, including those on vacant parcels and infill development, could be constructed before reaching maximum build-out. At the rate at which residential permits had been issued before the 2009 evaluation (36 residential units per year), maximum build-out would occur around the year 2030. Since the 2009 report, approximately 175 residential units have been constructed. Applying this new rate of construction (16 residential units per year), it is the opinion of Pare that this same maximum build-out will occur around the year 2054.

TABLE 4-1: Existing and Projected Residential Lots

Number of Households 2009	Number of Building Permits Issued 2009 to 2019	Future Buildable Residential Units (Vacant Lots and Infill Development)	Total Number of Households and Buildable Parcels at Build-out
3,339	**175**	**554**	**3,893**

To estimate future residential water demand, Pare utilized the number of future residential service connections, which corresponds to the future potential residential development. In 2009 the future potential residential development was 729 units, including vacant parcels and infill development. Since then, 175 units have been constructed, reducing the future potential residential development to 554 units, or 554 new service connections. Pare made the assumption that future residential customers will use a similar amount of water as existing residential customers, or approximately 240 gpd per service connection (refer to Section 2.2). Pare then applied that water demand to the proposed 554 buildable residential lots to estimate future water demand for residential users, which was approximately 132,960 gpd. Table 4-2 indicates the residential build-out potential.

TABLE 4-2: Residential Build-out Water Demand

Number of Potential Residential Units in 2009	Number of Building Permits Issued 2009 to 2019	Future Buildable Residential Units (Vacant Lots and Infill Development)	Total Future Water Demand
729	**175**	**554**	**132,960 gpd**

4.2 NON-RESIDENTIAL BUILD-OUT

In 2009, Pare utilized build-out data in chapter two of the Town Master Plan for the non-residential build-out. Given the highly variable nature of commercial and industrial development, it is difficult to predict the number of new non-residential service connections between now and build-out. Therefore, instead of estimating future non-residential water demand based on the number of new services as we did with residential water demand, Pare estimated water demand based on the land area allocated for future non-residential development.

As of the 2008 Town Master Plan, approximately 428 acres of non-residential acreage was available for future development. Given that the non-residential zoning reported in the 2008 Master Plan, was 948 acres, approximately 45% of non-residential zoned land has significant build-out potential. Pare used buildout data from the 2008 Town master plan, as this was the most up to date set available.

In Section 2.3, Pare estimated that non-residential users consume approximately 370-gpd/acre

(gross lot area). As with our residential build-out, Pare assumed that future non-residential development would be similar to current non-residential development, and therefore water demand would also be similar. Therefore, Pare applied 370-gpd/acre to the proposed non-residential acreage to estimate future water demand by non-residential users. Pare estimates that future non-residential water demand will increase by approximately 158,360 gpd.

Please note that this demand estimate is inclusive of the development proposed on the property behind Park Central, which is located on three contiguous parcels totaling 95 acres. One proposal for this site has includes up to 220 assisted living units and 200,000 square feet (sf) of commercial space. Based on MA DEP estimates of 150 gpd per assisted living unit and an estimate of 75-gpd/1,000 sf for commercial space, Pare estimates that future water average day demand for this proposal would be approximately 48,000 gpd, or 505-gpd/acre, which is consistent with our estimate of 500-gpd/acre.

Table 4-3 illustrates average daily demand at build-out for residential and non-residential users in the Town of Southborough.

TABLE 4-3: Residential and Non-Residential Average Day Demand at Build-Out

	Current Water Demand	Increase in Future Water Demand	Total Future Water Demand by Type	Increase
Residential	722,850 gpd	132,960 gpd	855,810 gpd	18 %
Non-Residential	192,150 gpd	158,260 gpd	350,410 gpd	82 %
TOTAL	**915,000 gpd**	**291,220 gpd**	**1,206,220 gpd**	**32 %**

Based on our evaluation of future land use, it appears water demand in Southborough may increase by almost 32 percent when the Town reaches its build-out. Currently, average daily water demand is approximately 0.915 MGD and may increase to 1.2 MGD at full build-out.

4.3 WATER USE PATTERNS SINCE 2009

In 2009, the total average daily water demand in the system was 1.09 MGD, but the current average daily water demand is 0.915 MGD. This means that the town's overall water demand

decreased by approximately 16 percent from 2009 to 2019. Table 4-4 indicates this water use pattern.

TABLE 4-4: Water Use Patterns Since 2009

	Water Demand as of 2009 (GPD)	Current Water Demand (GPD)	Percent Decrease since 2009
Residential	849,000	722,850	15
Non-Residential	240,000	192,150	20
TOTAL	**1,089,000**	**915,000 gpd**	**16**

This decrease is likely attributed to the fact that several high-use commercial customers switched over to wells to meet their water demands. Additionally, Southborough did not see the expected growth projected by both the town and the 2009 WSMP. Therefore, while the build out evaluation described in this section is a helpful tool for evaluating future system performance, the actual future growth can be difficult to predict.

4.4 ASHLAND DEMAND

In addition to the projected increase in demand due to build out, Pare will take into account demand from Ashland in the future system evaluation (see Section 5.0). In 2021 an interconnection with the Town of Ashland was completed so that MWRA could provide Ashland with water through Southborough's system. The Ashland Interconnection project also included upgrades to the Hosmer Pump Station, as well as some additional improvements to the Low Service Area, so that they could accommodate Ashland's demand. Per the Intermunicipal Water Supply Agreement, the Town of Southborough must reserve up to 1.6 MGD of capacity for Ashland's use. However, Ashland's system can only currently accommodate 1 MGD of supply from Southborough. Therefore, Pare allocated an additional 1 MGD to the future maximum day and peak hour water demands in the Low Service Area to accommodate Ashland's potential demand.

SECTION 5.0
FUTURE SYSTEM EVALUATION

After entering the build-out information into the model, Pare used the model to evaluate future system performance. As with the existing system evaluation, Pare evaluated an ADD, a MDD, and a PH demand scenario, as well as a fire flow analysis for a build-out condition. Pare evaluated the available pressure throughout the system, as well as the available fire flow. Pare also evaluated the performance of the system pump stations and the rate at which the system storage tanks either filled or drained during each scenario.

5.1 DEMAND DATABASE

Pare updated the hydraulic model demand database to reflect the addition of future water demand town-wide. To more accurately reflect the distribution of future water demand in the system, Pare addressed residential and non-residential water demand in two different ways.

5.1.1 *Residential Demand*

The future residential water demand added to the High Service Area for the ADD is approximately 62,940 gpd, which was distributed geospatially over the 207 nodes in the High Service area, in addition to any existing demand on those nodes. The future residential water demand added to the Low Service Area for the ADD is approximately 70,470 gpd, which was distributed geospatially over the 292 nodes in the Low Service Area.

5.1.2 *Non-Residential Demand*

To update the non-residential demand for the future system analysis, Pare assumed that the future non-residential build-out would occur only in areas currently zoned for business and/or industry. There are 93 nodes in the model that are designated as non-residential, to which the future non-residential demand increase was allocated. As indicated in Table 4-3, the future non-residential water demand added to the system is approximately 158,260 gpd, which was distributed geospatially over the 93 nodes designated as non-residential, in addition to any existing demand on those nodes. After Pare applied the non-residential water demand to the 93 non-residential nodes, Pare utilized the same methodology as was used in the existing system evaluation to apply

the future residential water demand by service area. The future water demand was subdivided in the model into the two (2) service areas, the High Service Area and the Low Service Area.

5.1.3 *Future Peak Demands*

Pare utilized the same peaking factors established in the sections 2.1.2 and 2.1.3 for the maximum day (2.37) and the peak hour (5.97) water demands. Pare allocated an additional 1 MGD to the future maximum day and peak hour water demands in the Low Service Area to accommodate Ashland's potential demand. Table 5-1 provides the total water demand for each service area for an average day, maximum day, and peak hour demand scenario.

TABLE 5-1: Future Water Demand in Southborough by Service Area

	Average Day (GPD)	Maximum Day (GPD)	Peak Hour (GPD)
High Service Area	566,920	1,343,610	3,384,530
Low Service Area	639,300	1,515,130	3,816,600
Ashland Reserve Capacity	N/A	1,000,000	1,000,000
TOTAL	**1,206,220**	**3,858,740**	**8,201,130**

Under the existing contract with MWRA, the average annual and maximum daily limit on water withdrawals will be 450 MGY and 3.5 MGD by the end of this contract in 2026. If Southborough reaches build-out before 2026, which it is not anticipated to do, the average annual demand of the system (i.e., 438 MGY, or 1.2 MGD) wouldn't exceed the limit imposed by MWRA of 450 MGY. The Town of Southborough's maximum daily demand is expected to reach 2.86 MGD, which is below the MWRA limit of 3.5 MGD. The addition of Ashland's demand (1 MGD) would increase the total system demand to 3.86 MGD; however, per section R.11 of the 2016 MWRA Water Use Agreement, Ashland's demand, "…will not be considered as part of the Town's approved withdraw from the MWRA." Refer to Appendix B.

5.2 STEADY STATE ANALYSIS

Pare created a steady state demand scenario for the ADD, MDD, and PHD future demand scenarios. The same methodology was utilized to evaluate future build-out of the system as was used for the evaluation of the existing system, i.e., AWWA M32 was used as a guide, the largest

pump in each station was offline, etc.

5.2.1 *Hydraulic Evaluation*

As with the existing system evaluation, a steady state analysis was used to evaluate typical system pressures and the net change in system storage for the ADD, MDD, and PHD scenarios for the future system.

The results of the steady state analysis evaluation are summarized in the table below and the hydraulic model reports are attached in Appendix L.

TABLE 5-2: Future System Evaluation (Steady State Analysis)

	Average Day Demand	Maximum Day Demand	Peak Hour Demand	Available Fire Flow
Pressure Range (HSA)	23 - 111 psi	23 - 115 psi	23 - 110 psi	547 - 3,500 gpm
Pressure Range (LSA)	31 - 130 psi	31 - 131 psi	29 - 128 psi	613 – 3,500 gpm
Tank Filling Rate (HSA)	393 gpm	482 gpm	-798 gpm	
Tank Filling Rate (LSA)	608 gpm	207 gpm	-1,390 gpm	

It appears the increase in system demand at build-out will not have a significant impact on system pressure. The results for the build-out scenario are similar to the results for the existing system. The pressure in the High Service Area on an average day ranges from 23 to 111 psi, with 14 nodes (out of 343 nodes) falling below 35 psi and 185 nodes above 80 psi on a regular basis. The pressure in the Low Service Area on an average day ranges from 31 to 130 psi, with 3 nodes (out of 423 nodes) falling below 35 psi and 258 nodes above 80 psi on a regular basis.

5.2.2 *Supply Evaluation*

During a future ADD scenario, it appears the existing system pumps would be able to keep up with system demand even with one pump in each station offline, as is evident by the net filling rate of the system storage tanks. On a MDD when the one pump in each station is offline, the existing pumps would still be able to keep up with system demand.

The existing capacity of the Boland Station is approximately 2.16 MGD (with one pump offline).

The future MDD for the High Service Area is approximately 1.34 MGD or 62 percent of the station's capacity.

The existing capacity of the Hosmer Station is approximately 2.9 MGD (with one pump offline). The future MDD for the Low Service Area is approximately 2.5 MGD when including the demand allocated for Ashland, or 86 percent of the station's capacity.

Based on these results, it appears both stations have more than enough capacity during the future maximum day demand scenario, with two pumps online and `one pump offline in each station.

If the existing PRVs between the High Service Area and the Low Service Area allow water to be shared between the two service areas, the total pump station capacity would be approximately 5.06 MGD, which is more than the total future system demand on a maximum day (i.e., 3.86 MGD).

5.2.3 *Storage Tank Evaluation*

Build out average day and maximum day demands were used in the Storage Tank Evaluation described in Section 3.1.3. The results of this evaluation indicated that the storage deficit in the HSA is approximately 0.35 MG, while the storage deficit in the LSA is approximately 0.85 MG.

5.2.4 *Pipe Evaluation*

Pare used the hydraulic model to evaluate the system's piping network after full town-wide build-out. The evaluation was conducted during a MDD scenario, which is consistent with our evaluation of the existing system. Based on the model results, there are no water mains in the system that have velocities greater than 5-ft/sec, but there are 3 pipes with head losses greater than 10 ft/1,000 ft. The three pipes with head losses greater than 10 ft/1,000 ft are a 8-inch pipe on Oak Hill Road, a 6-inch pipe on Central Street, and a 8-inch pipe at the bottom of the Hosmer Station access road. The total length of the three pipes is less than 200 ft and the total pressure loss to the system is less than 1 psi, therefore the impact of the head loss to the system is very minor. The Town should reevaluate these pipes in the future as buildout progresses. If these pipes

appear to be a significant issue in the future, the Town can include them in future capital improvement plans.

In general, the added demand of the system at full build-out does not appear to have a significant impact on the performance of the piping system.

5.2.5 *Fire Flow Evaluation*

The model results indicate that the available fire flow in the High Service Area ranges from 547 gpm to 3,500 gpm and in the Low Service Area range from 613 gpm to 3,500 gpm. Therefore, it appears fire flow would be generally adequate in most areas of Town after full build-out, even though some areas would experience a slight reduction (i.e. approximately 100 gpm) in available fire flow over what is available now.

SECTION 6.0
SUMMARY OF DEFICIENCIES & CAPITAL IMPROVEMENTS

The purpose of this section is to summarize system deficiencies identified in this report and identify potential capital improvements that would help to establish long-term infrastructure redundancy and increase system supply and storage to meet the projected future demands of the system.

6.1 SUMMARY OF SYSTEM DEFICIENCIES

This section describes system deficiencies that are considered critical to the immediate and future reliability of the system. The system deficiencies that Pare identified include:

1. Approximately 5,400 feet of existing cast iron water main on Newton Street. The existing water main is in poor condition and is the cause of pressure and fire flow issues on and around Newton Street. The pipe provides a second feed to the Clear Hill storage tank, but because of the pipe's poor condition, the tank has circulation and turnover issues.
2. Storage deficit in the Low Service Area. The existing Oak Hill storage tank is tall and narrow with very little storage volume per vertical foot and very little usable storage. Reducing this storage deficit would provide more usable storage and better pressure stabilization in the southern half of the Low Service Area.
3. Storage deficit in the High Service Area. There is currently no storage south of Route 9 in the High Service Area, leaving this area of the system vulnerable to a disruption in service.
4. Deficient system circulation and redundancy in the High Service Area from the Boland Pump Station to the northeast quadrant of the HSA.
5. The Lovers Lane water main is the most critical line in Southborough's system. This main is a 50-year old asbestos cement pipe, which is reaching the end of its service life, and is the main feed to the Tara tank, the only tank in the High Service Area. This main was identified in the pipe ranking evaluation as being critical due to several factors including age, material, and total flow carried.

6. The available fire flow at Trottier School and Cordaville Road is below ISO's fire flow requirements according to the model. From the 2009 WSMP to now, it appears that the available fire flow at these two locations has gone down, despite the significant improvements that Town has made since the 2009 WSMP. The reduction in fire flow is likely due to updates made to the model that have made the model more accurate and inclusive of certain neighborhoods that the previous model did not include. The addition of these neighborhoods affects the residual pressure in the system and makes it appear as though the available fire flow has gone down over the past 12 years. In reality, the available fire flow was likely lower in the past than it is now, but the old model did not accurately estimate fire flow at certain locations. The improvements that the Town has made over the last 12 years have significantly improved fire flow throughout the system, but these two areas need continued evaluation and improvement. Additionally, it appears that the available fire flow at the Trottier School may be impacted by the Fairview/Skylar Drive neighborhood. This neighborhood's high elevation may be negatively impacting the school's fire flow.

6.2 PROPOSED CAPITAL IMPROVEMENTS

Table 6-1 below provides a summary of each of the deficiencies identified above and the corresponding capital improvement that Pare proposes to resolve these deficiencies.

TABLE 6-1: Critical System Deficiencies and the Corresponding Capital Improvement

Deficiency	Corresponding Capital Improvement		
	Description	Report Section	Cost
1. The existing water main on Newton St is in poor condition	Newton St Water Main Replacement	6.2.1	$ 2,500,000
2. Usable storage deficit in the southern half of the Low Service Area	Replace the Oak Hill Storage Tank with a 1 MG Elevated Storage Tank	6.2.2.1	$ 4,700,000
3. Usable storage deficit in the High Service Area	New High Service Area Storage Tank	6.2.2.2	$ 4,400,000
4. Lack of circulation and redundant supply pathway in the HSA	Connect Fisher Road to Presidential Drive	6.2.3	$ 600,000
5. The existing water main on Lovers Lane is a critical pipe	Lovers Lane Water Main Replacement	6.2.4	$ 1,800,000
6. Deficient available fire flow at the Trottier School	Fairview/Skylar Drive Neighborhood Pump Station	6.2.5	$ 670,000

A description of each critical capital improvement, the resulting system benefit, and Pare's opinion of probable construction cost for each improvement are provided in subsequent sections of this report. A contingency of 25% or greater is typically added to cost estimates for projects at this planning stage.

6.2.1 Newton Street Water Main

This capital improvement consists of replacing approximately 5,400 LF of 8 and 10-inch main on Newton Street between Framingham Road and Main Street with 12-inch DI pipe.

Pare's opinion or probable construction cost for this capital improvement is $ 2,500,000. A 10% contingency was selected for this cost estimate because the project is in the design phase. A breakdown of the cost is provided below.

TABLE 6-2: Newton St Water Main	
Construction	$ 2,100,000
Contingency (10%)	$ 200,000
Engineering Services	$ 200,000
TOTAL	**$ 2,500,000**

6.2.2 System Storage Upgrades

There is currently a Town-wide storage deficit of 1.2 MG. Pare recommends that the Town consider making improvements to the storage capacity in both the High and Low Service Areas.

6.2.2.1 Low Service Area

Currently, the Low Service Area has a storage deficit of 0.85 MG. The available (usable) storage in the Low Service Area is currently 0.48 MG. To increase the usable storage, Pare recommends that the Town consider increasing the usable storage capacity in the Low Service Area from 0.48 MG to 1.3 MG. Therefore, Pare recommends that any new storage be constructed such that the bulk of the storage is above an elevation of 460 ft MSL, to make the storage completely usable.

It would likely be more cost effective to pursue the construction of an elevated storage tank on a parcel with a ground surface elevation of 415 ft or higher than to construct multiple elevated style tanks on parcels with lower ground surface elevations. Furthermore, it may be most cost-effective to replace one or both existing storage facilities with new tanks, rather than add a separate third tank to the system. The benefit would be that the Town already owns the parcels on which the existing tanks are located, which would save the cost of the purchasing a new parcel. Also, the two tanks in the Low Service Area are relatively old (almost 80 years) and relatively small. Therefore, Pare recommends replacing the current Oak Hill tank with a 1 MG elevated storage tank with a base elevation of at least 458 ft.

Pare's opinion of probable construction cost to upgrade storage in the Low Service Area is approximately $ 4,700,000. A breakdown of the cost is provided below.

TABLE 6-3: New 1 MG Elevated Tank at Oak Hill Tank Site	
Construction	$ 3,200,000
Contingency (25%)	$ 800,000
Engineering Design	$ 400,000
Engineering Services	$ 300,000
TOTAL	**$ 4,700,000**

6.2.2.2 High Service Area

Currently, the High Service Area has a storage deficit of 0.35 MG. The available (usable) volume in the High Service Area is currently 0.50 MG, which is only 38% of the total storage, 1.3 MG. To increase the usable storage, Pare recommends that the Town consider increasing the usable storage capacity in the High Service Area from 0.50 MG to 0.85 MG. Therefore, Pare recommends that any new storage be constructed such that the bulk of the storage is above an elevation of 496 ft MSL to make the storage usable.

In 2016, Pare performed an evaluation for a new water storage tank for the HSA. This study evaluated the feasibility and cost of several different options for providing the HSA with the recommended available storage. In this report Pare recommended Option 1A, which involved keeping the existing Tara Road tank in service and building a second tank on the Fairview Hill site. The new tank would be 1.5 MG and have an overflow elevation of 515 feet MSL, the same as the existing Tara Road tank.

Pare's opinion of probable construction cost to upgrade system storage in the High Service Area is approximately $ 4,400,000. A breakdown of the cost is provided below.

TABLE 6-4: New 1.5 MG Tank at the Fairview Site (Option 1A from Tank Siting Report)	
Construction	$ 3,000,000
Contingency (25%)	$ 700,000
Engineering Design	$ 400,000
Engineering Services	$ 300,000
TOTAL	**$ 4,400,000**

6.2.3 *Presidential Drive and Fisher Road Connection*

This capital improvement consists of installing approximately 1,000 linear feet (LF) of new 12-inch DI water main between the end of Fisher Road and Presidential Drive in the High Service Area. This capital improvement would provide significant system redundancy for two critical system water mains, the 12-inch main on Main Street and the 12-inch main on Sears Road. If the water main on Sears Road were taken offline, customers north of Main Street in the High Service Area would be entirely without water, making Sears Road a critical water main. If the water main on Main Street were taken offline, customers in the High Service Area north of Main Street would still have water but would have substantially reduced fire flow. Currently, the available fire flow in the High Service Area north of Main Street ranges from 893 to 1996 gpm. Without the water main on Main Street, the available fire flow in the northeast corner of the HSA could get at low as 324 gpm. However, with the addition of this capital improvement, the available fire flow in this area would range from 1080 to 1,631 gpm without the water main on Main Street; 1,281 to 2,219 gpm with the water main on Main Street. If the water main on Northboro Road were taken offline, the Boland Pump Station would be separated from the majority of the system. The Boland Pump Station fills the Tara Road Storage Tank, which is the sole supply reservoir in the HSA. Without the connection, the pump station will not be able to fill the Tara Road Tank in this scenario, which could result in a significant decrease in system supply. Therefore, this capital improvement would provide a substantial benefit to the water system by providing redundancy in the High Service Area.

There are three primary challenges to this capital improvement – 1) the Town would need to secure an easement between Fisher Road and Presidential Drive as there is currently no public right-of-way, 2) the Town would need to cross an existing railroad track, which would require coordination with the rail owner, and 3) the anticipated future alignment is densely wooded, which would add cost to the installation.

Pare's opinion of probable construction cost for this capital improvement is $ 600,000, not including the cost to secure an easement across the railroad tracks. A breakdown of the cost is provided below.

TABLE 6-5: Fisher Rd and Presidential Dr Connection	
Construction	$ 400,000
Contingency (25%)	$ 100,000
Engineering Design	$ 50,000
Engineering Services	$ 50,000
TOTAL	**$ 600,000**

6.2.4 *Lovers Lane Water Main*

This capital improvement consists of replacing approximately 4,100 lf of 12-inch main on Lovers Lane between Lynbrook Road and Blackthorn Drive with 12-inch DI pipe.

Pare's opinion of probable construction cost for this capital improvement is $ 1,800,000. A breakdown of the cost is provided below.

TABLE 6-6: Lovers Lane Water Main	
Construction	$ 1,200,000
Contingency (25%)	$ 300,000
Engineering Design	$ 150,000
Engineering Services	$ 150,000
TOTAL	**$ 1,800,000**

6.2.5 *Fairview/Skylar Drive Pump Station*

This capital improvement consists of isolating the neighborhood of Fairview/Skylar Drive with check valves and installing a small pitless booster pump station. This improvement would address low pressure in the neighborhood and insufficient fire flow at Trottier School, increasing it to a level that is recommended by ISO.

Pare's opinion of probable construction cost for this capital improvement is $670,000. A breakdown of the cost is provided below.

TABLE 6-7: Fairview/Skylar Drive Neighborhood Pump Station	
Construction	$ 440,000
Contingency (25%)	$ 110,000
Engineering Design	$ 60,000
Engineering Services	$ 60,000
TOTAL	**$ 670,000**

SECTION 7.0
CONCLUSIONS AND RECOMMENDATIONS

7.1 CONCLUSIONS

Based on the results of Pare's system evaluation, the Southborough water distribution system is, in general, adequately serving its current customer base. System pressure and fire flow appear to be generally adequate. Most customers experience pressure between 35 and 80 psi and have over 1,000 gpm of available fire flow. However, there are some areas of Town that experience pressure below 35-psi on a regular basis, although those areas are limited to small areas in the immediate vicinity of the system storage tanks. No customers experience pressure below 20-psi on a regular basis. System-wide fire flow ranges from 593 gpm to more than 3,500 gpm, which is generally adequate in a primarily residential system such as Southborough.

However, the results of our evaluation indicate that currently there are two primary system deficiencies, which are;

- There is currently a deficit in system storage in both service areas. The High Service Area has a current deficit of approximately 0.35 MG. The Low Service Area has a current deficit of approximately 0.85 MG; and
- There are two locations in Town that have significant fire flow demands, which the current system appears unable to meet. Those locations include the area around the Trottier School and the area in vicinity of Cordaville Road and Mount Vickery Road.

In addition, in section 3.1.4, Pare identified five critical pipe segments that the Town should consider replacing or should consider installing redundant mains elsewhere in the system to reduce the critical nature of these pipes. While these mains are not currently severely impacting system performance, they are either undersized or pose a risk to the system if they are taken offline. Of those five pipe segments, there are two that appear to be critical to the system. Additionally, Pare is recommending the installation of a new pipe segment that would add redundancy to the system. The pipe on Newton Street provides a second feed to the Clear Hill storage tank. The pipe on Lovers Lane is the main feed to the Tara tank, the only tank in the High Service Area. Connecting the pipes on Fisher Road and Presidential Drive would improve system

circulation and provide a redundant supply pathway from the Boland Pump Station.

Pare also evaluated the performance of the system after the Town reaches build-out. Based on the build out analysis, it appears water demand in Southborough may increase by almost 32 percent when the Town reaches its maximum build-out. However, a comparison of water use data from the 2009 WSMP to current data indicates that the town's overall water demand decreased by approximately 16 percent. This is likely due to the fact that several high-use commercial customers switched over to wells to meet their irrigation demands. Additionally, Southborough did not see the expected growth projected by both the town and the 2009 WSMP. That said, any increase in water demand is anticipated to exacerbate the existing system deficiencies. After full town-wide build-out, the deficit in usable storage in the system will increase, to approximately 1.2 MG over what the system has currently.

7.2 RECOMMENDATIONS

Pare has three recommendations for the Town;

1. Institute a capital improvements program to address the immediate and long-term needs of the system as described in Section 6, including the development of a priority plan and implementation schedule;
2. Perform an evaluation of the Town's flushing program to address water quality concerns in the winter (this could also include the development of a unidirectional flushing program); and
3. Address the insufficient fire flow at Trottier School and Cordaville Rd by conducting additional field tests to verify the results of the model, coordinate with ISO to reevaluate the required fire flow at these locations, and isolate the Fairview/Skylar Drive neighborhood with check valves and a small pump station.

At a minimum Pare recommends that the Town include the capital improvements listed below in their future capital improvements program. Please note that the order listed below does not necessarily reflect Pare's opinion as to the priority in which these improvements should be completed. We recommend that the Town evaluate these capital improvements, with assistance from Pare, and determine which improvements would provide the greatest benefit to the Town in the short-term and which are more suitable as long-term improvements.

1. Replace water main on Newton Street between East Main Street and Framingham Road;
2. Upgrade system storage in the Low Service Area;
3. Upgrade system storage in the High Service Area;
4. Install a new 12-inch water main between Presidential Drive and Fisher Road;
5. Replace 12-inch water main on Lovers Lane.
6. Install new pitless booster pump station for the Fairview/Skylar Drive neighborhood.

Pare also recommends that the Town perform an evaluation of their flushing program to identify the most effective means of circulating water in the southern half of Town by the Hopkinton town-line and along the western half of Rt. 9. The evaluation should consider what time of year pipes are flushed, the direction in which pipes are flushed, and the frequency of flushing. At the time of this report, the Town has engaged Pare to evaluate their flushing program.

To address the insufficient fire flow Trottier School and Cordaville Rd/ Mt. Vickery Road, Pare recommends the Town conduct additional field testing to verify the results of the model and coordinate with ISO to re-evaluate the required fire flow at these locations. After coordinating with ISO and analyzing field testing results, Pare can assist the Town in implementing one of three options: work with ISO to revise the required fire flow at these locations; develop an alternate plan for fighting fires; or make improvements to the system to increase fire flow at these locations. Additionally, the Town may want to consider isolating the Fairview/Skylar Drive neighborhood, which could increase the available fire flow of the Trottier School. This could be accomplished by installing a small pump station for the neighborhood and isolating it with check valves. Additional evaluation would be required to determine the exact impact of such improvements and the scope of the project.

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Water Supply Continuation Agreement Between The Massachusetts Water Resources Authority and The Town of Southborough, April 2016

APPENDIX A

WATER SYSTEM MAP

N

LOW SERVICE
HIGH SERVICE

MARLBOROUGH

MARLBORO ROAD

SUDBURY RESERVOIR

CLEAR HILL
0.46 MG STORAGE TANK
OVERFLOW=493.3 FT

LEDGE HILL PRV

HULTMAN AQUEDUCT

BOLAND PUMP STATION

SEARS ROAD

FRAMINGHAM ROAD

METROWEST WATER SUPPLY TUNNEL

HOSMER PUMP STATION

FAYVILLE DAM

MAIN STREET

TOWN SQUARE PRV

MAIN STREET

CORDAVILLE ROAD

FRAMINGHAM

TARA ROAD
1.3 MG STORAGE TANK
OVERFLOW=515.0 FT

DPW GARAGE

OAKHILL ROAD

OAK HILL
0.275 MG STORAGE TANK
OVERFLOW=492.7 FT

WESTBOROUGH

PARKERVILLE ROAD

MT. VICKERY PRV

WOODLAND ROAD

ASHLAND
INTERCONNECTION

PARKERVILLE ROAD PRV

HIGH SERVICE
LOW SERVICE

SOUTHVILLE ROAD

HOPKINTON

ASHLAND

Legend

- Valve
- Water Storage Tank
- Pump Station
- PRV
- Hydrant
- Water Main
- Major Roads
- Town Boundary

1 inch = 1,000 feet

1,000 500 0 1,000 2,000 3,000 4,000 Feet

PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
8 BLACKSTONE VALLEY PLACE
LICOLN, RI 02865
401-334-4100

TOWN OF SOUTHBOROUGH
WATER SYSTEM MAP

SOUTHBOROUGH, MASSACHUSETTS

REVISIONS:

PROJECT NO: 08176.20
DATE: DECEMBER 2021
SCALE: AS NOTED

DRAWING TITLE: WATER SYSTEM MAP

APPENDIX A

APPENDIX B

MWRA WATER USE AGREEMENT

WATER SUPPLY CONTINUATION AGREEMENT

BETWEEN

THE MASSACHUSETTS WATER RESOURCES AUTHORITY

AND

THE TOWN OF SOUTHBOROUGH

This Water Supply Continuation Agreement ("Agreement") by and between the Massachusetts Water Resources Authority (the "MWRA") and the Town of Southborough (the "Town") (hereinafter jointly referred to as the "Parties"), memorializes the agreement and understanding of the Parties regarding the arrangement whereby the MWRA will continue to supply water to the Town and the Town will purchase its water supply or a portion of its water supply from the MWRA water supply system.

RECITALS

R.1. The MWRA was created by the Massachusetts legislature in December, 1984 to operate, regulate, finance, and modernize the waterworks and sewerage systems serving the greater metropolitan Boston area. Operating pursuant to the terms of its Enabling Act, chapter 372 of the Acts of 1984 (the "Act"), the MWRA currently provides water supply and distribution services and wastewater collection and treatment services, to certain cities, towns and special service districts (the "Communities") within its service area.

R.2. The MWRA desires to continue to provide safe and sufficient water supplies to the Town and to provide system-wide assistance to help protect and conserve water supplies.

R.3. Section 8(d) of the Act permits the MWRA to enter into an arrangement to provide the continued delivery of water to a Community if specified requirements are met.

R.4. A regulation entitled "Continuation of Contract Water Supply," promulgated by the MWRA at 360 C.M.R. 11.00 and most recently revised on November 18, 1994, (the "Regulation") defines more specifically the requirements of section 8(d) of the Act and governs the continued delivery of water by the MWRA to the Communities which purchase water in accordance with contracts.

R.5. The Town executed a contract dated January 27, 1977 for the purchase of water from the MDC which contract, remained in effect until January 26, 1997.

R.6 The Town and MWRA entered into a Memorandum of Agreement ("MOA") in 1997 regarding mitigation measures to be implemented by the MWRA in connection with the construction by MWRA of the MetroWest Water Supply Tunnel in Southborough that provided for the Town's receipt of a total of three hundred thousand gallons of water per day free of charge from the MWRA water supply system in any Water Supply Contract renewals.

R.7 The Town and the MWRA subsequently executed new contracts for the purchase of water from the MWRA in 1999 and 2008, the latter contract, which by its terms, expires on December 31, 2016.

R.8 The Town, pursuant to the Regulation, has requested that the MWRA continue to supply water to it and has submitted a continuation request, a Supply Analysis Report, a Demand Analysis Report and a plan for water conservation and demand management pursuant to section 11.08 of the Regulation.

R.9 The Town has submitted a detailed description of local user charge systems and accounting systems which meet the Regulation's requirement for conservation based rates.

R.10 Based on its review of the submittals described in the recitals numbered R.8. and R.9., MWRA finds that the applicable requirements of section 8(d) of the Act have been met as follows:

(1) the safe yield of the watershed system as of the date of this contract and as projected for the term hereof, is sufficient to meet the projected demand of the town.
(2) no existing or potential water supply source for the Town has been abandoned;
(3) effective demand management measures have been developed by the Town;
(4) a local water supply source feasible for development has not been identified by either the Town or the Department of Environmental Protection (the "DEP");
(5) a water use survey has been completed which identifies all users within the Town that consume in excess of twenty million gallons a year.

R.11 The Town and the Town of Ashland ("Ashland") are in discussions whereby the Town would wheel water received from the MWRA to Ashland, in conjunction with Ashland's efforts to become an MWRA community. It is understood that any volume of MWRA water that would be wheeled through the Town to Ashland will be metered and that MWRA water supplied to Ashland will not be considered part of the Town's approved withdrawal from the MWRA.

R.12. The MWRA and the Town wish to formalize their rights and obligations regarding the supply of water to the Town and therefore enter into this Agreement.

NOW, THEREFORE, in consideration of the foregoing recitals and of the mutual promises contained herein and for other good and valuable consideration, the MWRA and the Town agree to the following:

1. The term ("Term") of this Agreement shall be ten (10) years beginning on January 1, 2017 and ending at midnight on December 31, 2026.

2. The MWRA shall during the Term provide the Town with water on a maximum annual water volume basis, stated in millions of gallons, as follows:

2017	2018	2019	2020	2021
400	400	400	400	400

2022	2023	2024	2025	2026
450	450	450	450	450

And on a maximum daily water volume basis, stated in millions of gallons per day as follows:

2017	2018	2019	2020	2021
3.0	3.0	3.0	3.0	3.0

2022	2023	2024	2025	2026
3.5	3.5	3.5	3.5	3.5

The annual volume basis and daily water basis are exclusive of any water that the Town may wheel to Ashland, which would be metered at a juncture between the Town and Ashland.

3. In the event of unusual water demand or supply conditions and upon written notice to the MWRA disclosing and explaining such conditions, MWRA agrees that it will use its best efforts to supply the Town with those quantities of water to meet its legitimate needs in excess of the maximum annual water volumes stated above.

4. In the event that revised circumstances regarding local demand and/or supply should occur and the Town determines that the volume designated in this Agreement to be supplied from the MWRA system is insufficient to meet the Town's newly projected demand, the Town may petition the MWRA to amend this Agreement pursuant to 360 C.M.R. 11.11.

5. Except for the first three hundred thousand gallons per day, which MWRA shall provide free of charge pursuant to the MOA, MWRA shall bill the Town and the Town shall timely pay to the MWRA charges for all water supplied under this Agreement at the MWRA's applicable prevailing rate(s). All billing procedures, due dates, and interest charges for late payments shall be in accordance with the MWRA's standard policies and procedures.

6. The Town agrees to continue in effect during the Term a user charge system and an accounting system which meets the Regulation's requirement for conservation based rates.

7. The Town shall develop and implement a full cost pricing system within twelve (12) months from the date that all communities listed in section 8(d) of the Act, other than those subject to 360 CMR 11.00, have implemented a full cost pricing system.

8. The Town agrees that during the Term it shall continue the implementation of its current and proposed local demand management programs, including participation in MWRA conservation programs, and distribution of MWRA-provided materials to all water users.

9. Any dispute arising between the MWRA and the Town under the terms of this Agreement shall be resolved exclusively in accordance with the dispute resolution process set forth at 360 CMR 11.14 and the administrative procedures set forth at 360 CMR 1.00.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed on this ___ day of _____, 2016 by their duly authorized representatives.

MASSACHUSETTS WATER RESOURCES AUTHORITY

By: _____

Frederick A. Laskey
Executive Director

TOWN OF SOUTHBOROUGH

By: _____

Brian E. Shea
Chairman, Board of Selectmen

APPENDIX C

TANK INSPECTION AND CLEANING REPORTS

UNDERWATER SOLUTIONS INC.

INSPECTION AND CLEANING (SEDIMENT REMOVAL) OF THE CLEAR HILL (OVERLOOK) 400,000-GALLON RIVETED STEEL WATER STORAGE TANK

TOWN OF SOUTHBOROUGH DEPARTMENT OF PUBLIC WORKS SOUTHBOROUGH, MASSACHUSETTS

OCTOBER 15, 2019

INSPECTION AND CLEANING (SEDIMENT REMOVAL) OF THE CLEAR HILL (OVERLOOK) 400,000-GALLON RIVETED STEEL WATER STORAGE TANK

TOWN OF SOUTHBOROUGH DEPARTMENT OF PUBLIC WORKS SOUTHBOROUGH, MASSACHUSETTS

OCTOBER 15, 2019

SCOPE:

On October 15, 2019, Underwater Solutions Inc. inspected the Clear Hill 400,000-gallon riveted steel potable water storage tank to provide information regarding the overall condition and integrity of this structure and removed the sediment accumulation from the floor.

EXTERIOR INSPECTION:

The entire exterior of this water storage tank was inspected, to include walls and coating, manways, ladder, foundation, overflow, roof, vent and hatch.

Walls And Coating

The exterior wall steel wall panels and rivets that secure these panels together were inspected and found appearing sound and free of fatigue or failures of the steel at this time.

The protective coating applied to these steel panel and riveted surfaces remains having mostly good adhesion value throughout all elevations.

The average dry film thickness of the protective coating system applied to the exterior riveted steel wall panels were measured during this inspection. The dry film thickness of the coating system applied to the exterior wall surfaces was found as follows:

Row	***Mil Thickness***	***Row***	***Mil Thickness***
1.	10.4 mils	5.	13.7 mils
2.	11.5 mils	6.	11.8 mils
3.	12.2 mils	7.	10.5 mils
4.	12.7 mils		

The American Water Works Association (AWWA) recommends a dry film thickness of 7.0 to 10.0 mils of coating film thickness be applied to the exterior surfaces of riveted steel potable water storage tanks to provide adequate protection for riveted steel structures.

The two 1/4" wide by 3” long areas of coating damage found on the easternmost side of the tank approximately 8’ above the ground during a previous inspection completed by Underwater Solutions Inc. on October 20, 2015 remain consistent and without change and were free of obvious fatigue of the steel at this time.

The 1/2” diameter area of coating loss found at the bottom edge of the lap joint within the second row of wall panels and above the westernmost manway during a previous inspection also remains consistent and without change and was free of obvious fatigue (pitting) of the steel at this time.

Rust staining was observed throughout the length of several lap joints and throughout all elevations of the walls on the northernmost side of the tank, yet no exposure of the steel or obvious leakage was evident within the areas showing rust staining at the time this inspection.

A mild, non-uniform accumulation of mildew throughout the exterior walls has declined the overall aesthetics.

RECOMMENDATION(S): It is our recommendation to pressure-wash the exterior wall surfaces at 3,500 P.S.I. using a 40° tip to remove the rust staining from the lap joints and to remove the accumulated mildew from the walls in an effort to preserve the adhesion value of the protective coating and to improve the aesthetics.

It is also our recommendation to spot-coat the areas of coating fatigue/coating loss found throughout the lower elevations of the exterior walls using a protective coating formulated for exterior exposure and to be applied in accordance with the product manufacturer’s surface preparation and application recommendations in an effort to halt corrosion, prevent steel fatigue/deterioration and to provide good protection for the steel.

Manways

Two manways penetrate the lowest row of wall panels on the easternmost and westernmost sides of the tank.

The westernmost manway was found having a 24" inside diameter and penetrates the wall 20" above the tank base and is securely installed and free of obvious leakage.

The easternmost manway was found having a 24" by 18" inside diameter and penetrates the wall 24" above the tank base and is securely installed and free of obvious leakage.

The protective coating on each manway appeared to have been applied uniformly and the protective coating applied to the westernmost manway was found having good adhesion value, and with an average dry film thickness of 9.7 mils, providing adequate protection for the steel.

The protective coating applied to the easternmost manway was found having good adhesion value, and with an average dry film thickness of 17.9 mils, providing adequate protection for the steel.

RECOMMENDATION(S): None at this time.

Ladder

A welded steel ladder extends from approximately 10' above the ground up to the roof dome and is supported in place with three sets of bolted standoffs, providing good access and egress to and from the roof.

This ladder was found in sound condition and the protective coating on this ladder appeared to have been applied uniformly and was found having good adhesion value at this time.

RECOMMENDATION(S): It is our recommendation to install a non-corrodible metal, OSHA approved fall prevention device throughout the length of this ladder in an effort to provide safe access and egress to and from the roof.

It would also be our recommendation to install a non-corrodible metal ladder guard on the lowest elevations of the ladder and to secure this ladder guard with a lock in an effort to prevent unwanted access to the ladder/roof.

Foundation

The exposed surfaces of the 7" wide concrete foundation ranges from 3" to 14" in height and was found un-coated and having tight surface cracks throughout approximately 25% of these exposed surfaces.

Efflorescence has accumulated within these cracks due to moisture penetration. These cracks were sounded and appeared to be limited to the surface of the concrete and remain free of obvious voids, however two areas showing spall of the concrete were found within these cracks at this time.

The first area of concrete spall is within the vertical face of the foundation on the south-easternmost side of the tank and measures approximately 4" in length and ranges from 1"-2" in width and has an average maximum depth of ¼" deep at this time. The surrounding and underlying concrete within this spall remains sound and free of obvious exposed reinforcement steel at this time.

The second area of concrete spall is located on the top face of the foundation on the north-westernmost side of the tank and measures approximately 4" in length by 3" in width and has an average maximum depth of 1" deep at this time. The surrounding and underlying concrete within this spall remains sound and free of obvious exposed reinforcement steel at this time.

A concrete fillet throughout the circumference of the tank at the junction of where the foundation and tank base meet appeared mostly sound, however an area of spall of this concrete fillet was observed on the south-easternmost side of the tank and measures approximately 8" in length by 2" in width and has an average maximum depth no greater than 1" deep at this time.

The surrounding and underlying concrete within this area of spall remains sound and with no obvious exposed reinforcement steel at this time.

Although spall of the concrete fillet has occurred, no obvious gaps allowing moisture to penetrate and accumulate beneath the tank were evident, however spall of this concrete fillet has resulted in exposure of the steel shell of the tank. The exposed surfaces of the steel shell of the tank shows coating loss and mild corrosion, however these steel surfaces remain sound and free of obvious fatigue/deterioration at this time.

Accumulated moss and mildew throughout the exposed foundation surfaces has declined the overall aesthetics.

RECOMMENDATION(S): It is our recommendation to pressure-wash the exposed foundation surfaces at 3,500 P.S.I. using an oscillating tip to remove the accumulated moss and mildew from these exposed concrete surfaces. It is also our recommendation to spot-coat the area of steel exposure found on the steel shell of the tank, at the location of spall of the concrete fillet on the south-easternmost side of the tank using a protective coating formulated for exterior exposure and to be applied in accordance with the product manufacturer's surface preparation and application recommendations in an effort to halt corrosion, prevent steel fatigue/deterioration and to provide good protection for the steel.

We also recommend re-surfacing the areas of concrete spall found throughout the foundation and concrete fillet using a suitable concrete repair/resurfacing product and to be applied in accordance with the product manufacturer's surface preparation and application recommendations in an effort to prevent further fatigue of the concrete and prevent the potential for exposure of the reinforcement steel.

Finally, we recommend coating the exposed surfaces of the foundation using a protective coating formulated for exterior exposure and to be applied in accordance with the product manufacturer's surface preparation and application recommendations in an effort to seal all cracks, seal the areas of repair and to seal and protect these exposed concrete surfaces.

Overflow

A 6" inside diameter steel overflow pipe exits the base of a welded steel weir box on the northernmost side of the tank. This pipe then extends down and is supported to the wall with two single welded standoffs before terminating approximately 19" above a concrete splash pad.

This pipe was free of obvious obstructions and was found with a primary 18-mesh screen and secondary 1-mesh expanded metal screen installed at its end at this time.

The protective coating on this steel pipe has an average dry film thickness of 9.9 mils and was found having good adhesion value, providing adequate protection for the steel.

RECOMMENDATION(S): It is our recommendation to un-bolt and remove the screen retaining flange from the end of the pipe and to remove and discard the current 18-mesh screen. We recommend then installing a replacement, non-corrodible metal screen having 24-mesh over the end of the pipe and to re-install the current 1-mesh screen and screen retaining flange in an effort to prevent access to the interior of the tank.

Roof

The fiberglass roof panels appeared sound and free of obvious fatigue at this time.

The sealant on the joints between panels appeared to have been applied uniformly and was found having good adhesion value at this time.

The protective coating on fiberglass roof panels and on the sealant applied to the joints between panels appeared to have been applied uniformly and was found having good adhesion value. Cracking of the coating was observed on the joints between panels, however no obvious fatigue or adhesion loss of the sealant between the fiberglass roof panels was evident at this time.

RECOMMENDATION(S): It is our recommendation to monitor the sealant applied to the joints between the roof panels through future scheduled inspections to ensure that adhesion loss of the sealant does not occur and allow rainwater run-off from entering the tank.

Vent

The vent is located within the center of the roof dome, having a 24” inside diameter and stands 16” tall.

A 40” outside diameter fiberglass cap and an associated primary 18-mesh and secondary 9-mesh stainless-steel screen remain securely installed over the vent penetration in the roof at this time.

RECOMMENDATION(S): It is our recommendation to install a non-corrodible metal screen having 24-mesh around the circumference and over the current screens in an effort to prevent access to the interior of the tank.

Hatch

One 24” inside diameter hatch provides good access to the interior of the tank through the roof.

The fiberglass hatch trunk and removable fiberglass hatch cover remain in good condition and were found without a hasp or lock; however, a series of nuts and bolts are utilized to secure the hatch closed and prevent accidental opening.

RECOMMENDATION(S): It is our recommendation to install a hasp and lock on this hatch in an effort to prevent unwanted access to the interior of the tank.

INTERIOR INSPECTION:

The entire interior of this water storage tank was inspected, to include sediment accumulations, floor, manway, piping, walls and coating, overhead, overflow and aesthetic water quality.

Sediment Accumulations

A uniform layer of accumulated precipitate was found on all floor surfaces, averaging 1/16" to 1/4" in depth.

After completing this inspection, all precipitate was vacuumed from the floor.

Floor

After removing the accumulated precipitate, these steel floor panels and associated rivets were inspected and found appearing sound and remain free of obvious fatigue or failures of the steel at this time.

The protective coating on the steel floor panels and rivets appeared to be applied uniformly and remains having good adhesion value, providing adequate protection for the steel panels and rivets.

Mild to moderate staining remains throughout the floor due to the accumulation of precipitate.

RECOMMENDATION(S): None at this time.

Manways

Two manways penetrate the lowest row of wall panels on the easternmost and westernmost sides of the tank and were found securely installed and free of obvious leakage.

The westernmost manway was found having a 24" inside diameter and penetrates the lowest row of wall panel approximately 20" above the tank floor.

The manway lid was found covered and sealed with a rubber gasket, providing adequate protection for the steel. The protective coating on the steel manway trunk appeared to have been applied uniformly and was found having mostly good adhesion value, however adhesion loss (blistering) of the protective coating was observed throughout less than 5% of these surfaces, resulting in exposure of the steel. No obvious fatigue (pitting) of the steel manway trunk was evident within these areas of steel exposure rather mild corrosion exists at this time.

The easternmost manway was found having a 24" by 18" inside diameter and penetrates the lowest wall panel approximately 24" above the tank floor.

The protective coating on these steel surfaces appeared to have been applied uniformly and was found having mostly good adhesion value, however adhesion loss (blistering) of the protective coating was observed throughout less than 5% of these surfaces, resulting in exposure of the steel. No obvious fatigue (pitting) of the steel was evident within these areas of steel exposure, rather mild corrosion exists at this time.

RECOMMENDATION(S): It is our recommendation to monitor the areas of steel exposure found throughout the surfaces of each manway through future scheduled inspections to ensure that fatigue/deterioration of the steel does not occur.

It is also our recommendation that the next time this tank is removed from service and de-watered, that the surfaces of each manway showing steel exposure be spot coated using a protective coating formulated for immersion (wet contact) and having an A.N.S.I./N.S.F.61 approval for use in structures containing potable water and to be applied in accordance with the product manufacturer's surface preparation and application recommendations in an effort to halt corrosion, prevent steel fatigue/deterioration and to provide good protection for the steel surfaces of each manway.

Piping

The influent/effluent pipe penetrates the tank floor on the southernmost side of the tank, located approximately 36" in from the wall, having an 8-3/4" inside diameter and is flush with the tank floor. An 8-3/4" inside diameter by 7" tall removable riser is installed over this pipe, serving as a silt stop.

This pipe was free of obvious obstructions and was without flow at the time of this inspection.

RECOMMENDATION(S): None at this time.

Walls And Coating

The interior walls were inspected beginning at the floor and by spiraling the circumference of the tank up to the water surface.

These steel wall panels and the rivets that secure the wall panels together appeared sound and remain free of obvious fatigue or failures of the steel panels or the steel rivets at this time.

The protective coating on the steel wall panels appeared to have been applied uniformly and was found having good adhesion value throughout all surfaces, providing adequate protection for the steel panels.

A black epoxy coating on the rivets and lap joints appeared to have been applied uniformly and also remains having good adhesion value, providing adequate protection for these steel surfaces.

Mild staining exists on all walls beginning approximately 36" below overflow level and extends down to the floor.

RECOMMENDATION(S): None at this time.

Overhead

The entire overhead was inspected from the water surface.

These fiberglass overhead panels were found appearing sound and free of obvious fatigue or failures.

The protective coating on these fiberglass surfaces appeared to have been applied uniformly was found having good adhesion value at this time. The securing hardware for the fiberglass panels was found having mild surface corrosion, however, this hardware appeared sound, secure and free of obvious fatigue or failures at this time.

The steel spider support system located at the junction of where the roof and walls meet appeared sound and free of obvious fatigue or failure.

The protective coating applied to these steel support surfaces has declined in film thickness, causing blotch rusting to show through the coating throughout approximately 10% of this support, however these steel surfaces appeared sound and free of obvious fatigue/deterioration at this time.

RECOMMENDATION(S): It is our recommendation to monitor the hardware that secures the fiberglass overhead panels together through future scheduled inspections to ensure that fatigue/deterioration of the hardware does not occur. We also recommend monitoring the surfaces of the spider support through future scheduled inspections to ensure that fatigue/deterioration of these steel surfaces does not occur.

It is also our recommendation that the next time this tank is removed from service and de-watered, that the surfaces of panel securing hardware, including all surfaces of the spider support be spot coated using a protective coating formulated for immersion (wet contact) and having an A.N.S.I./N.S.F.61 approval for use in structures containing potable water and to be applied in accordance with the product manufacturer's surface preparation and application recommendations in an effort to halt corrosion, prevent steel fatigue/deterioration and to provide good protection for the steel panel securing hardware and steel spider support surfaces.

Overflow

The overflow consists of a 12" diameter flush penetration within the top wall panel on the northernmost side of the tank, located approximately 8" below the junction of where the roof and walls meet.

This overflow penetration was free of obvious obstructions at the time this inspection was completed.

RECOMMENDATION(S): None at this time.

Aesthetic Water Quality

The aesthetic water quality was found to be good throughout this entire tank, allowing unlimited visibility for this inspection.

ADDITONAL REMARKS/RECOMMENDATION(S):

It is our recommendation to install an active mixer within this structure to prevent ice cap formation and to improve overall water quality.

CONCLUSION:

It is the opinion of Underwater Solutions Inc. that this riveted steel potable water storage tank appeared mostly sound and free of obvious leakage.

As always, we recommend that re-inspection and cleaning of all water storage facilities be performed in accordance with state and federal mandates, A.W.W.A. standards, and completed by an experienced and authorized inspection corporation.

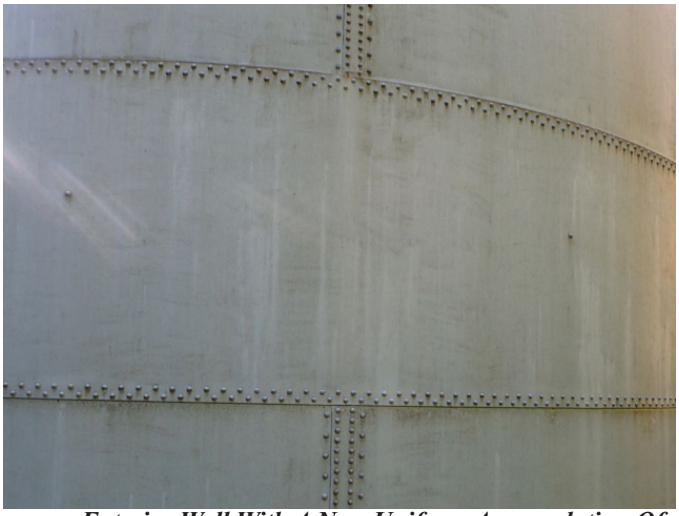
UNDERWATER SOLUTIONS INC.

Christopher A. Cole, Project Manager

This report, the conclusions, recommendations and comments prepared by Underwater Solutions Inc. are based upon spot examination from readily accessible parts of the tank. Should latent defects or conditions which vary significantly from those described in the report be discovered at a later date, these should be brought to the attention of a qualified individual at that time. These comments and recommendations should be viewed as information to be used by the Owner in determining the proper course of action and not to replace a complete set of specifications. All repairs should be done in accordance with A.W.W.A. and/or other applicable standards.

1 ***Exterior Wall With A Non-Uniform Accumulation Of Mildew***

2 ***Exterior Wall With A Non-Uniform Accumulation Of Mildew***



3 ***Exterior Wall With A Non-Uniform Accumulation Of Mildew***

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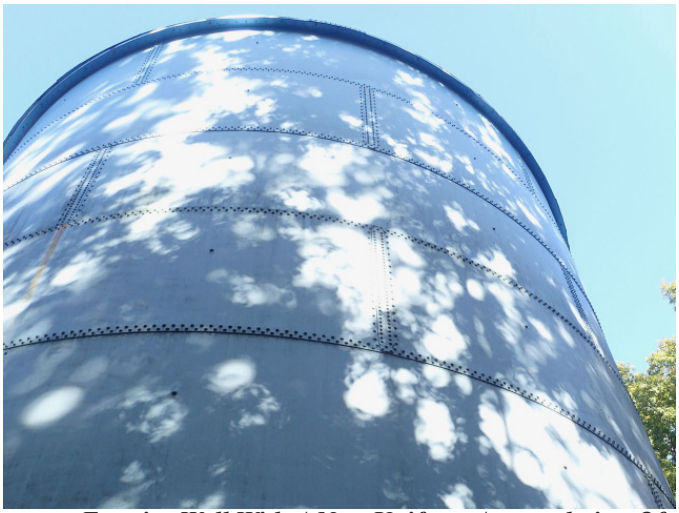


5 ***Exterior Wall With A Non-Uniform Accumulation Of Mildew***

6 ***Exterior Wall With A Non-Uniform Accumulation Of Mildew***

7 ***Exterior Wall With A Non-Uniform Accumulation Of Mildew***

8 ***Exterior Wall With A Non-Uniform Accumulation Of Mildew***

9 ***Exterior Wall With A Non-Uniform Accumulation Of Mildew***

10 ***Exterior Wall With A Non-Uniform Accumulation Of Mildew***

11 ***Exterior Wall With A Non-Uniform Accumulation Of Mildew***

12 ***Exterior Wall With A Non-Uniform Accumulation Of Mildew***

13 *Exterior Wall With A Non-Uniform Accumulation Of Mildew*

14 *Exterior Wall With Surface Corrosion And Rust Staining*

15 *Exterior Wall With Surface Corrosion And Rust Staining*

16 *Secure Western Manway*

17 *Secure Western Manway*

18 *Secure Eastern Manway*

19 ***Secure Eastern Manway***

20 ***Secure Eastern Manway***

21 ***Access Ladder***

22 ***Concrete Foundation With Tight Cracks, Efflorescence And An Accumulation Of Mildew***

23 ***Concrete Foundation With Tight Cracks, Efflorescence And An Accumulation Of Mildew***

24 ***Concrete Foundation With Tight Cracks, Efflorescence And An Accumulation Of Mildew***

25 *Concrete Foundation With Tight Cracks, Efflorescence And An Accumulation Of Mildew*

26 *Concrete Foundation With Tight Cracks, Efflorescence And An Accumulation Of Mildew*

27 *Concrete Foundation With Tight Cracks, Efflorescence And An Accumulation Of Mildew*

28 *Concrete Foundation With Tight Cracks, Efflorescence And An Accumulation Of Mildew*

29 *Spall Within Concrete Joint Compound On Foundation*

30 *Spall Within Concrete Foundation*

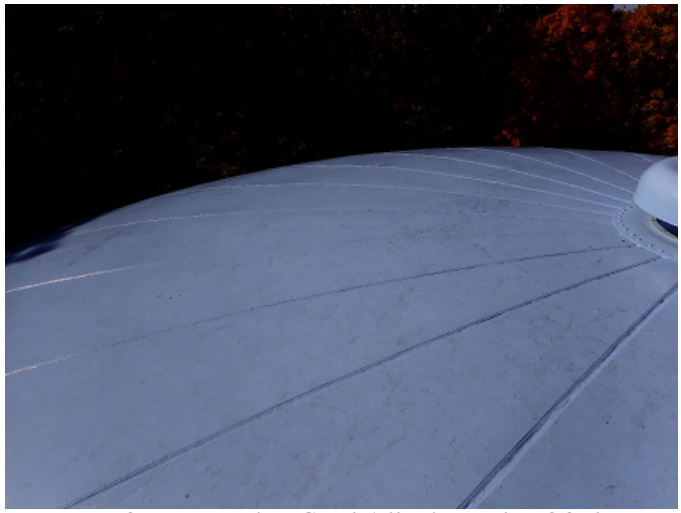
31 *6” Overflow Pipe*

32 *6” Overflow Pipe*

33 *6” Overflow Pipe*

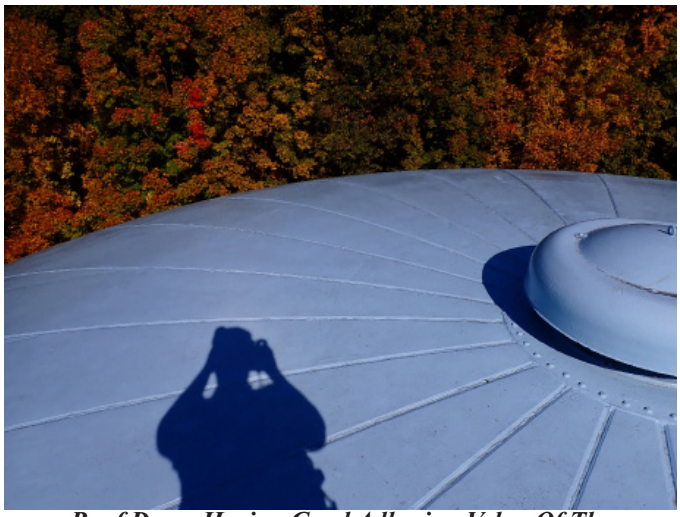
34 *6” Overflow Pipe*

35 *Screened Overflow Pipe*

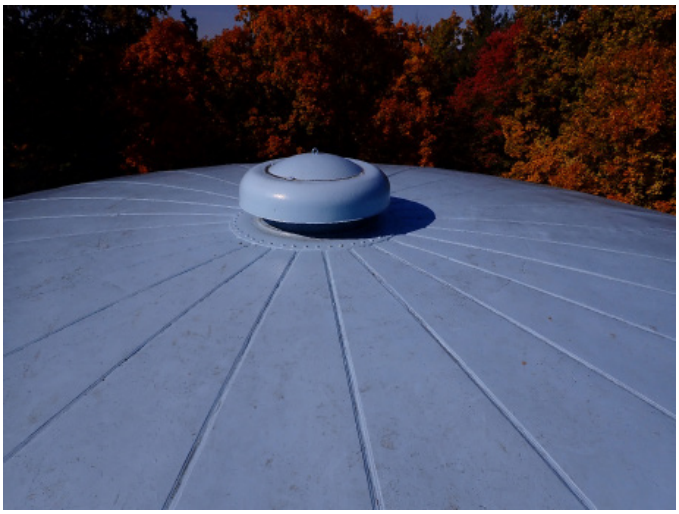


36 *Roof Dome Having Good Adhesion Value Of The Protective Coating*

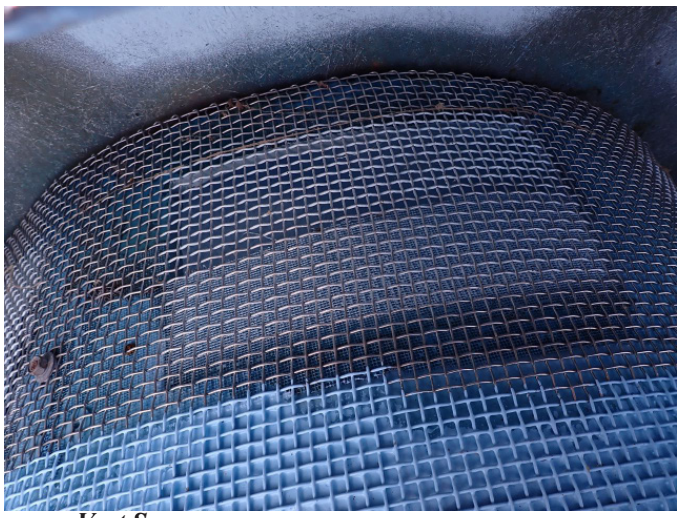
37 ***Roof Dome Having Good Adhesion Value Of The Protective Coating***



38 ***Roof Dome Having Good Adhesion Value Of The Protective Coating***



39 ***24" Vent And 40" Vent Cap***



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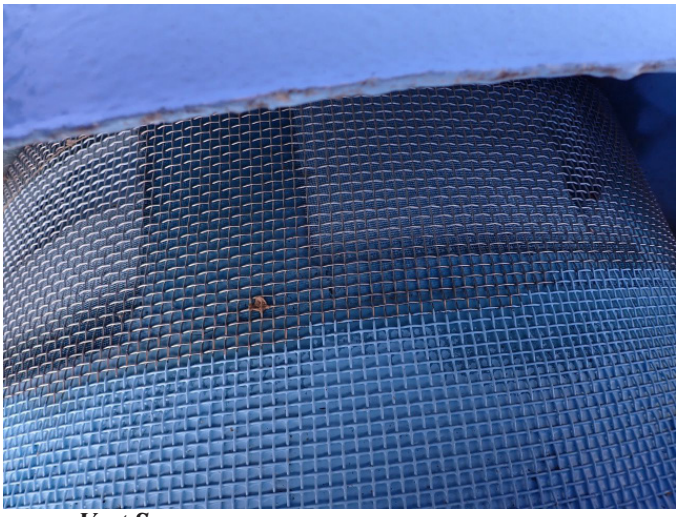
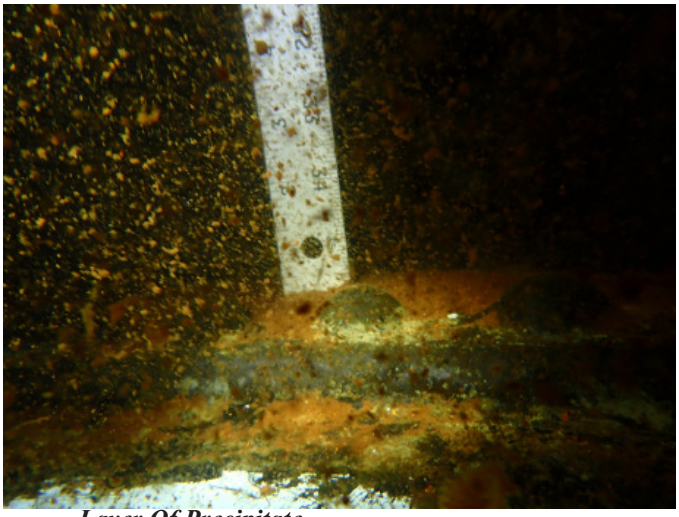


41 ***Vent Screen***

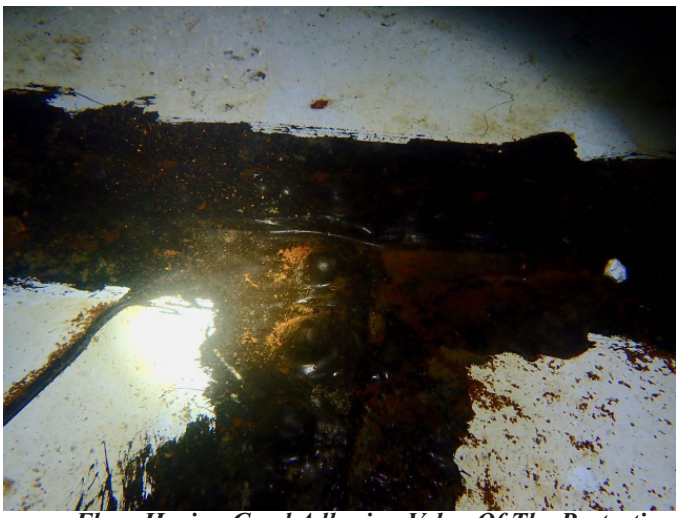
42 ***Vent Screen***

43 *Open Access Hatch*

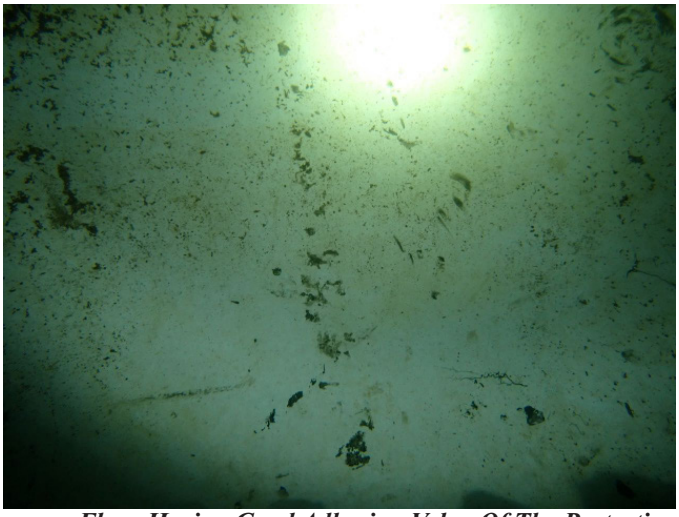
44 *Secure Closed Access Hatch*



45 *Layer Of Precipitate*



46 *Floor Having Good Adhesion Value Of The Protective Coating And Moderate Staining*



47 *Floor Having Good Adhesion Value Of The Protective Coating And Moderate Staining*

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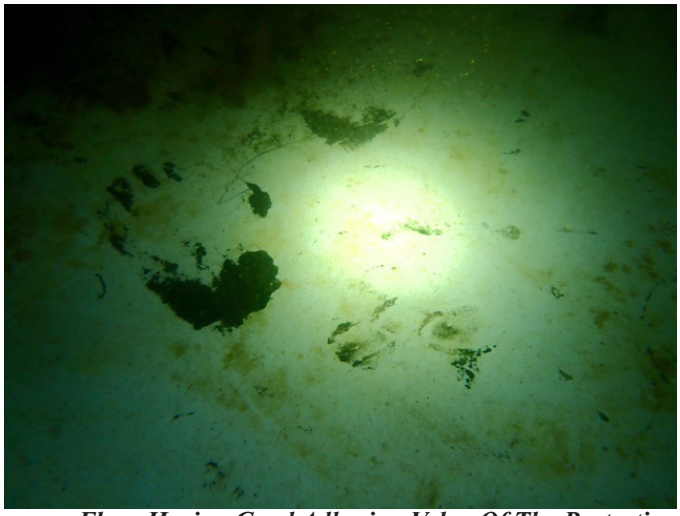

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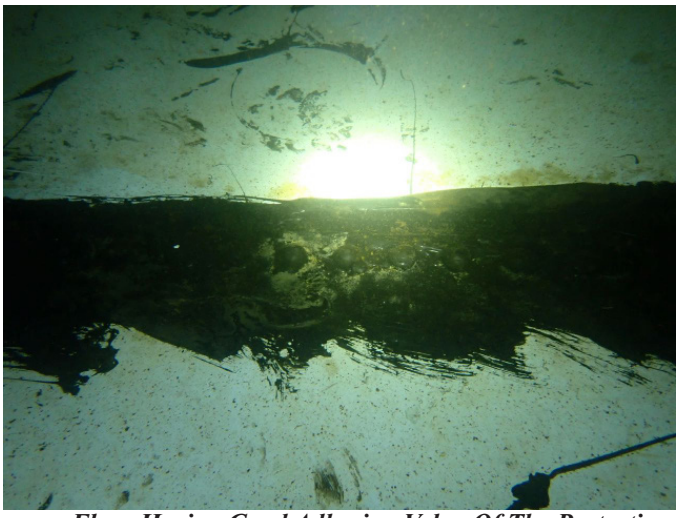

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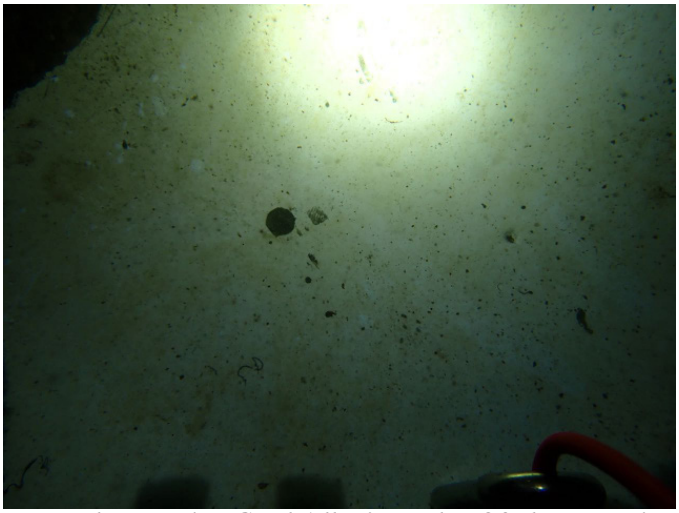

53 *Floor Having Good Adhesion Value Of The Protective Coating And Moderate Staining*

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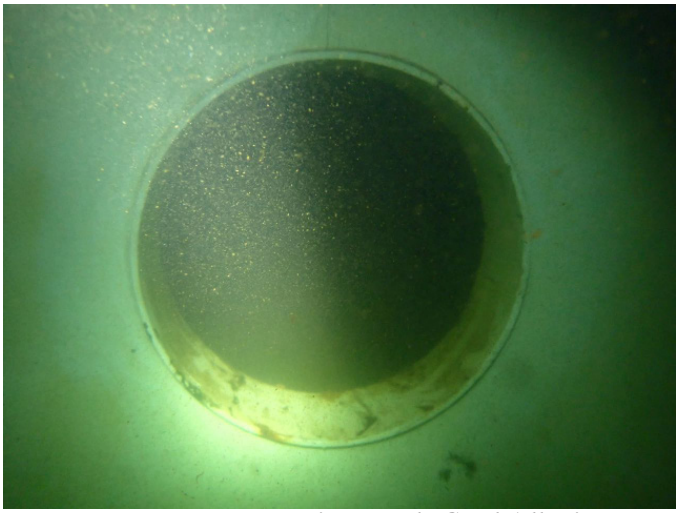
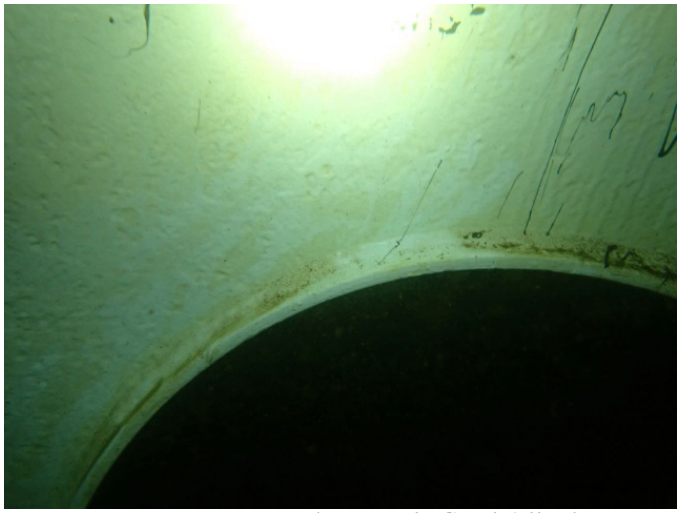
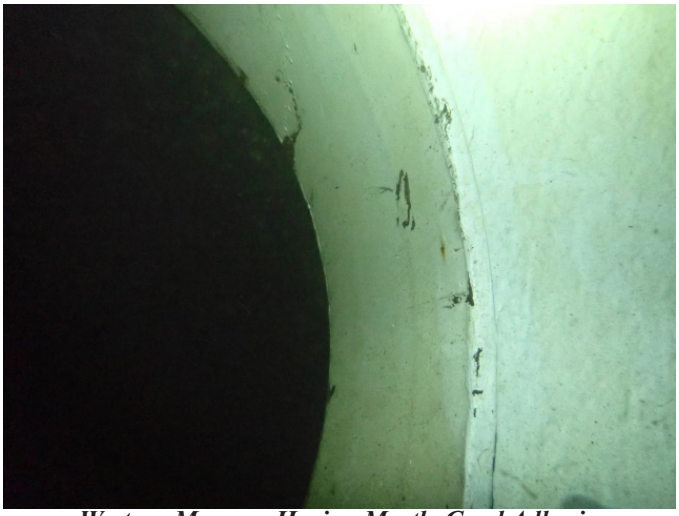


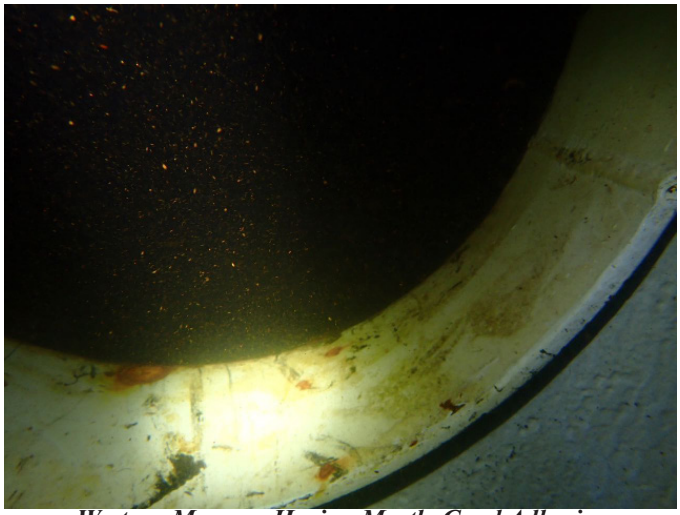
55 *Western Manway Having Mostly Good Adhesion Value*



56 *Western Manway Having Mostly Good Adhesion Value*



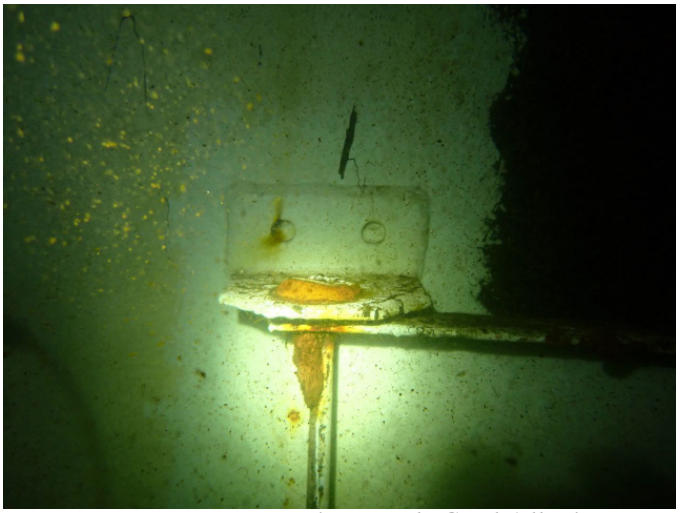
57 *Western Manway Having Mostly Good Adhesion Value*



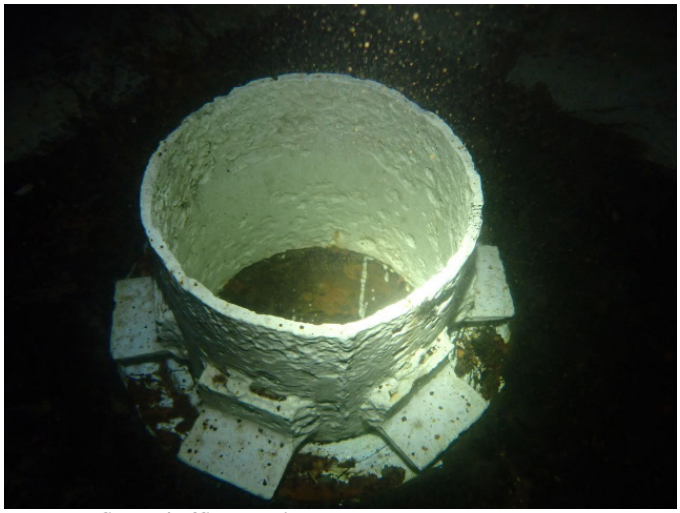
58 *Western Manway Having Mostly Good Adhesion Value*

59 *Eastern Manway Having Mostly Good Adhesion Value*

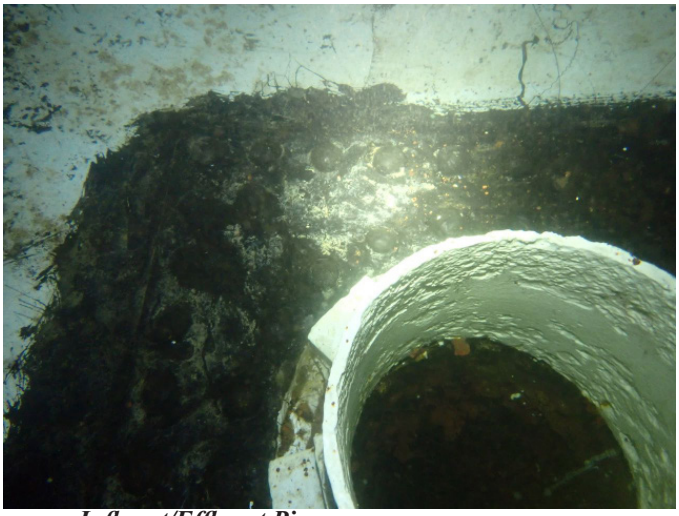
60 *Eastern Manway Having Mostly Good Adhesion Value*



61 *Eastern Manway Having Mostly Good Adhesion Value*



62 *Influent/Effluent Pipe*



63 *Influent/Effluent Pipe*

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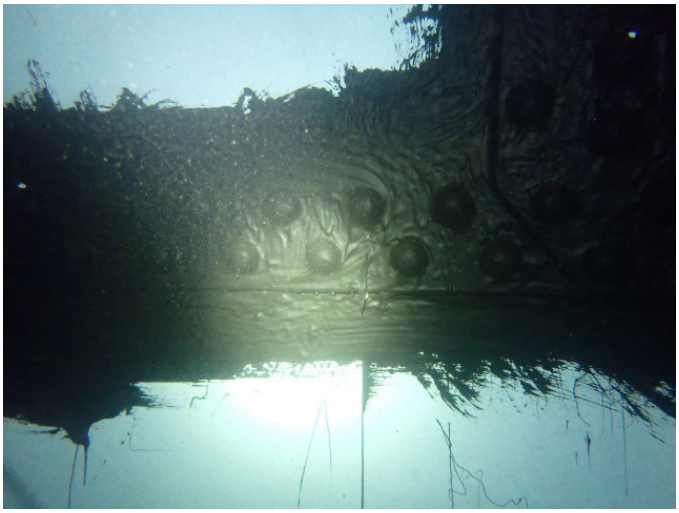
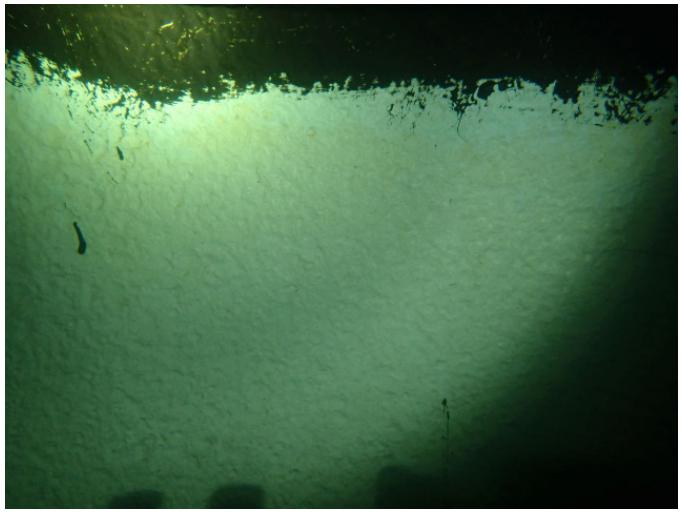


65 *Interior Wall Having Good Adhesion Value Of The Protective Coating And Mild Staining*



66 *Interior Wall Having Good Adhesion Value Of The Protective Coating And Mild Staining*

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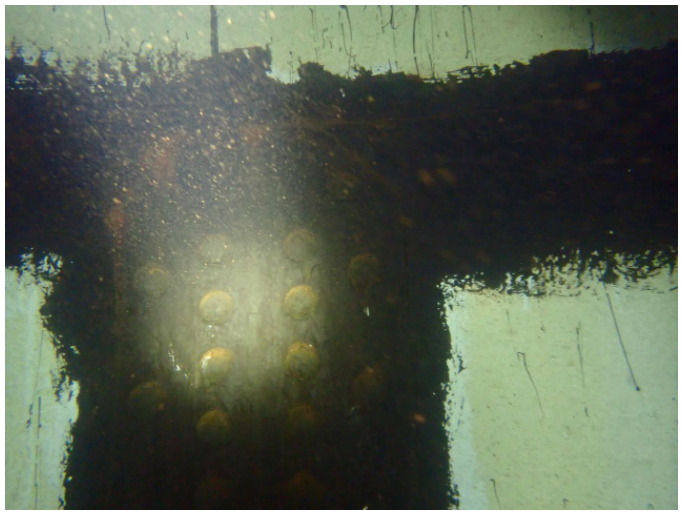

68 *Interior Wall Having Good Adhesion Value Of The Protective Coating And Mild Staining*

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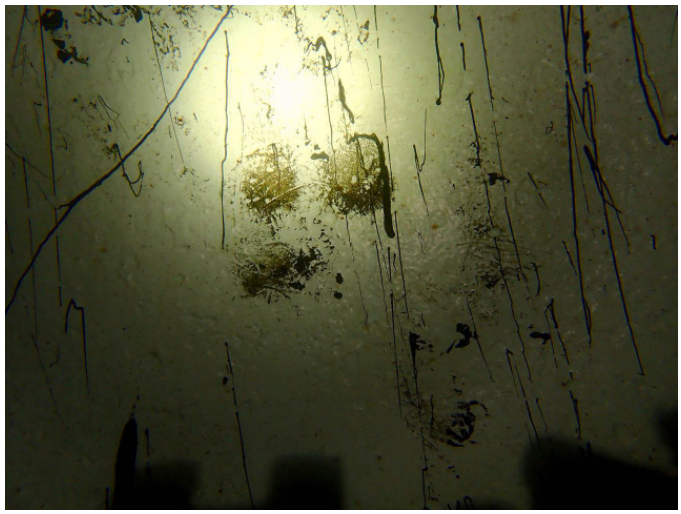
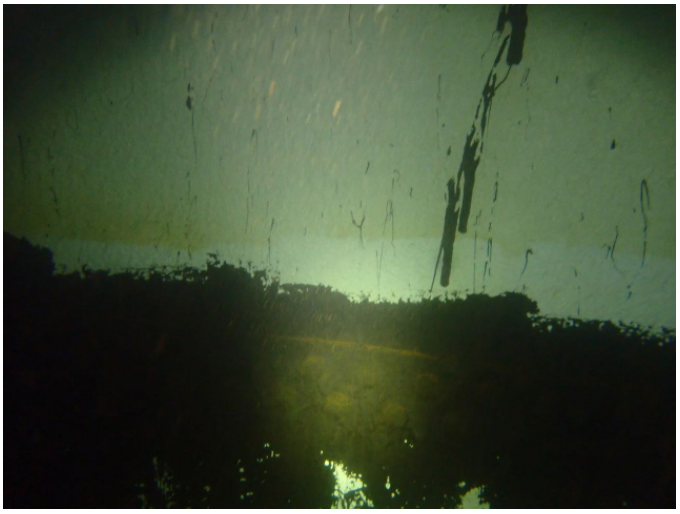


70 *Interior Wall Having Good Adhesion Value Of The Protective Coating And Mild Staining*



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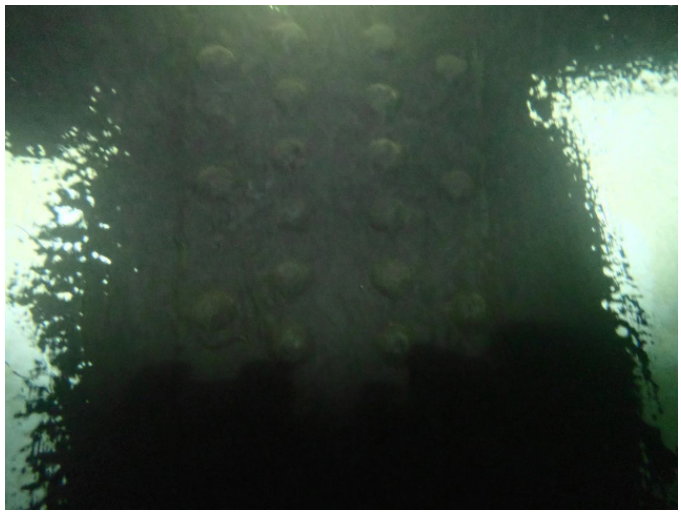
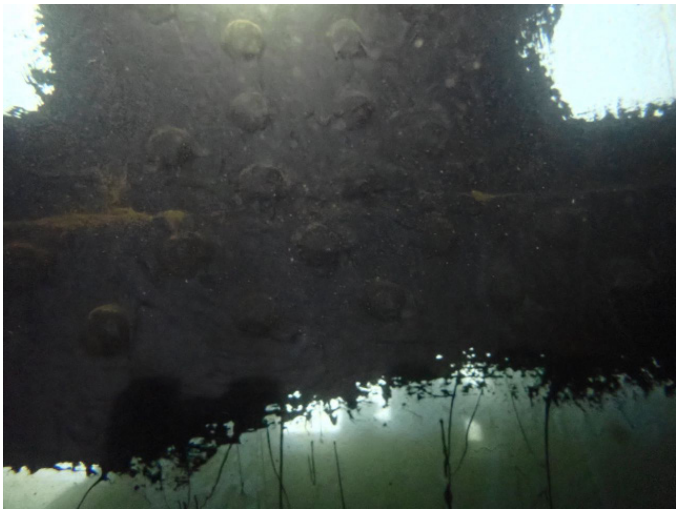


72 *Interior Wall Having Good Adhesion Value Of The Protective Coating And Mild Staining*



73 *Interior Wall Having Good Adhesion Value Of The Protective Coating And Mild Staining*

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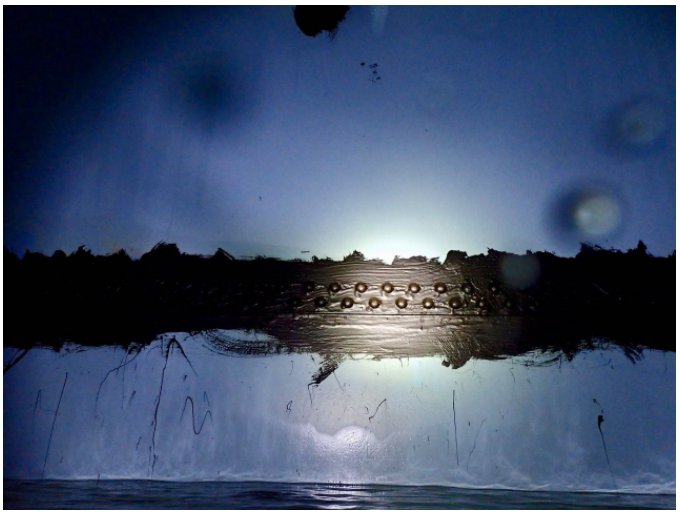
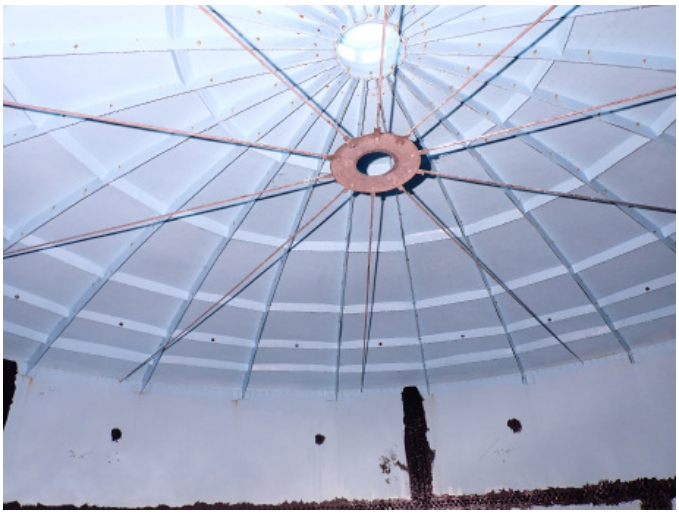


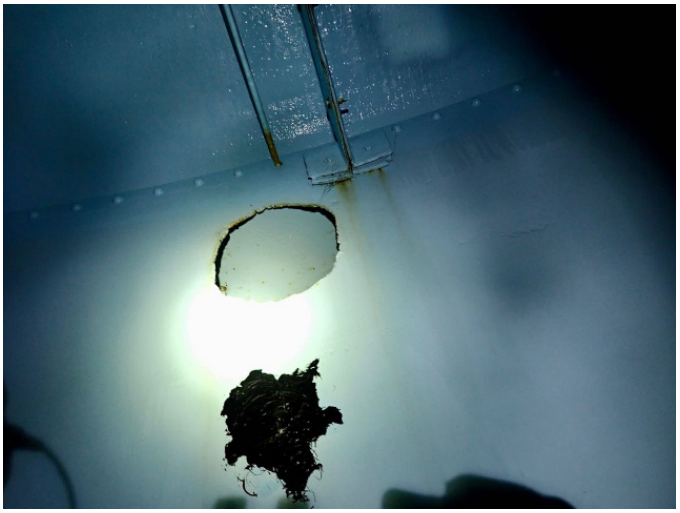
75 *Interior Wall Having Good Adhesion Value Of The Protective Coating And Mild Staining*

76 *Interior Wall Having Good Adhesion Value Of The Protective Coating And Mild Staining*

77 *Interior Overhead*



78 *Interior Overhead*



79 ***Overflow Cutout***

80 ***Discharge From Cleaning***

UNDERWATER SOLUTIONS INC.

INSPECTION AND INTERIOR CLEANING (SEDIMENT REMOVAL) OF THE OAK HILL 275,000-GALLON RIVETED STEEL WATER STORAGE TANK

TOWN OF SOUTHBOROUGH D.P.W.
SOUTHBOROUGH, MASSACHUSETTS

OCTOBER 31, 2018

INSPECTION AND INTERIOR CLEANING (SEDIMENT REMOVAL) OF THE OAK HILL 275,000-GALLON RIVETED STEEL WATER STORAGE TANK

TOWN OF SOUTHBOROUGH D.P.W. SOUTHBOROUGH, MASSACHUSETTS

OCTOBER 31, 2018

SCOPE:

On October 31, 2018, Underwater Solutions Inc. inspected the Oak Hill 275,000-gallon riveted steel potable water storage tank to provide information regarding the overall condition and integrity of this structure and removed the sediment accumulation found on the floor.

EXTERIOR INSPECTION:

The entire exterior of this water storage tank (and all components) was inspected, to include walls and coating, concrete foundation, anchor bolts, manways, ladder and safety cage, overflow, roof, vent and hatch.

Walls And Coating

The exterior steel wall panels and the rivets that secure these panels together were inspected and appeared sound and remain free of obvious fatigue or failure of the steel panels or the steel rivets at this time.

The average dry film thickness of the protective coating system applied to the exterior riveted steel wall panels was measured during this inspection. The dry film thickness of the coating system applied to the exterior wall surfaces was found as follows:

The American Water Works Association (AWWA) recommends a dry film thickness of 7.0 to 10.0 mils of coating film thickness be applied to the exterior surfaces of riveted steel potable water storage tanks to provide adequate protection for riveted steel structures.

Row	***Mil Thickness***	***Row***	***Mil Thickness***	***Row***	***Mil Thickness***
1.	3.8 mils	6.	11.3 mils	11.	10.2 mils
2.	7.7 mils	7.	11.4 mils	12.	8.4 mils
3.	12.5 mils	8.	10.8 mils	13	8.8 mils
4.	12.7 mils	9.	8.9 mils		
5.	13.8 mils	10.	8.4 mils		

The protective coating applied to these steel panels and rivets appeared to have been applied uniformly, meets the AWWA's recommendations and was found having mostly good adhesion value, however adhesion loss (lifting/peeling) of the coating was observed throughout less than 5% of the edges of the wall panels at the panel lap joints, resulting in exposure of the underlying steel. No obvious fatigue/deterioration of the steel panels was evident within these areas of exposure, rather mild corrosion and corrosion staining exist at this time.

A mild to moderate, non-uniform accumulation of mildew throughout the exterior wall surfaces causes declined aesthetics.

RECOMMENDATION(S): It is our recommendation to pressure-wash the exterior wall surfaces at 3,000 P.S.I. and using a 40° to remove the accumulated mildew from these surfaces in an effort to preserve the adhesion value of the protective coating and improve the overall aesthetics.

It is also our recommendation to power tool clean the wall panels showing steel exposure to remove the corrosion.

We also recommend re-coating these areas using a protective coating formulated for exterior exposure and that this coating be applied in accordance with the product manufacturer's surface preparation and application recommendations in an effort to halt corrosion, prevent steel fatigue/deterioration and to provide good protection for the steel.

Concrete Foundation

The exposed surfaces of the 20" wide by 3" tall concrete foundation appeared sound and remains free of cracks, spall or other obvious concrete fatigue at this time.

The protective coating applied to these exposed concrete surfaces appeared to have been applied uniformly and was found having good adhesion value at this time.

An accumulation of mildew exists throughout the surfaces of the foundation at this time.

Anchor Bolts

Eight, 1-3/4" diameter steel anchor bolts extend up from the concrete foundation through steel support chairs riveted to the lowest row of wall panels, located 14" above the base of the tank.

Each anchor bolt has one nut securely installed, and the protective coating applied to this steel support hardware appeared to have been applied uniformly and remains having good adhesion value at this time.

RECOMMENDATION(S): None required at this time.

Manways

Two manways penetrate the lowest row of wall panels on the easternmost and northernmost sides of the tank.

The easternmost manway has a 32" inside diameter and penetrates the wall panel 19" above the tank base and is securely installed and free of obvious leakage. The protective coating applied to these steel surfaces has an average dry film thickness of 11.4 mils, appeared to have been applied uniformly, meets the AWWA's recommendations and remains having good adhesion value at this time.

The northernmost manway has a 24" by 18" inside diameter and penetrates the wall panel 24" above the tank base and is securely installed and free of obvious leakage. The protective coating applied to these steel surfaces has an average dry film thickness of 11.8 mils, appeared to have been applied uniformly, meets the AWWA's recommendations and remains having good adhesion value at this time.

RECOMMENDATION(S): None required at this time.

Overflow

An 8" inside diameter welded steel overflow pipe exits the base of a welded steel weir box at the junction of where the roof and walls meet and extends down, supported to the tank wall with six welded standoffs, and terminates 8" above a concrete splash pad.

The outlet end of this pipe was free of obvious obstructions and a non-corrodible screen having 14-mesh remains securely installed at the end of this pipe at this time.

The protective coating applied to these steel surfaces has an average dry film thickness of 8.5 mils, appeared to have been applied uniformly and was found having good adhesion value at this time.

RECOMMENDATION(S): It is our recommendation to unbolt and remove the screen retaining flange, to install a non-corrodible metal screen having 24-mesh over the end of the pipe, to re-install the existing 14-mesh screen and to re-install and secure the retaining flange in an effort to prevent access to the interior of the pipe/tank.

Ladder And Safety Cage

A welded steel ladder and safety cage extend from ground level up to the roof dome and are supported to the wall of the tank with thirteen sets of riveted standoffs. This ladder and safety cage remain in sound condition at this time.

The protective coating applied to this steel ladder and safety cage was found having good adhesion value at this time.

RECOMMENDATION(S): We recommend installing an OSHA-approved fall prevention device throughout the length of this ladder in an effort to provide good-safe access to the roof. We recommend this fall prevention device be constructed of non-corrodible metal.

Roof

The fiberglass roof panels were inspected and appeared sound and remain free of obvious fatigue or failures. However, this fiberglass-paneled roof was found with no OSHA approved anchor points and requires safety upgrades to comply with applicable OSHA regulations/standards and to allow for attachments to be installed for a fall prevention system to gain safe access to the roof.

The protective coating applied to the fiberglass roof panels appeared to have been applied uniformly and was found having mostly good adhesion value, however adhesion loss (peeling) of the coating was observed throughout approximately 15% of these surfaces, resulting in exposure of the underlying molded gel-coat surfaces. The molded gel-coat within these areas of exposure appeared to have good adhesion value at this time.

The sealant applied to the joints between each fiberglass panel appeared to have been applied uniformly and remains having good adhesion value, preventing rain water run-off from entering the tank.

RECOMMENDATION(S): It is our recommendation to remove the existing roof and to install a replacement non-corrodible metal dome to prevent/avoid the further requirement of re-coating.

We recommend that this replacement roof dome be fitted with OSHA approved anchor points to allow for attachment of a fall prevention device that will provide safe access while working on the roof.

We recommend this replacement roof be fitted with a non-corrodible metal AWWA compliant fail-safe (frost-proof) vent having a non-corrodible 24-mesh screen to allow for proper ventilation and to prevent access to the interior of the tank.

We also recommend that the replacement dome be fitted with a non-corrodible metal hatch having a frame that extends up at least 4" above the roof surface. We recommend this hatch have a solid water tight cover that extends down around the frame at least 2" and that this hatch have a rubber-type gasket seal to prevent rainwater run-off and other contaminates from entering the tank. Finally, we recommend that this hatch have a provision for the installation of a lock in order to prevent unwanted access to the interior of the tank.

Finally, it is our recommendation that this replacement dome have an OSHA approved guardrail system installed (in conformance with OSHA 1910.29(6)) that spans the outer circumference of the tank.

In pertinent part, we recommend this guardrail system be constructed of non-corrodible metal, and that the top edge height of the top rail be 42" (plus or minus 3") above walking-working surface per OSHA 1910.29(b)(1).

Midrails should be installed at a height midway between the top edge of the guardrail system and the walking-working surface per OSHA 1910.29(b)(2)(i).

Intermediate vertical members (balusters) should be installed no more than 19" apart per OSHA 1910.29 (b)(2)(iii).

Vent

The vent is located within the center of the roof dome, having a 24" inside diameter, and stands 16" tall.

A 40" outside diameter fiberglass cap and a non-corrodible metal screen having 18-mesh remain securely installed over the vent penetration in the roof at this time.

The protective coating applied to the fiberglass vent cap appeared to have been applied uniformly and was found having mostly good adhesion value, however adhesion loss (peeling) of the coating was observed throughout approximately 25% of these surfaces, resulting in exposure of the underlying molded gel-coat surfaces. The molded gel-coat within these areas of exposure appeared to have good adhesion value at this time.

RECOMMENDATION(S): See roof recommendations.

Hatch

One 24" inside diameter hatch provides good access to the interior of the tank through the roof.

The fiberglass hatch trunk and removable fiberglass hatch cover remain in good condition and were found secured with a series of nuts and bolts, somewhat preventing access to the tank interior.

RECOMMENDATION(S): See roof recommendations.

INTERIOR INSPECTION:

The entire interior of this water storage tank (and components) was inspected, to include sediment accumulations, floor, manways, piping, walls and coating, overhead, overflow, and aesthetic water quality.

Sediment Accumulations

A uniform layer of accumulated precipitate was found on all floor surfaces, averaging 1/8" in depth.

After completing this inspection, all precipitate was vacuumed from the floor.

Floor

After removing the accumulated precipitate, the steel floor panels and the rivets that secure these panels together were inspected and appeared sound and remain free of obvious fatigue or failures of the steel panels or the steel rivets at this time.

The protective coating applied to these surfaces has an average dry film thickness of 34.6 mils, appeared to have been applied uniformly, meets the AWWA's recommendations and was found having good adhesion value at this time.

Mild staining remains throughout the floor due to the accumulation of precipitate.

Rust scale that appears to have entered the tank throughout the influent/effluent pipe was observed throughout the circumference of the influent/effluent pipe and has calcified to the floor and could not be removed with our vacuum system.

RECOMMENDATION(S): It is our recommendation that the next time this tank is removed from service and de-watered that this calcified rust scale be removed from the floor, and after removing this calcified accumulation, we recommend evaluating the floor surfaces to conclude if this calcified accumulation compromised the adhesion value of the protective coating.

If coating fatigue is found after removing this calcified accumulation, we recommend re-coating these affected areas using a protective coating formulated for immersion (wet contact) and having an A.N.S.I./N.S.F.61 approval for use in structures containing potable water and that this coating be applied in accordance with the product manufacturer's surface preparation and application recommendations in an effort to provide good protection for the riveted steel floor surfaces.

Manways

Two manways penetrate the lowest row of wall panels on the easternmost and northernmost sides of the tank.

The easternmost manway has a 32" inside diameter and penetrates the wall panel 19" above the floor and is securely installed and free of obvious leakage.

The protective coating applied to these steel surfaces appeared to have been applied uniformly and remains having good adhesion value at this time.

The northernmost manway has a 24" by 18" inside diameter and penetrates the wall panel 24" above the floor. A 26" by 22" outside diameter steel lid was found securely installed within this penetration and was found free of leakage at this time.

The protective coating applied to these steel surfaces appeared to have been applied uniformly and was found having mostly good adhesion value, however adhesion loss (blistering) of the coating was observed throughout approximately 10% of these surfaces, resulting in exposure of the underlying steel.

No obvious fatigue/deterioration of the steel was evident within these areas of exposure, rather mild corrosion exists at this time.

RECOMMENDATION(S): It is our recommendation that the next time this tank is removed from service and de-watered that the surfaces of this manway showing steel exposure be power tool cleaned to remove all corrosion. We then recommend re-coating these surfaces using a protective coating formulated for immersion (wet contact) and having an A.N.S.I./N.S.F.61 approval for use in structures containing potable water and that this coating be applied in accordance with the product manufacturer's surface preparation and application recommendations in an effort to provide good protection for the steel surfaces of this manway.

Piping

The influent/effluent pipe penetrates the floor 13" in from the wall, having a 10" inside diameter, and stands 4" tall.

This pipe was free of obvious obstructions and flow was entering the tank through this pipe at the time of this inspection.

The protective coating applied to this steel pipe appeared to have good adhesion value, however rust scale that appears to have entered the tank through the influent/effluent pipe was observed throughout the surfaces of the influent/effluent pipe and has calcified to the pipe and could not be removed with our vacuum system.

RECOMMENDATION(S): It is our recommendation that the next time this tank is removed from service and de-watered that this calcified rust scale be removed from the pipe, and after removing this calcified accumulation, we recommend evaluating the surfaces of the pipe to conclude if this calcified accumulation compromised the adhesion value of the protective coating.

If coating fatigue is found after removing this calcified accumulation, we recommend re-coating these affected areas using a protective coating formulated for immersion (wet contact) and having an A.N.S.I./N.S.F.61 approval for use in structures containing potable water and that this coating be applied in accordance with the product manufacturer's surface preparation and application recommendations in an effort to provide good protection for the steel pipe surfaces.

Walls And Coating

The interior wall surfaces were inspected beginning at the floor and by spiraling the circumference of the tank up to the water surface.

The steel wall panels and the rivets that secure these panels together appeared sound and remain free of obvious fatigue or failures of the steel wall panels or deterioration of the rivets at this time.

The average dry film thickness of the protective coating system applied to the interior riveted steel wall panels was measured during this inspection. The dry film thickness of the coating system applied to the interior wall surfaces was found as follows:

Row	***Mil Thickness***	***Row***	***Mil Thickness***	***Row***	***Mil Thickness***
1.	51.9 mils	6.	42.5 mils	11.	32.8 mils
2.	33.8 mils	7.	33.3 mils	12.	41.8 mils
3.	42.9 mils	8.	51.5 mils	13.	52.8 mils
4.	52.1 mils	9.	42.5 mils		
5.	33.8 mils	10.	52.3 mils		

The American Water Works Association (AWWA) recommends a dry film thickness of 10.5 to 15.5 mils of coating film thickness be applied to the interior surfaces of riveted steel potable water storage tanks to provide adequate protection for riveted steel structures.

The protective coating applied to the steel wall panels and rivets appeared to have been applied uniformly and was found having good adhesion value at this time. A rust stain was observed extending from the junction of where the roof and walls meet and was observed throughout approximately 15% of the circumference of the tank, however no obvious coating fatigue or steel exposure was evident at this time.

Mild staining exists throughout the interior wall surfaces beginning approximately 48" below overflow level and extending down to the floor.

RECOMMENDATION(S): It is our recommendation to monitor the wall surfaces at the junction of where the roof and walls meet through future scheduled inspections to ensure that adhesion loss of the protective coating does not occur and result in exposure of the underlying steel.

Overhead

The entire overhead was inspected from the water surface.

These fiberglass panels appeared sound and remain free of obvious fatigue or failures at this time.

The protective coating applied to these fiberglass surfaces appeared to have been applied uniformly and appeared to have good adhesion value at this time.

The steel spider support, located at the junction of where the roof and walls meet, appeared sound and remains free of obvious fatigue or failures at this time.

The protective coating applied to these steel support surfaces appeared to have been applied uniformly and was found having good adhesion value at this time.

RECOMMENDATION(S): None required at this time.

Overflow

The overflow consists of a 6" inside diameter flush pipe penetration within the top wall panel, located approximately 6" below the junction of where the roof and walls meet.

This overflow penetration was free of obstructions at the time this inspection was completed.

RECOMMENDATION(S): None required at this time.

Aesthetic Water Quality

The aesthetic water quality was found to be good throughout this entire tank, allowing unlimited visibility for this inspection.

ADDITIONAL REMARKS/RECOMMENDATIONS:

None at this time.

CONCLUSION:

It is the opinion of Underwater Solutions Inc. that this riveted steel potable water storage tank appeared mostly sound and remains free of obvious leakage at this time.

As always, we recommend that re-inspection and cleaning of all water storage facilities be performed in accordance with state and federal mandates, A.W.W.A. standards, and completed by an experienced and authorized inspection corporation.

UNDERWATER SOLUTIONS INC.
Christopher A. Cole, Project Manager

This report, the conclusions, recommendations and comments prepared by Underwater Solutions Inc. are based upon spot examination from readily accessible parts of the tank. Should latent defects or conditions which vary significantly from those described in the report be discovered at a later date, these should be brought to the attention of a qualified individual at that time. These comments and recommendations should be viewed as information to be used by the Owner in determining the proper course of action and not to replace a complete set of specifications. All repairs should be done in accordance with A.W.W.A. and/or other applicable standards.

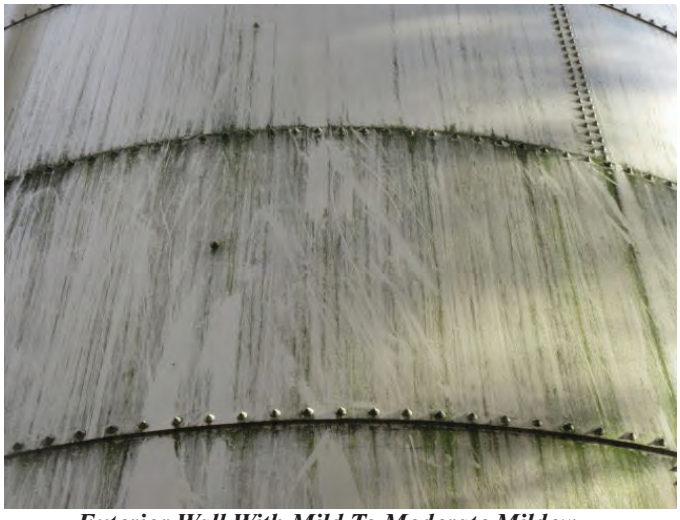
1 *Exterior Wall With Mild To Moderate Mildew*

2 *Exterior Wall With Mild To Moderate Mildew*

3 *Exterior Wall With Mild To Moderate Mildew*

4 *Exterior Wall With Mild To Moderate Mildew*

5 *Exterior Wall With Mild To Moderate Mildew*



6 *Exterior Wall With Mild To Moderate Mildew*

7 ***Exterior Wall With Mild To Moderate Mildew***

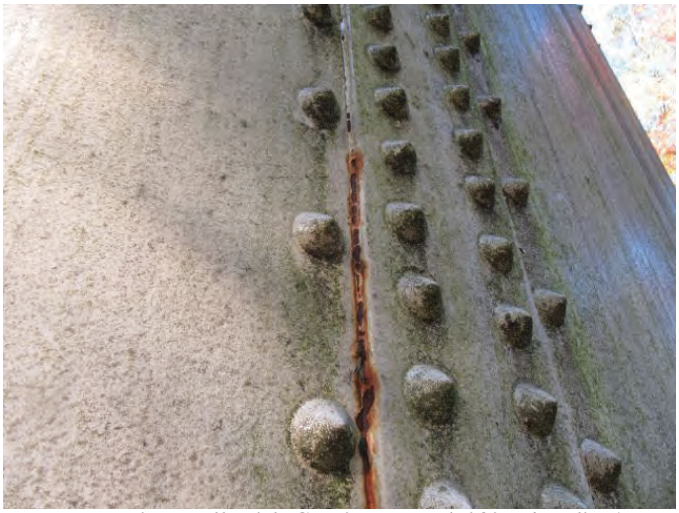
8 ***Exterior Wall With Mild To Moderate Mildew***

9 ***Exterior Wall With Mild To Moderate Mildew***

10 ***Exterior Wall With Mild To Moderate Mildew***

11 ***Exterior Wall With Mild To Moderate Mildew***

12 ***Exterior Wall With Mild To Moderate Mildew***



13 *Exterior Wall With Coating Loss (Lifting/Peeling), Exposed Underlying Steel And Mild Corrosion Within The Wall Panel Edge/Lap Joint*

14 *Exterior Wall With Coating Loss (Lifting/Peeling), Exposed Underlying Steel And Mild Corrosion Within The Wall Panel Edge/Lap Joint*

15 *Exterior Wall With Coating Loss (Lifting/Peeling), Exposed Underlying Steel And Mild Corrosion Within The Wall Panel Edge/Lap Joint*

16 *Concrete Foundation With Mildew*

17 *Concrete Foundation With Mildew*

18 *Concrete Foundation With Mildew*

19 ***Concrete Foundation With Mildew***

20 ***Secure Anchor Bolt***

21 ***Secure Anchor Bolt***

22 ***Secure Anchor Bolt***

23 ***Secure Anchor Bolt***

24 ***Easternmost 32” Inside Diameter Manway***

25 ***Northernmost 24” By 18” Inside Diameter Manway***

26 ***Overflow Pipe And Weir Box***

27 ***Overflow Pipe***

28 ***Overflow Pipe Terminating Above Concrete Splash Pad***

29 ***Secure Overflow Screen***

30 ***Ladder And Safety Cage***

31 ***Ladder And Safety Cage***

32 ***Roof Panels***

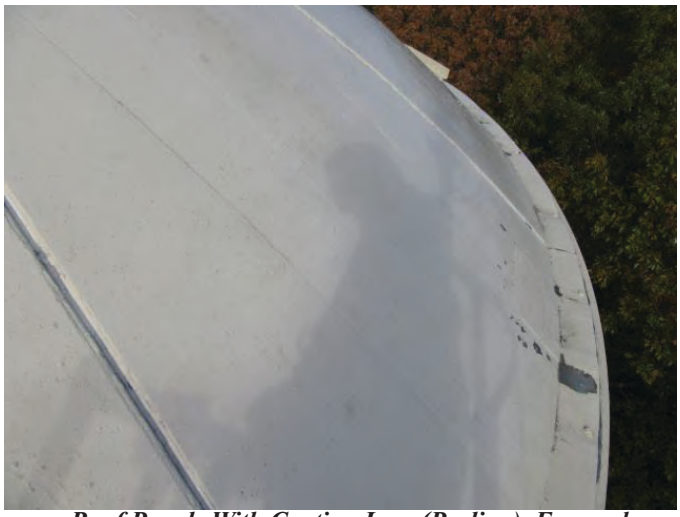
33 ***Roof Panels***

34 ***Roof Panels***

35 ***Roof Panels***

36 ***Roof Panels***

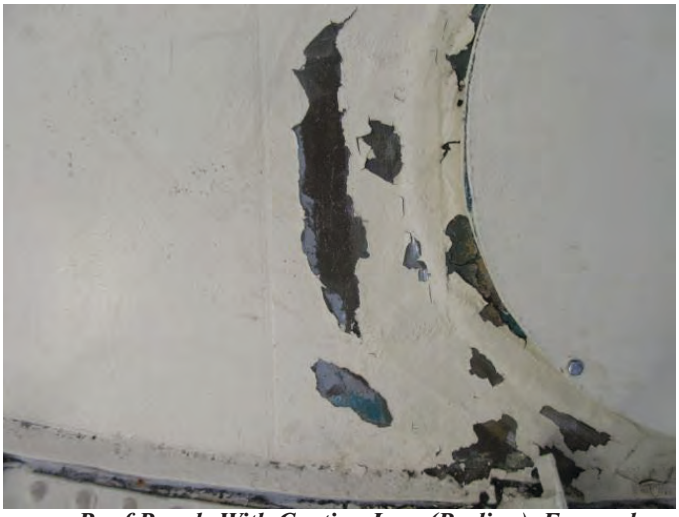
37 *Roof Panels With Coating Loss (Peeling), Exposed Underlying Molded Gel-Coat*



38 *Roof Panels With Coating Loss (Peeling), Exposed Underlying Molded Gel-Coat*

39 *Roof Panels With Coating Loss (Peeling), Exposed Underlying Molded Gel-Coat*

40 *Roof Panels With Coating Loss (Peeling), Exposed Underlying Molded Gel-Coat*



41 *Roof Panels With Coating Loss (Peeling), Exposed Underlying Molded Gel-Coat*

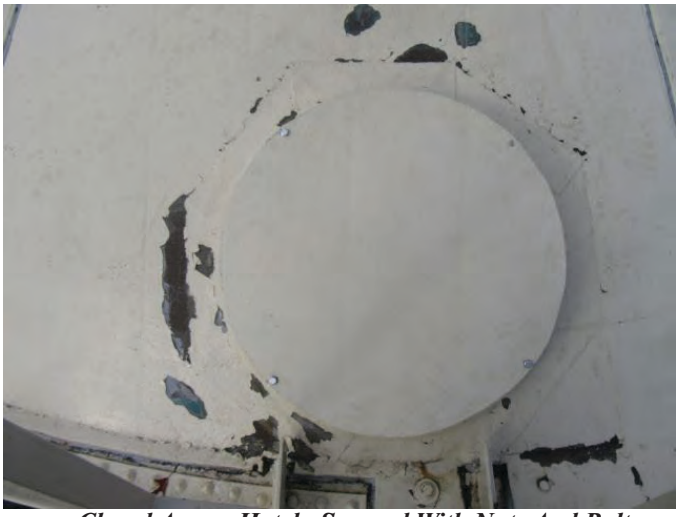
42 *Roof Panels With Coating Loss (Peeling), Exposed Underlying Molded Gel-Coat*

43 ***Secure Vent Cap With Coating Loss (Peeling), Exposed Underlying Molded Gel-Coat***

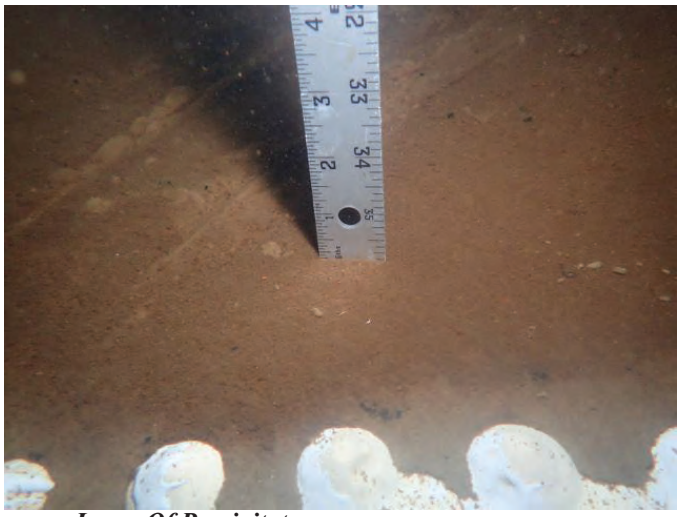
44 ***Secure Vent Screen***

45 ***Secure Vent Screen***

46 ***Open Access Hatch***



47 ***Closed Access Hatch, Secured With Nuts And Bolts***



48 ***Layer Of Precipitate***

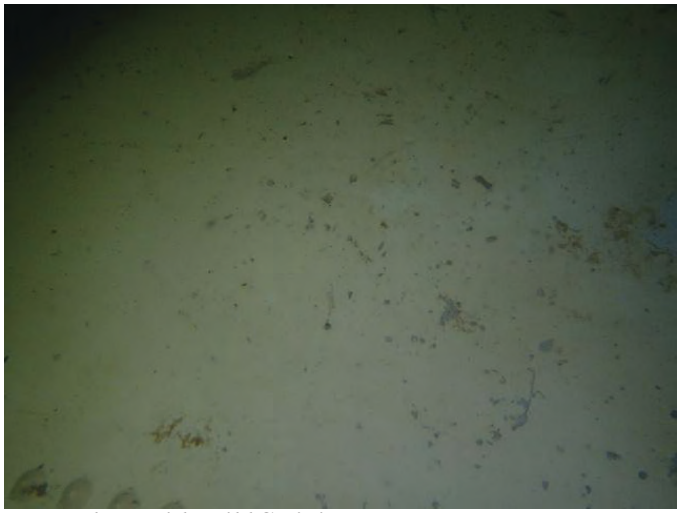
49 ***Layer Of Precipitate***

50 ***Floor With Mild Staining***

51 ***Floor With Mild Staining***

52 ***Floor With Mild Staining***

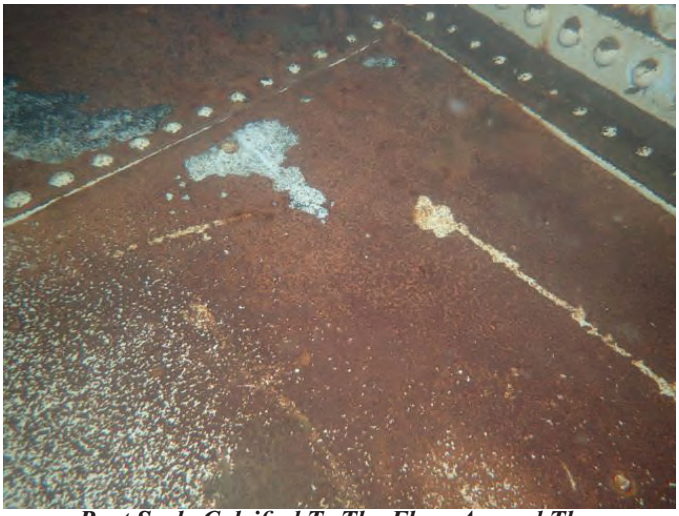
53 ***Floor With Mild Staining***



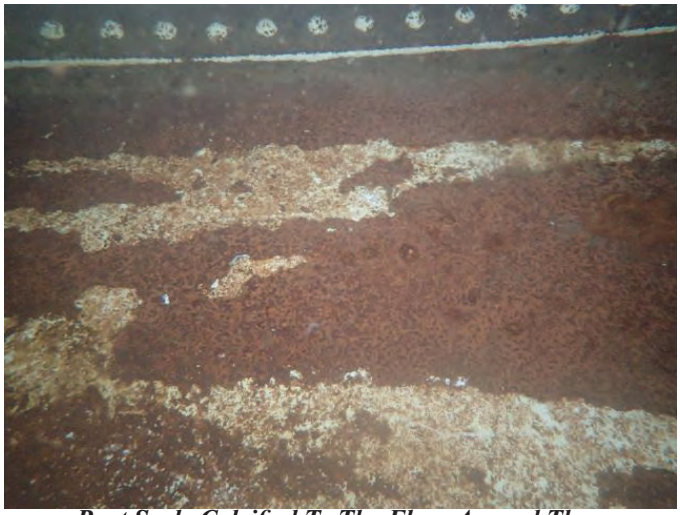
54 ***Floor With Mild Staining***

55 *Rust Scale Calcified To The Floor Around The Influent/Effluent Pipe*

56 *Rust Scale Calcified To The Floor Around The Influent/Effluent Pipe*

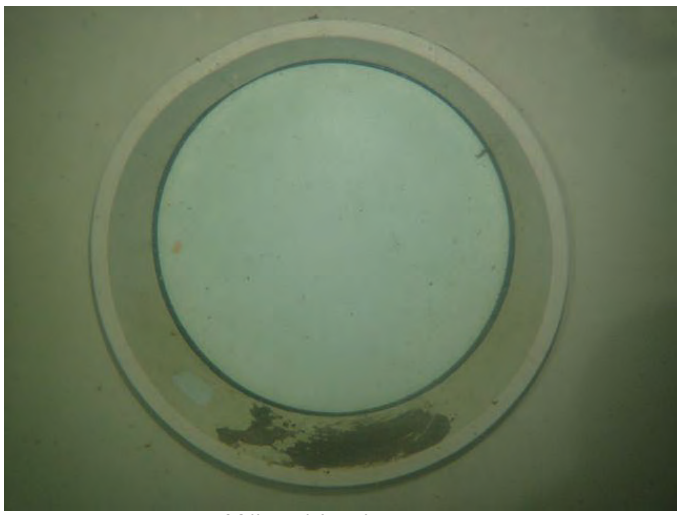


57 *Rust Scale Calcified To The Floor Around The Influent/Effluent Pipe*



58 *Rust Scale Calcified To The Floor Around The Influent/Effluent Pipe*

59 *Rust Scale Calcified To The Floor Around The Influent/Effluent Pipe*

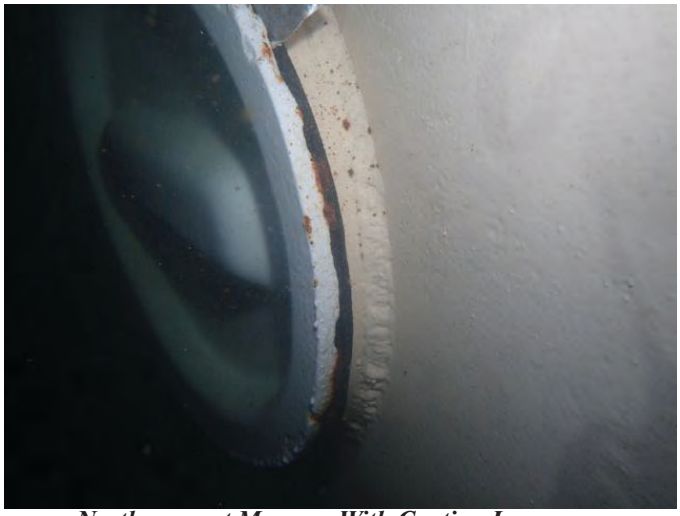


60 *Easternmost 32” Inside Diameter Manway*

61 *Northernmost 24” By 18” Inside Diameter Manway*

62 *Northernmost Manway With Coating Loss (Blistering), Exposed Underlying Steel And Mild Corrosion*

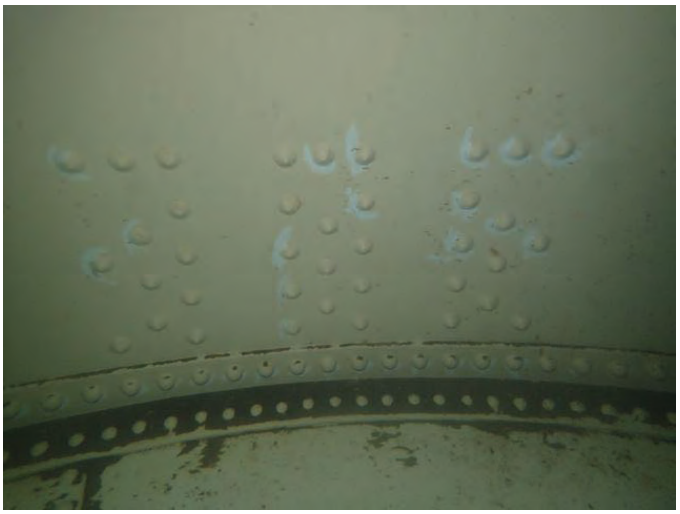
63 *Northernmost Manway With Coating Loss (Blistering), Exposed Underlying Steel And Mild Corrosion*



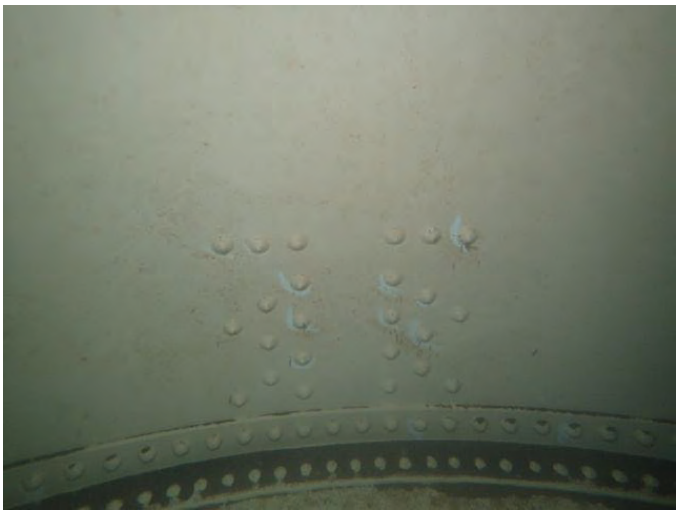
64 *Northernmost Manway With Coating Loss (Blistering), Exposed Underlying Steel And Mild Corrosion*

65 *10” Inside Diameter Influent/Effluent Pipe*

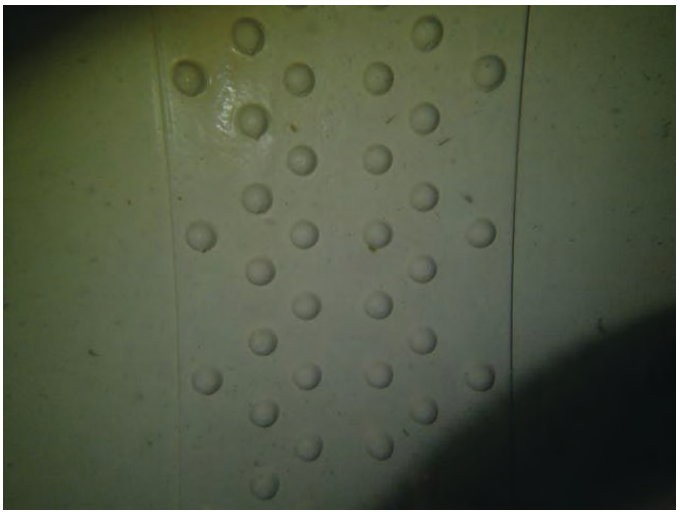
66 *Interior Wall With Mild Staining*



67 ***Interior Wall With Mild Staining***



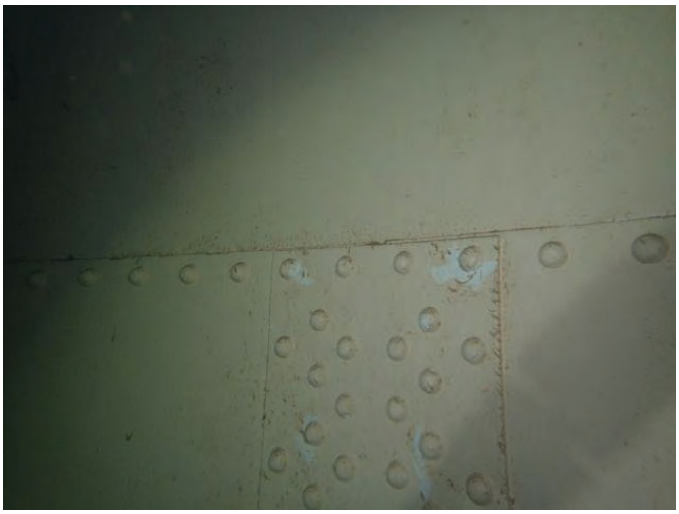
68 ***Interior Wall With Mild Staining***



69 ***Interior Wall With Mild Staining***

70 ***Interior Wall With Mild Staining***

71 ***Interior Wall With Mild Staining***



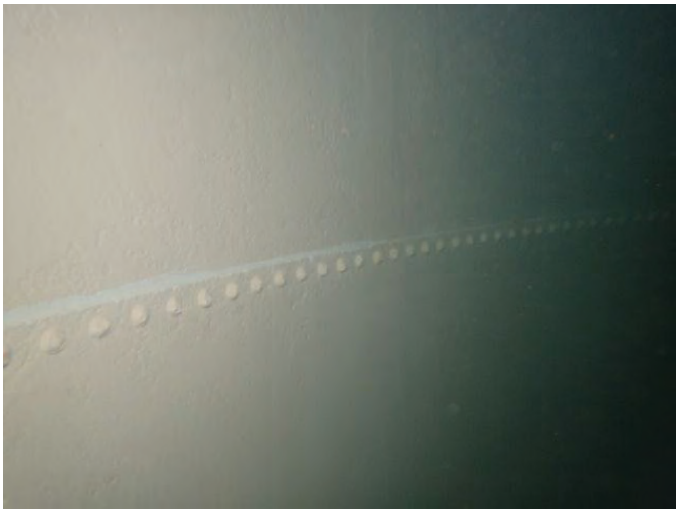
72 ***Interior Wall With Mild Staining***

73 ***Interior Wall With Mild Staining***

74 ***Interior Wall With Mild Staining***

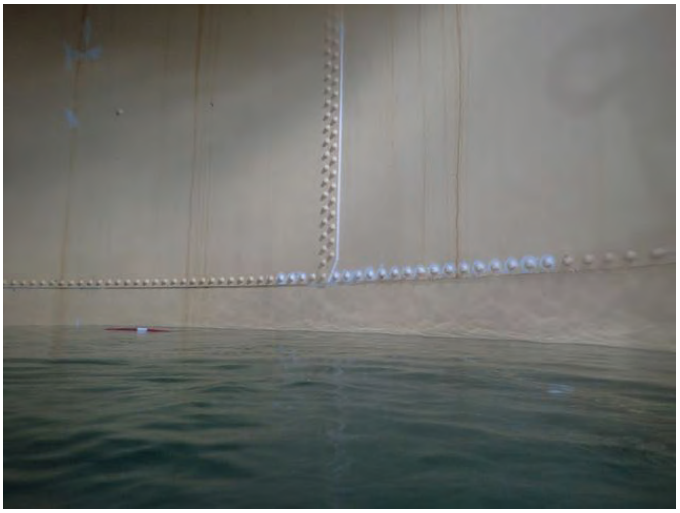
75 ***Interior Wall With Mild Staining***

76 ***Interior Wall With Mild Staining***



77 ***Interior Wall With Mild Staining***

78 ***Interior Wall With Mild Staining***



79 ***Interior Wall With Mild Staining***

80 ***Interior Wall With Mild Staining***

81 ***Interior Wall With Mild Staining***

82 ***Interior Wall With Rust Staining***

83 ***Interior Wall With Rust Staining***

84 ***Interior Wall With Rust Staining***

85 ***Interior Wall With Rust Staining***

86 ***Overhead Panels And Steel Spider Supports***

87 ***Overhead Panels And Steel Spider Supports***

88 ***Overhead Panels And Steel Spider Supports***

89 ***Overhead Panels And Steel Spider Supports***

90 ***Overhead Panels And Steel Spider Supports***

91 ***Overflow Pipe Penetration***

92 ***Discharge During Cleaning***

UNDERWATER SOLUTIONS INC

SERVICES COMPLETED:	Inspection and Cleaning
CUSTOMER NAME:	Town Of Southborough Department Of Public Works
SITE ADDRESS:	14 Tara Road Southborough, MA 01772
TANK NAME:	Tara Road
SIZE:	1.3 Million Gallon
TYPE OF TANK:	Welded Steel Water Storage Tank
DIMENSIONS:	48'H x 68'D

INSPECTION AND INTERIOR CLEANING (SEDIMENT REMOVAL) OF THE TARA ROAD 1.3-MILLION-GALLON WELDED STEEL WATER STORAGE TANK

TOWN OF SOUTHBOROUGH D.P.W. SOUTHBOROUGH, MASSACHUSETTS

OCTOBER 5, 2020

SCOPE:

On October 5, 2020, Underwater Solutions Inc. completed an inspection of the Tara Road 1.3-Million-gallon welded steel potable water storage tank to provide information regarding the overall condition and integrity of this structure and removed the accumulated precipitate from the floor.

EXTERIOR INSPECTION:

The entire exterior of this water storage tank was inspected, to include walls and coating, concrete foundation, anchor bolts, manways, ladder and safety cage, overflow, roof, vent, and hatches.

Walls And Coating

The exterior steel wall panels and associated welds were inspected and were found appearing sound and remain free of obvious fatigue or failure at this time.

The protective coating applied to the exterior walls was found having fair adhesion value at this time. Adhesion loss (cracking, lifting, declined film thickness) and peeling of the coating have resulted in exposure of the underlying steel throughout approximately 10% of the exterior wall surfaces, resulting in exposure of the underlying steel.

Isolated areas of damage to the protective coating were observed throughout less than 5% of the two lowest rows of wall panels that appeared to have been the result of objects striking the tank, also causing exposure of the underlying steel.
No obvious fatigue of the steel was evident within these areas of exposure, rather mild corrosion exists at this time.

Isolated areas of adhesion loss of the finish coat were observed throughout less than 5% of the exterior walls, resulting in exposure of an underlying coating. The underlying coating within these areas of exposure shows corrosion bleed-through at this time.

RECOMMENDATION(S): It is our recommendation to pressure-wash the exterior wall surfaces, including all components affixed to the exterior wall surfaces at 5,000-7,000 P.S.I. using an oscillating tip and an environmentally approved cleaning agent to remove all soluble/insoluble surface contamination, chalk and all coating that has lost adhesion, followed by a clean water rinse to remove all cleaning residue.

We recommend then to hand/power tool clean the wall panel surfaces showing steel exposure to bare metal to achieve a uniform anchor profile, ensuring all lifted edges of the coating are feathered back tight and to spot-coat the areas of steel exposure with a prime coat and intermediate coat to halt corrosion and to over-coat the exterior wall surfaces with a prime coat and finish coat to provide good protection for the steel and improve the aesthetics.

We recommend that the products used to complete these repairs be formulated for exterior exposure and to be applied in accordance with the product manufacturer's surface preparation and application recommendations.

Concrete Foundation

The exposed surfaces of the 6" wide by 3" tall concrete foundation was found having tight cracks throughout approximately 5% of these exposed surfaces. These cracks were sounded, and no obvious voids were evident, however one area of mild concrete spall was found within a crack on the southernmost side of the tank, located approximately 6' south of the overflow pipe.

This area of spall measures approximately 12" in length by 1" in width by 1/2" deep. The surrounding and underlying concrete within this area of spall remains sound, while no obvious exposed reinforcement steel was evident at this time.

The concrete filet that seals the junction of where the foundation and tank base meet appeared sound and free of obvious fatigue of the concrete at this time.

RECOMMENDATION(S): It is our recommendation to pressure-wash the exposed foundation surfaces at 5,000-7,000 P.S.I. using an oscillating tip and an environmentally approved cleaning agent to remove all soluble/insoluble surface contamination, followed by a clean water rinse to remove all cleaning residue.

We recommend then to apply a dedicated stripe coat of an elastomeric coating to all cracks having widths ranging from 1/16" to 1/8" wide, and to apply a high-performance adhesive sealant to all cracks having widths greater than 1/8" wide.

We also recommend re-surfacing the areas of spall on the southernmost side of the tank with a single component concrete resurfacing product and then to apply two coats of a masonry waterproofing coating to the exterior exposed foundation and concrete fillet surfaces in an effort to seal the cracks and prevent moisture penetration and to seal and protect the exposed surfaces of the concrete foundation.

We recommend that the products used to complete these repairs be formulated for exterior exposure and to be applied in accordance with the product manufacturer's surface preparation and application recommendations.

Anchor Bolts

Eight, 2" diameter steel anchor bolts extend up from the foundation through steel support chairs welded to the lowest row of wall panels.

Each anchor bolt has a nut securely installed and appeared sound at this time.

The protective coating applied to each anchor bolt assembly has lost adhesion, resulting in exposure of the underlying steel. No obvious fatigue of the steel was evident within these areas of exposure, rather mild corrosion exists at this time.

RECOMMENDATION(S): It is our recommendation to hand/power tool clean the surfaces of the anchor bolt assemblies showing steel exposure to bare metal to achieve a uniform anchor profile and to spot-coat/overcoat the anchor bolt assemblies with a prime coat, intermediate coat, and finish coat in an effort to halt corrosion, prevent steel fatigue and to provide good protection for the steel.

We recommend that the products used to complete these repairs be formulated for exterior exposure and to be applied in accordance with the product manufacturer's surface preparation and application recommendations.

Manways

Two manways penetrate the lowest row of wall panels on the northernmost and southernmost sides of the tank and are securely installed and free of obvious leakage.

The northernmost manway has 24" by 18" inside diameter and penetrates the wall panel 26" above the tank base.

The protective coating applied to this manway lid, trunk and securing hardware was found having mostly good adhesion value at this time. Decline (thinning) of the coating film thickness has resulted in exposure of the underlying steel throughout less than 5% of these surfaces. No obvious fatigue of the steel was evident within these areas of exposure, rather mild surface corrosion exists at this time.

The southernmost manway has a 30" inside diameter and penetrates the wall panel 24" above the tank base.

The protective coating applied to this manway lid and trunk was found having mostly good adhesion value at this time. Decline (thinning) of the coating film thickness and adhesion loss of the coating has resulted in exposure of the underlying steel throughout less than 5% of these surfaces. No obvious fatigue of the steel was evident within these areas of exposure, rather mild corrosion exists at this time.

The stainless-steel nuts and bolts that secures this manway are not coated and appeared sound and free of corrosion or fatigue.

The steel washers associated with the securing hardware are not coated and have mild corrosion on all surfaces that has caused a rust stain, yet these steel washers remain sound at this time.

RECOMMENDATION(S): It is our recommendation to hand/power tool clean the surfaces of each manway assembly showing steel exposure to bare metal to achieve a uniform anchor profile, ensuring all lifted edges of the coating are feathered back tight and to spot-coat these areas with a prime coat, intermediate coat, and finish coat in an effort to halt corrosion, prevent steel fatigue and to provide good protection for the steel.

We also recommend that the next time this manway is opened to use replacement stainless-steel washers upon closing the manway in an effort to prevent corrosion.

We recommend that the products used to complete these repairs be formulated for exterior exposure and to be applied in accordance with the product manufacturer's surface preparation and application recommendations.

Overflow

A 6" inside diameter steel overflow pipe exits the base of a welded steel weir box and extends down, supported to the tank wall with three welded and bolted standoffs and terminates approximately 14" above an asphalt splash-pad.

This pipe was free of obvious obstructions and an expanded metal screen equivalent to 2-mesh and a 24-mesh screen are installed at the end of this pipe, preventing contaminates from entering the pipe/tank.

The protective coating applied to this steel weir box and pipe was found having mostly good adhesion value at this time. Adhesion loss of the protective coating was observed throughout les than 5% of these surfaces, resulting in exposure of the underlying steel.

No obvious fatigue of the steel was evident within these areas of exposure, rather mild corrosion exists at this time.

RECOMMENDATION(S): It is our recommendation to hand/power tool clean the surfaces of the overflow pipe assembly showing steel exposure to bare metal to achieve a uniform anchor profile, ensuring all lifted edges of the coating are feathered back tight and to spot-coat these areas with a prime coat, intermediate coat, and finish coat in an effort to halt corrosion, prevent steel fatigue and to provide good protection for the steel.

We recommend that the products used to complete these repairs be formulated for exterior exposure and to be applied in accordance with the product manufacturer's surface preparation and application recommendations.

Ladder And Safety Cage

A welded steel ladder and bolted steel safety cage extends from 12' above the ground up to the roof dome and is supported to the wall of the tank with five sets of welded standoffs, providing safe access and egress to and from the roof. The protective coating applied to this ladder and safety cage remains having good adhesion value at this time.

A chain link security fence having an access gate that is secured with a lock is installed at the base of this ladder, preventing unwanted access.

RECOMMENDATION(S): None at this time.

A second steel ladder extends from the edge of the roof dome up to and is secured to the vent with one bolted bracket, while two sets of wheels installed on the ladder allow this ladder to rotate throughout the circumference of the roof.

The protective coating applied to this ladder was found having mostly good adhesion value at this time. Adhesion loss of the protective coating was observed throughout less than 5% of these surfaces, resulting in exposure of the underlying steel. No obvious fatigue of the steel was evident within these areas of exposure, rather mild corrosion exists at this time.

RECOMMENDATION(S): It is our recommendation to hand/power tool clean the surfaces of this ladder assembly showing steel exposure to bare metal to achieve a uniform anchor profile, ensuring all lifted edges of the coating are feathered back tight and to spot-coat these areas with a prime coat, intermediate coat, and finish coat in an effort to halt corrosion, prevent steel fatigue and to provide good protection for the steel.

We recommend that the products used to complete these repairs be formulated for exterior exposure and to be applied in accordance with the product manufacturer's surface preparation and application recommendations.

Roof

The steel roof panels, and associated welds were inspected and appeared sound and remain free of obvious fatigue or failure at this time.

The protective coating applied to these surfaces was found having mostly good adhesion value at this time. Adhesion loss of the protective coating was observed throughout approximately 5% of these surfaces, resulting in exposure of the underlying steel.

No obvious fatigue (pitting) of the steel panels or deterioration of the welds was evident within these 1/4" to 1" diameter areas of steel exposure, rather mild surface corrosion exists at this time.

A mild to moderate, non-uniform accumulation of mildew throughout the roof has caused declined aesthetics.

RECOMMENDATION(S): It is our recommendation to pressure-wash the exterior roof surfaces, including all components affixed to the exterior roof surfaces at 3,500 P.S.I. using a 40° tip and an environmentally approved cleaning agent to remove all soluble/insoluble surface contamination, chalk, and mildew, followed by a clean water rinse to remove all cleaning residue.

We recommend then to hand/power tool clean the roof surfaces showing steel exposure to bare metal to achieve a uniform anchor profile, ensuring all lifted edges of the coating are feathered back tight and to spot-coat the areas of steel exposure with a prime coat, intermediate coat, and finish coat to halt corrosion, prevent steel fatigue and to provide good protection for the steel and improve the aesthetics.

We recommend that the products used to complete these repairs be formulated for exterior exposure and to be applied in accordance with the product manufacturer's surface preparation and application recommendations.

A threaded plug was found installed within fourteen of the 2" diameter rigging hole penetrations in the roof, however one penetration adjacent to the 30" by 30" entry hatch and on the easternmost side of thew roof were found without plugs at the time of this inspection.

RECOMMENDATION(S): It is our recommendation to install a plug within each penetration in an effort to prevent the entry of surface water runoff.

Vent

A vent is located within the center of the roof, having a 12" inside diameter and stands 12" tall.

A 26" outside diameter steel cap prevents the entry of wind driven rain, snow and dust while a 4-mesh screen is installed on the underside of the vent and over the vent penetration in the roof at this time.

The protective coating applied to the exterior of the steel vent assembly was found having mostly good adhesion value at this time. Adhesion loss of the protective coating was observed throughout less than 5% of the vent exterior, resulting in exposure of the underling steel. No obvious fatigue of the steel was evident within these areas of exposure, rather mild corrosion exits at this time.

RECOMMENDATION(S): It is our recommendation to hand/power tool clean the exterior surfaces of the vent assembly showing steel exposure to bare metal to achieve a uniform anchor profile, ensuring all lifted edges of the coating are feathered back tight and to spot-coat these areas with a prime coat, intermediate coat and finish coat in an effort to halt corrosion, prevent steel fatigue and to provide good protection for the steel.

We recommend that the products used to complete these repairs be formulated for exterior exposure and to be applied in accordance with the product manufacturer's surface preparation and application recommendations.

Hatch

Three, 24" inside diameter hatches and one, 30" by 30" hatch provide access to the interior of the tank through the roof dome. Each hatch was found secured with a lock, preventing unwanted access to the interior of the tank. Each hatch has a solid watertight cover that overlaps an elevated trunk, preventing the entry of surface water runoff.

Only the hatch located on the easternmost side of the roof was opened and utilized to access the interior of the tank. This hatch was found in good working condition at this time.

The protective coating applied to the exterior of each hatch assembly was found having mostly good adhesion value at this time. Adhesion loss of the protective coating was observed throughout less than 5% of the exterior of each hatch assembly, resulting in exposure of the underling steel. No obvious fatigue of the steel was evident within these areas of exposure, rather mild corrosion exits at this time.

RECOMMENDATION(S): It is our recommendation to hand/power tool clean the exterior surfaces of the of each hatch assembly showing steel exposure to bare metal to achieve a uniform anchor profile, ensuring all lifted edges of the coating are feathered back tight and to spot-coat these areas with a prime coat, intermediate coat and finish coat in an effort to halt corrosion, prevent steel fatigue and to provide good protection for the steel.

We recommend that the products used to complete these repairs be formulated for exterior exposure and to be applied in accordance with the product manufacturer's surface preparation and application recommendations.

The protective coating applied to the interior of the easternmost and 30" by 30" hatch assembly was found having mostly good adhesion value at this time. Adhesion loss of the protective coating was observed throughout less than 5% of the interior of each of these two hatch assemblies, resulting in exposure of the underling steel. No obvious fatigue of the steel was evident within these areas of exposure, rather mild corrosion exits at this time.

RECOMMENDATION(S): It is our recommendation to hand/power tool clean the interior surfaces of the of each hatch assembly showing steel exposure to bare metal to achieve a uniform anchor profile, ensuring all lifted edges of the coating are feathered back tight and to spot-coat these areas with a prime coat, intermediate coat, and finish coat in an effort to halt corrosion, prevent steel fatigue and to provide good protection for the steel.

We recommend that the products used to complete these repairs be formulated for immersion (wet contact), have an A.N.S.I./N.S.F. 61 approval for use in structures containing potable water and to be applied in accordance with the product manufacturer's surface preparation and application recommendations.

The protective coating applied to the two remaining 24" inside diameter hatch assemblies appeared to have good adhesion value at this time.

RECOMMENDATION(S): None at this time.

INTERIOR INSPECTION:

The entire interior of this water storage tank was inspected, to include sediment accumulations, floor, manways, piping, walls, and coating, overhead, overflow, and aesthetic water quality.

Sediment Accumulations

A uniform layer of accumulated precipitate was found throughout the floor, averaging 1/4" in depth.

Upon completing this inspection, all precipitate was vacuumed from the floor.

Floor

After removing all accumulated precipitate, the steel floor panels, and associated welds were inspected and were found appearing sound and remain free of obvious fatigue or failure at this time.

The protective coating applied to the floor was found having mostly good adhesion valuer at this time. Adhesion loss of the protective coating was observed throughout approximately 15% of these surfaces, resulting in exposure of the underlying steel. No obvious fatigue of the steel was evident within these areas of exposure, rather mild to moderate corrosion exists at this time.

A mild stain/biofilm remains throughout the floor due to the accumulation of precipitate.

RECOMMENDATION(S): It is our recommendation to monitor the floor panel and weld surfaces showing steel exposure through future scheduled inspections to ensure that fatigue (pitting) of the steel does not occur and result in the potential for leakage.

It is also our recommendation that the next time this tank is removed from service and de-watered to hand/power tool clean the floor panel and weld surfaces showing coating fatigue to bare metal to achieve a uniform anchor profile, ensuring all lifted edges of the coating are feathered back and to spot-coat the areas of coating fatigue with a prime coat, intermediate coat and finish coat in an effort to halt corrosion, prevent steel fatigue and to provide good protection for the steel.

We recommend that the products used to complete these repairs be formulated for immersion (wet contact), have an A.N.S.I./N.S.F.61 approval for use in structures containing potable water and to be applied in accordance with the product manufacturer's surface preparation application recommendations.

Manways

Two manways penetrate the lowest row of wall panels on the northernmost and southernmost sides of the tank and are securely installed and free of obvious leakage.

The northernmost manway has 24" by 18" inside diameter and penetrates the wall panel 26" above the floor of the tank. The protective coating applied to the northernmost manway lid, trunk and davit hinge was found having mostly good adhesion value at this time. Adhesion loss (blistering) of the coating was observed throughout less than 5% of these surfaces, resulting in exposure of the underlying steel. No obvious fatigue of the steel was evident within these areas of exposure, rather mild corrosion exists at this time.

RECOMMENDATION(S): It is our recommendation that the next time this tank is removed from service and de-watered to hand/power tool clean the surfaces of the northernmost manway showing coating fatigue to bare metal to achieve a uniform anchor profile, ensuring all lifted edges of the coating are feathered back and to spot-coat the areas of coating fatigue with a prime coat, intermediate coat and finish coat in an effort to halt corrosion, prevent steel fatigue and to provide good protection for the steel.

We recommend that the products used to complete these repairs be formulated for immersion (wet contact), have an A.N.S.I./N.S.F.61 approval for use in structures containing potable water and to be applied in accordance with the product manufacturer's surface preparation application recommendations.

The southernmost manway has a 30" inside diameter and penetrates the wall panel 24" above the floor. The steel manway lid was found covered and sealed by a rubber gasket.

The protective coating applied to the steel manway trunk was found having good adhesion value at this time.

RECOMMENDATION(S): None at this time.

Piping

One pipe penetrates the floor 40" in from the wall on the northernmost side of the tank.

This pipe has a 12" inside diameter and extends up 16" to a "T" fitting. The 12" inside diameter pipe continues upward from the top of the "T" fitting and is supported to the wall of the tank with three welded standoffs and terminates 42' above the floor, having a cap and ¼" un-obstructed hole at its end. Three 6" inside diameter pipes extend outward 8" from the 12" inside diameter pipe to bolted flanges, each having a rubber (Tide Flex®) check valve installed on their ends. The top flange of this pipe was found having surface corrosion throughout its surfaces, yet no fatigue (pitting) was evident at this time.

The blind flange installed at the top of this pipe is un-coated and corrosion exists on all surfaces, yet this steel blind flange remains sound and free of obvious fatigue.

A 12" inside diameter pipe extends from the side of the "T" fitting across the floor and is supported in place with six sets of brackets. This pipe then extends through a 4-way cross section of pipe, located approximately 6' from the southernmost side of the tank. This 4-way cross pipe has an unobstructed grate and check valve on each side and a blind flange on its end.

All hardware associated with this piping was found securely installed and in sound condition.

The protective coating applied to this metal piping and associated supports remains having mostly good adhesion value, however isolated areas of surface corrosion was observed throughout the flanges that secure the pipe and check valve flanges and through the saddle clamp pipe supports, however no obvious fatigue of these metal surfaces was evident at this time.

Each effluent grate and associated check valve were free of obvious obstructions and without flow, while each rubber influent check valve was free of obvious obstructions and with flow entering the tank at the time of this inspection.

RECOMMENDATION(S): It is our recommendation that the next time this tank is removed from service and de-watered to hand/power tool clean the surfaces of the pipe assembly showing coating fatigue to bare metal to achieve a uniform anchor profile, ensuring all lifted edges of the coating are feathered back and to spot-coat the areas of coating fatigue with a prime coat, intermediate coat and finish coat in an effort to halt corrosion, prevent steel fatigue and to provide good protection for the metal piping and associated components.

We recommend that the products used to complete these repairs be formulated for immersion (wet contact), have an A.N.S.I./N.S.F.61 approval for use in structures containing potable water and to be applied in accordance with the product manufacturer's surface preparation application recommendations.

Walls And Coating

The interior walls were inspected beginning at the floor and by spiraling the circumference of the tank up to the water surface.

These steel wall panels and associated welds appeared sound and remain free of obvious fatigue or failure at this time.

The protective coating applied to these surfaces appeared to have been applied uniformly and remains having mostly good adhesion value at this time. Adhesion loss (blistering) of the coating was observed throughout less than 5% of these surfaces, resulting in exposure of the underlying steel. No obvious fatigue (pitting) of the steel was evident within these 1/8" to 1/4" diameter areas of steel exposure, rather mild surface corrosion exists at this time.

Rust staining was also observed throughout the upper three rows of wall panels, extending from where each angle iron overhead support is welded to the wall and extending from the areas of coating fatigue occurring throughout the overhead.

A mild stain/biofilm exists throughout the interior walls, beginning at overflow level and extends down to the floor.

RECOMMENDATION(S): It is our recommendation to monitor the wall surfaces showing steel exposure through future scheduled inspections to ensure that fatigue (pitting) of the steel does not occur and result in the potential for leakage.

It is also our recommendation that the next time this tank is removed from service and de-watered to hand/power tool clean the wall surfaces showing coating fatigue to bare metal to achieve a uniform anchor profile, ensuring all lifted edges of the coating are feathered back and to spot-coat the areas of coating fatigue with a prime coat, intermediate coat and finish coat in an effort to halt corrosion, prevent steel fatigue and to provide good protection for the steel.

We recommend that the products used to complete these repairs be formulated for immersion (wet contact), have an A.N.S.I./N.S.F.61 approval for use in structures containing potable water and to be applied in accordance with the product manufacturer's surface preparation application recommendations.

Overhead

The entire overhead was inspected from the water surface.

These steel overhead panels, welds and steel supports were found appearing sound and remain free of obvious fatigue or failure at this time.

The protective coating applied to these surfaces remains having mostly good adhesion value at this time. Decline (thinning) of the coating film thickness has caused corrosion bleed-though and minimal steel exposure throughout the panel and support edges and throughout the circumference of the rigging hole penetrations and was observed throughout the overhead, however no obvious fatigue of the steel was evident at this time.

RECOMMENDATION(S): It is our recommendation that the next time this tank is removed from service and de-watered to hand/power tool clean the overhead surfaces showing coating fatigue to bare metal to achieve a uniform anchor profile, ensuring all lifted edges of the coating are feathered back and to spot-coat the areas of coating fatigue with a prime coat, intermediate coat and finish coat in an effort to halt corrosion, prevent steel fatigue and to provide good protection for the steel.

We recommend that the products used to complete these repairs be formulated for immersion (wet contact), have an A.N.S.I./N.S.F.61 approval for use in structures containing potable water and to be applied in accordance with the product manufacturer's surface preparation application recommendations.

Overflow

The overflow consists of a 12" long by 4" tall cutout within the top wall panel, located 12" below the junction of where the roof and walls meet.

This overflow cutout was free of obvious obstructions at the time of this inspection.

RECOMMENDATION(S): None at this time.

Aesthetic Water Quality

The aesthetic water quality was good throughout the tank, allowing unlimited visibility for this inspection.

ADDITIONAL REMARKS/RECOMMENDATIONS:

We recommend that the next time this tank is removed from service and de-watered to pressure-wash the interior floor, wall and components surfaces within this tank at 3,500 P.S.I. using a 40° tip to remove the stain/biofilm from these surfaces.

Alternatively, we recommend washing the interior floor, wall and component surfaces using an NSF 60 approved cleaning agent to remove the stain/biofilm from these surfaces, followed by a clean water rinse to remove all cleaning residue.

We also recommendation installing an N.S.F. approved active mixer within this structure to improve overall water quality, reduce thermal stratification, reduce chemical stratification, and prevent ice cap formation.

CONCLUSION:

It is the opinion of Underwater Solutions Inc. that this welded steel potable water storage tank appeared mostly sound and free of obvious leakage at this time.

As always, we recommend that re-inspection and cleaning of all water storage facilities be performed in accordance with state and federal mandates, A.W.W.A. standards, and completed by an experienced and authorized inspection corporation.

UNDERWATER SOLUTIONS INC.

Christopher A. Cole, Project Manager

This report, the conclusions, recommendations, and comments prepared by Underwater Solutions Inc. are based upon spot examination from readily accessible parts of the tank. Should latent defects or conditions which vary significantly from those described in the report be discovered at a later date, these should be brought to the attention of a qualified individual at that time. These comments and recommendations should be viewed as information to be used by the Owner in determining the proper course of action and not to replace a complete set of specifications. All repairs should be done in accordance with A.W.W.A. and/or other applicable standards.

1 *Exterior Walls Having Exposed Steel And Corrosion*

2 *Exterior Walls Having Exposed Steel And Corrosion*

3 *Exterior Walls Having Exposed Steel And Corrosion*

4 *Exterior Walls Having Exposed Steel And Corrosion*

5 *Exterior Walls Having Exposed Steel And Corrosion*

6 *Exterior Walls Having Exposed Steel And Corrosion*

7 ***Exterior Walls Having Exposed Steel And Corrosion***

8 ***Exterior Walls Having Exposed Steel And Corrosion***

9 ***Exterior Walls Having Exposed Steel And Corrosion***

10 ***Exterior Walls Having Exposed Steel And Corrosion***

11 ***Exterior Walls Having Adhesion Loss Of The Finish Coat And An Exposed Underlying Coating***

12 ***Exterior Walls Having Adhesion Loss Of The Finish Coat And An Exposed Underlying Coating***

13 *Exterior Walls Having Adhesion Loss Of The Finish Coat And An Exposed Underlying Coating*

14 *Exterior Walls Having Adhesion Loss Of The Finish Coat And An Exposed Underlying Coating*

15 *Exterior Walls Having Adhesion Loss Of The Finish Coat And An Exposed Underlying Coating*

16 *Exterior Walls Having Adhesion Loss Of The Finish Coat And An Exposed Underlying Coating*

17 *Exposed Foundation Appearing Sound*

18 *Anchor Bolt Assembly Having Exposed Steel And Corrosion*

19 ***Anchor Bolt Assembly Having Exposed Steel And Corrosion***

20 ***Anchor Bolt Assembly Having Exposed Steel And Corrosion***

21 ***Anchor Bolt Assembly Having Exposed Steel And Corrosion***

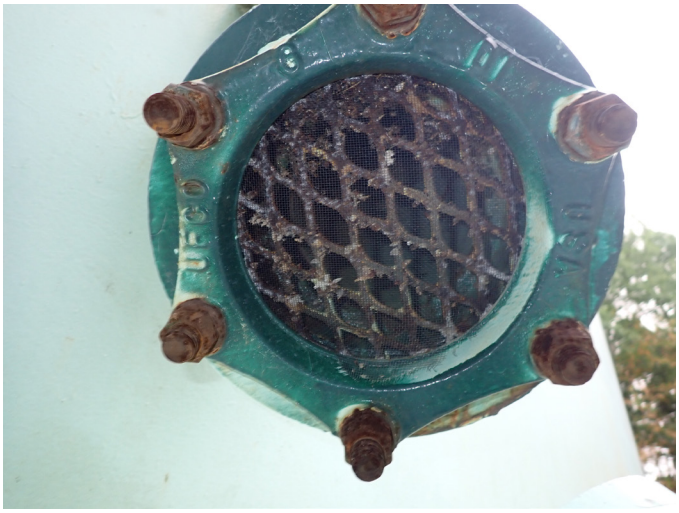
22 ***Northernmost Manway***

23 ***Southernmost Manway***

24 ***Overflow Weir Box And Pipe***

25 ***Overflow Pipe Terminating Above An Asphalt Splash-Pad***

26 ***Overflow Pipe Having Exposed Steel And Corrosion***



27 ***Unobstructed And Screened Overflow Pipe***

28 ***Ladder And Safety Cage***

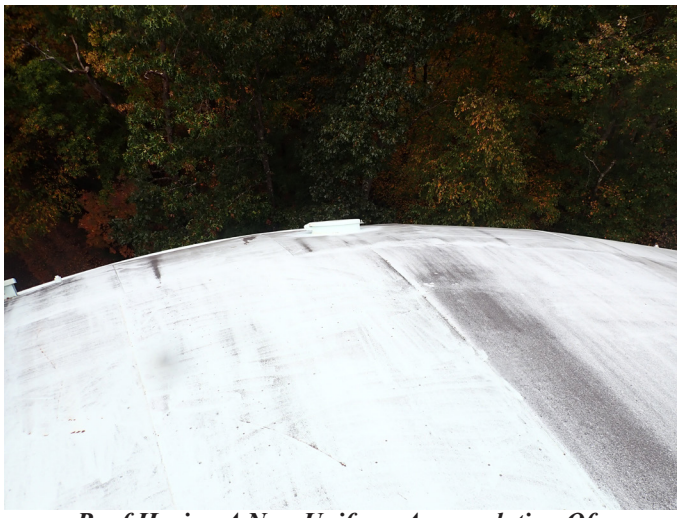
29 ***Security Fence Below The Ladder***

30 ***Ladder Extending To The Vent***

31 ***Ladder Having Exposed Steel And Corrosion***

32 ***Roof Having A Non-Uniform Accumulation Of Mildew***

33 ***Roof Having A Non-Uniform Accumulation Of Mildew***

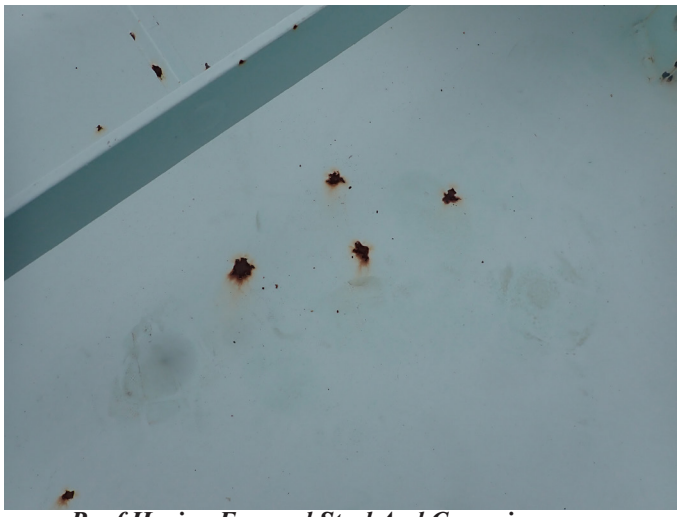


34 ***Roof Having A Non-Uniform Accumulation Of Mildew***

35 ***Roof Having Exposed Steel And Corrosion***

36 ***Roof Having Exposed Steel And Corrosion***

37 *Roof Having Exposed Steel And Corrosion*



38 *Roof Having Exposed Steel And Corrosion*

39 *Roof Having Exposed Steel And Corrosion*

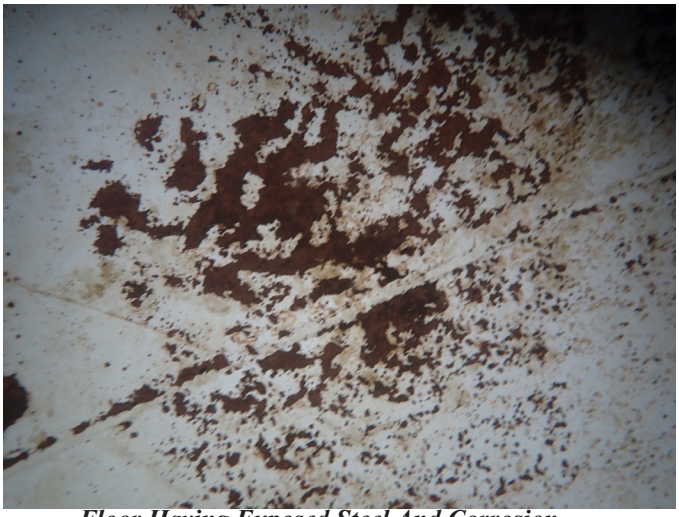
40 *Secured Vent Assembly*

41 *Secure 4-Mesh Vent Screen*

42 *Easternmost Hatch Opened*

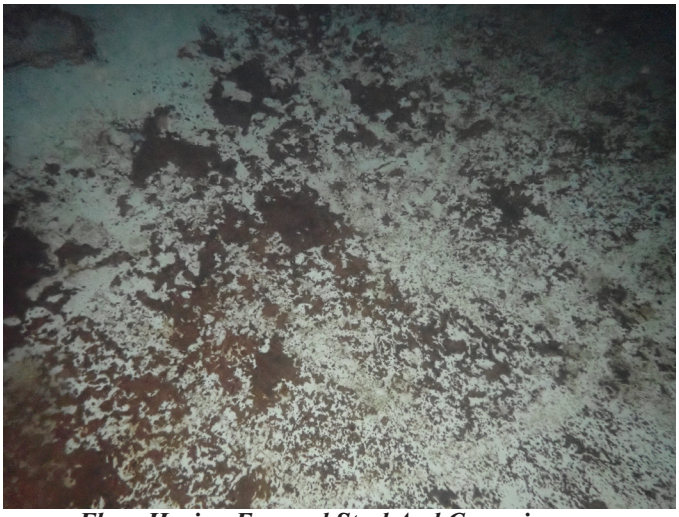
43 *Easternmost Hatch Closed*

44 *Floor Having Exposed Steel And Corrosion*

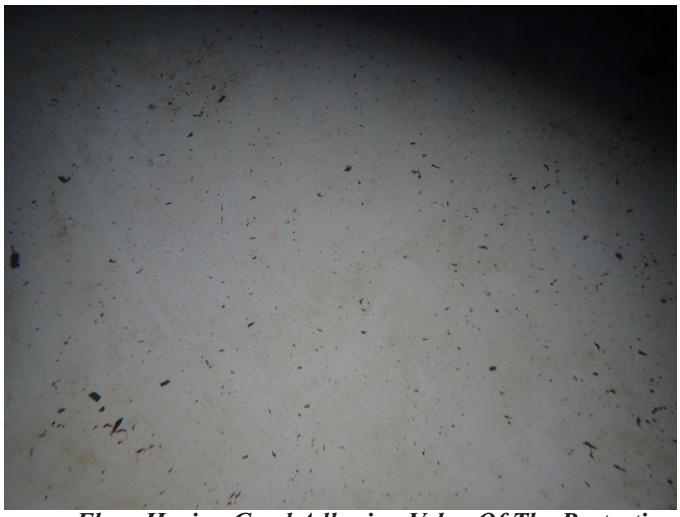


45 *Floor Having Exposed Steel And Corrosion*

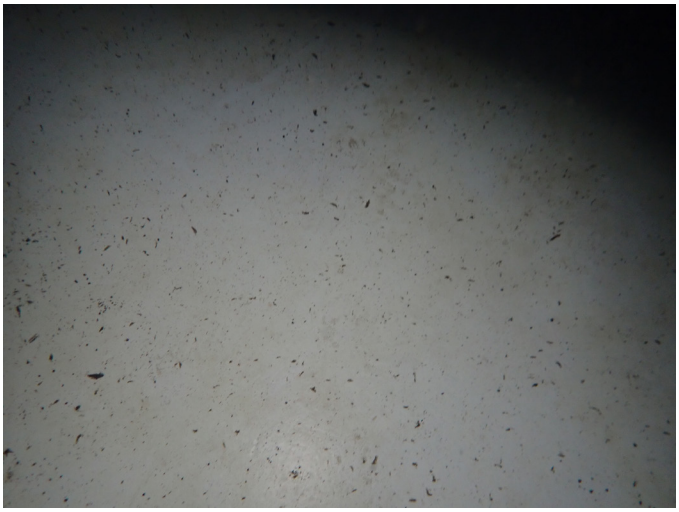
46 *Floor Having Exposed Steel And Corrosion*



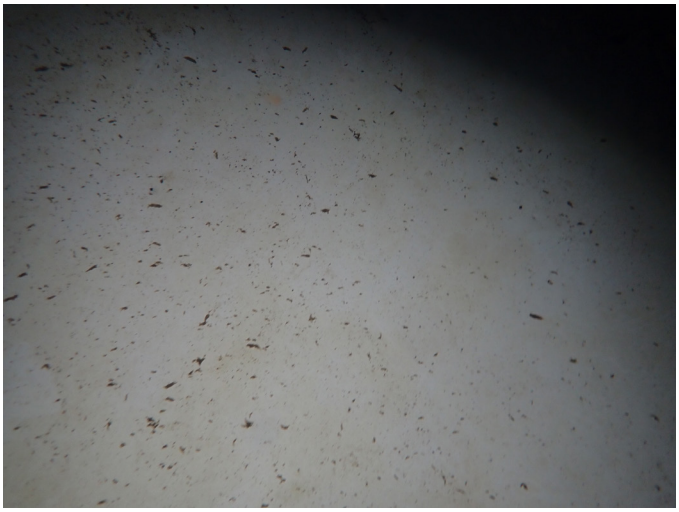
47 *Floor Having Exposed Steel And Corrosion*



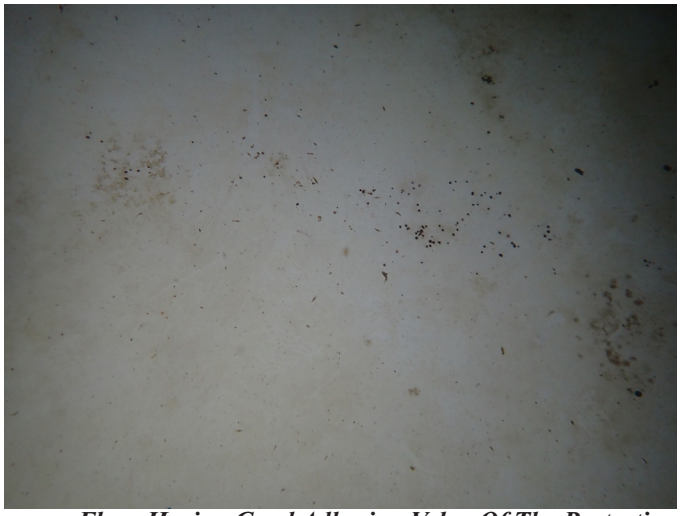
48 *Floor Having Good Adhesion Value Of The Protective Coating And A Mild Stain/Biofilm*



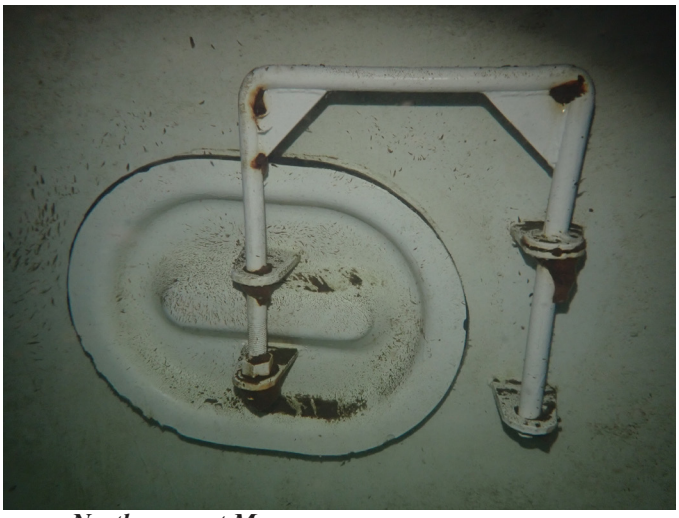
49 ***Floor Having Good Adhesion Value Of The Protective Coating And A Mild Stain/Biofilm***



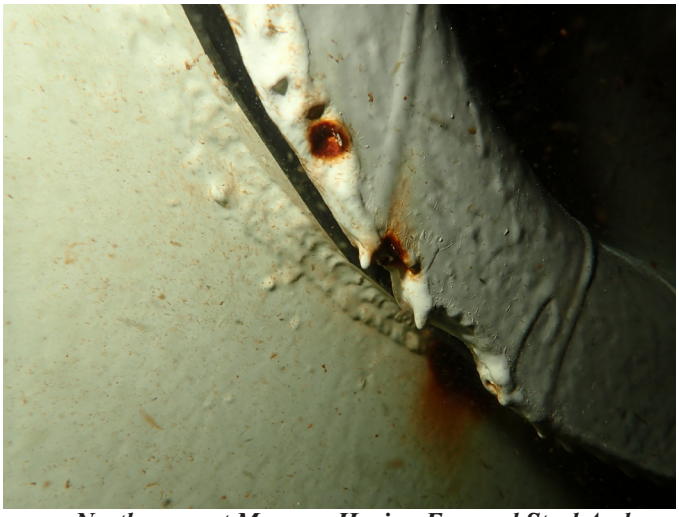
50 ***Floor Having Good Adhesion Value Of The Protective Coating And A Mild Stain/Biofilm***



51 ***Floor Having Good Adhesion Value Of The Protective Coating And A Mild Stain/Biofilm***

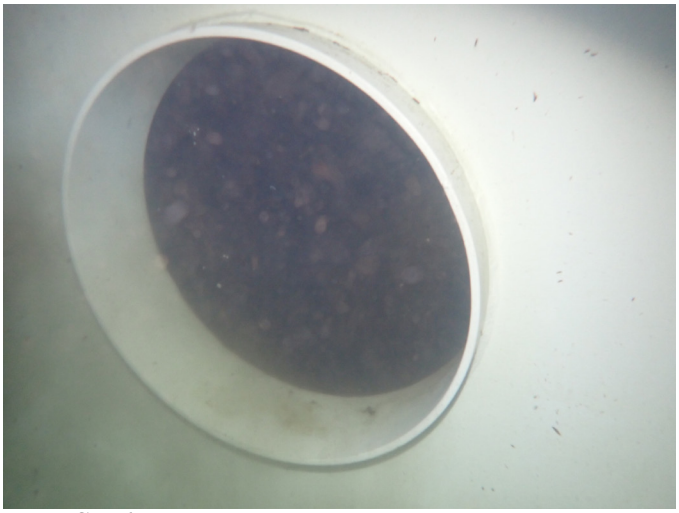


52 ***Northernmost Manway***



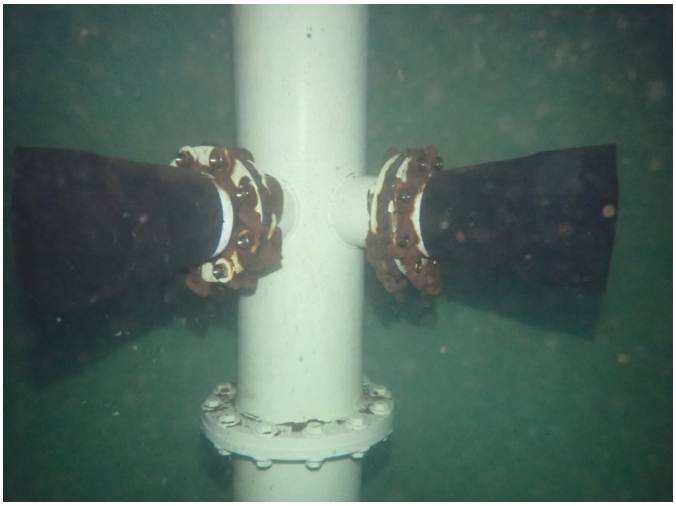
53 ***Northernmost Manway Having Exposed Steel And Corrosion***

54 ***Northernmost Manway Having Exposed Steel And Corrosion***



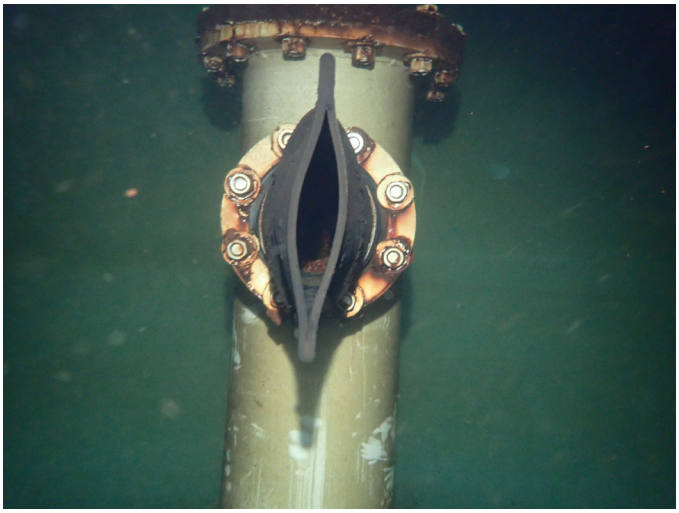
55 ***Southernmost Manway***

56 ***Pipe Penetrating The Floor***

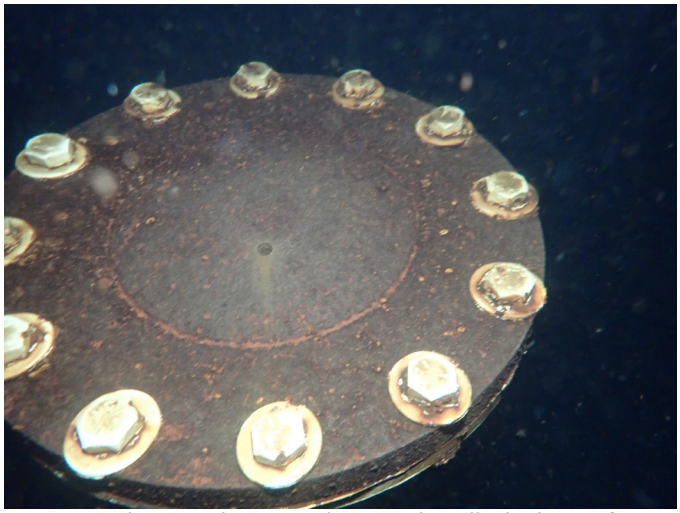


57 ***Unobstructed Rubber Check Valves***

58 ***Unobstructed Rubber Check Valves***

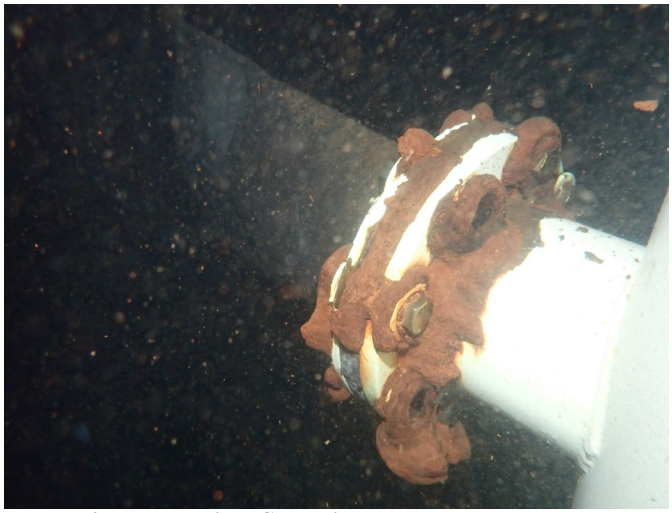


59 ***Unobstructed Rubber Check Valves***

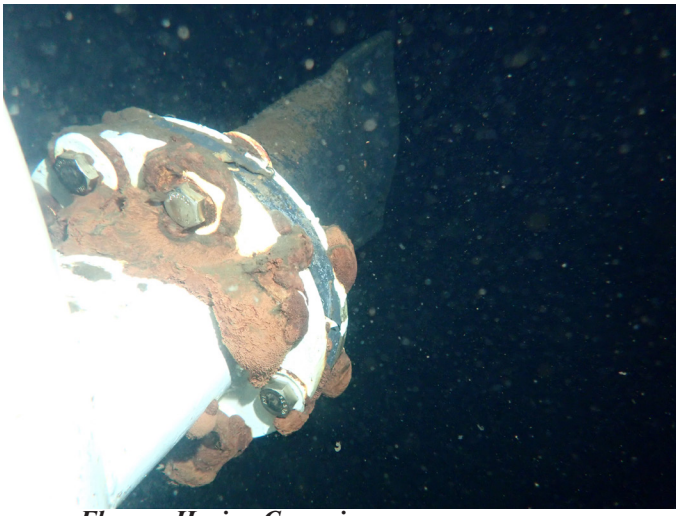


60 ***Unobstructed Penetration In The Blind Flange On The Top Of The Pipe***

61 *Flanges Having Corrosion*



62 *Flanges Having Corrosion*



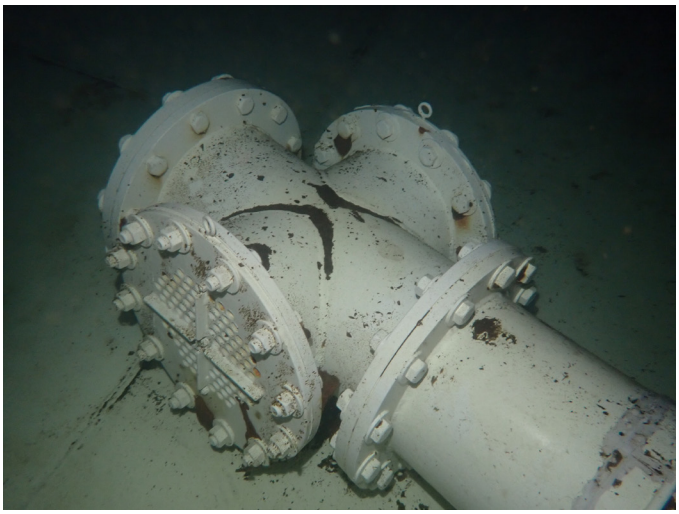
63 *Flanges Having Corrosion*

64 *Flanges Having Corrosion*

65 *Pipe Extending Across The Floor*

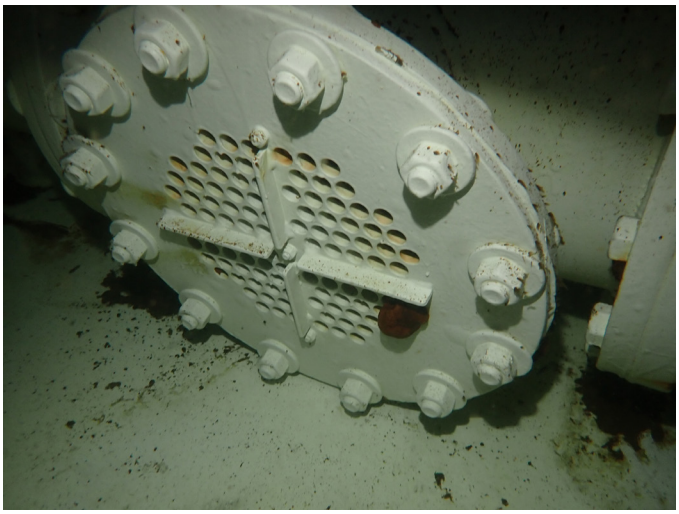
66 *Pipe Supported To The Floor*

67 *Pipe Support Having Exposed Steel And Corrosion*

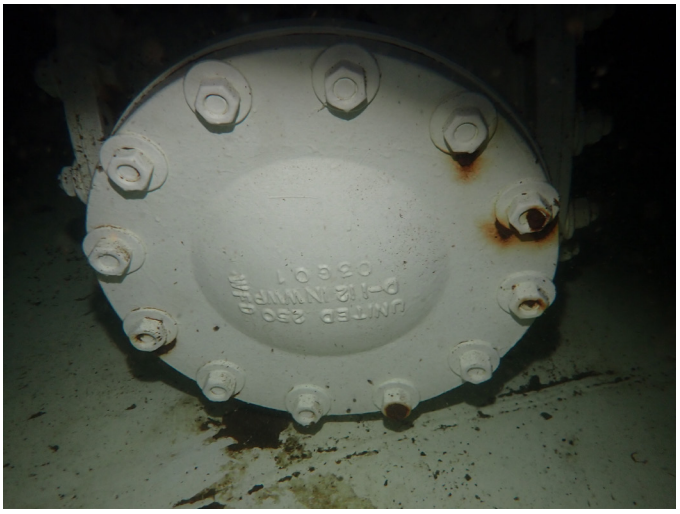


68 *"T" Fitting At The End Of The Pipe*

69 *Unobstructed Effluent Grate And Check Valve*



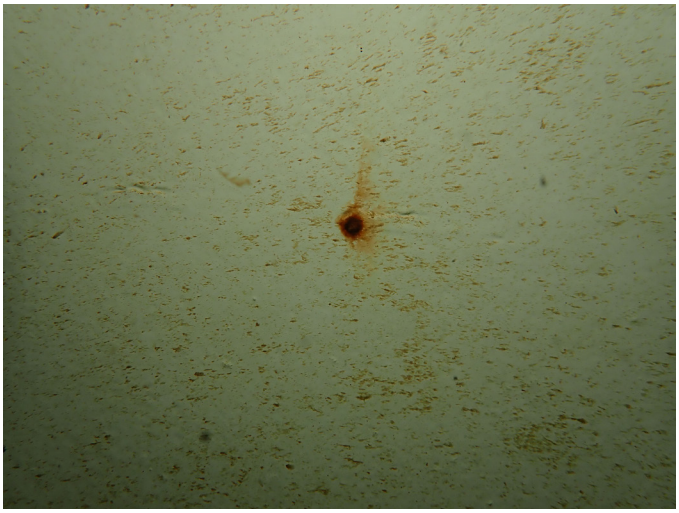
70 *Unobstructed Effluent Grate And Check Valve*



71 *Blind Flange At The End Of The Pipe*

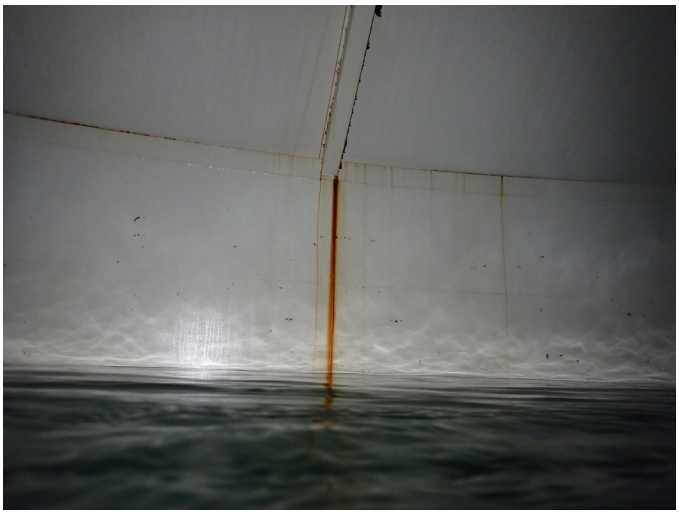
72 *Interior Walls Having Exposed Steel And Corrosion*

73 *Interior Walls Having Exposed Steel And Corrosion*



74 *Interior Walls Having Exposed Steel And Corrosion*

75 *Interior Walls Having Exposed Steel And Corrosion*



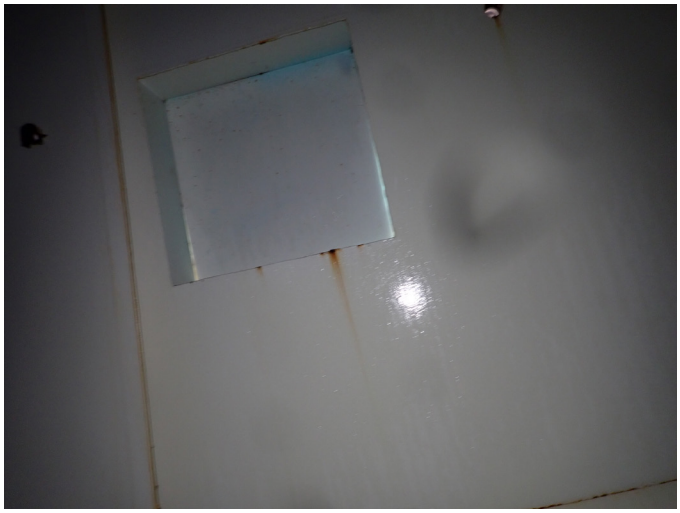
76 *Top Row Of Wall Panels Having A Rust Stain*

77 *Top Row Of Wall Panels Having A Rust Stain*

78 *Top Row Of Wall Panels Having A Rust Stain*

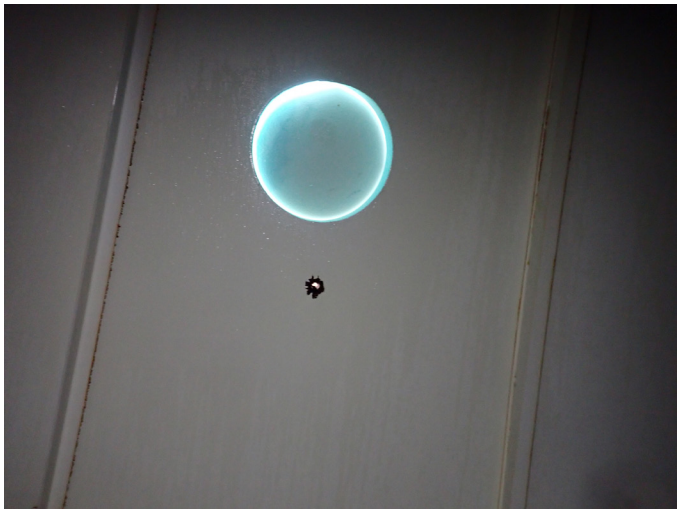
79 ***Overhead Having Declined Coating Film Thickness And Corrosion Bleed-Through And Minimal Steel Exposure***

80 ***Overhead Having Declined Coating Film Thickness And Corrosion Bleed-Through And Minimal Steel Exposure***



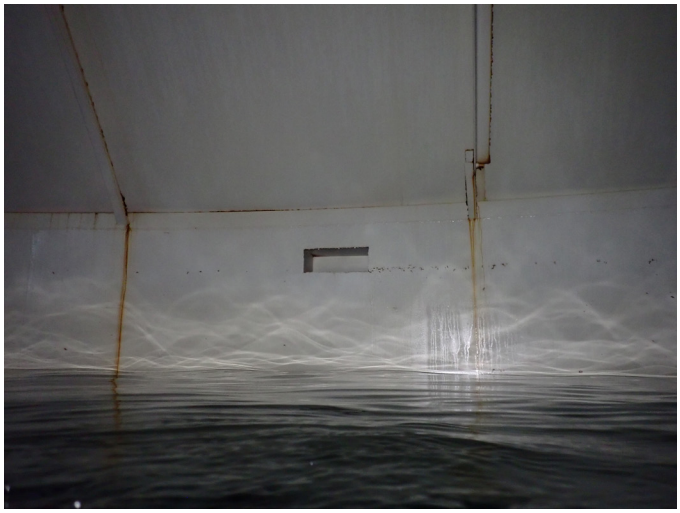
81 ***Overhead Having Declined Coating Film Thickness And Corrosion Bleed-Through And Minimal Steel Exposure***

82 ***Overhead Having Declined Coating Film Thickness And Corrosion Bleed-Through And Minimal Steel Exposure***



83 ***Overhead Having Declined Coating Film Thickness And Corrosion Bleed-Through And Minimal Steel Exposure***

84 ***Overhead Having Declined Coating Film Thickness And Corrosion Bleed-Through And Minimal Steel Exposure***



85 ***Unobstructed Overflow Cutout***

86 ***Discharge From Cleaning***

APPENDIX D

PUMPING STATION LOGS

Pump Station Log for 2016

	BOLAND PUMPED	HOSMER PUMPED	MONTHLY TOTALS	TOTALS	HIGHEST DAY	HIGHEST WEEK	CHLOR	BOLAND KWH	HOSMER KWH	TOTAL KWH	COMMENTS
							LAST TIME READS				
JAN	9,503,000	11,641,000	21,144,000	21,144,000	JAN 19 774,000	JAN 8 - 14 4,900,000	0	0	18,400	18,400	BOLAND READS Start read 68883 End read 80917
FEB	8,909,000	10,589,000	19,498,000	40,642,000	FEB 16 782,000	FEB 21 - 28 4,812,000	0	0	16,600	16,600	Start read 81321 End read 93287
MAR	9,381,500	11,238,000	20,619,500	61,261,500	MAR 13 774,000	MAR 8 - 14 4,976,000	0	0	17,800	17,800	Start Read 92722 End Read 4758
APR	10,834,000	11,686,000	22,520,000	83,781,500	APR. 28 1,123,000	APR 22 - 28 6,179,000	0	0	36,400	17,800	Start Read 5215 End Read 18275
MAY	14,764,000	19,069,000	33,833,000	117,614,500	MAY 28 1,663,000	MAY 22 - 28 9,470,000	0		26,700	26,700	Start Read 18600 End Read 36088
JUNE	24,378,000	27,963,000	52,341,000	169,955,500	JUNE 24 2,396,000	JUNE 22 - 28 15,409,000	0	0	33,900	33,900	Start Read 36870 End Read 65233
JULY	28,415,000	29,208,000	57,623,000	227,578,500	JULY 27 2,285,000	JULY 15 - 21 13,746,000	0	0	36,700	36,700	Start read 39346 End read 65836
AUG	28,219,000	27,659,000	55,878,000	283,456,500	AUG 8 2,164,000	AUG 22 - 28 12,693,000	0	0	31,900	31,900	Start read 895 End read 34563
SEPT	20,854,000	22,951,000	43,805,000	327,261,500	SEPT 22 2,041,000	SEPT 1 - 7 11,174,000	0	0	26,200	26,200	Start read 35620 End read 59868
OCT	11,374,000	16,149,000	27,523,000	354,784,500	OCT. 21 1,199,000	OCT 15 -21 6,853,000	0	0	21,700	21,700	Start read 60320 End read 73894
NOV	8,105,000	10,251,000	18,356,000	373,140,500	NOV. 6 727,000	NOV 1-7 4,389,000	0	0	15,600	15,600	Start read 74261 End read 84593
DEC	8,064,000	10,166,000	18,230,000	391,370,500	DEC 20 587,000	DEC 15 - 21 4,224,000	0	0	16,800	16,800	Start read 84948 End read 96516
TOTAL	182,800,500	208,570,000	391,370,500				0	0	298,700	298,700	

Pump Station Log for 2017

	BOLAND PUMPED	HOSMER PUMPED	MONTHLY TOTALS	TOTALS	HIGHEST DAY	HIGHEST WEEK	CHLOR	BOLAND KWH	HOSMER KWH	TOTAL KWH	COMMENTS
						LAST TIME READS					
					JAN 29	JAN 8 - 14					BOLAND READS
JAN	9,011,000	10,183,000	19,194,000	19,194,000	885,000	4,403,000	0	0	16,800	16,800	Start read 96817 End read 8371
					FEB 5	FEB 1 - 7					
FEB	9,388,000	9,036,000	18,424,000	37,618,000	793,000	4,576,000	0	0	31,200	31,200	Start read 8807 End read 20074
					MAR 20	MAR 1 - 7					
MAR	8,523,000	9,376,000	17,899,000	55,517,000	710,000	4,235,000	0	0	15,700	15,700	Start Read 20496 End Read 31244
					APR. 16	APR 22 - 28					
APR	9,817,000	10,611,000	20,428,000	75,945,000	927,000	5,473,000	0	0	17,200	17,200	Start Read 31432 End Read 43890
					MAY 21	MAY 15 - 21					
MAY	12,327,000	14,491,000	26,818,000	102,763,000	1,792,000	7,517,000	0		20,700	20,700	Start Read 44311 End Read 59219
					JUNE 30	JUNE 8 - 14					
JUNE	16,879,000	19,584,000	36,463,000	139,226,000	1,688,000	9,583,000	0	0	24,100	24,100	Start Read 59642 End Read 79546
					JULY 4	JULY 1 - 7					
JULY	20,569,000	21,761,000	42,330,000	181,556,000	1,641,000	10,414,000	0	0	27,800	27,800	Start read 80252 End read 3645
					AUG 26	AUG 22 - 28					
AUG	19,923,000	22,314,000	42,237,000	223,793,000	1,656,000	10,460,000	0	0	29,900	29,900	Start read 4597 End read 28900
					SEPT 1	SEPT 8 - 14					
SEPT	17,608,000	20,339,000	37,947,000	261,740,000	1,539,000	9,293,000	0	0	25,700	25,700	Start read 29748 End read 50010
					OCT. 5	OCT 1 -7					
OCT	14,224,000	16,991,000	31,215,000	292,955,000	1,359,000	8,955,000	0	0	16,700	16,700	Start read 50703 End read 67790
					NOV. 2	NOV 8-14					
NOV	8,353,000	11,269,000	19,622,000	312,577,000	790,000	4,951,000	0	0	20,400	20,400	Start read 68157 End read 79228
					DEC 9	DEC 15 - 21					
DEC	8,264,000	11,241,000	19,505,000	332,082,000	751,000	4,657,000	0	0	18,400	18,400	Start read 79607 End read 91199
TOTAL	154,886,000	177,196,000	332,082,000				0	0	264,600	264,600	
				max	1,792,000						

Pump Station Log for 2018

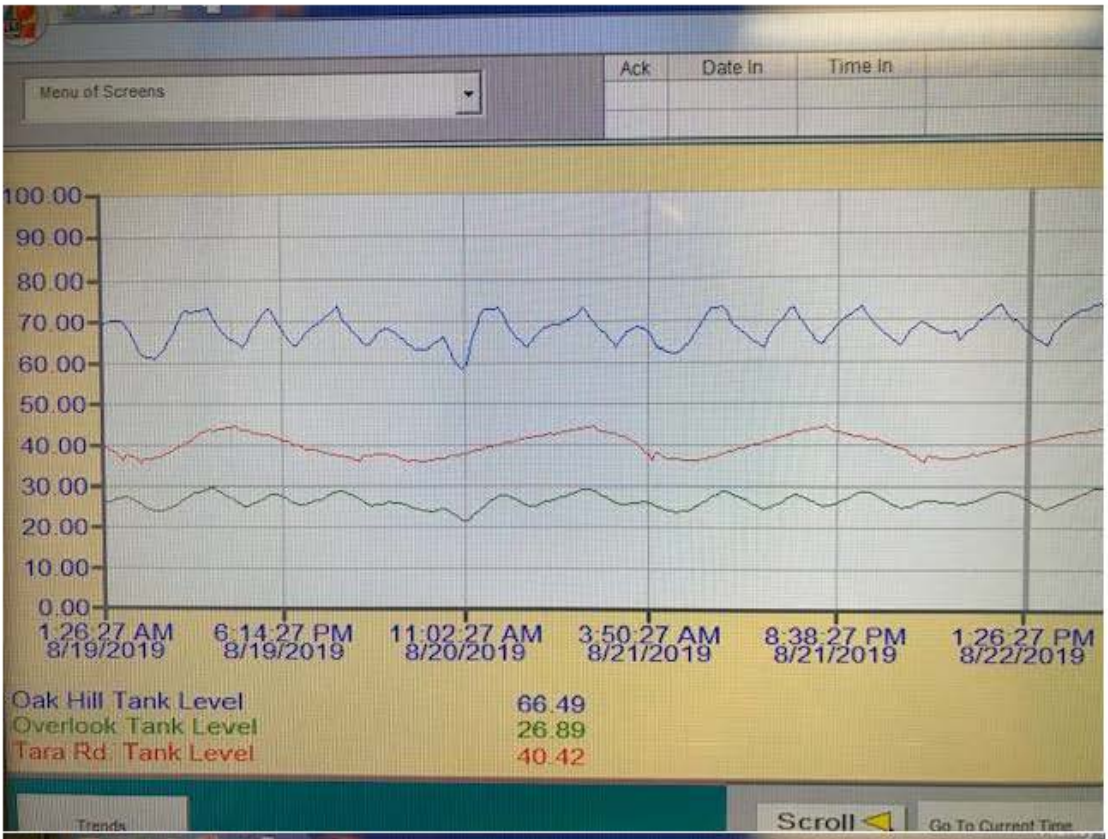
	BOLAND PUMPED	HOSMER PUMPED	MONTHLY TOTALS	TOTALS	HIGHEST DAY	HIGHEST WEEK	CHLOR	BOLAND KWH	HOSMER KWH	TOTAL KWH	COMMENTS
							LAST TIME READS				
					JAN 9	JAN 1 - 7					BOLAND READS
JAN	9,245,000	11,598,000	20,843,000	20,843,000	1,015,000	5,108,000	0	0	18,400	18,400	Start read 91900 End read 3
					FEB 5	FEB 8 - 14					
FEB	7,127,000	9,903,000	17,030,000	37,873,000	670,000	4,151,000	0	0	15,900	15,900	Start read 3461 End read 12
					MAR 5	MAR 22 - 28					
MAR	7,691,000	10,569,000	18,260,000	56,133,000	643,000	4,151,000	0	0	17,000	17,000	Start Read 13089 End Read
					APR. 24	APR 22 - 28					
APR	9,062,000	10,478,000	19,540,000	75,673,000	978,000	5,373,000	0	0	16,800	16,800	Start Read 23536 End Read
					MAY 31	MAY 22 - 28					
MAY	13,855,000	16,090,000	29,945,000	105,618,000	1,520,000	7,717,000	0		23,800	23,800	Start Read 35530 End Read
					JUNE 17	JUNE 15 - 21					
JUNE	20,819,000	22,988,000	43,807,000	149,425,000	1,899,000	11,899,000	0	0	30,300	30,300	Start Read 52848 End Read
					JULY 11	JULY 8 - 14					
JULY	25,631,000	26,472,000	52,103,000	201,528,000	2,140,000	13,748,000	0	0	33,800	33,800	Start read 79267 End read 1
					AUG 31	AUG 7 - 7					
AUG	19,851,000	21,073,000	40,924,000	242,452,000	1,806,000	10,266,000	0	0	28,000	28,000	Start read 11620 End read 3
					SEPT 2	SEPT 1 - 7					
SEPT	16,559,000	18,577,000	35,136,000	277,588,000	1,738,000	11,035,000	0	0	23,800	23,800	Start read 36979 End read 5
					OCT. 7	OCT 1 - 7					
OCT	10,562,000	13,404,000	23,966,000	301,554,000	909,000	5,991,000	0	0	16,800	16,800	Start read 57392 End read 7
					NOV. 22	NOV 22-28					
NOV	8,301,000	10,937,000	19,238,000	320,792,000	703,000	4,582,000	0	0	15,900	15,900	Start read 70810 End read 8
					DEC 5	DEC 8 - 14					
DEC	8,411,000	10,750,000	19,161,000	339,953,000	816,000	4,398,000	0	0	16,800	16,800	Start read 82100 End read 9
TOTAL	157,114,000	182,839,000	339,953,000				0	0	257,300	257,300	
				max	2,140,000						

Pump Station Log for 2019

	BOLAND PUMPED	HOSMER PUMPED	MONTHLY TOTALS	TOTALS	HIGHEST DAY	HIGHEST WEEK	CHLOR	BOLAND KWH	HOSMER KWH	TOTAL KWH	COMMENTS
							LAST TIME READS				
					Jan. 9	Jan. 8-14					BOLAND READS
JAN	8,466,000	10,830,000	19,296,000	19,296,000	963,000	4,511,000	0	0	255,900	255,900	Start read 94170 End read 05
					Feb. 7	Feb. 1-7					
FEB	7,612,000	10,384,000	17,996,000	28,380,000	813,000	4,859,000	0	0	16,100	16,100	Start read 5600 End read 157
					March 2	March 22-28					
MAR	8,715,000	11,256,000	19,971,000	48,351,000	932,000	4,635,000	0	0	27,300	27,300	Start Read 16083 End Read 2
					April 30	April 22-28					
APR	10,069,000	11,251,000	21,320,000	69,671,000	1,066,000	5,144,000	0	0	7,200	7,200	Start Read 27567 End Read 4
					May 2	May 22-28					
MAY	13,724,000	13,122,000	26,846,000	96,517,000	1,080,000	6,723,000	0		20,000	20,000	Start Read 40950 End Read 5
					June 7	June 22-28					
JUNE	16,642,000	16,561,000	33,203,000	129,720,000	1,336,000	8,446,000	0	0	24,100	24,100	Start Read 58483 End Read 7
					July 19	July 15-21					
JULY	21,294,000	22,233,000	43,527,000	173,247,000	2,007,000	10,447,000	0	0	27,900	27,900	Start read 78699 End read 05
					Aug 16	Aug 1 - 7					
AUG	22,485,000	21,577,000	44,062,000	217,309,000	1,705,000	10,553,000	0	0	32,700	32,700	Start read 5949 End read 335
					Sept 1	Sept 16 -21					
SEPT	18,896,000	17,353,000	36,249,000	253,558,000	1,607,000	9,064,000	0	0	24,900	24,900	Start read 24596 End read 57
					Oct 1	Oct. 1 - 7					
OCT	14,093,000	12,347,000	26,440,000	279,998,000	1,134,000	7,104,000	0	0	18,000	18,000	Start read 58635 End read 75
					Nov 6	Nov 1 - 7					
NOV	9,615,000	9,785,000	19,400,000	299,398,000	713,000	4,618,000	0	0	14,500	14,500	Start read 76076 End read 88
					Dec 19	Dec 15 - 21					
DEC	9,858,000	10,032,000	19,890,000	319,288,000	701,000	4,694,000	0	0	15,200	15,200	Start read 88826 End read 15
TOTAL	161,469,000	166,731,000	328,200,000				0	0	483,800	483,800	
				max	2,007,000						

APPENDIX E

TANK CHARTS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10.00
0.00
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6:14:27 PM 8/19/2019
11:02:27 AM 8/20/2019
3:50:27 AM 8/21/2019
8:38:27 PM 8/21/2019
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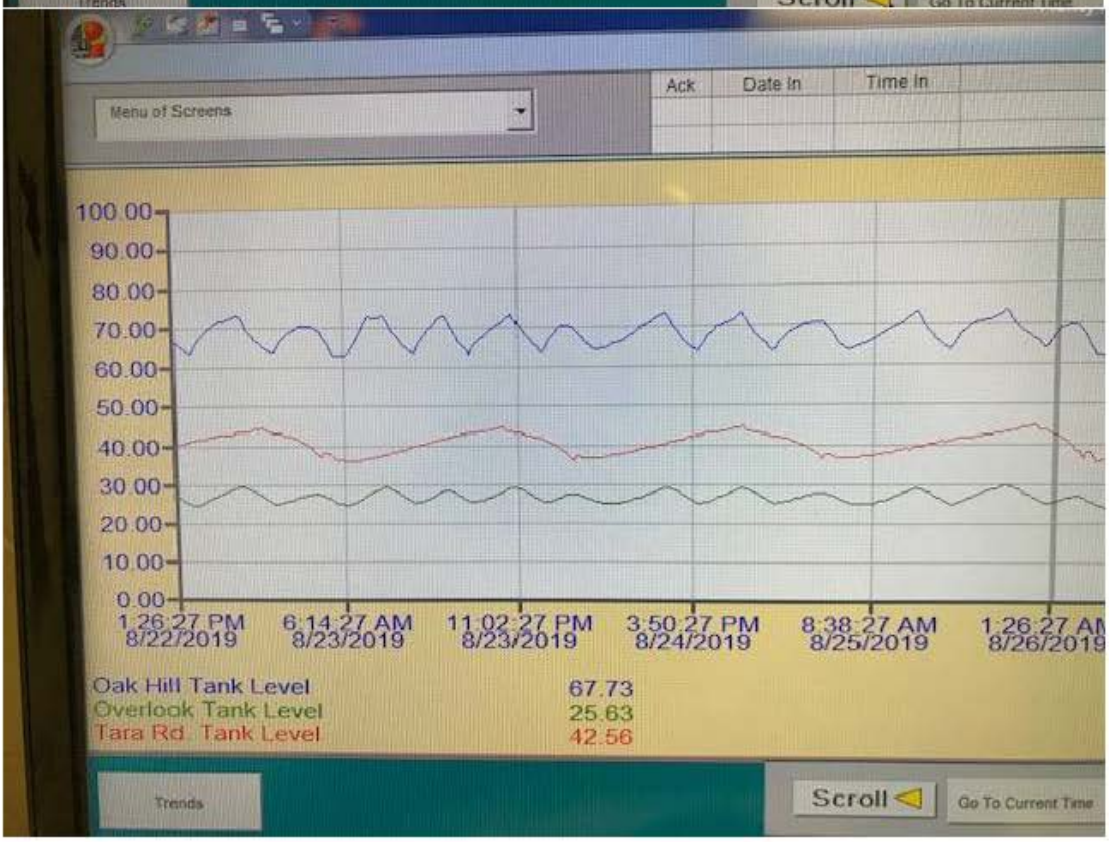
Oak Hill Tank Level 66.49
Overlook Tank Level 26.89
Tara Rd. Tank Level 40.42
Trends
Scroll
Go To Current Time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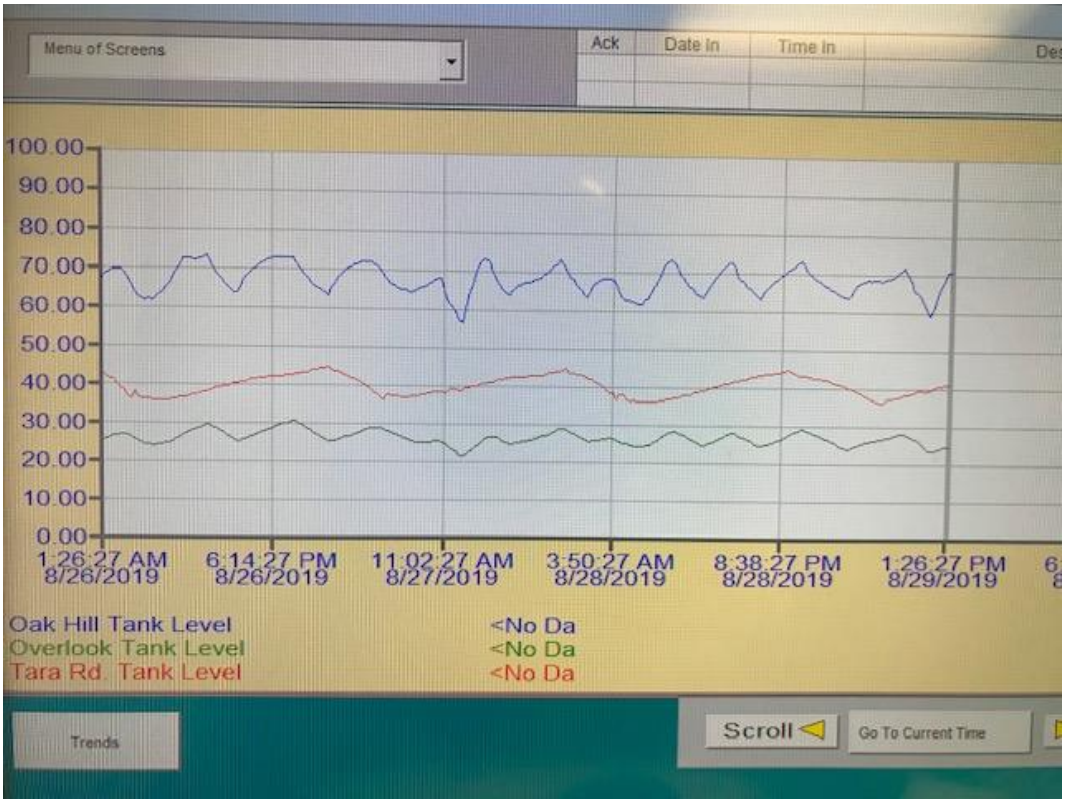
Tara Rd. Tank Level 42.56
Trends
Scroll
Go To Current Time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8:38:27 PM 8/28/2019
1:26:27 PM 8/29/2019
Oak Hill Tank Level <No Da
Overlook Tank Level <No Da
Tara Rd. Tank Level <No Da
Trends
Scroll
Go To Current Time

APPENDIX F

WATERGEMS MODEL OUTPUT REPORTS

(EXISTING CONDITIONS)

Active Scenario: Average Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-492	454.31	High Service	Fixed	23	0.00	508.11
J-99	454.14	High Service	Fixed	23	0.00	508.11
J-98	454.09	High Service	Fixed	23	0.30	508.11
J-189	450.90	High Service	Fixed	25	1.29	508.06
J-575	443.73	High Service	Fixed	28	0.59	508.30
J-645	442.00	High Service	Fixed	29	1.02	508.26
J-617	433.40	High Service	Fixed	32	0.00	508.14
J-616	432.82	High Service	Fixed	33	0.00	508.12
J-569	432.77	High Service	Fixed	33	0.00	508.12
J-92	432.80	High Service	Fixed	33	1.47	508.23
J-93	432.24	High Service	Fixed	33	1.50	508.23
J-42	429.80	High Service	Fixed	34	1.15	508.30
J-41	429.71	High Service	Fixed	34	0.49	508.30
J-346	434.86	High Service	Fixed	34	0.48	513.59
J-654	430.41	High Service	Fixed	35	1.43	511.55
J-478	422.78	High Service	Fixed	37	0.39	508.24
J-343	428.08	High Service	Fixed	37	0.61	513.59
J-200	421.49	High Service	Fixed	38	1.15	508.24
J-199	421.00	High Service	Fixed	38	0.49	508.24
J-107	425.26	High Service	Fixed	38	1.10	513.59
J-106	425.20	High Service	Fixed	38	0.60	513.59
J-131	418.68	High Service	Fixed	39	1.77	508.23
J-130	417.77	High Service	Fixed	39	0.30	508.23
J-452	422.38	High Service	Fixed	39	0.66	513.59
J-342	421.14	High Service	Fixed	40	0.51	513.59
J-571	415.51	High Service	Fixed	40	1.09	508.26
J-638	414.27	High Service	Fixed	42	1.75	511.55
J-639	414.04	High Service	Fixed	42	1.74	511.55
J-694	416.00	High Service	Fixed	42	0.92	513.59
J-611	406.03	High Service	Fixed	44	1.45	508.38
J-423	411.16	High Service	Fixed	44	0.58	513.59
J-379	404.81	High Service	Fixed	45	0.56	508.20
J-378	404.39	High Service	Fixed	45	0.00	508.20
J-247	401.49	High Service	Fixed	46	0.42	508.20
J-570	398.67	High Service	Fixed	47	2.34	508.27
J-462	398.21	High Service	Fixed	48	0.00	508.19
J-610	395.42	High Service	Fixed	49	0.30	508.38
J-846	395.08	High Service	Fixed	49	0.61	508.31
J-628	391.61	High Service	Fixed	50	0.00	508.22
J-393	391.00	High Service	Fixed	51	2.36	508.20
J-422	394.58	High Service	Fixed	51	0.99	513.59
J-183	388.00	High Service	Fixed	52	0.51	508.20
J-544	387.66	High Service	Fixed	52	0.00	508.20
J-652	388.14	High Service	Fixed	53	2.28	510.28
J-713	385.67	High Service	Fixed	53	5.06	508.27
J-629	387.93	High Service	Fixed	53	0.62	511.55

Active Scenario: Average Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-100	384.34	High Service	Fixed	54	0.00	508.27
J-668	384.00	High Service	Fixed	54	0.80	509.08
J-785	385.14	High Service	Fixed	55	2.61	511.55
J-248	381.76	High Service	Fixed	55	0.00	508.20
J-463	380.94	High Service	Fixed	55	0.00	508.20
J-444	386.09	High Service	Fixed	55	0.00	513.59
J-717	380.75	High Service	Fixed	55	0.00	508.27
J-101	380.69	High Service	Fixed	55	0.42	508.27
J-712	380.32	High Service	Fixed	55	0.00	508.27
J-222	380.20	High Service	Fixed	56	0.48	509.08
J-669	380.11	High Service	Fixed	56	0.69	509.08
J-184	377.12	High Service	Fixed	57	0.00	508.20
J-693	381.63	High Service	Fixed	57	0.00	513.59
J-482	373.41	High Service	Fixed	58	0.41	508.31
J-791	372.34	High Service	Fixed	59	1.89	508.20
J-760	372.11	High Service	Fixed	59	2.82	508.20
J-406	371.87	High Service	Fixed	59	1.47	508.31
J-647	371.61	High Service	Fixed	59	0.77	508.25
J-161	374.38	High Service	Fixed	59	2.21	511.55
J-511	371.02	High Service	Fixed	59	0.00	508.22
J-443	376.17	High Service	Fixed	59	0.00	513.59
J-223	371.21	High Service	Fixed	60	0.00	509.09
J-298	373.45	High Service	Fixed	60	0.00	511.55
J-755	368.98	High Service	Fixed	60	1.31	508.20
J-162	371.38	High Service	Fixed	61	2.04	511.55
J-405	368.00	High Service	Fixed	61	1.96	508.31
J-297	371.00	High Service	Fixed	61	1.35	511.55
J-718	366.82	High Service	Fixed	61	0.00	508.27
J-287	368.79	High Service	Fixed	62	0.78	511.55
J-483	365.11	High Service	Fixed	62	0.94	508.24
J-715	363.53	High Service	Fixed	63	0.00	508.27
J-680	363.00	High Service	Fixed	63	0.00	508.27
J-362	362.71	High Service	Fixed	63	0.91	508.20
J-676	362.77	High Service	Fixed	63	1.44	508.69
J-745	361.79	High Service	Fixed	63	0.00	508.31
J-523	361.28	High Service	Fixed	64	0.00	508.27
J-481	361.14	High Service	Fixed	64	0.00	508.31
J-479	361.00	High Service	Fixed	64	0.00	508.27
J-261	360.78	High Service	Fixed	64	0.00	508.27
J-317	360.69	High Service	Fixed	64	0.00	508.27
J-170	360.00	High Service	Fixed	64	0.00	508.24
J-262	360.00	High Service	Fixed	64	0.00	508.27
J-169	359.32	High Service	Fixed	64	0.00	508.24
J-714	358.58	High Service	Fixed	65	0.00	508.27
J-167	358.00	High Service	Fixed	65	0.00	508.27
J-180	358.00	High Service	Fixed	65	0.00	508.27

Active Scenario: Average Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-318	357.62	High Service	Fixed	65	0.00	508.27
J-23	357.00	High Service	Fixed	65	0.78	508.27
J-24	356.98	High Service	Fixed	65	0.00	508.27
J-230	355.09	High Service	Fixed	66	0.00	508.24
J-427	355.00	High Service	Fixed	66	0.00	508.27
J-288	356.93	High Service	Fixed	67	2.31	511.55
J-615	352.38	High Service	Fixed	67	1.72	508.27
J-426	352.28	High Service	Fixed	67	0.00	508.27
J-522	352.27	High Service	Fixed	67	0.00	508.27
J-484	351.91	High Service	Fixed	68	1.43	508.23
J-361	351.85	High Service	Fixed	68	0.39	508.20
J-852	350.64	High Service	Fixed	68	0.00	508.27
J-605	350.00	High Service	Fixed	68	0.00	508.24
J-851	353.00	High Service	Fixed	69	2.74	511.90
J-744	346.41	High Service	Fixed	70	1.51	508.32
J-596	345.00	High Service	Fixed	71	0.44	508.31
J-788	344.37	High Service	Fixed	71	2.30	509.02
J-809	343.60	High Service	Fixed	71	0.00	508.31
J-816	343.43	High Service	Fixed	72	1.85	509.02
J-641	340.75	High Service	Fixed	72	0.99	508.19
J-742	343.47	High Service	Fixed	73	0.00	511.36
J-635	340.10	High Service	Fixed	73	2.14	508.91
J-154	344.19	High Service	Fixed	73	0.46	513.59
J-834	337.96	High Service	Fixed	74	1.02	508.20
J-145	338.56	High Service	Fixed	74	0.28	509.04
J-74	338.49	High Service	Fixed	74	0.00	509.04
J-795	342.79	High Service	Fixed	74	0.00	513.59
J-677	338.12	High Service	Fixed	74	0.00	509.04
J-144	337.95	High Service	Fixed	74	0.00	509.04
J-75	337.75	High Service	Fixed	74	0.21	509.04
J-794	341.38	High Service	Fixed	75	5.23	513.59
J-110	336.81	High Service	Fixed	75	0.58	509.03
J-579	336.17	High Service	Fixed	75	0.00	509.03
J-707	336.13	High Service	Fixed	75	1.96	509.02
J-687	335.28	High Service	Fixed	75	0.74	508.20
J-836	335.57	High Service	Fixed	75	0.00	509.03
J-625	334.69	High Service	Fixed	75	0.00	508.27
J-111	335.00	High Service	Fixed	75	0.41	509.03
J-355	334.00	High Service	Fixed	75	0.00	508.27
J-356	334.00	High Service	Fixed	75	0.00	508.27
J-651	336.00	High Service	Fixed	75	0.26	510.28
J-400	334.74	High Service	Fixed	75	1.64	509.03
J-733	333.95	High Service	Fixed	75	4.78	508.27
J-531	334.53	High Service	Fixed	75	0.00	509.02
J-153	339.00	High Service	Fixed	76	0.00	513.59
J-399	334.08	High Service	Fixed	76	0.53	509.03

Active Scenario: Average Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-196	338.53	High Service	Fixed	76	0.22	513.59
J-187	332.67	High Service	Fixed	76	1.66	508.27
J-195	337.74	High Service	Fixed	76	0.71	513.59
J-532	333.00	High Service	Fixed	76	0.57	509.02
J-587	331.62	High Service	Fixed	76	1.08	508.25
J-188	330.78	High Service	Fixed	77	0.00	508.27
J-688	328.97	High Service	Fixed	78	0.59	508.20
J-582	328.62	High Service	Fixed	78	0.97	508.20
J-586	327.91	High Service	Fixed	78	0.49	508.25
J-833	327.91	High Service	Fixed	78	0.91	509.02
J-276	332.15	High Service	Fixed	79	0.38	513.59
J-685	326.20	High Service	Fixed	79	2.41	508.27
J-94	324.00	High Service	Fixed	80	0.42	508.20
J-95	324.00	High Service	Fixed	80	0.30	508.20
J-740	324.00	High Service	Fixed	80	0.00	508.20
J-666	323.00	High Service	Fixed	80	0.49	508.20
J-771	323.61	High Service	Fixed	80	2.14	508.91
J-695	322.34	High Service	Fixed	80	0.68	508.23
J-501	332.31	High Service	Fixed	81	1.28	518.61
J-217	326.91	High Service	Fixed	81	0.70	513.59
J-502	321.20	High Service	Fixed	81	0.77	508.20
J-603	321.39	High Service	Fixed	81	1.83	508.51
J-614	321.00	High Service	Fixed	81	0.00	508.27
J-28	321.50	High Service	Fixed	81	1.33	509.02
J-500	331.02	High Service	Fixed	81	0.00	518.61
J-27	321.34	High Service	Fixed	81	1.37	509.02
J-338	321.00	High Service	Fixed	81	1.07	509.02
J-295	320.13	High Service	Fixed	81	0.00	508.27
J-267	320.00	High Service	Fixed	81	0.31	508.27
J-622	323.07	High Service	Fixed	82	1.93	511.54
J-266	319.56	High Service	Fixed	82	1.12	508.27
J-296	319.54	High Service	Fixed	82	0.00	508.27
J-782	319.29	High Service	Fixed	82	0.71	508.20
J-339	320.00	High Service	Fixed	82	1.09	509.02
J-813	318.95	High Service	Fixed	82	1.49	508.28
J-807	318.73	High Service	Fixed	82	0.38	508.27
J-555	318.37	High Service	Fixed	82	0.00	508.27
J-787	319.00	High Service	Fixed	82	0.98	509.02
J-556	318.19	High Service	Fixed	82	1.23	508.27
J-808	317.83	High Service	Fixed	82	0.00	508.29
J-218	322.93	High Service	Fixed	82	0.29	513.59
J-503	317.42	High Service	Fixed	83	1.78	508.20
J-657	319.37	High Service	Fixed	83	3.60	511.55
J-799	318.93	High Service	Fixed	83	1.89	511.56
J-656	325.46	High Service	Fixed	84	2.17	518.60
J-391	318.00	High Service	Fixed	84	0.44	511.37

Active Scenario: Average Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-815	324.78	High Service	Fixed	84	1.06	518.60
J-455	291.00	High Service	Fixed	84	0.41	485.52
J-524	291.00	High Service	Fixed	84	0.00	485.52
J-583	313.13	High Service	Fixed	84	1.06	508.20
J-769	312.79	High Service	Fixed	85	2.36	508.19
J-779	312.17	High Service	Fixed	85	0.99	508.19
J-741	314.95	High Service	Fixed	85	12.29	511.34
J-653	312.00	High Service	Fixed	85	2.48	508.69
J-37	311.00	High Service	Fixed	85	1.02	508.19
J-38	311.00	High Service	Fixed	85	0.65	508.19
J-701	311.53	High Service	Fixed	85	2.05	508.95
J-758	311.28	High Service	Fixed	86	1.50	509.19
J-781	310.55	High Service	Fixed	86	1.02	508.65
J-104	310.47	High Service	Fixed	86	0.52	508.65
J-577	312.65	High Service	Fixed	86	0.82	512.33
J-274	308.50	High Service	Fixed	86	1.97	508.35
J-105	308.40	High Service	Fixed	87	1.02	508.65
J-589	284.69	High Service	Fixed	87	2.11	485.51
J-164	312.66	High Service	Fixed	87	3.76	513.59
J-765	307.57	High Service	Fixed	87	0.94	508.97
J-590	283.71	High Service	Fixed	87	0.97	485.51
J-163	311.64	High Service	Fixed	87	0.84	513.59
J-784	311.62	High Service	Fixed	87	3.28	513.59
J-631	309.06	High Service	Fixed	88	1.74	511.37
J-380	305.73	High Service	Fixed	88	0.82	508.20
J-766	304.98	High Service	Fixed	88	0.39	508.19
J-381	304.94	High Service	Fixed	88	1.22	508.19
J-229	304.77	High Service	Fixed	88	1.00	508.20
J-825	314.97	High Service	Fixed	88	3.36	518.60
J-642	304.45	High Service	Fixed	88	0.90	508.20
J-819	304.05	High Service	Fixed	88	0.00	508.20
J-757	303.87	High Service	Fixed	88	0.65	508.20
J-754	303.46	High Service	Fixed	89	0.00	508.20
J-279	306.72	High Service	Fixed	89	1.55	511.54
J-280	306.29	High Service	Fixed	89	1.76	511.53
J-621	306.13	High Service	Fixed	89	1.67	511.54
J-598	306.11	High Service	Fixed	89	1.95	511.54
J-228	301.87	High Service	Fixed	89	1.90	508.20
J-419	304.80	High Service	Fixed	89	1.25	511.55
J-273	301.00	High Service	Fixed	90	0.55	508.38
J-847	303.53	High Service	Fixed	90	3.80	511.54
J-320	299.65	High Service	Fixed	90	0.32	508.32
J-83	298.43	High Service	Fixed	91	0.00	508.31
J-260	301.38	High Service	Fixed	91	1.82	511.37
J-259	301.06	High Service	Fixed	91	0.00	511.37
J-237	301.00	High Service	Fixed	91	0.00	511.37

Active Scenario: Average Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-127	300.87	High Service	Fixed	91	0.00	511.37
J-126	300.81	High Service	Fixed	91	0.00	511.37
J-626	307.53	High Service	Fixed	91	0.00	518.61
J-82	297.19	High Service	Fixed	91	0.35	508.31
J-648	296.75	High Service	Fixed	91	1.54	508.19
J-803	306.90	High Service	Fixed	92	0.00	518.61
J-392	299.57	High Service	Fixed	92	0.00	511.37
J-698	306.63	High Service	Fixed	92	0.00	518.61
J-602	296.63	High Service	Fixed	92	1.02	508.70
J-655	305.73	High Service	Fixed	92	2.76	518.60
J-284	295.14	High Service	Fixed	92	0.31	508.20
J-420	298.29	High Service	Fixed	92	0.62	511.55
J-210	300.33	High Service	Fixed	92	0.30	513.59
J-774	305.00	High Service	Fixed	92	2.10	518.60
J-209	299.73	High Service	Fixed	93	0.43	513.59
J-553	304.56	High Service	Fixed	93	0.86	518.60
J-768	297.28	High Service	Fixed	93	1.17	511.37
J-173	293.92	High Service	Fixed	93	0.00	508.32
J-64	293.12	High Service	Fixed	93	0.00	508.32
J-576	296.79	High Service	Fixed	93	2.37	512.33
J-319	292.73	High Service	Fixed	93	0.00	508.32
J-830	297.99	High Service	Fixed	93	0.51	513.59
J-667	297.92	High Service	Fixed	93	0.00	513.59
J-63	292.56	High Service	Fixed	93	0.00	508.32
J-282	302.84	High Service	Fixed	93	1.18	518.61
J-633	296.00	High Service	Fixed	93	3.65	511.90
J-211	302.56	High Service	Fixed	93	0.00	518.61
J-257	302.48	High Service	Fixed	94	0.00	518.61
J-281	302.11	High Service	Fixed	94	0.00	518.61
J-212	302.00	High Service	Fixed	94	0.00	518.61
J-258	302.00	High Service	Fixed	94	0.00	518.61
J-235	291.00	High Service	Fixed	94	0.48	508.37
J-256	290.25	High Service	Fixed	94	2.72	508.38
J-335	290.00	High Service	Fixed	94	1.27	508.38
J-804	300.11	High Service	Fixed	95	0.00	518.61
J-236	289.27	High Service	Fixed	95	0.47	508.37
J-778	288.96	High Service	Fixed	95	0.24	508.59
J-554	298.95	High Service	Fixed	95	4.71	518.60
J-837	288.00	High Service	Fixed	95	0.61	508.59
J-584	297.92	High Service	Fixed	95	0.89	518.61
J-686	286.63	High Service	Fixed	96	1.61	508.42
J-238	286.97	High Service	Fixed	97	0.00	511.37
J-525	284.36	High Service	Fixed	97	0.00	508.91
J-697	288.62	High Service	Fixed	97	4.99	513.40
J-526	283.07	High Service	Fixed	98	0.00	508.90
J-255	282.52	High Service	Fixed	98	3.67	508.38

Active Scenario: Average Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-739	282.10	High Service	Fixed	98	0.37	508.36
J-498	281.80	High Service	Fixed	98	0.54	508.38
J-838	291.90	High Service	Fixed	98	0.47	518.61
J-585	291.85	High Service	Fixed	98	1.63	518.61
J-564	280.92	High Service	Fixed	98	1.09	508.38
J-325	285.29	High Service	Fixed	99	1.08	513.59
J-510	280.55	High Service	Fixed	99	0.00	508.88
J-691	283.35	High Service	Fixed	99	0.00	512.72
J-780	281.72	High Service	Fixed	99	1.45	511.37
J-634	281.99	High Service	Fixed	99	1.48	511.82
J-692	281.81	High Service	Fixed	100	2.39	512.38
J-97	287.92	High Service	Fixed	100	0.00	518.61
J-537	278.11	High Service	Fixed	100	0.00	508.86
J-509	278.00	High Service	Fixed	100	1.02	508.89
J-326	282.49	High Service	Fixed	100	0.68	513.59
J-96	286.82	High Service	Fixed	100	0.63	518.61
J-160	286.40	High Service	Fixed	100	0.71	518.60
J-649	275.00	High Service	Fixed	101	1.57	508.33
J-207	278.09	High Service	Fixed	101	1.91	511.58
J-159	284.47	High Service	Fixed	101	0.00	518.60
J-578	276.96	High Service	Fixed	101	0.52	511.37
J-208	277.00	High Service	Fixed	101	0.76	511.55
J-497	273.00	High Service	Fixed	102	0.66	508.38
J-290	273.00	High Service	Fixed	102	0.00	508.66
J-322	272.74	High Service	Fixed	102	0.00	508.66
J-185	272.17	High Service	Fixed	102	0.00	508.66
J-289	272.05	High Service	Fixed	102	0.00	508.66
J-186	271.42	High Service	Fixed	103	0.00	508.66
J-777	270.16	High Service	Fixed	103	0.00	508.66
J-538	270.10	High Service	Fixed	103	0.00	508.80
J-321	269.76	High Service	Fixed	103	0.00	508.66
J-727	274.60	High Service	Fixed	103	0.46	513.59
J-112	272.13	High Service	Fixed	104	0.53	511.55
J-29	268.18	High Service	Fixed	104	0.00	508.66
J-30	268.00	High Service	Fixed	104	0.00	508.66
J-113	270.13	High Service	Fixed	104	0.00	511.55
J-49	271.00	High Service	Fixed	104	2.33	512.41
J-50	271.00	High Service	Fixed	104	0.00	512.41
J-725	271.00	High Service	Fixed	104	1.22	512.48
J-773	277.00	High Service	Fixed	105	0.51	518.61
J-810	269.31	High Service	Fixed	105	0.57	511.37
J-844	270.90	High Service	Fixed	105	0.00	513.59
J-696	270.48	High Service	Fixed	105	1.21	513.40
J-848	270.50	High Service	Fixed	105	0.00	513.84
J-726	270.00	High Service	Fixed	105	0.00	513.84
J-738	263.86	High Service	Fixed	106	0.90	508.36

Active Scenario: Average Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-204	272.32	High Service	Fixed	106	0.44	517.17
J-433	267.53	High Service	Fixed	106	5.16	512.41
J-856	268.57	High Service	Fixed	106	0.00	513.50
J-203	271.53	High Service	Fixed	106	0.32	517.17
J-231	265.66	High Service	Fixed	106	1.15	511.33
J-232	265.68	High Service	Fixed	106	0.81	511.37
J-445	261.14	High Service	Fixed	107	0.97	508.38
J-234	261.01	High Service	Fixed	107	0.00	508.36
J-77	261.01	High Service	Fixed	107	0.00	508.36
J-134	260.99	High Service	Fixed	107	0.00	508.36
J-843	260.94	High Service	Fixed	107	0.00	508.38
J-233	260.81	High Service	Fixed	107	0.29	508.36
J-542	260.80	High Service	Fixed	107	0.45	508.38
J-821	260.57	High Service	Fixed	107	0.49	508.38
J-76	260.11	High Service	Fixed	107	0.00	508.36
J-135	259.94	High Service	Fixed	107	0.00	508.36
J-752	269.57	High Service	Fixed	108	0.00	518.61
J-751	259.34	High Service	Fixed	109	0.45	511.36
J-811	257.90	High Service	Fixed	110	0.00	511.37
J-750	257.59	High Service	Fixed	110	0.00	511.37
J-348	252.33	High Service	Fixed	111	0.46	508.36
J-251	413.71	Low Service	Fixed	31	0.69	485.57
J-250	409.79	Low Service	Fixed	33	0.83	485.58
J-308	406.63	Low Service	Fixed	34	0.90	485.58
J-307	405.37	Low Service	Fixed	35	1.43	485.58
J-430	401.88	Low Service	Fixed	36	0.99	485.58
J-506	395.91	Low Service	Fixed	39	0.54	485.58
J-670	392.00	Low Service	Fixed	41	2.10	486.09
J-3	394.00	Low Service	Fixed	41	0.00	489.74
J-4	394.00	Low Service	Fixed	42	6.25	490.03
J-716	385.66	Low Service	Fixed	43	0.44	485.58
J-671	382.92	Low Service	Fixed	45	1.17	486.07
J-792	382.82	Low Service	Fixed	45	0.49	486.07
J-588	381.97	Low Service	Fixed	45	1.05	486.36
J-304	380.76	Low Service	Fixed	45	0.64	485.53
J-513	378.57	Low Service	Fixed	46	0.33	485.58
J-268	375.69	Low Service	Fixed	48	0.63	486.36
J-861	378.98	Low Service	Fixed	48	1.84	489.74
J-735	375.66	Low Service	Fixed	48	1.39	486.56
J-206	369.37	Low Service	Fixed	50	0.37	485.53
J-205	368.16	Low Service	Fixed	51	0.93	485.53
J-269	368.35	Low Service	Fixed	51	0.55	486.36
J-303	365.68	Low Service	Fixed	52	0.70	485.53
J-467	365.29	Low Service	Fixed	52	1.25	485.53
J-552	361.06	Low Service	Fixed	54	0.75	485.58
J-800	360.94	Low Service	Fixed	54	1.24	486.56

Active Scenario: Average Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-659	357.55	Low Service	Fixed	55	0.37	485.59
J-630	356.10	Low Service	Fixed	56	0.82	485.53
J-551	356.09	Low Service	Fixed	56	0.50	485.58
J-658	356.00	Low Service	Fixed	56	0.62	485.59
J-429	356.15	Low Service	Fixed	56	0.45	486.08
J-832	359.00	Low Service	Fixed	56	0.85	489.38
J-753	353.85	Low Service	Fixed	57	1.67	486.07
J-812	355.14	Low Service	Fixed	58	1.27	488.49
J-428	351.15	Low Service	Fixed	58	0.00	486.08
J-910	350.00	Low Service	Fixed	59	0.00	485.59
J-743	348.56	Low Service	Fixed	59	0.00	485.59
J-435	351.19	Low Service	Fixed	59	0.23	488.64
J-11	348.44	Low Service	Fixed	60	0.00	486.06
J-413	350.92	Low Service	Fixed	60	0.00	488.64
J-660	347.17	Low Service	Fixed	60	0.54	485.58
J-662	347.00	Low Service	Fixed	60	0.27	485.59
J-528	346.62	Low Service	Fixed	61	0.96	486.59
J-573	346.80	Low Service	Fixed	61	1.64	486.94
J-839	346.00	Low Service	Fixed	61	0.67	486.54
J-734	346.00	Low Service	Fixed	61	0.00	486.54
J-818	341.79	Low Service	Fixed	62	2.04	485.60
J-174	340.90	Low Service	Fixed	63	0.00	485.59
J-776	340.07	Low Service	Fixed	63	3.92	485.51
J-705	342.97	Low Service	Fixed	63	0.00	488.49
J-527	340.88	Low Service	Fixed	63	2.26	486.61
J-175	339.00	Low Service	Fixed	63	0.00	485.59
J-471	340.67	Low Service	Fixed	64	0.00	488.49
J-709	340.28	Low Service	Fixed	64	0.43	488.49
J-493	337.10	Low Service	Fixed	64	1.23	485.54
J-54	339.16	Low Service	Fixed	65	0.00	488.49
J-376	338.60	Low Service	Fixed	65	0.00	488.49
J-20	338.55	Low Service	Fixed	65	0.00	488.49
J-19	338.52	Low Service	Fixed	65	0.00	488.49
J-491	338.04	Low Service	Fixed	65	0.00	488.49
J-708	339.74	Low Service	Fixed	65	2.74	490.19
J-53	337.95	Low Service	Fixed	65	0.00	488.49
J-746	337.22	Low Service	Fixed	65	1.37	488.49
J-597	337.05	Low Service	Fixed	66	0.00	488.49
J-442	335.85	Low Service	Fixed	66	0.00	488.49
J-490	335.82	Low Service	Fixed	66	0.00	488.49
J-470	335.73	Low Service	Fixed	66	0.00	488.49
J-747	334.45	Low Service	Fixed	67	3.65	488.49
J-177	334.25	Low Service	Fixed	67	0.00	488.49
J-365	334.00	Low Service	Fixed	67	0.00	488.49
J-480	334.00	Low Service	Fixed	67	0.00	488.49
J-142	333.79	Low Service	Fixed	67	0.00	488.49

Active Scenario: Average Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-495	333.64	Low Service	Fixed	67	1.52	488.50
J-517	333.00	Low Service	Fixed	67	0.00	488.49
J-494	332.93	Low Service	Fixed	67	0.86	488.50
J-675	329.51	Low Service	Fixed	67	1.38	485.51
J-377	331.34	Low Service	Fixed	68	0.00	488.49
J-143	330.48	Low Service	Fixed	68	0.00	488.49
J-176	330.39	Low Service	Fixed	68	0.00	488.49
J-434	330.06	Low Service	Fixed	69	0.00	488.64
J-412	329.55	Low Service	Fixed	69	0.00	488.64
J-301	329.00	Low Service	Fixed	69	0.89	488.49
J-650	326.00	Low Service	Fixed	69	0.47	486.02
J-661	328.05	Low Service	Fixed	69	0.00	488.49
J-302	328.00	Low Service	Fixed	69	0.74	488.49
J-604	328.00	Low Service	Fixed	69	0.48	488.49
J-441	327.95	Low Service	Fixed	69	0.00	488.49
J-736	325.31	Low Service	Fixed	70	0.86	486.02
J-789	325.36	Low Service	Fixed	70	1.70	486.21
J-472	327.59	Low Service	Fixed	70	0.60	488.49
J-728	327.44	Low Service	Fixed	70	0.48	488.49
J-473	327.19	Low Service	Fixed	70	0.44	488.49
J-354	326.60	Low Service	Fixed	70	0.00	488.49
J-372	324.61	Low Service	Fixed	70	1.50	487.02
J-334	325.29	Low Service	Fixed	71	0.00	488.49
J-599	325.09	Low Service	Fixed	71	1.53	488.52
J-408	325.00	Low Service	Fixed	71	0.78	488.49
J-775	321.77	Low Service	Fixed	71	1.17	485.51
J-436	324.13	Low Service	Fixed	71	0.68	488.48
J-835	320.00	Low Service	Fixed	72	0.60	485.54
J-496	322.50	Low Service	Fixed	72	1.94	488.47
J-330	319.22	Low Service	Fixed	72	1.72	485.75
J-703	318.43	Low Service	Fixed	72	0.53	485.58
J-627	321.51	Low Service	Fixed	72	0.65	488.98
J-409	321.00	Low Service	Fixed	72	0.46	488.49
J-770	319.95	Low Service	Fixed	73	0.75	488.43
J-704	316.85	Low Service	Fixed	73	1.48	485.58
J-448	316.56	Low Service	Fixed	73	1.40	485.53
J-421	320.00	Low Service	Fixed	73	0.78	488.98
J-331	316.00	Low Service	Fixed	73	0.85	485.71
J-291	316.19	Low Service	Fixed	73	0.38	485.99
J-618	314.91	Low Service	Fixed	74	2.13	485.56
J-565	315.00	Low Service	Fixed	74	1.88	485.68
J-559	314.22	Low Service	Fixed	74	1.27	485.54
J-759	316.59	Low Service	Fixed	74	0.31	488.49
J-447	313.51	Low Service	Fixed	74	1.17	485.53
J-438	313.00	Low Service	Fixed	75	0.51	485.51
J-543	313.31	Low Service	Fixed	75	1.90	485.83

Active Scenario: Average Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-729	314.03	Low Service	Fixed	75	0.23	486.65
J-539	316.00	Low Service	Fixed	75	0.31	488.66
J-148	315.04	Low Service	Fixed	75	0.41	487.74
J-796	312.30	Low Service	Fixed	75	2.49	485.57
J-292	312.67	Low Service	Fixed	75	0.28	485.98
J-572	313.24	Low Service	Fixed	75	0.72	486.94
J-748	312.80	Low Service	Fixed	75	1.07	487.26
J-353	314.00	Low Service	Fixed	75	0.70	488.49
J-711	313.88	Low Service	Fixed	76	2.25	488.46
J-488	313.88	Low Service	Fixed	76	9.24	488.49
J-437	310.61	Low Service	Fixed	76	2.73	485.51
J-475	310.43	Low Service	Fixed	76	1.74	485.56
J-66	312.73	Low Service	Fixed	76	0.81	488.49
J-352	312.61	Low Service	Fixed	76	1.52	488.49
J-65	311.85	Low Service	Fixed	76	0.21	488.49
J-149	311.05	Low Service	Fixed	76	0.34	487.74
J-324	311.08	Low Service	Fixed	77	0.99	488.62
J-79	309.25	Low Service	Fixed	77	0.50	487.18
J-78	309.15	Low Service	Fixed	77	0.51	487.20
J-474	307.25	Low Service	Fixed	77	3.49	485.56
J-681	311.83	Low Service	Fixed	77	1.49	490.33
J-121	310.05	Low Service	Fixed	77	0.45	488.98
J-133	309.48	Low Service	Fixed	77	1.20	488.50
J-806	310.00	Low Service	Fixed	78	1.86	489.38
J-305	308.77	Low Service	Fixed	78	0.00	488.49
J-181	304.55	Low Service	Fixed	78	1.03	485.59
J-132	307.27	Low Service	Fixed	78	0.31	488.50
J-306	307.00	Low Service	Fixed	79	0.00	488.49
J-706	307.00	Low Service	Fixed	79	0.00	488.49
J-120	307.38	Low Service	Fixed	79	0.51	488.98
J-323	306.91	Low Service	Fixed	79	0.50	488.66
J-359	306.15	Low Service	Fixed	79	0.56	488.49
J-858	305.82	Low Service	Fixed	79	0.44	488.49
J-632	305.55	Low Service	Fixed	79	0.85	488.49
J-182	302.38	Low Service	Fixed	79	1.46	485.59
J-102	305.26	Low Service	Fixed	79	0.25	488.49
J-580	301.87	Low Service	Fixed	79	3.09	485.54
J-138	301.71	Low Service	Fixed	80	0.44	485.56
J-103	304.46	Low Service	Fixed	80	0.43	488.49
J-432	303.00	Low Service	Fixed	80	0.00	487.13
J-333	301.70	Low Service	Fixed	80	0.45	486.10
J-721	301.00	Low Service	Fixed	80	0.62	485.52
J-139	301.00	Low Service	Fixed	80	2.48	485.56
J-499	300.83	Low Service	Fixed	80	1.05	485.54
J-275	303.51	Low Service	Fixed	80	0.23	488.71
J-440	303.33	Low Service	Fixed	80	0.26	488.58

Active Scenario: Average Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-644	300.00	Low Service	Fixed	80	2.07	485.56
J-518	299.78	Low Service	Fixed	80	1.96	485.59
J-802	298.92	Low Service	Fixed	81	0.73	485.51
J-48	301.49	Low Service	Fixed	81	0.00	488.50
J-360	301.40	Low Service	Fixed	81	0.61	488.49
J-47	301.29	Low Service	Fixed	81	0.23	488.49
J-456	298.30	Low Service	Fixed	81	0.37	485.52
J-21	301.19	Low Service	Fixed	81	0.74	488.49
J-594	298.13	Low Service	Fixed	81	1.70	485.56
J-22	301.00	Low Service	Fixed	81	0.00	488.49
J-278	298.12	Low Service	Fixed	81	0.81	485.70
J-417	299.88	Low Service	Fixed	82	0.67	488.49
J-431	298.46	Low Service	Fixed	82	1.21	487.13
J-178	296.69	Low Service	Fixed	82	0.85	486.10
J-487	297.56	Low Service	Fixed	82	0.50	487.18
J-514	298.83	Low Service	Fixed	82	0.35	488.49
J-439	298.67	Low Service	Fixed	82	1.17	488.52
J-710	298.48	Low Service	Fixed	82	0.42	488.43
J-793	298.37	Low Service	Fixed	82	0.67	488.43
J-593	295.15	Low Service	Fixed	82	2.46	485.56
J-407	296.93	Low Service	Fixed	83	0.67	488.47
J-689	293.80	Low Service	Fixed	83	2.11	485.80
J-601	296.73	Low Service	Fixed	83	1.08	488.86
J-612	294.84	Low Service	Fixed	83	0.00	487.02
J-123	296.47	Low Service	Fixed	83	0.00	488.66
J-404	294.77	Low Service	Fixed	83	0.27	487.26
J-166	292.77	Low Service	Fixed	83	0.85	485.59
J-489	295.34	Low Service	Fixed	84	0.00	488.49
J-623	294.99	Low Service	Fixed	84	0.00	488.49
J-737	292.05	Low Service	Fixed	84	2.16	485.57
J-591	291.96	Low Service	Fixed	84	0.70	485.52
J-762	292.02	Low Service	Fixed	84	0.29	486.05
J-786	291.38	Low Service	Fixed	84	2.15	485.53
J-165	291.10	Low Service	Fixed	84	0.90	485.58
J-277	291.12	Low Service	Fixed	84	0.49	485.70
J-226	290.87	Low Service	Fixed	84	1.06	485.56
J-122	293.96	Low Service	Fixed	84	0.52	488.66
J-414	292.61	Low Service	Fixed	84	1.37	487.48
J-763	291.26	Low Service	Fixed	84	3.41	486.16
J-375	290.60	Low Service	Fixed	84	1.56	485.56
J-719	292.24	Low Service	Fixed	84	0.41	487.26
J-850	295.60	Low Service	Fixed	84	0.26	490.64
J-679	290.21	Low Service	Fixed	85	2.26	485.54
J-682	295.00	Low Service	Fixed	85	0.00	490.64
J-512	292.68	Low Service	Fixed	85	1.10	488.49
J-179	290.15	Low Service	Fixed	85	0.00	486.10

Active Scenario: Average Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-387	290.00	Low Service	Fixed	85	1.59	486.10
J-7	289.35	Low Service	Fixed	85	0.29	485.51
J-548	292.77	Low Service	Fixed	85	1.03	488.98
J-8	289.27	Low Service	Fixed	85	0.00	485.51
J-31	289.10	Low Service	Fixed	85	1.17	485.51
J-32	289.01	Low Service	Fixed	85	0.00	485.51
J-801	288.53	Low Service	Fixed	85	1.68	485.51
J-349	288.61	Low Service	Fixed	85	1.48	485.70
J-841	289.74	Low Service	Fixed	86	1.23	487.50
J-150	290.79	Low Service	Fixed	86	0.28	488.66
J-619	290.87	Low Service	Fixed	86	0.70	488.80
J-396	290.60	Low Service	Fixed	86	0.78	488.64
J-221	287.39	Low Service	Fixed	86	0.00	485.51
J-637	290.63	Low Service	Fixed	86	1.38	488.86
J-374	287.30	Low Service	Fixed	86	0.75	485.69
J-827	290.57	Low Service	Fixed	86	1.21	488.97
J-690	287.25	Low Service	Fixed	86	1.56	485.77
J-560	287.01	Low Service	Fixed	86	1.34	485.54
J-373	287.08	Low Service	Fixed	86	1.50	485.69
J-192	290.32	Low Service	Fixed	86	0.34	489.15
J-403	288.18	Low Service	Fixed	86	0.37	487.26
J-581	285.25	Low Service	Fixed	87	1.04	485.54
J-336	289.77	Low Service	Fixed	87	0.85	490.19
J-606	287.28	Low Service	Fixed	87	0.84	487.74
J-227	284.99	Low Service	Fixed	87	3.06	485.56
J-772	284.53	Low Service	Fixed	87	1.64	485.57
J-191	288.00	Low Service	Fixed	87	0.00	489.12
J-595	284.36	Low Service	Fixed	87	1.02	485.51
J-68	284.00	Low Service	Fixed	87	1.07	485.54
J-239	287.00	Low Service	Fixed	87	0.58	488.67
J-67	283.53	Low Service	Fixed	87	1.41	485.54
J-332	284.00	Low Service	Fixed	87	5.31	486.10
J-451	284.00	Low Service	Fixed	87	0.00	486.10
J-33	283.00	Low Service	Fixed	88	0.57	485.51
J-34	282.78	Low Service	Fixed	88	0.00	485.51
J-561	282.44	Low Service	Fixed	88	2.49	485.54
J-286	282.25	Low Service	Fixed	88	0.59	485.51
J-767	284.93	Low Service	Fixed	88	1.30	488.43
J-624	284.83	Low Service	Fixed	88	0.00	488.49
J-285	281.70	Low Service	Fixed	88	0.44	485.51
J-254	281.58	Low Service	Fixed	88	0.35	485.51
J-152	284.45	Low Service	Fixed	88	0.23	488.72
J-337	285.55	Low Service	Fixed	89	1.30	490.19
J-118	284.00	Low Service	Fixed	89	0.46	488.69
J-566	282.50	Low Service	Fixed	89	0.00	487.26
J-567	282.50	Low Service	Fixed	89	0.00	487.26

Active Scenario: Average Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-87	282.75	Low Service	Fixed	89	0.41	487.59
J-395	283.72	Low Service	Fixed	89	0.70	488.64
J-749	283.78	Low Service	Fixed	89	1.32	488.83
J-699	283.58	Low Service	Fixed	89	0.51	488.69
J-36	283.48	Low Service	Fixed	89	0.00	488.74
J-5	280.83	Low Service	Fixed	89	0.00	486.10
J-6	280.79	Low Service	Fixed	89	0.00	486.10
J-119	283.26	Low Service	Fixed	89	0.34	488.69
J-35	283.24	Low Service	Fixed	89	0.00	488.74
J-265	283.11	Low Service	Fixed	89	0.00	488.74
J-636	283.15	Low Service	Fixed	89	0.92	488.86
J-86	281.89	Low Service	Fixed	89	0.24	487.61
J-151	283.00	Low Service	Fixed	89	0.00	488.72
J-829	282.90	Low Service	Fixed	89	0.95	488.64
J-756	280.00	Low Service	Fixed	89	0.00	486.10
J-600	282.63	Low Service	Fixed	89	3.28	488.86
J-26	282.03	Low Service	Fixed	89	0.26	488.45
J-446	278.86	Low Service	Fixed	89	1.15	485.52
J-25	281.00	Low Service	Fixed	90	0.50	488.45
J-720	280.90	Low Service	Fixed	90	0.98	488.42
J-328	278.00	Low Service	Fixed	90	1.02	486.10
J-853	280.93	Low Service	Fixed	90	0.44	489.32
J-820	280.88	Low Service	Fixed	90	0.68	489.32
J-529	279.97	Low Service	Fixed	90	0.63	488.45
J-425	277.26	Low Service	Fixed	90	0.00	486.10
J-831	280.38	Low Service	Fixed	90	1.81	489.38
J-327	277.05	Low Service	Fixed	90	0.40	486.10
J-826	280.23	Low Service	Fixed	90	0.00	489.32
J-315	277.81	Low Service	Fixed	91	0.38	487.19
J-424	276.63	Low Service	Fixed	91	0.00	486.10
J-620	279.25	Low Service	Fixed	91	4.07	488.77
J-476	279.00	Low Service	Fixed	91	0.00	488.77
J-465	276.00	Low Service	Fixed	91	0.00	486.10
J-643	276.00	Low Service	Fixed	91	0.00	486.10
J-293	275.10	Low Service	Fixed	91	0.54	485.52
J-592	274.83	Low Service	Fixed	91	0.75	485.51
J-388	274.59	Low Service	Fixed	91	0.49	485.54
J-536	276.13	Low Service	Fixed	91	0.49	487.26
J-530	277.00	Low Service	Fixed	91	1.80	488.44
J-665	276.32	Low Service	Fixed	92	0.41	487.85
J-683	277.24	Low Service	Fixed	92	1.06	488.86
J-416	275.16	Low Service	Fixed	92	1.74	486.94
J-486	276.69	Low Service	Fixed	92	0.35	488.68
J-367	276.29	Low Service	Fixed	92	0.51	488.49
J-214	275.00	Low Service	Fixed	92	1.40	487.26
J-724	276.10	Low Service	Fixed	92	1.59	488.44

Active Scenario: Average Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-568	273.09	Low Service	Fixed	92	1.45	485.51
J-678	272.56	Low Service	Fixed	92	2.27	485.56
J-519	272.31	Low Service	Fixed	92	0.93	485.51
J-458	272.00	Low Service	Fixed	92	0.97	485.57
J-198	271.78	Low Service	Fixed	92	0.39	485.51
J-824	274.37	Low Service	Fixed	93	2.66	488.17
J-521	274.00	Low Service	Fixed	93	1.38	487.81
J-674	274.73	Low Service	Fixed	93	0.87	488.67
J-459	271.51	Low Service	Fixed	93	0.58	485.57
J-2	272.90	Low Service	Fixed	93	1.05	487.09
J-468	272.69	Low Service	Fixed	93	0.23	487.10
J-283	293.78	Low Service	Fixed	93	0.00	508.20
J-116	271.00	Low Service	Fixed	93	0.81	485.59
J-117	271.00	Low Service	Fixed	93	0.58	485.59
J-216	272.32	Low Service	Fixed	93	0.00	487.65
J-197	270.00	Low Service	Fixed	93	0.30	485.51
J-505	271.00	Low Service	Fixed	94	1.22	487.13
J-213	270.88	Low Service	Fixed	94	0.00	487.26
J-390	268.98	Low Service	Fixed	94	1.65	485.56
J-357	270.40	Low Service	Fixed	94	0.77	487.31
J-215	270.68	Low Service	Fixed	94	0.26	487.74
J-608	268.45	Low Service	Fixed	94	0.95	485.57
J-193	267.79	Low Service	Fixed	94	0.35	485.54
J-684	271.04	Low Service	Fixed	94	2.14	488.86
J-345	270.71	Low Service	Fixed	94	0.86	488.58
J-466	268.02	Low Service	Fixed	94	0.35	486.10
J-309	268.95	Low Service	Fixed	94	0.00	487.11
J-520	268.91	Low Service	Fixed	94	0.00	487.15
J-316	268.79	Low Service	Fixed	94	0.80	487.19
J-394	267.13	Low Service	Fixed	94	0.76	485.55
J-294	267.02	Low Service	Fixed	95	0.53	485.52
J-201	267.00	Low Service	Fixed	95	0.95	485.51
J-171	268.26	Low Service	Fixed	95	0.00	487.15
J-270	268.18	Low Service	Fixed	95	0.00	487.15
J-828	269.59	Low Service	Fixed	95	0.00	488.64
J-840	269.40	Low Service	Fixed	95	0.00	488.58
J-202	266.26	Low Service	Fixed	95	0.62	485.51
J-271	270.56	Low Service	Fixed	95	0.36	490.20
J-344	268.93	Low Service	Fixed	95	0.00	488.64
J-464	267.63	Low Service	Fixed	95	0.50	487.40
J-13	270.37	Low Service	Fixed	95	1.09	490.20
J-272	270.23	Low Service	Fixed	95	0.00	490.19
J-389	265.43	Low Service	Fixed	95	1.20	485.56
J-45	265.23	Low Service	Fixed	95	0.00	485.54
J-822	268.32	Low Service	Fixed	95	0.00	488.64
J-172	266.78	Low Service	Fixed	95	0.00	487.15

Active Scenario: Average Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-469	265.12	Low Service	Fixed	95	0.64	485.55
J-700	268.00	Low Service	Fixed	96	0.22	488.77
J-14	269.17	Low Service	Fixed	96	0.00	490.20
J-114	266.00	Low Service	Fixed	96	0.43	487.07
J-46	264.42	Low Service	Fixed	96	0.00	485.54
J-574	267.46	Low Service	Fixed	96	0.75	488.66
J-817	268.16	Low Service	Fixed	96	2.28	489.52
J-115	265.68	Low Service	Fixed	96	0.00	487.07
J-310	265.64	Low Service	Fixed	96	1.71	487.11
J-457	265.47	Low Service	Fixed	96	1.63	487.17
J-194	263.64	Low Service	Fixed	96	0.00	485.54
J-485	265.17	Low Service	Fixed	96	5.06	487.15
J-663	263.04	Low Service	Fixed	96	3.52	485.56
J-125	266.38	Low Service	Fixed	96	0.91	489.32
J-351	264.13	Low Service	Fixed	96	0.00	487.17
J-358	264.00	Low Service	Fixed	97	0.00	487.15
J-609	262.15	Low Service	Fixed	97	0.89	485.57
J-823	264.40	Low Service	Fixed	97	0.72	487.85
J-508	265.08	Low Service	Fixed	97	0.77	488.83
J-329	264.00	Low Service	Fixed	97	0.00	487.78
J-156	261.61	Low Service	Fixed	97	0.60	485.51
J-607	263.50	Low Service	Fixed	97	0.31	487.74
J-155	261.00	Low Service	Fixed	97	0.46	485.51
J-783	264.12	Low Service	Fixed	97	1.12	488.67
J-72	264.00	Low Service	Fixed	97	0.37	488.66
J-73	264.00	Low Service	Fixed	97	0.27	488.66
J-124	264.64	Low Service	Fixed	97	0.43	489.38
J-761	264.00	Low Service	Fixed	97	1.43	489.32
J-504	263.26	Low Service	Fixed	98	0.27	488.66
J-299	263.00	Low Service	Fixed	98	1.74	488.42
J-507	263.21	Low Service	Fixed	98	0.53	488.82
J-557	259.56	Low Service	Fixed	98	0.71	485.51
J-300	261.45	Low Service	Fixed	98	0.99	488.42
J-558	258.38	Low Service	Fixed	98	0.53	485.51
J-350	260.00	Low Service	Fixed	98	0.00	487.19
J-341	259.65	Low Service	Fixed	98	1.27	487.15
J-415	256.97	Low Service	Fixed	99	0.59	485.56
J-10	256.52	Low Service	Fixed	99	0.00	485.56
J-849	262.68	Low Service	Fixed	99	0.00	491.77
J-790	259.19	Low Service	Fixed	99	0.50	488.39
J-340	258.00	Low Service	Fixed	99	0.00	487.20
J-9	256.30	Low Service	Fixed	99	1.38	485.56
J-240	255.54	Low Service	Fixed	100	0.43	485.54
J-245	259.00	Low Service	Fixed	100	0.00	490.01
J-108	258.83	Low Service	Fixed	100	0.00	490.06
J-109	258.00	Low Service	Fixed	100	0.00	490.19

Active Scenario: Average Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-855	258.00	Low Service	Fixed	100	0.00	490.20
J-246	256.85	Low Service	Fixed	101	0.00	490.01
J-363	250.83	Low Service	Fixed	102	0.55	485.55
J-546	250.59	Low Service	Fixed	102	0.98	485.56
J-386	250.07	Low Service	Fixed	102	0.36	485.55
J-364	250.00	Low Service	Fixed	102	0.31	485.55
J-664	245.63	Low Service	Fixed	104	0.93	485.56
J-366	244.88	Low Service	Fixed	104	0.34	485.56
J-805	244.01	Low Service	Fixed	105	0.82	485.56
J-547	243.00	Low Service	Fixed	105	0.99	485.56
J-158	242.00	Low Service	Fixed	105	0.00	485.56
J-249	241.56	Low Service	Fixed	106	0.00	485.56
J-545	241.00	Low Service	Fixed	106	0.33	485.56
J-157	241.00	Low Service	Fixed	106	0.55	485.56
J-369	239.00	Low Service	Fixed	107	0.00	485.56
J-842	239.00	Low Service	Fixed	107	0.72	485.56
J-814	231.90	Low Service	Fixed	111	0.21	488.91
J-798	230.79	Low Service	Fixed	112	1.23	488.92
J-845	229.55	Low Service	Fixed	112	0.00	488.75
J-732	221.07	Low Service	Fixed	116	0.42	488.92
J-731	218.04	Low Service	Fixed	117	0.67	488.92
J-797	216.00	Low Service	Fixed	118	4.84	488.91
J-224	209.19	Low Service	Fixed	121	0.22	488.91
J-613	207.74	Low Service	Fixed	122	0.00	488.91
J-764	206.00	Low Service	Fixed	122	1.00	488.91
J-225	204.34	Low Service	Fixed	123	0.53	488.91
J-516	201.00	Low Service	Fixed	125	0.00	488.91
J-515	199.62	Low Service	Fixed	125	0.00	488.91
J-461	199.55	Low Service	Fixed	125	0.00	488.91
J-460	188.74	Low Service	Fixed	130	0.49	488.91

Active Scenario: Average Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
14	12.0	J-752	J-203	718	746.71	2.01	1.44	2.12	110
30	12.0	J-203	J-848	1,660	745.95	2.01	3.33	2.12	110
P-50	12.0	J-848	J-844	102	745.95	2.39	0.24	2.12	100
P-51	12.0	J-844	J-856	48	720.18	1.88	0.09	2.04	110
P-233	6.0	J-329	J-823	15	-175.63	4.77	0.07	1.99	101
P-218	12.0	J-849	J-855	1,108	619.46	1.42	1.58	1.76	110
P-216	12.0	J-855	J-109	4	613.58	1.40	0.01	1.74	110
334	8.0	J-108	J-109	33	-272.67	4.05	0.14	1.74	80
P-217	12.0	J-854	J-849	1,426	531.41	0.79	1.12	1.51	130
P-372	12.0	J-854	J-849	1,427	531.18	0.79	1.12	1.51	130
574	12.0	J-251	Oak Hill Road Tank	683	508.75	0.84	0.57	1.44	120
711	12.0	J-78	J-79	23	493.72	0.80	0.02	1.40	120
712	12.0	J-79	J-372	206	492.71	0.79	0.16	1.40	120
713	12.0	J-372	J-588	829	491.21	0.79	0.65	1.39	120
355	12.0	J-251	J-588	1,011	-488.98	0.78	0.79	1.39	120
438	12.0	J-189	Tara Road Tank	82	481.62	0.76	0.06	1.37	120
226	12.0	J-692	J-651	2,488	466.73	0.84	2.09	1.32	110
662	12.0	J-651	J-144	1,488	464.19	0.83	1.24	1.32	110
P-59	12.0	J-144	J-677	5	464.19	0.71	0.00	1.32	120
569	12.0	J-849	J-850	1,739	443.13	0.65	1.13	1.26	120
P-219	12.0	J-681	J-850	478	-442.88	0.65	0.31	1.26	120
581	12.0	J-798	J-817	979	-430.56	0.62	0.60	1.22	120
P-241	8.0	J-344	J-840	73	189.57	0.84	0.06	1.21	130
776	8.0	J-840	J-841	1,293	188.71	0.83	1.08	1.20	130
P-240	12.0	J-845	J-798	281	-420.96	0.59	0.17	1.19	120
685	8.0	J-245	J-124	395	184.06	1.57	0.62	1.17	90
P-212	8.0	J-108	J-245	32	184.06	1.57	0.05	1.17	90
686	8.0	J-124	J-125	42	179.10	1.49	0.06	1.14	90
664	12.0	J-676	J-677	543	-402.89	0.64	0.35	1.14	110
708	12.0	J-86	J-87	26	399.82	0.54	0.01	1.13	120
P-238	8.0	J-841	J-719	78	177.31	3.11	0.24	1.13	60
369	8.0	J-125	J-823	1,011	176.76	1.46	1.47	1.13	90
339	8.0	J-215	J-216	110	175.37	0.84	0.09	1.12	120
758	12.0	J-691	J-692	589	380.71	0.58	0.34	1.08	110
P-52	12.0	J-856	J-691	1,364	380.71	0.58	0.79	1.08	110
710	12.0	J-414	J-78	605	372.58	0.47	0.29	1.06	120
P-117	8.0	J-231	J-758	2,090	162.63	1.03	2.15	1.04	100
583	12.0	J-817	J-681	1,786	-363.87	0.45	0.81	1.03	120
709	12.0	J-87	J-414	237	363.79	0.45	0.11	1.03	120

Active Scenario: Average Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
297	8.0	Overlook Drive Tank	J-496	3,260	-151.84	0.76	2.47	0.97	110
P-214	12.0	J-109	J-853	1,848	340.90	0.47	0.87	0.97	110
P-53	12.0	J-856	J-696	269	339.48	0.40	0.11	0.96	120
P-54	12.0	J-696	J-725	2,401	333.27	0.38	0.92	0.95	120
382	10.0	J-845	J-824	1,650	228.72	0.35	0.58	0.93	140
349	10.0	J-521	J-824	1,063	-226.06	0.34	0.36	0.92	140
408	10.0	J-634	J-207	544	225.08	0.45	0.25	0.92	120
707	10.0	J-86	J-521	326	-224.69	0.63	0.21	0.92	100
208	12.0	J-611	J-676	834	-298.02	0.37	0.31	0.85	110
207	12.0	J-611	J-189	884	296.27	0.36	0.32	0.84	110
292	8.0	J-607	J-790	952	-130.38	0.68	0.65	0.83	100
311	8.0	J-607	J-340	1,142	128.48	0.47	0.54	0.82	120
P-205	8.0	J-191	J-548	167	128.03	0.80	0.13	0.82	90
656	10.0	J-191	J-192	82	-196.81	0.41	0.03	0.80	110
P-206	8.0	J-548	J-496	672	124.61	0.76	0.51	0.80	90
P-200	8.0	J-619	J-820	688	-124.17	0.76	0.52	0.79	90
P-197	8.0	J-440	J-275	181	-118.93	0.70	0.13	0.76	90
666	10.0	J-207	J-208	89	185.79	0.32	0.03	0.76	120
409	10.0	J-208	J-232	559	185.03	0.31	0.18	0.76	120
784	8.0	J-114	J-416	242	113.62	0.53	0.13	0.73	100
333	8.0	J-292	J-543	349	113.45	0.44	0.15	0.72	110
270	8.0	J-416	J-763	1,583	109.51	0.49	0.78	0.70	100
P-118	8.0	J-758	J-765	447	107.57	0.48	0.21	0.69	100
370	8.0	J-826	J-827	1,045	107.08	0.34	0.35	0.68	120
290	8.0	J-827	J-790	1,737	105.87	0.33	0.57	0.68	120
432	12.0	J-725	J-576	609	236.14	0.24	0.15	0.67	110
667	10.0	J-231	J-232	108	-163.78	0.35	0.04	0.67	100
665	12.0	J-576	J-633	1,837	232.95	0.23	0.43	0.66	110
150	8.0	J-42	J-676	1,238	-103.43	0.32	0.39	0.66	120
206	8.0	J-41	J-99	614	101.20	0.30	0.19	0.65	120
224	12.0	J-633	J-634	437	226.56	0.19	0.08	0.64	120
210	6.0	J-602	J-603	385	56.20	0.49	0.19	0.64	110
P-211	8.0	J-826	J-108	1,814	-88.62	0.41	0.74	0.57	90
P-210	12.0	J-853	J-192	987	197.15	0.17	0.17	0.56	110
P-257	8.0	J-316	J-527	2,569	85.87	0.22	0.58	0.55	120
P-239	12.0	J-822	J-845	792	-192.23	0.14	0.11	0.55	120
P-245	12.0	J-344	J-822	16	-189.57	0.16	0.00	0.54	110
437	12.0	J-189	J-492	298	-186.64	0.15	0.05	0.53	110
P-64	6.0	J-75	J-635	313	45.50	0.39	0.12	0.52	100
782	8.0	J-340	J-341	186	80.39	0.28	0.05	0.51	100
P-256	8.0	J-734	J-839	21	80.01	0.20	0.00	0.51	120
330	8.0	J-839	J-789	1,207	79.35	0.27	0.33	0.51	100
269	8.0	J-341	J-114	293	79.12	0.27	0.08	0.50	100

Active Scenario: Average Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
337	12.0	J-215	J-329	170	-175.63	0.20	0.03	0.50	90
340	12.0	J-216	J-86	393	175.37	0.12	0.05	0.50	120
225	8.0	J-701	J-602	948	77.88	0.26	0.25	0.50	100
332	8.0	J-292	J-789	855	-77.65	0.26	0.22	0.50	100
684	8.0	J-708	J-681	625	-77.52	0.22	0.14	0.49	110
P-221	8.0	J-708	J-4	776	77.06	0.22	0.17	0.49	110
353	12.0	J-78	J-719	619	-173.30	0.10	0.06	0.49	130
P-111	8.0	J-765	J-525	329	77.01	0.18	0.06	0.49	120
144	8.0	J-29	J-30	7	75.98	0.14	0.00	0.48	140
2	8.0	J-537	J-538	337	75.98	0.18	0.06	0.48	120
3	8.0	J-538	J-29	755	75.98	0.18	0.14	0.48	120
P-114	8.0	J-510	J-537	100	75.98	0.18	0.02	0.48	120
679	8.0	J-47	J-48	14	-75.22	0.30	0.00	0.48	90
P-77	6.0	J-635	J-605	2,063	41.22	0.33	0.68	0.47	100
383	8.0	J-543	J-818	986	72.89	0.23	0.23	0.47	100
279	8.0	J-439	J-440	265	-71.53	0.22	0.06	0.46	101
P-302	8.0	J-861	J-4	1,541	-70.81	0.18	0.28	0.45	110
P-304	8.0	J-861	J-817	1,245	68.97	0.18	0.22	0.44	110
743	6.0	J-330	J-331	170	36.95	0.27	0.05	0.42	100
P-209	12.0	J-820	J-853	9	-143.32	0.10	0.00	0.41	110
P-199	8.0	J-275	J-619	416	-63.35	0.22	0.09	0.40	90
367	6.0	J-87	J-464	299	35.62	0.65	0.19	0.40	60
P-296	8.0	J-178	J-763	344	-62.44	0.17	0.06	0.40	100
P-150	8.0	J-30	J-778	752	61.27	0.09	0.07	0.39	140
344	6.0	J-357	J-315	189	34.34	0.60	0.11	0.39	60
P-176	8.0	J-778	J-686	1,068	60.43	0.16	0.18	0.39	100
P-195	8.0	J-619	J-476	387	60.11	0.09	0.03	0.38	140
652	6.0	J-323	J-324	166	32.93	0.22	0.04	0.37	100
691	8.0	J-235	J-319	326	57.98	0.15	0.05	0.37	100
76	8.0	J-699	J-700	594	-56.08	0.14	0.08	0.36	100
217	6.0	J-324	J-494	622	31.54	0.20	0.12	0.36	100
P-193	8.0	J-476	J-35	302	56.04	0.08	0.02	0.36	140
285	8.0	J-151	J-152	63	56.04	0.08	0.00	0.36	140
287	8.0	J-265	J-151	179	56.04	0.10	0.02	0.36	120
P-194	8.0	J-35	J-265	6	56.04	0.08	0.00	0.36	140
280	8.0	J-275	J-152	134	-55.81	0.08	0.01	0.36	140
779	8.0	J-603	J-596	1,746	54.37	0.11	0.20	0.35	110
P-155	6.0	J-235	J-104	1,492	-30.33	0.19	0.28	0.34	100
419	8.0	J-222	J-223	115	-53.56	0.13	0.02	0.34	100
420	8.0	J-758	J-223	722	53.56	0.13	0.09	0.34	100
P-295	8.0	J-762	J-178	389	-52.47	0.13	0.05	0.33	100
P-120	8.0	J-222	J-669	13	52.29	0.08	0.00	0.33	130
701	8.0	J-762	J-689	1,993	52.19	0.13	0.25	0.33	100
494	6.0	J-565	J-181	496	29.21	0.17	0.09	0.33	100
671	8.0	J-701	J-338	583	-50.31	0.12	0.07	0.32	100

Active Scenario: Average Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-258	8.0	J-527	J-734	845	50.25	0.08	0.07	0.32	120
P-6	8.0	J-690	J-116	1,656	48.52	0.11	0.18	0.31	100
770	8.0	J-599	J-440	635	-47.15	0.10	0.07	0.30	100
703	8.0	J-350	J-351	184	47.05	0.09	0.02	0.30	110
329	8.0	J-351	J-171	239	45.42	0.08	0.02	0.29	110
151	12.0	J-41	J-42	13	-101.69	0.04	0.00	0.29	120
P-68	12.0	J-492	J-99	16	-101.20	0.06	0.00	0.29	100
P-132	8.0	J-64	J-173	86	44.40	0.09	0.01	0.28	100
296	10.0	J-601	J-191	3,623	-68.78	0.07	0.26	0.28	100
765	8.0	J-763	J-670	1,311	43.65	0.06	0.07	0.28	130
P-346	12.0	J-49	J-725	1,349	-95.91	0.04	0.06	0.27	110
324	8.0	J-171	J-505	306	40.36	0.07	0.02	0.26	110
P-108	8.0	J-699	J-119	19	39.93	0.08	0.00	0.25	100
152	12.0	J-511	J-605	415	-89.59	0.05	0.02	0.25	100
P-72	12.0	J-184	J-511	241	-89.59	0.05	0.01	0.25	100
P-345	12.0	J-692	J-49	990	-88.41	0.04	0.04	0.25	110
P-112	8.0	J-525	J-509	408	38.80	0.05	0.02	0.25	120
313	8.0	J-330	J-543	1,080	-38.67	0.07	0.08	0.25	100
P-71	12.0	J-463	J-184	84	-86.16	0.04	0.00	0.24	100
P-74	12.0	J-248	J-463	17	-86.16	0.04	0.00	0.24	100
72	6.0	J-103	J-407	231	21.52	0.08	0.02	0.24	110
178	8.0	J-525	J-526	329	38.21	0.05	0.02	0.24	120
P-113	8.0	J-526	J-510	399	38.21	0.05	0.02	0.24	120
436	12.0	J-617	J-462	1,123	-85.74	0.04	0.05	0.24	100
P-66	12.0	J-569	J-617	364	-85.74	0.04	0.02	0.24	100
P-73	12.0	J-462	J-248	260	-85.74	0.04	0.01	0.24	100
230	12.0	J-98	J-569	352	-85.74	0.04	0.02	0.24	100
696	12.0	J-315	J-316	160	85.61	0.03	0.00	0.24	130
P-67	12.0	J-98	J-492	13	85.44	0.04	0.00	0.24	100
508	8.0	J-505	J-309	319	37.92	0.06	0.02	0.24	110
308	8.0	J-11	J-650	752	37.79	0.06	0.04	0.24	110
18	8.0	J-509	J-510	315	37.78	0.05	0.02	0.24	120
655	10.0	J-749	J-601	688	-58.92	0.05	0.04	0.24	100
51	8.0	J-686	J-335	540	37.56	0.07	0.04	0.24	100
247	10.0	J-729	J-730	629	58.52	1.03	0.65	0.24	20
699	8.0	J-650	J-291	508	36.46	0.05	0.03	0.23	110
504	8.0	J-309	J-468	318	36.21	0.05	0.02	0.23	110
331	8.0	J-291	J-292	145	36.08	0.05	0.01	0.23	110
262	10.0	J-700	J-749	1,081	-56.30	0.05	0.05	0.23	100
P-353	10.0	J-730	Overlook Drive Tank	48	56.26	0.06	0.00	0.23	90
368	8.0	J-464	J-357	596	35.11	0.15	0.09	0.22	60
505	8.0	J-115	J-2	375	-34.93	0.05	0.02	0.22	110
P-125	12.0	J-596	J-809	31	77.94	0.03	0.00	0.22	110

Active Scenario: Average Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
744	6.0	J-331	J-565	350	19.25	0.08	0.03	0.22	100
636	8.0	J-122	J-123	42	33.75	0.03	0.00	0.22	130
P-5	8.0	J-689	J-690	564	33.49	0.06	0.03	0.21	100
351	8.0	J-527	J-528	380	33.36	0.05	0.02	0.21	101
65	12.0	J-22	J-47	20	-75.00	0.04	0.00	0.21	90
418	10.0	J-669	J-338	1,418	51.60	0.04	0.06	0.21	100
561	8.0	J-528	J-800	858	32.40	0.04	0.03	0.21	120
145	6.0	J-653	J-781	770	18.19	0.05	0.04	0.21	120
P-131	8.0	J-319	J-64	7	32.14	0.05	0.00	0.21	100
463	8.0	J-116	J-67	888	32.02	0.05	0.04	0.20	100
534	2.0	J-273	J-274	135	1.97	0.25	0.03	0.20	101
66	12.0	J-48	J-439	860	-70.36	0.03	0.03	0.20	101
678	8.0	J-133	J-599	380	-31.21	0.05	0.02	0.20	100
103	8.0	J-695	J-740	656	30.89	0.05	0.03	0.20	100
P-285	8.0	J-740	J-95	16	30.89	0.05	0.00	0.20	100
P-156	6.0	J-104	J-781	3	-17.16	0.06	0.00	0.19	100
411	12.0	J-808	J-809	863	-68.24	0.02	0.02	0.19	110
P-121	12.0	J-808	J-555	711	68.24	0.02	0.02	0.19	110
67	8.0	J-302	J-436	261	29.86	0.03	0.01	0.19	120
P-253	8.0	J-734	J-800	413	-29.76	0.04	0.02	0.19	101
P-189	6.0	J-710	J-793	18	-16.68	0.06	0.00	0.19	100
P-116	8.0	J-765	J-701	549	29.62	0.04	0.02	0.19	100
P-122	12.0	J-555	J-266	253	66.63	0.02	0.01	0.19	110
77	6.0	J-239	J-118	292	-16.49	0.07	0.02	0.19	90
683	8.0	J-496	J-436	300	-29.18	0.03	0.01	0.19	120
690	8.0	J-335	J-235	173	28.59	0.04	0.01	0.18	100
734	8.0	J-67	J-68	21	28.35	0.04	0.00	0.18	100
410	2.0	J-279	J-280	147	1.76	0.12	0.02	0.18	130
594	6.0	J-134	J-135	52	-15.85	0.03	0.00	0.18	140
P-136	6.0	J-843	J-135	258	15.85	0.06	0.01	0.18	100
317	8.0	J-181	J-182	79	28.17	0.04	0.00	0.18	100
P-190	6.0	J-793	J-711	590	-15.79	0.06	0.03	0.18	100
P-107	6.0	J-729	J-699	1,901	-15.63	1.07	2.04	0.18	20
277	10.0	J-729	J-21	3,154	-43.12	0.58	1.84	0.18	20
P-61	12.0	J-677	J-74	24	61.30	0.02	0.00	0.17	120
P-63	6.0	J-399	J-75	127	-15.31	0.05	0.01	0.17	100
148	12.0	J-74	J-75	22	61.02	0.02	0.00	0.17	120
181	8.0	J-319	J-320	164	25.84	0.03	0.00	0.16	110
266	6.0	J-599	J-472	504	14.41	0.05	0.02	0.16	100
P-130	8.0	J-173	J-813	1,227	25.50	0.03	0.04	0.16	100
291	8.0	J-720	J-790	857	25.02	0.03	0.03	0.16	100
P-142	6.0	J-134	J-649	780	13.84	0.04	0.03	0.16	100
146	6.0	J-104	J-105	31	-13.69	0.02	0.00	0.16	140
760	8.0	J-570	J-571	376	24.20	0.03	0.01	0.15	100
8	8.0	J-846	J-570	1,512	23.79	0.02	0.04	0.15	110

Active Scenario: Average Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
697	12.0	J-315	J-78	624	-51.65	0.01	0.01	0.15	130
316	8.0	J-772	J-182	761	-22.94	0.02	0.02	0.15	110
80	8.0	J-119	J-486	294	22.64	0.03	0.01	0.14	100
503	10.0	J-114	J-115	39	-34.93	0.02	0.00	0.14	110
79	8.0	J-674	J-486	587	-22.29	0.03	0.02	0.14	100
171	8.0	J-571	J-647	494	22.09	0.03	0.01	0.14	100
100	6.0	J-741	J-742	688	-12.29	0.03	0.02	0.14	100
153	12.0	J-605	J-266	2,598	-48.37	0.01	0.03	0.14	110
303	8.0	J-792	J-670	847	-21.48	0.02	0.02	0.14	110
P-299	12.0	J-340	J-350	1,472	48.10	0.01	0.01	0.14	130
161	8.0	J-647	J-483	575	21.32	0.02	0.01	0.14	100
182	8.0	J-813	J-586	1,156	21.26	0.02	0.03	0.14	100
203	8.0	J-686	J-256	1,492	21.25	0.02	0.04	0.14	100
P-351	8.0	J-407	J-25	726	20.84	0.02	0.01	0.13	110
687	8.0	J-602	J-653	488	20.67	0.02	0.01	0.13	120
P-2	8.0	J-468	J-2	390	20.67	0.02	0.01	0.13	110
363	8.0	J-250	J-251	119	20.47	0.03	0.00	0.13	90
754	8.0	J-609	J-386	652	20.15	0.02	0.01	0.13	100
P-352	8.0	J-25	J-529	291	20.08	0.02	0.01	0.13	110
700	8.0	J-670	J-428	552	20.08	0.02	0.01	0.13	100
140	8.0	J-586	J-695	697	19.69	0.02	0.01	0.13	100
304	8.0	J-11	J-428	758	-19.63	0.02	0.01	0.13	110
675	10.0	J-417	J-102	242	30.47	0.02	0.00	0.12	90
64	12.0	J-21	J-22	5	-43.86	0.01	0.00	0.12	100
762	8.0	J-529	J-530	328	19.45	0.02	0.01	0.12	100
62	8.0	J-133	J-301	478	19.00	0.01	0.01	0.12	120
53	8.0	J-173	J-82	74	18.90	0.01	0.00	0.12	120
492	6.0	J-469	J-386	377	-10.52	0.02	0.01	0.12	110
385	12.0	J-818	J-704	2,189	41.87	0.01	0.02	0.12	110
P-207	8.0	J-820	J-826	24	18.46	0.02	0.00	0.12	90
P-260	8.0	J-792	J-11	514	18.16	0.01	0.01	0.12	110
468	8.0	J-394	J-363	399	-18.07	0.02	0.01	0.12	100
773	8.0	J-65	J-711	1,302	18.04	0.02	0.02	0.12	100
733	8.0	J-68	J-499	337	17.83	0.02	0.01	0.11	100
496	12.0	J-796	J-704	1,312	-39.86	0.01	0.01	0.11	120
126	2.0	J-106	J-107	33	1.10	0.05	0.00	0.11	130
682	8.0	J-301	J-302	152	17.23	0.01	0.00	0.11	120
78	8.0	J-118	J-119	40	-16.95	0.02	0.00	0.11	90
745	8.0	J-331	J-349	642	16.85	0.02	0.01	0.11	100
P-133	8.0	J-843	J-542	45	-16.82	0.02	0.00	0.11	100
177	12.0	J-207	J-799	2,611	37.39	0.01	0.02	0.11	120
P-263	12.0	J-796	J-737	403	37.36	0.01	0.00	0.11	120
259	8.0	J-689	J-690	2,072	16.58	0.01	0.03	0.11	100
132	8.0	J-448	J-456	819	16.41	0.01	0.01	0.10	100
268	8.0	J-767	J-530	759	-16.06	0.01	0.01	0.10	100

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Steady State Analysis

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637	8.0	J-150	J-239	116	-15.91	0.02	0.00	0.10	90
112	12.0	J-297	J-799	874	-35.50	0.01	0.01	0.10	120
556	8.0	J-7	J-8	3	-15.63	0.01	0.00	0.10	120
554	8.0	J-8	J-221	97	-15.63	0.01	0.00	0.10	140
557	8.0	J-221	J-524	370	-15.63	0.01	0.00	0.10	120
677	8.0	J-710	J-720	724	15.51	0.01	0.01	0.10	100
P-275	8.0	J-7	J-32	47	15.35	0.01	0.00	0.10	100
P-1	8.0	J-2	J-468	679	-15.31	0.01	0.01	0.10	110
246	8.0	J-786	J-293	952	15.24	0.01	0.01	0.10	100
647	12.0	J-297	J-298	149	34.16	0.01	0.00	0.10	120
500	8.0	J-116	J-609	1,586	15.17	0.01	0.02	0.10	100
731	8.0	J-447	J-448	268	15.17	0.01	0.00	0.10	100
195	12.0	J-123	J-539	435	33.75	0.00	0.00	0.10	130
245	8.0	J-581	J-786	813	14.89	0.01	0.01	0.10	100
761	12.0	J-539	J-323	338	33.44	0.01	0.00	0.09	100
732	8.0	J-499	J-447	303	14.81	0.01	0.00	0.09	100
589	8.0	J-399	J-400	229	14.77	0.01	0.00	0.09	100
493	8.0	J-394	J-193	224	14.75	0.01	0.00	0.09	100
P-152	8.0	J-321	J-30	85	-14.71	0.01	0.00	0.09	140
117	8.0	J-289	J-290	144	-14.71	0.01	0.00	0.09	140
114	8.0	J-321	J-322	169	14.71	0.01	0.00	0.09	140
116	8.0	J-290	J-322	231	-14.71	0.01	0.00	0.09	120
P-153	8.0	J-105	J-185	515	-14.71	0.01	0.00	0.09	140
P-154	8.0	J-185	J-289	155	-14.71	0.01	0.00	0.09	140
283	2.0	J-165	J-166	70	-0.90	0.06	0.00	0.09	101
509	8.0	J-349	J-373	867	14.08	0.01	0.01	0.09	100
73	10.0	J-102	J-103	32	21.95	0.01	0.00	0.09	110
63	12.0	J-417	J-22	242	-31.14	0.01	0.00	0.09	90
753	8.0	J-193	J-581	426	13.49	0.01	0.00	0.09	100
61	8.0	J-302	J-472	303	-13.38	0.01	0.00	0.09	100
693	8.0	J-255	J-256	121	-13.24	0.01	0.00	0.08	100
P-191	8.0	J-299	J-767	685	-13.21	0.01	0.01	0.08	100
646	12.0	J-629	J-287	435	29.29	0.00	0.00	0.08	110
472	8.0	J-772	J-593	1,155	12.93	0.01	0.01	0.08	110
384	12.0	J-818	J-658	1,775	28.98	0.00	0.01	0.08	120
555	8.0	J-31	J-32	11	-12.84	0.01	0.00	0.08	120
737	12.0	J-658	J-662	527	28.37	0.00	0.00	0.08	120
491	8.0	J-561	J-469	395	-12.44	0.01	0.00	0.08	100
216	8.0	J-768	J-742	955	12.29	0.01	0.01	0.08	100
52	8.0	J-63	J-64	19	12.26	0.01	0.00	0.08	100
570	12.0	J-662	J-743	717	27.19	0.00	0.00	0.08	120
771	12.0	J-551	J-743	1,325	-27.18	0.00	0.00	0.08	130
179	12.0	J-298	J-629	526	26.73	0.00	0.00	0.08	110
716	12.0	J-551	J-552	350	26.68	0.00	0.00	0.08	130
474	8.0	J-565	J-373	1,065	-11.83	0.01	0.01	0.08	100

Active Scenario: Average Day Demand
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Steady State Analysis

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P-264	12.0	J-737	J-663	475	26.49	0.00	0.00	0.08	120
184	6.0	J-38	J-766	757	-6.56	0.01	0.01	0.07	110
459	8.0	J-816	J-400	1,295	-11.57	0.01	0.01	0.07	100
571	12.0	J-552	J-250	1,911	25.93	0.00	0.01	0.07	130
P-48	12.0	J-844	J-727	419	25.77	0.00	0.00	0.07	100
138	8.0	J-493	J-467	300	11.38	0.01	0.00	0.07	100
1	12.0	J-744	J-320	678	-25.51	0.00	0.00	0.07	110
689	8.0	J-483	J-484	293	11.31	0.01	0.00	0.07	100
653	12.0	J-494	J-495	300	25.39	0.01	0.00	0.07	90
P-282	6.0	J-642	J-819	16	6.24	0.01	0.00	0.07	100
681	8.0	J-132	J-133	44	-11.00	0.00	0.00	0.07	120
755	8.0	J-547	J-545	342	10.98	0.01	0.00	0.07	100
48	12.0	J-752	J-97	906	24.33	0.00	0.00	0.07	110
120	12.0	J-596	J-744	1,086	-24.01	0.00	0.00	0.07	110
P-271	8.0	J-493	J-835	258	-10.64	0.01	0.00	0.07	100
P-162	12.0	J-517	J-495	1,538	-23.87	0.00	0.01	0.07	110
281	8.0	J-720	J-299	625	-10.48	0.01	0.00	0.07	100
P-202	6.0	J-746	J-132	689	-5.83	0.01	0.01	0.07	100
P-237	8.0	J-414	J-841	1,106	-10.16	0.02	0.02	0.06	60
346	2.0	J-271	J-272	132	0.62	0.02	0.00	0.06	110
P-288	8.0	J-782	J-380	414	9.97	0.01	0.00	0.06	100
729	8.0	J-446	J-293	263	-9.96	0.01	0.00	0.06	100
490	8.0	J-580	J-561	565	-9.95	0.01	0.00	0.06	100
P-164	12.0	J-661	J-517	222	-22.22	0.00	0.00	0.06	110
P-163	12.0	J-334	J-661	381	-22.22	0.00	0.00	0.06	110
470	8.0	J-545	J-364	573	9.67	0.01	0.00	0.06	100
532	8.0	J-542	J-255	949	-9.57	0.01	0.01	0.06	100
608	12.0	J-94	J-95	31	-21.30	0.00	0.00	0.06	120
618	4.0	J-183	J-393	322	2.36	0.01	0.00	0.06	120
P-36	12.0	J-838	J-97	373	-21.24	0.00	0.00	0.06	100
273	8.0	J-68	J-559	957	9.44	0.01	0.01	0.06	100
539	2.0	J-285	J-286	143	0.59	0.03	0.00	0.06	101
692	6.0	J-273	J-256	351	-5.30	0.01	0.00	0.06	100
654	6.0	J-494	J-408	620	5.28	0.01	0.01	0.06	90
756	8.0	J-363	J-364	196	-9.36	0.01	0.00	0.06	100
P-287	8.0	J-95	J-782	657	9.30	0.01	0.00	0.06	100
499	2.0	J-458	J-459	283	0.58	0.02	0.00	0.06	130
464	8.0	J-386	J-363	219	9.27	0.01	0.00	0.06	100
P-289	8.0	J-380	J-766	214	9.16	0.00	0.00	0.06	100
441	2.0	J-579	J-531	428	0.57	0.02	0.01	0.06	130
518	8.0	J-178	J-179	76	9.12	0.00	0.00	0.06	120
143	12.0	J-232	J-780	766	20.44	0.00	0.00	0.06	130
P-283	12.0	J-502	J-94	215	-20.38	0.00	0.00	0.06	100
735	6.0	J-205	J-206	89	5.03	0.01	0.00	0.06	100
366	2.0	J-268	J-269	128	0.55	0.02	0.00	0.06	101

Active Scenario: Average Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
658	8.0	J-600	J-601	381	-8.78	0.01	0.00	0.06	90
P-265	8.0	J-415	J-10	53	8.78	0.00	0.00	0.06	100
694	6.0	J-37	J-38	12	-4.92	0.00	0.00	0.06	110
479	8.0	J-644	J-737	672	-8.71	0.00	0.00	0.06	100
645	12.0	J-287	J-288	143	19.58	0.00	0.00	0.06	110
336	6.0	J-13	J-14	3	-4.89	0.01	0.00	0.06	120
565	2.0	J-659	J-660	528	0.54	0.01	0.01	0.06	130
741	8.0	J-467	J-205	275	8.60	0.00	0.00	0.05	100
265	2.0	J-507	J-508	318	-0.53	0.01	0.00	0.05	130
P-7	12.0	J-780	J-768	327	18.99	0.00	0.00	0.05	130
728	6.0	J-293	J-294	145	4.73	0.00	0.00	0.05	120
P-232	8.0	J-732	J-798	321	-8.37	0.00	0.00	0.05	110
P-269	8.0	J-772	J-458	518	8.36	0.00	0.00	0.05	110
194	12.0	J-674	J-122	526	18.64	0.00	0.00	0.05	110
0	12.0	J-82	J-83	25	18.55	0.00	0.00	0.05	120
188	12.0	J-83	J-405	1,243	18.55	0.00	0.00	0.05	120
P-11	12.0	J-858	J-334	1,229	-18.28	0.00	0.00	0.05	110
157	12.0	J-838	J-773	1,176	18.25	0.00	0.00	0.05	120
769	12.0	J-502	J-503	303	17.73	0.00	0.00	0.05	100
180	10.0	J-649	J-63	469	12.26	0.00	0.00	0.05	100
P-134	8.0	J-542	J-335	1,370	-7.70	0.00	0.00	0.05	100
P-103	12.0	J-266	J-295	102	17.13	0.00	0.00	0.05	120
141	10.0	J-484	J-695	569	11.89	0.00	0.00	0.05	100
524	8.0	J-5	J-6	2	7.52	0.00	0.00	0.05	140
P-297	8.0	J-6	J-756	76	7.52	0.00	0.00	0.05	110
525	8.0	J-179	J-5	398	7.52	0.00	0.00	0.05	120
542	8.0	J-201	J-446	707	-7.50	0.00	0.00	0.05	100
543	6.0	J-294	J-202	996	4.20	0.00	0.00	0.05	120
P-268	8.0	J-9	J-547	571	7.40	0.00	0.00	0.05	100
10	12.0	J-405	J-406	243	16.59	0.00	0.00	0.05	120
P-186	12.0	J-488	J-858	621	-16.48	0.00	0.00	0.05	130
538	8.0	J-33	J-590	521	7.29	0.00	0.00	0.05	110
P-231	8.0	J-797	J-732	545	-7.29	0.00	0.00	0.05	110
84	2.0	J-750	J-751	735	0.45	0.01	0.01	0.05	120
P-274	12.0	J-524	J-456	273	-16.04	0.00	0.00	0.05	100
613	2.0	J-472	J-473	277	0.44	0.02	0.00	0.04	100
639	12.0	J-159	J-773	828	-15.64	0.00	0.00	0.04	120
635	12.0	J-122	J-150	60	-15.64	0.00	0.00	0.04	90
P-272	8.0	J-835	J-559	91	-6.83	0.00	0.00	0.04	100
747	8.0	J-593	J-594	376	6.83	0.00	0.00	0.04	110
736	6.0	J-206	J-303	500	3.84	0.00	0.00	0.04	100
P-270	8.0	J-458	J-608	459	6.82	0.00	0.00	0.04	110
127	4.0	J-452	J-106	265	1.70	0.00	0.00	0.04	130
558	6.0	J-337	J-13	1,000	-3.80	0.00	0.00	0.04	110
P-128	12.0	J-846	J-406	308	-15.12	0.00	0.00	0.04	110

Active Scenario: Average Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
588	8.0	J-159	J-160	63	6.70	0.00	0.00	0.04	101
477	8.0	J-138	J-644	546	-6.65	0.00	0.00	0.04	100
593	2.0	J-324	J-646	589	0.41	0.01	0.01	0.04	101
673	10.0	J-65	J-66	20	-9.97	0.00	0.00	0.04	90
P-70	6.0	J-544	J-184	75	-3.43	0.00	0.00	0.04	120
604	8.0	J-503	J-760	926	6.09	0.00	0.00	0.04	110
P-105	8.0	J-160	J-655	417	5.99	0.00	0.00	0.04	101
644	12.0	J-288	J-657	1,132	13.39	0.00	0.00	0.04	110
740	12.0	J-663	J-664	513	13.22	0.00	0.00	0.04	120
172	10.0	J-199	J-483	1,101	-9.07	0.00	0.00	0.04	110
P-344	12.0	J-727	J-325	921	13.06	0.00	0.00	0.04	100
514	8.0	J-332	J-451	309	-5.75	0.00	0.00	0.04	140
523	8.0	J-756	J-451	706	5.75	0.00	0.00	0.04	140
P-160	6.0	J-604	J-759	633	3.23	0.00	0.00	0.04	90
P-148	8.0	J-707	J-816	449	-5.53	0.00	0.00	0.04	100
625	8.0	J-100	J-101	48	5.48	0.00	0.00	0.03	120
P-45	12.0	J-667	J-830	108	12.25	0.00	0.00	0.03	100
P-343	12.0	J-667	J-727	1,027	-12.25	0.00	0.00	0.03	100
511	12.0	J-415	J-805	1,748	-12.12	0.00	0.00	0.03	120
674	10.0	J-102	J-65	114	8.28	0.00	0.00	0.03	90
759	10.0	J-199	J-200	87	8.19	0.00	0.00	0.03	110
P-279	8.0	J-754	J-819	26	-5.24	0.00	0.00	0.03	100
456	8.0	J-164	J-794	1,994	5.23	0.00	0.00	0.03	130
591	8.0	J-50	J-433	242	5.16	0.00	0.00	0.03	101
726	8.0	J-31	J-437	1,600	5.15	0.00	0.00	0.03	110
P-69	6.0	J-183	J-544	6	-2.87	0.00	0.00	0.03	120
705	8.0	J-171	J-172	74	5.06	0.00	0.00	0.03	110
706	8.0	J-172	J-270	128	5.06	0.00	0.00	0.03	101
704	8.0	J-270	J-485	298	5.06	0.00	0.00	0.03	101
624	8.0	J-712	J-713	993	5.06	0.00	0.00	0.03	120
P-99	8.0	J-717	J-712	14	5.06	0.00	0.00	0.03	120
434	8.0	J-696	J-697	624	4.99	0.00	0.00	0.03	101
533	6.0	J-564	J-273	430	-2.77	0.00	0.00	0.03	100
544	8.0	J-202	J-155	502	4.89	0.00	0.00	0.03	100
486	6.0	J-389	J-415	239	-2.75	0.00	0.00	0.03	90
P-267	8.0	J-10	J-9	3	4.88	0.01	0.00	0.03	100
680	8.0	J-48	J-132	119	-4.87	0.00	0.00	0.03	90
111	10.0	J-298	J-161	2,153	7.42	0.00	0.00	0.03	110
135	6.0	J-448	J-205	1,167	-2.65	0.00	0.00	0.03	100
P-179	8.0	J-66	J-352	1,403	-4.63	0.00	0.00	0.03	90
714	8.0	J-307	J-250	557	-4.63	0.00	0.00	0.03	90
481	8.0	J-594	J-547	1,338	4.58	0.00	0.00	0.03	110
495	12.0	J-664	J-805	894	10.20	0.00	0.00	0.03	120
P-227	8.0	J-124	J-831	176	4.52	0.00	0.00	0.03	100
717	10.0	J-200	J-92	489	7.05	0.00	0.00	0.03	110

Active Scenario: Average Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
11	6.0	J-408	J-728	632	2.53	0.00	0.00	0.03	90
P-104	12.0	J-295	J-267	25	10.04	0.00	0.00	0.03	120
295	8.0	J-835	J-580	1,525	-4.41	0.00	0.00	0.03	100
607	12.0	J-642	J-503	888	-9.86	0.00	0.00	0.03	100
510	12.0	J-663	J-474	1,339	9.75	0.00	0.00	0.03	120
P-101	12.0	J-267	J-614	354	9.72	0.00	0.00	0.03	120
P-123	12.0	J-481	J-745	9	9.69	0.00	0.00	0.03	120
P-126	12.0	J-809	J-481	349	9.69	0.00	0.00	0.03	110
P-281	6.0	J-583	J-642	1,086	-2.42	0.00	0.00	0.03	100
301	6.0	J-416	J-572	1,063	2.36	0.00	0.00	0.03	100
258	6.0	J-769	J-37	1,191	-2.36	0.00	0.00	0.03	110
458	8.0	J-816	J-788	930	4.19	0.00	0.00	0.03	100
541	6.0	J-568	J-519	351	2.32	0.00	0.00	0.03	100
P-127	12.0	J-745	J-846	383	9.29	0.00	0.00	0.03	110
P-196	8.0	J-476	J-620	27	4.07	0.00	0.00	0.03	140
442	6.0	J-651	J-652	491	2.28	0.00	0.00	0.03	101
97	8.0	J-639	J-785	1,001	4.01	0.00	0.00	0.03	120
455	12.0	J-163	J-164	68	8.99	0.00	0.00	0.03	130
553	8.0	J-568	J-201	981	-3.99	0.00	0.00	0.03	100
34	12.0	J-554	J-159	1,840	-8.94	0.00	0.00	0.03	120
650	12.0	J-639	J-287	1,208	-8.93	0.00	0.00	0.03	110
659	8.0	J-325	J-326	173	3.96	0.00	0.00	0.03	101
218	8.0	J-19	J-20	4	3.94	0.00	0.00	0.03	130
88	8.0	J-334	J-19	203	3.94	0.00	0.00	0.03	130
P-10	8.0	J-20	J-365	357	3.94	0.00	0.00	0.03	80
P-13	8.0	J-365	J-480	5	3.94	0.00	0.00	0.03	80
160	12.0	J-598	J-657	1,483	-8.79	0.00	0.00	0.02	110
476	8.0	J-9	J-10	3	-3.90	0.01	0.00	0.02	80
22	8.0	J-288	J-621	2,692	3.88	0.00	0.00	0.02	110
P-165	6.0	J-391	J-259	216	2.16	0.00	0.00	0.02	130
P-167	6.0	J-259	J-237	86	2.16	0.00	0.00	0.02	130
546	8.0	J-801	J-155	876	-3.84	0.00	0.00	0.02	100
746	8.0	J-518	J-182	321	-3.78	0.00	0.00	0.02	100
487	6.0	J-389	J-390	220	2.10	0.00	0.00	0.02	120
391	2.0	J-434	J-435	269	0.23	0.00	0.00	0.02	130
749	8.0	J-593	J-618	982	3.65	0.00	0.00	0.02	110
P-204	8.0	J-709	J-747	121	3.65	0.00	0.00	0.02	110
P-159	6.0	J-728	J-604	90	2.05	0.00	0.00	0.02	90
42	6.0	J-76	J-77	22	-2.02	0.00	0.00	0.02	120
12	8.0	J-92	J-93	27	3.57	0.00	0.00	0.02	130
28	12.0	J-163	J-325	1,018	-8.02	0.00	0.00	0.02	100
P-102	12.0	J-614	J-180	1,448	8.00	0.00	0.00	0.02	120
202	6.0	J-408	J-409	248	1.98	0.00	0.00	0.02	101
133	6.0	J-499	J-493	1,056	1.97	0.00	0.00	0.02	100
433	8.0	J-825	J-554	1,068	-3.36	0.00	0.00	0.02	130

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241	8.0	J-754	J-755	846	3.34	0.00	0.00	0.02	100
403	6.0	J-308	J-430	255	1.86	0.00	0.00	0.02	90
407	8.0	J-598	J-279	408	3.31	0.00	0.00	0.02	130
446	8.0	J-326	J-784	844	3.28	0.00	0.00	0.02	101
605	8.0	J-760	J-362	853	3.27	0.00	0.00	0.02	110
263	8.0	J-637	J-600	884	-3.26	0.00	0.00	0.02	90
P-168	6.0	J-237	J-260	36	1.82	0.00	0.00	0.02	130
P-203	8.0	J-746	J-709	561	3.19	0.00	0.00	0.02	110
721	8.0	J-776	J-590	1,326	-3.18	0.00	0.00	0.02	110
P-82	12.0	J-187	J-295	2,225	-7.10	0.00	0.00	0.02	110
406	6.0	J-687	J-688	550	-1.77	0.00	0.00	0.02	110
P-15	8.0	J-480	J-490	179	3.11	0.00	0.00	0.02	120
250	8.0	J-176	J-177	74	-3.11	0.00	0.00	0.02	120
249	8.0	J-352	J-176	190	-3.11	0.00	0.00	0.02	120
P-16	8.0	J-490	J-177	207	3.11	0.00	0.00	0.02	120
P-180	8.0	J-352	J-353	351	-3.04	0.00	0.00	0.02	90
293	6.0	J-309	J-310	156	1.71	0.00	0.00	0.02	101
192	6.0	J-574	J-783	1,143	-1.66	0.00	0.00	0.02	100
302	6.0	J-572	J-573	356	1.64	0.00	0.00	0.02	101
P-178	8.0	J-353	J-759	195	-2.91	0.00	0.00	0.02	90
606	12.0	J-31	J-33	860	6.53	0.00	0.00	0.02	100
473	8.0	J-618	J-226	953	2.86	0.00	0.00	0.02	120
P-259	8.0	J-671	J-792	4	-2.84	0.00	0.00	0.02	110
526	6.0	J-179	J-387	219	1.59	0.00	0.00	0.02	120
175	8.0	J-180	J-100	78	2.81	0.00	0.00	0.02	120
193	8.0	J-783	J-674	793	-2.78	0.00	0.00	0.02	100
P-138	6.0	J-76	J-233	33	1.56	0.00	0.00	0.02	140
715	8.0	J-307	J-308	154	2.76	0.00	0.00	0.02	90
478	12.0	J-138	J-139	60	6.21	0.00	0.00	0.02	100
170	8.0	J-813	J-570	943	2.75	0.00	0.00	0.02	110
P-185	12.0	J-66	J-488	394	-6.14	0.00	0.00	0.02	130
P-109	6.0	J-409	J-359	191	1.52	0.00	0.00	0.02	101
174	8.0	J-167	J-100	73	2.67	0.00	0.00	0.02	120
395	6.0	J-613	J-515	413	1.48	0.00	0.00	0.02	80
P-223	6.0	J-515	J-461	170	1.48	0.00	0.00	0.02	120
P-215	12.0	J-14	J-855	399	-5.88	0.00	0.00	0.02	110
16	12.0	J-422	J-830	1,368	-5.87	0.00	0.00	0.02	120
480	12.0	J-608	J-609	389	5.87	0.00	0.00	0.02	110
P-46	12.0	J-830	J-209	450	5.86	0.00	0.00	0.02	100
502	8.0	J-469	J-394	276	-2.56	0.00	0.00	0.02	100
727	8.0	J-201	J-202	87	2.56	0.00	0.00	0.02	100
P-95	8.0	J-717	J-101	1	-2.53	0.00	0.00	0.02	120
P-97	8.0	J-101	J-717	1	2.53	0.00	0.00	0.02	120
341	8.0	J-336	J-337	174	-2.50	0.00	0.00	0.02	110
P-276	8.0	J-32	J-34	859	2.50	0.00	0.00	0.02	100

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244	8.0	J-303	J-786	880	2.50	0.00	0.00	0.02	100
549	6.0	J-519	J-197	322	1.39	0.00	0.00	0.02	100
P-181	12.0	J-768	J-391	848	5.53	0.00	0.00	0.02	130
294	8.0	J-580	J-581	362	2.45	0.00	0.00	0.02	100
590	8.0	J-187	J-188	82	2.41	0.00	0.00	0.02	130
156	8.0	J-188	J-685	641	2.41	0.00	0.00	0.02	130
757	8.0	J-548	J-120	344	2.39	0.00	0.00	0.02	110
752	8.0	J-227	J-139	1,507	-2.38	0.00	0.00	0.02	120
165	8.0	J-361	J-362	196	-2.36	0.00	0.00	0.02	110
P-42	8.0	J-423	J-452	630	2.36	0.00	0.00	0.02	130
108	6.0	J-446	J-591	369	1.32	0.00	0.00	0.01	130
P-94	12.0	J-180	J-167	25	5.20	0.00	0.00	0.01	120
227	12.0	J-49	J-50	32	5.16	0.00	0.00	0.01	101
25	12.0	J-209	J-195	945	5.14	0.00	0.00	0.01	100
357	8.0	J-336	J-708	861	2.28	0.00	0.00	0.01	110
P-201	6.0	J-812	J-746	190	-1.27	0.00	0.00	0.01	100
271	8.0	J-679	J-67	564	-2.26	0.00	0.00	0.01	130
P-157	8.0	J-600	J-684	1,822	2.25	0.00	0.00	0.01	90
620	4.0	J-378	J-379	396	0.56	0.00	0.00	0.01	120
P-225	8.0	J-797	J-224	1,229	2.23	0.00	0.00	0.01	110
107	6.0	J-202	J-557	458	1.24	0.00	0.00	0.01	100
P-290	8.0	J-766	J-381	3	2.21	0.00	0.00	0.01	100
20	12.0	J-422	J-423	249	4.89	0.00	0.00	0.01	120
634	8.0	J-655	J-656	483	2.17	0.00	0.00	0.01	101
167	8.0	J-635	J-771	1,085	2.14	0.00	0.00	0.01	101
83	6.0	J-564	J-497	351	1.20	0.00	0.00	0.01	101
P-171	6.0	J-631	J-578	518	1.20	0.00	0.00	0.01	100
725	8.0	J-589	J-590	367	-2.11	0.00	0.00	0.01	130
405	6.0	J-588	J-268	364	1.18	0.00	0.00	0.01	101
445	8.0	J-773	J-774	760	2.10	0.00	0.00	0.01	130
485	8.0	J-664	J-678	1,374	2.09	0.00	0.00	0.01	120
777	8.0	J-757	J-755	762	-2.03	0.00	0.00	0.01	100
651	10.0	J-161	J-629	817	3.18	0.00	0.00	0.01	110
738	12.0	J-678	J-474	564	-4.53	0.00	0.00	0.01	120
122	8.0	J-361	J-688	791	1.97	0.00	0.00	0.01	110
P-39	12.0	J-195	J-153	63	4.43	0.00	0.00	0.01	100
421	8.0	J-707	J-27	639	1.96	0.00	0.00	0.01	120
P-251	12.0	J-678	J-842	1,278	4.35	0.00	0.00	0.01	120
198	8.0	J-621	J-622	437	1.93	0.00	0.00	0.01	130
578	6.0	J-214	J-748	683	1.07	0.00	0.00	0.01	101
552	8.0	J-437	J-776	994	1.91	0.00	0.00	0.01	110
587	4.0	J-343	J-346	179	0.48	0.00	0.00	0.01	130
P-277	8.0	J-228	J-754	66	-1.90	0.00	0.00	0.01	100
162	8.0	J-502	J-791	882	1.89	0.00	0.00	0.01	130
P-228	8.0	J-831	J-806	685	1.86	0.00	0.00	0.01	100

Active Scenario: Average Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-172	6.0	J-578	J-810	428	1.02	0.00	0.00	0.01	100
P-141	6.0	J-77	J-134	1	-1.01	0.00	0.00	0.01	100
P-139	6.0	J-134	J-77	1	1.00	0.00	0.00	0.01	100
P-298	8.0	J-756	J-327	249	1.77	0.00	0.00	0.01	110
55	8.0	J-166	J-518	527	-1.76	0.00	0.00	0.01	101
345	6.0	J-14	J-271	459	0.99	0.00	0.00	0.01	110
21	10.0	J-851	J-633	2,127	-2.74	0.00	0.00	0.01	100
465	6.0	J-545	J-546	341	0.98	0.00	0.00	0.01	101
P-135	6.0	J-445	J-843	5	-0.97	0.00	0.00	0.01	100
626	8.0	J-614	J-615	408	1.72	0.00	0.00	0.01	120
56	8.0	J-753	J-671	743	-1.67	0.00	0.00	0.01	101
89	8.0	J-376	J-377	213	1.65	0.00	0.00	0.01	120
234	8.0	J-604	J-377	510	-1.65	0.00	0.00	0.01	120
P-21	8.0	J-517	J-470	139	1.65	0.00	0.00	0.01	130
P-22	8.0	J-470	J-376	187	1.65	0.00	0.00	0.01	130
325	8.0	J-351	J-457	312	1.63	0.00	0.00	0.01	101
95	6.0	J-73	J-574	356	-0.91	0.00	0.00	0.01	100
P-147	8.0	J-339	J-707	502	-1.61	0.00	0.00	0.01	100
P-235	12.0	J-719	J-403	108	3.61	0.00	0.00	0.01	130
125	8.0	J-423	J-342	1,182	1.60	0.00	0.00	0.01	130
288	8.0	J-530	J-724	608	1.59	0.00	0.00	0.01	100
57	8.0	J-606	J-607	395	-1.59	0.00	0.00	0.01	100
23	12.0	J-847	J-598	1,656	-3.52	0.00	0.00	0.01	110
497	8.0	J-226	J-375	212	1.56	0.00	0.00	0.01	101
397	6.0	J-460	J-461	282	-0.88	0.00	0.00	0.01	120
P-57	8.0	J-400	J-110	1,121	1.56	0.00	0.00	0.01	110
P-192	8.0	J-767	J-793	229	1.55	0.00	0.00	0.01	100
513	8.0	J-37	J-648	467	1.54	0.00	0.00	0.01	101
134	8.0	J-447	J-467	1,096	-1.52	0.00	0.00	0.01	100
P-226	8.0	J-224	J-613	55	1.48	0.00	0.00	0.01	110
200	8.0	J-638	J-654	480	1.43	0.00	0.00	0.01	130
320	8.0	J-761	J-125	722	-1.43	0.00	0.00	0.01	100
548	8.0	J-675	J-801	849	-1.43	0.00	0.00	0.01	110
649	12.0	J-638	J-639	449	-3.19	0.00	0.00	0.01	110
24	12.0	J-276	J-153	137	-3.18	0.00	0.00	0.01	100
96	8.0	J-419	J-785	2,262	-1.40	0.00	0.00	0.01	120
P-254	8.0	J-800	J-735	294	1.39	0.00	0.00	0.01	101
142	8.0	J-782	J-757	876	-1.39	0.00	0.00	0.01	100
457	12.0	J-96	J-97	28	-3.09	0.00	0.00	0.01	120
P-81	12.0	J-852	J-187	333	-3.03	0.00	0.00	0.01	110
750	8.0	J-618	J-139	410	-1.34	0.00	0.00	0.01	120
272	8.0	J-559	J-560	350	1.34	0.00	0.00	0.01	130
105	8.0	J-33	J-34	11	-1.33	0.00	0.00	0.01	120
550	6.0	J-197	J-592	372	0.75	0.00	0.00	0.01	130
629	8.0	J-27	J-28	516	1.33	0.00	0.00	0.01	101

Active Scenario: Average Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-236	12.0	J-403	J-214	1,056	2.97	0.00	0.00	0.01	130
176	10.0	J-161	J-162	67	2.04	0.00	0.00	0.01	101
P-182	12.0	J-391	J-631	647	2.93	0.00	0.00	0.01	130
261	8.0	J-508	J-749	783	-1.30	0.00	0.00	0.01	130
413	10.0	J-92	J-484	1,311	2.01	0.00	0.00	0.01	110
454	8.0	J-500	J-501	303	1.28	0.00	0.00	0.01	130
37	8.0	J-698	J-500	602	1.28	0.00	0.00	0.01	130
P-143	8.0	J-234	J-738	201	1.27	0.00	0.00	0.01	130
P-37	12.0	J-276	J-217	447	2.80	0.00	0.00	0.01	100
615	8.0	J-120	J-121	41	1.23	0.00	0.00	0.01	110
482	12.0	J-805	J-369	1,173	-2.74	0.00	0.00	0.01	120
774	8.0	J-505	J-431	743	1.21	0.00	0.00	0.01	101
P-252	12.0	J-842	J-369	3	2.70	0.00	0.00	0.01	120
P-247	12.0	J-822	J-395	621	2.66	0.00	0.00	0.01	110
39	8.0	J-281	J-282	142	1.18	0.00	0.00	0.01	120
723	8.0	J-34	J-254	119	1.17	0.00	0.00	0.01	100
416	8.0	J-775	J-776	862	-1.17	0.00	0.00	0.01	130
P-92	12.0	J-167	J-427	1,458	2.53	0.00	0.00	0.01	120
P-89	12.0	J-427	J-318	267	2.52	0.00	0.00	0.01	120
P-90	12.0	J-318	J-625	579	2.52	0.00	0.00	0.01	120
P-86	12.0	J-625	J-733	12	2.52	0.00	0.00	0.01	120
P-35	12.0	J-585	J-838	7	-2.52	0.00	0.00	0.01	100
P-188	8.0	J-623	J-512	325	1.10	0.00	0.00	0.01	120
253	8.0	J-488	J-489	295	1.10	0.00	0.00	0.01	140
P-187	8.0	J-489	J-623	7	1.10	0.00	0.00	0.01	120
106	6.0	J-591	J-721	609	0.62	0.00	0.00	0.01	130
223	12.0	J-804	J-96	2,519	-2.46	0.00	0.00	0.01	120
P-32	12.0	J-626	J-804	794	-2.46	0.00	0.00	0.01	130
661	8.0	J-342	J-343	177	1.08	0.00	0.00	0.01	130
183	8.0	J-586	J-587	363	1.08	0.00	0.00	0.01	101
92	6.0	J-359	J-360	192	0.61	0.00	0.00	0.01	101
398	6.0	J-764	J-516	803	-0.60	0.00	0.00	0.01	120
P-224	6.0	J-461	J-516	150	0.60	0.00	0.00	0.01	120
260	8.0	J-683	J-684	542	-1.06	0.00	0.00	0.01	101
P-106	8.0	J-655	J-815	509	1.06	0.00	0.00	0.01	101
540	8.0	J-254	J-285	388	1.03	0.00	0.00	0.01	101
551	8.0	J-590	J-595	378	1.02	0.00	0.00	0.01	130
P-261	8.0	J-327	J-424	98	1.02	0.00	0.00	0.01	120
173	8.0	J-571	J-645	472	1.02	0.00	0.00	0.01	101
P-262	8.0	J-424	J-328	70	1.02	0.00	0.00	0.01	120
377	8.0	J-395	J-396	242	1.01	0.00	0.00	0.01	120
P-84	12.0	J-733	J-852	1,296	-2.25	0.00	0.00	0.01	120
621	6.0	J-378	J-544	340	-0.56	0.00	0.00	0.01	120
P-280	8.0	J-819	J-229	14	1.00	0.00	0.00	0.01	100
289	8.0	J-299	J-300	150	0.99	0.00	0.00	0.01	101

Active Scenario: Average Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
81	8.0	J-38	J-641	457	0.99	0.00	0.00	0.01	101
5	8.0	J-381	J-779	768	0.99	0.00	0.00	0.01	130
P-55	8.0	J-110	J-579	9	0.98	0.00	0.00	0.01	140
17	8.0	J-787	J-788	821	-0.98	0.00	0.00	0.01	130
121	8.0	J-582	J-583	384	-0.97	0.00	0.00	0.01	101
627	8.0	J-556	J-807	1,367	0.97	0.00	0.00	0.01	120
361	6.0	J-430	J-506	315	0.54	0.00	0.00	0.01	130
P-158	8.0	J-684	J-637	271	-0.96	0.00	0.00	0.01	90
547	6.0	J-557	J-558	347	0.53	0.00	0.00	0.01	100
657	8.0	J-636	J-637	440	-0.92	0.00	0.00	0.01	101
414	12.0	J-93	J-131	941	2.07	0.00	0.00	0.01	130
P-350	8.0	J-45	J-194	28	-0.91	0.00	0.00	0.01	101
124	8.0	J-788	J-833	1,278	0.91	0.00	0.00	0.01	130
484	8.0	J-369	J-157	200	0.89	0.00	0.00	0.01	101
444	8.0	J-584	J-585	362	-0.89	0.00	0.00	0.01	100
274	8.0	J-709	J-301	599	-0.88	0.00	0.00	0.01	110
307	8.0	J-650	J-736	669	0.86	0.00	0.00	0.01	101
P-242	8.0	J-840	J-345	135	0.86	0.00	0.00	0.01	130
764	6.0	J-564	J-821	1,000	0.49	0.00	0.00	0.01	100
323	8.0	J-831	J-832	1,202	0.85	0.00	0.00	0.01	110
248	8.0	J-353	J-354	201	-0.83	0.00	0.00	0.01	80
P-20	8.0	J-441	J-354	52	0.83	0.00	0.00	0.01	80
P-19	8.0	J-480	J-441	170	0.83	0.00	0.00	0.01	80
102	6.0	J-235	J-236	109	0.47	0.00	0.00	0.01	140
314	10.0	J-349	J-277	180	1.29	0.00	0.00	0.01	101
282	8.0	J-149	J-606	399	-0.82	0.00	0.00	0.01	101
123	8.0	J-576	J-577	362	0.82	0.00	0.00	0.01	130
242	8.0	J-206	J-630	460	0.82	0.00	0.00	0.01	101
P-137	6.0	J-348	J-76	153	-0.46	0.00	0.00	0.01	140
315	8.0	J-277	J-278	149	0.81	0.00	0.00	0.01	101
P-38	12.0	J-217	J-163	580	1.81	0.00	0.00	0.01	100
P-119	8.0	J-668	J-222	502	-0.80	0.00	0.00	0.01	130
616	8.0	J-121	J-421	244	0.78	0.00	0.00	0.00	110
466	12.0	J-474	J-475	278	1.74	0.00	0.00	0.00	101
68	6.0	J-45	J-46	14	0.43	0.00	0.00	0.00	140
59	8.0	J-770	J-710	760	-0.75	0.00	0.00	0.00	100
622	6.0	J-247	J-248	118	-0.42	0.00	0.00	0.00	120
209	8.0	J-339	J-27	1,137	0.73	0.00	0.00	0.00	120
603	8.0	J-801	J-802	854	0.73	0.00	0.00	0.00	100
P-234	6.0	J-823	J-665	587	0.41	0.00	0.00	0.00	101
422	12.0	J-555	J-556	346	1.61	0.00	0.00	0.00	120
399	6.0	J-764	J-460	869	-0.39	0.00	0.00	0.00	120
718	6.0	J-688	J-583	578	-0.39	0.00	0.00	0.00	100
381	8.0	J-731	J-732	634	-0.67	0.00	0.00	0.00	130
535	6.0	J-738	J-739	732	0.37	0.00	0.00	0.00	130

Active Scenario: Average Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
614	8.0	J-120	J-627	441	0.65	0.00	0.00	0.00	101
94	8.0	J-72	J-73	21	-0.64	0.00	0.00	0.00	100
243	8.0	J-303	J-304	154	0.64	0.00	0.00	0.00	80
P-110	6.0	J-359	J-514	126	0.35	0.00	0.00	0.00	101
347	8.0	J-336	J-272	700	-0.62	0.00	0.00	0.00	110
730	6.0	J-197	J-198	87	0.35	0.00	0.00	0.00	110
P-169	6.0	J-237	J-126	9	0.34	0.00	0.00	0.00	130
215	6.0	J-578	J-238	429	-0.34	0.00	0.00	0.00	130
P-170	6.0	J-126	J-238	110	0.34	0.00	0.00	0.00	130
483	6.0	J-157	J-158	62	0.34	0.00	0.00	0.00	120
609	6.0	J-158	J-366	281	0.34	0.00	0.00	0.00	120
P-175	8.0	J-837	J-778	90	-0.61	0.00	0.00	0.00	100
P-184	12.0	J-858	J-632	63	1.36	0.00	0.00	0.00	130
545	8.0	J-155	J-156	62	0.60	0.00	0.00	0.00	101
572	6.0	J-430	J-513	317	0.33	0.00	0.00	0.00	90
669	8.0	J-575	J-42	359	-0.59	0.00	0.00	0.00	130
443	8.0	J-531	J-532	331	0.57	0.00	0.00	0.00	140
P-34	12.0	J-698	J-626	57	-1.28	0.00	0.00	0.00	130
4	12.0	J-233	J-234	109	1.27	0.00	0.00	0.00	130
450	8.0	J-693	J-694	564	0.57	0.00	0.00	0.00	130
449	8.0	J-154	J-443	754	0.57	0.00	0.00	0.00	100
748	8.0	J-594	J-389	576	0.55	0.00	0.00	0.00	100
191	8.0	J-497	J-498	312	0.54	0.00	0.00	0.00	101
380	8.0	J-224	J-225	103	0.53	0.00	0.00	0.00	120
563	8.0	J-703	J-704	602	-0.53	0.00	0.00	0.00	110
P-30	12.0	J-281	J-626	584	-1.18	0.00	0.00	0.00	130
489	8.0	J-116	J-117	39	0.52	0.00	0.00	0.00	100
415	8.0	J-437	J-438	261	0.51	0.00	0.00	0.00	101
254	8.0	J-632	J-367	1,287	0.51	0.00	0.00	0.00	130
642	12.0	J-419	J-420	243	1.15	0.00	0.00	0.00	110
595	8.0	J-79	J-487	294	0.50	0.00	0.00	0.00	130
P-349	8.0	J-388	J-45	192	-0.49	0.00	0.00	0.00	101
475	10.0	J-373	J-374	212	0.75	0.00	0.00	0.00	101
404	6.0	J-403	J-404	483	0.27	0.00	0.00	0.00	120
P-300	12.0	J-350	J-316	1,903	1.05	0.00	0.00	0.00	130
6	12.0	J-834	J-687	1,128	-1.02	0.00	0.00	0.00	110
168	12.0	J-153	J-154	61	1.02	0.00	0.00	0.00	100
772	8.0	J-227	J-390	889	-0.45	0.00	0.00	0.00	120
537	8.0	J-332	J-333	172	0.45	0.00	0.00	0.00	140
698	8.0	J-428	J-429	253	0.45	0.00	0.00	0.00	101
P-173	8.0	J-810	J-750	838	0.45	0.00	0.00	0.00	100
643	12.0	J-657	J-419	482	1.00	0.00	0.00	0.00	110
362	8.0	J-307	J-716	620	0.44	0.00	0.00	0.00	130
69	8.0	J-46	J-240	117	0.43	0.00	0.00	0.00	140
P-248	12.0	J-395	J-829	409	0.95	0.00	0.00	0.00	110

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Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-250	12.0	J-369	J-842	3	-0.93	0.00	0.00	0.00	120
695	8.0	J-148	J-149	55	-0.41	0.00	0.00	0.00	101
P-56	8.0	J-579	J-111	28	0.41	0.00	0.00	0.00	140
469	12.0	J-193	J-194	83	0.91	0.00	0.00	0.00	101
566	12.0	J-662	J-659	500	0.91	0.00	0.00	0.00	130
640	12.0	J-553	J-554	346	-0.86	0.00	0.00	0.00	101
P-41	8.0	J-694	J-423	137	-0.36	0.00	0.00	0.00	130
P-294	8.0	J-327	J-465	111	0.35	0.00	0.00	0.00	110
519	8.0	J-465	J-466	274	0.35	0.00	0.00	0.00	140
P-75	12.0	J-714	J-23	453	0.78	0.00	0.00	0.00	100
P-79	12.0	J-714	J-852	198	-0.78	0.00	0.00	0.00	110
159	8.0	J-420	J-112	1,472	0.34	0.00	0.00	0.00	110
648	8.0	J-621	J-847	1,628	0.28	0.00	0.00	0.00	110
93	8.0	J-504	J-72	303	-0.27	0.00	0.00	0.00	100
628	12.0	J-807	J-556	1,805	0.58	0.00	0.00	0.00	120
278	8.0	J-25	J-26	8	0.26	0.00	0.00	0.00	140
P-43	12.0	J-443	J-693	156	0.57	0.00	0.00	0.00	100
204	10.0	J-478	J-199	285	-0.39	0.00	0.00	0.00	130
751	8.0	J-226	J-227	111	0.23	0.00	0.00	0.00	120
P-347	8.0	J-396	J-412	616	0.23	0.00	0.00	0.00	120
P-348	8.0	J-412	J-434	24	0.23	0.00	0.00	0.00	120
378	12.0	J-536	J-214	334	-0.49	0.00	0.00	0.00	130
P-284	12.0	J-94	J-666	292	0.49	0.00	0.00	0.00	100
670	8.0	J-338	J-339	175	0.22	0.00	0.00	0.00	100
724	8.0	J-254	J-568	756	-0.21	0.00	0.00	0.00	100
364	8.0	J-814	J-797	3,156	-0.21	0.00	0.00	0.00	130
47	12.0	J-203	J-204	89	0.44	0.00	0.00	0.00	101
447	10.0	J-209	J-210	90	0.30	0.00	0.00	0.00	101
452	10.0	J-217	J-218	95	0.29	0.00	0.00	0.00	101
P-124	12.0	J-745	J-482	284	0.41	0.00	0.00	0.00	130
P-273	12.0	J-455	J-524	4	-0.41	0.00	0.00	0.00	100
720	12.0	J-284	J-642	457	-0.31	0.00	0.00	0.00	100
663	12.0	J-610	J-611	395	-0.30	0.00	0.00	0.00	120
196	12.0	J-130	J-131	43	-0.30	0.00	0.00	0.00	130
P-62	12.0	J-74	J-145	24	0.28	0.00	0.00	0.00	120
P-40	12.0	J-153	J-196	25	0.22	0.00	0.00	0.00	100
641	12.0	J-420	J-112	1,080	0.20	0.00	0.00	0.00	110
312	8.0	J-149	J-606	1,204	0.07	0.00	0.00	0.00	101
471	8.0	J-117	J-518	882	-0.06	0.00	0.00	0.00	100
768	8.0	J-675	J-198	549	0.04	0.00	0.00	0.00	110
38	6.0	J-211	J-212	90	0.00	0.00	0.00	0.00	120
P-28	8.0	J-212	J-258	33	0.00	0.00	0.00	0.00	130
P-29	12.0	J-258	J-281	15	0.00	0.00	0.00	0.00	130
P-27	8.0	J-257	J-212	90	0.00	0.00	0.00	0.00	130
638	8.0	J-794	J-795	840	0.00	0.00	0.00	0.00	101

Active Scenario: Average Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-88	8.0	J-261	J-318	135	0.00	0.00	0.00	0.00	140
P-24	8.0	J-53	J-706	735	0.00	0.00	0.00	0.00	130
P-87	8.0	J-317	J-261	25	0.00	0.00	0.00	0.00	140
371	8.0	J-35	J-36	12	0.00	0.00	0.00	0.00	140
P-151	8.0	J-777	J-321	14	0.00	0.00	0.00	0.00	140
P-58	8.0	J-110	J-836	20	0.00	0.00	0.00	0.00	110
688	12.0	J-426	J-427	251	0.00	0.00	0.00	0.00	120
201	8.0	J-53	J-54	15	0.00	0.00	0.00	0.00	130
586	10.0	J-661	J-306	494	0.00	0.00	0.00	0.00	130
P-26	10.0	J-706	J-306	45	0.00	0.00	0.00	0.00	130
P-292	8.0	J-465	J-643	18	0.00	0.00	0.00	0.00	110
P-342	6.0	PRV-2	J-769	469	0.00	0.00	0.00	0.00	100
P-341	6.0	J-762	PRV-2	301	0.00	0.00	0.00	0.00	100
P-243	12.0	J-828	J-344	13	0.00	0.00	0.00	0.00	110
P-340	12.0	PRV-3	J-632	161	0.00	0.00	0.00	0.00	130
33	12.0	J-23	J-24	5	0.00	0.00	0.00	0.00	140
P-33	12.0	J-803	J-698	9	0.00	0.00	0.00	0.00	130
P-49	12.0	J-726	J-848	40	0.00	0.00	0.00	0.00	100
P-373	12.0	J-743	J-910	216	0.00	0.00	0.00	0.00	130
190	12.0	J-295	J-296	151	0.00	0.00	0.00	0.00	130
P-220	12.0	J-850	J-682	60	0.00	0.00	0.00	0.00	120
780	12.0	J-112	J-113	38	0.00	0.00	0.00	0.00	110
P-337	12.0	J-495	PRV-4	148	0.00	0.00	0.00	0.00	110
P-339	12.0	J-631	PRV-3	277	0.00	0.00	0.00	0.00	130
130	12.0	J-283	J-284	143	0.00	0.00	0.00	0.00	100
P-305	12.0	J-31	PRV-1	314	0.00	0.00	0.00	0.00	100
P-338	12.0	PRV-4	J-638	1,166	0.00	0.00	0.00	0.00	110
P-166	6.0	J-259	J-392	11	0.00	0.00	0.00	0.00	130
P-78	6.0	J-605	J-230	143	0.00	0.00	0.00	0.00	100
P-65	12.0	J-616	J-569	50	0.00	0.00	0.00	0.00	100
128	8.0	J-230	J-170	141	0.00	0.00	0.00	0.00	140
P-44	12.0	J-693	J-444	108	0.00	0.00	0.00	0.00	100
155	8.0	J-169	J-170	76	0.00	0.00	0.00	0.00	140
430	8.0	J-261	J-262	125	0.00	0.00	0.00	0.00	140
87	8.0	J-490	J-491	304	0.00	0.00	0.00	0.00	120
528	8.0	J-424	J-425	332	0.00	0.00	0.00	0.00	120
610	6.0	J-142	J-143	53	0.00	0.00	0.00	0.00	120
P-76	12.0	J-23	J-715	218	0.00	0.00	0.00	0.00	100
781	8.0	J-157	J-249	118	0.00	0.00	0.00	0.00	101
P-25	10.0	J-305	J-706	109	0.00	0.00	0.00	0.00	130
P-23	8.0	J-705	J-53	159	0.00	0.00	0.00	0.00	130
426	8.0	J-479	J-262	288	0.00	0.00	0.00	0.00	140
596	8.0	J-372	J-612	451	0.00	0.00	0.00	0.00	120
567	8.0	J-658	J-174	510	0.00	0.00	0.00	0.00	130
427	10.0	J-733	J-355	674	0.00	0.00	0.00	0.00	120

Active Scenario: Average Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-9	8.0	J-597	J-20	44	0.00	0.00	0.00	0.00	80
429	8.0	J-625	J-522	425	0.00	0.00	0.00	0.00	80
P-18	8.0	J-142	J-442	40	0.00	0.00	0.00	0.00	80
425	8.0	J-522	J-523	325	0.00	0.00	0.00	0.00	80
360	6.0	J-213	J-214	120	0.00	0.00	0.00	0.00	120
109	12.0	J-511	J-628	435	0.00	0.00	0.00	0.00	101
214	6.0	J-126	J-127	43	0.00	0.00	0.00	0.00	130
P-306	12.0	PRV-1	J-283	29	0.00	0.00	0.00	0.00	100
P-100	8.0	J-712	J-718	620	0.00	0.00	0.00	0.00	120
386	12.0	J-536	J-566	850	0.00	0.00	0.00	0.00	130
767	8.0	J-341	J-520	460	0.00	0.00	0.00	0.00	101
612	8.0	J-623	J-624	457	0.00	0.00	0.00	0.00	120
702	8.0	J-431	J-432	256	0.00	0.00	0.00	0.00	101
P-303	8.0	J-3	J-861	503	0.00	0.00	0.00	0.00	110
118	4.0	J-185	J-186	92	0.00	0.00	0.00	0.00	140
P-174	8.0	J-750	J-811	128	0.00	0.00	0.00	0.00	100
P-17	8.0	J-441	J-142	230	0.00	0.00	0.00	0.00	80
600	6.0	J-172	J-358	191	0.00	0.00	0.00	0.00	101
7	8.0	J-24	J-680	546	0.00	0.00	0.00	0.00	110
564	2.0	J-174	J-175	74	0.00	0.00	0.00	0.00	130
335	6.0	J-245	J-246	118	0.00	0.00	0.00	0.00	80
428	8.0	J-355	J-356	184	0.00	0.00	0.00	0.00	120
90	2.0	J-470	J-471	309	0.00	0.00	0.00	0.00	130
392	6.0	J-412	J-413	237	0.00	0.00	0.00	0.00	120
387	2.0	J-566	J-567	354	0.00	0.00	0.00	0.00	101
P-354	12.0	J-553	J-847	714	0.00	0.00	0.00	0.00	130

Active Scenario: Average Day Demand
FlexTable: Pump Table
Steady State Analysis

Label	Elevation (ft)	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
Boland-1	264.00	On	288.48	519.38	771.04	230.90
Boland-2	264.00	Off	288.58	519.06	0.00	0.00
Boland-3	264.00	Off	288.59	519.06	0.00	0.00
Hosmer Pump #1	275.00	Off	284.47	505.89	0.00	0.00
Hosmer Pump #3	275.00	On	283.13	516.56	1,062.59	233.43

Active Scenario: Average Day Demand
FlexTable: Tank Table
Steady State Analysis

Label	Zone	Elevation (Base) (ft)	Elevation (Minimum) (ft)	Elevation (Initial) (ft)	Elevation (Maximum) (ft)	Diameter (ft)	Flow (Out net) (gpm)	Status (Calculated)	Hydraulic Grade (ft)
Tara Road Tank	High Service	467.00	467.00	508.00	515.00	67.00	-481.62	Filling	508.00
Oak Hill Road Tank	Low Service	418.00	418.00	485.00	492.70	25.00	-508.75	Filling	485.00
Overlook Drive Tank	Low Service	460.00	460.00	486.00	493.30	40.00	-208.10	Filling	486.00

Active Scenario: Maximum Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-492	454.31	High Service	Fixed	23	0.00	508.18
J-99	454.14	High Service	Fixed	23	0.00	508.19
J-98	454.09	High Service	Fixed	23	0.70	508.18
J-189	450.90	High Service	Fixed	25	3.06	508.12
J-575	443.73	High Service	Fixed	28	1.40	508.62
J-645	442.00	High Service	Fixed	29	2.41	508.04
J-617	433.40	High Service	Fixed	32	0.00	508.20
J-92	432.80	High Service	Fixed	32	3.49	507.90
J-616	432.82	High Service	Fixed	33	0.00	508.19
J-569	432.77	High Service	Fixed	33	0.00	508.19
J-93	432.24	High Service	Fixed	33	3.55	507.90
J-42	429.80	High Service	Fixed	34	2.72	508.62
J-41	429.71	High Service	Fixed	34	1.17	508.62
J-478	422.78	High Service	Fixed	37	0.93	507.90
J-654	430.41	High Service	Fixed	37	3.40	516.10
J-200	421.49	High Service	Fixed	37	2.72	507.90
J-199	421.00	High Service	Fixed	38	1.15	507.90
J-346	434.86	High Service	Fixed	38	1.13	522.09
J-131	418.68	High Service	Fixed	39	4.20	507.90
J-130	417.77	High Service	Fixed	39	0.70	507.90
J-571	415.51	High Service	Fixed	40	2.59	508.04
J-343	428.08	High Service	Fixed	41	1.44	522.09
J-107	425.26	High Service	Fixed	42	2.61	522.08
J-106	425.20	High Service	Fixed	42	1.42	522.09
J-452	422.38	High Service	Fixed	43	1.55	522.09
J-342	421.14	High Service	Fixed	44	1.22	522.09
J-638	414.27	High Service	Fixed	44	4.16	516.10
J-639	414.04	High Service	Fixed	44	4.11	516.10
J-611	406.03	High Service	Fixed	44	3.44	508.84
J-379	404.81	High Service	Fixed	45	1.33	508.24
J-378	404.39	High Service	Fixed	45	0.00	508.24
J-694	416.00	High Service	Fixed	46	2.18	522.09
J-247	401.49	High Service	Fixed	46	0.99	508.24
J-570	398.67	High Service	Fixed	47	5.55	508.09
J-462	398.21	High Service	Fixed	48	0.00	508.23
J-423	411.16	High Service	Fixed	48	1.37	522.09
J-846	395.08	High Service	Fixed	49	1.44	508.28
J-610	395.42	High Service	Fixed	49	0.70	508.84
J-628	391.61	High Service	Fixed	50	0.00	508.25
J-393	391.00	High Service	Fixed	51	5.60	508.23
J-183	388.00	High Service	Fixed	52	1.22	508.24
J-544	387.66	High Service	Fixed	52	0.00	508.24
J-713	385.67	High Service	Fixed	53	12.00	508.26
J-100	384.34	High Service	Fixed	54	0.00	508.26
J-652	388.14	High Service	Fixed	54	5.42	513.48
J-668	384.00	High Service	Fixed	55	1.89	510.22

Active Scenario: Maximum Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-248	381.76	High Service	Fixed	55	0.00	508.24
J-463	380.94	High Service	Fixed	55	0.00	508.24
J-717	380.75	High Service	Fixed	55	0.00	508.26
J-422	394.58	High Service	Fixed	55	2.34	522.09
J-101	380.69	High Service	Fixed	55	0.99	508.26
J-712	380.32	High Service	Fixed	55	0.00	508.26
J-629	387.93	High Service	Fixed	55	1.46	516.11
J-222	380.20	High Service	Fixed	56	1.13	510.22
J-669	380.11	High Service	Fixed	56	1.64	510.22
J-785	385.14	High Service	Fixed	57	6.18	516.09
J-184	377.12	High Service	Fixed	57	0.00	508.24
J-482	373.41	High Service	Fixed	58	0.97	508.29
J-791	372.34	High Service	Fixed	59	4.47	507.73
J-760	372.11	High Service	Fixed	59	6.67	507.71
J-444	386.09	High Service	Fixed	59	0.00	522.09
J-647	371.61	High Service	Fixed	59	1.82	507.97
J-406	371.87	High Service	Fixed	59	3.49	508.28
J-511	371.02	High Service	Fixed	59	0.00	508.25
J-755	368.98	High Service	Fixed	60	3.10	507.72
J-223	371.21	High Service	Fixed	60	0.00	510.25
J-405	368.00	High Service	Fixed	61	4.65	508.28
J-693	381.63	High Service	Fixed	61	0.00	522.09
J-718	366.82	High Service	Fixed	61	0.00	508.26
J-161	374.38	High Service	Fixed	61	5.24	516.11
J-298	373.45	High Service	Fixed	62	0.00	516.12
J-483	365.11	High Service	Fixed	62	2.23	507.91
J-715	363.53	High Service	Fixed	63	0.00	508.26
J-162	371.38	High Service	Fixed	63	4.83	516.11
J-362	362.71	High Service	Fixed	63	2.16	507.71
J-297	371.00	High Service	Fixed	63	3.19	516.13
J-680	363.00	High Service	Fixed	63	0.00	508.26
J-443	376.17	High Service	Fixed	63	0.00	522.09
J-745	361.79	High Service	Fixed	63	0.00	508.29
J-676	362.77	High Service	Fixed	64	3.42	509.54
J-523	361.28	High Service	Fixed	64	0.00	508.26
J-481	361.14	High Service	Fixed	64	0.00	508.29
J-479	361.00	High Service	Fixed	64	0.00	508.26
J-287	368.79	High Service	Fixed	64	1.85	516.10
J-261	360.78	High Service	Fixed	64	0.00	508.26
J-317	360.69	High Service	Fixed	64	0.00	508.26
J-262	360.00	High Service	Fixed	64	0.00	508.26
J-170	360.00	High Service	Fixed	64	0.00	508.27
J-169	359.32	High Service	Fixed	64	0.00	508.27
J-714	358.58	High Service	Fixed	65	0.00	508.26
J-167	358.00	High Service	Fixed	65	0.00	508.26
J-180	358.00	High Service	Fixed	65	0.00	508.26

Active Scenario: Maximum Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-318	357.62	High Service	Fixed	65	0.00	508.26
J-23	357.00	High Service	Fixed	65	1.85	508.26
J-24	356.98	High Service	Fixed	65	0.00	508.26
J-230	355.09	High Service	Fixed	66	0.00	508.27
J-427	355.00	High Service	Fixed	66	0.00	508.26
J-361	351.85	High Service	Fixed	67	0.93	507.71
J-615	352.38	High Service	Fixed	67	4.07	508.27
J-426	352.28	High Service	Fixed	67	0.00	508.26
J-484	351.91	High Service	Fixed	67	3.40	507.90
J-522	352.27	High Service	Fixed	67	0.00	508.26
J-852	350.64	High Service	Fixed	68	0.00	508.26
J-605	350.00	High Service	Fixed	68	0.00	508.27
J-288	356.93	High Service	Fixed	69	5.48	516.10
J-744	346.41	High Service	Fixed	70	3.58	508.30
J-596	345.00	High Service	Fixed	71	1.04	508.30
J-851	353.00	High Service	Fixed	71	6.49	517.23
J-809	343.60	High Service	Fixed	71	0.00	508.30
J-788	344.37	High Service	Fixed	72	5.46	510.11
J-816	343.43	High Service	Fixed	72	4.38	510.12
J-641	340.75	High Service	Fixed	72	2.34	507.66
J-834	337.96	High Service	Fixed	73	2.43	507.71
J-635	340.10	High Service	Fixed	74	5.08	510.00
J-145	338.56	High Service	Fixed	74	0.66	510.34
J-74	338.49	High Service	Fixed	74	0.00	510.34
J-742	343.47	High Service	Fixed	74	0.00	515.65
J-677	338.12	High Service	Fixed	75	0.00	510.34
J-144	337.95	High Service	Fixed	75	0.00	510.35
J-687	335.28	High Service	Fixed	75	1.76	507.71
J-75	337.75	High Service	Fixed	75	0.50	510.34
J-110	336.81	High Service	Fixed	75	1.37	510.24
J-625	334.69	High Service	Fixed	75	0.00	508.26
J-707	336.13	High Service	Fixed	75	4.65	510.10
J-579	336.17	High Service	Fixed	75	0.00	510.24
J-355	334.00	High Service	Fixed	75	0.00	508.26
J-356	334.00	High Service	Fixed	75	0.00	508.26
J-733	333.95	High Service	Fixed	75	11.32	508.26
J-836	335.57	High Service	Fixed	76	0.00	510.24
J-111	335.00	High Service	Fixed	76	0.97	510.24
J-400	334.74	High Service	Fixed	76	3.89	510.24
J-187	332.67	High Service	Fixed	76	3.93	508.26
J-531	334.53	High Service	Fixed	76	0.00	510.21
J-399	334.08	High Service	Fixed	76	1.26	510.27
J-587	331.62	High Service	Fixed	76	2.56	507.96
J-532	333.00	High Service	Fixed	77	1.35	510.21
J-651	336.00	High Service	Fixed	77	0.61	513.48
J-188	330.78	High Service	Fixed	77	0.00	508.26

Active Scenario: Maximum Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-154	344.19	High Service	Fixed	77	1.08	522.09
J-688	328.97	High Service	Fixed	77	1.40	507.71
J-582	328.62	High Service	Fixed	77	2.30	507.71
J-795	342.79	High Service	Fixed	78	0.00	522.08
J-586	327.91	High Service	Fixed	78	1.17	507.96
J-794	341.38	High Service	Fixed	78	12.40	522.08
J-685	326.20	High Service	Fixed	79	5.71	508.26
J-833	327.91	High Service	Fixed	79	2.16	510.11
J-153	339.00	High Service	Fixed	79	0.00	522.09
J-196	338.53	High Service	Fixed	79	0.52	522.09
J-94	324.00	High Service	Fixed	79	0.99	507.73
J-95	324.00	High Service	Fixed	79	0.70	507.73
J-740	324.00	High Service	Fixed	79	0.00	507.73
J-195	337.74	High Service	Fixed	80	1.69	522.09
J-666	323.00	High Service	Fixed	80	1.17	507.73
J-695	322.34	High Service	Fixed	80	1.62	507.89
J-771	323.61	High Service	Fixed	81	5.08	510.00
J-502	321.20	High Service	Fixed	81	1.82	507.73
J-614	321.00	High Service	Fixed	81	0.00	508.27
J-603	321.39	High Service	Fixed	81	4.34	508.77
J-295	320.13	High Service	Fixed	81	0.00	508.27
J-267	320.00	High Service	Fixed	81	0.75	508.27
J-782	319.29	High Service	Fixed	82	1.69	507.71
J-28	321.50	High Service	Fixed	82	3.15	510.09
J-266	319.56	High Service	Fixed	82	2.65	508.27
J-296	319.54	High Service	Fixed	82	0.00	508.27
J-27	321.34	High Service	Fixed	82	3.24	510.10
J-338	321.00	High Service	Fixed	82	2.54	510.09
J-813	318.95	High Service	Fixed	82	3.53	508.09
J-807	318.73	High Service	Fixed	82	0.90	508.27
J-555	318.37	High Service	Fixed	82	0.00	508.27
J-276	332.15	High Service	Fixed	82	0.90	522.09
J-556	318.19	High Service	Fixed	82	2.92	508.27
J-339	320.00	High Service	Fixed	82	2.59	510.09
J-503	317.42	High Service	Fixed	82	4.23	507.72
J-808	317.83	High Service	Fixed	82	0.00	508.28
J-787	319.00	High Service	Fixed	83	2.32	510.11
J-622	323.07	High Service	Fixed	84	4.59	516.09
J-455	291.00	High Service	Fixed	84	0.97	485.42
J-524	291.00	High Service	Fixed	84	0.00	485.42
J-583	313.13	High Service	Fixed	84	2.52	507.71
J-769	312.79	High Service	Fixed	84	5.60	507.65
J-217	326.91	High Service	Fixed	84	1.67	522.09
J-779	312.17	High Service	Fixed	85	2.34	507.70
J-37	311.00	High Service	Fixed	85	2.43	507.66
J-38	311.00	High Service	Fixed	85	1.53	507.66

Active Scenario: Maximum Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-657	319.37	High Service	Fixed	85	8.54	516.09
J-653	312.00	High Service	Fixed	85	5.89	509.21
J-799	318.93	High Service	Fixed	85	4.47	516.15
J-391	318.00	High Service	Fixed	86	1.04	515.69
J-701	311.53	High Service	Fixed	86	4.86	509.88
J-781	310.55	High Service	Fixed	86	2.43	509.10
J-104	310.47	High Service	Fixed	86	1.24	509.10
J-218	322.93	High Service	Fixed	86	0.68	522.09
J-758	311.28	High Service	Fixed	86	3.55	510.46
J-274	308.50	High Service	Fixed	86	4.68	508.23
J-741	314.95	High Service	Fixed	87	29.13	515.53
J-589	284.69	High Service	Fixed	87	5.01	485.39
J-105	308.40	High Service	Fixed	87	2.41	509.11
J-590	283.71	High Service	Fixed	87	2.30	485.39
J-380	305.73	High Service	Fixed	87	1.94	507.70
J-765	307.57	High Service	Fixed	88	2.23	509.93
J-766	304.98	High Service	Fixed	88	0.93	507.70
J-381	304.94	High Service	Fixed	88	2.90	507.70
J-229	304.77	High Service	Fixed	88	2.36	507.72
J-642	304.45	High Service	Fixed	88	2.14	507.72
J-819	304.05	High Service	Fixed	88	0.00	507.72
J-757	303.87	High Service	Fixed	88	1.53	507.71
J-501	332.31	High Service	Fixed	88	3.04	536.31
J-754	303.46	High Service	Fixed	88	0.00	507.72
J-500	331.02	High Service	Fixed	89	0.00	536.31
J-228	301.87	High Service	Fixed	89	4.50	507.72
J-577	312.65	High Service	Fixed	89	1.94	518.54
J-631	309.06	High Service	Fixed	89	4.11	515.69
J-273	301.00	High Service	Fixed	90	1.31	508.40
J-320	299.65	High Service	Fixed	90	0.77	508.30
J-279	306.72	High Service	Fixed	91	3.67	516.09
J-164	312.66	High Service	Fixed	91	8.92	522.09
J-280	306.29	High Service	Fixed	91	4.18	516.00
J-83	298.43	High Service	Fixed	91	0.00	508.29
J-621	306.13	High Service	Fixed	91	3.96	516.09
J-598	306.11	High Service	Fixed	91	4.63	516.09
J-163	311.64	High Service	Fixed	91	1.98	522.09
J-784	311.62	High Service	Fixed	91	7.77	522.09
J-656	325.46	High Service	Fixed	91	5.15	536.28
J-648	296.75	High Service	Fixed	91	3.64	507.66
J-82	297.19	High Service	Fixed	91	0.84	508.29
J-419	304.80	High Service	Fixed	91	2.97	516.09
J-815	324.78	High Service	Fixed	92	2.52	536.28
J-847	303.53	High Service	Fixed	92	9.01	516.09
J-284	295.14	High Service	Fixed	92	0.72	507.72
J-602	296.63	High Service	Fixed	92	2.41	509.23

Active Scenario: Maximum Day Demand
FlexTable: Junction Table
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Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-260	301.38	High Service	Fixed	93	4.32	515.69
J-173	293.92	High Service	Fixed	93	0.00	508.29
J-259	301.06	High Service	Fixed	93	0.00	515.69
J-237	301.00	High Service	Fixed	93	0.00	515.69
J-127	300.87	High Service	Fixed	93	0.00	515.69
J-126	300.81	High Service	Fixed	93	0.00	515.69
J-64	293.12	High Service	Fixed	93	0.00	508.31
J-319	292.73	High Service	Fixed	93	0.00	508.31
J-63	292.56	High Service	Fixed	93	0.00	508.31
J-392	299.57	High Service	Fixed	94	0.00	515.69
J-235	291.00	High Service	Fixed	94	1.13	508.41
J-420	298.29	High Service	Fixed	94	1.46	516.09
J-256	290.25	High Service	Fixed	94	6.45	508.41
J-768	297.28	High Service	Fixed	94	2.77	515.69
J-335	290.00	High Service	Fixed	95	3.01	508.42
J-236	289.27	High Service	Fixed	95	1.11	508.41
J-778	288.96	High Service	Fixed	95	0.57	508.95
J-837	288.00	High Service	Fixed	96	1.44	508.95
J-633	296.00	High Service	Fixed	96	8.65	517.23
J-825	314.97	High Service	Fixed	96	7.98	536.28
J-576	296.79	High Service	Fixed	96	5.62	518.54
J-210	300.33	High Service	Fixed	96	0.70	522.10
J-686	286.63	High Service	Fixed	96	3.82	508.51
J-209	299.73	High Service	Fixed	96	1.02	522.10
J-830	297.99	High Service	Fixed	97	1.22	522.10
J-667	297.92	High Service	Fixed	97	0.00	522.10
J-525	284.36	High Service	Fixed	98	0.00	509.78
J-255	282.52	High Service	Fixed	98	8.70	508.41
J-739	282.10	High Service	Fixed	98	0.88	508.37
J-498	281.80	High Service	Fixed	98	1.28	508.39
J-526	283.07	High Service	Fixed	98	0.00	509.73
J-564	280.92	High Service	Fixed	98	2.59	508.39
J-238	286.97	High Service	Fixed	99	0.00	515.69
J-626	307.53	High Service	Fixed	99	0.00	536.31
J-510	280.55	High Service	Fixed	99	0.00	509.68
J-803	306.90	High Service	Fixed	99	0.00	536.31
J-698	306.63	High Service	Fixed	99	0.00	536.31
J-655	305.73	High Service	Fixed	100	6.54	536.28
J-774	305.00	High Service	Fixed	100	4.97	536.29
J-537	278.11	High Service	Fixed	100	0.00	509.63
J-509	278.00	High Service	Fixed	100	2.43	509.72
J-553	304.56	High Service	Fixed	100	2.05	536.28
J-697	288.62	High Service	Fixed	101	11.84	521.56
J-649	275.00	High Service	Fixed	101	3.73	508.31
J-282	302.84	High Service	Fixed	101	2.79	536.31
J-211	302.56	High Service	Fixed	101	0.00	536.31

Active Scenario: Maximum Day Demand
FlexTable: Junction Table
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Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-257	302.48	High Service	Fixed	101	0.00	536.31
J-780	281.72	High Service	Fixed	101	3.44	515.69
J-281	302.11	High Service	Fixed	101	0.00	536.31
J-212	302.00	High Service	Fixed	101	0.00	536.31
J-258	302.00	High Service	Fixed	101	0.00	536.31
J-634	281.99	High Service	Fixed	102	3.51	516.98
J-497	273.00	High Service	Fixed	102	1.55	508.39
J-290	273.00	High Service	Fixed	102	0.00	509.12
J-804	300.11	High Service	Fixed	102	0.00	536.31
J-691	283.35	High Service	Fixed	102	0.00	519.72
J-322	272.74	High Service	Fixed	102	0.00	509.12
J-325	285.29	High Service	Fixed	102	2.56	522.10
J-185	272.17	High Service	Fixed	103	0.00	509.11
J-692	281.81	High Service	Fixed	103	5.66	518.80
J-289	272.05	High Service	Fixed	103	0.00	509.12
J-554	298.95	High Service	Fixed	103	11.17	536.28
J-186	271.42	High Service	Fixed	103	0.00	509.11
J-207	278.09	High Service	Fixed	103	4.52	516.24
J-584	297.92	High Service	Fixed	103	2.12	536.30
J-578	276.96	High Service	Fixed	103	1.24	515.69
J-777	270.16	High Service	Fixed	103	0.00	509.13
J-208	277.00	High Service	Fixed	103	1.80	516.16
J-321	269.76	High Service	Fixed	104	0.00	509.13
J-538	270.10	High Service	Fixed	104	0.00	509.48
J-326	282.49	High Service	Fixed	104	1.62	522.10
J-29	268.18	High Service	Fixed	104	0.00	509.13
J-30	268.00	High Service	Fixed	104	0.00	509.13
J-112	272.13	High Service	Fixed	106	1.26	516.09
J-838	291.90	High Service	Fixed	106	1.11	536.30
J-585	291.85	High Service	Fixed	106	3.87	536.30
J-738	263.86	High Service	Fixed	106	2.14	508.37
J-113	270.13	High Service	Fixed	106	0.00	516.09
J-810	269.31	High Service	Fixed	107	1.35	515.68
J-445	261.14	High Service	Fixed	107	2.30	508.40
J-234	261.01	High Service	Fixed	107	0.00	508.37
J-77	261.01	High Service	Fixed	107	0.00	508.37
J-134	260.99	High Service	Fixed	107	0.00	508.37
J-843	260.94	High Service	Fixed	107	0.00	508.40
J-727	274.60	High Service	Fixed	107	1.08	522.10
J-233	260.81	High Service	Fixed	107	0.68	508.37
J-542	260.80	High Service	Fixed	107	1.06	508.40
J-821	260.57	High Service	Fixed	107	1.15	508.39
J-49	271.00	High Service	Fixed	107	5.53	518.87
J-50	271.00	High Service	Fixed	107	0.00	518.87
J-725	271.00	High Service	Fixed	107	2.90	518.99
J-76	260.11	High Service	Fixed	107	0.00	508.37

Active Scenario: Maximum Day Demand
FlexTable: Junction Table
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Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-97	287.92	High Service	Fixed	107	0.00	536.31
J-135	259.94	High Service	Fixed	107	0.00	508.37
J-96	286.82	High Service	Fixed	108	1.49	536.31
J-160	286.40	High Service	Fixed	108	1.69	536.29
J-231	265.66	High Service	Fixed	108	2.72	515.61
J-232	265.68	High Service	Fixed	108	1.91	515.70
J-696	270.48	High Service	Fixed	109	2.88	521.56
J-844	270.90	High Service	Fixed	109	0.00	522.11
J-433	267.53	High Service	Fixed	109	12.24	518.87
J-159	284.47	High Service	Fixed	109	0.00	536.29
J-848	270.50	High Service	Fixed	109	0.00	522.80
J-726	270.00	High Service	Fixed	109	0.00	522.80
J-856	268.57	High Service	Fixed	110	0.00	521.86
J-348	252.33	High Service	Fixed	111	1.08	508.37
J-751	259.34	High Service	Fixed	111	1.06	515.64
J-811	257.90	High Service	Fixed	112	0.00	515.68
J-750	257.59	High Service	Fixed	112	0.00	515.68
J-773	277.00	High Service	Fixed	112	1.22	536.29
J-204	272.32	High Service	Fixed	112	1.04	532.23
J-203	271.53	High Service	Fixed	113	0.77	532.23
J-752	269.57	High Service	Fixed	115	0.00	536.33
J-251	413.71	Low Service	Fixed	31	1.64	486.21
J-250	409.79	Low Service	Fixed	33	1.96	486.19
J-308	406.63	Low Service	Fixed	34	2.14	486.18
J-307	405.37	Low Service	Fixed	35	3.40	486.18
J-430	401.88	Low Service	Fixed	36	2.34	486.18
J-506	395.91	Low Service	Fixed	39	1.28	486.18
J-670	392.00	Low Service	Fixed	41	4.97	487.20
J-716	385.66	Low Service	Fixed	43	1.04	486.18
J-3	394.00	Low Service	Fixed	45	0.00	497.90
J-671	382.92	Low Service	Fixed	45	2.77	487.15
J-792	382.82	Low Service	Fixed	45	1.15	487.15
J-4	394.00	Low Service	Fixed	45	14.83	498.72
J-304	380.76	Low Service	Fixed	45	1.51	485.48
J-588	381.97	Low Service	Fixed	46	2.50	488.30
J-513	378.57	Low Service	Fixed	47	0.79	486.18
J-268	375.69	Low Service	Fixed	49	1.49	488.30
J-735	375.66	Low Service	Fixed	49	3.31	488.59
J-206	369.37	Low Service	Fixed	50	0.88	485.49
J-205	368.16	Low Service	Fixed	51	2.21	485.49
J-861	378.98	Low Service	Fixed	51	4.36	497.90
J-303	365.68	Low Service	Fixed	52	1.67	485.48
J-269	368.35	Low Service	Fixed	52	1.31	488.28
J-467	365.29	Low Service	Fixed	52	2.97	485.50
J-552	361.06	Low Service	Fixed	54	1.78	486.17
J-800	360.94	Low Service	Fixed	55	2.95	488.59

Active Scenario: Maximum Day Demand
FlexTable: Junction Table
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Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-659	357.55	Low Service	Fixed	56	0.88	486.14
J-630	356.10	Low Service	Fixed	56	1.94	485.49
J-551	356.09	Low Service	Fixed	56	1.20	486.16
J-658	356.00	Low Service	Fixed	56	1.46	486.14
J-429	356.15	Low Service	Fixed	57	1.06	487.17
J-753	353.85	Low Service	Fixed	58	3.96	487.15
J-428	351.15	Low Service	Fixed	59	0.00	487.17
J-910	350.00	Low Service	Fixed	59	0.00	486.15
J-743	348.56	Low Service	Fixed	60	0.00	486.15
J-832	359.00	Low Service	Fixed	60	2.03	496.81
J-812	355.14	Low Service	Fixed	60	3.01	493.67
J-11	348.44	Low Service	Fixed	60	0.00	487.14
J-660	347.17	Low Service	Fixed	60	1.28	486.11
J-662	347.00	Low Service	Fixed	60	0.63	486.14
J-528	346.62	Low Service	Fixed	61	2.27	488.68
J-839	346.00	Low Service	Fixed	62	1.58	488.53
J-734	346.00	Low Service	Fixed	62	0.00	488.54
J-573	346.80	Low Service	Fixed	62	3.89	489.68
J-435	351.19	Low Service	Fixed	62	0.54	494.68
J-413	350.92	Low Service	Fixed	62	0.00	494.68
J-818	341.79	Low Service	Fixed	62	4.83	486.12
J-174	340.90	Low Service	Fixed	63	0.00	486.14
J-776	340.07	Low Service	Fixed	63	9.30	485.38
J-175	339.00	Low Service	Fixed	64	0.00	486.14
J-527	340.88	Low Service	Fixed	64	5.35	488.74
J-493	337.10	Low Service	Fixed	64	2.92	485.51
J-705	342.97	Low Service	Fixed	65	0.00	493.67
J-471	340.67	Low Service	Fixed	66	0.00	493.67
J-709	340.28	Low Service	Fixed	66	1.02	493.67
J-54	339.16	Low Service	Fixed	67	0.00	493.67
J-376	338.60	Low Service	Fixed	67	0.00	493.67
J-20	338.55	Low Service	Fixed	67	0.00	493.66
J-19	338.52	Low Service	Fixed	67	0.00	493.66
J-491	338.04	Low Service	Fixed	67	0.00	493.66
J-53	337.95	Low Service	Fixed	67	0.00	493.67
J-675	329.51	Low Service	Fixed	67	3.28	485.39
J-746	337.22	Low Service	Fixed	68	3.24	493.68
J-597	337.05	Low Service	Fixed	68	0.00	493.66
J-442	335.85	Low Service	Fixed	68	0.00	493.66
J-490	335.82	Low Service	Fixed	68	0.00	493.66
J-470	335.73	Low Service	Fixed	68	0.00	493.67
J-747	334.45	Low Service	Fixed	69	8.65	493.67
J-177	334.25	Low Service	Fixed	69	0.00	493.66
J-708	339.74	Low Service	Fixed	69	6.49	499.23
J-480	334.00	Low Service	Fixed	69	0.00	493.66
J-365	334.00	Low Service	Fixed	69	0.00	493.66

Active Scenario: Maximum Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-142	333.79	Low Service	Fixed	69	0.00	493.66
J-495	333.64	Low Service	Fixed	69	3.60	493.68
J-517	333.00	Low Service	Fixed	70	0.00	493.67
J-494	332.93	Low Service	Fixed	70	2.05	493.69
J-650	326.00	Low Service	Fixed	70	1.11	487.04
J-736	325.31	Low Service	Fixed	70	2.05	487.04
J-789	325.36	Low Service	Fixed	70	4.02	487.60
J-377	331.34	Low Service	Fixed	70	0.00	493.67
J-143	330.48	Low Service	Fixed	71	0.00	493.66
J-176	330.39	Low Service	Fixed	71	0.00	493.66
J-775	321.77	Low Service	Fixed	71	2.77	485.38
J-434	330.06	Low Service	Fixed	71	0.00	494.68
J-301	329.00	Low Service	Fixed	71	2.12	493.68
J-412	329.55	Low Service	Fixed	71	0.00	494.68
J-372	324.61	Low Service	Fixed	72	3.55	490.03
J-835	320.00	Low Service	Fixed	72	1.42	485.52
J-661	328.05	Low Service	Fixed	72	0.00	493.67
J-604	328.00	Low Service	Fixed	72	1.13	493.67
J-302	328.00	Low Service	Fixed	72	1.76	493.67
J-441	327.95	Low Service	Fixed	72	0.00	493.66
J-472	327.59	Low Service	Fixed	72	1.42	493.68
J-728	327.44	Low Service	Fixed	72	1.13	493.67
J-473	327.19	Low Service	Fixed	72	1.04	493.66
J-354	326.60	Low Service	Fixed	72	0.00	493.66
J-330	319.22	Low Service	Fixed	72	4.07	486.29
J-703	318.43	Low Service	Fixed	72	1.26	485.92
J-334	325.29	Low Service	Fixed	73	0.00	493.66
J-599	325.09	Low Service	Fixed	73	3.62	493.75
J-408	325.00	Low Service	Fixed	73	1.85	493.67
J-448	316.56	Low Service	Fixed	73	3.33	485.48
J-704	316.85	Low Service	Fixed	73	3.51	485.92
J-436	324.13	Low Service	Fixed	73	1.62	493.65
J-331	316.00	Low Service	Fixed	74	2.00	486.13
J-291	316.19	Low Service	Fixed	74	0.90	486.99
J-618	314.91	Low Service	Fixed	74	5.06	485.71
J-565	315.00	Low Service	Fixed	74	4.45	486.03
J-496	322.50	Low Service	Fixed	74	4.61	493.62
J-559	314.22	Low Service	Fixed	74	3.01	485.52
J-447	313.51	Low Service	Fixed	74	2.77	485.50
J-438	313.00	Low Service	Fixed	75	1.22	485.38
J-409	321.00	Low Service	Fixed	75	1.08	493.67
J-543	313.31	Low Service	Fixed	75	4.50	486.58
J-796	312.30	Low Service	Fixed	75	5.91	485.82
J-770	319.95	Low Service	Fixed	75	1.78	493.55
J-627	321.51	Low Service	Fixed	75	1.53	495.27
J-729	314.03	Low Service	Fixed	75	0.54	488.00

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FlexTable: Junction Table
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Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-292	312.67	Low Service	Fixed	75	0.66	486.97
J-437	310.61	Low Service	Fixed	76	6.47	485.38
J-421	320.00	Low Service	Fixed	76	1.85	495.27
J-475	310.43	Low Service	Fixed	76	4.11	485.76
J-572	313.24	Low Service	Fixed	76	1.71	489.68
J-148	315.04	Low Service	Fixed	76	0.97	491.85
J-759	316.59	Low Service	Fixed	77	0.75	493.66
J-748	312.80	Low Service	Fixed	77	2.54	490.68
J-539	316.00	Low Service	Fixed	77	0.75	494.16
J-474	307.25	Low Service	Fixed	77	8.27	485.76
J-353	314.00	Low Service	Fixed	78	1.67	493.66
J-711	313.88	Low Service	Fixed	78	5.33	493.61
J-488	313.88	Low Service	Fixed	78	21.90	493.66
J-149	311.05	Low Service	Fixed	78	0.81	491.85
J-66	312.73	Low Service	Fixed	78	1.91	493.66
J-352	312.61	Low Service	Fixed	78	3.60	493.66
J-181	304.55	Low Service	Fixed	78	2.45	485.75
J-79	309.25	Low Service	Fixed	78	1.20	490.46
J-78	309.15	Low Service	Fixed	78	1.22	490.51
J-65	311.85	Low Service	Fixed	79	0.50	493.66
J-324	311.08	Low Service	Fixed	79	2.34	494.04
J-182	302.38	Low Service	Fixed	79	3.46	485.74
J-580	301.87	Low Service	Fixed	79	7.33	485.54
J-138	301.71	Low Service	Fixed	80	1.04	485.71
J-133	309.48	Low Service	Fixed	80	2.86	493.70
J-721	301.00	Low Service	Fixed	80	1.46	485.41
J-499	300.83	Low Service	Fixed	80	2.50	485.51
J-139	301.00	Low Service	Fixed	80	5.89	485.71
J-305	308.77	Low Service	Fixed	80	0.00	493.67
J-121	310.05	Low Service	Fixed	80	1.06	495.27
J-333	301.70	Low Service	Fixed	80	1.06	487.17
J-644	300.00	Low Service	Fixed	80	4.90	485.74
J-518	299.78	Low Service	Fixed	80	4.65	485.73
J-132	307.27	Low Service	Fixed	81	0.72	493.70
J-802	298.92	Low Service	Fixed	81	1.73	485.39
J-306	307.00	Low Service	Fixed	81	0.00	493.67
J-706	307.00	Low Service	Fixed	81	0.00	493.67
J-806	310.00	Low Service	Fixed	81	4.41	496.81
J-456	298.30	Low Service	Fixed	81	0.88	485.42
J-323	306.91	Low Service	Fixed	81	1.20	494.15
J-432	303.00	Low Service	Fixed	81	0.00	490.27
J-359	306.15	Low Service	Fixed	81	1.33	493.67
J-594	298.13	Low Service	Fixed	81	4.02	485.71
J-858	305.82	Low Service	Fixed	81	1.04	493.66
J-681	311.83	Low Service	Fixed	81	3.53	499.71
J-120	307.38	Low Service	Fixed	81	1.22	495.27

Active Scenario: Maximum Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-278	298.12	Low Service	Fixed	81	1.91	486.09
J-632	305.55	Low Service	Fixed	81	2.00	493.66
J-102	305.26	Low Service	Fixed	82	0.59	493.66
J-103	304.46	Low Service	Fixed	82	1.02	493.66
J-178	296.69	Low Service	Fixed	82	2.03	487.18
J-593	295.15	Low Service	Fixed	82	5.82	485.71
J-440	303.33	Low Service	Fixed	82	0.61	493.97
J-275	303.51	Low Service	Fixed	83	0.54	494.37
J-431	298.46	Low Service	Fixed	83	2.88	490.27
J-48	301.49	Low Service	Fixed	83	0.00	493.70
J-360	301.40	Low Service	Fixed	83	1.44	493.67
J-47	301.29	Low Service	Fixed	83	0.54	493.68
J-21	301.19	Low Service	Fixed	83	1.76	493.68
J-689	293.80	Low Service	Fixed	83	5.01	486.31
J-22	301.00	Low Service	Fixed	83	0.00	493.68
J-487	297.56	Low Service	Fixed	83	1.20	490.46
J-166	292.77	Low Service	Fixed	83	2.03	485.73
J-591	291.96	Low Service	Fixed	84	1.67	485.41
J-737	292.05	Low Service	Fixed	84	5.12	485.79
J-417	299.88	Low Service	Fixed	84	1.58	493.67
J-786	291.38	Low Service	Fixed	84	5.10	485.48
J-165	291.10	Low Service	Fixed	84	2.14	485.71
J-514	298.83	Low Service	Fixed	84	0.84	493.67
J-226	290.87	Low Service	Fixed	84	2.52	485.71
J-277	291.12	Low Service	Fixed	84	1.15	486.09
J-762	292.02	Low Service	Fixed	84	0.68	487.04
J-710	298.48	Low Service	Fixed	84	0.99	493.55
J-375	290.60	Low Service	Fixed	84	3.71	485.71
J-439	298.67	Low Service	Fixed	84	2.77	493.78
J-793	298.37	Low Service	Fixed	84	1.58	493.55
J-612	294.84	Low Service	Fixed	84	0.00	490.03
J-679	290.21	Low Service	Fixed	85	5.35	485.54
J-404	294.77	Low Service	Fixed	85	0.63	490.68
J-7	289.35	Low Service	Fixed	85	0.68	485.40
J-763	291.26	Low Service	Fixed	85	8.09	487.38
J-8	289.27	Low Service	Fixed	85	0.00	485.40
J-31	289.10	Low Service	Fixed	85	2.77	485.40
J-32	289.01	Low Service	Fixed	85	0.00	485.40
J-407	296.93	Low Service	Fixed	85	1.60	493.62
J-801	288.53	Low Service	Fixed	85	3.98	485.39
J-179	290.15	Low Service	Fixed	85	0.00	487.18
J-387	290.00	Low Service	Fixed	85	3.78	487.18
J-349	288.61	Low Service	Fixed	85	3.51	486.09
J-123	296.47	Low Service	Fixed	86	0.00	494.16
J-221	287.39	Low Service	Fixed	86	0.00	485.40
J-601	296.73	Low Service	Fixed	86	2.56	494.81

Active Scenario: Maximum Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-489	295.34	Low Service	Fixed	86	0.00	493.66
J-719	292.24	Low Service	Fixed	86	0.97	490.68
J-560	287.01	Low Service	Fixed	86	3.17	485.52
J-623	294.99	Low Service	Fixed	86	0.00	493.66
J-414	292.61	Low Service	Fixed	86	3.24	491.33
J-374	287.30	Low Service	Fixed	86	1.78	486.06
J-690	287.25	Low Service	Fixed	86	3.69	486.23
J-373	287.08	Low Service	Fixed	86	3.55	486.06
J-122	293.96	Low Service	Fixed	87	1.24	494.17
J-581	285.25	Low Service	Fixed	87	2.48	485.54
J-227	284.99	Low Service	Fixed	87	7.26	485.71
J-512	292.68	Low Service	Fixed	87	2.61	493.66
J-595	284.36	Low Service	Fixed	87	2.43	485.39
J-772	284.53	Low Service	Fixed	87	3.89	485.71
J-68	284.00	Low Service	Fixed	87	2.54	485.54
J-841	289.74	Low Service	Fixed	87	2.92	491.38
J-67	283.53	Low Service	Fixed	87	3.35	485.54
J-33	283.00	Low Service	Fixed	88	1.35	485.39
J-548	292.77	Low Service	Fixed	88	2.45	495.27
J-403	288.18	Low Service	Fixed	88	0.88	490.68
J-34	282.78	Low Service	Fixed	88	0.00	485.39
J-561	282.44	Low Service	Fixed	88	5.91	485.56
J-286	282.25	Low Service	Fixed	88	1.40	485.37
J-332	284.00	Low Service	Fixed	88	12.58	487.17
J-451	284.00	Low Service	Fixed	88	0.00	487.17
J-150	290.79	Low Service	Fixed	88	0.66	494.17
J-285	281.70	Low Service	Fixed	88	1.04	485.39
J-619	290.87	Low Service	Fixed	88	1.67	494.67
J-254	281.58	Low Service	Fixed	88	0.84	485.39
J-396	290.60	Low Service	Fixed	88	1.85	494.68
J-637	290.63	Low Service	Fixed	88	3.26	494.79
J-606	287.28	Low Service	Fixed	89	1.98	491.85
J-827	290.57	Low Service	Fixed	89	2.88	495.28
J-850	295.60	Low Service	Fixed	89	0.61	500.67
J-192	290.32	Low Service	Fixed	89	0.81	495.82
J-682	295.00	Low Service	Fixed	89	0.00	500.67
J-5	280.83	Low Service	Fixed	89	0.00	487.18
J-6	280.79	Low Service	Fixed	89	0.00	487.18
J-446	278.86	Low Service	Fixed	89	2.72	485.41
J-239	287.00	Low Service	Fixed	90	1.37	494.17
J-756	280.00	Low Service	Fixed	90	0.00	487.18
J-191	288.00	Low Service	Fixed	90	0.00	495.70
J-566	282.50	Low Service	Fixed	90	0.00	490.68
J-567	282.50	Low Service	Fixed	90	0.00	490.68
J-767	284.93	Low Service	Fixed	90	3.08	493.55
J-624	284.83	Low Service	Fixed	90	0.00	493.66

Active Scenario: Maximum Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-87	282.75	Low Service	Fixed	90	0.97	491.64
J-328	278.00	Low Service	Fixed	91	2.41	487.18
J-336	289.77	Low Service	Fixed	91	2.00	499.23
J-86	281.89	Low Service	Fixed	91	0.57	491.68
J-425	277.26	Low Service	Fixed	91	0.00	487.18
J-152	284.45	Low Service	Fixed	91	0.54	494.41
J-327	277.05	Low Service	Fixed	91	0.95	487.18
J-118	284.00	Low Service	Fixed	91	1.08	494.24
J-293	275.10	Low Service	Fixed	91	1.28	485.42
J-424	276.63	Low Service	Fixed	91	0.00	487.18
J-592	274.83	Low Service	Fixed	91	1.78	485.39
J-699	283.58	Low Service	Fixed	91	1.22	494.25
J-749	283.78	Low Service	Fixed	91	3.13	494.69
J-395	283.72	Low Service	Fixed	91	1.67	494.68
J-388	274.59	Low Service	Fixed	91	1.15	485.56
J-119	283.26	Low Service	Fixed	91	0.81	494.24
J-36	283.48	Low Service	Fixed	91	0.00	494.48
J-465	276.00	Low Service	Fixed	91	0.00	487.18
J-643	276.00	Low Service	Fixed	91	0.00	487.18
J-35	283.24	Low Service	Fixed	91	0.00	494.48
J-265	283.11	Low Service	Fixed	91	0.00	494.48
J-151	283.00	Low Service	Fixed	91	0.00	494.42
J-26	282.03	Low Service	Fixed	92	0.61	493.59
J-636	283.15	Low Service	Fixed	92	2.18	494.79
J-829	282.90	Low Service	Fixed	92	2.25	494.68
J-600	282.63	Low Service	Fixed	92	7.77	494.80
J-568	273.09	Low Service	Fixed	92	3.44	485.39
J-25	281.00	Low Service	Fixed	92	1.20	493.59
J-720	280.90	Low Service	Fixed	92	2.32	493.54
J-315	277.81	Low Service	Fixed	92	0.90	490.48
J-519	272.31	Low Service	Fixed	92	2.21	485.39
J-678	272.56	Low Service	Fixed	92	5.37	485.76
J-198	271.78	Low Service	Fixed	92	0.93	485.39
J-529	279.97	Low Service	Fixed	92	1.49	493.58
J-337	285.55	Low Service	Fixed	92	3.08	499.23
J-458	272.00	Low Service	Fixed	92	2.30	485.69
J-283	293.78	Low Service	Fixed	93	0.00	507.72
J-459	271.51	Low Service	Fixed	93	1.37	485.67
J-416	275.16	Low Service	Fixed	93	4.14	489.69
J-536	276.13	Low Service	Fixed	93	1.17	490.68
J-116	271.00	Low Service	Fixed	93	1.91	485.72
J-117	271.00	Low Service	Fixed	93	1.37	485.72
J-620	279.25	Low Service	Fixed	93	9.66	494.55
J-197	270.00	Low Service	Fixed	93	0.70	485.39
J-853	280.93	Low Service	Fixed	93	1.04	496.38
J-820	280.88	Low Service	Fixed	93	1.62	496.38

Active Scenario: Maximum Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-476	279.00	Low Service	Fixed	93	0.00	494.55
J-214	275.00	Low Service	Fixed	93	3.33	490.68
J-665	276.32	Low Service	Fixed	93	0.97	492.38
J-826	280.23	Low Service	Fixed	94	0.00	496.37
J-831	280.38	Low Service	Fixed	94	4.29	496.81
J-530	277.00	Low Service	Fixed	94	4.27	493.57
J-390	268.98	Low Service	Fixed	94	3.91	485.71
J-608	268.45	Low Service	Fixed	94	2.25	485.68
J-2	272.90	Low Service	Fixed	94	2.50	490.14
J-367	276.29	Low Service	Fixed	94	1.22	493.66
J-468	272.69	Low Service	Fixed	94	0.54	490.16
J-724	276.10	Low Service	Fixed	94	3.78	493.57
J-486	276.69	Low Service	Fixed	94	0.84	494.22
J-683	277.24	Low Service	Fixed	94	2.52	494.79
J-193	267.79	Low Service	Fixed	94	0.84	485.56
J-521	274.00	Low Service	Fixed	94	3.26	492.27
J-294	267.02	Low Service	Fixed	94	1.26	485.42
J-201	267.00	Low Service	Fixed	94	2.25	485.40
J-394	267.13	Low Service	Fixed	95	1.80	485.58
J-824	274.37	Low Service	Fixed	95	6.32	493.32
J-202	266.26	Low Service	Fixed	95	1.46	485.40
J-466	268.02	Low Service	Fixed	95	0.84	487.18
J-505	271.00	Low Service	Fixed	95	2.90	490.27
J-674	274.73	Low Service	Fixed	95	2.07	494.17
J-216	272.32	Low Service	Fixed	95	0.00	491.81
J-213	270.88	Low Service	Fixed	95	0.00	490.68
J-389	265.43	Low Service	Fixed	95	2.86	485.71
J-45	265.23	Low Service	Fixed	95	0.00	485.56
J-357	270.40	Low Service	Fixed	95	1.82	490.80
J-469	265.12	Low Service	Fixed	95	1.51	485.58
J-46	264.42	Low Service	Fixed	96	0.00	485.56
J-309	268.95	Low Service	Fixed	96	0.00	490.21
J-215	270.68	Low Service	Fixed	96	0.61	492.07
J-520	268.91	Low Service	Fixed	96	0.00	490.32
J-316	268.79	Low Service	Fixed	96	1.89	490.46
J-194	263.64	Low Service	Fixed	96	0.00	485.56
J-171	268.26	Low Service	Fixed	96	0.00	490.33
J-270	268.18	Low Service	Fixed	96	0.00	490.33
J-663	263.04	Low Service	Fixed	96	8.34	485.77
J-464	267.63	Low Service	Fixed	97	1.20	491.07
J-609	262.15	Low Service	Fixed	97	2.12	485.68
J-172	266.78	Low Service	Fixed	97	0.00	490.33
J-684	271.04	Low Service	Fixed	97	5.08	494.79
J-156	261.61	Low Service	Fixed	97	1.42	485.40
J-345	270.71	Low Service	Fixed	97	2.05	494.50
J-114	266.00	Low Service	Fixed	97	1.02	490.08

Active Scenario: Maximum Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-155	261.00	Low Service	Fixed	97	1.08	485.40
J-115	265.68	Low Service	Fixed	97	0.00	490.08
J-310	265.64	Low Service	Fixed	97	4.05	490.21
J-457	265.47	Low Service	Fixed	97	3.87	490.40
J-828	269.59	Low Service	Fixed	97	0.00	494.68
J-840	269.40	Low Service	Fixed	97	0.00	494.50
J-485	265.17	Low Service	Fixed	97	12.00	490.33
J-344	268.93	Low Service	Fixed	98	0.00	494.68
J-557	259.56	Low Service	Fixed	98	1.69	485.40
J-351	264.13	Low Service	Fixed	98	0.00	490.40
J-358	264.00	Low Service	Fixed	98	0.00	490.33
J-822	268.32	Low Service	Fixed	98	0.00	494.68
J-700	268.00	Low Service	Fixed	98	0.52	494.52
J-574	267.46	Low Service	Fixed	98	1.78	494.16
J-558	258.38	Low Service	Fixed	98	1.26	485.40
J-823	264.40	Low Service	Fixed	99	1.71	492.38
J-329	264.00	Low Service	Fixed	99	0.00	492.17
J-607	263.50	Low Service	Fixed	99	0.72	491.85
J-271	270.56	Low Service	Fixed	99	0.86	499.23
J-415	256.97	Low Service	Fixed	99	1.40	485.73
J-13	270.37	Low Service	Fixed	99	2.59	499.23
J-272	270.23	Low Service	Fixed	99	0.00	499.23
J-817	268.16	Low Service	Fixed	99	5.39	497.28
J-10	256.52	Low Service	Fixed	99	0.00	485.73
J-9	256.30	Low Service	Fixed	99	3.28	485.73
J-508	265.08	Low Service	Fixed	99	1.82	494.69
J-240	255.54	Low Service	Fixed	100	1.02	485.56
J-783	264.12	Low Service	Fixed	100	2.65	494.17
J-14	269.17	Low Service	Fixed	100	0.00	499.23
J-72	264.00	Low Service	Fixed	100	0.88	494.16
J-73	264.00	Low Service	Fixed	100	0.63	494.16
J-125	266.38	Low Service	Fixed	100	2.16	496.63
J-350	260.00	Low Service	Fixed	100	0.00	490.45
J-299	263.00	Low Service	Fixed	100	4.11	493.54
J-341	259.65	Low Service	Fixed	100	3.01	490.32
J-504	263.26	Low Service	Fixed	100	0.63	494.16
J-507	263.21	Low Service	Fixed	100	1.26	494.67
J-300	261.45	Low Service	Fixed	100	2.34	493.54
J-124	264.64	Low Service	Fixed	100	1.02	496.81
J-340	258.00	Low Service	Fixed	101	0.00	490.48
J-761	264.00	Low Service	Fixed	101	3.40	496.63
J-790	259.19	Low Service	Fixed	101	1.20	493.52
J-363	250.83	Low Service	Fixed	102	1.31	485.62
J-546	250.59	Low Service	Fixed	102	2.32	485.67
J-386	250.07	Low Service	Fixed	102	0.86	485.63
J-364	250.00	Low Service	Fixed	102	0.75	485.64

Active Scenario: Maximum Day Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-245	259.00	Low Service	Fixed	104	0.00	498.65
J-108	258.83	Low Service	Fixed	104	0.00	498.80
J-664	245.63	Low Service	Fixed	104	2.21	485.77
J-366	244.88	Low Service	Fixed	104	0.81	485.76
J-109	258.00	Low Service	Fixed	104	0.00	499.21
J-855	258.00	Low Service	Fixed	104	0.00	499.23
J-849	262.68	Low Service	Fixed	104	0.00	504.16
J-805	244.01	Low Service	Fixed	105	1.94	485.76
J-246	256.85	Low Service	Fixed	105	0.00	498.65
J-547	243.00	Low Service	Fixed	105	2.34	485.70
J-158	242.00	Low Service	Fixed	105	0.00	485.76
J-249	241.56	Low Service	Fixed	106	0.00	485.76
J-545	241.00	Low Service	Fixed	106	0.79	485.67
J-157	241.00	Low Service	Fixed	106	1.31	485.76
J-369	239.00	Low Service	Fixed	107	0.00	485.76
J-842	239.00	Low Service	Fixed	107	1.71	485.76
J-814	231.90	Low Service	Fixed	114	0.50	495.48
J-798	230.79	Low Service	Fixed	115	2.92	495.49
J-845	229.55	Low Service	Fixed	115	0.00	495.01
J-732	221.07	Low Service	Fixed	119	0.99	495.49
J-731	218.04	Low Service	Fixed	120	1.58	495.49
J-797	216.00	Low Service	Fixed	121	11.48	495.48
J-224	209.19	Low Service	Fixed	124	0.52	495.48
J-613	207.74	Low Service	Fixed	124	0.00	495.48
J-764	206.00	Low Service	Fixed	125	2.36	495.47
J-225	204.34	Low Service	Fixed	126	1.26	495.48
J-516	201.00	Low Service	Fixed	127	0.00	495.47
J-515	199.62	Low Service	Fixed	128	0.00	495.48
J-461	199.55	Low Service	Fixed	128	0.00	495.47
J-460	188.74	Low Service	Fixed	133	1.15	495.47

Active Scenario: Maximum Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
14	12.0	J-752	J-203	718	1,310.47	5.70	4.09	3.72	110
30	12.0	J-203	J-848	1,660	1,308.66	5.68	9.43	3.71	110
P-50	12.0	J-848	J-844	102	1,308.66	6.78	0.69	3.71	100
P-51	12.0	J-844	J-856	48	1,247.57	5.20	0.25	3.54	110
P-233	6.0	J-329	J-823	15	-310.58	13.70	0.20	3.52	101
P-218	12.0	J-849	J-855	1,108	1,147.18	4.45	4.93	3.25	110
P-216	12.0	J-855	J-109	4	1,144.05	4.43	0.02	3.25	110
334	8.0	J-108	J-109	33	-499.15	12.40	0.41	3.19	80
P-217	12.0	J-854	J-849	1,426	981.12	2.45	3.49	2.78	130
P-372	12.0	J-854	J-849	1,427	980.69	2.44	3.49	2.78	130
711	12.0	J-78	J-79	23	837.43	2.12	0.05	2.38	120
712	12.0	J-79	J-372	206	835.04	2.11	0.43	2.37	120
713	12.0	J-372	J-588	829	831.48	2.09	1.73	2.36	120
355	12.0	J-251	J-588	1,011	-826.19	2.06	2.09	2.34	120
569	12.0	J-849	J-850	1,739	814.63	2.01	3.50	2.31	120
P-219	12.0	J-681	J-850	478	-814.02	2.01	0.96	2.31	120
581	12.0	J-798	J-817	979	-774.02	1.83	1.79	2.20	120
226	12.0	J-692	J-651	2,488	771.54	2.14	5.31	2.19	110
662	12.0	J-651	J-144	1,488	765.51	2.11	3.13	2.17	110
P-59	12.0	J-144	J-677	5	765.51	1.79	0.01	2.17	120
574	12.0	J-251	Oak Hill Road Tank	683	761.30	1.77	1.21	2.16	120
P-241	8.0	J-344	J-840	73	337.21	2.44	0.18	2.15	130
776	8.0	J-840	J-841	1,293	335.16	2.41	3.12	2.14	130
P-240	12.0	J-845	J-798	281	-751.25	1.73	0.49	2.13	120
P-212	8.0	J-108	J-245	32	330.56	4.65	0.15	2.11	90
685	8.0	J-245	J-124	395	330.56	4.65	1.84	2.11	90
686	8.0	J-124	J-125	42	318.82	4.35	0.18	2.03	90
708	12.0	J-86	J-87	26	707.55	1.55	0.04	2.01	120
P-238	8.0	J-841	J-719	78	313.97	8.95	0.70	2.00	60
369	8.0	J-125	J-823	1,011	313.26	4.21	4.25	2.00	90
339	8.0	J-215	J-216	110	309.97	2.42	0.27	1.98	120
438	12.0	J-189	Tara Road Tank	82	681.98	1.45	0.12	1.93	120
583	12.0	J-817	J-681	1,786	-658.43	1.36	2.42	1.87	120
710	12.0	J-414	J-78	605	657.99	1.35	0.82	1.87	120
758	12.0	J-691	J-692	589	653.34	1.57	0.92	1.85	110
P-52	12.0	J-856	J-691	1,364	653.34	1.57	2.14	1.85	110
P-214	12.0	J-109	J-853	1,848	644.89	1.53	2.83	1.83	110
709	12.0	J-87	J-414	237	642.96	1.30	0.31	1.82	120
664	12.0	J-676	J-677	543	-632.06	1.48	0.80	1.79	110

Active Scenario: Maximum Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
297	8.0	Overlook Drive Tank	J-496	3,260	-278.90	2.34	7.62	1.78	110
P-53	12.0	J-856	J-696	269	594.23	1.12	0.30	1.69	120
408	10.0	J-634	J-207	544	408.77	1.36	0.74	1.67	120
382	10.0	J-845	J-824	1,650	407.73	1.02	1.68	1.67	140
P-117	8.0	J-231	J-758	2,090	260.71	2.46	5.15	1.66	100
P-54	12.0	J-696	J-725	2,401	579.51	1.07	2.57	1.64	120
349	10.0	J-521	J-824	1,063	-401.41	0.99	1.05	1.64	140
707	10.0	J-86	J-521	326	-398.15	1.82	0.59	1.63	100
P-205	8.0	J-191	J-548	167	241.86	2.60	0.44	1.54	90
656	10.0	J-191	J-192	82	-377.23	1.38	0.11	1.54	110
P-200	8.0	J-619	J-820	688	-235.82	2.49	1.71	1.51	90
P-206	8.0	J-548	J-496	672	233.75	2.45	1.64	1.49	90
P-197	8.0	J-440	J-275	181	-223.41	2.25	0.41	1.43	90
292	8.0	J-607	J-790	952	-216.82	1.75	1.67	1.38	100
311	8.0	J-607	J-340	1,142	212.34	1.20	1.37	1.36	120
208	12.0	J-611	J-676	834	-464.52	0.83	0.70	1.32	110
784	8.0	J-114	J-416	242	206.44	1.60	0.39	1.32	100
207	12.0	J-611	J-189	884	460.38	0.82	0.73	1.31	110
666	10.0	J-207	J-208	89	315.61	0.84	0.07	1.29	120
409	10.0	J-208	J-232	559	313.80	0.84	0.47	1.28	120
370	8.0	J-826	J-827	1,045	196.97	1.05	1.09	1.26	120
270	8.0	J-416	J-763	1,583	196.71	1.46	2.31	1.26	100
290	8.0	J-827	J-790	1,737	194.09	1.02	1.77	1.24	120
432	12.0	J-725	J-576	609	434.98	0.74	0.45	1.23	110
665	12.0	J-576	J-633	1,837	427.42	0.72	1.31	1.21	110
333	8.0	J-292	J-543	349	188.02	1.13	0.39	1.20	110
224	12.0	J-633	J-634	437	412.28	0.57	0.25	1.17	120
P-118	8.0	J-758	J-765	447	175.08	1.18	0.53	1.12	100
667	10.0	J-231	J-232	108	-263.43	0.85	0.09	1.08	100
P-211	8.0	J-826	J-108	1,814	-168.59	1.34	2.42	1.08	90
P-210	12.0	J-853	J-192	987	378.04	0.57	0.56	1.07	110
150	8.0	J-42	J-676	1,238	-164.12	0.75	0.92	1.05	120
210	6.0	J-602	J-603	385	91.38	1.20	0.46	1.04	110
206	8.0	J-41	J-99	614	158.83	0.70	0.43	1.01	120
P-257	8.0	J-316	J-527	2,569	154.72	0.67	1.72	0.99	120
P-239	12.0	J-822	J-845	792	-343.52	0.41	0.32	0.97	120
684	8.0	J-708	J-681	625	-152.06	0.76	0.48	0.97	110
P-245	12.0	J-344	J-822	16	-337.21	0.46	0.01	0.96	110
782	8.0	J-340	J-341	186	147.28	0.86	0.16	0.94	100
269	8.0	J-341	J-114	293	144.26	0.82	0.24	0.92	100
P-256	8.0	J-734	J-839	21	140.85	0.56	0.01	0.90	120
P-221	8.0	J-708	J-4	776	140.17	0.65	0.51	0.89	110
P-64	6.0	J-75	J-635	313	78.60	1.09	0.34	0.89	100

Active Scenario: Maximum Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
330	8.0	J-839	J-789	1,207	139.27	0.77	0.93	0.89	100
679	8.0	J-47	J-48	14	-139.20	0.94	0.01	0.89	90
337	12.0	J-215	J-329	170	-310.58	0.57	0.10	0.88	90
340	12.0	J-216	J-86	393	309.97	0.34	0.13	0.88	120
353	12.0	J-78	J-719	619	-304.44	0.28	0.17	0.86	130
332	8.0	J-292	J-789	855	-135.25	0.73	0.62	0.86	100
279	8.0	J-439	J-440	265	-134.23	0.71	0.19	0.86	101
743	6.0	J-330	J-331	170	74.03	0.97	0.16	0.84	100
225	8.0	J-701	J-602	948	130.68	0.69	0.65	0.83	100
P-111	8.0	J-765	J-525	329	129.09	0.48	0.16	0.82	120
144	8.0	J-29	J-30	7	126.66	0.35	0.00	0.81	140
2	8.0	J-537	J-538	337	126.66	0.46	0.16	0.81	120
3	8.0	J-538	J-29	755	126.66	0.46	0.35	0.81	120
P-114	8.0	J-510	J-537	100	126.66	0.46	0.05	0.81	120
P-302	8.0	J-861	J-4	1,541	-125.34	0.53	0.82	0.80	110
P-77	6.0	J-635	J-605	2,063	68.44	0.84	1.73	0.78	100
P-304	8.0	J-861	J-817	1,245	120.98	0.50	0.62	0.77	110
P-199	8.0	J-275	J-619	416	-119.49	0.71	0.29	0.76	90
P-209	12.0	J-820	J-853	9	-265.82	0.30	0.00	0.75	110
P-296	8.0	J-178	J-763	344	-117.23	0.56	0.19	0.75	100
P-195	8.0	J-619	J-476	387	114.66	0.29	0.11	0.73	140
367	6.0	J-87	J-464	299	63.62	1.89	0.57	0.72	60
344	6.0	J-357	J-315	189	60.61	1.73	0.33	0.69	60
383	8.0	J-543	J-818	986	105.43	0.46	0.45	0.67	100
76	8.0	J-699	J-700	594	-105.25	0.46	0.27	0.67	100
P-193	8.0	J-476	J-35	302	105.00	0.24	0.07	0.67	140
285	8.0	J-151	J-152	63	105.00	0.24	0.02	0.67	140
287	8.0	J-265	J-151	179	105.00	0.33	0.06	0.67	120
P-194	8.0	J-35	J-265	6	105.00	0.25	0.00	0.67	140
652	6.0	J-323	J-324	166	58.83	0.63	0.11	0.67	100
280	8.0	J-275	J-152	134	-104.46	0.24	0.03	0.67	140
P-150	8.0	J-30	J-778	752	101.93	0.23	0.17	0.65	140
P-176	8.0	J-778	J-686	1,068	99.92	0.42	0.45	0.64	100
437	12.0	J-189	J-492	298	-224.66	0.22	0.06	0.64	110
494	6.0	J-565	J-181	496	55.67	0.57	0.28	0.63	100
217	6.0	J-324	J-494	622	55.52	0.57	0.35	0.63	100
P-63	6.0	J-399	J-75	127	-53.70	0.54	0.07	0.61	100
P-295	8.0	J-762	J-178	389	-93.59	0.37	0.14	0.60	100
701	8.0	J-762	J-689	1,993	92.92	0.36	0.73	0.59	100
703	8.0	J-350	J-351	184	91.93	0.30	0.06	0.59	110
671	8.0	J-701	J-338	583	-91.77	0.36	0.21	0.59	100
P-258	8.0	J-527	J-734	845	89.27	0.24	0.20	0.57	120
770	8.0	J-599	J-440	635	-88.56	0.33	0.21	0.57	100
P-155	6.0	J-235	J-104	1,492	-49.66	0.46	0.69	0.56	100
329	8.0	J-351	J-171	239	88.07	0.28	0.07	0.56	110

Active Scenario: Maximum Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
779	8.0	J-603	J-596	1,746	87.04	0.27	0.47	0.56	110
296	10.0	J-601	J-191	3,623	-135.37	0.25	0.89	0.55	100
691	8.0	J-235	J-319	326	86.11	0.32	0.10	0.55	100
P-6	8.0	J-690	J-116	1,656	84.22	0.30	0.50	0.54	100
419	8.0	J-222	J-223	115	-82.08	0.29	0.03	0.52	100
420	8.0	J-758	J-223	722	82.08	0.29	0.21	0.52	100
696	12.0	J-315	J-316	160	183.49	0.11	0.02	0.52	130
P-120	8.0	J-222	J-669	13	79.06	0.17	0.00	0.50	130
313	8.0	J-330	J-543	1,080	-78.10	0.26	0.29	0.50	100
324	8.0	J-171	J-505	306	76.07	0.21	0.06	0.49	110
P-108	8.0	J-699	J-119	19	75.43	0.25	0.00	0.48	100
534	2.0	J-273	J-274	135	4.68	1.22	0.16	0.48	101
P-132	8.0	J-64	J-173	86	74.18	0.24	0.02	0.47	100
103	8.0	J-695	J-740	656	73.24	0.23	0.15	0.47	100
P-285	8.0	J-740	J-95	16	73.24	0.23	0.00	0.47	100
655	10.0	J-749	J-601	688	-111.98	0.17	0.12	0.46	100
765	8.0	J-763	J-670	1,311	71.39	0.14	0.18	0.46	130
151	12.0	J-41	J-42	13	-160.00	0.10	0.00	0.45	120
P-68	12.0	J-492	J-99	16	-158.83	0.14	0.00	0.45	100
508	8.0	J-505	J-309	319	70.29	0.18	0.06	0.45	110
247	10.0	J-729	J-730	629	107.27	3.16	1.99	0.44	20
463	8.0	J-116	J-67	888	68.48	0.21	0.18	0.44	100
262	10.0	J-700	J-749	1,081	-105.77	0.16	0.17	0.43	100
744	6.0	J-331	J-565	350	37.81	0.28	0.10	0.43	100
410	2.0	J-279	J-280	147	4.18	0.62	0.09	0.43	130
504	8.0	J-309	J-468	318	66.24	0.16	0.05	0.42	110
P-353	10.0	J-730	Overlook Drive Tank	48	101.92	0.18	0.01	0.42	90
P-112	8.0	J-525	J-509	408	65.19	0.13	0.06	0.42	120
178	8.0	J-525	J-526	329	63.89	0.13	0.04	0.41	120
P-113	8.0	J-526	J-510	399	63.89	0.13	0.05	0.41	120
385	12.0	J-818	J-704	2,189	143.66	0.09	0.21	0.41	110
363	8.0	J-250	J-251	119	-63.24	0.22	0.03	0.40	90
505	8.0	J-115	J-2	375	-63.20	0.15	0.06	0.40	110
P-346	12.0	J-49	J-725	1,349	-141.63	0.09	0.12	0.40	110
18	8.0	J-509	J-510	315	62.76	0.13	0.04	0.40	120
368	8.0	J-464	J-357	596	62.43	0.45	0.27	0.40	60
496	12.0	J-796	J-704	1,312	-138.89	0.08	0.10	0.39	120
65	12.0	J-22	J-47	20	-138.66	0.13	0.00	0.39	90
636	8.0	J-122	J-123	42	60.77	0.10	0.00	0.39	130
351	8.0	J-527	J-528	380	60.10	0.16	0.06	0.38	101
734	8.0	J-67	J-68	21	59.78	0.16	0.00	0.38	100
P-131	8.0	J-319	J-64	7	59.37	0.16	0.00	0.38	100
P-61	12.0	J-677	J-74	24	133.45	0.07	0.00	0.38	120

Active Scenario: Maximum Day Demand
FlexTable: Pipe Table
Steady State Analysis

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P-263	12.0	J-796	J-737	403	132.98	0.07	0.03	0.38	120
P-130	8.0	J-173	J-813	1,227	59.03	0.16	0.19	0.38	100
148	12.0	J-74	J-75	22	132.80	0.07	0.00	0.38	120
51	8.0	J-686	J-335	540	58.94	0.16	0.08	0.38	100
P-5	8.0	J-689	J-690	564	58.79	0.16	0.09	0.38	100
66	12.0	J-48	J-439	860	-131.47	0.10	0.08	0.37	101
678	8.0	J-133	J-599	380	-58.16	0.15	0.06	0.37	100
8	8.0	J-846	J-570	1,512	57.83	0.13	0.19	0.37	110
561	8.0	J-528	J-800	858	57.83	0.11	0.09	0.37	120
308	8.0	J-11	J-650	752	57.49	0.13	0.09	0.37	110
760	8.0	J-570	J-571	376	57.42	0.15	0.06	0.37	100
72	6.0	J-103	J-407	231	31.88	0.17	0.04	0.36	110
145	6.0	J-653	J-781	770	31.00	0.14	0.11	0.35	120
P-345	12.0	J-692	J-49	990	-123.86	0.07	0.07	0.35	110
697	12.0	J-315	J-78	624	-123.79	0.05	0.03	0.35	130
77	6.0	J-239	J-118	292	-30.91	0.23	0.07	0.35	90
699	8.0	J-650	J-291	508	54.33	0.11	0.06	0.35	110
331	8.0	J-291	J-292	145	53.43	0.11	0.02	0.34	110
317	8.0	J-181	J-182	79	53.21	0.13	0.01	0.34	100
589	8.0	J-399	J-400	229	52.44	0.13	0.03	0.33	100
171	8.0	J-571	J-647	494	52.42	0.13	0.06	0.33	100
100	6.0	J-741	J-742	688	-29.13	0.17	0.12	0.33	100
P-253	8.0	J-734	J-800	413	-51.58	0.12	0.05	0.33	101
67	8.0	J-302	J-436	261	51.38	0.09	0.02	0.33	120
P-107	6.0	J-729	J-699	1,901	-28.60	3.29	6.25	0.32	20
P-156	6.0	J-104	J-781	3	-28.57	0.16	0.00	0.32	100
277	10.0	J-729	J-21	3,154	-79.21	1.80	5.68	0.32	20
161	8.0	J-647	J-483	575	50.60	0.12	0.07	0.32	100
182	8.0	J-813	J-586	1,156	50.37	0.12	0.14	0.32	100
683	8.0	J-496	J-436	300	-49.76	0.08	0.02	0.32	120
418	10.0	J-669	J-338	1,418	77.41	0.09	0.12	0.32	100
468	8.0	J-394	J-363	399	-48.40	0.11	0.04	0.31	100
P-125	12.0	J-596	J-809	31	108.40	0.06	0.00	0.31	110
492	6.0	J-469	J-386	377	-26.82	0.12	0.05	0.30	110
266	6.0	J-599	J-472	504	26.79	0.15	0.07	0.30	100
140	8.0	J-586	J-695	697	46.63	0.10	0.07	0.30	100
459	8.0	J-816	J-400	1,295	-44.85	0.09	0.12	0.29	100
P-116	8.0	J-765	J-701	549	43.77	0.09	0.05	0.28	100
80	8.0	J-119	J-486	294	42.63	0.09	0.03	0.27	100
79	8.0	J-674	J-486	587	-41.79	0.08	0.05	0.27	100
126	2.0	J-106	J-107	33	2.61	0.26	0.01	0.27	130
594	6.0	J-134	J-135	52	-23.33	0.06	0.00	0.26	140
P-136	6.0	J-843	J-135	258	23.33	0.11	0.03	0.26	100
754	8.0	J-609	J-386	652	41.36	0.08	0.05	0.26	100
503	10.0	J-114	J-115	39	-63.20	0.05	0.00	0.26	110

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Steady State Analysis

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P-264	12.0	J-737	J-663	475	90.57	0.03	0.02	0.26	120
755	8.0	J-547	J-545	342	39.88	0.08	0.03	0.25	100
146	6.0	J-104	J-105	31	-22.32	0.06	0.00	0.25	140
177	12.0	J-207	J-799	2,611	88.65	0.03	0.09	0.25	120
493	8.0	J-394	J-193	224	39.03	0.07	0.02	0.25	100
733	8.0	J-68	J-499	337	38.72	0.07	0.02	0.25	100
690	8.0	J-335	J-235	173	38.69	0.07	0.01	0.25	100
132	8.0	J-448	J-456	819	38.32	0.07	0.06	0.24	100
P-2	8.0	J-468	J-2	390	37.74	0.06	0.02	0.24	110
P-190	6.0	J-793	J-711	590	-21.20	0.10	0.06	0.24	100
245	8.0	J-581	J-786	813	37.60	0.07	0.06	0.24	100
112	12.0	J-297	J-799	874	-84.17	0.03	0.03	0.24	120
479	8.0	J-644	J-737	672	-37.28	0.07	0.05	0.24	100
203	8.0	J-686	J-256	1,492	37.15	0.07	0.10	0.24	100
687	8.0	J-602	J-653	488	36.89	0.05	0.02	0.24	120
470	8.0	J-545	J-364	573	36.77	0.07	0.04	0.23	100
246	8.0	J-786	J-293	952	36.72	0.07	0.06	0.23	100
556	8.0	J-7	J-8	3	-36.47	0.04	0.00	0.23	120
554	8.0	J-8	J-221	97	-36.47	0.03	0.00	0.23	140
557	8.0	J-221	J-524	370	-36.47	0.05	0.02	0.23	120
753	8.0	J-193	J-581	426	36.03	0.06	0.03	0.23	100
756	8.0	J-363	J-364	196	-36.02	0.06	0.01	0.23	100
647	12.0	J-297	J-298	149	80.98	0.03	0.00	0.23	120
64	12.0	J-21	J-22	5	-80.97	0.04	0.00	0.23	100
P-265	8.0	J-415	J-10	53	35.92	0.06	0.00	0.23	100
675	10.0	J-417	J-102	242	56.12	0.06	0.01	0.23	90
P-275	8.0	J-7	J-32	47	35.79	0.06	0.00	0.23	100
62	8.0	J-133	J-301	478	35.61	0.04	0.02	0.23	120
731	8.0	J-447	J-448	268	35.12	0.06	0.02	0.22	100
P-189	6.0	J-710	J-793	18	-19.64	0.08	0.00	0.22	100
303	8.0	J-792	J-670	847	-34.66	0.05	0.04	0.22	110
745	8.0	J-331	J-349	642	34.21	0.06	0.04	0.22	100
283	2.0	J-165	J-166	70	-2.14	0.29	0.02	0.22	101
486	6.0	J-389	J-415	239	-19.19	0.10	0.02	0.22	90
152	12.0	J-511	J-605	415	-75.67	0.03	0.01	0.21	100
P-72	12.0	J-184	J-511	241	-75.67	0.03	0.01	0.21	100
P-142	6.0	J-134	J-649	780	18.55	0.07	0.06	0.21	100
732	8.0	J-499	J-447	303	32.88	0.05	0.02	0.21	100
491	8.0	J-561	J-469	395	-32.87	0.05	0.02	0.21	100
P-268	8.0	J-9	J-547	571	32.64	0.05	0.03	0.21	100
477	8.0	J-138	J-644	546	-32.38	0.05	0.03	0.21	100
78	8.0	J-118	J-119	40	-31.99	0.06	0.00	0.20	90
700	8.0	J-670	J-428	552	31.76	0.05	0.03	0.20	100
646	12.0	J-629	J-287	435	69.45	0.02	0.01	0.20	110
304	8.0	J-11	J-428	758	-30.70	0.04	0.03	0.20	110

Active Scenario: Maximum Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-148	8.0	J-707	J-816	449	-30.52	0.05	0.02	0.19	100
316	8.0	J-772	J-182	761	-30.36	0.04	0.03	0.19	110
P-351	8.0	J-407	J-25	726	30.28	0.04	0.03	0.19	110
P-71	12.0	J-463	J-184	84	-67.53	0.03	0.00	0.19	100
P-74	12.0	J-248	J-463	17	-67.53	0.03	0.00	0.19	100
555	8.0	J-31	J-32	11	-30.01	0.03	0.00	0.19	120
436	12.0	J-617	J-462	1,123	-66.53	0.03	0.03	0.19	100
P-66	12.0	J-569	J-617	364	-66.53	0.03	0.01	0.19	100
P-73	12.0	J-462	J-248	260	-66.53	0.03	0.01	0.19	100
230	12.0	J-98	J-569	352	-66.53	0.03	0.01	0.19	100
637	8.0	J-150	J-239	116	-29.53	0.05	0.01	0.19	90
P-67	12.0	J-98	J-492	13	65.83	0.03	0.00	0.19	100
216	8.0	J-768	J-742	955	29.13	0.04	0.04	0.19	100
259	8.0	J-689	J-690	2,072	29.11	0.04	0.09	0.19	100
P-299	12.0	J-340	J-350	1,472	65.06	0.02	0.02	0.18	130
682	8.0	J-301	J-302	152	28.80	0.03	0.00	0.18	120
P-352	8.0	J-25	J-529	291	28.48	0.03	0.01	0.18	110
P-207	8.0	J-820	J-826	24	28.37	0.05	0.00	0.18	90
179	12.0	J-298	J-629	526	63.38	0.02	0.01	0.18	110
P-1	8.0	J-2	J-468	679	-27.96	0.03	0.02	0.18	110
509	8.0	J-349	J-373	867	27.64	0.04	0.03	0.18	100
184	6.0	J-38	J-766	757	-15.54	0.05	0.03	0.18	110
P-48	12.0	J-844	J-727	419	61.09	0.02	0.01	0.17	100
195	12.0	J-123	J-539	435	60.77	0.01	0.01	0.17	130
762	8.0	J-529	J-530	328	26.99	0.04	0.01	0.17	100
490	8.0	J-580	J-561	565	-26.96	0.04	0.02	0.17	100
138	8.0	J-493	J-467	300	26.91	0.04	0.01	0.17	100
689	8.0	J-483	J-484	293	26.85	0.04	0.01	0.17	100
P-260	8.0	J-792	J-11	514	26.78	0.03	0.02	0.17	110
181	8.0	J-319	J-320	164	26.75	0.03	0.01	0.17	110
761	12.0	J-539	J-323	338	60.03	0.02	0.01	0.17	100
773	8.0	J-65	J-711	1,302	26.52	0.04	0.05	0.17	100
P-271	8.0	J-493	J-835	258	-26.49	0.04	0.01	0.17	100
P-269	8.0	J-772	J-458	518	26.37	0.03	0.02	0.17	110
P-282	6.0	J-642	J-819	16	14.78	0.05	0.00	0.17	100
63	12.0	J-417	J-22	242	-57.70	0.03	0.01	0.16	90
48	12.0	J-752	J-97	906	57.68	0.02	0.02	0.16	110
P-133	8.0	J-843	J-542	45	-25.63	0.03	0.00	0.16	100
511	12.0	J-415	J-805	1,748	-56.50	0.01	0.03	0.16	120
P-152	8.0	J-321	J-30	85	-24.73	0.02	0.00	0.16	140
117	8.0	J-289	J-290	144	-24.73	0.02	0.00	0.16	140
114	8.0	J-321	J-322	169	24.73	0.02	0.00	0.16	140
116	8.0	J-290	J-322	231	-24.73	0.02	0.01	0.16	120
P-154	8.0	J-185	J-289	155	-24.73	0.02	0.00	0.16	140
P-153	8.0	J-105	J-185	515	-24.73	0.02	0.01	0.16	140

Active Scenario: Maximum Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
61	8.0	J-302	J-472	303	-24.33	0.03	0.01	0.16	100
411	12.0	J-808	J-809	863	-54.33	0.02	0.01	0.15	110
P-121	12.0	J-808	J-555	711	54.33	0.02	0.01	0.15	110
P-123	12.0	J-481	J-745	9	54.07	0.01	0.00	0.15	120
P-126	12.0	J-809	J-481	349	54.07	0.02	0.01	0.15	110
729	8.0	J-446	J-293	263	-24.02	0.03	0.01	0.15	100
291	8.0	J-720	J-790	857	23.93	0.03	0.03	0.15	100
P-288	8.0	J-782	J-380	414	23.65	0.03	0.01	0.15	100
P-127	12.0	J-745	J-846	383	53.10	0.02	0.01	0.15	110
500	8.0	J-116	J-609	1,586	23.02	0.03	0.04	0.15	100
P-270	8.0	J-458	J-608	459	22.70	0.02	0.01	0.14	110
P-122	12.0	J-555	J-266	253	50.51	0.01	0.00	0.14	110
608	12.0	J-94	J-95	31	-50.49	0.01	0.00	0.14	120
618	4.0	J-183	J-393	322	5.60	0.04	0.01	0.14	120
P-36	12.0	J-838	J-97	373	-50.36	0.02	0.01	0.14	100
571	12.0	J-552	J-250	1,911	-50.30	0.01	0.02	0.14	130
539	2.0	J-285	J-286	143	1.40	0.13	0.02	0.14	101
692	6.0	J-273	J-256	351	-12.56	0.04	0.01	0.14	100
474	8.0	J-565	J-373	1,065	-22.31	0.03	0.03	0.14	100
740	12.0	J-663	J-664	513	49.63	0.01	0.01	0.14	120
P-287	8.0	J-95	J-782	657	22.05	0.03	0.02	0.14	100
499	2.0	J-458	J-459	283	1.37	0.08	0.02	0.14	130
P-289	8.0	J-380	J-766	214	21.71	0.02	0.01	0.14	100
441	2.0	J-579	J-531	428	1.35	0.08	0.03	0.14	130
518	8.0	J-178	J-179	76	21.61	0.02	0.00	0.14	120
716	12.0	J-551	J-552	350	-48.52	0.01	0.00	0.14	130
143	12.0	J-232	J-780	766	48.46	0.01	0.01	0.14	130
P-283	12.0	J-502	J-94	215	-48.33	0.02	0.00	0.14	100
73	10.0	J-102	J-103	32	32.90	0.01	0.00	0.13	110
771	12.0	J-551	J-743	1,325	47.32	0.01	0.01	0.13	130
570	12.0	J-662	J-743	717	-47.32	0.01	0.01	0.13	120
366	2.0	J-268	J-269	128	1.31	0.12	0.01	0.13	101
658	8.0	J-600	J-601	381	-20.82	0.03	0.01	0.13	90
694	6.0	J-37	J-38	12	-11.67	0.03	0.00	0.13	110
645	12.0	J-287	J-288	143	46.46	0.01	0.00	0.13	110
565	2.0	J-659	J-660	528	1.28	0.07	0.04	0.13	130
728	6.0	J-293	J-294	145	11.41	0.02	0.00	0.13	120
265	2.0	J-507	J-508	318	-1.26	0.07	0.02	0.13	130
P-7	12.0	J-780	J-768	327	45.02	0.01	0.00	0.13	130
P-202	6.0	J-746	J-132	689	-11.23	0.03	0.02	0.13	100
P-267	8.0	J-10	J-9	3	19.95	0.02	0.00	0.13	100
P-232	8.0	J-732	J-798	321	-19.85	0.02	0.01	0.13	110
737	12.0	J-658	J-662	527	-44.52	0.01	0.00	0.13	120
681	8.0	J-132	J-133	44	-19.69	0.02	0.00	0.13	120
653	12.0	J-494	J-495	300	43.78	0.02	0.00	0.12	90

Active Scenario: Maximum Day Demand
FlexTable: Pipe Table
Steady State Analysis

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746	8.0	J-518	J-182	321	-19.39	0.02	0.01	0.12	100
157	12.0	J-838	J-773	1,176	43.27	0.01	0.01	0.12	120
384	12.0	J-818	J-658	1,775	-43.06	0.01	0.02	0.12	120
268	8.0	J-767	J-530	759	-18.94	0.02	0.01	0.12	100
741	8.0	J-467	J-205	275	18.94	0.02	0.01	0.12	100
769	12.0	J-502	J-503	303	42.03	0.01	0.00	0.12	100
273	8.0	J-68	J-559	957	18.51	0.02	0.02	0.12	100
495	12.0	J-664	J-805	894	41.24	0.01	0.01	0.12	120
P-237	8.0	J-414	J-841	1,106	-18.27	0.05	0.05	0.12	60
542	8.0	J-201	J-446	707	-18.17	0.02	0.01	0.12	100
735	6.0	J-205	J-206	89	10.21	0.02	0.00	0.12	100
693	8.0	J-255	J-256	121	-18.14	0.02	0.00	0.12	100
141	10.0	J-484	J-695	569	28.23	0.01	0.01	0.12	100
P-103	12.0	J-266	J-295	102	40.62	0.01	0.00	0.12	120
543	6.0	J-294	J-202	996	10.15	0.02	0.02	0.12	120
P-162	12.0	J-517	J-495	1,538	-40.18	0.01	0.01	0.11	110
524	8.0	J-5	J-6	2	17.83	0.00	0.00	0.11	140
525	8.0	J-179	J-5	398	17.83	0.01	0.00	0.11	120
P-297	8.0	J-6	J-756	76	17.83	0.01	0.00	0.11	110
538	8.0	J-33	J-590	521	17.31	0.01	0.01	0.11	110
P-231	8.0	J-797	J-732	545	-17.28	0.01	0.01	0.11	110
654	6.0	J-494	J-408	620	9.70	0.03	0.02	0.11	90
P-134	8.0	J-542	J-335	1,370	-17.24	0.02	0.02	0.11	100
84	2.0	J-750	J-751	735	1.06	0.06	0.04	0.11	120
670	8.0	J-338	J-339	175	-16.90	0.02	0.00	0.11	100
677	8.0	J-710	J-720	724	16.86	0.02	0.01	0.11	100
750	8.0	J-618	J-139	410	-16.69	0.01	0.00	0.11	120
P-274	12.0	J-524	J-456	273	-37.44	0.01	0.00	0.11	100
613	2.0	J-472	J-473	277	1.04	0.08	0.02	0.11	100
639	12.0	J-159	J-773	828	-37.09	0.01	0.01	0.11	120
127	4.0	J-452	J-106	265	4.03	0.02	0.01	0.10	130
476	8.0	J-9	J-10	3	-15.96	0.02	0.00	0.10	80
P-164	12.0	J-661	J-517	222	-35.84	0.01	0.00	0.10	110
P-163	12.0	J-334	J-661	381	-35.84	0.01	0.00	0.10	110
588	8.0	J-159	J-160	63	15.90	0.01	0.00	0.10	101
P-191	8.0	J-299	J-767	685	-15.84	0.01	0.01	0.10	100
295	8.0	J-835	J-580	1,525	-15.59	0.01	0.02	0.10	100
593	2.0	J-324	J-646	589	0.97	0.07	0.04	0.10	101
53	8.0	J-173	J-82	74	15.15	0.01	0.00	0.10	120
52	8.0	J-63	J-64	19	14.82	0.01	0.00	0.09	100
194	12.0	J-674	J-122	526	33.14	0.01	0.00	0.09	110
510	12.0	J-663	J-474	1,339	32.60	0.01	0.01	0.09	120
674	10.0	J-102	J-65	114	22.63	0.01	0.00	0.09	90
P-70	6.0	J-544	J-184	75	-8.14	0.01	0.00	0.09	120
604	8.0	J-503	J-760	926	14.43	0.01	0.01	0.09	110

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P-105	8.0	J-160	J-655	417	14.21	0.01	0.00	0.09	101
644	12.0	J-288	J-657	1,132	31.78	0.01	0.01	0.09	110
478	12.0	J-138	J-139	60	31.35	0.01	0.00	0.09	100
P-147	8.0	J-339	J-707	502	-13.86	0.01	0.01	0.09	100
172	10.0	J-199	J-483	1,101	-21.52	0.01	0.01	0.09	110
P-344	12.0	J-727	J-325	921	30.95	0.01	0.01	0.09	100
464	8.0	J-386	J-363	219	13.68	0.01	0.00	0.09	100
514	8.0	J-332	J-451	309	-13.64	0.01	0.00	0.09	140
523	8.0	J-756	J-451	706	13.64	0.01	0.00	0.09	140
736	6.0	J-206	J-303	500	7.39	0.01	0.01	0.08	100
625	8.0	J-100	J-101	48	12.99	0.01	0.00	0.08	120
P-45	12.0	J-667	J-830	108	29.06	0.01	0.00	0.08	100
P-343	12.0	J-667	J-727	1,027	-29.06	0.01	0.01	0.08	100
635	12.0	J-122	J-150	60	-28.88	0.01	0.00	0.08	90
P-11	12.0	J-858	J-334	1,229	-28.60	0.00	0.01	0.08	110
759	10.0	J-199	J-200	87	19.45	0.01	0.00	0.08	110
P-279	8.0	J-754	J-819	26	-12.42	0.01	0.00	0.08	100
456	8.0	J-164	J-794	1,994	12.40	0.01	0.01	0.08	130
P-272	8.0	J-835	J-559	91	-12.33	0.01	0.00	0.08	100
591	8.0	J-50	J-433	242	12.24	0.01	0.00	0.08	101
726	8.0	J-31	J-437	1,600	12.19	0.01	0.01	0.08	110
P-69	6.0	J-183	J-544	6	-6.81	0.00	0.00	0.08	120
421	8.0	J-707	J-27	639	12.01	0.01	0.00	0.08	120
P-99	8.0	J-717	J-712	14	12.00	0.01	0.00	0.08	120
705	8.0	J-171	J-172	74	12.00	0.01	0.00	0.08	110
706	8.0	J-172	J-270	128	12.00	0.01	0.00	0.08	101
704	8.0	J-270	J-485	298	12.00	0.01	0.00	0.08	101
624	8.0	J-712	J-713	993	12.00	0.01	0.01	0.08	120
P-300	12.0	J-350	J-316	1,903	-26.87	0.00	0.01	0.08	130
434	8.0	J-696	J-697	624	11.84	0.01	0.00	0.08	101
544	8.0	J-202	J-155	502	11.74	0.01	0.00	0.07	100
533	6.0	J-564	J-273	430	-6.58	0.01	0.00	0.07	100
135	6.0	J-448	J-205	1,167	-6.52	0.01	0.01	0.07	100
1	12.0	J-744	J-320	678	-25.98	0.00	0.00	0.07	110
111	10.0	J-298	J-161	2,153	17.60	0.00	0.01	0.07	110
748	8.0	J-594	J-389	576	-11.15	0.01	0.00	0.07	100
714	8.0	J-307	J-250	557	-10.99	0.01	0.00	0.07	90
P-186	12.0	J-488	J-858	621	-24.34	0.00	0.00	0.07	130
P-227	8.0	J-124	J-831	176	10.73	0.01	0.00	0.07	100
717	10.0	J-200	J-92	489	16.73	0.00	0.00	0.07	110
P-104	12.0	J-295	J-267	25	23.79	0.00	0.00	0.07	120
471	8.0	J-117	J-518	882	-10.57	0.01	0.01	0.07	100
607	12.0	J-642	J-503	888	-23.38	0.00	0.00	0.07	100
P-101	12.0	J-267	J-614	354	23.05	0.00	0.00	0.07	120
P-281	6.0	J-583	J-642	1,086	-5.73	0.01	0.01	0.07	100

Active Scenario: Maximum Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
301	6.0	J-416	J-572	1,063	5.60	0.01	0.01	0.06	100
120	12.0	J-596	J-744	1,086	-22.40	0.00	0.00	0.06	110
258	6.0	J-769	J-37	1,191	-5.60	0.01	0.01	0.06	110
458	8.0	J-816	J-788	930	9.94	0.01	0.01	0.06	100
553	8.0	J-568	J-201	981	-9.91	0.01	0.01	0.06	100
P-196	8.0	J-476	J-620	27	9.66	0.00	0.00	0.06	140
442	6.0	J-651	J-652	491	5.42	0.01	0.00	0.06	101
481	8.0	J-594	J-547	1,338	9.58	0.00	0.01	0.06	110
541	6.0	J-568	J-519	351	5.37	0.01	0.00	0.06	100
180	10.0	J-649	J-63	469	14.82	0.00	0.00	0.06	100
455	12.0	J-163	J-164	68	21.32	0.00	0.00	0.06	130
97	8.0	J-639	J-785	1,001	9.47	0.00	0.00	0.06	120
532	8.0	J-542	J-255	949	-9.45	0.01	0.01	0.06	100
34	12.0	J-554	J-159	1,840	-21.19	0.00	0.00	0.06	120
659	8.0	J-325	J-326	173	9.40	0.01	0.00	0.06	101
650	12.0	J-639	J-287	1,208	-21.14	0.00	0.00	0.06	110
281	8.0	J-720	J-299	625	-9.39	0.01	0.00	0.06	100
P-251	12.0	J-678	J-842	1,278	21.03	0.00	0.00	0.06	120
P-160	6.0	J-604	J-759	633	5.24	0.01	0.01	0.06	90
160	12.0	J-598	J-657	1,483	-20.84	0.00	0.00	0.06	110
546	8.0	J-801	J-155	876	-9.24	0.01	0.00	0.06	100
487	6.0	J-389	J-390	220	5.18	0.01	0.00	0.06	120
489	8.0	J-116	J-117	39	-9.20	0.01	0.00	0.06	100
22	8.0	J-288	J-621	2,692	9.19	0.00	0.01	0.06	110
P-167	6.0	J-259	J-237	86	5.13	0.00	0.00	0.06	130
P-165	6.0	J-391	J-259	216	5.13	0.00	0.00	0.06	130
480	12.0	J-608	J-609	389	20.45	0.00	0.00	0.06	110
738	12.0	J-678	J-474	564	-20.22	0.00	0.00	0.06	120
752	8.0	J-227	J-139	1,507	-8.77	0.00	0.00	0.06	120
391	2.0	J-434	J-435	269	0.54	0.01	0.00	0.06	130
P-204	8.0	J-709	J-747	121	8.65	0.00	0.00	0.06	110
42	6.0	J-76	J-77	22	-4.78	0.00	0.00	0.05	120
12	8.0	J-92	J-93	27	8.46	0.00	0.00	0.05	130
28	12.0	J-163	J-325	1,018	-18.99	0.00	0.00	0.05	100
P-102	12.0	J-614	J-180	1,448	18.98	0.00	0.00	0.05	120
202	6.0	J-408	J-409	248	4.69	0.01	0.00	0.05	101
749	8.0	J-593	J-618	982	-8.18	0.00	0.00	0.05	110
433	8.0	J-825	J-554	1,068	-7.98	0.00	0.00	0.05	130
241	8.0	J-754	J-755	846	7.92	0.00	0.00	0.05	100
403	6.0	J-308	J-430	255	4.42	0.01	0.00	0.05	90
407	8.0	J-598	J-279	408	7.85	0.00	0.00	0.05	130
446	8.0	J-326	J-784	844	7.77	0.00	0.00	0.05	101
605	8.0	J-760	J-362	853	7.75	0.00	0.00	0.05	110
680	8.0	J-48	J-132	119	-7.74	0.00	0.00	0.05	90
263	8.0	J-637	J-600	884	-7.72	0.00	0.00	0.05	90

Active Scenario: Maximum Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-168	6.0	J-237	J-260	36	4.32	0.00	0.00	0.05	130
482	12.0	J-805	J-369	1,173	-17.20	0.00	0.00	0.05	120
721	8.0	J-776	J-590	1,326	-7.57	0.00	0.00	0.05	110
502	8.0	J-469	J-394	276	-7.57	0.00	0.00	0.05	100
P-82	12.0	J-187	J-295	2,225	-16.83	0.00	0.00	0.05	110
406	6.0	J-687	J-688	550	-4.19	0.00	0.00	0.05	110
218	8.0	J-19	J-20	4	7.25	0.00	0.00	0.05	130
88	8.0	J-334	J-19	203	7.25	0.00	0.00	0.05	130
P-10	8.0	J-20	J-365	357	7.25	0.00	0.00	0.05	80
P-13	8.0	J-365	J-480	5	7.25	0.01	0.00	0.05	80
293	6.0	J-309	J-310	156	4.05	0.00	0.00	0.05	101
192	6.0	J-574	J-783	1,143	-3.93	0.00	0.00	0.04	100
302	6.0	J-572	J-573	356	3.89	0.00	0.00	0.04	101
P-259	8.0	J-671	J-792	4	-6.72	0.00	0.00	0.04	110
526	6.0	J-179	J-387	219	3.78	0.00	0.00	0.04	120
606	12.0	J-31	J-33	860	15.05	0.00	0.00	0.04	100
175	8.0	J-180	J-100	78	6.66	0.00	0.00	0.04	120
193	8.0	J-783	J-674	793	-6.58	0.00	0.00	0.04	100
P-138	6.0	J-76	J-233	33	3.70	0.00	0.00	0.04	140
715	8.0	J-307	J-308	154	6.55	0.00	0.00	0.04	90
P-179	8.0	J-66	J-352	1,403	-6.48	0.00	0.00	0.04	90
P-109	6.0	J-409	J-359	191	3.61	0.00	0.00	0.04	101
0	12.0	J-82	J-83	25	14.32	0.00	0.00	0.04	120
188	12.0	J-83	J-405	1,243	14.32	0.00	0.00	0.04	120
174	8.0	J-167	J-100	73	6.33	0.00	0.00	0.04	120
395	6.0	J-613	J-515	413	3.51	0.01	0.00	0.04	80
P-223	6.0	J-515	J-461	170	3.51	0.00	0.00	0.04	120
16	12.0	J-422	J-830	1,368	-14.04	0.00	0.00	0.04	120
485	8.0	J-664	J-678	1,374	6.18	0.00	0.00	0.04	120
P-46	12.0	J-830	J-209	450	13.80	0.00	0.00	0.04	100
727	8.0	J-201	J-202	87	6.01	0.00	0.00	0.04	100
P-97	8.0	J-101	J-717	1	6.00	0.00	0.00	0.04	120
P-95	8.0	J-717	J-101	1	-6.00	0.00	0.00	0.04	120
133	6.0	J-499	J-493	1,056	3.34	0.00	0.00	0.04	100
P-181	12.0	J-768	J-391	848	13.12	0.00	0.00	0.04	130
P-276	8.0	J-32	J-34	859	5.78	0.00	0.00	0.04	100
590	8.0	J-187	J-188	82	5.71	0.00	0.00	0.04	130
156	8.0	J-188	J-685	641	5.71	0.00	0.00	0.04	130
757	8.0	J-548	J-120	344	5.66	0.00	0.00	0.04	110
209	8.0	J-339	J-27	1,137	-5.63	0.00	0.00	0.04	120
549	6.0	J-519	J-197	322	3.16	0.00	0.00	0.04	100
11	6.0	J-408	J-728	632	3.16	0.00	0.00	0.04	90
165	8.0	J-361	J-362	196	-5.59	0.00	0.00	0.04	110
P-42	8.0	J-423	J-452	630	5.58	0.00	0.00	0.04	130
108	6.0	J-446	J-591	369	3.13	0.00	0.00	0.04	130

Active Scenario: Maximum Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-94	12.0	J-180	J-167	25	12.32	0.00	0.00	0.03	120
227	12.0	J-49	J-50	32	12.24	0.00	0.00	0.03	101
357	8.0	J-336	J-708	861	-5.40	0.00	0.00	0.03	110
25	12.0	J-209	J-195	945	12.09	0.00	0.00	0.03	100
P-201	6.0	J-812	J-746	190	-3.01	0.00	0.00	0.03	100
271	8.0	J-679	J-67	564	-5.35	0.00	0.00	0.03	130
P-157	8.0	J-600	J-684	1,822	5.32	0.00	0.00	0.03	90
620	4.0	J-378	J-379	396	1.33	0.00	0.00	0.03	120
P-225	8.0	J-797	J-224	1,229	5.30	0.00	0.00	0.03	110
P-15	8.0	J-480	J-490	179	5.27	0.00	0.00	0.03	120
250	8.0	J-176	J-177	74	-5.27	0.00	0.00	0.03	120
249	8.0	J-352	J-176	190	-5.27	0.00	0.00	0.03	120
P-16	8.0	J-490	J-177	207	5.27	0.00	0.00	0.03	120
107	6.0	J-202	J-557	458	2.95	0.00	0.00	0.03	100
P-290	8.0	J-766	J-381	3	5.24	0.01	0.00	0.03	100
20	12.0	J-422	J-423	249	11.70	0.00	0.00	0.03	120
634	8.0	J-655	J-656	483	5.15	0.00	0.00	0.03	101
170	8.0	J-813	J-570	943	5.14	0.00	0.00	0.03	110
167	8.0	J-635	J-771	1,085	5.08	0.00	0.00	0.03	101
83	6.0	J-564	J-497	351	2.84	0.00	0.00	0.03	101
P-171	6.0	J-631	J-578	518	2.84	0.00	0.00	0.03	100
725	8.0	J-589	J-590	367	-5.01	0.00	0.00	0.03	130
134	8.0	J-447	J-467	1,096	-5.01	0.00	0.00	0.03	100
P-203	8.0	J-746	J-709	561	4.97	0.00	0.00	0.03	110
405	6.0	J-588	J-268	364	2.79	0.00	0.00	0.03	101
445	8.0	J-773	J-774	760	4.97	0.00	0.00	0.03	130
777	8.0	J-757	J-755	762	-4.82	0.00	0.00	0.03	100
651	10.0	J-161	J-629	817	7.53	0.00	0.00	0.03	110
P-180	8.0	J-352	J-353	351	-4.81	0.00	0.00	0.03	90
274	8.0	J-709	J-301	599	-4.69	0.00	0.00	0.03	110
122	8.0	J-361	J-688	791	4.67	0.00	0.00	0.03	110
P-39	12.0	J-195	J-153	63	10.40	0.00	0.00	0.03	100
198	8.0	J-621	J-622	437	4.59	0.00	0.00	0.03	130
578	6.0	J-214	J-748	683	2.54	0.00	0.00	0.03	101
587	4.0	J-343	J-346	179	1.13	0.00	0.00	0.03	130
552	8.0	J-437	J-776	994	4.50	0.00	0.00	0.03	110
P-277	8.0	J-228	J-754	66	-4.50	0.00	0.00	0.03	100
P-178	8.0	J-353	J-759	195	-4.49	0.00	0.00	0.03	90
162	8.0	J-502	J-791	882	4.47	0.00	0.00	0.03	130
P-228	8.0	J-831	J-806	685	4.41	0.00	0.00	0.03	100
346	2.0	J-271	J-272	132	0.27	0.00	0.00	0.03	110
P-21	8.0	J-517	J-470	139	4.34	0.00	0.00	0.03	130
89	8.0	J-376	J-377	213	4.33	0.00	0.00	0.03	120
234	8.0	J-604	J-377	510	-4.33	0.00	0.00	0.03	120
P-22	8.0	J-470	J-376	187	4.33	0.00	0.00	0.03	130

Active Scenario: Maximum Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-250	12.0	J-369	J-842	3	-9.68	0.00	0.00	0.03	120
10	12.0	J-405	J-406	243	9.66	0.00	0.00	0.03	120
P-172	6.0	J-578	J-810	428	2.41	0.00	0.00	0.03	100
P-252	12.0	J-842	J-369	3	9.64	0.00	0.00	0.03	120
P-141	6.0	J-77	J-134	1	-2.39	0.00	0.00	0.03	100
P-139	6.0	J-134	J-77	1	2.39	0.00	0.00	0.03	100
244	8.0	J-303	J-786	880	4.21	0.00	0.00	0.03	100
P-298	8.0	J-756	J-327	249	4.19	0.00	0.00	0.03	110
55	8.0	J-166	J-518	527	-4.16	0.00	0.00	0.03	101
21	10.0	J-851	J-633	2,127	-6.49	0.00	0.00	0.03	100
465	6.0	J-545	J-546	341	2.32	0.00	0.00	0.03	101
P-135	6.0	J-445	J-843	5	-2.30	0.00	0.00	0.03	100
626	8.0	J-614	J-615	408	4.07	0.00	0.00	0.03	120
294	8.0	J-580	J-581	362	4.05	0.00	0.00	0.03	100
56	8.0	J-753	J-671	743	-3.96	0.00	0.00	0.03	101
325	8.0	J-351	J-457	312	3.87	0.00	0.00	0.02	101
95	6.0	J-73	J-574	356	-2.15	0.00	0.00	0.02	100
P-235	12.0	J-719	J-403	108	8.56	0.00	0.00	0.02	130
125	8.0	J-423	J-342	1,182	3.79	0.00	0.00	0.02	130
288	8.0	J-530	J-724	608	3.78	0.00	0.00	0.02	100
57	8.0	J-606	J-607	395	-3.76	0.00	0.00	0.02	100
23	12.0	J-847	J-598	1,656	-8.36	0.00	0.00	0.02	110
497	8.0	J-226	J-375	212	3.71	0.00	0.00	0.02	101
397	6.0	J-460	J-461	282	-2.08	0.00	0.00	0.02	120
P-57	8.0	J-400	J-110	1,121	3.70	0.00	0.00	0.02	110
341	8.0	J-336	J-337	174	3.67	0.00	0.00	0.02	110
513	8.0	J-37	J-648	467	3.64	0.00	0.00	0.02	101
P-159	6.0	J-728	J-604	90	2.03	0.00	0.00	0.02	90
105	8.0	J-33	J-34	11	-3.61	0.00	0.00	0.02	120
336	6.0	J-13	J-14	3	-2.00	0.01	0.00	0.02	120
548	8.0	J-675	J-801	849	-3.53	0.00	0.00	0.02	110
P-226	8.0	J-224	J-613	55	3.51	0.00	0.00	0.02	110
473	8.0	J-618	J-226	953	3.45	0.00	0.00	0.02	120
200	8.0	J-638	J-654	480	3.40	0.00	0.00	0.02	130
320	8.0	J-761	J-125	722	-3.40	0.00	0.00	0.02	100
24	12.0	J-276	J-153	137	-7.56	0.00	0.00	0.02	100
649	12.0	J-638	J-639	449	-7.56	0.00	0.00	0.02	110
P-254	8.0	J-800	J-735	294	3.31	0.00	0.00	0.02	101
96	8.0	J-419	J-785	2,262	-3.29	0.00	0.00	0.02	120
142	8.0	J-782	J-757	876	-3.29	0.00	0.00	0.02	100
457	12.0	J-96	J-97	28	-7.32	0.00	0.00	0.02	120
153	12.0	J-605	J-266	2,598	-7.23	0.00	0.00	0.02	110
P-81	12.0	J-852	J-187	333	-7.18	0.00	0.00	0.02	110
272	8.0	J-559	J-560	350	3.17	0.00	0.00	0.02	130
550	6.0	J-197	J-592	372	1.78	0.00	0.00	0.02	130

Active Scenario: Maximum Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
629	8.0	J-27	J-28	516	3.15	0.00	0.00	0.02	101
P-236	12.0	J-403	J-214	1,056	7.04	0.00	0.00	0.02	130
176	10.0	J-161	J-162	67	4.83	0.00	0.00	0.02	101
P-182	12.0	J-391	J-631	647	6.95	0.00	0.00	0.02	130
261	8.0	J-508	J-749	783	-3.09	0.00	0.00	0.02	130
413	10.0	J-92	J-484	1,311	4.78	0.00	0.00	0.02	110
454	8.0	J-500	J-501	303	3.04	0.00	0.00	0.02	130
37	8.0	J-698	J-500	602	3.04	0.00	0.00	0.02	130
P-143	8.0	J-234	J-738	201	3.02	0.00	0.00	0.02	130
P-37	12.0	J-276	J-217	447	6.66	0.00	0.00	0.02	100
615	8.0	J-120	J-121	41	2.91	0.00	0.00	0.02	110
774	8.0	J-505	J-431	743	2.88	0.00	0.00	0.02	101
673	10.0	J-65	J-66	20	-4.39	0.00	0.00	0.02	90
P-247	12.0	J-822	J-395	621	6.31	0.00	0.00	0.02	110
39	8.0	J-281	J-282	142	2.79	0.00	0.00	0.02	120
751	8.0	J-226	J-227	111	-2.78	0.00	0.00	0.02	120
416	8.0	J-775	J-776	862	-2.77	0.00	0.00	0.02	130
P-128	12.0	J-846	J-406	308	-6.18	0.00	0.00	0.02	110
P-89	12.0	J-427	J-318	267	5.99	0.00	0.00	0.02	120
P-92	12.0	J-167	J-427	1,458	5.99	0.00	0.00	0.02	120
P-90	12.0	J-318	J-625	579	5.99	0.00	0.00	0.02	120
P-86	12.0	J-625	J-733	12	5.99	0.00	0.00	0.02	120
P-35	12.0	J-585	J-838	7	-5.98	0.00	0.00	0.02	100
253	8.0	J-488	J-489	295	2.61	0.00	0.00	0.02	140
P-187	8.0	J-489	J-623	7	2.61	0.00	0.00	0.02	120
P-188	8.0	J-623	J-512	325	2.61	0.00	0.00	0.02	120
106	6.0	J-591	J-721	609	1.46	0.00	0.00	0.02	130
223	12.0	J-804	J-96	2,519	-5.83	0.00	0.00	0.02	120
P-32	12.0	J-626	J-804	794	-5.83	0.00	0.00	0.02	130
661	8.0	J-342	J-343	177	2.57	0.00	0.00	0.02	130
183	8.0	J-586	J-587	363	2.56	0.00	0.00	0.02	101
92	6.0	J-359	J-360	192	1.44	0.00	0.00	0.02	101
398	6.0	J-764	J-516	803	-1.43	0.00	0.00	0.02	120
P-224	6.0	J-461	J-516	150	1.43	0.00	0.00	0.02	120
260	8.0	J-683	J-684	542	-2.52	0.00	0.00	0.02	101
P-106	8.0	J-655	J-815	509	2.52	0.00	0.00	0.02	101
747	8.0	J-593	J-594	376	2.45	0.00	0.00	0.02	110
540	8.0	J-254	J-285	388	2.44	0.00	0.00	0.02	101
551	8.0	J-590	J-595	378	2.43	0.00	0.00	0.02	130
P-261	8.0	J-327	J-424	98	2.41	0.00	0.00	0.02	120
173	8.0	J-571	J-645	472	2.41	0.00	0.00	0.02	101
P-262	8.0	J-424	J-328	70	2.41	0.00	0.00	0.02	120
377	8.0	J-395	J-396	242	2.39	0.00	0.00	0.02	120
P-84	12.0	J-733	J-852	1,296	-5.34	0.00	0.00	0.02	120
621	6.0	J-378	J-544	340	-1.33	0.00	0.00	0.02	120

Active Scenario: Maximum Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-280	8.0	J-819	J-229	14	2.36	0.00	0.00	0.02	100
289	8.0	J-299	J-300	150	2.34	0.00	0.00	0.01	101
81	8.0	J-38	J-641	457	2.34	0.00	0.00	0.01	101
5	8.0	J-381	J-779	768	2.34	0.00	0.00	0.01	130
P-55	8.0	J-110	J-579	9	2.32	0.00	0.00	0.01	140
17	8.0	J-787	J-788	821	-2.32	0.00	0.00	0.01	130
121	8.0	J-582	J-583	384	-2.30	0.00	0.00	0.01	101
361	6.0	J-430	J-506	315	1.28	0.00	0.00	0.01	130
P-158	8.0	J-684	J-637	271	-2.28	0.00	0.00	0.01	90
547	6.0	J-557	J-558	347	1.26	0.00	0.00	0.01	100
657	8.0	J-636	J-637	440	-2.18	0.00	0.00	0.01	101
414	12.0	J-93	J-131	941	4.91	0.00	0.00	0.01	130
723	8.0	J-34	J-254	119	2.17	0.00	0.00	0.01	100
P-350	8.0	J-45	J-194	28	-2.17	0.00	0.00	0.01	101
124	8.0	J-788	J-833	1,278	2.16	0.00	0.00	0.01	130
484	8.0	J-369	J-157	200	2.12	0.00	0.00	0.01	101
444	8.0	J-584	J-585	362	-2.12	0.00	0.00	0.01	100
627	8.0	J-556	J-807	1,367	2.11	0.00	0.00	0.01	120
307	8.0	J-650	J-736	669	2.05	0.00	0.00	0.01	101
P-242	8.0	J-840	J-345	135	2.05	0.00	0.00	0.01	130
764	6.0	J-564	J-821	1,000	1.15	0.00	0.00	0.01	100
323	8.0	J-831	J-832	1,202	2.03	0.00	0.00	0.01	110
345	6.0	J-14	J-271	459	1.13	0.00	0.00	0.01	110
P-19	8.0	J-480	J-441	170	1.98	0.00	0.00	0.01	80
248	8.0	J-353	J-354	201	-1.98	0.00	0.00	0.01	80
P-20	8.0	J-441	J-354	52	1.98	0.00	0.00	0.01	80
102	6.0	J-235	J-236	109	1.11	0.00	0.00	0.01	140
314	10.0	J-349	J-277	180	3.06	0.00	0.00	0.01	101
123	8.0	J-576	J-577	362	1.94	0.00	0.00	0.01	130
242	8.0	J-206	J-630	460	1.94	0.00	0.00	0.01	101
P-137	6.0	J-348	J-76	153	-1.08	0.00	0.00	0.01	140
P-38	12.0	J-217	J-163	580	4.31	0.00	0.00	0.01	100
315	8.0	J-277	J-278	149	1.91	0.00	0.00	0.01	101
P-119	8.0	J-668	J-222	502	-1.89	0.00	0.00	0.01	130
282	8.0	J-149	J-606	399	-1.86	0.00	0.00	0.01	101
616	8.0	J-121	J-421	244	1.85	0.00	0.00	0.01	110
466	12.0	J-474	J-475	278	4.11	0.00	0.00	0.01	101
68	6.0	J-45	J-46	14	1.02	0.00	0.00	0.01	140
59	8.0	J-770	J-710	760	-1.78	0.00	0.00	0.01	100
622	6.0	J-247	J-248	118	-0.99	0.00	0.00	0.01	120
603	8.0	J-801	J-802	854	1.73	0.00	0.00	0.01	100
P-234	6.0	J-823	J-665	587	0.97	0.00	0.00	0.01	101
422	12.0	J-555	J-556	346	3.83	0.00	0.00	0.01	120
399	6.0	J-764	J-460	869	-0.93	0.00	0.00	0.01	120
718	6.0	J-688	J-583	578	-0.92	0.00	0.00	0.01	100

Active Scenario: Maximum Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
381	8.0	J-731	J-732	634	-1.58	0.00	0.00	0.01	130
535	6.0	J-738	J-739	732	0.88	0.00	0.00	0.01	130
614	8.0	J-120	J-627	441	1.53	0.00	0.00	0.01	101
94	8.0	J-72	J-73	21	-1.51	0.00	0.00	0.01	100
243	8.0	J-303	J-304	154	1.51	0.00	0.00	0.01	80
P-110	6.0	J-359	J-514	126	0.84	0.00	0.00	0.01	101
215	6.0	J-578	J-238	429	-0.81	0.00	0.00	0.01	130
P-170	6.0	J-126	J-238	110	0.81	0.00	0.00	0.01	130
P-169	6.0	J-237	J-126	9	0.81	0.00	0.00	0.01	130
483	6.0	J-157	J-158	62	0.81	0.00	0.00	0.01	120
609	6.0	J-158	J-366	281	0.81	0.00	0.00	0.01	120
P-175	8.0	J-837	J-778	90	-1.44	0.00	0.00	0.01	100
P-184	12.0	J-858	J-632	63	3.22	0.00	0.00	0.01	130
545	8.0	J-155	J-156	62	1.42	0.00	0.00	0.01	101
572	6.0	J-430	J-513	317	0.79	0.00	0.00	0.01	90
669	8.0	J-575	J-42	359	-1.40	0.00	0.00	0.01	130
P-215	12.0	J-14	J-855	399	-3.13	0.00	0.00	0.01	110
443	8.0	J-531	J-532	331	1.35	0.00	0.00	0.01	140
P-34	12.0	J-698	J-626	57	-3.04	0.00	0.00	0.01	130
4	12.0	J-233	J-234	109	3.02	0.00	0.00	0.01	130
191	8.0	J-497	J-498	312	1.28	0.00	0.00	0.01	101
772	8.0	J-227	J-390	889	-1.26	0.00	0.00	0.01	120
380	8.0	J-224	J-225	103	1.26	0.00	0.00	0.01	120
563	8.0	J-703	J-704	602	-1.26	0.00	0.00	0.01	110
P-30	12.0	J-281	J-626	584	-2.79	0.00	0.00	0.01	130
449	8.0	J-154	J-443	754	1.23	0.00	0.00	0.01	100
450	8.0	J-693	J-694	564	1.23	0.00	0.00	0.01	130
415	8.0	J-437	J-438	261	1.22	0.00	0.00	0.01	101
254	8.0	J-632	J-367	1,287	1.22	0.00	0.00	0.01	130
642	12.0	J-419	J-420	243	2.73	0.00	0.00	0.01	110
730	6.0	J-197	J-198	87	0.68	0.00	0.00	0.01	110
595	8.0	J-79	J-487	294	1.20	0.00	0.00	0.01	130
P-349	8.0	J-388	J-45	192	-1.15	0.00	0.00	0.01	101
475	10.0	J-373	J-374	212	1.78	0.00	0.00	0.01	101
404	6.0	J-403	J-404	483	0.63	0.00	0.00	0.01	120
724	8.0	J-254	J-568	756	-1.10	0.00	0.00	0.01	100
6	12.0	J-834	J-687	1,128	-2.43	0.00	0.00	0.01	110
643	12.0	J-657	J-419	482	2.40	0.00	0.00	0.01	110
P-173	8.0	J-810	J-750	838	1.06	0.00	0.00	0.01	100
537	8.0	J-332	J-333	172	1.06	0.00	0.00	0.01	140
698	8.0	J-428	J-429	253	1.06	0.00	0.00	0.01	101
558	6.0	J-337	J-13	1,000	0.59	0.00	0.00	0.01	110
362	8.0	J-307	J-716	620	1.04	0.00	0.00	0.01	130
168	12.0	J-153	J-154	61	2.31	0.00	0.00	0.01	100
69	8.0	J-46	J-240	117	1.02	0.00	0.00	0.01	140

Active Scenario: Maximum Day Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-248	12.0	J-395	J-829	409	2.25	0.00	0.00	0.01	110
695	8.0	J-148	J-149	55	-0.97	0.00	0.00	0.01	101
P-56	8.0	J-579	J-111	28	0.97	0.00	0.00	0.01	140
566	12.0	J-662	J-659	500	2.17	0.00	0.00	0.01	130
469	12.0	J-193	J-194	83	2.17	0.00	0.00	0.01	101
P-41	8.0	J-694	J-423	137	-0.95	0.00	0.00	0.01	130
640	12.0	J-553	J-554	346	-2.05	0.00	0.00	0.01	101
519	8.0	J-465	J-466	274	0.84	0.00	0.00	0.01	140
P-294	8.0	J-327	J-465	111	0.84	0.00	0.00	0.01	110
P-75	12.0	J-714	J-23	453	1.85	0.00	0.00	0.01	100
P-79	12.0	J-714	J-852	198	-1.85	0.00	0.00	0.01	110
159	8.0	J-420	J-112	1,472	0.73	0.00	0.00	0.00	110
648	8.0	J-621	J-847	1,628	0.65	0.00	0.00	0.00	110
93	8.0	J-504	J-72	303	-0.63	0.00	0.00	0.00	100
278	8.0	J-25	J-26	8	0.61	0.00	0.00	0.00	140
204	10.0	J-478	J-199	285	-0.93	0.00	0.00	0.00	130
P-43	12.0	J-443	J-693	156	1.23	0.00	0.00	0.00	100
P-347	8.0	J-396	J-412	616	0.54	0.00	0.00	0.00	120
P-348	8.0	J-412	J-434	24	0.54	0.00	0.00	0.00	120
628	12.0	J-807	J-556	1,805	1.21	0.00	0.00	0.00	120
378	12.0	J-536	J-214	334	-1.17	0.00	0.00	0.00	130
P-284	12.0	J-94	J-666	292	1.17	0.00	0.00	0.00	100
364	8.0	J-814	J-797	3,156	-0.50	0.00	0.00	0.00	130
47	12.0	J-203	J-204	89	1.04	0.00	0.00	0.00	101
447	10.0	J-209	J-210	90	0.70	0.00	0.00	0.00	101
452	10.0	J-217	J-218	95	0.68	0.00	0.00	0.00	101
P-273	12.0	J-455	J-524	4	-0.97	0.00	0.00	0.00	100
P-124	12.0	J-745	J-482	284	0.97	0.00	0.00	0.00	130
720	12.0	J-284	J-642	457	-0.72	0.00	0.00	0.00	100
196	12.0	J-130	J-131	43	-0.70	0.00	0.00	0.00	130
663	12.0	J-610	J-611	395	-0.70	0.00	0.00	0.00	120
P-62	12.0	J-74	J-145	24	0.66	0.00	0.00	0.00	120
347	8.0	J-336	J-272	700	-0.27	0.00	0.00	0.00	110
768	8.0	J-675	J-198	549	0.24	0.00	0.00	0.00	110
641	12.0	J-420	J-112	1,080	0.53	0.00	0.00	0.00	110
P-40	12.0	J-153	J-196	25	0.52	0.00	0.00	0.00	100
472	8.0	J-772	J-593	1,155	0.10	0.00	0.00	0.00	110
312	8.0	J-149	J-606	1,204	0.08	0.00	0.00	0.00	101
P-185	12.0	J-66	J-488	394	0.17	0.00	0.00	0.00	130
P-192	8.0	J-767	J-793	229	0.02	0.00	0.00	0.00	100
387	2.0	J-566	J-567	354	0.00	0.00	0.00	0.00	101
90	2.0	J-470	J-471	309	0.00	0.00	0.00	0.00	130
564	2.0	J-174	J-175	74	0.00	0.00	0.00	0.00	130
118	4.0	J-185	J-186	92	0.00	0.00	0.00	0.00	140
P-28	8.0	J-212	J-258	33	0.00	0.00	0.00	0.00	130

Active Scenario: Maximum Day Demand
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Steady State Analysis

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392	6.0	J-412	J-413	237	0.00	0.00	0.00	0.00	120
600	6.0	J-172	J-358	191	0.00	0.00	0.00	0.00	101
38	6.0	J-211	J-212	90	0.00	0.00	0.00	0.00	120
610	6.0	J-142	J-143	53	0.00	0.00	0.00	0.00	120
P-88	8.0	J-261	J-318	135	0.00	0.00	0.00	0.00	140
P-24	8.0	J-53	J-706	735	0.00	0.00	0.00	0.00	130
P-17	8.0	J-441	J-142	230	0.00	0.00	0.00	0.00	80
586	10.0	J-661	J-306	494	0.00	0.00	0.00	0.00	130
P-26	10.0	J-706	J-306	45	0.00	0.00	0.00	0.00	130
P-29	12.0	J-258	J-281	15	0.00	0.00	0.00	0.00	130
371	8.0	J-35	J-36	12	0.00	0.00	0.00	0.00	140
155	8.0	J-169	J-170	76	0.00	0.00	0.00	0.00	140
528	8.0	J-424	J-425	332	0.00	0.00	0.00	0.00	120
P-174	8.0	J-750	J-811	128	0.00	0.00	0.00	0.00	100
428	8.0	J-355	J-356	184	0.00	0.00	0.00	0.00	120
596	8.0	J-372	J-612	451	0.00	0.00	0.00	0.00	120
P-23	8.0	J-705	J-53	159	0.00	0.00	0.00	0.00	130
638	8.0	J-794	J-795	840	0.00	0.00	0.00	0.00	101
612	8.0	J-623	J-624	457	0.00	0.00	0.00	0.00	120
429	8.0	J-625	J-522	425	0.00	0.00	0.00	0.00	80
P-27	8.0	J-257	J-212	90	0.00	0.00	0.00	0.00	130
430	8.0	J-261	J-262	125	0.00	0.00	0.00	0.00	140
P-18	8.0	J-142	J-442	40	0.00	0.00	0.00	0.00	80
201	8.0	J-53	J-54	15	0.00	0.00	0.00	0.00	130
P-78	6.0	J-605	J-230	143	0.00	0.00	0.00	0.00	100
360	6.0	J-213	J-214	120	0.00	0.00	0.00	0.00	120
335	6.0	J-245	J-246	118	0.00	0.00	0.00	0.00	80
P-87	8.0	J-317	J-261	25	0.00	0.00	0.00	0.00	140
P-151	8.0	J-777	J-321	14	0.00	0.00	0.00	0.00	140
P-306	12.0	PRV-1	J-283	29	0.00	0.00	0.00	0.00	100
128	8.0	J-230	J-170	141	0.00	0.00	0.00	0.00	140
781	8.0	J-157	J-249	118	0.00	0.00	0.00	0.00	101
P-9	8.0	J-597	J-20	44	0.00	0.00	0.00	0.00	80
426	8.0	J-479	J-262	288	0.00	0.00	0.00	0.00	140
P-303	8.0	J-3	J-861	503	0.00	0.00	0.00	0.00	110
87	8.0	J-490	J-491	304	0.00	0.00	0.00	0.00	120
7	8.0	J-24	J-680	546	0.00	0.00	0.00	0.00	110
P-100	8.0	J-712	J-718	620	0.00	0.00	0.00	0.00	120
702	8.0	J-431	J-432	256	0.00	0.00	0.00	0.00	101
767	8.0	J-341	J-520	460	0.00	0.00	0.00	0.00	101
425	8.0	J-522	J-523	325	0.00	0.00	0.00	0.00	80
567	8.0	J-658	J-174	510	0.00	0.00	0.00	0.00	130
P-25	10.0	J-305	J-706	109	0.00	0.00	0.00	0.00	130
P-49	12.0	J-726	J-848	40	0.00	0.00	0.00	0.00	100
109	12.0	J-511	J-628	435	0.00	0.00	0.00	0.00	101

Active Scenario: Maximum Day Demand
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P-220	12.0	J-850	J-682	60	0.00	0.00	0.00	0.00	120
P-65	12.0	J-616	J-569	50	0.00	0.00	0.00	0.00	100
P-373	12.0	J-743	J-910	216	0.00	0.00	0.00	0.00	130
P-342	6.0	PRV-2	J-769	469	0.00	0.00	0.00	0.00	100
P-341	6.0	J-762	PRV-2	301	0.00	0.00	0.00	0.00	100
427	10.0	J-733	J-355	674	0.00	0.00	0.00	0.00	120
780	12.0	J-112	J-113	38	0.00	0.00	0.00	0.00	110
33	12.0	J-23	J-24	5	0.00	0.00	0.00	0.00	140
P-33	12.0	J-803	J-698	9	0.00	0.00	0.00	0.00	130
386	12.0	J-536	J-566	850	0.00	0.00	0.00	0.00	130
P-76	12.0	J-23	J-715	218	0.00	0.00	0.00	0.00	100
P-58	8.0	J-110	J-836	20	0.00	0.00	0.00	0.00	110
130	12.0	J-283	J-284	143	0.00	0.00	0.00	0.00	100
P-339	12.0	J-631	PRV-3	277	0.00	0.00	0.00	0.00	130
P-338	12.0	PRV-4	J-638	1,166	0.00	0.00	0.00	0.00	110
P-340	12.0	PRV-3	J-632	161	0.00	0.00	0.00	0.00	130
P-166	6.0	J-259	J-392	11	0.00	0.00	0.00	0.00	130
P-292	8.0	J-465	J-643	18	0.00	0.00	0.00	0.00	110
P-337	12.0	J-495	PRV-4	148	0.00	0.00	0.00	0.00	110
P-305	12.0	J-31	PRV-1	314	0.00	0.00	0.00	0.00	100
688	12.0	J-426	J-427	251	0.00	0.00	0.00	0.00	120
214	6.0	J-126	J-127	43	0.00	0.00	0.00	0.00	130
190	12.0	J-295	J-296	151	0.00	0.00	0.00	0.00	130
P-243	12.0	J-828	J-344	13	0.00	0.00	0.00	0.00	110
P-44	12.0	J-693	J-444	108	0.00	0.00	0.00	0.00	100
P-354	12.0	J-553	J-847	714	0.00	0.00	0.00	0.00	130

Active Scenario: Maximum Day Demand
FlexTable: Pump Table
Steady State Analysis

Label	Elevation (ft)	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
Boland-1	264.00	On	287.71	537.89	678.68	250.17
Boland-2	264.00	On	287.72	537.95	689.47	250.23
Boland-3	264.00	Off	287.82	537.69	0.00	0.00
Hosmer Pump #1	275.00	On	282.16	541.17	994.00	259.01
Hosmer Pump #3	275.00	On	282.23	540.01	967.81	257.78

Active Scenario: Maximum Day Demand

FlexTable: Tank Table

Steady State Analysis

Label	Zone	Elevation (Base) (ft)	Elevation (Minimum) (ft)	Elevation (Initial) (ft)	Elevation (Maximum) (ft)	Diameter (ft)	Flow (Out net) (gpm)	Status (Calculated)	Hydraulic Grade (ft)
Tara Road Tank	High Service	467.00	467.00	508.00	515.00	67.00	-681.98	Filling	508.00
Oak Hill Road Tank	Low Service	418.00	418.00	485.00	492.70	25.00	-761.30	Filling	485.00
Overlook Drive Tank	Low Service	460.00	460.00	486.00	493.30	40.00	-380.82	Filling	486.00

Active Scenario: Peak Hour Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-492	454.31	High Service	Fixed	23	0.00	507.84
J-99	454.14	High Service	Fixed	23	0.00	507.84
J-98	454.09	High Service	Fixed	23	1.77	507.83
J-189	450.90	High Service	Fixed	25	7.71	507.98
J-645	442.00	High Service	Fixed	26	6.07	501.87
J-575	443.73	High Service	Fixed	28	3.52	507.88
J-92	432.80	High Service	Fixed	30	8.78	501.09
J-93	432.24	High Service	Fixed	30	8.95	501.09
J-617	433.40	High Service	Fixed	32	0.00	507.35
J-616	432.82	High Service	Fixed	32	0.00	507.59
J-569	432.77	High Service	Fixed	32	0.00	507.59
J-654	430.41	High Service	Fixed	33	8.56	505.87
J-42	429.80	High Service	Fixed	34	6.86	507.88
J-41	429.71	High Service	Fixed	34	2.95	507.88
J-478	422.78	High Service	Fixed	34	2.33	501.10
J-346	434.86	High Service	Fixed	34	2.84	513.74
J-200	421.49	High Service	Fixed	34	6.86	501.10
J-199	421.00	High Service	Fixed	35	2.90	501.10
J-131	418.68	High Service	Fixed	36	10.59	501.09
J-130	417.77	High Service	Fixed	36	1.77	501.09
J-343	428.08	High Service	Fixed	37	3.63	513.74
J-571	415.51	High Service	Fixed	37	6.52	501.87
J-107	425.26	High Service	Fixed	38	6.58	513.67
J-106	425.20	High Service	Fixed	38	3.58	513.72
J-452	422.38	High Service	Fixed	40	3.92	513.74
J-638	414.27	High Service	Fixed	40	10.48	505.87
J-639	414.04	High Service	Fixed	40	10.37	505.87
J-342	421.14	High Service	Fixed	40	3.07	513.74
J-694	416.00	High Service	Fixed	42	5.50	513.75
J-379	404.81	High Service	Fixed	44	3.35	506.33
J-378	404.39	High Service	Fixed	44	0.00	506.33
J-611	406.03	High Service	Fixed	44	8.67	507.99
J-423	411.16	High Service	Fixed	44	3.46	513.75
J-570	398.67	High Service	Fixed	45	13.99	502.18
J-247	401.49	High Service	Fixed	45	2.50	506.41
J-846	395.08	High Service	Fixed	47	3.63	503.27
J-462	398.21	High Service	Fixed	47	0.00	506.58
J-610	395.42	High Service	Fixed	49	1.77	507.99
J-628	391.61	High Service	Fixed	50	0.00	506.19
J-393	391.00	High Service	Fixed	50	14.10	506.26
J-629	387.93	High Service	Fixed	51	3.69	505.95
J-183	388.00	High Service	Fixed	51	3.07	506.33
J-713	385.67	High Service	Fixed	51	30.23	504.07
J-544	387.66	High Service	Fixed	51	0.00	506.33
J-422	394.58	High Service	Fixed	52	5.90	513.75
J-100	384.34	High Service	Fixed	52	0.00	504.10

Active Scenario: Peak Hour Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-668	384.00	High Service	Fixed	52	4.76	504.49
J-785	385.14	High Service	Fixed	52	15.57	505.85
J-652	388.14	High Service	Fixed	52	13.65	509.18
J-717	380.75	High Service	Fixed	53	0.00	504.10
J-101	380.69	High Service	Fixed	53	2.50	504.10
J-712	380.32	High Service	Fixed	54	0.00	504.10
J-222	380.20	High Service	Fixed	54	2.84	504.49
J-669	380.11	High Service	Fixed	54	4.14	504.49
J-248	381.76	High Service	Fixed	54	0.00	506.41
J-463	380.94	High Service	Fixed	54	0.00	506.39
J-444	386.09	High Service	Fixed	55	0.00	513.75
J-791	372.34	High Service	Fixed	55	11.27	500.15
J-760	372.11	High Service	Fixed	55	16.82	500.08
J-184	377.12	High Service	Fixed	56	0.00	506.34
J-647	371.61	High Service	Fixed	56	4.60	501.52
J-482	373.41	High Service	Fixed	56	2.45	503.35
J-755	368.98	High Service	Fixed	57	7.82	500.09
J-406	371.87	High Service	Fixed	57	8.78	503.26
J-161	374.38	High Service	Fixed	57	13.20	505.95
J-693	381.63	High Service	Fixed	57	0.00	513.75
J-298	373.45	High Service	Fixed	57	0.00	506.01
J-223	371.21	High Service	Fixed	58	0.00	504.49
J-162	371.38	High Service	Fixed	58	12.18	505.95
J-297	371.00	High Service	Fixed	58	8.05	506.03
J-511	371.02	High Service	Fixed	58	0.00	506.19
J-405	368.00	High Service	Fixed	59	11.72	503.25
J-483	365.11	High Service	Fixed	59	5.61	501.14
J-287	368.79	High Service	Fixed	59	4.65	505.89
J-718	366.82	High Service	Fixed	59	0.00	504.10
J-362	362.71	High Service	Fixed	59	5.44	500.07
J-443	376.17	High Service	Fixed	60	0.00	513.75
J-715	363.53	High Service	Fixed	61	0.00	504.10
J-680	363.00	High Service	Fixed	61	0.00	504.10
J-745	361.79	High Service	Fixed	61	0.00	503.35
J-481	361.14	High Service	Fixed	62	0.00	503.35
J-523	361.28	High Service	Fixed	62	0.00	504.10
J-479	361.00	High Service	Fixed	62	0.00	504.10
J-261	360.78	High Service	Fixed	62	0.00	504.10
J-317	360.69	High Service	Fixed	62	0.00	504.10
J-262	360.00	High Service	Fixed	62	0.00	504.10
J-676	362.77	High Service	Fixed	63	8.61	508.02
J-714	358.58	High Service	Fixed	63	0.00	504.10
J-170	360.00	High Service	Fixed	63	0.00	505.94
J-167	358.00	High Service	Fixed	63	0.00	504.10
J-180	358.00	High Service	Fixed	63	0.00	504.10
J-318	357.62	High Service	Fixed	63	0.00	504.10

Active Scenario: Peak Hour Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-169	359.32	High Service	Fixed	63	0.00	505.94
J-23	357.00	High Service	Fixed	64	4.65	504.10
J-24	356.98	High Service	Fixed	64	0.00	504.10
J-361	351.85	High Service	Fixed	64	2.33	500.06
J-288	356.93	High Service	Fixed	64	13.82	505.88
J-427	355.00	High Service	Fixed	65	0.00	504.10
J-484	351.91	High Service	Fixed	65	8.56	501.09
J-230	355.09	High Service	Fixed	65	0.00	505.94
J-615	352.38	High Service	Fixed	66	10.25	504.12
J-426	352.28	High Service	Fixed	66	0.00	504.10
J-522	352.27	High Service	Fixed	66	0.00	504.10
J-852	350.64	High Service	Fixed	66	0.00	504.10
J-851	353.00	High Service	Fixed	67	16.36	508.18
J-605	350.00	High Service	Fixed	67	0.00	505.94
J-744	346.41	High Service	Fixed	68	9.01	503.36
J-596	345.00	High Service	Fixed	69	2.61	503.43
J-641	340.75	High Service	Fixed	69	5.90	499.79
J-809	343.60	High Service	Fixed	69	0.00	503.43
J-788	344.37	High Service	Fixed	70	13.76	505.09
J-816	343.43	High Service	Fixed	70	11.05	505.12
J-834	337.96	High Service	Fixed	70	6.12	500.05
J-742	343.47	High Service	Fixed	70	0.00	505.95
J-687	335.28	High Service	Fixed	71	4.43	500.05
J-635	340.10	High Service	Fixed	72	12.80	507.59
J-707	336.13	High Service	Fixed	73	11.72	504.72
J-625	334.69	High Service	Fixed	73	0.00	504.10
J-145	338.56	High Service	Fixed	73	1.65	508.06
J-154	344.19	High Service	Fixed	73	2.73	513.75
J-74	338.49	High Service	Fixed	73	0.00	508.06
J-587	331.62	High Service	Fixed	73	6.46	501.43
J-677	338.12	High Service	Fixed	74	0.00	508.07
J-110	336.81	High Service	Fixed	74	3.46	506.84
J-355	334.00	High Service	Fixed	74	0.00	504.10
J-356	334.00	High Service	Fixed	74	0.00	504.10
J-144	337.95	High Service	Fixed	74	0.00	508.07
J-733	333.95	High Service	Fixed	74	28.53	504.10
J-75	337.75	High Service	Fixed	74	1.26	508.05
J-579	336.17	High Service	Fixed	74	0.00	506.84
J-795	342.79	High Service	Fixed	74	0.00	513.69
J-688	328.97	High Service	Fixed	74	3.52	500.06
J-836	335.57	High Service	Fixed	74	0.00	506.84
J-582	328.62	High Service	Fixed	74	5.78	500.06
J-187	332.67	High Service	Fixed	74	9.91	504.10
J-111	335.00	High Service	Fixed	74	2.45	506.84
J-400	334.74	High Service	Fixed	74	9.80	506.84
J-531	334.53	High Service	Fixed	74	0.00	506.66

Active Scenario: Peak Hour Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-794	341.38	High Service	Fixed	75	31.24	513.69
J-399	334.08	High Service	Fixed	75	3.18	507.20
J-651	336.00	High Service	Fixed	75	1.54	509.20
J-188	330.78	High Service	Fixed	75	0.00	504.10
J-586	327.91	High Service	Fixed	75	2.95	501.43
J-532	333.00	High Service	Fixed	75	3.41	506.66
J-153	339.00	High Service	Fixed	76	0.00	513.75
J-196	338.53	High Service	Fixed	76	1.31	513.75
J-195	337.74	High Service	Fixed	76	4.26	513.75
J-94	324.00	High Service	Fixed	76	2.50	500.17
J-95	324.00	High Service	Fixed	76	1.77	500.17
J-740	324.00	High Service	Fixed	76	0.00	500.19
J-666	323.00	High Service	Fixed	77	2.95	500.17
J-833	327.91	High Service	Fixed	77	5.44	505.09
J-685	326.20	High Service	Fixed	77	14.38	504.10
J-695	322.34	High Service	Fixed	77	4.09	501.04
J-502	321.20	High Service	Fixed	77	4.60	500.15
J-782	319.29	High Service	Fixed	78	4.26	500.08
J-276	332.15	High Service	Fixed	79	2.28	513.75
J-455	291.00	High Service	Fixed	79	2.45	472.99
J-524	291.00	High Service	Fixed	79	0.00	472.99
J-603	321.39	High Service	Fixed	79	10.93	503.57
J-503	317.42	High Service	Fixed	79	10.65	500.13
J-622	323.07	High Service	Fixed	79	11.55	505.82
J-614	321.00	High Service	Fixed	79	0.00	504.12
J-28	321.50	High Service	Fixed	79	7.93	504.65
J-813	318.95	High Service	Fixed	79	8.90	502.18
J-27	321.34	High Service	Fixed	79	8.16	504.65
J-338	321.00	High Service	Fixed	79	6.41	504.49
J-771	323.61	High Service	Fixed	80	12.80	507.58
J-295	320.13	High Service	Fixed	80	0.00	504.13
J-267	320.00	High Service	Fixed	80	1.88	504.12
J-266	319.56	High Service	Fixed	80	6.69	504.13
J-339	320.00	High Service	Fixed	80	6.52	504.58
J-296	319.54	High Service	Fixed	80	0.00	504.13
J-807	318.73	High Service	Fixed	80	2.28	504.03
J-555	318.37	High Service	Fixed	80	0.00	504.03
J-556	318.19	High Service	Fixed	80	7.37	504.03
J-808	317.83	High Service	Fixed	80	0.00	503.76
J-787	319.00	High Service	Fixed	81	5.84	505.09
J-657	319.37	High Service	Fixed	81	21.51	505.85
J-217	326.91	High Service	Fixed	81	4.20	513.75
J-583	313.13	High Service	Fixed	81	6.35	500.06
J-769	312.79	High Service	Fixed	81	14.10	499.75
J-799	318.93	High Service	Fixed	81	11.27	506.18
J-779	312.17	High Service	Fixed	81	5.90	499.98

Active Scenario: Peak Hour Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-589	284.69	High Service	Fixed	81	12.63	472.81
J-391	318.00	High Service	Fixed	81	2.61	506.17
J-37	311.00	High Service	Fixed	82	6.12	499.79
J-38	311.00	High Service	Fixed	82	3.86	499.79
J-590	283.71	High Service	Fixed	82	5.78	472.81
J-741	314.95	High Service	Fixed	82	73.40	505.29
J-218	322.93	High Service	Fixed	83	1.71	513.75
J-653	312.00	High Service	Fixed	83	14.84	503.73
J-701	311.53	High Service	Fixed	83	12.23	504.21
J-781	310.55	High Service	Fixed	84	6.12	503.64
J-104	310.47	High Service	Fixed	84	3.12	503.64
J-758	311.28	High Service	Fixed	84	8.95	504.49
J-274	308.50	High Service	Fixed	84	11.78	502.18
J-380	305.73	High Service	Fixed	84	4.88	500.01
J-766	304.98	High Service	Fixed	84	2.33	499.98
J-381	304.94	High Service	Fixed	84	7.31	499.98
J-105	308.40	High Service	Fixed	84	6.07	503.64
J-229	304.77	High Service	Fixed	85	5.95	500.11
J-501	332.31	High Service	Fixed	85	7.65	527.77
J-642	304.45	High Service	Fixed	85	5.39	500.11
J-819	304.05	High Service	Fixed	85	0.00	500.11
J-757	303.87	High Service	Fixed	85	3.86	500.08
J-765	307.57	High Service	Fixed	85	5.61	504.21
J-754	303.46	High Service	Fixed	85	0.00	500.11
J-500	331.02	High Service	Fixed	85	0.00	527.77
J-631	309.06	High Service	Fixed	85	10.37	506.17
J-577	312.65	High Service	Fixed	86	4.88	510.38
J-228	301.87	High Service	Fixed	86	11.33	500.11
J-280	306.29	High Service	Fixed	86	10.54	505.32
J-279	306.72	High Service	Fixed	86	9.23	505.82
J-621	306.13	High Service	Fixed	86	9.97	505.82
J-598	306.11	High Service	Fixed	86	11.67	505.82
J-419	304.80	High Service	Fixed	87	7.48	505.85
J-164	312.66	High Service	Fixed	87	22.47	513.75
J-273	301.00	High Service	Fixed	87	3.29	503.09
J-163	311.64	High Service	Fixed	87	4.99	513.75
J-784	311.62	High Service	Fixed	87	19.59	513.74
J-656	325.46	High Service	Fixed	87	12.97	527.62
J-847	303.53	High Service	Fixed	88	22.70	505.82
J-815	324.78	High Service	Fixed	88	6.35	527.62
J-648	296.75	High Service	Fixed	88	9.18	499.79
J-320	299.65	High Service	Fixed	88	1.94	503.33
J-260	301.38	High Service	Fixed	89	10.88	506.16
J-83	298.43	High Service	Fixed	89	0.00	503.24
J-284	295.14	High Service	Fixed	89	1.82	500.11
J-259	301.06	High Service	Fixed	89	0.00	506.16

Active Scenario: Peak Hour Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-237	301.00	High Service	Fixed	89	0.00	506.16
J-127	300.87	High Service	Fixed	89	0.00	506.16
J-126	300.81	High Service	Fixed	89	0.00	506.16
J-82	297.19	High Service	Fixed	89	2.11	503.23
J-392	299.57	High Service	Fixed	89	0.00	506.16
J-602	296.63	High Service	Fixed	90	6.07	503.76
J-420	298.29	High Service	Fixed	90	3.69	505.84
J-768	297.28	High Service	Fixed	90	6.97	506.17
J-173	293.92	High Service	Fixed	91	0.00	503.23
J-64	293.12	High Service	Fixed	91	0.00	503.26
J-319	292.73	High Service	Fixed	91	0.00	503.26
J-63	292.56	High Service	Fixed	91	0.00	503.26
J-633	296.00	High Service	Fixed	92	21.80	508.19
J-235	291.00	High Service	Fixed	92	2.84	503.27
J-825	314.97	High Service	Fixed	92	20.10	527.62
J-256	290.25	High Service	Fixed	92	16.25	503.16
J-335	290.00	High Service	Fixed	92	7.59	503.27
J-210	300.33	High Service	Fixed	92	1.77	513.75
J-576	296.79	High Service	Fixed	92	14.16	510.38
J-236	289.27	High Service	Fixed	93	2.78	503.27
J-209	299.73	High Service	Fixed	93	2.56	513.75
J-778	288.96	High Service	Fixed	93	1.43	503.55
J-837	288.00	High Service	Fixed	93	3.63	503.55
J-830	297.99	High Service	Fixed	93	3.07	513.76
J-667	297.92	High Service	Fixed	93	0.00	513.76
J-686	286.63	High Service	Fixed	94	9.63	503.28
J-238	286.97	High Service	Fixed	95	0.00	506.16
J-525	284.36	High Service	Fixed	95	0.00	504.10
J-626	307.53	High Service	Fixed	95	0.00	527.77
J-255	282.52	High Service	Fixed	95	21.91	503.16
J-803	306.90	High Service	Fixed	96	0.00	527.77
J-526	283.07	High Service	Fixed	96	0.00	504.07
J-739	282.10	High Service	Fixed	96	2.22	503.20
J-698	306.63	High Service	Fixed	96	0.00	527.77
J-498	281.80	High Service	Fixed	96	3.24	503.06
J-655	305.73	High Service	Fixed	96	16.48	527.62
J-564	280.92	High Service	Fixed	96	6.52	503.06
J-774	305.00	High Service	Fixed	96	12.52	527.68
J-553	304.56	High Service	Fixed	97	5.16	527.63
J-510	280.55	High Service	Fixed	97	0.00	504.03
J-780	281.72	High Service	Fixed	97	8.67	506.19
J-697	288.62	High Service	Fixed	97	29.83	513.33
J-282	302.84	High Service	Fixed	97	7.03	527.77
J-211	302.56	High Service	Fixed	97	0.00	527.77
J-257	302.48	High Service	Fixed	97	0.00	527.77
J-281	302.11	High Service	Fixed	98	0.00	527.77

Active Scenario: Peak Hour Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-212	302.00	High Service	Fixed	98	0.00	527.77
J-258	302.00	High Service	Fixed	98	0.00	527.77
J-634	281.99	High Service	Fixed	98	8.84	507.80
J-537	278.11	High Service	Fixed	98	0.00	504.00
J-509	278.00	High Service	Fixed	98	6.12	504.06
J-804	300.11	High Service	Fixed	98	0.00	527.77
J-649	275.00	High Service	Fixed	99	9.40	503.25
J-325	285.29	High Service	Fixed	99	6.46	513.76
J-207	278.09	High Service	Fixed	99	11.38	506.66
J-691	283.35	High Service	Fixed	99	0.00	511.95
J-554	298.95	High Service	Fixed	99	28.13	527.63
J-578	276.96	High Service	Fixed	99	3.12	506.16
J-692	281.81	High Service	Fixed	99	14.27	511.23
J-208	277.00	High Service	Fixed	99	4.54	506.60
J-584	297.92	High Service	Fixed	99	5.33	527.74
J-497	273.00	High Service	Fixed	100	3.92	503.06
J-290	273.00	High Service	Fixed	100	0.00	503.65
J-322	272.74	High Service	Fixed	100	0.00	503.65
J-326	282.49	High Service	Fixed	100	4.09	513.76
J-185	272.17	High Service	Fixed	100	0.00	503.65
J-289	272.05	High Service	Fixed	100	0.00	503.65
J-186	271.42	High Service	Fixed	100	0.00	503.65
J-777	270.16	High Service	Fixed	101	0.00	503.66
J-112	272.13	High Service	Fixed	101	3.18	505.84
J-538	270.10	High Service	Fixed	101	0.00	503.89
J-321	269.76	High Service	Fixed	101	0.00	503.66
J-29	268.18	High Service	Fixed	102	0.00	503.66
J-30	268.00	High Service	Fixed	102	0.00	503.66
J-113	270.13	High Service	Fixed	102	0.00	505.84
J-838	291.90	High Service	Fixed	102	2.78	527.74
J-585	291.85	High Service	Fixed	102	9.74	527.74
J-810	269.31	High Service	Fixed	102	3.41	506.16
J-727	274.60	High Service	Fixed	103	2.73	513.80
J-738	263.86	High Service	Fixed	104	5.39	503.20
J-97	287.92	High Service	Fixed	104	0.00	527.78
J-725	271.00	High Service	Fixed	104	7.31	511.16
J-50	271.00	High Service	Fixed	104	0.00	511.18
J-49	271.00	High Service	Fixed	104	13.93	511.18
J-231	265.66	High Service	Fixed	104	6.86	506.19
J-232	265.68	High Service	Fixed	104	4.82	506.23
J-96	286.82	High Service	Fixed	104	3.75	527.78
J-160	286.40	High Service	Fixed	104	4.26	527.65
J-445	261.14	High Service	Fixed	105	5.78	503.20
J-234	261.01	High Service	Fixed	105	0.00	503.20
J-77	261.01	High Service	Fixed	105	0.00	503.20
J-134	260.99	High Service	Fixed	105	0.00	503.20

Active Scenario: Peak Hour Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-843	260.94	High Service	Fixed	105	0.00	503.20
J-233	260.81	High Service	Fixed	105	1.71	503.20
J-542	260.80	High Service	Fixed	105	2.67	503.20
J-821	260.57	High Service	Fixed	105	2.90	503.06
J-696	270.48	High Service	Fixed	105	7.25	513.36
J-844	270.90	High Service	Fixed	105	0.00	513.85
J-76	260.11	High Service	Fixed	105	0.00	503.20
J-159	284.47	High Service	Fixed	105	0.00	527.66
J-135	259.94	High Service	Fixed	105	0.00	503.20
J-433	267.53	High Service	Fixed	105	30.85	511.17
J-848	270.50	High Service	Fixed	106	0.00	514.53
J-726	270.00	High Service	Fixed	106	0.00	514.53
J-856	268.57	High Service	Fixed	106	0.00	513.64
J-751	259.34	High Service	Fixed	107	2.67	505.93
J-811	257.90	High Service	Fixed	107	0.00	506.16
J-750	257.59	High Service	Fixed	108	0.00	506.16
J-773	277.00	High Service	Fixed	108	3.07	527.69
J-348	252.33	High Service	Fixed	109	2.73	503.20
J-204	272.32	High Service	Fixed	109	2.61	523.82
J-203	271.53	High Service	Fixed	109	1.94	523.82
J-752	269.57	High Service	Fixed	112	0.00	527.86
J-251	413.71	Low Service	Fixed	31	4.14	484.90
J-250	409.79	Low Service	Fixed	32	4.93	483.54
J-308	406.63	Low Service	Fixed	33	5.39	483.51
J-307	405.37	Low Service	Fixed	34	8.56	483.51
J-430	401.88	Low Service	Fixed	35	5.90	483.50
J-670	392.00	Low Service	Fixed	38	12.52	478.91
J-506	395.91	Low Service	Fixed	38	3.24	483.50
J-304	380.76	Low Service	Fixed	40	3.80	473.36
J-671	382.92	Low Service	Fixed	42	6.97	478.90
J-792	382.82	Low Service	Fixed	42	2.90	478.90
J-3	394.00	Low Service	Fixed	42	0.00	491.64
J-716	385.66	Low Service	Fixed	42	2.61	483.51
J-4	394.00	Low Service	Fixed	43	37.35	492.31
J-588	381.97	Low Service	Fixed	45	6.29	485.32
J-206	369.37	Low Service	Fixed	45	2.22	473.38
J-513	378.57	Low Service	Fixed	45	1.99	483.50
J-205	368.16	Low Service	Fixed	46	5.56	473.39
J-735	375.66	Low Service	Fixed	46	8.33	481.64
J-303	365.68	Low Service	Fixed	47	4.20	473.36
J-467	365.29	Low Service	Fixed	47	7.48	473.42
J-268	375.69	Low Service	Fixed	47	3.75	485.32
J-861	378.98	Low Service	Fixed	49	10.99	491.64
J-269	368.35	Low Service	Fixed	51	3.29	485.23
J-630	356.10	Low Service	Fixed	51	4.88	473.38
J-800	360.94	Low Service	Fixed	52	7.42	481.64

Active Scenario: Peak Hour Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-552	361.06	Low Service	Fixed	52	4.48	482.16
J-429	356.15	Low Service	Fixed	53	2.67	478.91
J-659	357.55	Low Service	Fixed	53	2.22	480.41
J-658	356.00	Low Service	Fixed	54	3.69	479.99
J-753	353.85	Low Service	Fixed	54	9.97	478.90
J-551	356.09	Low Service	Fixed	54	3.01	481.92
J-428	351.15	Low Service	Fixed	55	0.00	478.91
J-11	348.44	Low Service	Fixed	56	0.00	478.90
J-910	350.00	Low Service	Fixed	57	0.00	480.99
J-832	359.00	Low Service	Fixed	57	5.10	490.61
J-812	355.14	Low Service	Fixed	57	7.59	487.20
J-743	348.56	Low Service	Fixed	57	0.00	480.99
J-776	340.07	Low Service	Fixed	57	23.44	472.79
J-660	347.17	Low Service	Fixed	58	3.24	480.20
J-662	347.00	Low Service	Fixed	58	1.60	480.41
J-528	346.62	Low Service	Fixed	58	5.73	481.81
J-839	346.00	Low Service	Fixed	59	3.97	481.54
J-734	346.00	Low Service	Fixed	59	0.00	481.56
J-493	337.10	Low Service	Fixed	59	7.37	473.48
J-573	346.80	Low Service	Fixed	59	9.80	483.35
J-818	341.79	Low Service	Fixed	59	12.18	478.61
J-435	351.19	Low Service	Fixed	60	1.37	488.91
J-413	350.92	Low Service	Fixed	60	0.00	488.93
J-174	340.90	Low Service	Fixed	60	0.00	479.99
J-175	339.00	Low Service	Fixed	61	0.00	479.99
J-527	340.88	Low Service	Fixed	61	13.48	481.94
J-675	329.51	Low Service	Fixed	62	8.27	472.84
J-705	342.97	Low Service	Fixed	62	0.00	486.94
J-471	340.67	Low Service	Fixed	63	0.00	486.94
J-709	340.28	Low Service	Fixed	64	2.56	487.21
J-54	339.16	Low Service	Fixed	64	0.00	486.94
J-376	338.60	Low Service	Fixed	64	0.00	486.94
J-20	338.55	Low Service	Fixed	64	0.00	486.94
J-19	338.52	Low Service	Fixed	64	0.00	486.94
J-491	338.04	Low Service	Fixed	64	0.00	486.93
J-53	337.95	Low Service	Fixed	64	0.00	486.94
J-597	337.05	Low Service	Fixed	65	0.00	486.94
J-746	337.22	Low Service	Fixed	65	8.16	487.20
J-775	321.77	Low Service	Fixed	65	6.97	472.79
J-442	335.85	Low Service	Fixed	65	0.00	486.93
J-490	335.82	Low Service	Fixed	65	0.00	486.93
J-470	335.73	Low Service	Fixed	65	0.00	486.94
J-177	334.25	Low Service	Fixed	66	0.00	486.93
J-747	334.45	Low Service	Fixed	66	21.80	487.20
J-650	326.00	Low Service	Fixed	66	2.78	478.90
J-365	334.00	Low Service	Fixed	66	0.00	486.94

Active Scenario: Peak Hour Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-480	334.00	Low Service	Fixed	66	0.00	486.94
J-708	339.74	Low Service	Fixed	66	16.36	492.88
J-142	333.79	Low Service	Fixed	66	0.00	486.93
J-495	333.64	Low Service	Fixed	66	9.06	486.94
J-835	320.00	Low Service	Fixed	66	3.58	473.53
J-736	325.31	Low Service	Fixed	66	5.16	478.90
J-517	333.00	Low Service	Fixed	67	0.00	486.94
J-494	332.93	Low Service	Fixed	67	5.16	486.94
J-789	325.36	Low Service	Fixed	67	10.14	479.93
J-377	331.34	Low Service	Fixed	67	0.00	486.93
J-143	330.48	Low Service	Fixed	68	0.00	486.93
J-176	330.39	Low Service	Fixed	68	0.00	486.93
J-448	316.56	Low Service	Fixed	68	8.39	473.32
J-330	319.22	Low Service	Fixed	68	10.25	477.24
J-301	329.00	Low Service	Fixed	68	5.33	487.24
J-703	318.43	Low Service	Fixed	69	3.18	476.86
J-434	330.06	Low Service	Fixed	69	0.00	488.93
J-661	328.05	Low Service	Fixed	69	0.00	486.94
J-604	328.00	Low Service	Fixed	69	2.84	486.93
J-441	327.95	Low Service	Fixed	69	0.00	486.93
J-302	328.00	Low Service	Fixed	69	4.43	487.27
J-559	314.22	Low Service	Fixed	69	7.59	473.53
J-412	329.55	Low Service	Fixed	69	0.00	488.93
J-728	327.44	Low Service	Fixed	69	2.84	486.93
J-472	327.59	Low Service	Fixed	69	3.58	487.27
J-438	313.00	Low Service	Fixed	69	3.07	472.80
J-447	313.51	Low Service	Fixed	69	6.97	473.40
J-473	327.19	Low Service	Fixed	69	2.61	487.15
J-704	316.85	Low Service	Fixed	69	8.84	476.86
J-618	314.91	Low Service	Fixed	69	12.74	474.98
J-354	326.60	Low Service	Fixed	69	0.00	486.93
J-331	316.00	Low Service	Fixed	69	5.05	476.47
J-565	315.00	Low Service	Fixed	70	11.21	476.02
J-372	324.61	Low Service	Fixed	70	8.95	485.69
J-334	325.29	Low Service	Fixed	70	0.00	486.94
J-408	325.00	Low Service	Fixed	70	4.65	486.92
J-599	325.09	Low Service	Fixed	70	9.12	487.27
J-437	310.61	Low Service	Fixed	70	16.31	472.80
J-291	316.19	Low Service	Fixed	70	2.28	478.90
J-436	324.13	Low Service	Fixed	71	4.09	487.32
J-796	312.30	Low Service	Fixed	71	14.89	476.01
J-496	322.50	Low Service	Fixed	71	11.61	487.38
J-475	310.43	Low Service	Fixed	71	10.37	475.57
J-543	313.31	Low Service	Fixed	72	11.33	478.58
J-409	321.00	Low Service	Fixed	72	2.73	486.91
J-292	312.67	Low Service	Fixed	72	1.65	478.90

Active Scenario: Peak Hour Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-770	319.95	Low Service	Fixed	72	4.48	486.88
J-627	321.51	Low Service	Fixed	72	3.86	488.68
J-474	307.25	Low Service	Fixed	73	20.83	475.57
J-421	320.00	Low Service	Fixed	73	4.65	488.68
J-572	313.24	Low Service	Fixed	74	4.31	483.36
J-181	304.55	Low Service	Fixed	74	6.18	474.78
J-759	316.59	Low Service	Fixed	74	1.88	486.93
J-148	315.04	Low Service	Fixed	74	2.45	485.85
J-539	316.00	Low Service	Fixed	74	1.88	487.12
J-580	301.87	Low Service	Fixed	74	18.46	473.69
J-721	301.00	Low Service	Fixed	74	3.69	472.95
J-729	314.03	Low Service	Fixed	75	1.37	486.28
J-182	302.38	Low Service	Fixed	75	8.73	474.73
J-499	300.83	Low Service	Fixed	75	6.29	473.49
J-353	314.00	Low Service	Fixed	75	4.20	486.93
J-711	313.88	Low Service	Fixed	75	13.42	486.90
J-488	313.88	Low Service	Fixed	75	55.18	486.94
J-748	312.80	Low Service	Fixed	75	6.41	485.90
J-138	301.71	Low Service	Fixed	75	2.61	475.04
J-802	298.92	Low Service	Fixed	75	4.37	472.84
J-139	301.00	Low Service	Fixed	75	14.84	475.03
J-66	312.73	Low Service	Fixed	75	4.82	486.95
J-352	312.61	Low Service	Fixed	75	9.06	486.93
J-456	298.30	Low Service	Fixed	76	2.22	473.00
J-149	311.05	Low Service	Fixed	76	2.05	485.85
J-518	299.78	Low Service	Fixed	76	11.72	474.65
J-65	311.85	Low Service	Fixed	76	1.26	486.95
J-644	300.00	Low Service	Fixed	76	12.35	475.33
J-324	311.08	Low Service	Fixed	76	5.90	487.06
J-79	309.25	Low Service	Fixed	76	3.01	485.78
J-333	301.70	Low Service	Fixed	76	2.67	478.27
J-78	309.15	Low Service	Fixed	76	3.07	485.80
J-594	298.13	Low Service	Fixed	76	10.14	474.90
J-133	309.48	Low Service	Fixed	77	7.20	487.22
J-305	308.77	Low Service	Fixed	77	0.00	486.94
J-278	298.12	Low Service	Fixed	77	4.82	476.29
J-121	310.05	Low Service	Fixed	77	2.67	488.68
J-593	295.15	Low Service	Fixed	78	14.67	474.89
J-132	307.27	Low Service	Fixed	78	1.82	487.21
J-306	307.00	Low Service	Fixed	78	0.00	486.94
J-706	307.00	Low Service	Fixed	78	0.00	486.94
J-323	306.91	Low Service	Fixed	78	3.01	487.11
J-806	310.00	Low Service	Fixed	78	11.10	490.60
J-359	306.15	Low Service	Fixed	78	3.35	486.91
J-591	291.96	Low Service	Fixed	78	4.20	472.95
J-858	305.82	Low Service	Fixed	78	2.61	486.94

Active Scenario: Peak Hour Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-120	307.38	Low Service	Fixed	78	3.07	488.68
J-632	305.55	Low Service	Fixed	78	5.05	486.94
J-432	303.00	Low Service	Fixed	79	0.00	484.59
J-178	296.69	Low Service	Fixed	79	5.10	478.35
J-681	311.83	Low Service	Fixed	79	8.90	493.50
J-102	305.26	Low Service	Fixed	79	1.48	486.98
J-166	292.77	Low Service	Fixed	79	5.10	474.64
J-786	291.38	Low Service	Fixed	79	12.86	473.35
J-689	293.80	Low Service	Fixed	79	12.63	475.98
J-103	304.46	Low Service	Fixed	79	2.56	486.98
J-679	290.21	Low Service	Fixed	79	13.48	473.62
J-165	291.10	Low Service	Fixed	79	5.39	474.53
J-7	289.35	Low Service	Fixed	79	1.71	472.88
J-8	289.27	Low Service	Fixed	79	0.00	472.88
J-737	292.05	Low Service	Fixed	79	12.91	475.77
J-31	289.10	Low Service	Fixed	80	6.97	472.86
J-32	289.01	Low Service	Fixed	80	0.00	472.86
J-440	303.33	Low Service	Fixed	80	1.54	487.43
J-226	290.87	Low Service	Fixed	80	6.35	474.98
J-275	303.51	Low Service	Fixed	80	1.37	487.78
J-801	288.53	Low Service	Fixed	80	10.03	472.84
J-375	290.60	Low Service	Fixed	80	9.35	474.98
J-277	291.12	Low Service	Fixed	80	2.90	476.29
J-221	287.39	Low Service	Fixed	80	0.00	472.90
J-360	301.40	Low Service	Fixed	80	3.63	486.91
J-48	301.49	Low Service	Fixed	80	0.00	487.17
J-47	301.29	Low Service	Fixed	80	1.37	487.14
J-762	292.02	Low Service	Fixed	80	1.71	477.95
J-21	301.19	Low Service	Fixed	80	4.43	487.13
J-431	298.46	Low Service	Fixed	81	7.25	484.59
J-22	301.00	Low Service	Fixed	81	0.00	487.13
J-560	287.01	Low Service	Fixed	81	7.99	473.53
J-417	299.88	Low Service	Fixed	81	3.97	487.09
J-349	288.61	Low Service	Fixed	81	8.84	476.30
J-763	291.26	Low Service	Fixed	81	20.38	478.97
J-514	298.83	Low Service	Fixed	81	2.11	486.91
J-179	290.15	Low Service	Fixed	81	0.00	478.34
J-487	297.56	Low Service	Fixed	81	3.01	485.78
J-387	290.00	Low Service	Fixed	81	9.52	478.34
J-710	298.48	Low Service	Fixed	82	2.50	486.88
J-581	285.25	Low Service	Fixed	82	6.24	473.69
J-595	284.36	Low Service	Fixed	82	6.12	472.81
J-690	287.25	Low Service	Fixed	82	9.29	475.76
J-793	298.37	Low Service	Fixed	82	3.97	486.88
J-439	298.67	Low Service	Fixed	82	6.97	487.24
J-374	287.30	Low Service	Fixed	82	4.48	476.14

Active Scenario: Peak Hour Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-373	287.08	Low Service	Fixed	82	8.95	476.14
J-68	284.00	Low Service	Fixed	82	6.41	473.61
J-33	283.00	Low Service	Fixed	82	3.41	472.85
J-227	284.99	Low Service	Fixed	82	18.29	474.98
J-407	296.93	Low Service	Fixed	82	4.03	486.93
J-34	282.78	Low Service	Fixed	82	0.00	472.85
J-67	283.53	Low Service	Fixed	82	8.44	473.62
J-772	284.53	Low Service	Fixed	82	9.80	474.70
J-286	282.25	Low Service	Fixed	82	3.52	472.75
J-123	296.47	Low Service	Fixed	82	0.00	487.12
J-612	294.84	Low Service	Fixed	83	0.00	485.69
J-601	296.73	Low Service	Fixed	83	6.46	487.70
J-404	294.77	Low Service	Fixed	83	1.60	485.91
J-285	281.70	Low Service	Fixed	83	2.61	472.85
J-254	281.58	Low Service	Fixed	83	2.11	472.85
J-561	282.44	Low Service	Fixed	83	14.89	473.82
J-489	295.34	Low Service	Fixed	83	0.00	486.94
J-623	294.99	Low Service	Fixed	83	0.00	486.94
J-122	293.96	Low Service	Fixed	84	3.12	487.12
J-719	292.24	Low Service	Fixed	84	2.45	485.91
J-414	292.61	Low Service	Fixed	84	8.16	486.37
J-446	278.86	Low Service	Fixed	84	6.86	472.96
J-512	292.68	Low Service	Fixed	84	6.58	486.94
J-332	284.00	Low Service	Fixed	84	31.70	478.27
J-451	284.00	Low Service	Fixed	84	0.00	478.28
J-548	292.77	Low Service	Fixed	85	6.18	488.68
J-150	290.79	Low Service	Fixed	85	1.65	487.12
J-841	289.74	Low Service	Fixed	85	7.37	486.42
J-637	290.63	Low Service	Fixed	85	8.22	487.62
J-619	290.87	Low Service	Fixed	85	4.20	488.06
J-5	280.83	Low Service	Fixed	85	0.00	478.31
J-6	280.79	Low Service	Fixed	85	0.00	478.31
J-403	288.18	Low Service	Fixed	86	2.22	485.91
J-293	275.10	Low Service	Fixed	86	3.24	473.00
J-592	274.83	Low Service	Fixed	86	4.48	472.83
J-827	290.57	Low Service	Fixed	86	7.25	488.67
J-756	280.00	Low Service	Fixed	86	0.00	478.31
J-396	290.60	Low Service	Fixed	86	4.65	488.93
J-606	287.28	Low Service	Fixed	86	4.99	485.85
J-850	295.60	Low Service	Fixed	86	1.54	494.48
J-192	290.32	Low Service	Fixed	86	2.05	489.20
J-388	274.59	Low Service	Fixed	86	2.90	473.86
J-682	295.00	Low Service	Fixed	86	0.00	494.48
J-568	273.09	Low Service	Fixed	86	8.67	472.85
J-239	287.00	Low Service	Fixed	87	3.46	487.13
J-328	278.00	Low Service	Fixed	87	6.07	478.30

Active Scenario: Peak Hour Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-519	272.31	Low Service	Fixed	87	5.56	472.84
J-425	277.26	Low Service	Fixed	87	0.00	478.30
J-198	271.78	Low Service	Fixed	87	2.33	472.84
J-191	288.00	Low Service	Fixed	87	0.00	489.07
J-327	277.05	Low Service	Fixed	87	2.39	478.30
J-424	276.63	Low Service	Fixed	87	0.00	478.30
J-767	284.93	Low Service	Fixed	87	7.76	486.87
J-624	284.83	Low Service	Fixed	87	0.00	486.94
J-465	276.00	Low Service	Fixed	88	0.00	478.30
J-643	276.00	Low Service	Fixed	88	0.00	478.30
J-458	272.00	Low Service	Fixed	88	5.78	474.57
J-197	270.00	Low Service	Fixed	88	1.77	472.84
J-459	271.51	Low Service	Fixed	88	3.46	474.45
J-678	272.56	Low Service	Fixed	88	13.53	475.56
J-336	289.77	Low Service	Fixed	88	5.05	492.88
J-118	284.00	Low Service	Fixed	88	2.73	487.20
J-152	284.45	Low Service	Fixed	88	1.37	487.81
J-566	282.50	Low Service	Fixed	88	0.00	485.91
J-567	282.50	Low Service	Fixed	88	0.00	485.91
J-116	271.00	Low Service	Fixed	88	4.82	474.51
J-117	271.00	Low Service	Fixed	88	3.46	474.52
J-699	283.58	Low Service	Fixed	88	3.07	487.21
J-749	283.78	Low Service	Fixed	88	7.88	487.58
J-87	282.75	Low Service	Fixed	88	2.45	486.59
J-119	283.26	Low Service	Fixed	88	2.05	487.20
J-36	283.48	Low Service	Fixed	88	0.00	487.87
J-636	283.15	Low Service	Fixed	88	5.50	487.61
J-35	283.24	Low Service	Fixed	89	0.00	487.87
J-86	281.89	Low Service	Fixed	89	1.43	486.62
J-265	283.11	Low Service	Fixed	89	0.00	487.87
J-151	283.00	Low Service	Fixed	89	0.00	487.82
J-26	282.03	Low Service	Fixed	89	1.54	486.90
J-600	282.63	Low Service	Fixed	89	19.59	487.64
J-395	283.72	Low Service	Fixed	89	4.20	488.93
J-201	267.00	Low Service	Fixed	89	5.67	472.89
J-25	281.00	Low Service	Fixed	89	3.01	486.90
J-294	267.02	Low Service	Fixed	89	3.18	472.98
J-720	280.90	Low Service	Fixed	89	5.84	486.88
J-390	268.98	Low Service	Fixed	89	9.86	474.98
J-608	268.45	Low Service	Fixed	89	5.67	474.47
J-829	282.90	Low Service	Fixed	89	5.67	488.93
J-193	267.79	Low Service	Fixed	89	2.11	473.86
J-283	293.78	Low Service	Fixed	89	0.00	500.11
J-202	266.26	Low Service	Fixed	89	3.69	472.89
J-394	267.13	Low Service	Fixed	89	4.54	473.96
J-529	279.97	Low Service	Fixed	90	3.75	486.89

Active Scenario: Peak Hour Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-337	285.55	Low Service	Fixed	90	7.76	492.88
J-315	277.81	Low Service	Fixed	90	2.28	485.50
J-416	275.16	Low Service	Fixed	90	10.42	483.41
J-45	265.23	Low Service	Fixed	90	0.00	473.86
J-620	279.25	Low Service	Fixed	90	24.34	487.94
J-469	265.12	Low Service	Fixed	90	3.80	473.95
J-853	280.93	Low Service	Fixed	90	2.61	489.82
J-820	280.88	Low Service	Fixed	90	4.09	489.82
J-476	279.00	Low Service	Fixed	90	0.00	487.94
J-46	264.42	Low Service	Fixed	91	0.00	473.86
J-389	265.43	Low Service	Fixed	91	7.20	474.98
J-826	280.23	Low Service	Fixed	91	0.00	489.81
J-536	276.13	Low Service	Fixed	91	2.95	485.91
J-530	277.00	Low Service	Fixed	91	10.76	486.88
J-194	263.64	Low Service	Fixed	91	0.00	473.86
J-831	280.38	Low Service	Fixed	91	10.82	490.61
J-466	268.02	Low Service	Fixed	91	2.11	478.30
J-683	277.24	Low Service	Fixed	91	6.35	487.61
J-486	276.69	Low Service	Fixed	91	2.11	487.18
J-367	276.29	Low Service	Fixed	91	3.07	486.94
J-724	276.10	Low Service	Fixed	91	9.52	486.87
J-665	276.32	Low Service	Fixed	91	2.45	487.15
J-214	275.00	Low Service	Fixed	91	8.39	485.91
J-156	261.61	Low Service	Fixed	91	3.58	472.86
J-2	272.90	Low Service	Fixed	91	6.29	484.31
J-468	272.69	Low Service	Fixed	92	1.37	484.36
J-155	261.00	Low Service	Fixed	92	2.73	472.86
J-609	262.15	Low Service	Fixed	92	5.33	474.46
J-674	274.73	Low Service	Fixed	92	5.22	487.12
J-663	263.04	Low Service	Fixed	92	21.00	475.63
J-521	274.00	Low Service	Fixed	92	8.22	487.06
J-557	259.56	Low Service	Fixed	92	4.26	472.88
J-824	274.37	Low Service	Fixed	92	15.91	487.85
J-505	271.00	Low Service	Fixed	92	7.31	484.59
J-216	272.32	Low Service	Fixed	93	0.00	486.72
J-558	258.38	Low Service	Fixed	93	3.18	472.88
J-213	270.88	Low Service	Fixed	93	0.00	485.91
J-357	270.40	Low Service	Fixed	93	4.60	485.78
J-309	268.95	Low Service	Fixed	93	0.00	484.46
J-520	268.91	Low Service	Fixed	93	0.00	484.71
J-215	270.68	Low Service	Fixed	94	1.54	486.92
J-171	268.26	Low Service	Fixed	94	0.00	484.75
J-270	268.18	Low Service	Fixed	94	0.00	484.74
J-684	271.04	Low Service	Fixed	94	12.80	487.61
J-316	268.79	Low Service	Fixed	94	4.76	485.40
J-172	266.78	Low Service	Fixed	94	0.00	484.74

Active Scenario: Peak Hour Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-345	270.71	Low Service	Fixed	94	5.16	488.79
J-114	266.00	Low Service	Fixed	94	2.56	484.20
J-415	256.97	Low Service	Fixed	94	3.52	475.25
J-240	255.54	Low Service	Fixed	94	2.56	473.86
J-464	267.63	Low Service	Fixed	94	3.01	486.03
J-115	265.68	Low Service	Fixed	95	0.00	484.20
J-10	256.52	Low Service	Fixed	95	0.00	475.21
J-310	265.64	Low Service	Fixed	95	10.20	484.46
J-9	256.30	Low Service	Fixed	95	8.27	475.21
J-828	269.59	Low Service	Fixed	95	0.00	488.92
J-840	269.40	Low Service	Fixed	95	0.00	488.79
J-700	268.00	Low Service	Fixed	95	1.31	487.43
J-457	265.47	Low Service	Fixed	95	9.74	484.93
J-485	265.17	Low Service	Fixed	95	30.23	484.72
J-574	267.46	Low Service	Fixed	95	4.48	487.09
J-344	268.93	Low Service	Fixed	95	0.00	488.92
J-822	268.32	Low Service	Fixed	95	0.00	488.93
J-358	264.00	Low Service	Fixed	96	0.00	484.74
J-351	264.13	Low Service	Fixed	96	0.00	484.93
J-271	270.56	Low Service	Fixed	96	2.16	492.88
J-607	263.50	Low Service	Fixed	96	1.82	485.85
J-508	265.08	Low Service	Fixed	96	4.60	487.57
J-13	270.37	Low Service	Fixed	96	6.52	492.88
J-272	270.23	Low Service	Fixed	96	0.00	492.88
J-823	264.40	Low Service	Fixed	96	4.31	487.15
J-329	264.00	Low Service	Fixed	96	0.00	486.99
J-783	264.12	Low Service	Fixed	96	6.69	487.11
J-817	268.16	Low Service	Fixed	96	13.59	491.19
J-72	264.00	Low Service	Fixed	97	2.22	487.08
J-73	264.00	Low Service	Fixed	97	1.60	487.08
J-363	250.83	Low Service	Fixed	97	3.29	474.23
J-14	269.17	Low Service	Fixed	97	0.00	492.88
J-504	263.26	Low Service	Fixed	97	1.60	487.08
J-299	263.00	Low Service	Fixed	97	10.37	486.87
J-546	250.59	Low Service	Fixed	97	5.84	474.67
J-125	266.38	Low Service	Fixed	97	5.44	490.46
J-386	250.07	Low Service	Fixed	97	2.16	474.24
J-507	263.21	Low Service	Fixed	97	3.18	487.46
J-364	250.00	Low Service	Fixed	97	1.88	474.34
J-341	259.65	Low Service	Fixed	97	7.59	484.71
J-350	260.00	Low Service	Fixed	97	0.00	485.09
J-300	261.45	Low Service	Fixed	98	5.90	486.87
J-124	264.64	Low Service	Fixed	98	2.56	490.61
J-761	264.00	Low Service	Fixed	98	8.56	490.46
J-340	258.00	Low Service	Fixed	98	0.00	485.06
J-790	259.19	Low Service	Fixed	99	3.01	486.90

Active Scenario: Peak Hour Demand
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-664	245.63	Low Service	Fixed	99	5.56	475.58
J-366	244.88	Low Service	Fixed	100	2.05	475.53
J-805	244.01	Low Service	Fixed	100	4.88	475.51
J-547	243.00	Low Service	Fixed	100	5.90	474.89
J-245	259.00	Low Service	Fixed	101	0.00	492.32
J-158	242.00	Low Service	Fixed	101	0.00	475.53
J-108	258.83	Low Service	Fixed	101	0.00	492.46
J-545	241.00	Low Service	Fixed	101	1.99	474.67
J-249	241.56	Low Service	Fixed	101	0.00	475.53
J-157	241.00	Low Service	Fixed	101	3.29	475.53
J-109	258.00	Low Service	Fixed	102	0.00	492.86
J-855	258.00	Low Service	Fixed	102	0.00	492.88
J-849	262.68	Low Service	Fixed	102	0.00	498.07
J-246	256.85	Low Service	Fixed	102	0.00	492.32
J-369	239.00	Low Service	Fixed	102	0.00	475.53
J-842	239.00	Low Service	Fixed	102	4.31	475.53
J-814	231.90	Low Service	Fixed	111	1.26	489.52
J-798	230.79	Low Service	Fixed	112	7.37	489.59
J-845	229.55	Low Service	Fixed	112	0.00	489.20
J-732	221.07	Low Service	Fixed	116	2.50	489.56
J-731	218.04	Low Service	Fixed	117	3.97	489.56
J-797	216.00	Low Service	Fixed	118	28.92	489.52
J-224	209.19	Low Service	Fixed	121	1.31	489.51
J-613	207.74	Low Service	Fixed	122	0.00	489.51
J-764	206.00	Low Service	Fixed	123	5.95	489.49
J-225	204.34	Low Service	Fixed	123	3.18	489.51
J-516	201.00	Low Service	Fixed	125	0.00	489.49
J-515	199.62	Low Service	Fixed	125	0.00	489.50
J-461	199.55	Low Service	Fixed	125	0.00	489.49
J-460	188.74	Low Service	Fixed	130	2.90	489.49

Active Scenario: Peak Hour Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
14	12.0	J-752	J-203	718	1,302.47	5.63	4.05	3.69	110
30	12.0	J-203	J-848	1,660	1,297.92	5.60	9.29	3.68	110
P-50	12.0	J-848	J-844	102	1,297.92	6.68	0.68	3.68	100
363	8.0	J-250	J-251	119	-539.17	11.50	1.36	3.44	90
P-218	12.0	J-849	J-855	1,108	1,177.94	4.68	5.18	3.34	110
P-216	12.0	J-855	J-109	4	1,164.91	4.58	0.02	3.30	110
P-51	12.0	J-844	J-856	48	1,144.00	4.43	0.21	3.25	110
334	8.0	J-108	J-109	33	-494.22	12.17	0.41	3.15	80
P-233	6.0	J-329	J-823	15	-267.15	10.37	0.15	3.03	101
P-217	12.0	J-854	J-849	1,426	1,002.08	2.54	3.63	2.84	130
P-372	12.0	J-854	J-849	1,427	1,001.64	2.54	3.63	2.84	130
P-63	6.0	J-399	J-75	127	-208.93	6.64	0.85	2.37	100
569	12.0	J-849	J-850	1,739	825.78	2.06	3.59	2.34	120
P-219	12.0	J-681	J-850	478	-824.24	2.06	0.98	2.34	120
408	10.0	J-634	J-207	544	516.48	2.10	1.14	2.11	120
581	12.0	J-798	J-817	979	-728.59	1.64	1.60	2.07	120
P-212	8.0	J-108	J-245	32	317.49	4.31	0.14	2.03	90
685	8.0	J-245	J-124	395	317.49	4.31	1.70	2.03	90
784	8.0	J-114	J-416	242	304.18	3.28	0.79	1.94	100
743	6.0	J-330	J-331	170	169.98	4.53	0.77	1.93	100
P-240	12.0	J-845	J-798	281	-671.22	1.40	0.39	1.90	120
P-214	12.0	J-109	J-853	1,848	670.69	1.65	3.05	1.90	110
P-241	8.0	J-344	J-840	73	294.19	1.89	0.14	1.88	130
776	8.0	J-840	J-841	1,293	289.03	1.83	2.37	1.84	130
686	8.0	J-124	J-125	42	287.91	3.60	0.15	1.84	90
583	12.0	J-817	J-681	1,786	-640.80	1.29	2.30	1.82	120
270	8.0	J-416	J-763	1,583	279.64	2.80	4.44	1.78	100
369	8.0	J-125	J-823	1,011	273.91	3.28	3.31	1.75	90
708	12.0	J-86	J-87	26	601.20	1.15	0.03	1.71	120
339	8.0	J-215	J-216	110	265.61	1.82	0.20	1.70	120
P-238	8.0	J-841	J-719	78	264.75	6.53	0.51	1.69	60
432	12.0	J-725	J-576	609	582.51	1.27	0.77	1.65	110
758	12.0	J-691	J-692	589	573.61	1.23	0.73	1.63	110
P-52	12.0	J-856	J-691	1,364	573.61	1.23	1.68	1.63	110
656	10.0	J-191	J-192	82	-397.47	1.52	0.13	1.62	110
P-53	12.0	J-856	J-696	269	570.39	1.04	0.28	1.62	120
665	12.0	J-576	J-633	1,837	563.47	1.19	2.19	1.60	110
710	12.0	J-414	J-78	605	544.12	0.95	0.58	1.54	120
P-200	8.0	J-619	J-820	688	-239.46	2.56	1.76	1.53	90
709	12.0	J-87	J-414	237	535.36	0.92	0.22	1.52	120
P-54	12.0	J-696	J-725	2,401	533.30	0.92	2.20	1.51	120
224	12.0	J-633	J-634	437	525.31	0.89	0.39	1.49	120
382	10.0	J-845	J-824	1,650	361.14	0.81	1.34	1.48	140
P-205	8.0	J-191	J-548	167	226.67	2.31	0.39	1.45	90
P-257	8.0	J-316	J-527	2,569	225.98	1.35	3.46	1.44	120

Active Scenario: Peak Hour Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
571	12.0	J-552	J-250	1,911	-506.55	0.72	1.37	1.44	130
782	8.0	J-340	J-341	186	224.60	1.87	0.35	1.43	100
716	12.0	J-551	J-552	350	-502.07	0.71	0.25	1.42	130
771	12.0	J-551	J-743	1,325	499.05	0.70	0.93	1.42	130
570	12.0	J-662	J-743	717	-499.05	0.81	0.58	1.42	120
349	10.0	J-521	J-824	1,063	-345.23	0.75	0.80	1.41	140
P-296	8.0	J-178	J-763	344	-220.53	1.81	0.62	1.41	100
494	6.0	J-565	J-181	496	123.73	2.51	1.25	1.40	100
737	12.0	J-658	J-662	527	-492.00	0.79	0.42	1.40	120
384	12.0	J-818	J-658	1,775	-488.31	0.78	1.38	1.39	120
269	8.0	J-341	J-114	293	217.01	1.75	0.51	1.39	100
707	10.0	J-86	J-521	326	-337.01	1.34	0.44	1.38	100
P-197	8.0	J-440	J-275	181	-208.17	1.97	0.36	1.33	90
P-206	8.0	J-548	J-496	672	206.24	1.94	1.30	1.32	90
589	8.0	J-399	J-400	229	205.75	1.59	0.36	1.31	100
679	8.0	J-47	J-48	14	-205.14	1.92	0.03	1.31	90
696	12.0	J-315	J-316	160	459.88	0.60	0.10	1.30	130
226	12.0	J-692	J-651	2,488	458.05	0.81	2.02	1.30	110
370	8.0	J-826	J-827	1,045	201.74	1.09	1.14	1.29	120
385	12.0	J-818	J-704	2,189	453.32	0.80	1.75	1.29	110
662	12.0	J-651	J-144	1,488	442.86	0.76	1.14	1.26	110
P-59	12.0	J-144	J-677	5	442.86	0.65	0.00	1.26	120
496	12.0	J-796	J-704	1,312	-441.30	0.65	0.85	1.25	120
290	8.0	J-827	J-790	1,737	194.48	1.02	1.77	1.24	120
P-256	8.0	J-734	J-839	21	191.02	0.99	0.02	1.22	120
P-263	12.0	J-796	J-737	403	426.40	0.61	0.24	1.21	120
534	2.0	J-273	J-274	135	11.78	6.75	0.91	1.20	101
153	12.0	J-605	J-266	2,598	421.58	0.70	1.81	1.20	110
330	8.0	J-839	J-789	1,207	187.05	1.33	1.61	1.19	100
459	8.0	J-816	J-400	1,295	-186.63	1.33	1.72	1.19	100
103	8.0	J-695	J-740	656	184.53	1.30	0.85	1.18	100
P-285	8.0	J-740	J-95	16	184.53	1.30	0.02	1.18	100
697	12.0	J-315	J-78	624	-406.37	0.48	0.30	1.15	130
666	10.0	J-207	J-208	89	281.74	0.68	0.06	1.15	120
313	8.0	J-330	J-543	1,080	-180.23	1.24	1.34	1.15	100
P-210	12.0	J-853	J-192	987	399.52	0.63	0.62	1.13	110
409	10.0	J-208	J-232	559	277.20	0.66	0.37	1.13	120
332	8.0	J-292	J-789	855	-176.91	1.20	1.03	1.13	100
P-211	8.0	J-826	J-108	1,814	-176.73	1.46	2.64	1.13	90
684	8.0	J-708	J-681	625	-174.55	0.98	0.61	1.11	110
292	8.0	J-607	J-790	952	-168.90	1.10	1.05	1.08	100
P-67	12.0	J-98	J-492	13	-379.69	0.69	0.01	1.08	100
333	8.0	J-292	J-543	349	168.74	0.92	0.32	1.08	110
410	2.0	J-279	J-280	147	10.54	3.41	0.50	1.08	130
230	12.0	J-98	J-569	352	377.92	0.68	0.24	1.07	100

Active Scenario: Peak Hour Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
436	12.0	J-617	J-462	1,123	377.92	0.68	0.76	1.07	100
P-66	12.0	J-569	J-617	364	377.92	0.68	0.25	1.07	100
P-73	12.0	J-462	J-248	260	377.92	0.68	0.18	1.07	100
P-71	12.0	J-463	J-184	84	375.42	0.67	0.06	1.06	100
P-74	12.0	J-248	J-463	17	375.42	0.67	0.01	1.06	100
711	12.0	J-78	J-79	23	375.42	0.48	0.01	1.06	120
712	12.0	J-79	J-372	206	369.40	0.46	0.10	1.05	120
P-64	6.0	J-75	J-635	313	92.28	1.46	0.46	1.05	100
703	8.0	J-350	J-351	184	162.13	0.86	0.16	1.03	110
P-295	8.0	J-762	J-178	389	-160.98	1.01	0.39	1.03	100
463	8.0	J-116	J-67	888	160.43	1.00	0.89	1.02	100
713	12.0	J-372	J-588	829	360.44	0.44	0.37	1.02	120
701	8.0	J-762	J-689	1,993	159.27	0.99	1.97	1.02	100
P-72	12.0	J-184	J-511	241	354.90	0.60	0.15	1.01	100
152	12.0	J-511	J-605	415	354.90	0.61	0.25	1.01	100
311	8.0	J-607	J-340	1,142	157.59	0.69	0.79	1.01	120
355	12.0	J-251	J-588	1,011	-347.11	0.41	0.42	0.98	120
744	6.0	J-331	J-565	350	85.73	1.27	0.45	0.97	100
329	8.0	J-351	J-171	239	152.38	0.76	0.18	0.97	110
P-148	8.0	J-707	J-816	449	-150.54	0.89	0.40	0.96	100
P-221	8.0	J-708	J-4	776	149.73	0.74	0.57	0.96	110
437	12.0	J-189	J-492	298	335.10	0.46	0.14	0.95	110
8	8.0	J-846	J-570	1,512	147.58	0.72	1.09	0.94	110
P-130	8.0	J-173	J-813	1,227	146.88	0.85	1.04	0.94	100
760	8.0	J-570	J-571	376	144.72	0.83	0.31	0.92	100
P-117	8.0	J-231	J-758	2,090	143.43	0.81	1.70	0.92	100
P-122	12.0	J-555	J-266	253	-312.56	0.40	0.10	0.89	110
734	8.0	J-67	J-68	21	138.51	0.76	0.02	0.88	100
P-239	12.0	J-822	J-845	792	-310.09	0.34	0.27	0.88	120
P-6	8.0	J-690	J-116	1,656	137.35	0.75	1.24	0.88	100
P-61	12.0	J-677	J-74	24	304.12	0.32	0.01	0.86	120
411	12.0	J-808	J-809	863	302.91	0.38	0.33	0.86	110
P-121	12.0	J-808	J-555	711	-302.91	0.38	0.27	0.86	110
148	12.0	J-74	J-75	22	302.46	0.32	0.01	0.86	120
279	8.0	J-439	J-440	265	-132.36	0.70	0.18	0.84	101
171	8.0	J-571	J-647	494	132.14	0.70	0.35	0.84	100
P-245	12.0	J-344	J-822	16	-294.19	0.36	0.01	0.83	110
468	8.0	J-394	J-363	399	-130.64	0.68	0.27	0.83	100
100	6.0	J-741	J-742	688	-73.40	0.96	0.66	0.83	100
161	8.0	J-647	J-483	575	127.54	0.66	0.38	0.81	100
P-264	12.0	J-737	J-663	475	286.57	0.29	0.14	0.81	120
479	8.0	J-644	J-737	672	-126.93	0.65	0.44	0.81	100
182	8.0	J-813	J-586	1,156	126.84	0.65	0.75	0.81	100
486	6.0	J-389	J-415	239	-71.28	1.10	0.26	0.81	90
755	8.0	J-547	J-545	342	126.37	0.64	0.22	0.81	100

Active Scenario: Peak Hour Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
492	6.0	J-469	J-386	377	-70.97	0.75	0.28	0.81	110
P-265	8.0	J-415	J-10	53	125.94	0.64	0.03	0.80	100
438	12.0	J-189	Tara Road Tank	82	-281.04	0.28	0.02	0.80	120
P-258	8.0	J-527	J-734	845	124.83	0.45	0.38	0.80	120
P-118	8.0	J-758	J-765	447	124.68	0.63	0.28	0.80	100
324	8.0	J-171	J-505	306	122.16	0.51	0.16	0.78	110
P-195	8.0	J-619	J-476	387	120.05	0.31	0.12	0.77	140
P-131	8.0	J-319	J-64	7	119.91	0.58	0.00	0.77	100
P-209	12.0	J-820	J-853	9	-268.55	0.30	0.00	0.76	110
337	12.0	J-215	J-329	170	-267.15	0.43	0.07	0.76	90
P-77	6.0	J-635	J-605	2,063	66.68	0.80	1.65	0.76	100
470	8.0	J-545	J-364	573	118.54	0.57	0.33	0.76	100
340	12.0	J-216	J-86	393	265.61	0.25	0.10	0.75	120
P-268	8.0	J-9	J-547	571	117.67	0.56	0.32	0.75	100
317	8.0	J-181	J-182	79	117.55	0.56	0.04	0.75	100
140	8.0	J-586	J-695	697	117.43	0.56	0.39	0.75	100
756	8.0	J-363	J-364	196	-116.66	0.56	0.11	0.74	100
670	8.0	J-338	J-339	175	-116.20	0.55	0.10	0.74	100
P-199	8.0	J-275	J-619	416	-115.20	0.66	0.27	0.74	90
477	8.0	J-138	J-644	546	-114.58	0.54	0.29	0.73	100
367	6.0	J-87	J-464	299	63.39	1.88	0.56	0.72	60
P-302	8.0	J-861	J-4	1,541	-112.38	0.43	0.67	0.72	110
297	8.0	Overlook Drive Tank	J-496	3,260	-110.87	0.42	1.38	0.71	110
296	10.0	J-601	J-191	3,623	-170.80	0.38	1.37	0.70	100
P-111	8.0	J-765	J-525	329	108.43	0.35	0.11	0.69	120
671	8.0	J-701	J-338	583	-107.84	0.48	0.28	0.69	100
508	8.0	J-505	J-309	319	107.59	0.40	0.13	0.69	110
353	12.0	J-78	J-719	619	-240.74	0.18	0.11	0.68	130
675	10.0	J-417	J-102	242	166.93	0.44	0.11	0.68	90
225	8.0	J-701	J-602	948	106.25	0.47	0.44	0.68	100
126	2.0	J-106	J-107	33	6.58	1.42	0.05	0.67	130
493	8.0	J-394	J-193	224	105.00	0.46	0.10	0.67	100
181	8.0	J-319	J-320	164	-104.79	0.38	0.06	0.67	110
144	8.0	J-29	J-30	7	102.31	0.23	0.00	0.65	140
2	8.0	J-537	J-538	337	102.31	0.31	0.10	0.65	120
3	8.0	J-538	J-29	755	102.31	0.31	0.23	0.65	120
P-114	8.0	J-510	J-537	100	102.31	0.31	0.03	0.65	120
P-123	12.0	J-481	J-745	9	230.06	0.19	0.00	0.65	120
P-126	12.0	J-809	J-481	349	230.06	0.23	0.08	0.65	110
P-300	12.0	J-350	J-316	1,903	-229.13	0.17	0.31	0.65	130
P-304	8.0	J-861	J-817	1,245	101.39	0.36	0.45	0.65	110

Active Scenario: Peak Hour Demand
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Steady State Analysis

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P-127	12.0	J-745	J-846	383	227.62	0.22	0.09	0.65	110
210	6.0	J-602	J-603	385	56.43	0.49	0.19	0.64	110
177	12.0	J-207	J-799	2,611	223.35	0.18	0.48	0.63	120
344	6.0	J-357	J-315	189	55.79	1.48	0.28	0.63	60
245	8.0	J-581	J-786	813	99.04	0.41	0.33	0.63	100
P-5	8.0	J-689	J-690	564	98.07	0.40	0.23	0.63	100
753	8.0	J-193	J-581	426	97.44	0.40	0.17	0.62	100
504	8.0	J-309	J-468	318	97.39	0.33	0.11	0.62	110
667	10.0	J-231	J-232	108	-150.28	0.30	0.03	0.61	100
P-193	8.0	J-476	J-35	302	95.71	0.21	0.06	0.61	140
285	8.0	J-151	J-152	63	95.71	0.21	0.01	0.61	140
287	8.0	J-265	J-151	179	95.71	0.27	0.05	0.61	120
P-194	8.0	J-35	J-265	6	95.71	0.21	0.00	0.61	140
132	8.0	J-448	J-456	819	95.57	0.38	0.31	0.61	100
76	8.0	J-699	J-700	594	-94.92	0.38	0.23	0.61	100
280	8.0	J-275	J-152	134	-94.34	0.20	0.03	0.60	140
112	12.0	J-297	J-799	874	-212.08	0.17	0.15	0.60	120
246	8.0	J-786	J-293	952	93.49	0.37	0.35	0.60	100
P-132	8.0	J-64	J-173	86	93.08	0.37	0.03	0.59	100
733	8.0	J-68	J-499	337	91.82	0.36	0.12	0.59	100
556	8.0	J-7	J-8	3	-90.90	0.25	0.00	0.58	120
554	8.0	J-8	J-221	97	-90.90	0.19	0.02	0.58	140
557	8.0	J-221	J-524	370	-90.90	0.25	0.09	0.58	120
647	12.0	J-297	J-298	149	204.03	0.15	0.02	0.58	120
65	12.0	J-22	J-47	20	-203.77	0.26	0.01	0.58	90
754	8.0	J-609	J-386	652	90.41	0.35	0.23	0.58	100
505	8.0	J-115	J-2	375	-89.73	0.29	0.11	0.57	110
511	12.0	J-415	J-805	1,748	-200.74	0.15	0.26	0.57	120
P-275	8.0	J-7	J-32	47	89.19	0.34	0.02	0.57	100
491	8.0	J-561	J-469	395	-88.27	0.33	0.13	0.56	100
351	8.0	J-527	J-528	380	87.68	0.32	0.12	0.56	101
574	12.0	J-251	Oak Hill Road Tank	683	-196.20	0.14	0.10	0.56	120
731	8.0	J-447	J-448	268	87.07	0.32	0.09	0.56	100
283	2.0	J-165	J-166	70	-5.39	1.58	0.11	0.55	101
681	8.0	J-132	J-133	44	-85.94	0.23	0.01	0.55	120
P-269	8.0	J-772	J-458	518	85.44	0.26	0.14	0.55	110
683	8.0	J-496	J-436	300	83.76	0.21	0.06	0.53	120
561	8.0	J-528	J-800	858	81.95	0.21	0.18	0.52	120
P-108	8.0	J-699	J-119	19	81.64	0.29	0.01	0.52	100
674	10.0	J-102	J-65	114	125.94	0.26	0.03	0.51	90
P-150	8.0	J-30	J-778	752	80.42	0.15	0.11	0.51	140
P-147	8.0	J-339	J-707	502	-80.30	0.28	0.14	0.51	100
680	8.0	J-48	J-132	119	-79.76	0.33	0.04	0.51	90

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67	8.0	J-302	J-436	261	-79.68	0.20	0.05	0.51	120
732	8.0	J-499	J-447	303	79.44	0.27	0.08	0.51	100
745	8.0	J-331	J-349	642	79.20	0.27	0.17	0.51	100
746	8.0	J-518	J-182	321	-78.80	0.27	0.09	0.50	100
646	12.0	J-629	J-287	435	174.97	0.14	0.06	0.50	110
682	8.0	J-301	J-302	152	-76.86	0.18	0.03	0.49	120
P-270	8.0	J-458	J-608	459	76.19	0.21	0.10	0.49	110
63	12.0	J-417	J-22	242	-170.90	0.19	0.05	0.48	90
P-176	8.0	J-778	J-686	1,068	75.36	0.25	0.26	0.48	100
555	8.0	J-31	J-32	11	-74.88	0.18	0.00	0.48	120
770	8.0	J-599	J-440	635	-74.28	0.24	0.15	0.47	100
216	8.0	J-768	J-742	955	73.40	0.24	0.22	0.47	100
490	8.0	J-580	J-561	565	-73.38	0.24	0.13	0.47	100
740	12.0	J-663	J-664	513	163.76	0.10	0.05	0.46	120
655	10.0	J-749	J-601	688	-111.88	0.17	0.12	0.46	100
179	12.0	J-298	J-629	526	159.69	0.12	0.06	0.45	110
652	6.0	J-323	J-324	166	39.82	0.31	0.05	0.45	100
P-267	8.0	J-10	J-9	3	69.97	0.21	0.00	0.45	100
184	6.0	J-38	J-766	757	-39.16	0.25	0.19	0.44	110
P-48	12.0	J-844	J-727	419	153.92	0.13	0.05	0.44	100
P-271	8.0	J-493	J-835	258	-68.21	0.21	0.05	0.44	100
689	8.0	J-483	J-484	293	67.68	0.20	0.06	0.43	100
138	8.0	J-493	J-467	300	66.92	0.20	0.06	0.43	100
P-282	6.0	J-642	J-819	16	37.25	0.27	0.00	0.42	100
P-253	8.0	J-734	J-800	413	-66.20	0.19	0.08	0.42	101
72	6.0	J-103	J-407	231	36.95	0.22	0.05	0.42	110
472	8.0	J-772	J-593	1,155	-65.22	0.16	0.18	0.42	110
750	8.0	J-618	J-139	410	-65.00	0.13	0.06	0.41	120
48	12.0	J-752	J-97	906	145.31	0.10	0.09	0.41	110
P-155	6.0	J-235	J-104	1,492	-35.49	0.25	0.37	0.40	100
509	8.0	J-349	J-373	867	62.64	0.18	0.15	0.40	100
495	12.0	J-664	J-805	894	140.49	0.08	0.07	0.40	120
673	10.0	J-65	J-66	20	97.35	0.16	0.00	0.40	90
664	12.0	J-676	J-677	543	-138.74	0.09	0.05	0.39	110
262	10.0	J-700	J-749	1,081	-96.23	0.13	0.14	0.39	100
729	8.0	J-446	J-293	263	-61.17	0.17	0.04	0.39	100
368	8.0	J-464	J-357	596	60.38	0.42	0.25	0.39	60
P-288	8.0	J-782	J-380	414	59.58	0.16	0.07	0.38	100
421	8.0	J-707	J-27	639	58.52	0.11	0.07	0.37	120
150	8.0	J-42	J-676	1,238	-57.92	0.11	0.13	0.37	120
503	10.0	J-114	J-115	39	-89.73	0.10	0.00	0.37	110
678	8.0	J-133	J-599	380	-57.35	0.15	0.06	0.37	100
471	8.0	J-117	J-518	882	-56.59	0.15	0.13	0.36	100
608	12.0	J-94	J-95	31	-127.22	0.07	0.00	0.36	120
77	6.0	J-239	J-118	292	-31.78	0.25	0.07	0.36	90

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618	4.0	J-183	J-393	322	14.10	0.23	0.07	0.36	120
P-36	12.0	J-838	J-97	373	-126.88	0.09	0.03	0.36	100
539	2.0	J-285	J-286	143	3.52	0.72	0.10	0.36	101
692	6.0	J-273	J-256	351	-31.64	0.20	0.07	0.36	100
476	8.0	J-9	J-10	3	-55.97	0.21	0.00	0.36	80
217	6.0	J-324	J-494	622	31.48	0.20	0.12	0.36	100
66	12.0	J-48	J-439	860	-125.38	0.09	0.08	0.36	101
P-112	8.0	J-525	J-509	408	55.62	0.10	0.04	0.35	120
P-287	8.0	J-95	J-782	657	55.55	0.14	0.09	0.35	100
748	8.0	J-594	J-389	576	-55.44	0.14	0.08	0.35	100
499	2.0	J-458	J-459	283	3.46	0.43	0.12	0.35	130
P-2	8.0	J-468	J-2	390	55.16	0.12	0.05	0.35	110
P-289	8.0	J-380	J-766	214	54.70	0.14	0.03	0.35	100
441	2.0	J-579	J-531	428	3.41	0.42	0.18	0.35	130
518	8.0	J-178	J-179	76	54.45	0.10	0.01	0.35	120
143	12.0	J-232	J-780	766	122.10	0.05	0.04	0.35	130
P-283	12.0	J-502	J-94	215	-121.77	0.08	0.02	0.35	100
53	8.0	J-173	J-82	74	-53.80	0.09	0.01	0.34	120
489	8.0	J-116	J-117	39	-53.12	0.13	0.01	0.34	100
178	8.0	J-525	J-526	329	52.81	0.09	0.03	0.34	120
P-113	8.0	J-526	J-510	399	52.81	0.09	0.04	0.34	120
366	2.0	J-268	J-269	128	3.29	0.64	0.08	0.34	101
658	8.0	J-600	J-601	381	-52.45	0.15	0.06	0.33	90
694	6.0	J-37	J-38	12	-29.40	0.15	0.00	0.33	110
645	12.0	J-287	J-288	143	117.08	0.06	0.01	0.33	110
565	2.0	J-659	J-660	528	3.24	0.38	0.20	0.33	130
728	6.0	J-293	J-294	145	29.08	0.12	0.02	0.33	120
120	12.0	J-596	J-744	1,086	115.74	0.06	0.07	0.33	110
145	6.0	J-653	J-781	770	28.91	0.12	0.09	0.33	120
265	2.0	J-507	J-508	318	-3.18	0.37	0.12	0.32	130
P-7	12.0	J-780	J-768	327	113.43	0.05	0.01	0.32	130
P-232	8.0	J-732	J-798	321	-50.00	0.10	0.03	0.32	110
478	12.0	J-138	J-139	60	111.96	0.07	0.00	0.32	100
18	8.0	J-509	J-510	315	49.49	0.08	0.03	0.32	120
474	8.0	J-565	J-373	1,065	-49.21	0.11	0.12	0.31	100
749	8.0	J-593	J-618	982	-49.18	0.09	0.09	0.31	110
259	8.0	J-689	J-690	2,072	48.57	0.11	0.23	0.31	100
157	12.0	J-838	J-773	1,176	109.03	0.05	0.06	0.31	120
1	12.0	J-744	J-320	678	106.73	0.05	0.04	0.30	110
295	8.0	J-835	J-580	1,525	-47.09	0.10	0.16	0.30	100
769	12.0	J-502	J-503	303	105.90	0.06	0.02	0.30	100
542	8.0	J-201	J-446	707	-46.42	0.10	0.07	0.30	100
543	6.0	J-294	J-202	996	25.90	0.10	0.10	0.29	120
141	10.0	J-484	J-695	569	71.19	0.08	0.04	0.29	100
779	8.0	J-603	J-596	1,746	45.50	0.08	0.14	0.29	110

Active Scenario: Peak Hour Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-103	12.0	J-266	J-295	102	102.34	0.04	0.00	0.29	120
510	12.0	J-663	J-474	1,339	101.81	0.04	0.06	0.29	120
80	8.0	J-119	J-486	294	45.08	0.10	0.03	0.29	100
P-345	12.0	J-692	J-49	990	101.29	0.05	0.05	0.29	110
524	8.0	J-5	J-6	2	44.93	0.05	0.00	0.29	140
525	8.0	J-179	J-5	398	44.93	0.07	0.03	0.29	120
P-297	8.0	J-6	J-756	76	44.93	0.08	0.01	0.29	110
741	8.0	J-467	J-205	275	44.85	0.09	0.03	0.29	100
636	8.0	J-122	J-123	42	44.71	0.06	0.00	0.29	130
206	8.0	J-41	J-99	614	44.59	0.07	0.04	0.28	120
687	8.0	J-602	J-653	488	43.75	0.06	0.03	0.28	120
538	8.0	J-33	J-590	521	43.64	0.08	0.04	0.28	110
P-231	8.0	J-797	J-732	545	-43.53	0.07	0.04	0.28	110
79	8.0	J-674	J-486	587	-42.97	0.09	0.05	0.27	100
84	2.0	J-750	J-751	735	2.67	0.31	0.23	0.27	120
209	8.0	J-339	J-27	1,137	-42.43	0.06	0.07	0.27	120
613	2.0	J-472	J-473	277	2.61	0.42	0.12	0.27	100
639	12.0	J-159	J-773	828	-93.44	0.04	0.03	0.27	120
P-274	12.0	J-524	J-456	273	-93.35	0.05	0.01	0.26	100
203	8.0	J-686	J-256	1,492	41.46	0.08	0.12	0.26	100
P-1	8.0	J-2	J-468	679	-40.87	0.07	0.05	0.26	110
127	4.0	J-452	J-106	265	10.15	0.11	0.03	0.26	130
P-156	6.0	J-104	J-781	3	-22.79	0.11	0.00	0.26	100
273	8.0	J-68	J-559	957	40.28	0.08	0.07	0.26	100
588	8.0	J-159	J-160	63	40.05	0.08	0.00	0.26	101
735	6.0	J-205	J-206	89	22.40	0.11	0.01	0.25	100
593	2.0	J-324	J-646	589	2.45	0.37	0.22	0.25	101
765	8.0	J-763	J-670	1,311	38.73	0.04	0.06	0.25	130
P-70	6.0	J-544	J-184	75	-20.52	0.06	0.00	0.23	120
604	8.0	J-503	J-760	926	36.35	0.05	0.05	0.23	110
P-185	12.0	J-66	J-488	394	81.03	0.02	0.01	0.23	130
P-105	8.0	J-160	J-655	417	35.79	0.06	0.03	0.23	101
62	8.0	J-133	J-301	478	-35.78	0.04	0.02	0.23	120
274	8.0	J-709	J-301	599	-35.75	0.05	0.03	0.23	110
644	12.0	J-288	J-657	1,132	80.13	0.03	0.04	0.23	110
172	10.0	J-199	J-483	1,101	-54.25	0.04	0.04	0.22	110
P-344	12.0	J-727	J-325	921	77.84	0.04	0.03	0.22	100
78	8.0	J-118	J-119	40	-34.51	0.07	0.00	0.22	90
514	8.0	J-332	J-451	309	-34.37	0.03	0.01	0.22	140
523	8.0	J-756	J-451	706	34.37	0.03	0.02	0.22	140
P-128	12.0	J-846	J-406	308	76.41	0.03	0.01	0.22	110
P-251	12.0	J-678	J-842	1,278	74.79	0.02	0.03	0.21	120
P-351	8.0	J-407	J-25	726	32.92	0.04	0.03	0.21	110
625	8.0	J-100	J-101	48	32.73	0.04	0.00	0.21	120
P-45	12.0	J-667	J-830	108	73.36	0.03	0.00	0.21	100

Active Scenario: Peak Hour Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-343	12.0	J-667	J-727	1,027	-73.36	0.03	0.03	0.21	100
P-125	12.0	J-596	J-809	31	-72.85	0.03	0.00	0.21	110
752	8.0	J-227	J-139	1,507	-32.13	0.04	0.05	0.21	120
208	12.0	J-611	J-676	834	-72.20	0.03	0.02	0.20	110
P-134	8.0	J-542	J-335	1,370	-31.41	0.05	0.07	0.20	100
738	12.0	J-678	J-474	564	-70.61	0.02	0.01	0.20	120
759	10.0	J-199	J-200	87	49.02	0.03	0.00	0.20	110
480	12.0	J-608	J-609	389	70.52	0.03	0.01	0.20	110
P-279	8.0	J-754	J-819	26	-31.29	0.05	0.00	0.20	100
456	8.0	J-164	J-794	1,994	31.24	0.03	0.06	0.20	130
P-142	6.0	J-134	J-649	780	-17.43	0.07	0.05	0.20	100
591	8.0	J-50	J-433	242	30.85	0.05	0.01	0.20	101
747	8.0	J-593	J-594	376	-30.70	0.04	0.01	0.20	110
726	8.0	J-31	J-437	1,600	30.68	0.04	0.06	0.20	110
P-69	6.0	J-183	J-544	6	-17.17	0.05	0.00	0.19	120
P-99	8.0	J-717	J-712	14	30.23	0.03	0.00	0.19	120
705	8.0	J-171	J-172	74	30.23	0.04	0.00	0.19	110
706	8.0	J-172	J-270	128	30.23	0.05	0.01	0.19	101
704	8.0	J-270	J-485	298	30.23	0.05	0.01	0.19	101
624	8.0	J-712	J-713	993	30.23	0.03	0.03	0.19	120
10	12.0	J-405	J-406	243	-67.63	0.02	0.00	0.19	120
135	6.0	J-448	J-205	1,167	-16.89	0.06	0.07	0.19	100
316	8.0	J-772	J-182	761	-30.02	0.04	0.03	0.19	110
434	8.0	J-696	J-697	624	29.83	0.04	0.03	0.19	101
544	8.0	J-202	J-155	502	29.83	0.04	0.02	0.19	100
P-299	12.0	J-340	J-350	1,472	-67.01	0.02	0.02	0.19	130
533	6.0	J-564	J-273	430	-16.57	0.06	0.03	0.19	100
482	12.0	J-805	J-369	1,173	-65.13	0.02	0.02	0.18	120
111	10.0	J-298	J-161	2,153	44.34	0.03	0.06	0.18	110
P-352	8.0	J-25	J-529	291	28.37	0.03	0.01	0.18	110
532	8.0	J-542	J-255	949	28.34	0.04	0.04	0.18	100
637	8.0	J-150	J-239	116	-28.32	0.05	0.01	0.18	90
146	6.0	J-104	J-105	31	-15.82	0.03	0.00	0.18	140
714	8.0	J-307	J-250	557	-27.68	0.05	0.03	0.18	90
207	12.0	J-611	J-189	884	61.77	0.02	0.02	0.18	110
773	8.0	J-65	J-711	1,302	27.33	0.04	0.05	0.17	100
736	6.0	J-206	J-303	500	15.31	0.05	0.03	0.17	100
P-227	8.0	J-124	J-831	176	27.03	0.04	0.01	0.17	100
717	10.0	J-200	J-92	489	42.16	0.02	0.01	0.17	110
52	8.0	J-63	J-64	19	-26.83	0.04	0.00	0.17	100
P-104	12.0	J-295	J-267	25	59.95	0.02	0.00	0.17	120
607	12.0	J-642	J-503	888	-58.90	0.02	0.02	0.17	100
P-101	12.0	J-267	J-614	354	58.07	0.02	0.01	0.16	120
553	8.0	J-568	J-201	981	-25.70	0.03	0.03	0.16	100
P-281	6.0	J-583	J-642	1,086	-14.44	0.05	0.05	0.16	100

Active Scenario: Peak Hour Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
73	10.0	J-102	J-103	32	39.51	0.02	0.00	0.16	110
500	8.0	J-116	J-609	1,586	25.22	0.03	0.05	0.16	100
P-346	12.0	J-49	J-725	1,349	56.52	0.02	0.02	0.16	110
301	6.0	J-416	J-572	1,063	14.11	0.05	0.05	0.16	100
258	6.0	J-769	J-37	1,191	-14.10	0.04	0.04	0.16	110
458	8.0	J-816	J-788	930	25.04	0.03	0.03	0.16	100
P-207	8.0	J-820	J-826	24	25.01	0.04	0.00	0.16	90
0	12.0	J-82	J-83	25	-55.90	0.01	0.00	0.16	120
188	12.0	J-83	J-405	1,243	-55.90	0.01	0.02	0.16	120
P-190	6.0	J-793	J-711	590	-13.91	0.04	0.03	0.16	100
P-272	8.0	J-835	J-559	91	-24.70	0.03	0.00	0.16	100
762	8.0	J-529	J-530	328	24.62	0.03	0.01	0.16	100
P-196	8.0	J-476	J-620	27	24.34	0.02	0.00	0.16	140
51	8.0	J-686	J-335	540	24.27	0.03	0.02	0.15	100
442	6.0	J-651	J-652	491	13.65	0.04	0.02	0.15	101
455	12.0	J-163	J-164	68	53.72	0.01	0.00	0.15	130
247	10.0	J-729	J-730	629	37.28	0.45	0.28	0.15	20
97	8.0	J-639	J-785	1,001	23.84	0.02	0.02	0.15	120
34	12.0	J-554	J-159	1,840	-53.39	0.01	0.02	0.15	120
659	8.0	J-325	J-326	173	23.67	0.03	0.00	0.15	101
650	12.0	J-639	J-287	1,208	-53.24	0.02	0.02	0.15	110
541	6.0	J-568	J-519	351	13.28	0.04	0.01	0.15	100
546	8.0	J-801	J-155	876	-23.52	0.03	0.03	0.15	100
160	12.0	J-598	J-657	1,483	-52.54	0.01	0.02	0.15	110
22	8.0	J-288	J-621	2,692	23.12	0.02	0.06	0.15	110
P-165	6.0	J-391	J-259	216	12.93	0.02	0.01	0.15	130
P-167	6.0	J-259	J-237	86	12.93	0.02	0.00	0.15	130
383	8.0	J-543	J-818	986	-22.82	0.03	0.03	0.15	100
291	8.0	J-720	J-790	857	-22.57	0.03	0.02	0.14	100
391	2.0	J-434	J-435	269	1.37	0.08	0.02	0.14	130
P-152	8.0	J-321	J-30	85	-21.89	0.01	0.00	0.14	140
117	8.0	J-289	J-290	144	-21.89	0.01	0.00	0.14	140
114	8.0	J-321	J-322	169	21.89	0.01	0.00	0.14	140
116	8.0	J-290	J-322	231	-21.89	0.02	0.00	0.14	120
P-154	8.0	J-185	J-289	155	-21.89	0.01	0.00	0.14	140
P-153	8.0	J-105	J-185	515	-21.89	0.01	0.01	0.14	140
P-204	8.0	J-709	J-747	121	21.80	0.02	0.00	0.14	110
42	6.0	J-76	J-77	22	-12.04	0.02	0.00	0.14	120
12	8.0	J-92	J-93	27	21.31	0.01	0.00	0.14	130
P-102	12.0	J-614	J-180	1,448	47.82	0.01	0.02	0.14	120
28	12.0	J-163	J-325	1,018	-47.70	0.01	0.01	0.14	100
151	12.0	J-41	J-42	13	-47.55	0.01	0.00	0.13	120
502	8.0	J-469	J-394	276	-21.10	0.02	0.01	0.13	100
202	6.0	J-408	J-409	248	11.82	0.03	0.01	0.13	101
433	8.0	J-825	J-554	1,068	-20.10	0.01	0.01	0.13	130

Active Scenario: Peak Hour Demand
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Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
241	8.0	J-754	J-755	846	19.97	0.02	0.02	0.13	100
195	12.0	J-123	J-539	435	44.71	0.01	0.00	0.13	130
P-68	12.0	J-492	J-99	16	-44.59	0.01	0.00	0.13	100
403	6.0	J-308	J-430	255	11.13	0.04	0.01	0.13	90
407	8.0	J-598	J-279	408	19.77	0.01	0.01	0.13	130
446	8.0	J-326	J-784	844	19.59	0.02	0.02	0.13	101
605	8.0	J-760	J-362	853	19.53	0.02	0.01	0.12	110
263	8.0	J-637	J-600	884	-19.46	0.02	0.02	0.12	90
P-168	6.0	J-237	J-260	36	10.88	0.02	0.00	0.12	130
721	8.0	J-776	J-590	1,326	-19.10	0.02	0.02	0.12	110
761	12.0	J-539	J-323	338	42.83	0.01	0.00	0.12	100
P-82	12.0	J-187	J-295	2,225	-42.39	0.01	0.02	0.12	110
406	6.0	J-687	J-688	550	-10.55	0.02	0.01	0.12	110
336	6.0	J-13	J-14	3	-10.30	0.02	0.00	0.12	120
277	10.0	J-729	J-21	3,154	-28.44	0.27	0.85	0.12	20
P-107	6.0	J-729	J-699	1,901	-10.21	0.49	0.93	0.12	20
293	6.0	J-309	J-310	156	10.20	0.02	0.00	0.12	101
485	8.0	J-664	J-678	1,374	17.72	0.01	0.02	0.11	120
192	6.0	J-574	J-783	1,143	-9.89	0.02	0.03	0.11	100
302	6.0	J-572	J-573	356	9.80	0.02	0.01	0.11	101
464	8.0	J-386	J-363	219	17.28	0.02	0.00	0.11	100
654	6.0	J-494	J-408	620	9.68	0.03	0.02	0.11	90
180	10.0	J-649	J-63	469	-26.83	0.01	0.01	0.11	100
P-159	6.0	J-728	J-604	90	-9.63	0.03	0.00	0.11	90
P-259	8.0	J-671	J-792	4	-16.94	0.02	0.00	0.11	110
526	6.0	J-179	J-387	219	9.52	0.02	0.00	0.11	120
P-237	8.0	J-414	J-841	1,106	-16.92	0.04	0.04	0.11	60
175	8.0	J-180	J-100	78	16.78	0.01	0.00	0.11	120
193	8.0	J-783	J-674	793	-16.58	0.01	0.01	0.11	100
P-138	6.0	J-76	J-233	33	9.32	0.01	0.00	0.11	140
606	12.0	J-31	J-33	860	37.23	0.01	0.01	0.11	100
715	8.0	J-307	J-308	154	16.51	0.02	0.00	0.11	90
16	12.0	J-422	J-830	1,368	-36.38	0.01	0.01	0.10	120
P-109	6.0	J-409	J-359	191	9.09	0.02	0.00	0.10	101
174	8.0	J-167	J-100	73	15.95	0.01	0.00	0.10	120
395	6.0	J-613	J-515	413	8.85	0.03	0.01	0.10	80
P-223	6.0	J-515	J-461	170	8.85	0.01	0.00	0.10	120
P-250	12.0	J-369	J-842	3	-35.24	0.01	0.00	0.10	120
P-252	12.0	J-842	J-369	3	35.24	0.01	0.00	0.10	120
487	6.0	J-389	J-390	220	8.64	0.01	0.00	0.10	120
P-353	10.0	J-730	Overlook Drive Tank	48	23.80	0.01	0.00	0.10	90
691	8.0	J-235	J-319	326	15.12	0.01	0.00	0.10	100
P-95	8.0	J-717	J-101	1	-15.11	0.03	0.00	0.10	120

Active Scenario: Peak Hour Demand
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Steady State Analysis

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P-97	8.0	J-101	J-717	1	15.11	0.03	0.00	0.10	120
P-46	12.0	J-830	J-209	450	33.91	0.01	0.00	0.10	100
727	8.0	J-201	J-202	87	15.05	0.01	0.00	0.10	100
690	8.0	J-335	J-235	173	-14.74	0.01	0.00	0.09	100
P-181	12.0	J-768	J-391	848	33.06	0.00	0.00	0.09	130
64	12.0	J-21	J-22	5	-32.87	0.01	0.00	0.09	100
481	8.0	J-594	J-547	1,338	14.60	0.01	0.01	0.09	110
134	8.0	J-447	J-467	1,096	-14.60	0.01	0.01	0.09	100
303	8.0	J-792	J-670	847	-14.48	0.01	0.01	0.09	110
590	8.0	J-187	J-188	82	14.38	0.01	0.00	0.09	130
156	8.0	J-188	J-685	641	14.38	0.01	0.00	0.09	130
P-276	8.0	J-32	J-34	859	14.31	0.01	0.01	0.09	100
757	8.0	J-548	J-120	344	14.25	0.01	0.00	0.09	110
165	8.0	J-361	J-362	196	-14.09	0.01	0.00	0.09	110
P-42	8.0	J-423	J-452	630	14.07	0.01	0.00	0.09	130
108	6.0	J-446	J-591	369	7.89	0.01	0.00	0.09	130
266	6.0	J-599	J-472	504	7.80	0.02	0.01	0.09	100
P-94	12.0	J-180	J-167	25	31.04	0.00	0.00	0.09	120
549	6.0	J-519	J-197	322	7.72	0.01	0.00	0.09	100
227	12.0	J-49	J-50	32	30.85	0.01	0.00	0.09	101
20	12.0	J-422	J-423	249	30.49	0.00	0.00	0.09	120
P-201	6.0	J-812	J-746	190	-7.59	0.01	0.00	0.09	100
271	8.0	J-679	J-67	564	-13.48	0.01	0.00	0.09	130
620	4.0	J-378	J-379	396	3.35	0.02	0.01	0.09	120
P-157	8.0	J-600	J-684	1,822	13.40	0.01	0.02	0.09	90
P-225	8.0	J-797	J-224	1,229	13.35	0.01	0.01	0.09	110
107	6.0	J-202	J-557	458	7.44	0.01	0.01	0.08	100
P-290	8.0	J-766	J-381	3	13.21	0.01	0.00	0.08	100
25	12.0	J-209	J-195	945	29.58	0.01	0.01	0.08	100
634	8.0	J-655	J-656	483	12.97	0.01	0.00	0.08	101
167	8.0	J-635	J-771	1,085	12.80	0.01	0.01	0.08	101
83	6.0	J-564	J-497	351	7.15	0.01	0.00	0.08	101
P-171	6.0	J-631	J-578	518	7.15	0.01	0.01	0.08	100
725	8.0	J-589	J-590	367	-12.63	0.01	0.00	0.08	130
751	8.0	J-226	J-227	111	-12.62	0.01	0.00	0.08	120
405	6.0	J-588	J-268	364	7.04	0.01	0.00	0.08	101
445	8.0	J-773	J-774	760	12.52	0.01	0.00	0.08	130
777	8.0	J-757	J-755	762	-12.15	0.01	0.01	0.08	100
651	10.0	J-161	J-629	817	18.97	0.01	0.00	0.08	110
11	6.0	J-408	J-728	632	-6.79	0.01	0.01	0.08	90
635	12.0	J-122	J-150	60	-26.67	0.01	0.00	0.08	90
122	8.0	J-361	J-688	791	11.76	0.01	0.01	0.08	110
700	8.0	J-670	J-428	552	11.74	0.01	0.00	0.07	100
198	8.0	J-621	J-622	437	11.55	0.00	0.00	0.07	130
P-179	8.0	J-66	J-352	1,403	11.50	0.01	0.01	0.07	90

Active Scenario: Peak Hour Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-203	8.0	J-746	J-709	561	-11.39	0.01	0.00	0.07	110
578	6.0	J-214	J-748	683	6.41	0.01	0.01	0.07	101
587	4.0	J-343	J-346	179	2.84	0.01	0.00	0.07	130
P-277	8.0	J-228	J-754	66	-11.33	0.01	0.00	0.07	100
552	8.0	J-437	J-776	994	11.30	0.01	0.01	0.07	110
162	8.0	J-502	J-791	882	11.27	0.00	0.00	0.07	130
P-39	12.0	J-195	J-153	63	25.33	0.00	0.00	0.07	100
170	8.0	J-813	J-570	943	11.13	0.01	0.01	0.07	110
P-228	8.0	J-831	J-806	685	11.10	0.01	0.00	0.07	100
133	6.0	J-499	J-493	1,056	6.09	0.01	0.01	0.07	100
P-172	6.0	J-578	J-810	428	6.08	0.01	0.00	0.07	100
P-139	6.0	J-134	J-77	1	6.02	0.00	0.00	0.07	100
P-141	6.0	J-77	J-134	1	-6.02	0.00	0.00	0.07	100
281	8.0	J-720	J-299	625	10.68	0.01	0.00	0.07	100
P-116	8.0	J-765	J-701	549	10.64	0.01	0.00	0.07	100
P-298	8.0	J-756	J-327	249	10.56	0.01	0.00	0.07	110
55	8.0	J-166	J-518	527	-10.49	0.01	0.00	0.07	101
21	10.0	J-851	J-633	2,127	-16.36	0.00	0.01	0.07	100
465	6.0	J-545	J-546	341	5.84	0.01	0.00	0.07	101
P-135	6.0	J-445	J-843	5	-5.78	0.01	0.00	0.07	100
626	8.0	J-614	J-615	408	10.25	0.00	0.00	0.07	120
56	8.0	J-753	J-671	743	-9.97	0.01	0.00	0.06	101
P-21	8.0	J-517	J-470	139	9.90	0.00	0.00	0.06	130
89	8.0	J-376	J-377	213	9.90	0.00	0.00	0.06	120
234	8.0	J-604	J-377	510	-9.90	0.00	0.00	0.06	120
P-22	8.0	J-470	J-376	187	9.90	0.00	0.00	0.06	130
105	8.0	J-33	J-34	11	-9.82	0.01	0.00	0.06	120
419	8.0	J-222	J-223	115	-9.79	0.01	0.00	0.06	100
420	8.0	J-758	J-223	722	9.79	0.01	0.00	0.06	100
325	8.0	J-351	J-457	312	9.74	0.01	0.00	0.06	101
95	6.0	J-73	J-574	356	-5.41	0.01	0.00	0.06	100
P-235	12.0	J-719	J-403	108	21.56	0.00	0.00	0.06	130
594	6.0	J-134	J-135	52	5.39	0.00	0.00	0.06	140
P-136	6.0	J-843	J-135	258	-5.39	0.01	0.00	0.06	100
125	8.0	J-423	J-342	1,182	9.54	0.00	0.00	0.06	130
288	8.0	J-530	J-724	608	9.52	0.01	0.00	0.06	100
57	8.0	J-606	J-607	395	-9.49	0.01	0.00	0.06	100
194	12.0	J-674	J-122	526	21.17	0.00	0.00	0.06	110
23	12.0	J-847	J-598	1,656	-21.10	0.00	0.00	0.06	110
497	8.0	J-226	J-375	212	9.35	0.01	0.00	0.06	101
397	6.0	J-460	J-461	282	-5.24	0.01	0.00	0.06	120
P-57	8.0	J-400	J-110	1,121	9.32	0.00	0.00	0.06	110
513	8.0	J-37	J-648	467	9.18	0.00	0.00	0.06	101
548	8.0	J-675	J-801	849	-9.13	0.00	0.00	0.06	110
346	2.0	J-271	J-272	132	0.57	0.02	0.00	0.06	110

Active Scenario: Peak Hour Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
304	8.0	J-11	J-428	758	-9.07	0.00	0.00	0.06	110
P-192	8.0	J-767	J-793	229	-9.00	0.00	0.00	0.06	100
P-226	8.0	J-224	J-613	55	8.85	0.00	0.00	0.06	110
P-186	12.0	J-488	J-858	621	19.27	0.00	0.00	0.05	130
200	8.0	J-638	J-654	480	8.56	0.00	0.00	0.05	130
320	8.0	J-761	J-125	722	-8.56	0.00	0.00	0.05	100
24	12.0	J-276	J-153	137	-19.20	0.00	0.00	0.05	100
649	12.0	J-638	J-639	449	-19.04	0.00	0.00	0.05	110
357	8.0	J-336	J-708	861	-8.46	0.00	0.00	0.05	110
P-254	8.0	J-800	J-735	294	8.33	0.00	0.00	0.05	101
142	8.0	J-782	J-757	876	-8.29	0.00	0.00	0.05	100
96	8.0	J-419	J-785	2,262	-8.27	0.00	0.01	0.05	120
457	12.0	J-96	J-97	28	-18.43	0.00	0.00	0.05	120
P-81	12.0	J-852	J-187	333	-18.09	0.00	0.00	0.05	110
272	8.0	J-559	J-560	350	7.99	0.00	0.00	0.05	130
550	6.0	J-197	J-592	372	4.48	0.00	0.00	0.05	130
629	8.0	J-27	J-28	516	7.93	0.00	0.00	0.05	101
P-236	12.0	J-403	J-214	1,056	17.75	0.00	0.00	0.05	130
294	8.0	J-580	J-581	362	7.84	0.00	0.00	0.05	100
176	10.0	J-161	J-162	67	12.18	0.00	0.00	0.05	101
P-182	12.0	J-391	J-631	647	17.52	0.00	0.00	0.05	130
261	8.0	J-508	J-749	783	-7.78	0.00	0.00	0.05	130
P-202	6.0	J-746	J-132	689	-4.36	0.01	0.00	0.05	100
413	10.0	J-92	J-484	1,311	12.07	0.00	0.00	0.05	110
454	8.0	J-500	J-501	303	7.65	0.00	0.00	0.05	130
37	8.0	J-698	J-500	602	7.65	0.00	0.00	0.05	130
P-143	8.0	J-234	J-738	201	7.61	0.00	0.00	0.05	130
P-37	12.0	J-276	J-217	447	16.92	0.00	0.00	0.05	100
653	12.0	J-494	J-495	300	16.64	0.00	0.00	0.05	90
615	8.0	J-120	J-121	41	7.32	0.00	0.00	0.05	110
244	8.0	J-303	J-786	880	7.31	0.00	0.00	0.05	100
774	8.0	J-505	J-431	743	7.25	0.00	0.00	0.05	101
P-247	12.0	J-822	J-395	621	15.89	0.00	0.00	0.05	110
39	8.0	J-281	J-282	142	7.03	0.00	0.00	0.04	120
416	8.0	J-775	J-776	862	-6.97	0.00	0.00	0.04	130
558	6.0	J-337	J-13	1,000	-3.78	0.00	0.00	0.04	110
P-92	12.0	J-167	J-427	1,458	15.09	0.00	0.00	0.04	120
P-89	12.0	J-427	J-318	267	15.09	0.00	0.00	0.04	120
P-90	12.0	J-318	J-625	579	15.09	0.00	0.00	0.04	120
P-86	12.0	J-625	J-733	12	15.09	0.00	0.00	0.04	120
P-35	12.0	J-585	J-838	7	-15.07	0.00	0.00	0.04	100
253	8.0	J-488	J-489	295	6.58	0.00	0.00	0.04	140
P-187	8.0	J-489	J-623	7	6.58	0.00	0.00	0.04	120
P-188	8.0	J-623	J-512	325	6.58	0.00	0.00	0.04	120
106	6.0	J-591	J-721	609	3.69	0.00	0.00	0.04	130

Active Scenario: Peak Hour Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
223	12.0	J-804	J-96	2,519	-14.68	0.00	0.00	0.04	120
P-32	12.0	J-626	J-804	794	-14.68	0.00	0.00	0.04	130
331	8.0	J-291	J-292	145	-6.52	0.00	0.00	0.04	110
661	8.0	J-342	J-343	177	6.47	0.00	0.00	0.04	130
183	8.0	J-586	J-587	363	6.46	0.00	0.00	0.04	101
92	6.0	J-359	J-360	192	3.63	0.00	0.00	0.04	101
693	8.0	J-255	J-256	121	6.43	0.00	0.00	0.04	100
398	6.0	J-764	J-516	803	-3.61	0.00	0.00	0.04	120
P-224	6.0	J-461	J-516	150	3.61	0.00	0.00	0.04	120
260	8.0	J-683	J-684	542	-6.35	0.00	0.00	0.04	101
P-106	8.0	J-655	J-815	509	6.35	0.00	0.00	0.04	101
218	8.0	J-19	J-20	4	6.21	0.00	0.00	0.04	130
88	8.0	J-334	J-19	203	6.21	0.00	0.00	0.04	130
P-10	8.0	J-20	J-365	357	6.21	0.00	0.00	0.04	80
P-13	8.0	J-365	J-480	5	6.21	0.00	0.00	0.04	80
540	8.0	J-254	J-285	388	6.14	0.00	0.00	0.04	101
551	8.0	J-590	J-595	378	6.12	0.00	0.00	0.04	130
P-261	8.0	J-327	J-424	98	6.07	0.00	0.00	0.04	120
173	8.0	J-571	J-645	472	6.07	0.00	0.00	0.04	101
P-262	8.0	J-424	J-328	70	6.07	0.00	0.00	0.04	120
677	8.0	J-710	J-720	724	-6.05	0.00	0.00	0.04	100
377	8.0	J-395	J-396	242	6.02	0.00	0.00	0.04	120
P-84	12.0	J-733	J-852	1,296	-13.44	0.00	0.00	0.04	120
621	6.0	J-378	J-544	340	-3.35	0.00	0.00	0.04	120
P-280	8.0	J-819	J-229	14	5.95	0.00	0.00	0.04	100
289	8.0	J-299	J-300	150	5.90	0.00	0.00	0.04	101
81	8.0	J-38	J-641	457	5.90	0.00	0.00	0.04	101
5	8.0	J-381	J-779	768	5.90	0.00	0.00	0.04	130
P-55	8.0	J-110	J-579	9	5.85	0.00	0.00	0.04	140
17	8.0	J-787	J-788	821	-5.84	0.00	0.00	0.04	130
P-215	12.0	J-14	J-855	399	-13.03	0.00	0.00	0.04	110
121	8.0	J-582	J-583	384	-5.78	0.00	0.00	0.04	101
361	6.0	J-430	J-506	315	3.24	0.00	0.00	0.04	130
P-158	8.0	J-684	J-637	271	-5.75	0.00	0.00	0.04	90
547	6.0	J-557	J-558	347	3.18	0.00	0.00	0.04	100
P-191	8.0	J-299	J-767	685	-5.58	0.00	0.00	0.04	100
657	8.0	J-636	J-637	440	-5.50	0.00	0.00	0.04	101
414	12.0	J-93	J-131	941	12.36	0.00	0.00	0.04	130
P-350	8.0	J-45	J-194	28	-5.46	0.00	0.00	0.03	101
124	8.0	J-788	J-833	1,278	5.44	0.00	0.00	0.03	130
P-260	8.0	J-792	J-11	514	-5.36	0.00	0.00	0.03	110
484	8.0	J-369	J-157	200	5.34	0.00	0.00	0.03	101
444	8.0	J-584	J-585	362	-5.33	0.00	0.00	0.03	100
307	8.0	J-650	J-736	669	5.16	0.00	0.00	0.03	101
P-242	8.0	J-840	J-345	135	5.16	0.00	0.00	0.03	130

Active Scenario: Peak Hour Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
764	6.0	J-564	J-821	1,000	2.90	0.00	0.00	0.03	100
323	8.0	J-831	J-832	1,202	5.10	0.00	0.00	0.03	110
102	6.0	J-235	J-236	109	2.78	0.00	0.00	0.03	140
314	10.0	J-349	J-277	180	7.72	0.00	0.00	0.03	101
P-38	12.0	J-217	J-163	580	11.01	0.00	0.00	0.03	100
123	8.0	J-576	J-577	362	4.88	0.00	0.00	0.03	130
242	8.0	J-206	J-630	460	4.88	0.00	0.00	0.03	101
345	6.0	J-14	J-271	459	2.73	0.00	0.00	0.03	110
P-137	6.0	J-348	J-76	153	-2.73	0.00	0.00	0.03	140
315	8.0	J-277	J-278	149	4.82	0.00	0.00	0.03	101
P-119	8.0	J-668	J-222	502	-4.76	0.00	0.00	0.03	130
616	8.0	J-121	J-421	244	4.65	0.00	0.00	0.03	110
466	12.0	J-474	J-475	278	10.37	0.00	0.00	0.03	101
P-160	6.0	J-604	J-759	633	-2.57	0.00	0.00	0.03	90
68	6.0	J-45	J-46	14	2.56	0.00	0.00	0.03	140
P-180	8.0	J-352	J-353	351	4.53	0.00	0.00	0.03	90
723	8.0	J-34	J-254	119	4.50	0.00	0.00	0.03	100
59	8.0	J-770	J-710	760	-4.48	0.00	0.00	0.03	100
P-178	8.0	J-353	J-759	195	4.45	0.00	0.00	0.03	90
622	6.0	J-247	J-248	118	-2.50	0.00	0.00	0.03	120
603	8.0	J-801	J-802	854	4.37	0.00	0.00	0.03	100
P-234	6.0	J-823	J-665	587	2.45	0.00	0.00	0.03	101
268	8.0	J-767	J-530	759	-4.34	0.00	0.00	0.03	100
422	12.0	J-555	J-556	346	9.64	0.00	0.00	0.03	120
699	8.0	J-650	J-291	508	-4.24	0.00	0.00	0.03	110
399	6.0	J-764	J-460	869	-2.34	0.00	0.00	0.03	120
P-19	8.0	J-480	J-441	170	4.13	0.00	0.00	0.03	80
248	8.0	J-353	J-354	201	-4.12	0.00	0.00	0.03	80
P-20	8.0	J-441	J-354	52	4.12	0.00	0.00	0.03	80
718	6.0	J-688	J-583	578	-2.31	0.00	0.00	0.03	100
341	8.0	J-336	J-337	174	3.98	0.00	0.00	0.03	110
381	8.0	J-731	J-732	634	-3.97	0.00	0.00	0.03	130
535	6.0	J-738	J-739	732	2.22	0.00	0.00	0.03	130
614	8.0	J-120	J-627	441	3.86	0.00	0.00	0.02	101
94	8.0	J-72	J-73	21	-3.82	0.00	0.00	0.02	100
243	8.0	J-303	J-304	154	3.80	0.00	0.00	0.02	80
P-11	12.0	J-858	J-334	1,229	8.54	0.00	0.00	0.02	110
724	8.0	J-254	J-568	756	-3.75	0.00	0.00	0.02	100
P-110	6.0	J-359	J-514	126	2.11	0.00	0.00	0.02	101
308	8.0	J-11	J-650	752	3.71	0.00	0.00	0.02	110
P-169	6.0	J-237	J-126	9	2.05	0.00	0.00	0.02	130
215	6.0	J-578	J-238	429	-2.05	0.00	0.00	0.02	130
P-170	6.0	J-126	J-238	110	2.05	0.00	0.00	0.02	130
483	6.0	J-157	J-158	62	2.05	0.00	0.00	0.02	120
609	6.0	J-158	J-366	281	2.05	0.00	0.00	0.02	120

Active Scenario: Peak Hour Demand
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Steady State Analysis

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P-175	8.0	J-837	J-778	90	-3.63	0.00	0.00	0.02	100
P-184	12.0	J-858	J-632	63	8.12	0.00	0.00	0.02	130
545	8.0	J-155	J-156	62	3.58	0.00	0.00	0.02	101
572	6.0	J-430	J-513	317	1.99	0.00	0.00	0.02	90
669	8.0	J-575	J-42	359	-3.52	0.00	0.00	0.02	130
P-41	8.0	J-694	J-423	137	-3.41	0.00	0.00	0.02	130
443	8.0	J-531	J-532	331	3.41	0.00	0.00	0.02	140
P-34	12.0	J-698	J-626	57	-7.65	0.00	0.00	0.02	130
4	12.0	J-233	J-234	109	7.61	0.00	0.00	0.02	130
P-162	12.0	J-517	J-495	1,538	-7.57	0.00	0.00	0.02	110
191	8.0	J-497	J-498	312	3.24	0.00	0.00	0.02	101
380	8.0	J-224	J-225	103	3.18	0.00	0.00	0.02	120
563	8.0	J-703	J-704	602	-3.18	0.00	0.00	0.02	110
P-30	12.0	J-281	J-626	584	-7.03	0.00	0.00	0.02	130
473	8.0	J-618	J-226	953	3.07	0.00	0.00	0.02	120
415	8.0	J-437	J-438	261	3.07	0.00	0.00	0.02	101
254	8.0	J-632	J-367	1,287	3.07	0.00	0.00	0.02	130
642	12.0	J-419	J-420	243	6.87	0.00	0.00	0.02	110
595	8.0	J-79	J-487	294	3.01	0.00	0.00	0.02	130
P-349	8.0	J-388	J-45	192	-2.90	0.00	0.00	0.02	101
475	10.0	J-373	J-374	212	4.48	0.00	0.00	0.02	101
404	6.0	J-403	J-404	483	1.60	0.00	0.00	0.02	120
6	12.0	J-834	J-687	1,128	-6.12	0.00	0.00	0.02	110
643	12.0	J-657	J-419	482	6.08	0.00	0.00	0.02	110
P-173	8.0	J-810	J-750	838	2.67	0.00	0.00	0.02	100
537	8.0	J-332	J-333	172	2.67	0.00	0.00	0.02	140
698	8.0	J-428	J-429	253	2.67	0.00	0.00	0.02	101
730	6.0	J-197	J-198	87	1.48	0.00	0.00	0.02	110
362	8.0	J-307	J-716	620	2.61	0.00	0.00	0.02	130
69	8.0	J-46	J-240	117	2.56	0.00	0.00	0.02	140
P-248	12.0	J-395	J-829	409	5.67	0.00	0.00	0.02	110
695	8.0	J-148	J-149	55	-2.45	0.00	0.00	0.02	101
P-56	8.0	J-579	J-111	28	2.45	0.00	0.00	0.02	140
469	12.0	J-193	J-194	83	5.46	0.00	0.00	0.02	101
566	12.0	J-662	J-659	500	5.46	0.00	0.00	0.02	130
282	8.0	J-149	J-606	399	-2.36	0.00	0.00	0.02	101
640	12.0	J-553	J-554	346	-5.16	0.00	0.00	0.01	101
627	8.0	J-556	J-807	1,367	2.24	0.00	0.00	0.01	120
P-120	8.0	J-222	J-669	13	2.18	0.00	0.00	0.01	130
168	12.0	J-153	J-154	61	4.82	0.00	0.00	0.01	100
312	8.0	J-149	J-606	1,204	-2.13	0.00	0.00	0.01	101
519	8.0	J-465	J-466	274	2.11	0.00	0.00	0.01	140
P-294	8.0	J-327	J-465	111	2.11	0.00	0.00	0.01	110
449	8.0	J-154	J-443	754	2.09	0.00	0.00	0.01	100
P-15	8.0	J-480	J-490	179	2.09	0.00	0.00	0.01	120

Active Scenario: Peak Hour Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
450	8.0	J-693	J-694	564	2.09	0.00	0.00	0.01	130
250	8.0	J-176	J-177	74	-2.09	0.00	0.00	0.01	120
249	8.0	J-352	J-176	190	-2.09	0.00	0.00	0.01	120
P-16	8.0	J-490	J-177	207	2.09	0.00	0.00	0.01	120
P-75	12.0	J-714	J-23	453	4.65	0.00	0.00	0.01	100
P-79	12.0	J-714	J-852	198	-4.65	0.00	0.00	0.01	110
P-189	6.0	J-710	J-793	18	-0.94	0.00	0.00	0.01	100
61	8.0	J-302	J-472	303	-1.61	0.00	0.00	0.01	100
648	8.0	J-621	J-847	1,628	1.60	0.00	0.00	0.01	110
93	8.0	J-504	J-72	303	-1.60	0.00	0.00	0.01	100
278	8.0	J-25	J-26	8	1.54	0.00	0.00	0.01	140
204	10.0	J-478	J-199	285	-2.33	0.00	0.00	0.01	130
P-347	8.0	J-396	J-412	616	1.37	0.00	0.00	0.01	120
P-348	8.0	J-412	J-434	24	1.37	0.00	0.00	0.01	120
378	12.0	J-536	J-214	334	-2.95	0.00	0.00	0.01	130
P-284	12.0	J-94	J-666	292	2.95	0.00	0.00	0.01	100
364	8.0	J-814	J-797	3,156	-1.26	0.00	0.00	0.01	130
418	10.0	J-669	J-338	1,418	-1.96	0.00	0.00	0.01	100
772	8.0	J-227	J-390	889	1.22	0.00	0.00	0.01	120
47	12.0	J-203	J-204	89	2.61	0.00	0.00	0.01	101
447	10.0	J-209	J-210	90	1.77	0.00	0.00	0.01	101
452	10.0	J-217	J-218	95	1.71	0.00	0.00	0.01	101
P-124	12.0	J-745	J-482	284	2.45	0.00	0.00	0.01	130
P-273	12.0	J-455	J-524	4	-2.45	0.00	0.00	0.01	100
P-163	12.0	J-334	J-661	381	2.33	0.00	0.00	0.01	110
P-164	12.0	J-661	J-517	222	2.33	0.00	0.00	0.01	110
641	12.0	J-420	J-112	1,080	2.29	0.00	0.00	0.01	110
P-43	12.0	J-443	J-693	156	2.09	0.00	0.00	0.01	100
159	8.0	J-420	J-112	1,472	0.89	0.00	0.00	0.01	110
768	8.0	J-675	J-198	549	0.86	0.00	0.00	0.01	110
720	12.0	J-284	J-642	457	-1.82	0.00	0.00	0.01	100
196	12.0	J-130	J-131	43	-1.77	0.00	0.00	0.01	130
663	12.0	J-610	J-611	395	-1.77	0.00	0.00	0.01	120
P-62	12.0	J-74	J-145	24	1.65	0.00	0.00	0.00	120
P-40	12.0	J-153	J-196	25	1.31	0.00	0.00	0.00	100
347	8.0	J-336	J-272	700	-0.57	0.00	0.00	0.00	110
P-133	8.0	J-843	J-542	45	-0.40	0.00	0.00	0.00	100
628	12.0	J-807	J-556	1,805	-0.03	0.00	0.00	0.00	120
90	2.0	J-470	J-471	309	0.00	0.00	0.00	0.00	130
564	2.0	J-174	J-175	74	0.00	0.00	0.00	0.00	130
387	2.0	J-566	J-567	354	0.00	0.00	0.00	0.00	101
118	4.0	J-185	J-186	92	0.00	0.00	0.00	0.00	140
586	10.0	J-661	J-306	494	0.00	0.00	0.00	0.00	130
610	6.0	J-142	J-143	53	0.00	0.00	0.00	0.00	120
214	6.0	J-126	J-127	43	0.00	0.00	0.00	0.00	130

Active Scenario: Peak Hour Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-78	6.0	J-605	J-230	143	0.00	0.00	0.00	0.00	100
335	6.0	J-245	J-246	118	0.00	0.00	0.00	0.00	80
P-88	8.0	J-261	J-318	135	0.00	0.00	0.00	0.00	140
P-24	8.0	J-53	J-706	735	0.00	0.00	0.00	0.00	130
P-26	10.0	J-706	J-306	45	0.00	0.00	0.00	0.00	130
P-17	8.0	J-441	J-142	230	0.00	0.00	0.00	0.00	80
P-151	8.0	J-777	J-321	14	0.00	0.00	0.00	0.00	140
430	8.0	J-261	J-262	125	0.00	0.00	0.00	0.00	140
P-18	8.0	J-142	J-442	40	0.00	0.00	0.00	0.00	80
P-174	8.0	J-750	J-811	128	0.00	0.00	0.00	0.00	100
87	8.0	J-490	J-491	304	0.00	0.00	0.00	0.00	120
702	8.0	J-431	J-432	256	0.00	0.00	0.00	0.00	101
P-100	8.0	J-712	J-718	620	0.00	0.00	0.00	0.00	120
P-303	8.0	J-3	J-861	503	0.00	0.00	0.00	0.00	110
P-166	6.0	J-259	J-392	11	0.00	0.00	0.00	0.00	130
600	6.0	J-172	J-358	191	0.00	0.00	0.00	0.00	101
392	6.0	J-412	J-413	237	0.00	0.00	0.00	0.00	120
360	6.0	J-213	J-214	120	0.00	0.00	0.00	0.00	120
P-25	10.0	J-305	J-706	109	0.00	0.00	0.00	0.00	130
427	10.0	J-733	J-355	674	0.00	0.00	0.00	0.00	120
P-49	12.0	J-726	J-848	40	0.00	0.00	0.00	0.00	100
190	12.0	J-295	J-296	151	0.00	0.00	0.00	0.00	130
155	8.0	J-169	J-170	76	0.00	0.00	0.00	0.00	140
128	8.0	J-230	J-170	141	0.00	0.00	0.00	0.00	140
426	8.0	J-479	J-262	288	0.00	0.00	0.00	0.00	140
P-23	8.0	J-705	J-53	159	0.00	0.00	0.00	0.00	130
428	8.0	J-355	J-356	184	0.00	0.00	0.00	0.00	120
P-29	12.0	J-258	J-281	15	0.00	0.00	0.00	0.00	130
781	8.0	J-157	J-249	118	0.00	0.00	0.00	0.00	101
767	8.0	J-341	J-520	460	0.00	0.00	0.00	0.00	101
567	8.0	J-658	J-174	510	0.00	0.00	0.00	0.00	130
612	8.0	J-623	J-624	457	0.00	0.00	0.00	0.00	120
425	8.0	J-522	J-523	325	0.00	0.00	0.00	0.00	80
7	8.0	J-24	J-680	546	0.00	0.00	0.00	0.00	110
596	8.0	J-372	J-612	451	0.00	0.00	0.00	0.00	120
528	8.0	J-424	J-425	332	0.00	0.00	0.00	0.00	120
429	8.0	J-625	J-522	425	0.00	0.00	0.00	0.00	80
P-9	8.0	J-597	J-20	44	0.00	0.00	0.00	0.00	80
P-33	12.0	J-803	J-698	9	0.00	0.00	0.00	0.00	130
P-44	12.0	J-693	J-444	108	0.00	0.00	0.00	0.00	100
386	12.0	J-536	J-566	850	0.00	0.00	0.00	0.00	130
780	12.0	J-112	J-113	38	0.00	0.00	0.00	0.00	110
P-87	8.0	J-317	J-261	25	0.00	0.00	0.00	0.00	140
P-342	6.0	PRV-2	J-769	469	0.00	0.00	0.00	0.00	100
P-341	6.0	J-762	PRV-2	301	0.00	0.00	0.00	0.00	100

Active Scenario: Peak Hour Demand
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-340	12.0	PRV-3	J-632	161	0.00	0.00	0.00	0.00	130
371	8.0	J-35	J-36	12	0.00	0.00	0.00	0.00	140
688	12.0	J-426	J-427	251	0.00	0.00	0.00	0.00	120
P-243	12.0	J-828	J-344	13	0.00	0.00	0.00	0.00	110
P-220	12.0	J-850	J-682	60	0.00	0.00	0.00	0.00	120
P-76	12.0	J-23	J-715	218	0.00	0.00	0.00	0.00	100
P-373	12.0	J-743	J-910	216	0.00	0.00	0.00	0.00	130
109	12.0	J-511	J-628	435	0.00	0.00	0.00	0.00	101
33	12.0	J-23	J-24	5	0.00	0.00	0.00	0.00	140
130	12.0	J-283	J-284	143	0.00	0.00	0.00	0.00	100
P-65	12.0	J-616	J-569	50	0.00	0.00	0.00	0.00	100
201	8.0	J-53	J-54	15	0.00	0.00	0.00	0.00	130
P-339	12.0	J-631	PRV-3	277	0.00	0.00	0.00	0.00	130
P-305	12.0	J-31	PRV-1	314	0.00	0.00	0.00	0.00	100
P-338	12.0	PRV-4	J-638	1,166	0.00	0.00	0.00	0.00	110
P-337	12.0	J-495	PRV-4	148	0.00	0.00	0.00	0.00	110
P-292	8.0	J-465	J-643	18	0.00	0.00	0.00	0.00	110
P-306	12.0	PRV-1	J-283	29	0.00	0.00	0.00	0.00	100
P-27	8.0	J-257	J-212	90	0.00	0.00	0.00	0.00	130
P-58	8.0	J-110	J-836	20	0.00	0.00	0.00	0.00	110
38	6.0	J-211	J-212	90	0.00	0.00	0.00	0.00	120
P-28	8.0	J-212	J-258	33	0.00	0.00	0.00	0.00	130
638	8.0	J-794	J-795	840	0.00	0.00	0.00	0.00	101
P-354	12.0	J-553	J-847	714	0.00	0.00	0.00	0.00	130

Active Scenario: Peak Hour Demand
FlexTable: Pump Table
Steady State Analysis

Label	Elevation (ft)	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
Boland-1	264.00	On	287.57	529.60	719.51	242.03
Boland-2	264.00	On	287.57	529.66	728.28	242.09
Boland-3	264.00	Off	287.69	529.37	0.00	0.00
Hosmer Pump #1	275.00	On	282.05	536.20	1,014.62	254.15
Hosmer Pump #3	275.00	On	282.12	535.02	989.10	252.90

Active Scenario: Peak Hour Demand
FlexTable: Tank Table
Steady State Analysis

Label	Zone	Elevation (Base) (ft)	Elevation (Minimum) (ft)	Elevation (Initial) (ft)	Elevation (Maximum) (ft)	Diameter (ft)	Flow (Out net) (gpm)	Status (Calculated)	Hydraulic Grade (ft)
Tara Road Tank	High Service	467.00	467.00	508.00	515.00	67.00	281.04	Emptying	508.00
Oak Hill Road Tank	Low Service	418.00	418.00	485.00	492.70	25.00	196.20	Emptying	485.00
Overlook Drive Tank	Low Service	460.00	460.00	486.00	493.30	40.00	-134.68	Filling	486.00

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-645	High Service	442.00	593.13	20	6	20	23
J-769	High Service	312.79	678.87	20	-55	20	22
J-571	High Service	415.51	715.99	20	24	31	20
J-647	High Service	371.61	741.61	20	40	49	20
J-93	High Service	432.24	751.93	20	11	20	20
J-92	High Service	432.80	751.93	20	11	20	20
J-130	High Service	417.77	752.16	20	16	26	20
J-131	High Service	418.68	752.20	20	15	25	20
J-200	High Service	421.49	761.57	20	16	25	20
J-483	High Service	365.11	762.34	20	41	50	20
J-199	High Service	421.00	763.15	20	16	25	20
J-478	High Service	422.78	763.22	20	14	24	20
J-484	High Service	351.91	766.15	20	47	55	20
J-834	High Service	337.96	771.40	20	-2	30	20
J-38	High Service	311.00	771.46	20	3	37	20
J-37	High Service	311.00	771.46	20	2	37	20
J-648	High Service	296.75	771.46	20	2	39	20
J-757	High Service	303.87	771.47	20	50	66	20
J-380	High Service	305.73	771.47	20	45	63	20
J-754	High Service	303.46	771.47	20	54	68	20
J-819	High Service	304.05	771.47	20	54	68	20
J-740	High Service	324.00	771.47	20	48	61	20
J-755	High Service	368.98	771.47	20	23	38	20
J-695	High Service	322.34	771.47	20	60	68	20
J-381	High Service	304.94	771.47	20	42	61	20
J-666	High Service	323.00	771.47	20	48	61	20
J-782	High Service	319.29	771.47	20	45	60	20
J-95	High Service	324.00	771.47	20	48	61	20
J-94	High Service	324.00	771.47	20	48	61	20
J-688	High Service	328.97	771.47	20	30	50	20
J-228	High Service	301.87	771.47	20	54	68	20
J-361	High Service	351.85	771.47	20	23	41	20
J-642	High Service	304.45	771.47	20	55	68	20
J-229	High Service	304.77	771.47	20	54	68	20
J-362	High Service	362.71	771.47	20	19	37	20
J-503	High Service	317.42	771.47	20	50	63	20
J-583	High Service	313.13	771.47	20	34	55	20
J-791	High Service	372.34	771.47	20	19	35	20
J-502	High Service	321.20	771.47	20	49	62	20
J-284	High Service	295.14	771.47	20	58	72	20
J-687	High Service	335.28	771.47	20	1	32	20
J-779	High Service	312.17	771.47	20	33	54	20
J-582	High Service	328.62	771.47	20	22	45	20

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-760	High Service	372.11	771.47	20	20	35	20
J-766	High Service	304.98	771.47	20	42	61	20
J-641	High Service	340.75	771.47	20	-17	21	20
J-586	High Service	327.91	791.09	20	58	66	20
J-587	High Service	331.62	791.09	20	52	61	20
J-570	High Service	398.67	810.46	20	34	39	20
J-813	High Service	318.95	852.58	20	69	72	20
J-654	High Service	430.41	893.67	20	15	20	23
J-821	High Service	260.57	894.65	20	-10	20	23
J-343	High Service	428.08	925.86	20	20	23	20
J-342	High Service	421.14	976.32	20	24	26	20
J-498	High Service	281.80	1,008.33	20	14	20	23
J-638	High Service	414.27	1,020.89	20	26	27	20
J-497	High Service	273.00	1,038.04	20	22	24	20
J-639	High Service	414.04	1,049.88	20	27	27	20
J-741	High Service	314.95	1,059.85	20	23	20	23
J-785	High Service	385.14	1,076.49	20	36	35	20
J-112	High Service	272.13	1,107.91	20	87	85	20
J-419	High Service	304.80	1,107.91	20	74	73	20
J-420	High Service	298.29	1,107.91	20	76	75	20
J-113	High Service	270.13	1,107.91	20	87	86	20
J-657	High Service	319.37	1,109.29	20	68	67	20
J-598	High Service	306.11	1,109.75	20	72	71	20
J-279	High Service	306.72	1,109.75	20	69	67	20
J-847	High Service	303.53	1,110.06	20	72	70	20
J-622	High Service	323.07	1,111.15	20	56	53	20
J-621	High Service	306.13	1,111.16	20	67	65	20
J-288	High Service	356.93	1,112.39	20	53	52	20
J-287	High Service	368.79	1,113.19	20	48	47	20
J-652	High Service	388.14	1,117.13	20	24	20	23
J-629	High Service	387.93	1,153.34	20	41	38	20
J-161	High Service	374.38	1,167.02	20	46	43	20
J-162	High Service	371.38	1,167.02	20	47	44	20
J-378	High Service	404.39	1,183.83	20	25	20	20
J-298	High Service	373.45	1,189.30	20	48	45	20
J-173	High Service	293.92	1,192.59	20	86	84	20
J-82	High Service	297.19	1,199.79	20	84	82	20
J-83	High Service	298.43	1,200.14	20	84	82	20
J-297	High Service	371.00	1,203.08	20	49	46	20
J-846	High Service	395.08	1,204.85	20	42	40	20
J-406	High Service	371.87	1,210.90	20	52	50	20
J-405	High Service	368.00	1,212.48	20	54	52	20
J-564	High Service	280.92	1,216.39	20	39	20	20

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-64	High Service	293.12	1,224.89	20	86	84	20
J-63	High Service	292.56	1,225.68	20	86	84	20
J-319	High Service	292.73	1,226.97	20	86	84	20
J-649	High Service	275.00	1,231.50	20	92	90	20
J-482	High Service	373.41	1,234.35	20	51	49	20
J-745	High Service	361.79	1,234.36	20	57	55	20
J-481	High Service	361.14	1,234.98	20	57	55	20
J-320	High Service	299.65	1,248.23	20	83	81	20
J-575	High Service	443.73	1,257.38	20	22	20	23
J-739	High Service	282.10	1,258.36	20	52	34	20
J-348	High Service	252.33	1,258.60	20	89	81	20
J-738	High Service	263.86	1,258.60	20	86	78	20
J-234	High Service	261.01	1,258.61	20	89	82	20
J-233	High Service	260.81	1,258.61	20	89	82	20
J-76	High Service	260.11	1,258.61	20	90	84	20
J-77	High Service	261.01	1,258.61	20	91	85	20
J-134	High Service	260.99	1,258.61	20	91	85	20
J-744	High Service	346.41	1,258.62	20	63	61	20
J-135	High Service	259.94	1,259.84	20	91	85	20
J-809	High Service	343.60	1,269.59	20	65	63	20
J-596	High Service	345.00	1,269.96	20	64	62	20
J-235	High Service	291.00	1,271.50	20	86	83	20
J-236	High Service	289.27	1,271.64	20	83	79	20
J-843	High Service	260.94	1,274.76	20	95	90	20
J-445	High Service	261.14	1,274.79	20	94	89	20
J-542	High Service	260.80	1,275.72	20	95	90	20
J-335	High Service	290.00	1,284.82	20	86	82	20
J-255	High Service	282.52	1,287.39	20	83	77	20
J-273	High Service	301.00	1,288.81	20	55	39	20
J-256	High Service	290.25	1,288.84	20	80	74	20
J-799	High Service	318.93	1,294.76	20	73	68	20
J-686	High Service	286.63	1,314.85	20	86	82	20
J-808	High Service	317.83	1,342.75	20	77	74	20
J-811	High Service	257.90	1,357.09	20	54	20	22
J-795	High Service	342.79	1,357.62	20	40	20	23
J-750	High Service	257.59	1,375.87	20	55	21	20
J-837	High Service	288.00	1,378.25	20	84	77	20
J-778	High Service	288.96	1,378.25	20	85	79	20
J-603	High Service	321.39	1,390.33	20	70	62	20
J-104	High Service	310.47	1,399.14	20	76	69	20
J-781	High Service	310.55	1,399.54	20	76	69	20
J-105	High Service	308.40	1,400.29	20	77	70	20
J-186	High Service	271.42	1,405.39	20	72	51	20

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-185	High Service	272.17	1,405.75	20	92	86	20
J-452	High Service	422.38	1,406.39	20	28	21	20
J-289	High Service	272.05	1,407.65	20	93	86	20
J-290	High Service	273.00	1,409.55	20	92	86	20
J-322	High Service	272.74	1,414.13	20	93	87	20
J-556	High Service	318.19	1,414.37	20	76	72	20
J-807	High Service	318.73	1,414.37	20	75	70	20
J-555	High Service	318.37	1,414.37	20	77	73	20
J-321	High Service	269.76	1,417.06	20	95	89	20
J-777	High Service	270.16	1,417.06	20	94	88	20
J-30	High Service	268.00	1,418.67	20	96	90	20
J-29	High Service	268.18	1,419.28	20	96	90	20
J-833	High Service	327.91	1,440.37	20	46	20	23
J-523	High Service	361.28	1,443.08	20	40	22	20
J-713	High Service	385.67	1,443.09	20	36	22	20
J-522	High Service	352.27	1,443.11	20	51	39	20
J-680	High Service	363.00	1,443.11	20	48	37	20
J-718	High Service	366.82	1,443.11	20	47	37	20
J-479	High Service	361.00	1,443.11	20	52	44	20
J-685	High Service	326.20	1,443.11	20	66	55	20
J-615	High Service	352.38	1,443.12	20	57	50	20
J-712	High Service	380.32	1,443.12	20	48	42	20
J-715	High Service	363.53	1,443.12	20	54	47	20
J-356	High Service	334.00	1,443.12	20	64	56	20
J-101	High Service	380.69	1,443.12	20	48	42	20
J-100	High Service	384.34	1,443.12	20	47	42	20
J-717	High Service	380.75	1,443.12	20	48	42	20
J-262	High Service	360.00	1,443.12	20	55	48	20
J-261	High Service	360.78	1,443.12	20	56	50	20
J-23	High Service	357.00	1,443.12	20	57	51	20
J-317	High Service	360.69	1,443.12	20	55	49	20
J-24	High Service	356.98	1,443.12	20	57	51	20
J-355	High Service	334.00	1,443.12	20	66	59	20
J-714	High Service	358.58	1,443.13	20	57	52	20
J-318	High Service	357.62	1,443.13	20	58	53	20
J-427	High Service	355.00	1,443.13	20	59	54	20
J-426	High Service	352.28	1,443.13	20	60	55	20
J-167	High Service	358.00	1,443.13	20	58	53	20
J-180	High Service	358.00	1,443.13	20	58	53	20
J-852	High Service	350.64	1,443.13	20	61	56	20
J-733	High Service	333.95	1,443.13	20	68	63	20
J-188	High Service	330.78	1,443.13	20	69	63	20
J-187	High Service	332.67	1,443.13	20	69	64	20

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-266	High Service	319.56	1,443.14	20	76	73	20
J-625	High Service	334.69	1,443.14	20	68	63	20
J-296	High Service	319.54	1,443.14	20	76	72	20
J-295	High Service	320.13	1,443.14	20	76	72	20
J-614	High Service	321.00	1,443.14	20	75	71	20
J-267	High Service	320.00	1,443.14	20	76	72	20
J-653	High Service	312.00	1,467.33	20	75	66	20
J-602	High Service	296.63	1,480.36	20	83	76	20
J-538	High Service	270.10	1,500.31	20	94	87	20
J-810	High Service	269.31	1,533.96	20	62	20	23
J-537	High Service	278.11	1,534.58	20	91	83	20
J-510	High Service	280.55	1,545.85	20	90	82	20
J-509	High Service	278.00	1,560.11	20	91	82	20
J-526	High Service	283.07	1,562.62	20	89	80	20
J-525	High Service	284.36	1,572.11	20	89	81	20
J-589	High Service	284.69	1,597.56	20	54	20	23
J-787	High Service	319.00	1,601.80	20	54	20	23
J-701	High Service	311.53	1,625.15	20	79	71	20
J-765	High Service	307.57	1,629.73	20	80	73	20
J-771	High Service	323.61	1,651.29	20	54	20	23
J-788	High Service	344.37	1,686.06	20	50	20	23
J-742	High Service	343.47	1,691.79	20	50	20	22
J-590	High Service	283.71	1,702.58	20	58	20	20
J-794	High Service	341.38	1,716.91	20	52	21	20
J-223	High Service	371.21	1,734.10	20	51	39	20
J-668	High Service	384.00	1,737.88	20	41	23	20
J-222	High Service	380.20	1,737.91	20	47	35	20
J-669	High Service	380.11	1,738.23	20	48	36	20
J-758	High Service	311.28	1,750.33	20	79	69	20
J-207	High Service	278.09	1,761.35	20	95	86	20
J-208	High Service	277.00	1,772.23	20	95	86	20
J-338	High Service	321.00	1,777.31	20	75	64	20
J-423	High Service	411.16	1,813.26	20	39	30	20
J-768	High Service	297.28	1,839.55	20	84	71	20
J-780	High Service	281.72	1,839.55	20	91	78	20
J-232	High Service	265.68	1,839.56	20	99	88	20
J-127	High Service	300.87	1,839.98	20	74	46	20
J-260	High Service	301.38	1,839.98	20	75	47	20
J-578	High Service	276.96	1,839.98	20	84	53	20
J-126	High Service	300.81	1,839.98	20	76	50	20
J-238	High Service	286.97	1,839.98	20	81	53	20
J-237	High Service	301.00	1,839.98	20	76	51	20
J-259	High Service	301.06	1,839.98	20	77	54	20

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-392	High Service	299.57	1,839.98	20	77	53	20
J-631	High Service	309.06	1,840.00	20	77	61	20
J-391	High Service	318.00	1,840.00	20	74	59	20
J-694	High Service	416.00	1,844.70	20	36	26	20
J-422	High Service	394.58	1,845.18	20	46	37	20
J-836	High Service	335.57	1,846.82	20	56	20	20
J-111	High Service	335.00	1,849.50	20	56	20	20
J-110	High Service	336.81	1,849.57	20	55	20	20
J-579	High Service	336.17	1,850.11	20	56	20	20
J-339	High Service	320.00	1,850.58	20	74	62	20
J-231	High Service	265.66	1,856.74	20	99	87	20
J-455	High Service	291.00	1,858.70	20	59	20	20
J-524	High Service	291.00	1,859.06	20	59	20	20
J-815	High Service	324.78	1,885.42	20	61	20	23
J-28	High Service	321.50	1,890.85	20	64	32	20
J-27	High Service	321.34	1,890.97	20	72	54	20
J-656	High Service	325.46	1,896.83	20	61	20	23
J-42	High Service	429.80	1,931.10	20	31	26	20
J-41	High Service	429.71	1,933.61	20	31	26	20
J-444	High Service	386.09	1,933.66	20	48	34	20
J-693	High Service	381.63	1,933.67	20	50	37	20
J-634	High Service	281.99	1,937.49	20	94	84	20
J-707	High Service	336.13	1,937.67	20	67	51	20
J-443	High Service	376.17	1,938.40	20	53	39	20
J-230	High Service	355.09	1,954.94	20	55	31	20
J-170	High Service	360.00	1,955.02	20	52	25	20
J-169	High Service	359.32	1,955.03	20	51	24	20
J-605	High Service	350.00	1,955.04	20	65	59	20
J-851	High Service	353.00	1,996.62	20	53	20	20
J-633	High Service	296.00	2,006.20	20	88	78	20
J-825	High Service	314.97	2,053.37	20	68	20	23
J-247	High Service	401.49	2,076.47	20	39	20	21
J-628	High Service	391.61	2,083.58	20	47	37	20
J-511	High Service	371.02	2,083.58	20	56	49	20
J-830	High Service	297.99	2,085.71	20	89	79	20
J-209	High Service	299.73	2,101.54	20	88	77	20
J-210	High Service	300.33	2,101.54	20	87	75	20
J-667	High Service	297.92	2,106.99	20	89	79	20
J-501	High Service	332.31	2,115.40	20	63	20	23
J-154	High Service	344.19	2,128.36	20	69	57	20
J-195	High Service	337.74	2,130.12	20	71	60	20
J-196	High Service	338.53	2,132.23	20	71	60	20
J-153	High Service	339.00	2,132.23	20	71	60	20

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-784	High Service	311.62	2,133.64	20	69	20	22
J-816	High Service	343.43	2,133.69	20	63	42	20
J-276	High Service	332.15	2,143.10	20	74	62	20
J-544	High Service	387.66	2,171.87	20	46	30	20
J-183	High Service	388.00	2,171.88	20	46	29	20
J-184	High Service	377.12	2,171.89	20	54	47	20
J-218	High Service	322.93	2,177.09	20	77	64	20
J-217	High Service	326.91	2,177.09	20	76	64	20
J-463	High Service	380.94	2,205.74	20	52	45	20
J-248	High Service	381.76	2,212.84	20	52	44	20
J-164	High Service	312.66	2,219.28	20	82	69	20
J-163	High Service	311.64	2,219.28	20	83	70	20
J-325	High Service	285.29	2,295.95	20	95	82	20
J-326	High Service	282.49	2,295.97	20	93	73	20
J-500	High Service	331.02	2,313.51	20	66	21	20
J-655	High Service	305.73	2,320.25	20	77	29	20
J-462	High Service	398.21	2,331.06	20	45	37	20
J-727	High Service	274.60	2,395.01	20	100	89	20
J-635	High Service	340.10	2,471.12	20	62	20	23
J-576	High Service	296.79	2,486.52	20	90	77	20
J-577	High Service	312.65	2,486.55	20	80	55	20
J-774	High Service	305.00	2,607.83	20	78	20	23
J-211	High Service	302.56	2,612.44	20	79	20	23
J-725	High Service	271.00	2,732.05	20	102	88	20
J-844	High Service	270.90	2,752.30	20	103	91	20
J-848	High Service	270.50	2,762.24	20	103	91	20
J-726	High Service	270.00	2,762.24	20	103	91	20
J-856	High Service	268.57	2,770.31	20	104	92	20
J-697	High Service	288.62	2,814.31	20	86	27	20
J-696	High Service	270.48	2,814.34	20	103	90	20
J-554	High Service	298.95	2,845.49	20	84	27	20
J-553	High Service	304.56	2,845.66	20	81	20	20
J-282	High Service	302.84	2,896.37	20	82	20	21
J-204	High Service	272.32	2,906.26	20	103	86	20
J-203	High Service	271.53	2,906.26	20	103	87	20
J-803	High Service	306.90	2,913.54	20	82	31	20
J-698	High Service	306.63	2,913.54	20	82	31	20
J-400	High Service	334.74	2,920.40	20	70	36	20
J-212	High Service	302.00	2,924.30	20	83	26	20
J-258	High Service	302.00	2,924.31	20	84	28	20
J-281	High Service	302.11	2,924.31	20	84	28	20
J-626	High Service	307.53	2,924.32	20	82	31	20
J-257	High Service	302.48	2,925.01	20	82	21	20

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-691	High Service	283.35	2,940.48	20	97	82	20
J-433	High Service	267.53	2,952.56	20	100	64	20
J-49	High Service	271.00	2,952.58	20	102	86	20
J-50	High Service	271.00	2,952.59	20	102	85	20
J-160	High Service	286.40	2,973.42	20	91	38	20
J-585	High Service	291.85	2,973.87	20	92	61	20
J-96	High Service	286.82	2,973.88	20	95	68	20
J-773	High Service	277.00	2,973.88	20	97	56	20
J-838	High Service	291.90	2,973.88	20	92	61	20
J-97	High Service	287.92	2,973.88	20	95	68	20
J-752	High Service	269.57	2,973.89	20	104	87	20
J-584	High Service	297.92	2,973.94	20	85	24	20
J-804	High Service	300.11	2,973.94	20	86	38	20
J-159	High Service	284.47	2,973.94	20	93	45	20
J-692	High Service	281.81	3,054.81	20	98	83	20
J-399	High Service	334.08	3,169.13	20	71	38	20
J-99	High Service	454.14	3,170.51	20	23	20	20
J-98	High Service	454.09	3,187.95	20	23	20	20
J-492	High Service	454.31	3,218.36	20	23	20	20
J-617	High Service	433.40	3,275.15	20	31	21	20
J-569	High Service	432.77	3,360.39	20	32	25	20
J-616	High Service	432.82	3,360.39	20	32	24	20
J-74	High Service	338.49	3,500.00	20	73	64	22
J-75	High Service	337.75	3,500.00	20	73	64	22
J-144	High Service	337.95	3,500.00	20	73	64	22
J-145	High Service	338.56	3,500.00	20	73	63	22
J-189	High Service	450.90	3,500.00	20	25	24	23
J-610	High Service	395.42	3,500.00	20	48	38	22
J-611	High Service	406.03	3,500.00	20	44	38	22
J-651	High Service	336.00	3,500.00	20	74	58	22
J-676	High Service	362.77	3,500.00	20	63	56	22
J-677	High Service	338.12	3,500.00	20	73	64	22
J-506	Low Service	395.91	662.19	20	-5	20	22
J-573	Low Service	346.80	689.66	20	-27	20	31
J-513	Low Service	378.57	705.03	20	-8	20	20
J-430	Low Service	401.88	716.52	20	4	20	23
J-572	Low Service	313.24	796.16	20	8	35	20
J-504	Low Service	263.26	842.29	20	-18	20	23
J-72	Low Service	264.00	857.70	20	-14	20	20
J-73	Low Service	264.00	858.95	20	-14	20	20
J-574	Low Service	267.46	949.44	20	5	20	22
J-304	Low Service	380.76	1,014.03	20	19	20	30
J-308	Low Service	406.63	1,034.02	20	20	20	22

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-721	Low Service	301.00	1,042.05	20	19	20	27
J-558	Low Service	258.38	1,095.11	20	26	20	26
J-303	Low Service	365.68	1,097.79	20	28	27	20
J-360	Low Service	301.40	1,107.30	20	26	20	30
J-307	Low Service	405.37	1,156.97	20	23	21	20
J-716	Low Service	385.66	1,156.97	20	26	23	20
J-514	Low Service	298.83	1,161.30	20	31	20	25
J-764	Low Service	206.00	1,184.47	20	41	20	31
J-775	Low Service	321.77	1,196.88	20	30	20	22
J-268	Low Service	375.69	1,213.00	20	27	20	23
J-630	Low Service	356.10	1,214.68	20	28	20	22
J-359	Low Service	306.15	1,222.69	20	35	20	22
J-776	Low Service	340.07	1,224.55	20	30	20	23
J-802	Low Service	298.92	1,226.78	20	34	20	22
J-748	Low Service	312.80	1,229.36	20	34	20	31
J-675	Low Service	329.51	1,236.19	20	32	20	22
J-786	Low Service	291.38	1,251.34	20	64	57	20
J-460	Low Service	188.74	1,256.70	20	53	23	20
J-516	Low Service	201.00	1,264.54	20	50	20	20
J-198	Low Service	271.78	1,268.05	20	56	42	20
J-206	Low Service	369.37	1,274.27	20	29	20	20
J-592	Low Service	274.83	1,288.03	20	42	20	20
J-197	Low Service	270.00	1,288.24	20	57	42	20
J-293	Low Service	275.10	1,288.36	20	66	56	20
J-437	Low Service	310.61	1,289.38	20	43	29	20
J-438	Low Service	313.00	1,289.41	20	38	23	20
J-461	Low Service	199.55	1,289.62	20	55	23	20
J-294	Low Service	267.02	1,291.00	20	67	55	20
J-591	Low Service	291.96	1,291.64	20	45	28	20
J-446	Low Service	278.86	1,291.66	20	63	53	20
J-202	Low Service	266.26	1,299.44	20	68	57	20
J-201	Low Service	267.00	1,299.55	20	68	57	20
J-557	Low Service	259.56	1,299.65	20	45	21	20
J-156	Low Service	261.61	1,302.07	20	66	52	20
J-155	Low Service	261.00	1,302.07	20	67	54	20
J-801	Low Service	288.53	1,303.53	20	51	36	20
J-519	Low Service	272.31	1,306.17	20	58	42	20
J-568	Low Service	273.09	1,311.16	20	65	53	20
J-205	Low Service	368.16	1,318.87	20	31	22	20
J-285	Low Service	281.70	1,324.90	20	57	41	20
J-254	Low Service	281.58	1,324.90	20	62	50	20
J-34	Low Service	282.78	1,326.88	20	62	50	20
J-33	Low Service	283.00	1,326.98	20	62	49	20

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-595	Low Service	284.36	1,327.36	20	54	38	20
J-31	Low Service	289.10	1,327.81	20	59	47	20
J-32	Low Service	289.01	1,327.90	20	59	47	20
J-7	Low Service	289.35	1,328.64	20	59	47	20
J-8	Low Service	289.27	1,328.67	20	59	47	20
J-221	Low Service	287.39	1,329.47	20	60	48	20
J-456	Low Service	298.30	1,333.61	20	56	45	20
J-409	Low Service	321.00	1,335.98	20	39	20	26
J-467	Low Service	365.29	1,350.30	20	33	24	20
J-448	Low Service	316.56	1,353.12	20	53	43	20
J-515	Low Service	199.62	1,364.90	20	62	23	20
J-447	Low Service	313.51	1,365.53	20	56	46	20
J-753	Low Service	353.85	1,368.93	20	34	20	24
J-493	Low Service	337.10	1,375.46	20	46	36	20
J-735	Low Service	375.66	1,378.40	20	31	20	31
J-3	Low Service	394.00	1,381.56	20	28	20	31
J-499	Low Service	300.83	1,385.40	20	62	51	20
J-835	Low Service	320.00	1,393.27	20	54	43	20
J-559	Low Service	314.22	1,396.12	20	56	45	20
J-560	Low Service	287.01	1,396.12	20	65	52	20
J-581	Low Service	285.25	1,402.92	20	70	60	20
J-68	Low Service	284.00	1,415.90	20	70	60	20
J-679	Low Service	290.21	1,419.63	20	63	48	20
J-67	Low Service	283.53	1,419.64	20	70	60	20
J-832	Low Service	359.00	1,421.99	20	36	20	31
J-580	Low Service	301.87	1,425.77	20	63	52	20
J-388	Low Service	274.59	1,457.60	20	72	57	20
J-240	Low Service	255.54	1,457.60	20	81	68	20
J-46	Low Service	264.42	1,457.60	20	78	66	20
J-45	Low Service	265.23	1,457.60	20	78	66	20
J-193	Low Service	267.79	1,457.60	20	78	66	20
J-194	Low Service	263.64	1,457.60	20	79	68	20
J-812	Low Service	355.14	1,461.62	20	38	20	31
J-561	Low Service	282.44	1,465.70	20	71	58	20
J-413	Low Service	350.92	1,469.35	20	38	20	31
J-394	Low Service	267.13	1,485.52	20	79	68	20
J-469	Low Service	265.12	1,485.66	20	80	68	20
J-670	Low Service	392.00	1,509.60	20	30	20	25
J-665	Low Service	276.32	1,528.13	20	56	20	31
J-671	Low Service	382.92	1,535.52	20	32	20	20
J-792	Low Service	382.82	1,538.19	20	32	20	20
J-428	Low Service	351.15	1,557.39	20	45	33	20
J-429	Low Service	356.15	1,557.70	20	40	23	20

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-363	Low Service	250.83	1,560.14	20	87	75	20
J-386	Low Service	250.07	1,564.17	20	87	75	20
J-729	Low Service	314.03	1,571.85	20	49	20	31
J-364	Low Service	250.00	1,598.48	20	87	73	20
J-283	Low Service	293.78	1,612.71	20	58	20	31
J-800	Low Service	360.94	1,613.37	20	41	26	20
J-11	Low Service	348.44	1,613.40	20	48	36	20
J-683	Low Service	277.24	1,631.66	20	60	20	31
J-116	Low Service	271.00	1,632.90	20	79	66	20
J-117	Low Service	271.00	1,637.66	20	79	65	20
J-814	Low Service	231.90	1,653.78	20	72	20	31
J-609	Low Service	262.15	1,654.74	20	83	68	20
J-333	Low Service	301.70	1,658.07	20	53	20	25
J-636	Low Service	283.15	1,659.85	20	59	20	31
J-608	Low Service	268.45	1,660.00	20	80	65	20
J-458	Low Service	272.00	1,696.16	20	78	61	20
J-545	Low Service	241.00	1,705.13	20	92	75	20
J-546	Low Service	250.59	1,705.71	20	68	23	20
J-332	Low Service	284.00	1,707.24	20	63	28	20
J-166	Low Service	292.77	1,712.25	20	62	33	20
J-518	Low Service	299.78	1,712.51	20	66	48	20
J-528	Low Service	346.62	1,733.70	20	48	29	20
J-772	Low Service	284.53	1,735.40	20	74	58	20
J-182	Low Service	302.38	1,744.23	20	66	49	20
J-181	Low Service	304.55	1,758.27	20	65	47	20
J-408	Low Service	325.00	1,760.08	20	51	20	22
J-736	Low Service	325.31	1,773.84	20	50	20	22
J-547	Low Service	243.00	1,778.35	20	92	75	20
J-734	Low Service	346.00	1,789.31	20	50	32	20
J-839	Low Service	346.00	1,794.37	20	50	32	20
J-451	Low Service	284.00	1,808.34	20	65	28	20
J-593	Low Service	295.15	1,818.50	20	70	52	20
J-594	Low Service	298.13	1,825.59	20	69	51	20
J-527	Low Service	340.88	1,836.37	20	52	34	20
J-637	Low Service	290.63	1,836.59	20	62	20	23
J-705	Low Service	342.97	1,842.87	20	48	20	26
J-389	Low Service	265.43	1,850.11	20	82	63	20
J-278	Low Service	298.12	1,850.17	20	58	20	25
J-390	Low Service	268.98	1,856.17	20	79	55	20
J-650	Low Service	326.00	1,861.31	20	59	42	20
J-227	Low Service	284.99	1,867.28	20	73	50	20
J-618	Low Service	314.91	1,867.44	20	61	40	20
J-375	Low Service	290.60	1,867.90	20	67	39	20

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-226	Low Service	290.87	1,867.90	20	70	47	20
J-9	Low Service	256.30	1,872.76	20	88	70	20
J-10	Low Service	256.52	1,872.97	20	87	69	20
J-770	Low Service	319.95	1,877.97	20	55	20	31
J-684	Low Service	271.04	1,878.65	20	70	24	20
J-139	Low Service	301.00	1,882.25	20	67	45	20
J-138	Low Service	301.71	1,882.97	20	66	45	20
J-763	Low Service	291.26	1,884.68	20	75	59	20
J-415	Low Service	256.97	1,885.71	20	88	70	20
J-425	Low Service	277.26	1,891.55	20	66	20	21
J-404	Low Service	294.77	1,899.53	20	62	20	30
J-783	Low Service	264.12	1,900.12	20	72	21	20
J-690	Low Service	287.25	1,913.45	20	69	37	20
J-861	Low Service	378.98	1,915.30	20	41	26	20
J-143	Low Service	330.48	1,916.17	20	53	20	24
J-644	Low Service	300.00	1,920.43	20	67	44	20
J-432	Low Service	303.00	1,926.12	20	60	20	30
J-805	Low Service	244.01	1,932.41	20	94	76	20
J-369	Low Service	239.00	1,938.71	20	95	76	20
J-842	Low Service	239.00	1,938.71	20	95	76	20
J-366	Low Service	244.88	1,939.40	20	76	22	20
J-158	Low Service	242.00	1,939.40	20	89	58	20
J-249	Low Service	241.56	1,939.41	20	90	61	20
J-157	Low Service	241.00	1,939.41	20	92	67	20
J-53	Low Service	337.95	1,940.63	20	52	22	20
J-54	Low Service	339.16	1,940.64	20	51	21	20
J-664	Low Service	245.63	1,941.75	20	93	75	20
J-678	Low Service	272.56	1,942.99	20	81	62	20
J-475	Low Service	310.43	1,944.40	20	64	44	20
J-474	Low Service	307.25	1,944.41	20	66	47	20
J-663	Low Service	263.04	1,947.18	20	86	68	20
J-5	Low Service	280.83	1,953.11	20	72	40	20
J-6	Low Service	280.79	1,953.11	20	72	40	20
J-756	Low Service	280.00	1,953.16	20	72	38	20
J-327	Low Service	277.05	1,953.17	20	70	30	20
J-424	Low Service	276.63	1,953.21	20	69	27	20
J-465	Low Service	276.00	1,953.22	20	69	26	20
J-643	Low Service	276.00	1,953.23	20	69	25	20
J-328	Low Service	278.00	1,953.24	20	68	24	20
J-466	Low Service	268.02	1,953.25	20	71	23	20
J-387	Low Service	290.00	1,953.26	20	64	21	20
J-179	Low Service	290.15	1,953.26	20	72	49	20
J-178	Low Service	296.69	1,953.26	20	70	49	20

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-442	Low Service	335.85	1,954.99	20	52	20	24
J-689	Low Service	293.80	1,960.04	20	66	32	20
J-277	Low Service	291.12	1,960.26	20	64	23	20
J-4	Low Service	394.00	1,966.52	20	35	20	30
J-737	Low Service	292.05	1,968.30	20	74	56	20
J-374	Low Service	287.30	1,982.73	20	64	20	22
J-434	Low Service	330.06	1,998.97	20	57	29	20
J-796	Low Service	312.30	1,999.82	20	65	47	20
J-349	Low Service	288.61	2,010.93	20	66	24	20
J-762	Low Service	292.02	2,014.71	20	70	43	20
J-142	Low Service	333.79	2,019.62	20	53	21	20
J-412	Low Service	329.55	2,020.83	20	57	29	20
J-373	Low Service	287.08	2,039.52	20	65	20	20
J-565	Low Service	315.00	2,054.12	20	57	20	20
J-806	Low Service	310.00	2,080.18	20	61	20	30
J-703	Low Service	318.43	2,085.93	20	56	20	21
J-331	Low Service	316.00	2,091.81	20	57	20	21
J-291	Low Service	316.19	2,098.92	20	65	46	20
J-704	Low Service	316.85	2,119.38	20	64	45	20
J-613	Low Service	207.74	2,135.47	20	94	20	21
J-225	Low Service	204.34	2,136.02	20	95	20	22
J-431	Low Service	298.46	2,150.97	20	65	22	20
J-627	Low Service	321.51	2,155.78	20	59	20	31
J-224	Low Service	209.19	2,156.08	20	94	20	21
J-271	Low Service	270.56	2,162.40	20	75	20	30
J-148	Low Service	315.04	2,167.68	20	60	20	25
J-600	Low Service	282.63	2,177.37	20	72	23	20
J-746	Low Service	337.22	2,198.70	20	56	28	20
J-292	Low Service	312.67	2,200.78	20	67	48	20
J-539	Low Service	316.00	2,209.37	20	61	20	25
J-491	Low Service	338.04	2,216.76	20	54	20	31
J-324	Low Service	311.08	2,218.19	20	63	20	29
J-728	Low Service	327.44	2,220.62	20	57	20	31
J-330	Low Service	319.22	2,222.46	20	58	20	21
J-323	Low Service	306.91	2,223.33	20	65	23	20
J-123	Low Service	296.47	2,223.60	20	69	28	20
J-724	Low Service	276.10	2,231.48	20	74	20	31
J-149	Low Service	311.05	2,232.30	20	63	22	20
J-122	Low Service	293.96	2,233.90	20	70	29	20
J-150	Low Service	290.79	2,235.98	20	72	30	20
J-674	Low Service	274.73	2,248.55	20	79	36	20
J-239	Low Service	287.00	2,259.99	20	73	27	20
J-508	Low Service	265.08	2,300.72	20	79	20	21

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-486	Low Service	276.69	2,328.41	20	77	29	20
J-543	Low Service	313.31	2,334.53	20	67	45	20
J-789	Low Service	325.36	2,336.26	20	59	26	20
J-367	Low Service	276.29	2,356.81	20	76	20	31
J-118	Low Service	284.00	2,369.09	20	75	28	20
J-119	Low Service	283.26	2,380.33	20	76	29	20
J-699	Low Service	283.58	2,389.56	20	76	29	20
J-174	Low Service	340.90	2,407.63	20	53	20	21
J-358	Low Service	264.00	2,415.45	20	80	20	30
J-421	Low Service	320.00	2,450.82	20	62	20	31
J-606	Low Service	287.28	2,485.46	20	75	32	20
J-818	Low Service	341.79	2,491.40	20	56	36	20
J-747	Low Service	334.45	2,539.24	20	58	20	22
J-310	Low Service	265.64	2,560.35	20	81	20	29
J-711	Low Service	313.88	2,571.82	20	65	20	30
J-441	Low Service	327.95	2,573.00	20	61	23	20
J-604	Low Service	328.00	2,590.20	20	60	20	22
J-709	Low Service	340.28	2,598.26	20	57	23	20
J-761	Low Service	264.00	2,598.33	20	83	20	30
J-464	Low Service	267.63	2,608.15	20	81	20	29
J-354	Low Service	326.60	2,612.71	20	61	22	20
J-272	Low Service	270.23	2,619.51	20	81	20	29
J-831	Low Service	280.38	2,628.30	20	84	54	20
J-490	Low Service	335.82	2,631.12	20	58	21	20
J-759	Low Service	316.59	2,639.38	20	65	20	25
J-177	Low Service	334.25	2,657.62	20	59	20	21
J-700	Low Service	268.00	2,671.95	20	83	27	20
J-176	Low Service	330.39	2,693.80	20	60	21	20
J-377	Low Service	331.34	2,719.38	20	60	20	23
J-305	Low Service	308.77	2,721.73	20	70	33	20
J-706	Low Service	307.00	2,721.75	20	71	36	20
J-624	Low Service	284.83	2,743.58	20	77	20	30
J-480	Low Service	334.00	2,747.87	20	59	21	20
J-306	Low Service	307.00	2,748.20	20	71	36	20
J-365	Low Service	334.00	2,753.02	20	59	21	20
J-353	Low Service	314.00	2,755.18	20	67	25	20
J-357	Low Service	270.40	2,764.01	20	82	20	29
J-376	Low Service	338.60	2,765.08	20	58	20	24
J-658	Low Service	356.00	2,771.81	20	50	28	20
J-601	Low Service	296.73	2,784.36	20	73	20	23
J-352	Low Service	312.61	2,791.91	20	68	27	20
J-749	Low Service	283.78	2,802.33	20	77	20	23
J-597	Low Service	337.05	2,808.13	20	58	20	25

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-250	Low Service	409.79	2,824.57	20	31	20	21
J-708	Low Service	339.74	2,848.40	20	61	40	20
J-512	Low Service	292.68	2,849.39	20	75	20	30
J-659	Low Service	357.55	2,876.62	20	50	23	20
J-662	Low Service	347.00	2,876.69	20	55	31	20
J-121	Low Service	310.05	2,877.09	20	70	24	20
J-470	Low Service	335.73	2,901.68	20	60	22	20
J-485	Low Service	265.17	2,908.92	20	84	20	29
J-494	Low Service	332.93	2,921.79	20	60	20	22
J-246	Low Service	256.85	2,924.59	20	89	20	30
J-120	Low Service	307.38	2,952.61	20	71	26	20
J-495	Low Service	333.64	2,956.11	20	60	20	21
J-396	Low Service	290.60	2,988.31	20	80	46	20
J-20	Low Service	338.55	2,996.61	20	59	20	20
J-19	Low Service	338.52	3,000.66	20	59	20	20
J-300	Low Service	261.45	3,041.27	20	87	20	29
J-743	Low Service	348.56	3,043.11	20	54	30	20
J-910	Low Service	350.00	3,043.11	20	54	28	20
J-552	Low Service	361.06	3,046.47	20	50	30	20
J-710	Low Service	298.48	3,052.42	20	75	29	20
J-26	Low Service	282.03	3,072.98	20	80	20	21
J-551	Low Service	356.09	3,081.97	20	52	31	20
J-25	Low Service	281.00	3,083.07	20	81	20	20
J-661	Low Service	328.05	3,094.26	20	64	26	20
J-529	Low Service	279.97	3,095.90	20	81	20	26
J-517	Low Service	333.00	3,098.41	20	62	23	20
J-520	Low Service	268.91	3,105.29	20	84	20	28
J-416	Low Service	275.16	3,109.17	20	86	51	20
J-797	Low Service	216.00	3,110.89	20	106	27	20
J-407	Low Service	296.93	3,119.77	20	75	20	30
J-793	Low Service	298.37	3,145.41	20	75	28	20
J-530	Low Service	277.00	3,171.28	20	82	20	20
J-334	Low Service	325.29	3,183.83	20	65	27	20
J-472	Low Service	327.59	3,290.52	20	64	20	20
J-336	Low Service	289.77	3,295.35	20	80	27	20
J-767	Low Service	284.93	3,309.63	20	81	29	20
J-124	Low Service	264.64	3,338.79	20	93	61	20
J-299	Low Service	263.00	3,343.12	20	89	22	20
J-337	Low Service	285.55	3,364.53	20	81	22	20
J-731	Low Service	218.04	3,364.95	20	106	20	29
J-125	Low Service	266.38	3,404.32	20	92	57	20
J-632	Low Service	305.55	3,438.16	20	74	34	20
J-858	Low Service	305.82	3,438.16	20	74	34	20

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-720	Low Service	280.90	3,441.67	20	83	29	20
J-623	Low Service	294.99	3,472.07	20	77	20	20
J-489	Low Service	295.34	3,486.57	20	77	20	20
J-2	Low Service	272.90	3,500.00	20	87	44	23
J-13	Low Service	270.37	3,500.00	20	93	77	29
J-14	Low Service	269.17	3,500.00	20	94	78	29
J-21	Low Service	301.19	3,500.00	20	78	48	30
J-22	Low Service	301.00	3,500.00	20	78	48	30
J-35	Low Service	283.24	3,500.00	20	84	38	30
J-36	Low Service	283.48	3,500.00	20	84	37	30
J-47	Low Service	301.29	3,500.00	20	78	48	30
J-48	Low Service	301.49	3,500.00	20	78	48	30
J-65	Low Service	311.85	3,500.00	20	72	36	24
J-66	Low Service	312.73	3,500.00	20	72	35	23
J-78	Low Service	309.15	3,500.00	20	76	68	28
J-79	Low Service	309.25	3,500.00	20	76	67	28
J-86	Low Service	281.89	3,500.00	20	88	77	28
J-87	Low Service	282.75	3,500.00	20	87	76	28
J-102	Low Service	305.26	3,500.00	20	76	42	26
J-103	Low Service	304.46	3,500.00	20	76	41	27
J-108	Low Service	258.83	3,500.00	20	98	84	29
J-109	Low Service	258.00	3,500.00	20	99	87	29
J-114	Low Service	266.00	3,500.00	20	91	58	21
J-115	Low Service	265.68	3,500.00	20	91	58	21
J-132	Low Service	307.27	3,500.00	20	75	44	26
J-133	Low Service	309.48	3,500.00	20	74	43	26
J-151	Low Service	283.00	3,500.00	20	84	41	30
J-152	Low Service	284.45	3,500.00	20	84	42	30
J-171	Low Service	268.26	3,500.00	20	90	51	26
J-172	Low Service	266.78	3,500.00	20	89	44	26
J-191	Low Service	288.00	3,500.00	20	85	61	29
J-192	Low Service	290.32	3,500.00	20	84	61	29
J-213	Low Service	270.88	3,500.00	20	86	22	28
J-214	Low Service	275.00	3,500.00	20	89	65	28
J-215	Low Service	270.68	3,500.00	20	92	73	28
J-216	Low Service	272.32	3,500.00	20	92	78	28
J-245	Low Service	259.00	3,500.00	20	98	81	29
J-251	Low Service	413.71	3,500.00	20	31	26	28
J-265	Low Service	283.11	3,500.00	20	84	38	30
J-270	Low Service	268.18	3,500.00	20	87	26	26
J-275	Low Service	303.51	3,500.00	20	76	38	30
J-301	Low Service	329.00	3,500.00	20	65	31	22
J-302	Low Service	328.00	3,500.00	20	66	33	25

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-309	Low Service	268.95	3,500.00	20	88	41	25
J-315	Low Service	277.81	3,500.00	20	89	78	28
J-316	Low Service	268.79	3,500.00	20	93	81	28
J-329	Low Service	264.00	3,500.00	20	95	74	28
J-340	Low Service	258.00	3,500.00	20	96	74	27
J-341	Low Service	259.65	3,500.00	20	95	65	25
J-344	Low Service	268.93	3,500.00	20	93	74	28
J-345	Low Service	270.71	3,500.00	20	91	60	28
J-350	Low Service	260.00	3,500.00	20	96	77	27
J-351	Low Service	264.13	3,500.00	20	93	63	27
J-372	Low Service	324.61	3,500.00	20	69	61	27
J-395	Low Service	283.72	3,500.00	20	85	58	28
J-403	Low Service	288.18	3,500.00	20	85	71	28
J-414	Low Service	292.61	3,500.00	20	83	73	28
J-417	Low Service	299.88	3,500.00	20	78	47	30
J-436	Low Service	324.13	3,500.00	20	68	34	30
J-439	Low Service	298.67	3,500.00	20	79	45	30
J-440	Low Service	303.33	3,500.00	20	77	43	30
J-457	Low Service	265.47	3,500.00	20	88	22	27
J-468	Low Service	272.69	3,500.00	20	87	42	24
J-476	Low Service	279.00	3,500.00	20	86	40	30
J-487	Low Service	297.56	3,500.00	20	79	49	28
J-488	Low Service	313.88	3,500.00	20	71	32	21
J-496	Low Service	322.50	3,500.00	20	69	38	30
J-505	Low Service	271.00	3,500.00	20	88	43	25
J-521	Low Service	274.00	3,500.00	20	91	75	28
J-536	Low Service	276.13	3,500.00	20	88	61	28
J-548	Low Service	292.77	3,500.00	20	82	50	30
J-566	Low Service	282.50	3,500.00	20	84	49	28
J-588	Low Service	381.97	3,500.00	20	45	36	27
J-599	Low Service	325.09	3,500.00	20	67	28	28
J-607	Low Service	263.50	3,500.00	20	91	45	22
J-612	Low Service	294.84	3,500.00	20	78	32	27
J-619	Low Service	290.87	3,500.00	20	81	42	30
J-620	Low Service	279.25	3,500.00	20	85	38	30
J-681	Low Service	311.83	3,500.00	20	75	60	26
J-682	Low Service	295.00	3,500.00	20	83	67	27
J-719	Low Service	292.24	3,500.00	20	83	71	28
J-732	Low Service	221.07	3,500.00	20	110	62	28
J-790	Low Service	259.19	3,500.00	20	94	54	29
J-798	Low Service	230.79	3,500.00	20	110	94	28
J-817	Low Service	268.16	3,500.00	20	94	77	25
J-820	Low Service	280.88	3,500.00	20	89	72	29

Active Scenario: MDD_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-822	Low Service	268.32	3,500.00	20	93	74	28
J-823	Low Service	264.40	3,500.00	20	94	71	28
J-824	Low Service	274.37	3,500.00	20	90	71	28
J-826	Low Service	280.23	3,500.00	20	89	71	29
J-827	Low Service	290.57	3,500.00	20	80	32	29
J-828	Low Service	269.59	3,500.00	20	93	73	28
J-829	Low Service	282.90	3,500.00	20	85	52	28
J-840	Low Service	269.40	3,500.00	20	92	72	28
J-841	Low Service	289.74	3,500.00	20	84	65	28
J-845	Low Service	229.55	3,500.00	20	111	94	28
J-849	Low Service	262.68	3,500.00	20	98	88	29
J-850	Low Service	295.60	3,500.00	20	82	67	27
J-853	Low Service	280.93	3,500.00	20	89	72	29
J-855	Low Service	258.00	3,500.00	20	99	87	29

APPENDIX G

AVAILABLE SYSTEM PRESSURE ON A MAX DAY MAP

N

MARLBOROUGH

LOW SERVICE
HIGH SERVICE

MARLBORO ROAD

SUDBURY RESERVOIR

CLEAR HILL
0.46 MG STORAGE TANK
OVERFLOW=493.3 FT

LEDGE HILL PRV

HULTMAN AQUEDUCT

FRAMINGHAM ROAD

BOLAND PUMP STATION

SEARS ROAD

METROWEST WATER SUPPLY TUNNEL

HOSMER PUMP STATION

FAYVILLE DAM

MAIN STREET

TOWN SQUARE PRV

MAIN STREET

CORDAVILLE ROAD

FRAMINGHAM

495

TARA ROAD
1.3 MG STORAGE TANK
OVERFLOW=515.0 FT

9

DPW GARAGE

OAKHILL ROAD

OAK HILL
0.275 MG STORAGE TANK
OVERFLOW=492.7 FT

WESTBOROUGH

PARKERVILLE ROAD

MT. VICKERY PRV

WOODLAND ROAD

ASHLAND INTERCONNECTION

90

PARKERVILLE ROAD PRV

ASHLAND

HIGH SERVICE
LOW SERVICE

SOUTHVILLE ROAD

HOPKINTON

Legend

Node Pressure

- <=35 PSI
- <=80 PSI
- >80 PSI
- Water Storage Tank
- Pump Station
- PRV
- Water Main
- Major Roads
- Town Boundary

1 inch = 1,000 feet

1,000 500 0 1,000 2,000 3,000 4,000 Feet

PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
8 BLACKSTONE VALLEY PLACE
LICOLN, RI 02865
401-334-4100

TOWN OF SOUTHBOROUGH
WATER SYSTEM MAP

SOUTHBOROUGH, MASSACHUSETTS

REVISIONS:

PROJECT NO: 08176.20
DATE: DECEMBER 2021
SCALE: AS NOTED

DRAWING TITLE:
AVAILABLE SYSTEM PRESSURE ON A MAX DAY

APPENDIX G

APPENDIX H

PIPE RANKING FIGURE

N

LOW SERVICE
HIGH SERVICE

MARLBOROUGH

MARLBORO ROAD

LEDGE HILL PRV

CLEAR HILL
0.46 MG STORAGE TANK
OVERFLOW=493.3 FT

SUDBURY
RESERVOIR

HULTMAN
AQUEDUCT

P BOLAND PUMP STATION

METROWEST WATER SUPPLY TUNNEL

SEARS ROAD

FRAMINGHAM ROAD

P HOSMER PUMP STATION

FAYVILLE DAM

MAIN STREET

TOWN SQUARE PRV

MAIN STREET

495

CORDAVILLE ROAD

FRAMINGHAM

TARA ROAD
1.3 MG STORAGE TANK
OVERFLOW=515.0 FT

9

9

OAKHILL ROAD

DPW GARAGE

OAK HILL
0.275 MG STORAGE TANK
OVERFLOW=492.7 FT

PARKERVILLE ROAD

MT. VICKERY PRV

WOODLAND ROAD

ASHLAND
INTERCONNECTION

CORDAVILLE ROAD

90

WOODLAND ROAD

PARKERVILLE ROAD PRV

WESTBOROUGH

ASHLAND

HIGH SERVICE
LOW SERVICE

SOUTHVILLE ROAD

HOPKINTON

Legend

Pipe

- Most Critical
- Least Critical
- Water Storage Tank
- P Pump Station
- PRV
- Major Roads
- Town Boundary

1 inch = 1,000 feet

1,000 500 0 1,000 2,000 3,000 4,000 Feet

PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
8 BLACKSTONE VALLEY PLACE
LICOLN, RI 02865
401-334-4100

TOWN OF SOUTHBOROUGH
WATER SYSTEM MAP

SOUTHBOROUGH, MASSACHUSETTS

REVISIONS:

PROJECT NO: 08176.20
DATE: DECEMBER 2021
SCALE: AS NOTED

DRAWING TITLE:
PIPE RANKING FIGURE

APPENDIX H

APPENDIX I

AVAILABLE FIRE FLOW

N

LOW SERVICE
HIGH SERVICE

MARLBOROUGH

MARLBORO ROAD

SUDBURY RESERVOIR

LEDGE HILL PRV

CLEAR HILL
0.46 MG STORAGE TANK
OVERFLOW=493.3 FT

HULTMAN AQUEDUCT

BOLAND PUMP STATION

METROWEST WATER SUPPLY TUNNEL

SEARS ROAD

FRAMINGHAM ROAD

HOSMER PUMP STATION

FAYVILLE DAM

MAIN STREET

TOWN SQUARE PRV

CORDAVILLE ROAD

FRAMINGHAM

495

TARA ROAD
1.3 MG STORAGE TANK
OVERFLOW=515.0 FT

9

DPW GARAGE

OAKHILL ROAD

OAK HILL
0.275 MG STORAGE TANK
OVERFLOW=492.7 FT

WESTBOROUGH

PARKERVILLE ROAD

MT. VICKERY PRV

WOODLAND ROAD

ASHLAND INTERCONNECTION

90

PARKERVILLE ROAD PRV

ASHLAND

HIGH SERVICE
LOW SERVICE

SOUTHVILLE ROAD

HOPKINTON

Legend

Available Fire Flow

- <=1000 GPM
- <=2000 GPM
- <=3000 GPM
- <=3500 GPM
- Water Storage Tank
- Pump Station
- PRV
- Water Main
- Major Roads
- Town Boundary

1 inch = 1,000 feet

1,000 500 0 1,000 2,000 3,000 4,000 Feet

PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
8 BLACKSTONE VALLEY PLACE
LICOLN, RI 02865
401-334-4100

TOWN OF SOUTHBOROUGH
WATER SYSTEM MAP

SOUTHBOROUGH, MASSACHUSETTS

REVISIONS:

PROJECT NO: 08176.20
DATE: DECEMBER 2021
SCALE: AS NOTED

DRAWING TITLE:
AVAILABLE FIRE FLOW

APPENDIX I

APPENDIX J

ISO HYDRANT FLOW DATA SUMMARY

Table 7 - Hydrant Flow Data Summary for Town Of Southborough

Conducted by ISO Commercial Risk Services, Inc.

City Southborough State MA Zip 01772 Witnessed by A. Lagadinos Date 3-9-00

TEST NO.	TYPE DIST.*	TEST LOCATION	SERVICE	FLOW-GPM INDIVIDUAL HYDRANTS			FLOW-GPM TOTAL	PRESSURE PSI STATIC	PRESSURE PSI RESID.	FLOW AT 20 PSI NEEDED **	FLOW AT 20 PSI AVAIL.	REMARKS
1	Res	Presidential & Sears	Main	1140			1140	48	30	500	1400	
2	Res	6 Maple Crest Dr.	"	1570			1570	80	42	750	2000	
3	Comm	Main St. at Fay School	"	2050			2050	76	55	3000	3500	
4	Comm	150 Cordaville Rd	"	1380			1380	96	73	3000	2700	
5	Comm	Cor. Rte 9 & Willow St	"	1200			1200	90	22	3500	1200	
6	Comm	337 Turnpike Rd-Rt 9	"	2060			2060	66	55	2500	4500	
7	Res	Lynnbrook at CUL DE SAC	"	2820			2820	86	75	500	7400	
8	Comm	Neary School-Front Yard	"	1690			1690	90 98	34 26	3000	1900	
9	Comm	21 Boston Rd.	"	2150			2150	78	48	1500	3100	
10	Comm	17 Oregon Rd.	"	1280			1280	60 73	8 61	1250	1100	
11	Comm	Parkerville Rd.near Gilmore	"	1160			1160	80	62	2250	2200	
12	Res	151 Southville Rd	"	1980			1980	92	58	750	3000	
13	Comm	Southville Rd.at North St	"	1950			1950	102	50	2250	2500	
14	Comm	10 Southville Rd.	"	2220			2220	105	48	1250	2800	

THE ABOVE LISTED NEEDED FIRE FLOWS ARE FOR INSURANCE RATING PURPOSES ONLY AND ARE *NOT* INTENDED TO PREDICT THE MAXIMUM AMOUNT OF WATER REQUIRED FOR A LARGE SCALE FIRE CONDITION. THE AVAILABLE FLOWS ONLY INDICATE THE CONDITIONS THAT EXISTED AT THE TIME AND AT THE LOCATION WHERE TESTS WERE WITNESSED.

* Comm = Commercial; Res = Residential.

** Needed is the rate of flow for a specific duration for a full credit condition. Needed Fire Flows greater than 3,500 gpm are not considered in determining the classification of the city when using the Fire Suppression Rating Schedule.

Table 6 – Fire Flow Test

INSURANCE SERVICES OFFICE, INC.

HYDRANT FLOW DATA SUMMARY

City SOUTHBOROUGH
County WORCESTER State MA Witnessed by Southborough Water Dept. Date March 4, 2002

TEST NO.	TYPE DIST.*	TEST LOCATION	SERVICE	FLOW - GPM $Q=(29.83(C(d^2)p^{0.5}))$ INDIVIDUAL HYDRANTS			TOTAL	PRESSURE PSI STATIC	PRESSURE PSI RESID.	FLOW -AT 20 PSI $Q_R=Q_f(h_R^{0.54}/h_f^{0.54})$ NEEDED **	FLOW -AT 20 PSI AVAIL.	REMARKS
1	Comm	BOSTON WORCESTER @ COSLIN	MAIN	1180			1180	45	44	4000	6700	A (2170gpm)
1-A	Comm	BOSTON WORCESTER @ COSLIN	MAIN	1180			1180	45	44	3000	6700	
2	Comm	MARLBORO @ ST.MARKS	MAIN	1180	1130		1180	69 72	50 54	2500	2100	
3	Comm	ON NEWTON @ ABT.1/4 MILE S.OF OVERLOOK	MAIN	1300			1300	70	67	3000	5900	A (1920gpm)
4	Comm	RICHARDS @ PARKERVILLE	MAIN	1060	1050		1060	98 83	50 48	2250	1500	
5	Comm	MT.VICKERY RD.@ CORDAVILLE RD	MAIN	1150	1150		1150	85 84	52 48	3500	1600	
6	Comm	RT -9 near DEERFOOT	MAIN	1260			1260	56	50	1500	3300	
7	Comm	HIGHLAND @ ATWOOD	MAIN	920			920	80	42	1500	1200	
8	Comm	ON BOSTON RD./ABT.1000' S.OF E.MAIN ST	MAIN	2140			2140	78	48	1500	3100	
9	Res	BANFILL @ FAIRVIEW	MAIN	810			810	38	28	750	1100	
10	Comm	BREAKNECK RD.@ MT.VICKERY RD	MAIN	1200			1200	100	89	2000	3500	A (1920gpm)
11	Res	BOSTON RD NR.VALLEY	MAIN	1450			1450	112	84	750	2800	
12	Res	FISHER @ NORTHBORO	MAIN	1690			1690	96	82	750	4200	
			A = Limited by available hydrants.									

THE ABOVE LISTED NEEDED FIRE FLOWS ARE FOR PROPERTY INSURANCE PREMIUM CALCULATIONS ONLY AND ARE *NOT* INTENDED TO PREDICT THE MAXIMUM AMOUNT OF WATER REQUIRED FOR A LARGE SCALE FIRE CONDITION. THE AVAILABLE FLOWS ONLY INDICATE THE CONDITIONS THAT EXISTED AT THE TIME AND AT THE LOCATION WHERE TESTS WERE WITNESSED.

*Comm = Commercial; Res = Residential.

**Needed is the rate of flow for a specific duration for a full credit condition. Needed Fire Flows greater than 3,500 gpm are not considered in determining the classification of the city when using the Fire Suppression Rating Schedule.

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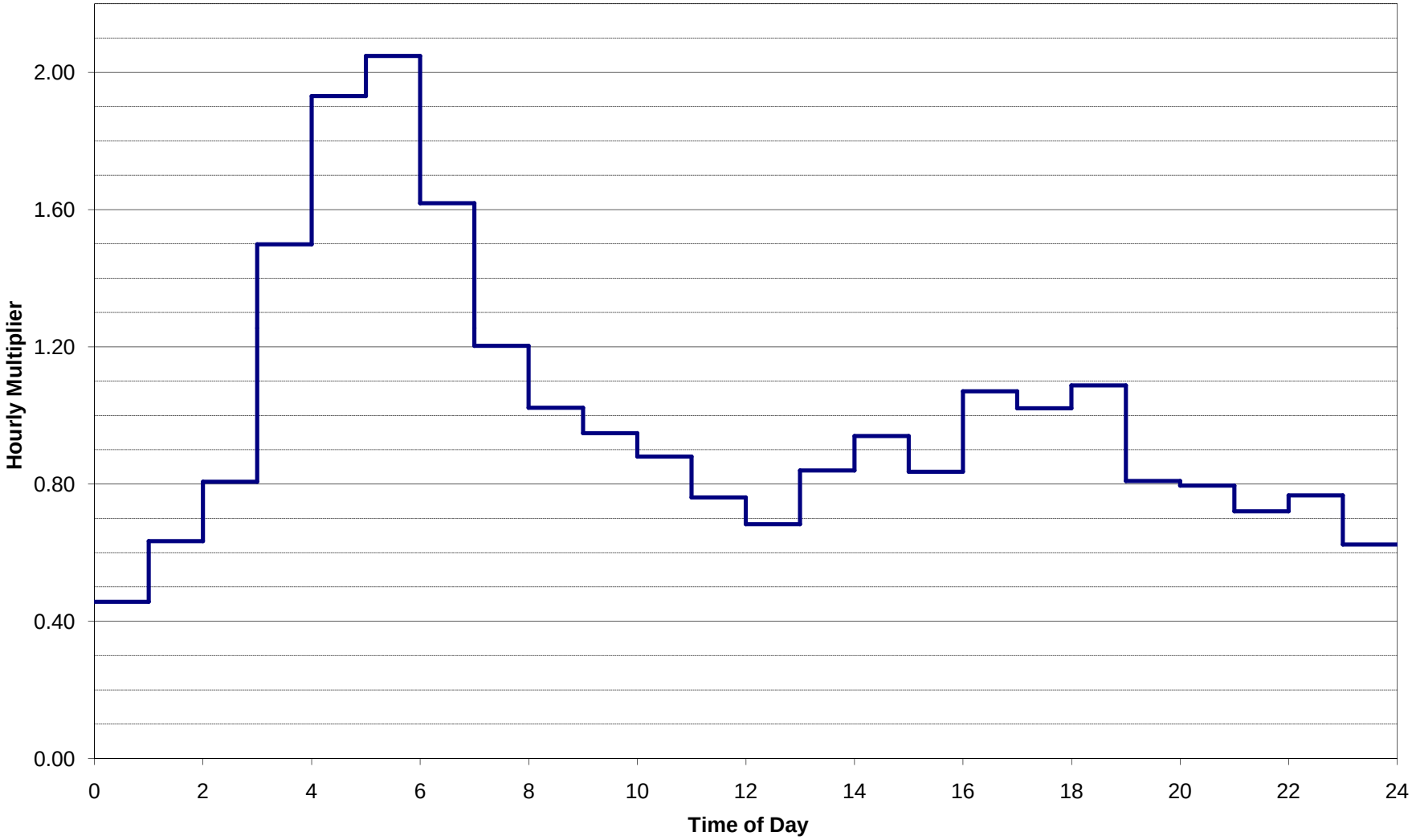
APPENDIX K

HOURLY PEAKING FACTOR GRAPH

Typical Hourly Peaking Factors



APPENDIX L

WATERGEMS MODEL OUTPUT REPORTS

(BUILD-OUT)

Active Scenario: ADD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-492	454.31	High Service	Fixed	23	0.00	508.07
J-99	454.14	High Service	Fixed	23	0.00	508.07
J-98	454.09	High Service	Fixed	23	0.39	508.07
J-189	450.90	High Service	Fixed	25	1.70	508.04
J-575	443.73	High Service	Fixed	28	0.78	508.22
J-645	442.00	High Service	Fixed	29	1.34	508.03
J-617	433.40	High Service	Fixed	32	0.00	508.08
J-92	432.80	High Service	Fixed	33	1.94	507.98
J-616	432.82	High Service	Fixed	33	0.00	508.07
J-569	432.77	High Service	Fixed	33	0.00	508.07
J-93	432.24	High Service	Fixed	33	1.98	507.98
J-346	434.86	High Service	Fixed	34	0.63	512.96
J-42	429.80	High Service	Fixed	34	1.51	508.22
J-41	429.71	High Service	Fixed	34	0.65	508.22
J-654	430.41	High Service	Fixed	35	1.89	510.87
J-343	428.08	High Service	Fixed	37	0.80	512.96
J-478	422.78	High Service	Fixed	37	0.51	507.98
J-200	421.49	High Service	Fixed	37	1.51	507.98
J-199	421.00	High Service	Fixed	38	0.64	507.98
J-107	425.26	High Service	Fixed	38	1.45	512.95
J-106	425.20	High Service	Fixed	38	0.79	512.95
J-131	418.68	High Service	Fixed	39	2.34	507.98
J-130	417.77	High Service	Fixed	39	0.39	507.98
J-452	422.38	High Service	Fixed	39	0.86	512.96
J-342	421.14	High Service	Fixed	40	0.68	512.96
J-571	415.51	High Service	Fixed	40	1.44	508.03
J-638	414.27	High Service	Fixed	42	2.31	510.87
J-639	414.04	High Service	Fixed	42	2.29	510.87
J-694	416.00	High Service	Fixed	42	1.21	512.96
J-423	411.16	High Service	Fixed	44	0.76	512.96
J-611	406.03	High Service	Fixed	44	1.91	508.30
J-379	404.81	High Service	Fixed	45	0.74	508.09
J-378	404.39	High Service	Fixed	45	0.00	508.09
J-247	401.49	High Service	Fixed	46	0.55	508.09
J-570	398.67	High Service	Fixed	47	3.09	508.05
J-462	398.21	High Service	Fixed	48	0.00	508.09
J-610	395.42	High Service	Fixed	49	0.39	508.30
J-846	395.08	High Service	Fixed	49	0.80	508.11
J-628	391.61	High Service	Fixed	50	0.00	508.10
J-393	391.00	High Service	Fixed	51	3.11	508.09
J-422	394.58	High Service	Fixed	51	1.30	512.96
J-183	388.00	High Service	Fixed	52	0.68	508.09
J-544	387.66	High Service	Fixed	52	0.00	508.09
J-652	388.14	High Service	Fixed	53	3.01	509.93
J-713	385.67	High Service	Fixed	53	6.67	508.10
J-629	387.93	High Service	Fixed	53	0.81	510.87

Active Scenario: ADD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-100	384.34	High Service	Fixed	54	0.00	508.10
J-668	384.00	High Service	Fixed	54	1.05	508.79
J-785	385.14	High Service	Fixed	54	3.44	510.87
J-248	381.76	High Service	Fixed	55	0.00	508.09
J-444	386.09	High Service	Fixed	55	0.00	512.96
J-463	380.94	High Service	Fixed	55	0.00	508.09
J-717	380.75	High Service	Fixed	55	0.00	508.10
J-101	380.69	High Service	Fixed	55	0.55	508.10
J-712	380.32	High Service	Fixed	55	0.00	508.10
J-222	380.20	High Service	Fixed	56	0.63	508.79
J-669	380.11	High Service	Fixed	56	0.91	508.79
J-184	377.12	High Service	Fixed	57	0.00	508.09
J-693	381.63	High Service	Fixed	57	0.00	512.96
J-482	373.41	High Service	Fixed	58	0.54	508.11
J-791	372.34	High Service	Fixed	59	2.49	507.92
J-760	372.11	High Service	Fixed	59	3.71	507.92
J-406	371.87	High Service	Fixed	59	1.94	508.11
J-647	371.61	High Service	Fixed	59	1.01	508.01
J-161	374.38	High Service	Fixed	59	2.91	510.87
J-443	376.17	High Service	Fixed	59	0.00	512.96
J-511	371.02	High Service	Fixed	59	0.00	508.10
J-298	373.45	High Service	Fixed	59	0.00	510.88
J-223	371.21	High Service	Fixed	60	0.00	508.80
J-755	368.98	High Service	Fixed	60	1.73	507.92
J-162	371.38	High Service	Fixed	60	2.69	510.87
J-297	371.00	High Service	Fixed	61	1.78	510.88
J-405	368.00	High Service	Fixed	61	2.59	508.11
J-718	366.82	High Service	Fixed	61	0.00	508.10
J-287	368.79	High Service	Fixed	61	1.03	510.87
J-483	365.11	High Service	Fixed	62	1.24	507.98
J-715	363.53	High Service	Fixed	63	0.00	508.10
J-680	363.00	High Service	Fixed	63	0.00	508.10
J-362	362.71	High Service	Fixed	63	1.20	507.92
J-676	362.77	High Service	Fixed	63	1.90	508.55
J-745	361.79	High Service	Fixed	63	0.00	508.11
J-523	361.28	High Service	Fixed	64	0.00	508.10
J-481	361.14	High Service	Fixed	64	0.00	508.11
J-479	361.00	High Service	Fixed	64	0.00	508.10
J-261	360.78	High Service	Fixed	64	0.00	508.10
J-317	360.69	High Service	Fixed	64	0.00	508.10
J-262	360.00	High Service	Fixed	64	0.00	508.10
J-170	360.00	High Service	Fixed	64	0.00	508.10
J-169	359.32	High Service	Fixed	64	0.00	508.10
J-714	358.58	High Service	Fixed	65	0.00	508.10
J-167	358.00	High Service	Fixed	65	0.00	508.10
J-180	358.00	High Service	Fixed	65	0.00	508.10

Active Scenario: ADD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-318	357.62	High Service	Fixed	65	0.00	508.10
J-23	357.00	High Service	Fixed	65	1.03	508.10
J-24	356.98	High Service	Fixed	65	0.00	508.10
J-230	355.09	High Service	Fixed	66	0.00	508.10
J-427	355.00	High Service	Fixed	66	0.00	508.10
J-288	356.93	High Service	Fixed	67	3.05	510.87
J-615	352.38	High Service	Fixed	67	2.26	508.10
J-426	352.28	High Service	Fixed	67	0.00	508.10
J-522	352.27	High Service	Fixed	67	0.00	508.10
J-361	351.85	High Service	Fixed	68	0.51	507.92
J-484	351.91	High Service	Fixed	68	1.89	507.98
J-852	350.64	High Service	Fixed	68	0.00	508.10
J-605	350.00	High Service	Fixed	68	0.00	508.10
J-851	353.00	High Service	Fixed	68	3.61	511.26
J-744	346.41	High Service	Fixed	70	1.99	508.12
J-596	345.00	High Service	Fixed	71	0.58	508.11
J-788	344.37	High Service	Fixed	71	3.04	508.75
J-809	343.60	High Service	Fixed	71	0.00	508.11
J-816	343.43	High Service	Fixed	72	2.44	508.76
J-641	340.75	High Service	Fixed	72	1.30	507.90
J-742	343.47	High Service	Fixed	72	0.00	510.71
J-635	340.10	High Service	Fixed	73	2.82	508.71
J-154	344.19	High Service	Fixed	73	0.60	512.96
J-834	337.96	High Service	Fixed	74	1.35	507.92
J-795	342.79	High Service	Fixed	74	0.00	512.95
J-145	338.56	High Service	Fixed	74	0.36	508.83
J-74	338.49	High Service	Fixed	74	0.00	508.83
J-677	338.12	High Service	Fixed	74	0.00	508.83
J-144	337.95	High Service	Fixed	74	0.00	508.83
J-75	337.75	High Service	Fixed	74	0.28	508.83
J-794	341.38	High Service	Fixed	74	6.89	512.95
J-110	336.81	High Service	Fixed	74	0.76	508.80
J-707	336.13	High Service	Fixed	75	2.59	508.75
J-579	336.17	High Service	Fixed	75	0.00	508.80
J-687	335.28	High Service	Fixed	75	0.98	507.92
J-836	335.57	High Service	Fixed	75	0.00	508.80
J-625	334.69	High Service	Fixed	75	0.00	508.10
J-111	335.00	High Service	Fixed	75	0.54	508.80
J-651	336.00	High Service	Fixed	75	0.34	509.93
J-153	339.00	High Service	Fixed	75	0.00	512.96
J-400	334.74	High Service	Fixed	75	2.16	508.80
J-355	334.00	High Service	Fixed	75	0.00	508.10
J-356	334.00	High Service	Fixed	75	0.00	508.10
J-733	333.95	High Service	Fixed	75	6.29	508.10
J-531	334.53	High Service	Fixed	75	0.00	508.79
J-196	338.53	High Service	Fixed	75	0.29	512.96

Active Scenario: ADD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-399	334.08	High Service	Fixed	76	0.70	508.81
J-195	337.74	High Service	Fixed	76	0.94	512.96
J-187	332.67	High Service	Fixed	76	2.19	508.10
J-532	333.00	High Service	Fixed	76	0.75	508.79
J-587	331.62	High Service	Fixed	76	1.43	508.00
J-188	330.78	High Service	Fixed	77	0.00	508.10
J-688	328.97	High Service	Fixed	77	0.78	507.92
J-582	328.62	High Service	Fixed	78	1.28	507.92
J-586	327.91	High Service	Fixed	78	0.65	508.00
J-276	332.15	High Service	Fixed	78	0.50	512.96
J-833	327.91	High Service	Fixed	78	1.20	508.75
J-685	326.20	High Service	Fixed	79	3.17	508.10
J-94	324.00	High Service	Fixed	80	0.55	507.92
J-95	324.00	High Service	Fixed	80	0.39	507.92
J-740	324.00	High Service	Fixed	80	0.00	507.92
J-666	323.00	High Service	Fixed	80	0.65	507.92
J-771	323.61	High Service	Fixed	80	2.82	508.71
J-501	332.31	High Service	Fixed	80	1.69	517.91
J-695	322.34	High Service	Fixed	80	0.90	507.98
J-217	326.91	High Service	Fixed	80	0.93	512.96
J-502	321.20	High Service	Fixed	81	1.01	507.92
J-603	321.39	High Service	Fixed	81	2.41	508.28
J-500	331.02	High Service	Fixed	81	0.00	517.91
J-614	321.00	High Service	Fixed	81	0.00	508.10
J-28	321.50	High Service	Fixed	81	1.75	508.75
J-27	321.34	High Service	Fixed	81	1.80	508.75
J-338	321.00	High Service	Fixed	81	1.41	508.75
J-622	323.07	High Service	Fixed	81	2.55	510.87
J-295	320.13	High Service	Fixed	81	0.00	508.10
J-267	320.00	High Service	Fixed	81	0.41	508.10
J-266	319.56	High Service	Fixed	82	1.48	508.10
J-296	319.54	High Service	Fixed	82	0.00	508.10
J-782	319.29	High Service	Fixed	82	0.94	507.92
J-339	320.00	High Service	Fixed	82	1.44	508.75
J-813	318.95	High Service	Fixed	82	1.96	508.05
J-807	318.73	High Service	Fixed	82	0.50	508.10
J-555	318.37	High Service	Fixed	82	0.00	508.10
J-787	319.00	High Service	Fixed	82	1.29	508.75
J-556	318.19	High Service	Fixed	82	1.63	508.10
J-218	322.93	High Service	Fixed	82	0.38	512.96
J-808	317.83	High Service	Fixed	82	0.00	508.11
J-503	317.42	High Service	Fixed	82	2.35	507.92
J-657	319.37	High Service	Fixed	83	4.75	510.87
J-799	318.93	High Service	Fixed	83	2.49	510.89
J-656	325.46	High Service	Fixed	83	2.86	517.90
J-391	318.00	High Service	Fixed	83	0.58	510.72

Active Scenario: ADD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-815	324.78	High Service	Fixed	84	1.40	517.90
J-455	291.00	High Service	Fixed	84	0.54	485.14
J-524	291.00	High Service	Fixed	84	0.00	485.14
J-583	313.13	High Service	Fixed	84	1.40	507.92
J-769	312.79	High Service	Fixed	84	3.11	507.90
J-741	314.95	High Service	Fixed	85	16.19	510.67
J-779	312.17	High Service	Fixed	85	1.30	507.91
J-653	312.00	High Service	Fixed	85	3.27	508.44
J-37	311.00	High Service	Fixed	85	1.35	507.90
J-38	311.00	High Service	Fixed	85	0.85	507.90
J-701	311.53	High Service	Fixed	85	2.70	508.67
J-758	311.28	High Service	Fixed	85	1.98	508.88
J-781	310.55	High Service	Fixed	86	1.35	508.40
J-104	310.47	High Service	Fixed	86	0.69	508.40
J-577	312.65	High Service	Fixed	86	1.08	511.72
J-274	308.50	High Service	Fixed	86	2.60	508.10
J-105	308.40	High Service	Fixed	87	1.34	508.40
J-164	312.66	High Service	Fixed	87	4.96	512.96
J-589	284.69	High Service	Fixed	87	2.79	485.13
J-765	307.57	High Service	Fixed	87	1.24	508.69
J-163	311.64	High Service	Fixed	87	1.10	512.96
J-784	311.62	High Service	Fixed	87	4.32	512.96
J-590	283.71	High Service	Fixed	87	1.28	485.13
J-631	309.06	High Service	Fixed	87	2.29	510.72
J-380	305.73	High Service	Fixed	87	1.08	507.91
J-766	304.98	High Service	Fixed	88	0.51	507.91
J-825	314.97	High Service	Fixed	88	4.43	517.90
J-381	304.94	High Service	Fixed	88	1.61	507.91
J-229	304.77	High Service	Fixed	88	1.31	507.92
J-642	304.45	High Service	Fixed	88	1.19	507.92
J-819	304.05	High Service	Fixed	88	0.00	507.92
J-757	303.87	High Service	Fixed	88	0.85	507.92
J-279	306.72	High Service	Fixed	88	2.04	510.87
J-754	303.46	High Service	Fixed	88	0.00	507.92
J-280	306.29	High Service	Fixed	88	2.32	510.84
J-621	306.13	High Service	Fixed	89	2.20	510.87
J-598	306.11	High Service	Fixed	89	2.57	510.87
J-228	301.87	High Service	Fixed	89	2.50	507.92
J-419	304.80	High Service	Fixed	89	1.65	510.87
J-273	301.00	High Service	Fixed	90	0.73	508.15
J-847	303.53	High Service	Fixed	90	5.01	510.87
J-320	299.65	High Service	Fixed	90	0.43	508.12
J-260	301.38	High Service	Fixed	91	2.40	510.72
J-259	301.06	High Service	Fixed	91	0.00	510.72
J-83	298.43	High Service	Fixed	91	0.00	508.11
J-237	301.00	High Service	Fixed	91	0.00	510.72

Active Scenario: ADD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-127	300.87	High Service	Fixed	91	0.00	510.72
J-126	300.81	High Service	Fixed	91	0.00	510.72
J-626	307.53	High Service	Fixed	91	0.00	517.91
J-82	297.19	High Service	Fixed	91	0.46	508.11
J-803	306.90	High Service	Fixed	91	0.00	517.91
J-648	296.75	High Service	Fixed	91	2.03	507.90
J-392	299.57	High Service	Fixed	91	0.00	510.72
J-698	306.63	High Service	Fixed	91	0.00	517.91
J-602	296.63	High Service	Fixed	92	1.34	508.45
J-655	305.73	High Service	Fixed	92	3.64	517.90
J-420	298.29	High Service	Fixed	92	0.81	510.87
J-210	300.33	High Service	Fixed	92	0.39	512.96
J-284	295.14	High Service	Fixed	92	0.40	507.92
J-774	305.00	High Service	Fixed	92	2.76	517.91
J-209	299.73	High Service	Fixed	92	0.56	512.96
J-553	304.56	High Service	Fixed	92	1.14	517.90
J-768	297.28	High Service	Fixed	92	1.54	510.72
J-173	293.92	High Service	Fixed	93	0.00	508.11
J-576	296.79	High Service	Fixed	93	3.12	511.72
J-830	297.99	High Service	Fixed	93	0.68	512.96
J-64	293.12	High Service	Fixed	93	0.00	508.12
J-667	297.92	High Service	Fixed	93	0.00	512.96
J-282	302.84	High Service	Fixed	93	1.55	517.91
J-633	296.00	High Service	Fixed	93	4.81	511.26
J-211	302.56	High Service	Fixed	93	0.00	517.91
J-319	292.73	High Service	Fixed	93	0.00	508.12
J-257	302.48	High Service	Fixed	93	0.00	517.91
J-63	292.56	High Service	Fixed	93	0.00	508.12
J-281	302.11	High Service	Fixed	93	0.00	517.91
J-212	302.00	High Service	Fixed	93	0.00	517.91
J-258	302.00	High Service	Fixed	93	0.00	517.91
J-235	291.00	High Service	Fixed	94	0.63	508.16
J-804	300.11	High Service	Fixed	94	0.00	517.91
J-256	290.25	High Service	Fixed	94	3.59	508.16
J-335	290.00	High Service	Fixed	94	1.68	508.16
J-236	289.27	High Service	Fixed	95	0.61	508.16
J-554	298.95	High Service	Fixed	95	6.21	517.90
J-778	288.96	High Service	Fixed	95	0.31	508.35
J-584	297.92	High Service	Fixed	95	1.18	517.91
J-837	288.00	High Service	Fixed	95	0.80	508.35
J-686	286.63	High Service	Fixed	96	2.12	508.19
J-238	286.97	High Service	Fixed	97	0.00	510.72
J-697	288.62	High Service	Fixed	97	6.58	512.77
J-525	284.36	High Service	Fixed	97	0.00	508.64
J-526	283.07	High Service	Fixed	98	0.00	508.62
J-255	282.52	High Service	Fixed	98	4.83	508.15

Active Scenario: ADD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-838	291.90	High Service	Fixed	98	0.61	517.91
J-739	282.10	High Service	Fixed	98	0.49	508.14
J-585	291.85	High Service	Fixed	98	2.15	517.91
J-498	281.80	High Service	Fixed	98	0.71	508.15
J-564	280.92	High Service	Fixed	98	1.44	508.15
J-325	285.29	High Service	Fixed	98	1.43	512.96
J-510	280.55	High Service	Fixed	99	0.00	508.60
J-691	283.35	High Service	Fixed	99	0.00	512.13
J-780	281.72	High Service	Fixed	99	1.91	510.72
J-634	281.99	High Service	Fixed	99	1.95	511.17
J-692	281.81	High Service	Fixed	100	3.15	511.80
J-97	287.92	High Service	Fixed	100	0.00	517.91
J-326	282.49	High Service	Fixed	100	0.90	512.96
J-537	278.11	High Service	Fixed	100	0.00	508.59
J-509	278.00	High Service	Fixed	100	1.35	508.62
J-96	286.82	High Service	Fixed	100	0.83	517.91
J-160	286.40	High Service	Fixed	100	0.94	517.91
J-207	278.09	High Service	Fixed	101	2.51	510.92
J-649	275.00	High Service	Fixed	101	2.07	508.12
J-159	284.47	High Service	Fixed	101	0.00	517.91
J-578	276.96	High Service	Fixed	101	0.69	510.72
J-208	277.00	High Service	Fixed	101	1.00	510.89
J-497	273.00	High Service	Fixed	102	0.86	508.15
J-290	273.00	High Service	Fixed	102	0.00	508.41
J-322	272.74	High Service	Fixed	102	0.00	508.41
J-185	272.17	High Service	Fixed	102	0.00	508.40
J-289	272.05	High Service	Fixed	102	0.00	508.40
J-186	271.42	High Service	Fixed	103	0.00	508.40
J-777	270.16	High Service	Fixed	103	0.00	508.41
J-727	274.60	High Service	Fixed	103	0.60	512.96
J-538	270.10	High Service	Fixed	103	0.00	508.53
J-321	269.76	High Service	Fixed	103	0.00	508.41
J-112	272.13	High Service	Fixed	103	0.70	510.87
J-29	268.18	High Service	Fixed	104	0.00	508.41
J-30	268.00	High Service	Fixed	104	0.00	508.41
J-113	270.13	High Service	Fixed	104	0.00	510.87
J-49	271.00	High Service	Fixed	104	3.07	511.83
J-50	271.00	High Service	Fixed	104	0.00	511.83
J-725	271.00	High Service	Fixed	104	1.61	511.87
J-773	277.00	High Service	Fixed	104	0.68	517.91
J-810	269.31	High Service	Fixed	104	0.75	510.72
J-844	270.90	High Service	Fixed	105	0.00	512.96
J-696	270.48	High Service	Fixed	105	1.60	512.77
J-848	270.50	High Service	Fixed	105	0.00	513.20
J-726	270.00	High Service	Fixed	105	0.00	513.20
J-204	272.32	High Service	Fixed	106	0.58	516.49

Active Scenario: ADD-Buildout
FlexTable: Junction Table
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Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-738	263.86	High Service	Fixed	106	1.19	508.14
J-433	267.53	High Service	Fixed	106	6.81	511.83
J-856	268.57	High Service	Fixed	106	0.00	512.87
J-203	271.53	High Service	Fixed	106	0.43	516.49
J-231	265.66	High Service	Fixed	106	1.51	510.69
J-232	265.68	High Service	Fixed	106	1.06	510.73
J-445	261.14	High Service	Fixed	107	1.28	508.15
J-234	261.01	High Service	Fixed	107	0.00	508.14
J-77	261.01	High Service	Fixed	107	0.00	508.14
J-134	260.99	High Service	Fixed	107	0.00	508.14
J-843	260.94	High Service	Fixed	107	0.00	508.15
J-233	260.81	High Service	Fixed	107	0.38	508.14
J-542	260.80	High Service	Fixed	107	0.59	508.15
J-821	260.57	High Service	Fixed	107	0.64	508.15
J-76	260.11	High Service	Fixed	107	0.00	508.14
J-135	259.94	High Service	Fixed	107	0.00	508.14
J-752	269.57	High Service	Fixed	107	0.00	517.92
J-751	259.34	High Service	Fixed	109	0.59	510.71
J-811	257.90	High Service	Fixed	109	0.00	510.72
J-750	257.59	High Service	Fixed	110	0.00	510.72
J-348	252.33	High Service	Fixed	111	0.60	508.14
J-251	413.71	Low Service	Fixed	31	0.91	485.41
J-250	409.79	Low Service	Fixed	33	1.09	485.40
J-308	406.63	Low Service	Fixed	34	1.19	485.40
J-307	405.37	Low Service	Fixed	35	1.89	485.40
J-430	401.88	Low Service	Fixed	36	1.30	485.40
J-506	395.91	Low Service	Fixed	39	0.71	485.40
J-670	392.00	Low Service	Fixed	41	2.76	485.74
J-3	394.00	Low Service	Fixed	41	0.00	489.30
J-4	394.00	Low Service	Fixed	41	8.24	489.57
J-716	385.66	Low Service	Fixed	43	0.58	485.40
J-671	382.92	Low Service	Fixed	44	1.54	485.72
J-792	382.82	Low Service	Fixed	45	0.64	485.72
J-588	381.97	Low Service	Fixed	45	1.39	486.11
J-304	380.76	Low Service	Fixed	45	0.84	485.16
J-513	378.57	Low Service	Fixed	46	0.44	485.40
J-861	378.98	Low Service	Fixed	48	2.42	489.30
J-268	375.69	Low Service	Fixed	48	0.83	486.11
J-735	375.66	Low Service	Fixed	48	1.84	486.20
J-206	369.37	Low Service	Fixed	50	0.49	485.16
J-205	368.16	Low Service	Fixed	51	1.23	485.16
J-269	368.35	Low Service	Fixed	51	0.73	486.10
J-303	365.68	Low Service	Fixed	52	0.93	485.16
J-467	365.29	Low Service	Fixed	52	1.65	485.17
J-552	361.06	Low Service	Fixed	54	0.99	485.39
J-800	360.94	Low Service	Fixed	54	1.64	486.20

Active Scenario: ADD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-659	357.55	Low Service	Fixed	55	0.49	485.38
J-630	356.10	Low Service	Fixed	56	1.08	485.16
J-551	356.09	Low Service	Fixed	56	0.66	485.39
J-658	356.00	Low Service	Fixed	56	0.81	485.38
J-429	356.15	Low Service	Fixed	56	0.59	485.73
J-832	359.00	Low Service	Fixed	56	1.13	488.94
J-753	353.85	Low Service	Fixed	57	2.20	485.72
J-812	355.14	Low Service	Fixed	57	1.68	488.04
J-428	351.15	Low Service	Fixed	58	0.00	485.73
J-910	350.00	Low Service	Fixed	59	0.00	485.39
J-743	348.56	Low Service	Fixed	59	0.00	485.39
J-435	351.19	Low Service	Fixed	59	0.30	488.23
J-11	348.44	Low Service	Fixed	59	0.00	485.72
J-413	350.92	Low Service	Fixed	59	0.00	488.23
J-660	347.17	Low Service	Fixed	60	0.71	485.37
J-662	347.00	Low Service	Fixed	60	0.35	485.38
J-528	346.62	Low Service	Fixed	60	1.26	486.24
J-573	346.80	Low Service	Fixed	60	2.16	486.57
J-839	346.00	Low Service	Fixed	61	0.88	486.18
J-734	346.00	Low Service	Fixed	61	0.00	486.19
J-818	341.79	Low Service	Fixed	62	2.69	485.38
J-174	340.90	Low Service	Fixed	63	0.00	485.38
J-776	340.07	Low Service	Fixed	63	5.17	485.13
J-705	342.97	Low Service	Fixed	63	0.00	488.03
J-527	340.88	Low Service	Fixed	63	2.97	486.26
J-175	339.00	Low Service	Fixed	63	0.00	485.38
J-471	340.67	Low Service	Fixed	64	0.00	488.03
J-709	340.28	Low Service	Fixed	64	0.56	488.04
J-493	337.10	Low Service	Fixed	64	1.63	485.17
J-54	339.16	Low Service	Fixed	64	0.00	488.03
J-376	338.60	Low Service	Fixed	65	0.00	488.03
J-20	338.55	Low Service	Fixed	65	0.00	488.03
J-19	338.52	Low Service	Fixed	65	0.00	488.03
J-491	338.04	Low Service	Fixed	65	0.00	488.03
J-708	339.74	Low Service	Fixed	65	3.61	489.74
J-53	337.95	Low Service	Fixed	65	0.00	488.03
J-746	337.22	Low Service	Fixed	65	1.80	488.04
J-597	337.05	Low Service	Fixed	65	0.00	488.03
J-442	335.85	Low Service	Fixed	66	0.00	488.03
J-490	335.82	Low Service	Fixed	66	0.00	488.03
J-470	335.73	Low Service	Fixed	66	0.00	488.03
J-747	334.45	Low Service	Fixed	66	4.81	488.04
J-177	334.25	Low Service	Fixed	67	0.00	488.03
J-480	334.00	Low Service	Fixed	67	0.00	488.03
J-365	334.00	Low Service	Fixed	67	0.00	488.03
J-142	333.79	Low Service	Fixed	67	0.00	488.03

Active Scenario: ADD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-495	333.64	Low Service	Fixed	67	2.00	488.03
J-517	333.00	Low Service	Fixed	67	0.00	488.03
J-494	332.93	Low Service	Fixed	67	1.14	488.04
J-675	329.51	Low Service	Fixed	67	1.83	485.13
J-377	331.34	Low Service	Fixed	68	0.00	488.03
J-143	330.48	Low Service	Fixed	68	0.00	488.03
J-176	330.39	Low Service	Fixed	68	0.00	488.03
J-434	330.06	Low Service	Fixed	68	0.00	488.23
J-412	329.55	Low Service	Fixed	69	0.00	488.23
J-301	329.00	Low Service	Fixed	69	1.18	488.04
J-650	326.00	Low Service	Fixed	69	0.61	485.69
J-661	328.05	Low Service	Fixed	69	0.00	488.03
J-604	328.00	Low Service	Fixed	69	0.63	488.03
J-302	328.00	Low Service	Fixed	69	0.98	488.04
J-441	327.95	Low Service	Fixed	69	0.00	488.03
J-736	325.31	Low Service	Fixed	69	1.14	485.69
J-472	327.59	Low Service	Fixed	69	0.79	488.04
J-789	325.36	Low Service	Fixed	69	2.24	485.87
J-728	327.44	Low Service	Fixed	69	0.63	488.03
J-473	327.19	Low Service	Fixed	70	0.58	488.04
J-354	326.60	Low Service	Fixed	70	0.00	488.03
J-372	324.61	Low Service	Fixed	70	1.98	486.69
J-334	325.29	Low Service	Fixed	70	0.00	488.03
J-599	325.09	Low Service	Fixed	71	2.01	488.06
J-408	325.00	Low Service	Fixed	71	1.03	488.03
J-775	321.77	Low Service	Fixed	71	1.54	485.13
J-436	324.13	Low Service	Fixed	71	0.90	488.04
J-835	320.00	Low Service	Fixed	71	0.79	485.17
J-496	322.50	Low Service	Fixed	72	2.56	488.03
J-330	319.22	Low Service	Fixed	72	2.26	485.43
J-703	318.43	Low Service	Fixed	72	0.70	485.31
J-627	321.51	Low Service	Fixed	72	0.85	488.53
J-409	321.00	Low Service	Fixed	72	0.60	488.03
J-770	319.95	Low Service	Fixed	73	0.99	487.97
J-704	316.85	Low Service	Fixed	73	1.95	485.31
J-421	320.00	Low Service	Fixed	73	1.03	488.53
J-448	316.56	Low Service	Fixed	73	1.85	485.16
J-331	316.00	Low Service	Fixed	73	1.11	485.38
J-291	316.19	Low Service	Fixed	73	0.50	485.67
J-618	314.91	Low Service	Fixed	74	2.81	485.24
J-565	315.00	Low Service	Fixed	74	2.47	485.34
J-559	314.22	Low Service	Fixed	74	1.68	485.17
J-759	316.59	Low Service	Fixed	74	0.41	488.03
J-447	313.51	Low Service	Fixed	74	1.54	485.16
J-438	313.00	Low Service	Fixed	74	0.68	485.13
J-539	316.00	Low Service	Fixed	74	0.41	488.18

Active Scenario: ADD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-543	313.31	Low Service	Fixed	75	2.50	485.53
J-148	315.04	Low Service	Fixed	75	0.54	487.34
J-729	314.03	Low Service	Fixed	75	0.30	486.53
J-796	312.30	Low Service	Fixed	75	3.29	485.27
J-292	312.67	Low Service	Fixed	75	0.36	485.66
J-572	313.24	Low Service	Fixed	75	0.95	486.57
J-353	314.00	Low Service	Fixed	75	0.93	488.03
J-748	312.80	Low Service	Fixed	75	1.41	486.91
J-711	313.88	Low Service	Fixed	75	2.96	488.00
J-488	313.88	Low Service	Fixed	75	12.17	488.03
J-437	310.61	Low Service	Fixed	76	3.60	485.13
J-475	310.43	Low Service	Fixed	76	2.29	485.26
J-66	312.73	Low Service	Fixed	76	1.06	488.03
J-352	312.61	Low Service	Fixed	76	2.00	488.03
J-65	311.85	Low Service	Fixed	76	0.28	488.03
J-149	311.05	Low Service	Fixed	76	0.45	487.34
J-324	311.08	Low Service	Fixed	77	1.30	488.15
J-79	309.25	Low Service	Fixed	77	0.66	486.83
J-78	309.15	Low Service	Fixed	77	0.68	486.85
J-474	307.25	Low Service	Fixed	77	4.60	485.26
J-681	311.83	Low Service	Fixed	77	1.96	489.88
J-121	310.05	Low Service	Fixed	77	0.59	488.53
J-133	309.48	Low Service	Fixed	77	1.59	488.05
J-806	310.00	Low Service	Fixed	77	2.45	488.94
J-305	308.77	Low Service	Fixed	78	0.00	488.03
J-181	304.55	Low Service	Fixed	78	1.36	485.25
J-132	307.27	Low Service	Fixed	78	0.40	488.04
J-306	307.00	Low Service	Fixed	78	0.00	488.03
J-706	307.00	Low Service	Fixed	78	0.00	488.03
J-120	307.38	Low Service	Fixed	78	0.68	488.53
J-323	306.91	Low Service	Fixed	78	0.66	488.18
J-359	306.15	Low Service	Fixed	79	0.74	488.03
J-858	305.82	Low Service	Fixed	79	0.58	488.03
J-632	305.55	Low Service	Fixed	79	1.11	488.03
J-102	305.26	Low Service	Fixed	79	0.33	488.03
J-182	302.38	Low Service	Fixed	79	1.93	485.25
J-580	301.87	Low Service	Fixed	79	4.07	485.18
J-138	301.71	Low Service	Fixed	79	0.58	485.24
J-103	304.46	Low Service	Fixed	79	0.56	488.03
J-432	303.00	Low Service	Fixed	80	0.00	486.77
J-333	301.70	Low Service	Fixed	80	0.59	485.73
J-721	301.00	Low Service	Fixed	80	0.81	485.14
J-139	301.00	Low Service	Fixed	80	3.27	485.24
J-499	300.83	Low Service	Fixed	80	1.39	485.17
J-275	303.51	Low Service	Fixed	80	0.30	488.25
J-440	303.33	Low Service	Fixed	80	0.34	488.13

Active Scenario: ADD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-644	300.00	Low Service	Fixed	80	2.72	485.25
J-518	299.78	Low Service	Fixed	80	2.59	485.24
J-802	298.92	Low Service	Fixed	81	0.96	485.13
J-48	301.49	Low Service	Fixed	81	0.00	488.04
J-360	301.40	Low Service	Fixed	81	0.80	488.03
J-47	301.29	Low Service	Fixed	81	0.30	488.04
J-456	298.30	Low Service	Fixed	81	0.49	485.14
J-21	301.19	Low Service	Fixed	81	0.98	488.04
J-22	301.00	Low Service	Fixed	81	0.00	488.04
J-594	298.13	Low Service	Fixed	81	2.24	485.24
J-278	298.12	Low Service	Fixed	81	1.06	485.36
J-417	299.88	Low Service	Fixed	81	0.88	488.03
J-431	298.46	Low Service	Fixed	81	1.60	486.77
J-178	296.69	Low Service	Fixed	82	1.13	485.73
J-514	298.83	Low Service	Fixed	82	0.46	488.03
J-487	297.56	Low Service	Fixed	82	0.66	486.83
J-439	298.67	Low Service	Fixed	82	1.54	488.07
J-710	298.48	Low Service	Fixed	82	0.55	487.97
J-793	298.37	Low Service	Fixed	82	0.88	487.97
J-593	295.15	Low Service	Fixed	82	3.24	485.24
J-407	296.93	Low Service	Fixed	83	0.89	488.01
J-689	293.80	Low Service	Fixed	83	2.79	485.44
J-601	296.73	Low Service	Fixed	83	1.43	488.38
J-123	296.47	Low Service	Fixed	83	0.00	488.18
J-612	294.84	Low Service	Fixed	83	0.00	486.69
J-404	294.77	Low Service	Fixed	83	0.35	486.91
J-166	292.77	Low Service	Fixed	83	1.13	485.24
J-489	295.34	Low Service	Fixed	83	0.00	488.03
J-623	294.99	Low Service	Fixed	84	0.00	488.03
J-591	291.96	Low Service	Fixed	84	0.93	485.14
J-737	292.05	Low Service	Fixed	84	2.85	485.26
J-762	292.02	Low Service	Fixed	84	0.38	485.68
J-786	291.38	Low Service	Fixed	84	2.84	485.16
J-165	291.10	Low Service	Fixed	84	1.19	485.24
J-122	293.96	Low Service	Fixed	84	0.69	488.18
J-277	291.12	Low Service	Fixed	84	0.64	485.36
J-226	290.87	Low Service	Fixed	84	1.40	485.24
J-414	292.61	Low Service	Fixed	84	1.80	487.12
J-763	291.26	Low Service	Fixed	84	4.50	485.80
J-850	295.60	Low Service	Fixed	84	0.34	490.20
J-375	290.60	Low Service	Fixed	84	2.06	485.24
J-719	292.24	Low Service	Fixed	84	0.54	486.91
J-679	290.21	Low Service	Fixed	84	2.97	485.18
J-682	295.00	Low Service	Fixed	84	0.00	490.20
J-512	292.68	Low Service	Fixed	85	1.45	488.03
J-179	290.15	Low Service	Fixed	85	0.00	485.73

Active Scenario: ADD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-387	290.00	Low Service	Fixed	85	2.10	485.73
J-548	292.77	Low Service	Fixed	85	1.36	488.53
J-7	289.35	Low Service	Fixed	85	0.38	485.13
J-8	289.27	Low Service	Fixed	85	0.00	485.13
J-31	289.10	Low Service	Fixed	85	1.54	485.13
J-32	289.01	Low Service	Fixed	85	0.00	485.13
J-801	288.53	Low Service	Fixed	85	2.21	485.13
J-349	288.61	Low Service	Fixed	85	1.95	485.36
J-841	289.74	Low Service	Fixed	85	1.63	487.14
J-150	290.79	Low Service	Fixed	85	0.36	488.18
J-619	290.87	Low Service	Fixed	85	0.93	488.34
J-396	290.60	Low Service	Fixed	86	1.03	488.23
J-221	287.39	Low Service	Fixed	86	0.00	485.13
J-637	290.63	Low Service	Fixed	86	1.81	488.38
J-827	290.57	Low Service	Fixed	86	1.60	488.51
J-374	287.30	Low Service	Fixed	86	0.99	485.35
J-560	287.01	Low Service	Fixed	86	1.76	485.17
J-690	287.25	Low Service	Fixed	86	2.05	485.41
J-373	287.08	Low Service	Fixed	86	1.98	485.35
J-192	290.32	Low Service	Fixed	86	0.45	488.69
J-403	288.18	Low Service	Fixed	86	0.49	486.91
J-581	285.25	Low Service	Fixed	87	1.38	485.18
J-336	289.77	Low Service	Fixed	87	1.11	489.74
J-606	287.28	Low Service	Fixed	87	1.10	487.34
J-227	284.99	Low Service	Fixed	87	4.03	485.24
J-191	288.00	Low Service	Fixed	87	0.00	488.66
J-772	284.53	Low Service	Fixed	87	2.16	485.24
J-595	284.36	Low Service	Fixed	87	1.35	485.13
J-68	284.00	Low Service	Fixed	87	1.41	485.18
J-239	287.00	Low Service	Fixed	87	0.76	488.19
J-67	283.53	Low Service	Fixed	87	1.86	485.18
J-332	284.00	Low Service	Fixed	87	6.99	485.73
J-451	284.00	Low Service	Fixed	87	0.00	485.73
J-33	283.00	Low Service	Fixed	87	0.75	485.13
J-34	282.78	Low Service	Fixed	88	0.00	485.13
J-561	282.44	Low Service	Fixed	88	3.29	485.19
J-286	282.25	Low Service	Fixed	88	0.78	485.12
J-767	284.93	Low Service	Fixed	88	1.71	487.97
J-624	284.83	Low Service	Fixed	88	0.00	488.03
J-285	281.70	Low Service	Fixed	88	0.58	485.13
J-254	281.58	Low Service	Fixed	88	0.46	485.13
J-152	284.45	Low Service	Fixed	88	0.30	488.26
J-337	285.55	Low Service	Fixed	88	1.71	489.74
J-118	284.00	Low Service	Fixed	88	0.60	488.21
J-566	282.50	Low Service	Fixed	88	0.00	486.91
J-567	282.50	Low Service	Fixed	88	0.00	486.91

Active Scenario: ADD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-87	282.75	Low Service	Fixed	88	0.54	487.22
J-395	283.72	Low Service	Fixed	88	0.93	488.23
J-749	283.78	Low Service	Fixed	89	1.74	488.34
J-699	283.58	Low Service	Fixed	89	0.68	488.21
J-36	283.48	Low Service	Fixed	89	0.00	488.28
J-5	280.83	Low Service	Fixed	89	0.00	485.73
J-6	280.79	Low Service	Fixed	89	0.00	485.73
J-119	283.26	Low Service	Fixed	89	0.45	488.21
J-35	283.24	Low Service	Fixed	89	0.00	488.28
J-265	283.11	Low Service	Fixed	89	0.00	488.28
J-636	283.15	Low Service	Fixed	89	1.21	488.38
J-151	283.00	Low Service	Fixed	89	0.00	488.27
J-829	282.90	Low Service	Fixed	89	1.25	488.23
J-86	281.89	Low Service	Fixed	89	0.31	487.24
J-756	280.00	Low Service	Fixed	89	0.00	485.73
J-600	282.63	Low Service	Fixed	89	4.32	488.38
J-26	282.03	Low Service	Fixed	89	0.34	487.99
J-446	278.86	Low Service	Fixed	89	1.51	485.14
J-25	281.00	Low Service	Fixed	90	0.66	487.99
J-720	280.90	Low Service	Fixed	90	1.29	487.96
J-328	278.00	Low Service	Fixed	90	1.34	485.73
J-853	280.93	Low Service	Fixed	90	0.58	488.86
J-820	280.88	Low Service	Fixed	90	0.90	488.86
J-529	279.97	Low Service	Fixed	90	0.83	487.99
J-425	277.26	Low Service	Fixed	90	0.00	485.73
J-831	280.38	Low Service	Fixed	90	2.39	488.94
J-826	280.23	Low Service	Fixed	90	0.00	488.86
J-327	277.05	Low Service	Fixed	90	0.53	485.73
J-315	277.81	Low Service	Fixed	90	0.50	486.84
J-620	279.25	Low Service	Fixed	90	5.37	488.31
J-424	276.63	Low Service	Fixed	90	0.00	485.73
J-476	279.00	Low Service	Fixed	91	0.00	488.31
J-465	276.00	Low Service	Fixed	91	0.00	485.73
J-643	276.00	Low Service	Fixed	91	0.00	485.73
J-293	275.10	Low Service	Fixed	91	0.71	485.14
J-592	274.83	Low Service	Fixed	91	0.99	485.13
J-388	274.59	Low Service	Fixed	91	0.64	485.19
J-536	276.13	Low Service	Fixed	91	0.65	486.91
J-530	277.00	Low Service	Fixed	91	2.37	487.98
J-683	277.24	Low Service	Fixed	91	1.40	488.38
J-665	276.32	Low Service	Fixed	91	0.54	487.47
J-416	275.16	Low Service	Fixed	91	2.30	486.58
J-486	276.69	Low Service	Fixed	92	0.46	488.20
J-367	276.29	Low Service	Fixed	92	0.68	488.03
J-724	276.10	Low Service	Fixed	92	2.10	487.98
J-214	275.00	Low Service	Fixed	92	1.85	486.91

Active Scenario: ADD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-568	273.09	Low Service	Fixed	92	1.91	485.13
J-678	272.56	Low Service	Fixed	92	2.99	485.25
J-519	272.31	Low Service	Fixed	92	1.23	485.13
J-458	272.00	Low Service	Fixed	92	1.28	485.23
J-198	271.78	Low Service	Fixed	92	0.51	485.13
J-824	274.37	Low Service	Fixed	92	3.51	487.78
J-521	274.00	Low Service	Fixed	92	1.81	487.43
J-674	274.73	Low Service	Fixed	92	1.15	488.18
J-459	271.51	Low Service	Fixed	92	0.76	485.22
J-2	272.90	Low Service	Fixed	93	1.39	486.73
J-468	272.69	Low Service	Fixed	93	0.30	486.73
J-283	293.78	Low Service	Fixed	93	0.00	507.92
J-116	271.00	Low Service	Fixed	93	1.06	485.24
J-117	271.00	Low Service	Fixed	93	0.76	485.24
J-216	272.32	Low Service	Fixed	93	0.00	487.28
J-197	270.00	Low Service	Fixed	93	0.39	485.13
J-505	271.00	Low Service	Fixed	93	1.61	486.77
J-213	270.88	Low Service	Fixed	93	0.00	486.91
J-390	268.98	Low Service	Fixed	94	2.17	485.24
J-357	270.40	Low Service	Fixed	94	1.01	486.95
J-215	270.68	Low Service	Fixed	94	0.34	487.37
J-608	268.45	Low Service	Fixed	94	1.25	485.23
J-684	271.04	Low Service	Fixed	94	2.82	488.38
J-193	267.79	Low Service	Fixed	94	0.46	485.19
J-345	270.71	Low Service	Fixed	94	1.14	488.17
J-466	268.02	Low Service	Fixed	94	0.46	485.73
J-309	268.95	Low Service	Fixed	94	0.00	486.75
J-520	268.91	Low Service	Fixed	94	0.00	486.79
J-316	268.79	Low Service	Fixed	94	1.05	486.83
J-394	267.13	Low Service	Fixed	94	1.00	485.19
J-294	267.02	Low Service	Fixed	94	0.70	485.14
J-201	267.00	Low Service	Fixed	94	1.25	485.13
J-171	268.26	Low Service	Fixed	95	0.00	486.79
J-270	268.18	Low Service	Fixed	95	0.00	486.79
J-828	269.59	Low Service	Fixed	95	0.00	488.23
J-840	269.40	Low Service	Fixed	95	0.00	488.17
J-202	266.26	Low Service	Fixed	95	0.81	485.13
J-271	270.56	Low Service	Fixed	95	0.48	489.75
J-344	268.93	Low Service	Fixed	95	0.00	488.23
J-13	270.37	Low Service	Fixed	95	1.44	489.75
J-464	267.63	Low Service	Fixed	95	0.66	487.04
J-272	270.23	Low Service	Fixed	95	0.00	489.74
J-389	265.43	Low Service	Fixed	95	1.59	485.24
J-822	268.32	Low Service	Fixed	95	0.00	488.23
J-45	265.23	Low Service	Fixed	95	0.00	485.19
J-172	266.78	Low Service	Fixed	95	0.00	486.79

Active Scenario: ADD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-469	265.12	Low Service	Fixed	95	0.84	485.19
J-700	268.00	Low Service	Fixed	95	0.29	488.29
J-14	269.17	Low Service	Fixed	95	0.00	489.75
J-114	266.00	Low Service	Fixed	95	0.56	486.71
J-574	267.46	Low Service	Fixed	95	0.99	488.18
J-46	264.42	Low Service	Fixed	96	0.00	485.19
J-817	268.16	Low Service	Fixed	96	3.00	489.09
J-115	265.68	Low Service	Fixed	96	0.00	486.71
J-310	265.64	Low Service	Fixed	96	2.25	486.75
J-457	265.47	Low Service	Fixed	96	2.15	486.81
J-194	263.64	Low Service	Fixed	96	0.00	485.19
J-485	265.17	Low Service	Fixed	96	6.67	486.79
J-663	263.04	Low Service	Fixed	96	4.63	485.26
J-125	266.38	Low Service	Fixed	96	1.20	488.88
J-351	264.13	Low Service	Fixed	96	0.00	486.82
J-358	264.00	Low Service	Fixed	96	0.00	486.79
J-823	264.40	Low Service	Fixed	97	0.95	487.47
J-609	262.15	Low Service	Fixed	97	1.18	485.23
J-508	265.08	Low Service	Fixed	97	1.01	488.34
J-329	264.00	Low Service	Fixed	97	0.00	487.40
J-156	261.61	Low Service	Fixed	97	0.79	485.13
J-607	263.50	Low Service	Fixed	97	0.40	487.34
J-783	264.12	Low Service	Fixed	97	1.48	488.18
J-155	261.00	Low Service	Fixed	97	0.60	485.13
J-72	264.00	Low Service	Fixed	97	0.49	488.18
J-73	264.00	Low Service	Fixed	97	0.35	488.18
J-124	264.64	Low Service	Fixed	97	0.56	488.94
J-761	264.00	Low Service	Fixed	97	1.89	488.88
J-504	263.26	Low Service	Fixed	97	0.35	488.18
J-299	263.00	Low Service	Fixed	97	2.29	487.97
J-507	263.21	Low Service	Fixed	97	0.70	488.34
J-557	259.56	Low Service	Fixed	98	0.94	485.13
J-300	261.45	Low Service	Fixed	98	1.30	487.97
J-558	258.38	Low Service	Fixed	98	0.70	485.13
J-350	260.00	Low Service	Fixed	98	0.00	486.83
J-341	259.65	Low Service	Fixed	98	1.68	486.79
J-415	256.97	Low Service	Fixed	99	0.78	485.24
J-849	262.68	Low Service	Fixed	99	0.00	491.33
J-10	256.52	Low Service	Fixed	99	0.00	485.24
J-790	259.19	Low Service	Fixed	99	0.66	487.94
J-340	258.00	Low Service	Fixed	99	0.00	486.84
J-9	256.30	Low Service	Fixed	99	1.83	485.24
J-240	255.54	Low Service	Fixed	99	0.56	485.19
J-245	259.00	Low Service	Fixed	100	0.00	489.56
J-108	258.83	Low Service	Fixed	100	0.00	489.61
J-109	258.00	Low Service	Fixed	100	0.00	489.74

Active Scenario: ADD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-855	258.00	Low Service	Fixed	100	0.00	489.75
J-246	256.85	Low Service	Fixed	101	0.00	489.56
J-363	250.83	Low Service	Fixed	101	0.73	485.21
J-546	250.59	Low Service	Fixed	102	1.29	485.22
J-386	250.07	Low Service	Fixed	102	0.48	485.21
J-364	250.00	Low Service	Fixed	102	0.41	485.21
J-664	245.63	Low Service	Fixed	104	1.23	485.26
J-366	244.88	Low Service	Fixed	104	0.45	485.25
J-805	244.01	Low Service	Fixed	104	1.08	485.25
J-547	243.00	Low Service	Fixed	105	1.30	485.23
J-158	242.00	Low Service	Fixed	105	0.00	485.25
J-249	241.56	Low Service	Fixed	105	0.00	485.25
J-545	241.00	Low Service	Fixed	106	0.44	485.22
J-157	241.00	Low Service	Fixed	106	0.73	485.25
J-369	239.00	Low Service	Fixed	107	0.00	485.25
J-842	239.00	Low Service	Fixed	107	0.95	485.25
J-814	231.90	Low Service	Fixed	111	0.28	488.49
J-798	230.79	Low Service	Fixed	111	1.63	488.50
J-845	229.55	Low Service	Fixed	112	0.00	488.33
J-732	221.07	Low Service	Fixed	116	0.55	488.49
J-731	218.04	Low Service	Fixed	117	0.88	488.49
J-797	216.00	Low Service	Fixed	118	6.38	488.49
J-224	209.19	Low Service	Fixed	121	0.29	488.49
J-613	207.74	Low Service	Fixed	121	0.00	488.49
J-764	206.00	Low Service	Fixed	122	1.31	488.49
J-225	204.34	Low Service	Fixed	123	0.70	488.49
J-516	201.00	Low Service	Fixed	124	0.00	488.49
J-515	199.62	Low Service	Fixed	125	0.00	488.49
J-461	199.55	Low Service	Fixed	125	0.00	488.49
J-460	188.74	Low Service	Fixed	130	0.64	488.49

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
14	12.0	J-752	J-203	718	742.01	1.99	1.43	2.10	110
30	12.0	J-203	J-848	1,660	741.00	1.98	3.29	2.10	110
P-50	12.0	J-848	J-844	102	741.00	2.37	0.24	2.10	100
P-51	12.0	J-844	J-856	48	707.04	1.82	0.09	2.01	110
P-233	6.0	J-329	J-823	15	-171.46	4.56	0.07	1.95	101
P-218	12.0	J-849	J-855	1,108	620.74	1.43	1.58	1.76	110
P-216	12.0	J-855	J-109	4	614.00	1.40	0.01	1.74	110
334	8.0	J-108	J-109	33	-271.67	4.02	0.13	1.73	80
P-217	12.0	J-854	J-849	1,426	532.09	0.79	1.12	1.51	130
P-372	12.0	J-854	J-849	1,427	531.85	0.79	1.12	1.51	130
711	12.0	J-78	J-79	23	464.56	0.71	0.02	1.32	120
712	12.0	J-79	J-372	206	463.23	0.71	0.15	1.31	120
713	12.0	J-372	J-588	829	461.25	0.70	0.58	1.31	120
355	12.0	J-251	J-588	1,011	-458.31	0.69	0.70	1.30	120
569	12.0	J-849	J-850	1,739	443.20	0.65	1.13	1.26	120
P-219	12.0	J-681	J-850	478	-442.86	0.65	0.31	1.26	120
226	12.0	J-692	J-651	2,488	438.73	0.75	1.87	1.24	110
662	12.0	J-651	J-144	1,488	435.38	0.74	1.10	1.24	110
P-59	12.0	J-144	J-677	5	435.38	0.63	0.00	1.24	120
581	12.0	J-798	J-817	979	-425.62	0.60	0.59	1.21	120
574	12.0	J-251	Oak Hill Road Tank	683	422.10	0.60	0.41	1.20	120
P-241	8.0	J-344	J-840	73	185.38	0.81	0.06	1.18	130
776	8.0	J-840	J-841	1,293	184.24	0.80	1.03	1.18	130
P-240	12.0	J-845	J-798	281	-412.97	0.57	0.16	1.17	120
685	8.0	J-245	J-124	395	182.56	1.55	0.61	1.17	90
P-212	8.0	J-108	J-245	32	182.56	1.55	0.05	1.17	90
686	8.0	J-124	J-125	42	176.04	1.45	0.06	1.12	90
438	12.0	J-189	Tara Road Tank	82	392.62	0.52	0.04	1.11	120
708	12.0	J-86	J-87	26	389.56	0.51	0.01	1.11	120
369	8.0	J-125	J-823	1,011	172.95	1.40	1.41	1.10	90
P-238	8.0	J-841	J-719	78	172.69	2.96	0.23	1.10	60
339	8.0	J-215	J-216	110	171.12	0.81	0.09	1.09	120
758	12.0	J-691	J-692	589	370.51	0.55	0.32	1.05	110
P-52	12.0	J-856	J-691	1,364	370.51	0.55	0.75	1.05	110
710	12.0	J-414	J-78	605	362.17	0.45	0.27	1.03	120
583	12.0	J-817	J-681	1,786	-361.45	0.45	0.80	1.03	120
664	12.0	J-676	J-677	543	-360.59	0.52	0.28	1.02	110
709	12.0	J-87	J-414	237	354.04	0.43	0.10	1.00	120
P-214	12.0	J-109	J-853	1,848	342.32	0.47	0.88	0.97	110
P-53	12.0	J-856	J-696	269	336.54	0.39	0.11	0.95	120
P-117	8.0	J-231	J-758	2,090	148.61	0.87	1.82	0.95	100

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
408	10.0	J-634	J-207	544	230.92	0.47	0.26	0.94	120
P-54	12.0	J-696	J-725	2,401	328.35	0.37	0.90	0.93	120
382	10.0	J-845	J-824	1,650	224.08	0.34	0.56	0.92	140
349	10.0	J-521	J-824	1,063	-220.57	0.33	0.35	0.90	140
707	10.0	J-86	J-521	326	-218.76	0.60	0.20	0.89	100
297	8.0	Overlook Drive Tank	J-496	3,260	-136.69	0.62	2.03	0.87	110
656	10.0	J-191	J-192	82	-198.44	0.42	0.03	0.81	110
P-205	8.0	J-191	J-548	167	126.41	0.78	0.13	0.81	90
292	8.0	J-607	J-790	952	-125.28	0.63	0.60	0.80	100
P-200	8.0	J-619	J-820	688	-124.37	0.76	0.52	0.79	90
311	8.0	J-607	J-340	1,142	122.78	0.44	0.50	0.78	120
P-206	8.0	J-548	J-496	672	121.90	0.73	0.49	0.78	90
208	12.0	J-611	J-676	834	-265.14	0.30	0.25	0.75	110
P-197	8.0	J-440	J-275	181	-117.47	0.68	0.12	0.75	90
207	12.0	J-611	J-189	884	262.84	0.29	0.26	0.75	110
784	8.0	J-114	J-416	242	114.73	0.54	0.13	0.73	100
666	10.0	J-207	J-208	89	179.13	0.30	0.03	0.73	120
409	10.0	J-208	J-232	559	178.13	0.29	0.16	0.73	120
270	8.0	J-416	J-763	1,583	109.32	0.49	0.78	0.70	100
432	12.0	J-725	J-576	609	245.49	0.26	0.16	0.70	110
665	12.0	J-576	J-633	1,837	241.29	0.25	0.46	0.68	110
370	8.0	J-826	J-827	1,045	106.69	0.34	0.35	0.68	120
290	8.0	J-827	J-790	1,737	105.09	0.33	0.57	0.67	120
333	8.0	J-292	J-543	349	104.41	0.38	0.13	0.67	110
224	12.0	J-633	J-634	437	232.87	0.20	0.09	0.66	120
P-118	8.0	J-758	J-765	447	99.74	0.42	0.19	0.64	100
667	10.0	J-231	J-232	108	-150.12	0.30	0.03	0.61	100
150	8.0	J-42	J-676	1,238	-93.55	0.26	0.33	0.60	120
210	6.0	J-602	J-603	385	52.12	0.43	0.16	0.59	110
206	8.0	J-41	J-99	614	90.61	0.25	0.15	0.58	120
P-211	8.0	J-826	J-108	1,814	-89.11	0.41	0.74	0.57	90
P-210	12.0	J-853	J-192	987	198.89	0.17	0.17	0.56	110
P-257	8.0	J-316	J-527	2,569	85.91	0.22	0.58	0.55	120
P-239	12.0	J-822	J-845	792	-188.89	0.13	0.11	0.54	120
P-245	12.0	J-344	J-822	16	-185.38	0.15	0.00	0.53	110
782	8.0	J-340	J-341	186	82.07	0.29	0.05	0.52	100
679	8.0	J-47	J-48	14	-80.97	0.34	0.00	0.52	90
269	8.0	J-341	J-114	293	80.40	0.28	0.08	0.51	100
684	8.0	J-708	J-681	625	-79.44	0.23	0.14	0.51	110
P-64	6.0	J-75	J-635	313	44.56	0.38	0.12	0.51	100
P-256	8.0	J-734	J-839	21	78.19	0.19	0.00	0.50	120
P-221	8.0	J-708	J-4	776	77.84	0.22	0.17	0.50	110
330	8.0	J-839	J-789	1,207	77.32	0.26	0.31	0.49	100

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
337	12.0	J-215	J-329	170	-171.46	0.19	0.03	0.49	90
340	12.0	J-216	J-86	393	171.12	0.11	0.04	0.49	120
332	8.0	J-292	J-789	855	-75.08	0.25	0.21	0.48	100
353	12.0	J-78	J-719	619	-167.39	0.09	0.06	0.47	130
225	8.0	J-701	J-602	948	74.36	0.24	0.23	0.47	100
P-111	8.0	J-765	J-525	329	73.45	0.17	0.06	0.47	120
743	6.0	J-330	J-331	170	41.13	0.33	0.06	0.47	100
144	8.0	J-29	J-30	7	72.10	0.12	0.00	0.46	140
2	8.0	J-537	J-538	337	72.10	0.16	0.05	0.46	120
3	8.0	J-538	J-29	755	72.10	0.16	0.12	0.46	120
P-114	8.0	J-510	J-537	100	72.10	0.16	0.02	0.46	120
279	8.0	J-439	J-440	265	-70.97	0.22	0.06	0.45	101
P-302	8.0	J-861	J-4	1,541	-69.60	0.18	0.28	0.44	110
P-77	6.0	J-635	J-605	2,063	38.91	0.30	0.61	0.44	100
P-304	8.0	J-861	J-817	1,245	67.17	0.17	0.21	0.43	110
P-296	8.0	J-178	J-763	344	-65.14	0.19	0.06	0.42	100
P-209	12.0	J-820	J-853	9	-142.86	0.09	0.00	0.41	110
P-199	8.0	J-275	J-619	416	-62.90	0.22	0.09	0.40	90
367	6.0	J-87	J-464	299	34.98	0.62	0.19	0.40	60
P-195	8.0	J-619	J-476	387	60.54	0.09	0.03	0.39	140
344	6.0	J-357	J-315	189	33.30	0.57	0.11	0.38	60
383	8.0	J-543	J-818	986	58.52	0.15	0.15	0.37	100
437	12.0	J-189	J-492	298	-131.48	0.08	0.02	0.37	110
P-150	8.0	J-30	J-778	752	58.04	0.08	0.06	0.37	140
P-176	8.0	J-778	J-686	1,068	56.92	0.15	0.16	0.36	100
652	6.0	J-323	J-324	166	31.32	0.20	0.03	0.36	100
76	8.0	J-699	J-700	594	-55.29	0.14	0.08	0.35	100
P-193	8.0	J-476	J-35	302	55.17	0.07	0.02	0.35	140
285	8.0	J-151	J-152	63	55.17	0.07	0.00	0.35	140
287	8.0	J-265	J-151	179	55.17	0.10	0.02	0.35	120
P-194	8.0	J-35	J-265	6	55.17	0.07	0.00	0.35	140
494	6.0	J-565	J-181	496	30.93	0.19	0.10	0.35	100
280	8.0	J-275	J-152	134	-54.87	0.07	0.01	0.35	140
P-63	6.0	J-399	J-75	127	-29.58	0.18	0.02	0.34	100
217	6.0	J-324	J-494	622	29.48	0.18	0.11	0.33	100
671	8.0	J-701	J-338	583	-52.01	0.12	0.07	0.33	100
P-295	8.0	J-762	J-178	389	-52.00	0.12	0.05	0.33	100
701	8.0	J-762	J-689	1,993	51.63	0.12	0.24	0.33	100
703	8.0	J-350	J-351	184	50.87	0.10	0.02	0.32	110
P-155	6.0	J-235	J-104	1,492	-28.31	0.16	0.24	0.32	100
779	8.0	J-603	J-596	1,746	49.71	0.10	0.17	0.32	110
P-258	8.0	J-527	J-734	845	49.56	0.08	0.07	0.32	120
691	8.0	J-235	J-319	326	49.49	0.11	0.04	0.32	100
329	8.0	J-351	J-171	239	48.72	0.09	0.02	0.31	110
419	8.0	J-222	J-223	115	-46.90	0.10	0.01	0.30	100

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
420	8.0	J-758	J-223	722	46.90	0.10	0.07	0.30	100
P-6	8.0	J-690	J-116	1,656	46.79	0.10	0.17	0.30	100
770	8.0	J-599	J-440	635	-46.17	0.10	0.06	0.29	100
296	10.0	J-601	J-191	3,623	-72.03	0.08	0.28	0.29	100
P-120	8.0	J-222	J-669	13	45.22	0.06	0.00	0.29	130
313	8.0	J-330	J-543	1,080	-43.40	0.09	0.10	0.28	100
696	12.0	J-315	J-316	160	97.12	0.03	0.01	0.28	130
P-132	8.0	J-64	J-173	86	42.11	0.08	0.01	0.27	100
324	8.0	J-171	J-505	306	42.05	0.07	0.02	0.27	110
534	2.0	J-273	J-274	135	2.60	0.41	0.06	0.27	101
103	8.0	J-695	J-740	656	40.72	0.08	0.05	0.26	100
P-285	8.0	J-740	J-95	16	40.72	0.08	0.00	0.26	100
151	12.0	J-41	J-42	13	-91.26	0.03	0.00	0.26	120
P-108	8.0	J-699	J-119	19	40.55	0.08	0.00	0.26	100
P-68	12.0	J-492	J-99	16	-90.61	0.05	0.00	0.26	100
765	8.0	J-763	J-670	1,311	39.68	0.05	0.06	0.25	130
508	8.0	J-505	J-309	319	38.84	0.06	0.02	0.25	110
72	6.0	J-103	J-407	231	21.84	0.08	0.02	0.25	110
463	8.0	J-116	J-67	888	38.06	0.07	0.06	0.24	100
655	10.0	J-749	J-601	688	-59.03	0.05	0.04	0.24	100
744	6.0	J-331	J-565	350	21.01	0.09	0.03	0.24	100
410	2.0	J-279	J-280	147	2.32	0.21	0.03	0.24	130
P-112	8.0	J-525	J-509	408	37.09	0.05	0.02	0.24	120
504	8.0	J-309	J-468	318	36.59	0.05	0.02	0.23	110
178	8.0	J-525	J-526	329	36.36	0.05	0.02	0.23	120
P-113	8.0	J-526	J-510	399	36.36	0.05	0.02	0.23	120
P-346	12.0	J-49	J-725	1,349	-81.25	0.03	0.04	0.23	110
65	12.0	J-22	J-47	20	-80.67	0.05	0.00	0.23	90
18	8.0	J-509	J-510	315	35.74	0.04	0.01	0.23	120
262	10.0	J-700	J-749	1,081	-55.58	0.05	0.05	0.23	100
385	12.0	J-818	J-704	2,189	79.91	0.03	0.07	0.23	110
363	8.0	J-250	J-251	119	-35.30	0.07	0.01	0.23	90
505	8.0	J-115	J-2	375	-34.90	0.05	0.02	0.22	110
496	12.0	J-796	J-704	1,312	-77.25	0.03	0.03	0.22	120
368	8.0	J-464	J-357	596	34.31	0.15	0.09	0.22	60
51	8.0	J-686	J-335	540	33.72	0.06	0.03	0.22	100
247	10.0	J-729	J-730	629	52.45	0.84	0.53	0.21	20
P-131	8.0	J-319	J-64	7	33.42	0.06	0.00	0.21	100
351	8.0	J-527	J-528	380	33.37	0.05	0.02	0.21	101
P-61	12.0	J-677	J-74	24	74.78	0.02	0.00	0.21	120
734	8.0	J-67	J-68	21	33.23	0.05	0.00	0.21	100
148	12.0	J-74	J-75	22	74.42	0.02	0.00	0.21	120
P-263	12.0	J-796	J-737	403	73.97	0.02	0.01	0.21	120
P-130	8.0	J-173	J-813	1,227	32.84	0.05	0.07	0.21	100
P-5	8.0	J-689	J-690	564	32.66	0.05	0.03	0.21	100

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
636	8.0	J-122	J-123	42	32.40	0.03	0.00	0.21	130
8	8.0	J-846	J-570	1,512	32.13	0.04	0.06	0.21	110
561	8.0	J-528	J-800	858	32.11	0.04	0.03	0.20	120
308	8.0	J-11	J-650	752	31.95	0.04	0.03	0.20	110
760	8.0	J-570	J-571	376	31.92	0.05	0.02	0.20	100
P-345	12.0	J-692	J-49	990	-71.37	0.03	0.03	0.20	110
P-353	10.0	J-730	Overlook Drive Tank	48	49.48	0.05	0.00	0.20	90
145	6.0	J-653	J-781	770	17.63	0.05	0.04	0.20	120
678	8.0	J-133	J-599	380	-31.13	0.05	0.02	0.20	100
66	12.0	J-48	J-439	860	-69.43	0.03	0.03	0.20	101
699	8.0	J-650	J-291	508	30.20	0.04	0.02	0.19	110
331	8.0	J-291	J-292	145	29.70	0.04	0.01	0.19	110
317	8.0	J-181	J-182	79	29.56	0.04	0.00	0.19	100
77	6.0	J-239	J-118	292	-16.59	0.07	0.02	0.19	90
171	8.0	J-571	J-647	494	29.14	0.04	0.02	0.19	100
P-156	6.0	J-104	J-781	3	-16.28	0.06	0.00	0.18	100
589	8.0	J-399	J-400	229	28.88	0.04	0.01	0.18	100
100	6.0	J-741	J-742	688	-16.19	0.06	0.04	0.18	100
P-253	8.0	J-734	J-800	413	-28.63	0.04	0.02	0.18	101
697	12.0	J-315	J-78	624	-64.33	0.02	0.01	0.18	130
418	10.0	J-669	J-338	1,418	44.30	0.03	0.04	0.18	100
161	8.0	J-647	J-483	575	28.13	0.04	0.02	0.18	100
182	8.0	J-813	J-586	1,156	28.00	0.04	0.05	0.18	100
P-125	12.0	J-596	J-809	31	62.79	0.02	0.00	0.18	110
P-190	6.0	J-793	J-711	590	-15.21	0.05	0.03	0.17	100
P-189	6.0	J-710	J-793	18	-15.15	0.05	0.00	0.17	100
468	8.0	J-394	J-363	399	-26.91	0.04	0.01	0.17	100
492	6.0	J-469	J-386	377	-14.91	0.04	0.02	0.17	110
140	8.0	J-586	J-695	697	25.92	0.03	0.02	0.17	100
675	10.0	J-417	J-102	242	40.13	0.03	0.01	0.16	90
P-116	8.0	J-765	J-701	549	25.05	0.03	0.02	0.16	100
P-107	6.0	J-729	J-699	1,901	-14.06	0.88	1.68	0.16	20
277	10.0	J-729	J-21	3,154	-38.69	0.48	1.51	0.16	20
459	8.0	J-816	J-400	1,295	-24.66	0.03	0.04	0.16	100
594	6.0	J-134	J-135	52	-13.43	0.02	0.00	0.15	140
P-136	6.0	J-843	J-135	258	13.43	0.04	0.01	0.15	100
126	2.0	J-106	J-107	33	1.45	0.09	0.00	0.15	130
266	6.0	J-599	J-472	504	13.03	0.04	0.02	0.15	100
754	8.0	J-609	J-386	652	22.99	0.03	0.02	0.15	100
80	8.0	J-119	J-486	294	22.90	0.03	0.01	0.15	100
146	6.0	J-104	J-105	31	-12.72	0.02	0.00	0.14	140
79	8.0	J-674	J-486	587	-22.44	0.03	0.02	0.14	100
690	8.0	J-335	J-235	173	22.42	0.03	0.00	0.14	100

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-264	12.0	J-737	J-663	475	50.38	0.01	0.01	0.14	120
503	10.0	J-114	J-115	39	-34.90	0.02	0.00	0.14	110
755	8.0	J-547	J-545	342	22.18	0.03	0.01	0.14	100
177	12.0	J-207	J-799	2,611	49.28	0.01	0.03	0.14	120
493	8.0	J-394	J-193	224	21.70	0.02	0.01	0.14	100
733	8.0	J-68	J-499	337	21.52	0.02	0.01	0.14	100
132	8.0	J-448	J-456	819	21.30	0.02	0.02	0.14	100
203	8.0	J-686	J-256	1,492	21.08	0.02	0.03	0.13	100
P-351	8.0	J-407	J-25	726	20.95	0.02	0.01	0.13	110
245	8.0	J-581	J-786	813	20.91	0.02	0.02	0.13	100
687	8.0	J-602	J-653	488	20.90	0.02	0.01	0.13	120
291	8.0	J-720	J-790	857	20.85	0.02	0.02	0.13	100
P-2	8.0	J-468	J-2	390	20.84	0.02	0.01	0.13	110
112	12.0	J-297	J-799	874	-46.79	0.01	0.01	0.13	120
479	8.0	J-644	J-737	672	-20.74	0.02	0.02	0.13	100
152	12.0	J-511	J-605	415	-46.34	0.01	0.01	0.13	100
P-72	12.0	J-184	J-511	241	-46.34	0.01	0.00	0.13	100
470	8.0	J-545	J-364	573	20.45	0.02	0.01	0.13	100
246	8.0	J-786	J-293	952	20.41	0.02	0.02	0.13	100
556	8.0	J-7	J-8	3	-20.27	0.01	0.00	0.13	120
554	8.0	J-8	J-221	97	-20.27	0.01	0.00	0.13	140
557	8.0	J-221	J-524	370	-20.27	0.02	0.01	0.13	120
756	8.0	J-363	J-364	196	-20.03	0.02	0.00	0.13	100
753	8.0	J-193	J-581	426	20.03	0.02	0.01	0.13	100
647	12.0	J-297	J-298	149	45.02	0.01	0.00	0.13	120
P-265	8.0	J-415	J-10	53	19.98	0.02	0.00	0.13	100
P-352	8.0	J-25	J-529	291	19.95	0.02	0.01	0.13	110
P-275	8.0	J-7	J-32	47	19.89	0.02	0.00	0.13	100
731	8.0	J-447	J-448	268	19.52	0.02	0.01	0.12	100
303	8.0	J-792	J-670	847	-19.26	0.02	0.01	0.12	110
P-142	6.0	J-134	J-649	780	10.77	0.03	0.02	0.12	100
762	8.0	J-529	J-530	328	19.12	0.02	0.01	0.12	100
283	2.0	J-165	J-166	70	-1.19	0.10	0.01	0.12	101
745	8.0	J-331	J-349	642	19.01	0.02	0.01	0.12	100
486	6.0	J-389	J-415	239	-10.68	0.03	0.01	0.12	90
P-71	12.0	J-463	J-184	84	-41.81	0.01	0.00	0.12	100
P-74	12.0	J-248	J-463	17	-41.81	0.01	0.00	0.12	100
436	12.0	J-617	J-462	1,123	-41.26	0.01	0.01	0.12	100
P-66	12.0	J-569	J-617	364	-41.26	0.01	0.00	0.12	100
P-73	12.0	J-462	J-248	260	-41.26	0.01	0.00	0.12	100
230	12.0	J-98	J-569	352	-41.26	0.01	0.00	0.12	100
732	8.0	J-499	J-447	303	18.28	0.02	0.01	0.12	100
491	8.0	J-561	J-469	395	-18.28	0.02	0.01	0.12	100
67	8.0	J-302	J-436	261	18.25	0.01	0.00	0.12	120
63	12.0	J-417	J-22	242	-41.00	0.01	0.00	0.12	90

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
773	8.0	J-65	J-711	1,302	18.17	0.02	0.02	0.12	100
P-67	12.0	J-98	J-492	13	40.87	0.01	0.00	0.12	100
P-268	8.0	J-9	J-547	571	18.16	0.02	0.01	0.12	100
P-299	12.0	J-340	J-350	1,472	40.71	0.01	0.01	0.12	130
477	8.0	J-138	J-644	546	-18.02	0.02	0.01	0.12	100
700	8.0	J-670	J-428	552	17.65	0.02	0.01	0.11	100
64	12.0	J-21	J-22	5	-39.66	0.01	0.00	0.11	100
P-207	8.0	J-820	J-826	24	17.58	0.02	0.00	0.11	90
683	8.0	J-496	J-436	300	-17.35	0.01	0.00	0.11	120
78	8.0	J-118	J-119	40	-17.20	0.02	0.00	0.11	90
646	12.0	J-629	J-287	435	38.61	0.01	0.00	0.11	110
304	8.0	J-11	J-428	758	-17.06	0.01	0.01	0.11	110
316	8.0	J-772	J-182	761	-16.85	0.01	0.01	0.11	110
P-148	8.0	J-707	J-816	449	-16.70	0.02	0.01	0.11	100
555	8.0	J-31	J-32	11	-16.68	0.01	0.00	0.11	120
681	8.0	J-132	J-133	44	-16.39	0.01	0.00	0.10	120
216	8.0	J-768	J-742	955	16.19	0.01	0.01	0.10	100
259	8.0	J-689	J-690	2,072	16.18	0.01	0.03	0.10	100
181	8.0	J-319	J-320	164	16.07	0.01	0.00	0.10	110
637	8.0	J-150	J-239	116	-15.83	0.02	0.00	0.10	90
179	12.0	J-298	J-629	526	35.23	0.01	0.00	0.10	110
P-1	8.0	J-2	J-468	679	-15.44	0.01	0.01	0.10	110
184	6.0	J-38	J-766	757	-8.64	0.02	0.01	0.10	110
509	8.0	J-349	J-373	867	15.36	0.01	0.01	0.10	100
P-48	12.0	J-844	J-727	419	33.96	0.01	0.00	0.10	100
490	8.0	J-580	J-561	565	-14.99	0.01	0.01	0.10	100
138	8.0	J-493	J-467	300	14.96	0.01	0.00	0.10	100
411	12.0	J-808	J-809	863	-33.61	0.01	0.01	0.10	110
P-121	12.0	J-808	J-555	711	33.61	0.01	0.00	0.10	110
689	8.0	J-483	J-484	293	14.93	0.01	0.00	0.10	100
P-260	8.0	J-792	J-11	514	14.89	0.01	0.01	0.10	110
P-271	8.0	J-493	J-835	258	-14.73	0.01	0.00	0.09	100
P-133	8.0	J-843	J-542	45	-14.71	0.01	0.00	0.09	100
P-269	8.0	J-772	J-458	518	14.67	0.01	0.01	0.09	110
268	8.0	J-767	J-530	759	-14.65	0.01	0.01	0.09	100
P-282	6.0	J-642	J-819	16	8.22	0.02	0.00	0.09	100
195	12.0	J-123	J-539	435	32.40	0.00	0.00	0.09	130
73	10.0	J-102	J-103	32	22.41	0.01	0.00	0.09	110
48	12.0	J-752	J-97	906	32.06	0.01	0.01	0.09	110
761	12.0	J-539	J-323	338	31.99	0.01	0.00	0.09	100
P-152	8.0	J-321	J-30	85	-14.06	0.01	0.00	0.09	140
117	8.0	J-289	J-290	144	-14.06	0.01	0.00	0.09	140
114	8.0	J-321	J-322	169	14.06	0.01	0.00	0.09	140
116	8.0	J-290	J-322	231	-14.06	0.01	0.00	0.09	120
P-153	8.0	J-105	J-185	515	-14.06	0.01	0.00	0.09	140

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

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P-154	8.0	J-185	J-289	155	-14.06	0.01	0.00	0.09	140
P-122	12.0	J-555	J-266	253	31.48	0.01	0.00	0.09	110
511	12.0	J-415	J-805	1,748	-31.44	0.00	0.01	0.09	120
677	8.0	J-710	J-720	724	13.61	0.01	0.01	0.09	100
729	8.0	J-446	J-293	263	-13.35	0.01	0.00	0.09	100
62	8.0	J-133	J-301	478	13.15	0.01	0.00	0.08	120
P-288	8.0	J-782	J-380	414	13.14	0.01	0.00	0.08	100
P-123	12.0	J-481	J-745	9	29.18	0.00	0.00	0.08	120
P-126	12.0	J-809	J-481	349	29.18	0.00	0.00	0.08	110
500	8.0	J-116	J-609	1,586	12.78	0.01	0.01	0.08	100
P-127	12.0	J-745	J-846	383	28.64	0.00	0.00	0.08	110
P-270	8.0	J-458	J-608	459	12.63	0.01	0.00	0.08	110
571	12.0	J-552	J-250	1,911	-28.10	0.00	0.01	0.08	130
608	12.0	J-94	J-95	31	-28.07	0.00	0.00	0.08	120
618	4.0	J-183	J-393	322	3.11	0.01	0.00	0.08	120
P-36	12.0	J-838	J-97	373	-28.00	0.01	0.00	0.08	100
539	2.0	J-285	J-286	143	0.78	0.04	0.01	0.08	101
692	6.0	J-273	J-256	351	-6.98	0.01	0.00	0.08	100
474	8.0	J-565	J-373	1,065	-12.40	0.01	0.01	0.08	100
740	12.0	J-663	J-664	513	27.61	0.00	0.00	0.08	120
P-287	8.0	J-95	J-782	657	12.26	0.01	0.01	0.08	100
499	2.0	J-458	J-459	283	0.76	0.03	0.01	0.08	130
P-191	8.0	J-299	J-767	685	-12.12	0.01	0.01	0.08	100
P-289	8.0	J-380	J-766	214	12.07	0.01	0.00	0.08	100
716	12.0	J-551	J-552	350	-27.11	0.00	0.00	0.08	130
441	2.0	J-579	J-531	428	0.75	0.03	0.01	0.08	130
518	8.0	J-178	J-179	76	12.01	0.01	0.00	0.08	120
143	12.0	J-232	J-780	766	26.94	0.00	0.00	0.08	130
P-283	12.0	J-502	J-94	215	-26.87	0.00	0.00	0.08	100
570	12.0	J-662	J-743	717	-26.45	0.00	0.00	0.08	120
771	12.0	J-551	J-743	1,325	26.45	0.00	0.00	0.08	130
61	8.0	J-302	J-472	303	-11.66	0.01	0.00	0.07	100
366	2.0	J-268	J-269	128	0.73	0.04	0.00	0.07	101
658	8.0	J-600	J-601	381	-11.57	0.01	0.00	0.07	90
680	8.0	J-48	J-132	119	-11.54	0.01	0.00	0.07	90
694	6.0	J-37	J-38	12	-6.49	0.01	0.00	0.07	110
645	12.0	J-287	J-288	143	25.83	0.00	0.00	0.07	110
565	2.0	J-659	J-660	528	0.71	0.02	0.01	0.07	130
728	6.0	J-293	J-294	145	6.34	0.01	0.00	0.07	120
265	2.0	J-507	J-508	318	-0.70	0.02	0.01	0.07	130
674	10.0	J-102	J-65	114	17.39	0.01	0.00	0.07	90
P-7	12.0	J-780	J-768	327	25.03	0.00	0.00	0.07	130
P-267	8.0	J-10	J-9	3	11.10	0.01	0.00	0.07	100
737	12.0	J-658	J-662	527	-24.89	0.00	0.00	0.07	120
P-232	8.0	J-732	J-798	321	-11.03	0.01	0.00	0.07	110

Active Scenario: ADD-Buildout
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Steady State Analysis

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346	2.0	J-271	J-272	132	0.68	0.03	0.00	0.07	110
746	8.0	J-518	J-182	321	-10.79	0.01	0.00	0.07	100
384	12.0	J-818	J-658	1,775	-24.08	0.00	0.01	0.07	120
157	12.0	J-838	J-773	1,176	24.06	0.00	0.00	0.07	120
741	8.0	J-467	J-205	275	10.53	0.01	0.00	0.07	100
693	8.0	J-255	J-256	121	-10.51	0.01	0.00	0.07	100
769	12.0	J-502	J-503	303	23.37	0.00	0.00	0.07	100
653	12.0	J-494	J-495	300	23.16	0.00	0.00	0.07	90
273	8.0	J-68	J-559	957	10.29	0.01	0.01	0.07	100
495	12.0	J-664	J-805	894	22.94	0.00	0.00	0.07	120
542	8.0	J-201	J-446	707	-10.10	0.01	0.00	0.06	100
735	6.0	J-205	J-206	89	5.67	0.01	0.00	0.06	100
141	10.0	J-484	J-695	569	15.70	0.00	0.00	0.06	100
P-103	12.0	J-266	J-295	102	22.58	0.00	0.00	0.06	120
543	6.0	J-294	J-202	996	5.64	0.01	0.01	0.06	120
336	6.0	J-13	J-14	3	-5.59	0.01	0.00	0.06	120
P-237	8.0	J-414	J-841	1,106	-9.93	0.01	0.02	0.06	60
524	8.0	J-5	J-6	2	9.91	0.00	0.00	0.06	140
525	8.0	J-179	J-5	398	9.91	0.00	0.00	0.06	120
P-297	8.0	J-6	J-756	76	9.91	0.00	0.00	0.06	110
538	8.0	J-33	J-590	521	9.62	0.00	0.00	0.06	110
P-134	8.0	J-542	J-335	1,370	-9.62	0.01	0.01	0.06	100
P-231	8.0	J-797	J-732	545	-9.60	0.00	0.00	0.06	110
84	2.0	J-750	J-751	735	0.59	0.02	0.01	0.06	120
P-162	12.0	J-517	J-495	1,538	-21.16	0.00	0.00	0.06	110
750	8.0	J-618	J-139	410	-9.29	0.00	0.00	0.06	120
53	8.0	J-173	J-82	74	9.27	0.00	0.00	0.06	120
P-274	12.0	J-524	J-456	273	-20.81	0.00	0.00	0.06	100
613	2.0	J-472	J-473	277	0.58	0.03	0.01	0.06	100
654	6.0	J-494	J-408	620	5.18	0.01	0.01	0.06	90
639	12.0	J-159	J-773	828	-20.62	0.00	0.00	0.06	120
670	8.0	J-338	J-339	175	-9.12	0.00	0.00	0.06	100
127	4.0	J-452	J-106	265	2.24	0.01	0.00	0.06	130
476	8.0	J-9	J-10	3	-8.88	0.01	0.00	0.06	80
588	8.0	J-159	J-160	63	8.84	0.00	0.00	0.06	101
52	8.0	J-63	J-64	19	8.70	0.00	0.00	0.06	100
295	8.0	J-835	J-580	1,525	-8.67	0.00	0.01	0.06	100
593	2.0	J-324	J-646	589	0.54	0.02	0.01	0.06	101
281	8.0	J-720	J-299	625	-8.53	0.00	0.00	0.05	100
P-164	12.0	J-661	J-517	222	-18.72	0.00	0.00	0.05	110
P-163	12.0	J-334	J-661	381	-18.72	0.00	0.00	0.05	110
510	12.0	J-663	J-474	1,339	18.13	0.00	0.00	0.05	120
P-70	6.0	J-544	J-184	75	-4.53	0.00	0.00	0.05	120
604	8.0	J-503	J-760	926	8.02	0.00	0.00	0.05	110
P-202	6.0	J-746	J-132	689	-4.44	0.01	0.00	0.05	100

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-105	8.0	J-160	J-655	417	7.90	0.00	0.00	0.05	101
644	12.0	J-288	J-657	1,132	17.68	0.00	0.00	0.05	110
194	12.0	J-674	J-122	526	17.63	0.00	0.00	0.05	110
478	12.0	J-138	J-139	60	17.44	0.00	0.00	0.05	100
172	10.0	J-199	J-483	1,101	-11.96	0.00	0.00	0.05	110
P-344	12.0	J-727	J-325	921	17.19	0.00	0.00	0.05	100
464	8.0	J-386	J-363	219	7.60	0.00	0.00	0.05	100
514	8.0	J-332	J-451	309	-7.58	0.00	0.00	0.05	140
523	8.0	J-756	J-451	706	7.58	0.00	0.00	0.05	140
682	8.0	J-301	J-302	152	7.57	0.00	0.00	0.05	120
P-147	8.0	J-339	J-707	502	-7.54	0.00	0.00	0.05	100
558	6.0	J-337	J-13	1,000	-4.15	0.00	0.00	0.05	110
736	6.0	J-206	J-303	500	4.11	0.00	0.00	0.05	100
625	8.0	J-100	J-101	48	7.22	0.00	0.00	0.05	120
P-45	12.0	J-667	J-830	108	16.17	0.00	0.00	0.05	100
P-343	12.0	J-667	J-727	1,027	-16.17	0.00	0.00	0.05	100
1	12.0	J-744	J-320	678	-15.65	0.00	0.00	0.04	110
759	10.0	J-199	J-200	87	10.81	0.00	0.00	0.04	110
P-279	8.0	J-754	J-819	26	-6.90	0.00	0.00	0.04	100
456	8.0	J-164	J-794	1,994	6.89	0.00	0.00	0.04	130
635	12.0	J-122	J-150	60	-15.46	0.00	0.00	0.04	90
P-272	8.0	J-835	J-559	91	-6.85	0.00	0.00	0.04	100
591	8.0	J-50	J-433	242	6.81	0.00	0.00	0.04	101
726	8.0	J-31	J-437	1,600	6.78	0.00	0.00	0.04	110
P-69	6.0	J-183	J-544	6	-3.79	0.00	0.00	0.04	120
705	8.0	J-171	J-172	74	6.67	0.00	0.00	0.04	110
706	8.0	J-172	J-270	128	6.67	0.00	0.00	0.04	101
704	8.0	J-270	J-485	298	6.67	0.00	0.00	0.04	101
624	8.0	J-712	J-713	993	6.67	0.00	0.00	0.04	120
P-99	8.0	J-717	J-712	14	6.67	0.00	0.00	0.04	120
P-11	12.0	J-858	J-334	1,229	-14.84	0.00	0.00	0.04	110
434	8.0	J-696	J-697	624	6.58	0.00	0.00	0.04	101
421	8.0	J-707	J-27	639	6.57	0.00	0.00	0.04	120
544	8.0	J-202	J-155	502	6.53	0.00	0.00	0.04	100
533	6.0	J-564	J-273	430	-3.66	0.00	0.00	0.04	100
135	6.0	J-448	J-205	1,167	-3.63	0.00	0.00	0.04	100
111	10.0	J-298	J-161	2,153	9.78	0.00	0.00	0.04	110
748	8.0	J-594	J-389	576	-6.21	0.00	0.00	0.04	100
714	8.0	J-307	J-250	557	-6.11	0.00	0.00	0.04	90
120	12.0	J-596	J-744	1,086	-13.66	0.00	0.00	0.04	110
P-227	8.0	J-124	J-831	176	5.96	0.00	0.00	0.04	100
717	10.0	J-200	J-92	489	9.30	0.00	0.00	0.04	110
471	8.0	J-117	J-518	882	-5.89	0.00	0.00	0.04	100
P-104	12.0	J-295	J-267	25	13.23	0.00	0.00	0.04	120
607	12.0	J-642	J-503	888	-13.00	0.00	0.00	0.04	100

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-101	12.0	J-267	J-614	354	12.81	0.00	0.00	0.04	120
532	8.0	J-542	J-255	949	-5.68	0.00	0.00	0.04	100
P-281	6.0	J-583	J-642	1,086	-3.19	0.00	0.00	0.04	100
180	10.0	J-649	J-63	469	8.70	0.00	0.00	0.04	100
P-186	12.0	J-488	J-858	621	-12.47	0.00	0.00	0.04	130
301	6.0	J-416	J-572	1,063	3.11	0.00	0.00	0.04	100
258	6.0	J-769	J-37	1,191	-3.11	0.00	0.00	0.04	110
458	8.0	J-816	J-788	930	5.53	0.00	0.00	0.04	100
553	8.0	J-568	J-201	981	-5.51	0.00	0.00	0.04	100
P-196	8.0	J-476	J-620	27	5.37	0.00	0.00	0.03	140
442	6.0	J-651	J-652	491	3.01	0.00	0.00	0.03	101
481	8.0	J-594	J-547	1,338	5.32	0.00	0.00	0.03	110
541	6.0	J-568	J-519	351	2.98	0.00	0.00	0.03	100
455	12.0	J-163	J-164	68	11.85	0.00	0.00	0.03	130
97	8.0	J-639	J-785	1,001	5.26	0.00	0.00	0.03	120
34	12.0	J-554	J-159	1,840	-11.78	0.00	0.00	0.03	120
659	8.0	J-325	J-326	173	5.22	0.00	0.00	0.03	101
650	12.0	J-639	J-287	1,208	-11.75	0.00	0.00	0.03	110
P-251	12.0	J-678	J-842	1,278	11.70	0.00	0.00	0.03	120
160	12.0	J-598	J-657	1,483	-11.59	0.00	0.00	0.03	110
546	8.0	J-801	J-155	876	-5.14	0.00	0.00	0.03	100
489	8.0	J-116	J-117	39	-5.12	0.00	0.00	0.03	100
487	6.0	J-389	J-390	220	2.88	0.00	0.00	0.03	120
22	8.0	J-288	J-621	2,692	5.10	0.00	0.00	0.03	110
P-167	6.0	J-259	J-237	86	2.85	0.00	0.00	0.03	130
P-165	6.0	J-391	J-259	216	2.85	0.00	0.00	0.03	130
480	12.0	J-608	J-609	389	11.38	0.00	0.00	0.03	110
738	12.0	J-678	J-474	564	-11.25	0.00	0.00	0.03	120
752	8.0	J-227	J-139	1,507	-4.88	0.00	0.00	0.03	120
P-160	6.0	J-604	J-759	633	2.74	0.00	0.00	0.03	90
391	2.0	J-434	J-435	269	0.30	0.00	0.00	0.03	130
P-204	8.0	J-709	J-747	121	4.81	0.00	0.00	0.03	110
42	6.0	J-76	J-77	22	-2.66	0.00	0.00	0.03	120
12	8.0	J-92	J-93	27	4.70	0.00	0.00	0.03	130
P-102	12.0	J-614	J-180	1,448	10.55	0.00	0.00	0.03	120
28	12.0	J-163	J-325	1,018	-10.54	0.00	0.00	0.03	100
202	6.0	J-408	J-409	248	2.61	0.00	0.00	0.03	101
749	8.0	J-593	J-618	982	-4.56	0.00	0.00	0.03	110
P-300	12.0	J-350	J-316	1,903	-10.17	0.00	0.00	0.03	130
433	8.0	J-825	J-554	1,068	-4.43	0.00	0.00	0.03	130
274	8.0	J-709	J-301	599	-4.41	0.00	0.00	0.03	110
241	8.0	J-754	J-755	846	4.41	0.00	0.00	0.03	100
403	6.0	J-308	J-430	255	2.45	0.00	0.00	0.03	90
407	8.0	J-598	J-279	408	4.36	0.00	0.00	0.03	130
446	8.0	J-326	J-784	844	4.32	0.00	0.00	0.03	101

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
605	8.0	J-760	J-362	853	4.31	0.00	0.00	0.03	110
263	8.0	J-637	J-600	884	-4.29	0.00	0.00	0.03	90
P-168	6.0	J-237	J-260	36	2.40	0.00	0.00	0.03	130
482	12.0	J-805	J-369	1,173	-9.57	0.00	0.00	0.03	120
721	8.0	J-776	J-590	1,326	-4.21	0.00	0.00	0.03	110
502	8.0	J-469	J-394	276	-4.21	0.00	0.00	0.03	100
P-82	12.0	J-187	J-295	2,225	-9.35	0.00	0.00	0.03	110
406	6.0	J-687	J-688	550	-2.33	0.00	0.00	0.03	110
293	6.0	J-309	J-310	156	2.25	0.00	0.00	0.03	101
0	12.0	J-82	J-83	25	8.81	0.00	0.00	0.02	120
188	12.0	J-83	J-405	1,243	8.81	0.00	0.00	0.02	120
192	6.0	J-574	J-783	1,143	-2.18	0.00	0.00	0.02	100
218	8.0	J-19	J-20	4	3.88	0.00	0.00	0.02	130
88	8.0	J-334	J-19	203	3.88	0.00	0.00	0.02	130
P-10	8.0	J-20	J-365	357	3.88	0.00	0.00	0.02	80
P-13	8.0	J-365	J-480	5	3.88	0.01	0.00	0.02	80
302	6.0	J-572	J-573	356	2.16	0.00	0.00	0.02	101
P-259	8.0	J-671	J-792	4	-3.74	0.00	0.00	0.02	110
526	6.0	J-179	J-387	219	2.10	0.00	0.00	0.02	120
606	12.0	J-31	J-33	860	8.37	0.00	0.00	0.02	100
175	8.0	J-180	J-100	78	3.70	0.00	0.00	0.02	120
193	8.0	J-783	J-674	793	-3.66	0.00	0.00	0.02	100
P-138	6.0	J-76	J-233	33	2.06	0.00	0.00	0.02	140
715	8.0	J-307	J-308	154	3.64	0.00	0.00	0.02	90
P-109	6.0	J-409	J-359	191	2.01	0.00	0.00	0.02	101
174	8.0	J-167	J-100	73	3.52	0.00	0.00	0.02	120
16	12.0	J-422	J-830	1,368	-7.92	0.00	0.00	0.02	120
395	6.0	J-613	J-515	413	1.95	0.00	0.00	0.02	80
P-223	6.0	J-515	J-461	170	1.95	0.00	0.00	0.02	120
485	8.0	J-664	J-678	1,374	3.44	0.00	0.00	0.02	120
P-46	12.0	J-830	J-209	450	7.58	0.00	0.00	0.02	100
727	8.0	J-201	J-202	87	3.34	0.00	0.00	0.02	100
P-95	8.0	J-717	J-101	1	-3.33	0.00	0.00	0.02	120
P-97	8.0	J-101	J-717	1	3.33	0.00	0.00	0.02	120
133	6.0	J-499	J-493	1,056	1.86	0.00	0.00	0.02	100
153	12.0	J-605	J-266	2,598	-7.43	0.00	0.00	0.02	110
P-179	8.0	J-66	J-352	1,403	-3.28	0.00	0.00	0.02	90
P-181	12.0	J-768	J-391	848	7.29	0.00	0.00	0.02	130
P-276	8.0	J-32	J-34	859	3.21	0.00	0.00	0.02	100
590	8.0	J-187	J-188	82	3.17	0.00	0.00	0.02	130
156	8.0	J-188	J-685	641	3.17	0.00	0.00	0.02	130
757	8.0	J-548	J-120	344	3.14	0.00	0.00	0.02	110
549	6.0	J-519	J-197	322	1.76	0.00	0.00	0.02	100
165	8.0	J-361	J-362	196	-3.11	0.00	0.00	0.02	110
P-42	8.0	J-423	J-452	630	3.10	0.00	0.00	0.02	130

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
108	6.0	J-446	J-591	369	1.74	0.00	0.00	0.02	130
P-94	12.0	J-180	J-167	25	6.85	0.00	0.00	0.02	120
227	12.0	J-49	J-50	32	6.81	0.00	0.00	0.02	101
209	8.0	J-339	J-27	1,137	-3.02	0.00	0.00	0.02	120
P-215	12.0	J-14	J-855	399	-6.75	0.00	0.00	0.02	110
P-201	6.0	J-812	J-746	190	-1.68	0.00	0.00	0.02	100
271	8.0	J-679	J-67	564	-2.97	0.00	0.00	0.02	130
P-157	8.0	J-600	J-684	1,822	2.96	0.00	0.00	0.02	90
620	4.0	J-378	J-379	396	0.74	0.00	0.00	0.02	120
P-225	8.0	J-797	J-224	1,229	2.94	0.00	0.00	0.02	110
25	12.0	J-209	J-195	945	6.62	0.00	0.00	0.02	100
20	12.0	J-422	J-423	249	6.61	0.00	0.00	0.02	120
107	6.0	J-202	J-557	458	1.64	0.00	0.00	0.02	100
P-290	8.0	J-766	J-381	3	2.91	0.00	0.00	0.02	100
170	8.0	J-813	J-570	943	2.88	0.00	0.00	0.02	110
634	8.0	J-655	J-656	483	2.86	0.00	0.00	0.02	101
167	8.0	J-635	J-771	1,085	2.82	0.00	0.00	0.02	101
83	6.0	J-564	J-497	351	1.58	0.00	0.00	0.02	101
P-171	6.0	J-631	J-578	518	1.58	0.00	0.00	0.02	100
725	8.0	J-589	J-590	367	-2.79	0.00	0.00	0.02	130
134	8.0	J-447	J-467	1,096	-2.78	0.00	0.00	0.02	100
250	8.0	J-176	J-177	74	-2.78	0.00	0.00	0.02	120
249	8.0	J-352	J-176	190	-2.78	0.00	0.00	0.02	120
P-16	8.0	J-490	J-177	207	2.78	0.00	0.00	0.02	120
P-15	8.0	J-480	J-490	179	2.78	0.00	0.00	0.02	120
10	12.0	J-405	J-406	243	6.22	0.00	0.00	0.02	120
405	6.0	J-588	J-268	364	1.55	0.00	0.00	0.02	101
445	8.0	J-773	J-774	760	2.76	0.00	0.00	0.02	130
11	6.0	J-408	J-728	632	1.55	0.00	0.00	0.02	90
777	8.0	J-757	J-755	762	-2.68	0.00	0.00	0.02	100
651	10.0	J-161	J-629	817	4.19	0.00	0.00	0.02	110
122	8.0	J-361	J-688	791	2.59	0.00	0.00	0.02	110
198	8.0	J-621	J-622	437	2.55	0.00	0.00	0.02	130
P-39	12.0	J-195	J-153	63	5.68	0.00	0.00	0.02	100
578	6.0	J-214	J-748	683	1.41	0.00	0.00	0.02	101
587	4.0	J-343	J-346	179	0.63	0.00	0.00	0.02	130
552	8.0	J-437	J-776	994	2.50	0.00	0.00	0.02	110
P-277	8.0	J-228	J-754	66	-2.50	0.00	0.00	0.02	100
P-180	8.0	J-352	J-353	351	-2.49	0.00	0.00	0.02	90
162	8.0	J-502	J-791	882	2.49	0.00	0.00	0.02	130
P-228	8.0	J-831	J-806	685	2.45	0.00	0.00	0.02	100
P-21	8.0	J-517	J-470	139	2.44	0.00	0.00	0.02	130
89	8.0	J-376	J-377	213	2.44	0.00	0.00	0.02	120
234	8.0	J-604	J-377	510	-2.44	0.00	0.00	0.02	120
P-22	8.0	J-470	J-376	187	2.44	0.00	0.00	0.02	130

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
341	8.0	J-336	J-337	174	-2.44	0.00	0.00	0.02	110
P-250	12.0	J-369	J-842	3	-5.38	0.00	0.00	0.02	120
P-252	12.0	J-842	J-369	3	5.38	0.00	0.00	0.02	120
P-172	6.0	J-578	J-810	428	1.34	0.00	0.00	0.02	100
P-141	6.0	J-77	J-134	1	-1.33	0.00	0.00	0.02	100
P-139	6.0	J-134	J-77	1	1.33	0.00	0.00	0.02	100
244	8.0	J-303	J-786	880	2.34	0.00	0.00	0.01	100
P-298	8.0	J-756	J-327	249	2.33	0.00	0.00	0.01	110
P-178	8.0	J-353	J-759	195	-2.32	0.00	0.00	0.01	90
55	8.0	J-166	J-518	527	-2.31	0.00	0.00	0.01	101
21	10.0	J-851	J-633	2,127	-3.61	0.00	0.00	0.01	100
465	6.0	J-545	J-546	341	1.29	0.00	0.00	0.01	101
P-135	6.0	J-445	J-843	5	-1.28	0.00	0.00	0.01	100
626	8.0	J-614	J-615	408	2.26	0.00	0.00	0.01	120
294	8.0	J-580	J-581	362	2.25	0.00	0.00	0.01	100
56	8.0	J-753	J-671	743	-2.20	0.00	0.00	0.01	101
325	8.0	J-351	J-457	312	2.15	0.00	0.00	0.01	101
95	6.0	J-73	J-574	356	-1.19	0.00	0.00	0.01	100
P-235	12.0	J-719	J-403	108	4.76	0.00	0.00	0.01	130
125	8.0	J-423	J-342	1,182	2.11	0.00	0.00	0.01	130
288	8.0	J-530	J-724	608	2.10	0.00	0.00	0.01	100
57	8.0	J-606	J-607	395	-2.09	0.00	0.00	0.01	100
23	12.0	J-847	J-598	1,656	-4.65	0.00	0.00	0.01	110
497	8.0	J-226	J-375	212	2.06	0.00	0.00	0.01	101
345	6.0	J-14	J-271	459	1.16	0.00	0.00	0.01	110
397	6.0	J-460	J-461	282	-1.16	0.00	0.00	0.01	120
P-57	8.0	J-400	J-110	1,121	2.06	0.00	0.00	0.01	110
513	8.0	J-37	J-648	467	2.03	0.00	0.00	0.01	101
105	8.0	J-33	J-34	11	-2.01	0.00	0.00	0.01	120
357	8.0	J-336	J-708	861	2.00	0.00	0.00	0.01	110
548	8.0	J-675	J-801	849	-1.96	0.00	0.00	0.01	110
P-226	8.0	J-224	J-613	55	1.95	0.00	0.00	0.01	110
473	8.0	J-618	J-226	953	1.92	0.00	0.00	0.01	120
P-128	12.0	J-846	J-406	308	-4.29	0.00	0.00	0.01	110
320	8.0	J-761	J-125	722	-1.89	0.00	0.00	0.01	100
200	8.0	J-638	J-654	480	1.89	0.00	0.00	0.01	130
24	12.0	J-276	J-153	137	-4.22	0.00	0.00	0.01	100
649	12.0	J-638	J-639	449	-4.20	0.00	0.00	0.01	110
P-254	8.0	J-800	J-735	294	1.84	0.00	0.00	0.01	101
142	8.0	J-782	J-757	876	-1.83	0.00	0.00	0.01	100
96	8.0	J-419	J-785	2,262	-1.83	0.00	0.00	0.01	120
457	12.0	J-96	J-97	28	-4.07	0.00	0.00	0.01	120
P-81	12.0	J-852	J-187	333	-3.99	0.00	0.00	0.01	110
272	8.0	J-559	J-560	350	1.76	0.00	0.00	0.01	130
550	6.0	J-197	J-592	372	0.99	0.00	0.00	0.01	130

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
629	8.0	J-27	J-28	516	1.75	0.00	0.00	0.01	101
P-236	12.0	J-403	J-214	1,056	3.92	0.00	0.00	0.01	130
176	10.0	J-161	J-162	67	2.69	0.00	0.00	0.01	101
P-182	12.0	J-391	J-631	647	3.86	0.00	0.00	0.01	130
261	8.0	J-508	J-749	783	-1.72	0.00	0.00	0.01	130
413	10.0	J-92	J-484	1,311	2.66	0.00	0.00	0.01	110
454	8.0	J-500	J-501	303	1.69	0.00	0.00	0.01	130
37	8.0	J-698	J-500	602	1.69	0.00	0.00	0.01	130
P-143	8.0	J-234	J-738	201	1.68	0.00	0.00	0.01	130
P-37	12.0	J-276	J-217	447	3.72	0.00	0.00	0.01	100
P-159	6.0	J-728	J-604	90	0.92	0.00	0.00	0.01	90
615	8.0	J-120	J-121	41	1.62	0.00	0.00	0.01	110
774	8.0	J-505	J-431	743	1.60	0.00	0.00	0.01	101
P-247	12.0	J-822	J-395	621	3.51	0.00	0.00	0.01	110
39	8.0	J-281	J-282	142	1.55	0.00	0.00	0.01	120
751	8.0	J-226	J-227	111	-1.55	0.00	0.00	0.01	120
416	8.0	J-775	J-776	862	-1.54	0.00	0.00	0.01	130
P-89	12.0	J-427	J-318	267	3.33	0.00	0.00	0.01	120
P-92	12.0	J-167	J-427	1,458	3.33	0.00	0.00	0.01	120
P-90	12.0	J-318	J-625	579	3.33	0.00	0.00	0.01	120
P-86	12.0	J-625	J-733	12	3.33	0.00	0.00	0.01	120
P-35	12.0	J-585	J-838	7	-3.33	0.00	0.00	0.01	100
253	8.0	J-488	J-489	295	1.45	0.00	0.00	0.01	140
P-187	8.0	J-489	J-623	7	1.45	0.00	0.00	0.01	120
P-188	8.0	J-623	J-512	325	1.45	0.00	0.00	0.01	120
106	6.0	J-591	J-721	609	0.81	0.00	0.00	0.01	130
223	12.0	J-804	J-96	2,519	-3.24	0.00	0.00	0.01	120
P-32	12.0	J-626	J-804	794	-3.24	0.00	0.00	0.01	130
661	8.0	J-342	J-343	177	1.43	0.00	0.00	0.01	130
183	8.0	J-586	J-587	363	1.43	0.00	0.00	0.01	101
92	6.0	J-359	J-360	192	0.80	0.00	0.00	0.01	101
398	6.0	J-764	J-516	803	-0.80	0.00	0.00	0.01	120
P-224	6.0	J-461	J-516	150	0.80	0.00	0.00	0.01	120
260	8.0	J-683	J-684	542	-1.40	0.00	0.00	0.01	101
P-106	8.0	J-655	J-815	509	1.40	0.00	0.00	0.01	101
540	8.0	J-254	J-285	388	1.35	0.00	0.00	0.01	101
551	8.0	J-590	J-595	378	1.35	0.00	0.00	0.01	130
747	8.0	J-593	J-594	376	1.34	0.00	0.00	0.01	110
P-261	8.0	J-327	J-424	98	1.34	0.00	0.00	0.01	120
173	8.0	J-571	J-645	472	1.34	0.00	0.00	0.01	101
P-262	8.0	J-424	J-328	70	1.34	0.00	0.00	0.01	120
377	8.0	J-395	J-396	242	1.33	0.00	0.00	0.01	120
P-84	12.0	J-733	J-852	1,296	-2.97	0.00	0.00	0.01	120
621	6.0	J-378	J-544	340	-0.74	0.00	0.00	0.01	120
P-280	8.0	J-819	J-229	14	1.31	0.00	0.00	0.01	100

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
289	8.0	J-299	J-300	150	1.30	0.00	0.00	0.01	101
81	8.0	J-38	J-641	457	1.30	0.00	0.00	0.01	101
5	8.0	J-381	J-779	768	1.30	0.00	0.00	0.01	130
P-55	8.0	J-110	J-579	9	1.29	0.00	0.00	0.01	140
17	8.0	J-787	J-788	821	-1.29	0.00	0.00	0.01	130
121	8.0	J-582	J-583	384	-1.28	0.00	0.00	0.01	101
361	6.0	J-430	J-506	315	0.71	0.00	0.00	0.01	130
P-158	8.0	J-684	J-637	271	-1.27	0.00	0.00	0.01	90
547	6.0	J-557	J-558	347	0.70	0.00	0.00	0.01	100
657	8.0	J-636	J-637	440	-1.21	0.00	0.00	0.01	101
414	12.0	J-93	J-131	941	2.73	0.00	0.00	0.01	130
723	8.0	J-34	J-254	119	1.21	0.00	0.00	0.01	100
P-350	8.0	J-45	J-194	28	-1.20	0.00	0.00	0.01	101
124	8.0	J-788	J-833	1,278	1.20	0.00	0.00	0.01	130
484	8.0	J-369	J-157	200	1.18	0.00	0.00	0.01	101
444	8.0	J-584	J-585	362	-1.18	0.00	0.00	0.01	100
307	8.0	J-650	J-736	669	1.14	0.00	0.00	0.01	101
P-242	8.0	J-840	J-345	135	1.14	0.00	0.00	0.01	130
764	6.0	J-564	J-821	1,000	0.64	0.00	0.00	0.01	100
323	8.0	J-831	J-832	1,202	1.13	0.00	0.00	0.01	110
248	8.0	J-353	J-354	201	-1.10	0.00	0.00	0.01	80
P-20	8.0	J-441	J-354	52	1.10	0.00	0.00	0.01	80
P-19	8.0	J-480	J-441	170	1.10	0.00	0.00	0.01	80
102	6.0	J-235	J-236	109	0.61	0.00	0.00	0.01	140
314	10.0	J-349	J-277	180	1.70	0.00	0.00	0.01	101
123	8.0	J-576	J-577	362	1.08	0.00	0.00	0.01	130
242	8.0	J-206	J-630	460	1.08	0.00	0.00	0.01	101
P-38	12.0	J-217	J-163	580	2.41	0.00	0.00	0.01	100
P-137	6.0	J-348	J-76	153	-0.60	0.00	0.00	0.01	140
315	8.0	J-277	J-278	149	1.06	0.00	0.00	0.01	101
P-119	8.0	J-668	J-222	502	-1.05	0.00	0.00	0.01	130
616	8.0	J-121	J-421	244	1.03	0.00	0.00	0.01	110
466	12.0	J-474	J-475	278	2.29	0.00	0.00	0.01	101
68	6.0	J-45	J-46	14	0.56	0.00	0.00	0.01	140
59	8.0	J-770	J-710	760	-0.99	0.00	0.00	0.01	100
622	6.0	J-247	J-248	118	-0.55	0.00	0.00	0.01	120
627	8.0	J-556	J-807	1,367	0.98	0.00	0.00	0.01	120
P-203	8.0	J-746	J-709	561	0.97	0.00	0.00	0.01	110
603	8.0	J-801	J-802	854	0.96	0.00	0.00	0.01	100
P-234	6.0	J-823	J-665	587	0.54	0.00	0.00	0.01	101
422	12.0	J-555	J-556	346	2.13	0.00	0.00	0.01	120
282	8.0	J-149	J-606	399	-0.94	0.00	0.00	0.01	101
399	6.0	J-764	J-460	869	-0.52	0.00	0.00	0.01	120
718	6.0	J-688	J-583	578	-0.51	0.00	0.00	0.01	100
381	8.0	J-731	J-732	634	-0.88	0.00	0.00	0.01	130

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
535	6.0	J-738	J-739	732	0.49	0.00	0.00	0.01	130
614	8.0	J-120	J-627	441	0.85	0.00	0.00	0.01	101
94	8.0	J-72	J-73	21	-0.84	0.00	0.00	0.01	100
243	8.0	J-303	J-304	154	0.84	0.00	0.00	0.01	80
P-110	6.0	J-359	J-514	126	0.46	0.00	0.00	0.01	101
P-192	8.0	J-767	J-793	229	0.82	0.00	0.00	0.01	100
215	6.0	J-578	J-238	429	-0.45	0.00	0.00	0.01	130
P-170	6.0	J-126	J-238	110	0.45	0.00	0.00	0.01	130
P-169	6.0	J-237	J-126	9	0.45	0.00	0.00	0.01	130
483	6.0	J-157	J-158	62	0.45	0.00	0.00	0.01	120
609	6.0	J-158	J-366	281	0.45	0.00	0.00	0.01	120
P-175	8.0	J-837	J-778	90	-0.80	0.00	0.00	0.01	100
P-184	12.0	J-858	J-632	63	1.79	0.00	0.00	0.01	130
545	8.0	J-155	J-156	62	0.79	0.00	0.00	0.01	101
572	6.0	J-430	J-513	317	0.44	0.00	0.00	0.00	90
669	8.0	J-575	J-42	359	-0.78	0.00	0.00	0.00	130
443	8.0	J-531	J-532	331	0.75	0.00	0.00	0.00	140
P-34	12.0	J-698	J-626	57	-1.69	0.00	0.00	0.00	130
4	12.0	J-233	J-234	109	1.68	0.00	0.00	0.00	130
191	8.0	J-497	J-498	312	0.71	0.00	0.00	0.00	101
380	8.0	J-224	J-225	103	0.70	0.00	0.00	0.00	120
563	8.0	J-703	J-704	602	-0.70	0.00	0.00	0.00	110
772	8.0	J-227	J-390	889	-0.70	0.00	0.00	0.00	120
P-30	12.0	J-281	J-626	584	-1.55	0.00	0.00	0.00	130
347	8.0	J-336	J-272	700	-0.68	0.00	0.00	0.00	110
673	10.0	J-65	J-66	20	-1.06	0.00	0.00	0.00	90
415	8.0	J-437	J-438	261	0.68	0.00	0.00	0.00	101
254	8.0	J-632	J-367	1,287	0.68	0.00	0.00	0.00	130
642	12.0	J-419	J-420	243	1.52	0.00	0.00	0.00	110
730	6.0	J-197	J-198	87	0.38	0.00	0.00	0.00	110
595	8.0	J-79	J-487	294	0.66	0.00	0.00	0.00	130
P-41	8.0	J-694	J-423	137	-0.64	0.00	0.00	0.00	130
P-349	8.0	J-388	J-45	192	-0.64	0.00	0.00	0.00	101
475	10.0	J-373	J-374	212	0.99	0.00	0.00	0.00	101
404	6.0	J-403	J-404	483	0.35	0.00	0.00	0.00	120
724	8.0	J-254	J-568	756	-0.61	0.00	0.00	0.00	100
6	12.0	J-834	J-687	1,128	-1.35	0.00	0.00	0.00	110
643	12.0	J-657	J-419	482	1.34	0.00	0.00	0.00	110
537	8.0	J-332	J-333	172	0.59	0.00	0.00	0.00	140
698	8.0	J-428	J-429	253	0.59	0.00	0.00	0.00	101
P-173	8.0	J-810	J-750	838	0.59	0.00	0.00	0.00	100
362	8.0	J-307	J-716	620	0.58	0.00	0.00	0.00	130
449	8.0	J-154	J-443	754	0.57	0.00	0.00	0.00	100
450	8.0	J-693	J-694	564	0.57	0.00	0.00	0.00	130
69	8.0	J-46	J-240	117	0.56	0.00	0.00	0.00	140

Active Scenario: ADD-Buildout
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Steady State Analysis

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P-248	12.0	J-395	J-829	409	1.25	0.00	0.00	0.00	110
695	8.0	J-148	J-149	55	-0.54	0.00	0.00	0.00	101
P-56	8.0	J-579	J-111	28	0.54	0.00	0.00	0.00	140
566	12.0	J-662	J-659	500	1.20	0.00	0.00	0.00	130
469	12.0	J-193	J-194	83	1.20	0.00	0.00	0.00	101
168	12.0	J-153	J-154	61	1.18	0.00	0.00	0.00	100
P-185	12.0	J-66	J-488	394	1.15	0.00	0.00	0.00	130
640	12.0	J-553	J-554	346	-1.14	0.00	0.00	0.00	101
P-294	8.0	J-327	J-465	111	0.47	0.00	0.00	0.00	110
519	8.0	J-465	J-466	274	0.46	0.00	0.00	0.00	140
P-75	12.0	J-714	J-23	453	1.03	0.00	0.00	0.00	100
P-79	12.0	J-714	J-852	198	-1.03	0.00	0.00	0.00	110
648	8.0	J-621	J-847	1,628	0.35	0.00	0.00	0.00	110
93	8.0	J-504	J-72	303	-0.35	0.00	0.00	0.00	100
278	8.0	J-25	J-26	8	0.34	0.00	0.00	0.00	140
159	8.0	J-420	J-112	1,472	0.33	0.00	0.00	0.00	110
204	10.0	J-478	J-199	285	-0.51	0.00	0.00	0.00	130
P-348	8.0	J-412	J-434	24	0.30	0.00	0.00	0.00	120
P-347	8.0	J-396	J-412	616	0.30	0.00	0.00	0.00	120
378	12.0	J-536	J-214	334	-0.65	0.00	0.00	0.00	130
P-284	12.0	J-94	J-666	292	0.65	0.00	0.00	0.00	100
364	8.0	J-814	J-797	3,156	-0.28	0.00	0.00	0.00	130
47	12.0	J-203	J-204	89	0.58	0.00	0.00	0.00	101
P-43	12.0	J-443	J-693	156	0.57	0.00	0.00	0.00	100
447	10.0	J-209	J-210	90	0.39	0.00	0.00	0.00	101
452	10.0	J-217	J-218	95	0.38	0.00	0.00	0.00	101
P-273	12.0	J-455	J-524	4	-0.54	0.00	0.00	0.00	100
P-124	12.0	J-745	J-482	284	0.54	0.00	0.00	0.00	130
628	12.0	J-807	J-556	1,805	0.48	0.00	0.00	0.00	120
720	12.0	J-284	J-642	457	-0.40	0.00	0.00	0.00	100
196	12.0	J-130	J-131	43	-0.39	0.00	0.00	0.00	130
663	12.0	J-610	J-611	395	-0.39	0.00	0.00	0.00	120
641	12.0	J-420	J-112	1,080	0.37	0.00	0.00	0.00	110
P-62	12.0	J-74	J-145	24	0.36	0.00	0.00	0.00	120
768	8.0	J-675	J-198	549	0.14	0.00	0.00	0.00	110
P-40	12.0	J-153	J-196	25	0.29	0.00	0.00	0.00	100
312	8.0	J-149	J-606	1,204	-0.06	0.00	0.00	0.00	101
472	8.0	J-772	J-593	1,155	0.02	0.00	0.00	0.00	110
P-151	8.0	J-777	J-321	14	0.00	0.00	0.00	0.00	140
586	10.0	J-661	J-306	494	0.00	0.00	0.00	0.00	130
P-26	10.0	J-706	J-306	45	0.00	0.00	0.00	0.00	130
P-87	8.0	J-317	J-261	25	0.00	0.00	0.00	0.00	140
P-88	8.0	J-261	J-318	135	0.00	0.00	0.00	0.00	140
P-24	8.0	J-53	J-706	735	0.00	0.00	0.00	0.00	130
371	8.0	J-35	J-36	12	0.00	0.00	0.00	0.00	140

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-292	8.0	J-465	J-643	18	0.00	0.00	0.00	0.00	110
P-33	12.0	J-803	J-698	9	0.00	0.00	0.00	0.00	130
P-49	12.0	J-726	J-848	40	0.00	0.00	0.00	0.00	100
P-44	12.0	J-693	J-444	108	0.00	0.00	0.00	0.00	100
130	12.0	J-283	J-284	143	0.00	0.00	0.00	0.00	100
201	8.0	J-53	J-54	15	0.00	0.00	0.00	0.00	130
P-342	6.0	PRV-2	J-769	469	0.00	0.00	0.00	0.00	100
P-341	6.0	J-762	PRV-2	301	0.00	0.00	0.00	0.00	100
P-25	10.0	J-305	J-706	109	0.00	0.00	0.00	0.00	130
P-306	12.0	PRV-1	J-283	29	0.00	0.00	0.00	0.00	100
P-220	12.0	J-850	J-682	60	0.00	0.00	0.00	0.00	120
190	12.0	J-295	J-296	151	0.00	0.00	0.00	0.00	130
P-29	12.0	J-258	J-281	15	0.00	0.00	0.00	0.00	130
P-243	12.0	J-828	J-344	13	0.00	0.00	0.00	0.00	110
33	12.0	J-23	J-24	5	0.00	0.00	0.00	0.00	140
780	12.0	J-112	J-113	38	0.00	0.00	0.00	0.00	110
P-65	12.0	J-616	J-569	50	0.00	0.00	0.00	0.00	100
P-340	12.0	PRV-3	J-632	161	0.00	0.00	0.00	0.00	130
P-339	12.0	J-631	PRV-3	277	0.00	0.00	0.00	0.00	130
P-338	12.0	PRV-4	J-638	1,166	0.00	0.00	0.00	0.00	110
P-305	12.0	J-31	PRV-1	314	0.00	0.00	0.00	0.00	100
P-58	8.0	J-110	J-836	20	0.00	0.00	0.00	0.00	110
P-78	6.0	J-605	J-230	143	0.00	0.00	0.00	0.00	100
128	8.0	J-230	J-170	141	0.00	0.00	0.00	0.00	140
P-17	8.0	J-441	J-142	230	0.00	0.00	0.00	0.00	80
P-18	8.0	J-142	J-442	40	0.00	0.00	0.00	0.00	80
155	8.0	J-169	J-170	76	0.00	0.00	0.00	0.00	140
P-27	8.0	J-257	J-212	90	0.00	0.00	0.00	0.00	130
214	6.0	J-126	J-127	43	0.00	0.00	0.00	0.00	130
610	6.0	J-142	J-143	53	0.00	0.00	0.00	0.00	120
781	8.0	J-157	J-249	118	0.00	0.00	0.00	0.00	101
P-23	8.0	J-705	J-53	159	0.00	0.00	0.00	0.00	130
430	8.0	J-261	J-262	125	0.00	0.00	0.00	0.00	140
P-28	8.0	J-212	J-258	33	0.00	0.00	0.00	0.00	130
P-373	12.0	J-743	J-910	216	0.00	0.00	0.00	0.00	130
P-166	6.0	J-259	J-392	11	0.00	0.00	0.00	0.00	130
528	8.0	J-424	J-425	332	0.00	0.00	0.00	0.00	120
702	8.0	J-431	J-432	256	0.00	0.00	0.00	0.00	101
426	8.0	J-479	J-262	288	0.00	0.00	0.00	0.00	140
109	12.0	J-511	J-628	435	0.00	0.00	0.00	0.00	101
P-174	8.0	J-750	J-811	128	0.00	0.00	0.00	0.00	100
P-76	12.0	J-23	J-715	218	0.00	0.00	0.00	0.00	100
87	8.0	J-490	J-491	304	0.00	0.00	0.00	0.00	120
429	8.0	J-625	J-522	425	0.00	0.00	0.00	0.00	80
7	8.0	J-24	J-680	546	0.00	0.00	0.00	0.00	110

Active Scenario: ADD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
567	8.0	J-658	J-174	510	0.00	0.00	0.00	0.00	130
360	6.0	J-213	J-214	120	0.00	0.00	0.00	0.00	120
335	6.0	J-245	J-246	118	0.00	0.00	0.00	0.00	80
596	8.0	J-372	J-612	451	0.00	0.00	0.00	0.00	120
688	12.0	J-426	J-427	251	0.00	0.00	0.00	0.00	120
P-303	8.0	J-3	J-861	503	0.00	0.00	0.00	0.00	110
427	10.0	J-733	J-355	674	0.00	0.00	0.00	0.00	120
38	6.0	J-211	J-212	90	0.00	0.00	0.00	0.00	120
392	6.0	J-412	J-413	237	0.00	0.00	0.00	0.00	120
P-337	12.0	J-495	PRV-4	148	0.00	0.00	0.00	0.00	110
638	8.0	J-794	J-795	840	0.00	0.00	0.00	0.00	101
428	8.0	J-355	J-356	184	0.00	0.00	0.00	0.00	120
P-100	8.0	J-712	J-718	620	0.00	0.00	0.00	0.00	120
612	8.0	J-623	J-624	457	0.00	0.00	0.00	0.00	120
600	6.0	J-172	J-358	191	0.00	0.00	0.00	0.00	101
425	8.0	J-522	J-523	325	0.00	0.00	0.00	0.00	80
P-9	8.0	J-597	J-20	44	0.00	0.00	0.00	0.00	80
118	4.0	J-185	J-186	92	0.00	0.00	0.00	0.00	140
767	8.0	J-341	J-520	460	0.00	0.00	0.00	0.00	101
386	12.0	J-536	J-566	850	0.00	0.00	0.00	0.00	130
564	2.0	J-174	J-175	74	0.00	0.00	0.00	0.00	130
90	2.0	J-470	J-471	309	0.00	0.00	0.00	0.00	130
387	2.0	J-566	J-567	354	0.00	0.00	0.00	0.00	101
P-354	12.0	J-553	J-847	714	0.00	0.00	0.00	0.00	130

Active Scenario: ADD-Buildout
FlexTable: Pump Table
Steady State Analysis

Label	Elevation (ft)	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
Boland-1	264.00	On	288.48	518.70	774.07	230.22
Boland-2	264.00	Off	288.58	518.37	0.00	0.00
Boland-3	264.00	Off	288.59	518.37	0.00	0.00
Hosmer Pump #1	275.00	Off	284.47	505.46	0.00	0.00
Hosmer Pump #3	275.00	On	283.12	516.16	1,063.94	233.03

Active Scenario: ADD-Buildout

FlexTable: Tank Table

Steady State Analysis

Label	Zone	Elevation (Base) (ft)	Elevation (Minimum) (ft)	Elevation (Initial) (ft)	Elevation (Maximum) (ft)	Diameter (ft)	Flow (Out net) (gpm)	Status (Calculated)	Hydraulic Grade (ft)
Tara Road Tank	High Service	467.00	467.00	508.00	515.00	67.00	-392.62	Filling	508.00
Oak Hill Road Tank	Low Service	418.00	418.00	485.00	492.70	25.00	-422.10	Filling	485.00
Overlook Drive Tank	Low Service	460.00	460.00	486.00	493.30	40.00	-186.16	Filling	486.00

Active Scenario: MDD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-492	454.31	High Service	Fixed	23	0.00	508.07
J-99	454.14	High Service	Fixed	23	0.00	508.08
J-98	454.09	High Service	Fixed	23	0.92	508.07
J-189	450.90	High Service	Fixed	25	4.03	508.06
J-575	443.73	High Service	Fixed	28	1.84	508.41
J-645	442.00	High Service	Fixed	28	3.17	507.45
J-92	432.80	High Service	Fixed	32	4.59	507.21
J-617	433.40	High Service	Fixed	32	0.00	508.06
J-93	432.24	High Service	Fixed	32	4.68	507.21
J-616	432.82	High Service	Fixed	33	0.00	508.07
J-569	432.77	High Service	Fixed	33	0.00	508.07
J-42	429.80	High Service	Fixed	34	3.59	508.41
J-41	429.71	High Service	Fixed	34	1.54	508.41
J-654	430.41	High Service	Fixed	36	4.47	513.97
J-478	422.78	High Service	Fixed	37	1.22	507.22
J-346	434.86	High Service	Fixed	37	1.49	520.22
J-200	421.49	High Service	Fixed	37	3.59	507.22
J-199	421.00	High Service	Fixed	37	1.52	507.22
J-131	418.68	High Service	Fixed	38	5.54	507.21
J-130	417.77	High Service	Fixed	39	0.92	507.21
J-571	415.51	High Service	Fixed	40	3.41	507.45
J-343	428.08	High Service	Fixed	40	1.90	520.22
J-107	425.26	High Service	Fixed	41	3.44	520.20
J-106	425.20	High Service	Fixed	41	1.87	520.21
J-452	422.38	High Service	Fixed	42	2.05	520.22
J-342	421.14	High Service	Fixed	43	1.60	520.22
J-638	414.27	High Service	Fixed	43	5.48	513.97
J-639	414.04	High Service	Fixed	43	5.42	513.97
J-611	406.03	High Service	Fixed	44	4.53	508.62
J-379	404.81	High Service	Fixed	45	1.75	508.04
J-378	404.39	High Service	Fixed	45	0.00	508.04
J-694	416.00	High Service	Fixed	45	2.88	520.22
J-247	401.49	High Service	Fixed	46	1.31	508.04
J-570	398.67	High Service	Fixed	47	7.31	507.54
J-423	411.16	High Service	Fixed	47	1.81	520.22
J-462	398.21	High Service	Fixed	48	0.00	508.04
J-846	395.08	High Service	Fixed	49	1.90	507.86
J-610	395.42	High Service	Fixed	49	0.92	508.62
J-628	391.61	High Service	Fixed	50	0.00	508.04
J-393	391.00	High Service	Fixed	51	7.37	508.01
J-183	388.00	High Service	Fixed	52	1.60	508.04
J-544	387.66	High Service	Fixed	52	0.00	508.04
J-713	385.67	High Service	Fixed	53	15.80	507.89
J-100	384.34	High Service	Fixed	53	0.00	507.90
J-652	388.14	High Service	Fixed	54	7.14	512.48
J-668	384.00	High Service	Fixed	54	2.49	509.39

Active Scenario: MDD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-422	394.58	High Service	Fixed	54	3.08	520.22
J-629	387.93	High Service	Fixed	55	1.93	513.99
J-248	381.76	High Service	Fixed	55	0.00	508.04
J-463	380.94	High Service	Fixed	55	0.00	508.04
J-717	380.75	High Service	Fixed	55	0.00	507.90
J-101	380.69	High Service	Fixed	55	1.31	507.90
J-712	380.32	High Service	Fixed	55	0.00	507.90
J-785	385.14	High Service	Fixed	56	8.14	513.96
J-222	380.20	High Service	Fixed	56	1.49	509.39
J-669	380.11	High Service	Fixed	56	2.17	509.38
J-184	377.12	High Service	Fixed	57	0.00	508.04
J-444	386.09	High Service	Fixed	58	0.00	520.22
J-482	373.41	High Service	Fixed	58	1.28	507.88
J-791	372.34	High Service	Fixed	58	5.89	506.93
J-760	372.11	High Service	Fixed	58	8.79	506.91
J-647	371.61	High Service	Fixed	59	2.40	507.34
J-406	371.87	High Service	Fixed	59	4.59	507.86
J-511	371.02	High Service	Fixed	59	0.00	508.04
J-755	368.98	High Service	Fixed	60	4.09	506.91
J-223	371.21	High Service	Fixed	60	0.00	509.41
J-693	381.63	High Service	Fixed	60	0.00	520.22
J-161	374.38	High Service	Fixed	60	6.90	513.99
J-405	368.00	High Service	Fixed	61	6.13	507.86
J-298	373.45	High Service	Fixed	61	0.00	514.01
J-718	366.82	High Service	Fixed	61	0.00	507.90
J-483	365.11	High Service	Fixed	61	2.94	507.23
J-162	371.38	High Service	Fixed	62	6.37	513.99
J-297	371.00	High Service	Fixed	62	4.21	514.02
J-443	376.17	High Service	Fixed	62	0.00	520.22
J-362	362.71	High Service	Fixed	62	2.85	506.91
J-715	363.53	High Service	Fixed	62	0.00	507.90
J-680	363.00	High Service	Fixed	63	0.00	507.90
J-287	368.79	High Service	Fixed	63	2.43	513.97
J-745	361.79	High Service	Fixed	63	0.00	507.88
J-676	362.77	High Service	Fixed	63	4.50	509.15
J-523	361.28	High Service	Fixed	63	0.00	507.90
J-481	361.14	High Service	Fixed	63	0.00	507.88
J-479	361.00	High Service	Fixed	64	0.00	507.90
J-261	360.78	High Service	Fixed	64	0.00	507.90
J-317	360.69	High Service	Fixed	64	0.00	507.90
J-262	360.00	High Service	Fixed	64	0.00	507.90
J-170	360.00	High Service	Fixed	64	0.00	508.03
J-169	359.32	High Service	Fixed	64	0.00	508.03
J-714	358.58	High Service	Fixed	65	0.00	507.90
J-167	358.00	High Service	Fixed	65	0.00	507.90
J-180	358.00	High Service	Fixed	65	0.00	507.90

Active Scenario: MDD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-318	357.62	High Service	Fixed	65	0.00	507.90
J-23	357.00	High Service	Fixed	65	2.43	507.90
J-24	356.98	High Service	Fixed	65	0.00	507.90
J-427	355.00	High Service	Fixed	66	0.00	507.90
J-230	355.09	High Service	Fixed	66	0.00	508.03
J-361	351.85	High Service	Fixed	67	1.22	506.91
J-484	351.91	High Service	Fixed	67	4.47	507.21
J-615	352.38	High Service	Fixed	67	5.36	507.90
J-426	352.28	High Service	Fixed	67	0.00	507.90
J-522	352.27	High Service	Fixed	67	0.00	507.90
J-288	356.93	High Service	Fixed	68	7.22	513.97
J-852	350.64	High Service	Fixed	68	0.00	507.90
J-605	350.00	High Service	Fixed	68	0.00	508.03
J-744	346.41	High Service	Fixed	70	4.71	507.89
J-851	353.00	High Service	Fixed	70	8.56	515.26
J-596	345.00	High Service	Fixed	70	1.37	507.89
J-809	343.60	High Service	Fixed	71	0.00	507.89
J-788	344.37	High Service	Fixed	71	7.20	509.35
J-816	343.43	High Service	Fixed	72	5.78	509.36
J-641	340.75	High Service	Fixed	72	3.08	506.82
J-834	337.96	High Service	Fixed	73	3.20	506.90
J-635	340.10	High Service	Fixed	73	6.69	509.47
J-742	343.47	High Service	Fixed	74	0.00	513.62
J-145	338.56	High Service	Fixed	74	0.86	509.78
J-74	338.49	High Service	Fixed	74	0.00	509.78
J-687	335.28	High Service	Fixed	74	2.31	506.90
J-677	338.12	High Service	Fixed	74	0.00	509.78
J-144	337.95	High Service	Fixed	74	0.00	509.79
J-75	337.75	High Service	Fixed	74	0.66	509.78
J-110	336.81	High Service	Fixed	75	1.81	509.59
J-707	336.13	High Service	Fixed	75	6.13	509.32
J-625	334.69	High Service	Fixed	75	0.00	507.90
J-579	336.17	High Service	Fixed	75	0.00	509.59
J-355	334.00	High Service	Fixed	75	0.00	507.90
J-356	334.00	High Service	Fixed	75	0.00	507.90
J-733	333.95	High Service	Fixed	75	14.92	507.90
J-836	335.57	High Service	Fixed	75	0.00	509.59
J-111	335.00	High Service	Fixed	76	1.28	509.59
J-400	334.74	High Service	Fixed	76	5.12	509.60
J-531	334.53	High Service	Fixed	76	0.00	509.54
J-187	332.67	High Service	Fixed	76	5.18	507.90
J-399	334.08	High Service	Fixed	76	1.66	509.65
J-587	331.62	High Service	Fixed	76	3.38	507.32
J-154	344.19	High Service	Fixed	76	1.43	520.22
J-651	336.00	High Service	Fixed	76	0.81	512.49
J-532	333.00	High Service	Fixed	76	1.78	509.54

Active Scenario: MDD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-188	330.78	High Service	Fixed	77	0.00	507.90
J-795	342.79	High Service	Fixed	77	0.00	520.20
J-688	328.97	High Service	Fixed	77	1.84	506.90
J-582	328.62	High Service	Fixed	77	3.02	506.90
J-794	341.38	High Service	Fixed	77	16.34	520.20
J-586	327.91	High Service	Fixed	78	1.54	507.32
J-153	339.00	High Service	Fixed	78	0.00	520.22
J-833	327.91	High Service	Fixed	78	2.85	509.35
J-196	338.53	High Service	Fixed	79	0.69	520.22
J-685	326.20	High Service	Fixed	79	7.52	507.90
J-195	337.74	High Service	Fixed	79	2.23	520.22
J-94	324.00	High Service	Fixed	79	1.31	506.94
J-95	324.00	High Service	Fixed	79	0.92	506.94
J-740	324.00	High Service	Fixed	79	0.00	506.94
J-666	323.00	High Service	Fixed	80	1.54	506.94
J-695	322.34	High Service	Fixed	80	2.14	507.20
J-502	321.20	High Service	Fixed	80	2.40	506.93
J-771	323.61	High Service	Fixed	80	6.69	509.46
J-455	291.00	High Service	Fixed	80	1.28	476.96
J-524	291.00	High Service	Fixed	80	0.00	476.96
J-603	321.39	High Service	Fixed	81	5.72	508.23
J-614	321.00	High Service	Fixed	81	0.00	507.90
J-782	319.29	High Service	Fixed	81	2.23	506.91
J-295	320.13	High Service	Fixed	81	0.00	507.91
J-28	321.50	High Service	Fixed	81	4.15	509.31
J-267	320.00	High Service	Fixed	81	0.98	507.91
J-27	321.34	High Service	Fixed	81	4.27	509.31
J-276	332.15	High Service	Fixed	81	1.19	520.22
J-338	321.00	High Service	Fixed	81	3.35	509.30
J-266	319.56	High Service	Fixed	81	3.50	507.91
J-296	319.54	High Service	Fixed	81	0.00	507.91
J-813	318.95	High Service	Fixed	82	4.65	507.54
J-807	318.73	High Service	Fixed	82	1.19	507.91
J-339	320.00	High Service	Fixed	82	3.41	509.30
J-503	317.42	High Service	Fixed	82	5.57	506.93
J-555	318.37	High Service	Fixed	82	0.00	507.91
J-556	318.19	High Service	Fixed	82	3.85	507.91
J-808	317.83	High Service	Fixed	82	0.00	507.90
J-787	319.00	High Service	Fixed	82	3.05	509.35
J-622	323.07	High Service	Fixed	83	6.04	513.95
J-589	284.69	High Service	Fixed	83	6.60	476.91
J-590	283.71	High Service	Fixed	84	3.02	476.91
J-217	326.91	High Service	Fixed	84	2.20	520.22
J-583	313.13	High Service	Fixed	84	3.32	506.90
J-769	312.79	High Service	Fixed	84	7.37	506.81
J-657	319.37	High Service	Fixed	84	11.25	513.96

Active Scenario: MDD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-779	312.17	High Service	Fixed	84	3.08	506.88
J-799	318.93	High Service	Fixed	84	5.89	514.06
J-391	318.00	High Service	Fixed	85	1.37	513.69
J-37	311.00	High Service	Fixed	85	3.20	506.82
J-38	311.00	High Service	Fixed	85	2.02	506.82
J-653	312.00	High Service	Fixed	85	7.76	508.56
J-218	322.93	High Service	Fixed	85	0.89	520.22
J-701	311.53	High Service	Fixed	85	6.40	509.11
J-781	310.55	High Service	Fixed	86	3.20	508.47
J-104	310.47	High Service	Fixed	86	1.63	508.47
J-758	311.28	High Service	Fixed	86	4.68	509.57
J-741	314.95	High Service	Fixed	86	38.38	513.42
J-274	308.50	High Service	Fixed	86	6.16	507.62
J-105	308.40	High Service	Fixed	87	3.17	508.47
J-380	305.73	High Service	Fixed	87	2.55	506.89
J-765	307.57	High Service	Fixed	87	2.94	509.14
J-766	304.98	High Service	Fixed	87	1.22	506.88
J-381	304.94	High Service	Fixed	87	3.82	506.88
J-501	332.31	High Service	Fixed	87	4.00	534.43
J-229	304.77	High Service	Fixed	87	3.11	506.92
J-642	304.45	High Service	Fixed	88	2.82	506.92
J-819	304.05	High Service	Fixed	88	0.00	506.92
J-757	303.87	High Service	Fixed	88	2.02	506.91
J-500	331.02	High Service	Fixed	88	0.00	534.43
J-754	303.46	High Service	Fixed	88	0.00	506.92
J-577	312.65	High Service	Fixed	88	2.55	516.71
J-631	309.06	High Service	Fixed	89	5.42	513.69
J-228	301.87	High Service	Fixed	89	5.92	506.92
J-273	301.00	High Service	Fixed	90	1.72	507.90
J-279	306.72	High Service	Fixed	90	4.83	513.95
J-280	306.29	High Service	Fixed	90	5.51	513.80
J-164	312.66	High Service	Fixed	90	11.75	520.22
J-621	306.13	High Service	Fixed	90	5.21	513.95
J-598	306.11	High Service	Fixed	90	6.10	513.95
J-320	299.65	High Service	Fixed	90	1.01	507.89
J-163	311.64	High Service	Fixed	90	2.61	520.22
J-784	311.62	High Service	Fixed	90	10.24	520.22
J-656	325.46	High Service	Fixed	90	6.78	534.38
J-419	304.80	High Service	Fixed	90	3.91	513.96
J-83	298.43	High Service	Fixed	91	0.00	507.86
J-815	324.78	High Service	Fixed	91	3.32	534.38
J-648	296.75	High Service	Fixed	91	4.80	506.82
J-847	303.53	High Service	Fixed	91	11.87	513.95
J-82	297.19	High Service	Fixed	91	1.10	507.86
J-284	295.14	High Service	Fixed	92	0.95	506.92
J-602	296.63	High Service	Fixed	92	3.17	508.58

Active Scenario: MDD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-260	301.38	High Service	Fixed	92	5.69	513.69
J-259	301.06	High Service	Fixed	92	0.00	513.69
J-237	301.00	High Service	Fixed	92	0.00	513.69
J-127	300.87	High Service	Fixed	92	0.00	513.69
J-126	300.81	High Service	Fixed	92	0.00	513.69
J-173	293.92	High Service	Fixed	93	0.00	507.86
J-392	299.57	High Service	Fixed	93	0.00	513.69
J-64	293.12	High Service	Fixed	93	0.00	507.89
J-319	292.73	High Service	Fixed	93	0.00	507.89
J-63	292.56	High Service	Fixed	93	0.00	507.89
J-420	298.29	High Service	Fixed	93	1.93	513.96
J-768	297.28	High Service	Fixed	94	3.65	513.69
J-235	291.00	High Service	Fixed	94	1.49	507.94
J-256	290.25	High Service	Fixed	94	8.50	507.92
J-335	290.00	High Service	Fixed	94	3.97	507.95
J-236	289.27	High Service	Fixed	95	1.46	507.94
J-633	296.00	High Service	Fixed	95	11.40	515.27
J-778	288.96	High Service	Fixed	95	0.75	508.35
J-825	314.97	High Service	Fixed	95	10.51	534.38
J-210	300.33	High Service	Fixed	95	0.92	520.22
J-576	296.79	High Service	Fixed	95	7.40	516.71
J-837	288.00	High Service	Fixed	95	1.90	508.35
J-209	299.73	High Service	Fixed	95	1.34	520.22
J-686	286.63	High Service	Fixed	96	5.04	508.01
J-830	297.99	High Service	Fixed	96	1.60	520.23
J-667	297.92	High Service	Fixed	96	0.00	520.23
J-525	284.36	High Service	Fixed	97	0.00	509.01
J-255	282.52	High Service	Fixed	98	11.46	507.92
J-739	282.10	High Service	Fixed	98	1.16	507.90
J-526	283.07	High Service	Fixed	98	0.00	508.98
J-498	281.80	High Service	Fixed	98	1.69	507.89
J-238	286.97	High Service	Fixed	98	0.00	513.69
J-626	307.53	High Service	Fixed	98	0.00	534.43
J-564	280.92	High Service	Fixed	98	3.41	507.89
J-803	306.90	High Service	Fixed	98	0.00	534.43
J-698	306.63	High Service	Fixed	99	0.00	534.43
J-510	280.55	High Service	Fixed	99	0.00	508.94
J-655	305.73	High Service	Fixed	99	8.62	534.38
J-774	305.00	High Service	Fixed	99	6.54	534.40
J-553	304.56	High Service	Fixed	99	2.70	534.38
J-537	278.11	High Service	Fixed	100	0.00	508.90
J-509	278.00	High Service	Fixed	100	3.20	508.97
J-697	288.62	High Service	Fixed	100	15.60	519.70
J-282	302.84	High Service	Fixed	100	3.67	534.43
J-211	302.56	High Service	Fixed	100	0.00	534.43
J-257	302.48	High Service	Fixed	100	0.00	534.43

Active Scenario: MDD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-780	281.72	High Service	Fixed	100	4.53	513.69
J-281	302.11	High Service	Fixed	101	0.00	534.43
J-212	302.00	High Service	Fixed	101	0.00	534.43
J-258	302.00	High Service	Fixed	101	0.00	534.43
J-649	275.00	High Service	Fixed	101	4.92	507.89
J-634	281.99	High Service	Fixed	101	4.62	515.00
J-804	300.11	High Service	Fixed	101	0.00	534.43
J-691	283.35	High Service	Fixed	102	0.00	517.97
J-497	273.00	High Service	Fixed	102	2.05	507.89
J-325	285.29	High Service	Fixed	102	3.38	520.23
J-692	281.81	High Service	Fixed	102	7.46	517.09
J-554	298.95	High Service	Fixed	102	14.71	534.38
J-290	273.00	High Service	Fixed	102	0.00	508.48
J-322	272.74	High Service	Fixed	102	0.00	508.49
J-207	278.09	High Service	Fixed	102	5.95	514.20
J-185	272.17	High Service	Fixed	102	0.00	508.48
J-289	272.05	High Service	Fixed	102	0.00	508.48
J-584	297.92	High Service	Fixed	102	2.79	534.42
J-578	276.96	High Service	Fixed	102	1.63	513.69
J-186	271.42	High Service	Fixed	103	0.00	508.48
J-208	277.00	High Service	Fixed	103	2.37	514.13
J-326	282.49	High Service	Fixed	103	2.14	520.22
J-777	270.16	High Service	Fixed	103	0.00	508.49
J-538	270.10	High Service	Fixed	103	0.00	508.77
J-321	269.76	High Service	Fixed	103	0.00	508.49
J-29	268.18	High Service	Fixed	104	0.00	508.49
J-30	268.00	High Service	Fixed	104	0.00	508.49
J-112	272.13	High Service	Fixed	105	1.66	513.96
J-838	291.90	High Service	Fixed	105	1.46	534.42
J-585	291.85	High Service	Fixed	105	5.09	534.42
J-113	270.13	High Service	Fixed	105	0.00	513.96
J-738	263.86	High Service	Fixed	106	2.82	507.90
J-810	269.31	High Service	Fixed	106	1.78	513.68
J-727	274.60	High Service	Fixed	106	1.43	520.24
J-50	271.00	High Service	Fixed	106	0.00	517.13
J-49	271.00	High Service	Fixed	106	7.28	517.13
J-725	271.00	High Service	Fixed	107	3.82	517.21
J-97	287.92	High Service	Fixed	107	0.00	534.43
J-445	261.14	High Service	Fixed	107	3.02	507.92
J-234	261.01	High Service	Fixed	107	0.00	507.90
J-77	261.01	High Service	Fixed	107	0.00	507.90
J-134	260.99	High Service	Fixed	107	0.00	507.90
J-843	260.94	High Service	Fixed	107	0.00	507.92
J-233	260.81	High Service	Fixed	107	0.89	507.90
J-542	260.80	High Service	Fixed	107	1.40	507.92
J-821	260.57	High Service	Fixed	107	1.52	507.89

Active Scenario: MDD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-96	286.82	High Service	Fixed	107	1.96	534.43
J-76	260.11	High Service	Fixed	107	0.00	507.90
J-135	259.94	High Service	Fixed	107	0.00	507.90
J-231	265.66	High Service	Fixed	107	3.59	513.63
J-160	286.40	High Service	Fixed	107	2.23	534.39
J-232	265.68	High Service	Fixed	107	2.52	513.71
J-696	270.48	High Service	Fixed	108	3.79	519.71
J-844	270.90	High Service	Fixed	108	0.00	520.25
J-433	267.53	High Service	Fixed	108	16.13	517.13
J-159	284.47	High Service	Fixed	108	0.00	534.39
J-848	270.50	High Service	Fixed	108	0.00	520.94
J-726	270.00	High Service	Fixed	109	0.00	520.94
J-856	268.57	High Service	Fixed	109	0.00	520.01
J-751	259.34	High Service	Fixed	110	1.40	513.62
J-348	252.33	High Service	Fixed	111	1.43	507.90
J-811	257.90	High Service	Fixed	111	0.00	513.68
J-750	257.59	High Service	Fixed	111	0.00	513.68
J-773	277.00	High Service	Fixed	111	1.60	534.40
J-204	272.32	High Service	Fixed	112	1.37	530.36
J-203	271.53	High Service	Fixed	112	1.01	530.36
J-752	269.57	High Service	Fixed	115	0.00	534.45
J-251	413.71	Low Service	Fixed	31	2.17	484.98
J-250	409.79	Low Service	Fixed	32	2.58	482.65
J-308	406.63	Low Service	Fixed	33	2.82	482.64
J-307	405.37	Low Service	Fixed	33	4.47	482.64
J-430	401.88	Low Service	Fixed	35	3.08	482.64
J-506	395.91	Low Service	Fixed	38	1.69	482.64
J-670	392.00	Low Service	Fixed	38	6.54	480.52
J-304	380.76	Low Service	Fixed	42	1.99	477.07
J-716	385.66	Low Service	Fixed	42	1.37	482.64
J-671	382.92	Low Service	Fixed	42	3.65	480.43
J-792	382.82	Low Service	Fixed	42	1.52	480.43
J-3	394.00	Low Service	Fixed	44	0.00	494.93
J-4	394.00	Low Service	Fixed	44	19.53	495.76
J-513	378.57	Low Service	Fixed	45	1.04	482.64
J-588	381.97	Low Service	Fixed	45	3.29	486.24
J-206	369.37	Low Service	Fixed	47	1.16	477.08
J-735	375.66	Low Service	Fixed	47	4.36	483.46
J-205	368.16	Low Service	Fixed	47	2.91	477.08
J-268	375.69	Low Service	Fixed	48	1.96	486.24
J-303	365.68	Low Service	Fixed	48	2.20	477.07
J-467	365.29	Low Service	Fixed	48	3.91	477.09
J-861	378.98	Low Service	Fixed	50	5.75	494.93
J-269	368.35	Low Service	Fixed	51	1.72	486.22
J-552	361.06	Low Service	Fixed	52	2.34	480.13
J-659	357.55	Low Service	Fixed	52	1.16	477.94

Active Scenario: MDD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-630	356.10	Low Service	Fixed	52	2.55	477.08
J-658	356.00	Low Service	Fixed	53	1.93	477.94
J-800	360.94	Low Service	Fixed	53	3.88	483.46
J-551	356.09	Low Service	Fixed	53	1.57	479.67
J-429	356.15	Low Service	Fixed	54	1.40	480.46
J-753	353.85	Low Service	Fixed	55	5.21	480.43
J-910	350.00	Low Service	Fixed	55	694.40	477.66
J-428	351.15	Low Service	Fixed	56	0.00	480.46
J-743	348.56	Low Service	Fixed	56	0.00	477.94
J-660	347.17	Low Service	Fixed	57	1.69	477.88
J-662	347.00	Low Service	Fixed	57	0.83	477.94
J-11	348.44	Low Service	Fixed	57	0.00	480.39
J-832	359.00	Low Service	Fixed	58	2.67	493.84
J-812	355.14	Low Service	Fixed	59	3.97	490.92
J-818	341.79	Low Service	Fixed	59	6.37	477.94
J-776	340.07	Low Service	Fixed	59	12.25	476.90
J-528	346.62	Low Service	Fixed	59	2.99	483.66
J-174	340.90	Low Service	Fixed	59	0.00	477.94
J-839	346.00	Low Service	Fixed	59	2.08	483.33
J-734	346.00	Low Service	Fixed	59	0.00	483.35
J-573	346.80	Low Service	Fixed	60	5.12	485.68
J-175	339.00	Low Service	Fixed	60	0.00	477.94
J-493	337.10	Low Service	Fixed	61	3.85	477.11
J-435	351.19	Low Service	Fixed	61	0.72	491.69
J-413	350.92	Low Service	Fixed	61	0.00	491.70
J-527	340.88	Low Service	Fixed	62	7.05	483.78
J-675	329.51	Low Service	Fixed	64	4.33	476.91
J-705	342.97	Low Service	Fixed	64	0.00	490.84
J-471	340.67	Low Service	Fixed	65	0.00	490.84
J-709	340.28	Low Service	Fixed	65	1.34	490.92
J-54	339.16	Low Service	Fixed	66	0.00	490.84
J-376	338.60	Low Service	Fixed	66	0.00	490.84
J-20	338.55	Low Service	Fixed	66	0.00	490.84
J-19	338.52	Low Service	Fixed	66	0.00	490.84
J-491	338.04	Low Service	Fixed	66	0.00	490.83
J-53	337.95	Low Service	Fixed	66	0.00	490.84
J-746	337.22	Low Service	Fixed	66	4.27	490.92
J-597	337.05	Low Service	Fixed	67	0.00	490.84
J-650	326.00	Low Service	Fixed	67	1.46	480.17
J-736	325.31	Low Service	Fixed	67	2.70	480.16
J-442	335.85	Low Service	Fixed	67	0.00	490.83
J-490	335.82	Low Service	Fixed	67	0.00	490.83
J-470	335.73	Low Service	Fixed	67	0.00	490.84
J-775	321.77	Low Service	Fixed	67	3.65	476.90
J-789	325.36	Low Service	Fixed	67	5.30	481.33
J-747	334.45	Low Service	Fixed	68	11.40	490.92

Active Scenario: MDD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-708	339.74	Low Service	Fixed	68	8.56	496.31
J-177	334.25	Low Service	Fixed	68	0.00	490.83
J-480	334.00	Low Service	Fixed	68	0.00	490.83
J-365	334.00	Low Service	Fixed	68	0.00	490.83
J-142	333.79	Low Service	Fixed	68	0.00	490.83
J-835	320.00	Low Service	Fixed	68	1.87	477.13
J-495	333.64	Low Service	Fixed	68	4.74	490.85
J-517	333.00	Low Service	Fixed	68	0.00	490.84
J-494	332.93	Low Service	Fixed	68	2.70	490.85
J-703	318.43	Low Service	Fixed	69	1.66	477.67
J-330	319.22	Low Service	Fixed	69	5.36	478.57
J-377	331.34	Low Service	Fixed	69	0.00	490.84
J-143	330.48	Low Service	Fixed	69	0.00	490.83
J-176	330.39	Low Service	Fixed	69	0.00	490.83
J-448	316.56	Low Service	Fixed	69	4.38	477.06
J-704	316.85	Low Service	Fixed	70	4.62	477.67
J-434	330.06	Low Service	Fixed	70	0.00	491.70
J-301	329.00	Low Service	Fixed	70	2.79	490.93
J-412	329.55	Low Service	Fixed	70	0.00	491.70
J-331	316.00	Low Service	Fixed	70	2.64	478.26
J-618	314.91	Low Service	Fixed	70	6.66	477.41
J-372	324.61	Low Service	Fixed	70	4.68	487.31
J-661	328.05	Low Service	Fixed	70	0.00	490.84
J-604	328.00	Low Service	Fixed	70	1.49	490.84
J-441	327.95	Low Service	Fixed	70	0.00	490.83
J-559	314.22	Low Service	Fixed	70	3.97	477.13
J-302	328.00	Low Service	Fixed	70	2.31	490.93
J-565	315.00	Low Service	Fixed	71	5.86	478.08
J-472	327.59	Low Service	Fixed	71	1.87	490.94
J-728	327.44	Low Service	Fixed	71	1.49	490.84
J-447	313.51	Low Service	Fixed	71	3.65	477.09
J-473	327.19	Low Service	Fixed	71	1.37	490.90
J-291	316.19	Low Service	Fixed	71	1.19	480.03
J-438	313.00	Low Service	Fixed	71	1.60	476.90
J-354	326.60	Low Service	Fixed	71	0.00	490.83
J-796	312.30	Low Service	Fixed	71	7.79	477.53
J-334	325.29	Low Service	Fixed	72	0.00	490.84
J-543	313.31	Low Service	Fixed	72	5.92	479.11
J-408	325.00	Low Service	Fixed	72	2.43	490.84
J-599	325.09	Low Service	Fixed	72	4.77	490.99
J-437	310.61	Low Service	Fixed	72	8.53	476.90
J-436	324.13	Low Service	Fixed	72	2.14	490.93
J-475	310.43	Low Service	Fixed	72	5.42	477.47
J-292	312.67	Low Service	Fixed	72	0.86	479.99
J-496	322.50	Low Service	Fixed	73	6.07	490.93
J-409	321.00	Low Service	Fixed	73	1.43	490.84

Active Scenario: MDD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-474	307.25	Low Service	Fixed	74	10.89	477.47
J-770	319.95	Low Service	Fixed	74	2.34	490.65
J-627	321.51	Low Service	Fixed	74	2.02	492.42
J-421	320.00	Low Service	Fixed	75	2.43	492.42
J-572	313.24	Low Service	Fixed	75	2.25	485.68
J-181	304.55	Low Service	Fixed	75	3.23	477.52
J-729	314.03	Low Service	Fixed	75	0.72	487.27
J-148	315.04	Low Service	Fixed	75	1.28	488.76
J-759	316.59	Low Service	Fixed	75	0.98	490.83
J-748	312.80	Low Service	Fixed	76	3.35	487.77
J-182	302.38	Low Service	Fixed	76	4.56	477.50
J-539	316.00	Low Service	Fixed	76	0.98	491.25
J-580	301.87	Low Service	Fixed	76	9.65	477.15
J-138	301.71	Low Service	Fixed	76	1.37	477.41
J-721	301.00	Low Service	Fixed	76	1.93	476.95
J-499	300.83	Low Service	Fixed	76	3.29	477.12
J-139	301.00	Low Service	Fixed	76	7.76	477.41
J-353	314.00	Low Service	Fixed	77	2.20	490.83
J-711	313.88	Low Service	Fixed	77	7.02	490.75
J-488	313.88	Low Service	Fixed	77	28.85	490.83
J-644	300.00	Low Service	Fixed	77	6.46	477.44
J-149	311.05	Low Service	Fixed	77	1.07	488.76
J-518	299.78	Low Service	Fixed	77	6.13	477.50
J-802	298.92	Low Service	Fixed	77	2.28	476.91
J-66	312.73	Low Service	Fixed	77	2.52	490.83
J-352	312.61	Low Service	Fixed	77	4.74	490.83
J-79	309.25	Low Service	Fixed	77	1.57	487.57
J-78	309.15	Low Service	Fixed	77	1.60	487.60
J-456	298.30	Low Service	Fixed	77	1.16	476.97
J-333	301.70	Low Service	Fixed	77	1.40	480.52
J-65	311.85	Low Service	Fixed	77	0.66	490.83
J-594	298.13	Low Service	Fixed	78	5.30	477.41
J-278	298.12	Low Service	Fixed	78	2.52	478.20
J-324	311.08	Low Service	Fixed	78	3.08	491.15
J-133	309.48	Low Service	Fixed	79	3.76	490.93
J-305	308.77	Low Service	Fixed	79	0.00	490.84
J-593	295.15	Low Service	Fixed	79	7.67	477.41
J-121	310.05	Low Service	Fixed	79	1.40	492.42
J-132	307.27	Low Service	Fixed	79	0.95	490.93
J-306	307.00	Low Service	Fixed	80	0.00	490.84
J-706	307.00	Low Service	Fixed	80	0.00	490.84
J-806	310.00	Low Service	Fixed	80	5.80	493.84
J-178	296.69	Low Service	Fixed	80	2.67	480.54
J-432	303.00	Low Service	Fixed	80	0.00	486.89
J-323	306.91	Low Service	Fixed	80	1.57	491.24
J-359	306.15	Low Service	Fixed	80	1.75	490.83

Active Scenario: MDD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-166	292.77	Low Service	Fixed	80	2.67	477.50
J-689	293.80	Low Service	Fixed	80	6.60	478.74
J-681	311.83	Low Service	Fixed	80	4.65	496.79
J-591	291.96	Low Service	Fixed	80	2.20	476.95
J-858	305.82	Low Service	Fixed	80	1.37	490.83
J-120	307.38	Low Service	Fixed	80	1.60	492.42
J-632	305.55	Low Service	Fixed	80	2.64	490.83
J-737	292.05	Low Service	Fixed	80	6.75	477.50
J-102	305.26	Low Service	Fixed	80	0.78	490.84
J-786	291.38	Low Service	Fixed	80	6.72	477.06
J-165	291.10	Low Service	Fixed	81	2.82	477.46
J-103	304.46	Low Service	Fixed	81	1.34	490.84
J-226	290.87	Low Service	Fixed	81	3.32	477.41
J-375	290.60	Low Service	Fixed	81	4.89	477.41
J-679	290.21	Low Service	Fixed	81	7.05	477.17
J-277	291.12	Low Service	Fixed	81	1.52	478.20
J-7	289.35	Low Service	Fixed	81	0.89	476.93
J-8	289.27	Low Service	Fixed	81	0.00	476.93
J-31	289.10	Low Service	Fixed	81	3.65	476.92
J-440	303.33	Low Service	Fixed	81	0.81	491.18
J-32	289.01	Low Service	Fixed	81	0.00	476.92
J-275	303.51	Low Service	Fixed	81	0.72	491.56
J-762	292.02	Low Service	Fixed	81	0.89	480.25
J-801	288.53	Low Service	Fixed	82	5.24	476.91
J-431	298.46	Low Service	Fixed	82	3.79	486.89
J-48	301.49	Low Service	Fixed	82	0.00	490.92
J-360	301.40	Low Service	Fixed	82	1.90	490.83
J-221	287.39	Low Service	Fixed	82	0.00	476.93
J-349	288.61	Low Service	Fixed	82	4.62	478.20
J-47	301.29	Low Service	Fixed	82	0.72	490.90
J-763	291.26	Low Service	Fixed	82	10.66	480.93
J-21	301.19	Low Service	Fixed	82	2.31	490.90
J-22	301.00	Low Service	Fixed	82	0.00	490.90
J-487	297.56	Low Service	Fixed	82	1.57	487.57
J-560	287.01	Low Service	Fixed	82	4.18	477.13
J-179	290.15	Low Service	Fixed	82	0.00	480.54
J-387	290.00	Low Service	Fixed	82	4.98	480.54
J-374	287.30	Low Service	Fixed	83	2.34	478.13
J-417	299.88	Low Service	Fixed	83	2.08	490.88
J-373	287.08	Low Service	Fixed	83	4.68	478.13
J-690	287.25	Low Service	Fixed	83	4.86	478.56
J-581	285.25	Low Service	Fixed	83	3.26	477.15
J-514	298.83	Low Service	Fixed	83	1.10	490.83
J-710	298.48	Low Service	Fixed	83	1.31	490.65
J-793	298.37	Low Service	Fixed	83	2.08	490.65
J-439	298.67	Low Service	Fixed	83	3.65	491.00

Active Scenario: MDD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-227	284.99	Low Service	Fixed	83	9.56	477.41
J-612	294.84	Low Service	Fixed	83	0.00	487.31
J-595	284.36	Low Service	Fixed	83	3.20	476.91
J-772	284.53	Low Service	Fixed	83	5.12	477.42
J-404	294.77	Low Service	Fixed	84	0.83	487.77
J-68	284.00	Low Service	Fixed	84	3.35	477.16
J-67	283.53	Low Service	Fixed	84	4.41	477.17
J-407	296.93	Low Service	Fixed	84	2.11	490.77
J-33	283.00	Low Service	Fixed	84	1.78	476.92
J-34	282.78	Low Service	Fixed	84	0.00	476.92
J-286	282.25	Low Service	Fixed	84	1.84	476.89
J-561	282.44	Low Service	Fixed	84	7.79	477.19
J-123	296.47	Low Service	Fixed	84	0.00	491.26
J-601	296.73	Low Service	Fixed	84	3.38	491.87
J-285	281.70	Low Service	Fixed	84	1.37	476.92
J-254	281.58	Low Service	Fixed	85	1.10	476.92
J-489	295.34	Low Service	Fixed	85	0.00	490.83
J-719	292.24	Low Service	Fixed	85	1.28	487.77
J-414	292.61	Low Service	Fixed	85	4.27	488.40
J-623	294.99	Low Service	Fixed	85	0.00	490.83
J-332	284.00	Low Service	Fixed	85	16.57	480.52
J-451	284.00	Low Service	Fixed	85	0.00	480.53
J-122	293.96	Low Service	Fixed	85	1.63	491.26
J-446	278.86	Low Service	Fixed	86	3.59	476.95
J-512	292.68	Low Service	Fixed	86	3.44	490.83
J-841	289.74	Low Service	Fixed	86	3.85	488.45
J-403	288.18	Low Service	Fixed	86	1.16	487.77
J-548	292.77	Low Service	Fixed	86	3.23	492.43
J-5	280.83	Low Service	Fixed	86	0.00	480.53
J-6	280.79	Low Service	Fixed	86	0.00	480.53
J-150	290.79	Low Service	Fixed	87	0.86	491.26
J-756	280.00	Low Service	Fixed	87	0.00	480.53
J-619	290.87	Low Service	Fixed	87	2.20	491.84
J-396	290.60	Low Service	Fixed	87	2.43	491.70
J-637	290.63	Low Service	Fixed	87	4.30	491.85
J-606	287.28	Low Service	Fixed	87	2.61	488.76
J-827	290.57	Low Service	Fixed	87	3.79	492.38
J-293	275.10	Low Service	Fixed	87	1.69	476.96
J-592	274.83	Low Service	Fixed	87	2.34	476.91
J-850	295.60	Low Service	Fixed	87	0.81	497.77
J-328	278.00	Low Service	Fixed	88	3.17	480.53
J-388	274.59	Low Service	Fixed	88	1.52	477.20
J-192	290.32	Low Service	Fixed	88	1.07	492.94
J-682	295.00	Low Service	Fixed	88	0.00	497.77
J-425	277.26	Low Service	Fixed	88	0.00	480.53
J-327	277.05	Low Service	Fixed	88	1.25	480.53

Active Scenario: MDD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-568	273.09	Low Service	Fixed	88	4.53	476.92
J-424	276.63	Low Service	Fixed	88	0.00	480.53
J-239	287.00	Low Service	Fixed	88	1.81	491.27
J-465	276.00	Low Service	Fixed	88	0.00	480.53
J-643	276.00	Low Service	Fixed	88	0.00	480.53
J-519	272.31	Low Service	Fixed	89	2.91	476.91
J-191	288.00	Low Service	Fixed	89	0.00	492.83
J-678	272.56	Low Service	Fixed	89	7.08	477.47
J-198	271.78	Low Service	Fixed	89	1.22	476.91
J-566	282.50	Low Service	Fixed	89	0.00	487.77
J-567	282.50	Low Service	Fixed	89	0.00	487.77
J-458	272.00	Low Service	Fixed	89	3.02	477.40
J-767	284.93	Low Service	Fixed	89	4.06	490.65
J-459	271.51	Low Service	Fixed	89	1.81	477.37
J-87	282.75	Low Service	Fixed	89	1.28	488.70
J-624	284.83	Low Service	Fixed	89	0.00	490.83
J-116	271.00	Low Service	Fixed	89	2.52	477.49
J-117	271.00	Low Service	Fixed	89	1.81	477.49
J-336	289.77	Low Service	Fixed	89	2.64	496.31
J-86	281.89	Low Service	Fixed	89	0.75	488.74
J-197	270.00	Low Service	Fixed	90	0.92	476.91
J-152	284.45	Low Service	Fixed	90	0.72	491.59
J-118	284.00	Low Service	Fixed	90	1.43	491.34
J-699	283.58	Low Service	Fixed	90	1.60	491.34
J-749	283.78	Low Service	Fixed	90	4.12	491.75
J-395	283.72	Low Service	Fixed	90	2.20	491.70
J-119	283.26	Low Service	Fixed	90	1.07	491.34
J-36	283.48	Low Service	Fixed	90	0.00	491.66
J-35	283.24	Low Service	Fixed	90	0.00	491.66
J-390	268.98	Low Service	Fixed	90	5.15	477.41
J-265	283.11	Low Service	Fixed	90	0.00	491.66
J-151	283.00	Low Service	Fixed	90	0.00	491.60
J-26	282.03	Low Service	Fixed	90	0.81	490.72
J-636	283.15	Low Service	Fixed	90	2.88	491.85
J-829	282.90	Low Service	Fixed	90	2.96	491.70
J-608	268.45	Low Service	Fixed	90	2.96	477.39
J-600	282.63	Low Service	Fixed	91	10.24	491.85
J-193	267.79	Low Service	Fixed	91	1.10	477.20
J-315	277.81	Low Service	Fixed	91	1.19	487.44
J-25	281.00	Low Service	Fixed	91	1.57	490.72
J-720	280.90	Low Service	Fixed	91	3.05	490.63
J-201	267.00	Low Service	Fixed	91	2.96	476.93
J-294	267.02	Low Service	Fixed	91	1.66	476.96
J-394	267.13	Low Service	Fixed	91	2.37	477.22
J-416	275.16	Low Service	Fixed	91	5.45	485.69
J-202	266.26	Low Service	Fixed	91	1.93	476.93

Active Scenario: MDD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-529	279.97	Low Service	Fixed	91	1.96	490.70
J-337	285.55	Low Service	Fixed	91	4.06	496.31
J-536	276.13	Low Service	Fixed	92	1.54	487.77
J-45	265.23	Low Service	Fixed	92	0.00	477.20
J-389	265.43	Low Service	Fixed	92	3.76	477.41
J-469	265.12	Low Service	Fixed	92	1.99	477.22
J-620	279.25	Low Service	Fixed	92	12.73	491.73
J-466	268.02	Low Service	Fixed	92	1.10	480.53
J-853	280.93	Low Service	Fixed	92	1.37	493.50
J-820	280.88	Low Service	Fixed	92	2.14	493.49
J-476	279.00	Low Service	Fixed	92	0.00	491.73
J-214	275.00	Low Service	Fixed	92	4.38	487.77
J-46	264.42	Low Service	Fixed	92	0.00	477.20
J-665	276.32	Low Service	Fixed	92	1.28	489.43
J-283	293.78	Low Service	Fixed	92	0.00	506.92
J-826	280.23	Low Service	Fixed	92	0.00	493.49
J-831	280.38	Low Service	Fixed	92	5.66	493.84
J-194	263.64	Low Service	Fixed	92	0.00	477.20
J-530	277.00	Low Service	Fixed	92	5.63	490.68
J-2	272.90	Low Service	Fixed	92	3.29	486.61
J-468	272.69	Low Service	Fixed	93	0.72	486.66
J-663	263.04	Low Service	Fixed	93	10.98	477.48
J-367	276.29	Low Service	Fixed	93	1.60	490.83
J-724	276.10	Low Service	Fixed	93	4.98	490.68
J-683	277.24	Low Service	Fixed	93	3.32	491.85
J-486	276.69	Low Service	Fixed	93	1.10	491.31
J-609	262.15	Low Service	Fixed	93	2.79	477.39
J-156	261.61	Low Service	Fixed	93	1.87	476.92
J-521	274.00	Low Service	Fixed	93	4.30	489.32
J-505	271.00	Low Service	Fixed	93	3.82	486.89
J-155	261.00	Low Service	Fixed	93	1.43	476.92
J-824	274.37	Low Service	Fixed	93	8.32	490.35
J-674	274.73	Low Service	Fixed	94	2.73	491.26
J-216	272.32	Low Service	Fixed	94	0.00	488.87
J-213	270.88	Low Service	Fixed	94	0.00	487.77
J-557	259.56	Low Service	Fixed	94	2.23	476.93
J-357	270.40	Low Service	Fixed	94	2.40	487.79
J-309	268.95	Low Service	Fixed	94	0.00	486.77
J-520	268.91	Low Service	Fixed	94	0.00	486.96
J-215	270.68	Low Service	Fixed	95	0.81	489.13
J-558	258.38	Low Service	Fixed	95	1.66	476.93
J-316	268.79	Low Service	Fixed	95	2.49	487.38
J-171	268.26	Low Service	Fixed	95	0.00	487.03
J-270	268.18	Low Service	Fixed	95	0.00	487.03
J-172	266.78	Low Service	Fixed	95	0.00	487.03
J-464	267.63	Low Service	Fixed	95	1.57	488.08

Active Scenario: MDD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-415	256.97	Low Service	Fixed	95	1.84	477.43
J-114	266.00	Low Service	Fixed	95	1.34	486.48
J-684	271.04	Low Service	Fixed	96	6.69	491.85
J-345	270.71	Low Service	Fixed	96	2.70	491.52
J-115	265.68	Low Service	Fixed	96	0.00	486.49
J-10	256.52	Low Service	Fixed	96	0.00	477.43
J-9	256.30	Low Service	Fixed	96	4.33	477.43
J-310	265.64	Low Service	Fixed	96	5.33	486.77
J-240	255.54	Low Service	Fixed	96	1.34	477.20
J-457	265.47	Low Service	Fixed	96	5.09	487.16
J-485	265.17	Low Service	Fixed	96	15.80	487.02
J-828	269.59	Low Service	Fixed	96	0.00	491.69
J-840	269.40	Low Service	Fixed	96	0.00	491.52
J-344	268.93	Low Service	Fixed	96	0.00	491.69
J-358	264.00	Low Service	Fixed	96	0.00	487.03
J-351	264.13	Low Service	Fixed	96	0.00	487.16
J-822	268.32	Low Service	Fixed	97	0.00	491.70
J-700	268.00	Low Service	Fixed	97	0.69	491.60
J-574	267.46	Low Service	Fixed	97	2.34	491.25
J-823	264.40	Low Service	Fixed	97	2.25	489.43
J-329	264.00	Low Service	Fixed	97	0.00	489.23
J-607	263.50	Low Service	Fixed	97	0.95	488.76
J-271	270.56	Low Service	Fixed	98	1.13	496.32
J-13	270.37	Low Service	Fixed	98	3.41	496.32
J-272	270.23	Low Service	Fixed	98	0.00	496.31
J-817	268.16	Low Service	Fixed	98	7.11	494.32
J-363	250.83	Low Service	Fixed	98	1.72	477.29
J-508	265.08	Low Service	Fixed	98	2.40	491.75
J-546	250.59	Low Service	Fixed	98	3.05	477.36
J-783	264.12	Low Service	Fixed	98	3.50	491.26
J-14	269.17	Low Service	Fixed	98	0.00	496.32
J-386	250.07	Low Service	Fixed	98	1.13	477.29
J-72	264.00	Low Service	Fixed	98	1.16	491.25
J-73	264.00	Low Service	Fixed	98	0.83	491.25
J-350	260.00	Low Service	Fixed	98	0.00	487.27
J-125	266.38	Low Service	Fixed	98	2.85	493.66
J-364	250.00	Low Service	Fixed	98	0.98	477.31
J-341	259.65	Low Service	Fixed	98	3.97	486.96
J-299	263.00	Low Service	Fixed	98	5.42	490.64
J-504	263.26	Low Service	Fixed	99	0.83	491.25
J-507	263.21	Low Service	Fixed	99	1.66	491.72
J-300	261.45	Low Service	Fixed	99	3.08	490.64
J-124	264.64	Low Service	Fixed	99	1.34	493.84
J-340	258.00	Low Service	Fixed	99	0.00	487.27
J-761	264.00	Low Service	Fixed	99	4.47	493.66
J-790	259.19	Low Service	Fixed	100	1.57	490.58

Active Scenario: MDD-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-664	245.63	Low Service	Fixed	100	2.91	477.47
J-366	244.88	Low Service	Fixed	101	1.07	477.46
J-805	244.01	Low Service	Fixed	101	2.55	477.46
J-547	243.00	Low Service	Fixed	101	3.08	477.39
J-158	242.00	Low Service	Fixed	102	0.00	477.46
J-249	241.56	Low Service	Fixed	102	0.00	477.46
J-545	241.00	Low Service	Fixed	102	1.04	477.36
J-157	241.00	Low Service	Fixed	102	1.72	477.46
J-245	259.00	Low Service	Fixed	102	0.00	495.73
J-108	258.83	Low Service	Fixed	103	0.00	495.88
J-109	258.00	Low Service	Fixed	103	0.00	496.30
J-855	258.00	Low Service	Fixed	103	0.00	496.32
J-369	239.00	Low Service	Fixed	103	0.00	477.46
J-842	239.00	Low Service	Fixed	103	2.25	477.46
J-849	262.68	Low Service	Fixed	103	0.00	501.34
J-246	256.85	Low Service	Fixed	103	0.00	495.73
J-814	231.90	Low Service	Fixed	113	0.66	492.48
J-798	230.79	Low Service	Fixed	113	3.85	492.50
J-845	229.55	Low Service	Fixed	114	0.00	492.02
J-732	221.07	Low Service	Fixed	117	1.31	492.49
J-731	218.04	Low Service	Fixed	119	2.08	492.49
J-797	216.00	Low Service	Fixed	120	15.12	492.48
J-224	209.19	Low Service	Fixed	123	0.69	492.48
J-613	207.74	Low Service	Fixed	123	0.00	492.48
J-764	206.00	Low Service	Fixed	124	3.11	492.47
J-225	204.34	Low Service	Fixed	125	1.66	492.48
J-516	201.00	Low Service	Fixed	126	0.00	492.48
J-515	199.62	Low Service	Fixed	127	0.00	492.48
J-461	199.55	Low Service	Fixed	127	0.00	492.48
J-460	188.74	Low Service	Fixed	131	1.52	492.47

Active Scenario: MDD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
363	8.0	J-250	J-251	119	-719.57	19.62	2.33	4.59	90
14	12.0	J-752	J-203	718	1,310.30	5.70	4.09	3.72	110
30	12.0	J-203	J-848	1,660	1,307.92	5.68	9.42	3.71	110
P-50	12.0	J-848	J-844	102	1,307.92	6.77	0.69	3.71	100
P-233	6.0	J-329	J-823	15	-309.00	13.57	0.20	3.51	101
P-51	12.0	J-844	J-856	48	1,227.44	5.05	0.24	3.48	110
P-218	12.0	J-849	J-855	1,108	1,157.66	4.53	5.02	3.28	110
P-216	12.0	J-855	J-109	4	1,144.72	4.44	0.02	3.25	110
334	8.0	J-108	J-109	33	-502.80	12.56	0.42	3.21	80
P-217	12.0	J-854	J-849	1,426	990.97	2.49	3.55	2.81	130
P-372	12.0	J-854	J-849	1,427	990.54	2.49	3.55	2.81	130
569	12.0	J-849	J-850	1,739	823.85	2.05	3.57	2.34	120
P-219	12.0	J-681	J-850	478	-823.05	2.05	0.98	2.33	120
581	12.0	J-798	J-817	979	-779.16	1.85	1.81	2.21	120
P-212	8.0	J-108	J-245	32	335.32	4.77	0.15	2.14	90
685	8.0	J-245	J-124	395	335.32	4.77	1.89	2.14	90
P-241	8.0	J-344	J-840	73	334.85	2.41	0.18	2.14	130
P-240	12.0	J-845	J-798	281	-749.16	1.72	0.48	2.13	120
776	8.0	J-840	J-841	1,293	332.15	2.37	3.07	2.12	130
686	8.0	J-124	J-125	42	319.85	4.37	0.19	2.04	90
226	12.0	J-692	J-651	2,488	714.16	1.85	4.61	2.03	110
662	12.0	J-651	J-144	1,488	706.22	1.81	2.70	2.00	110
P-59	12.0	J-144	J-677	5	706.22	1.55	0.01	2.00	120
369	8.0	J-125	J-823	1,011	312.53	4.19	4.23	1.99	90
571	12.0	J-552	J-250	1,911	-702.51	1.32	2.52	1.99	130
708	12.0	J-86	J-87	26	700.84	1.52	0.04	1.99	120
716	12.0	J-551	J-552	350	-700.17	1.31	0.46	1.99	130
771	12.0	J-551	J-743	1,325	698.60	1.30	1.73	1.98	130
P-238	8.0	J-841	J-719	78	309.84	8.73	0.68	1.98	60
P-373	12.0	J-743	J-910	216	694.40	1.29	0.28	1.97	130
339	8.0	J-215	J-216	110	308.19	2.40	0.26	1.97	120
784	8.0	J-114	J-416	242	303.48	3.26	0.79	1.94	100
583	12.0	J-817	J-681	1,786	-665.71	1.38	2.47	1.89	120
270	8.0	J-416	J-763	1,583	290.65	3.01	4.77	1.86	100
333	8.0	J-292	J-543	349	290.54	2.52	0.88	1.85	110
710	12.0	J-414	J-78	605	646.94	1.31	0.79	1.84	120
711	12.0	J-78	J-79	23	646.30	1.31	0.03	1.83	120
712	12.0	J-79	J-372	206	643.15	1.30	0.27	1.82	120
P-214	12.0	J-109	J-853	1,848	641.92	1.52	2.81	1.82	110
713	12.0	J-372	J-588	829	638.47	1.28	1.06	1.81	120
758	12.0	J-691	J-692	589	636.11	1.49	0.88	1.80	110
P-52	12.0	J-856	J-691	1,364	636.11	1.49	2.04	1.80	110
709	12.0	J-87	J-414	237	632.75	1.26	0.30	1.79	120
355	12.0	J-251	J-588	1,011	-631.50	1.25	1.27	1.79	120
408	10.0	J-634	J-207	544	424.66	1.46	0.80	1.73	120

Active Scenario: MDD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-53	12.0	J-856	J-696	269	591.33	1.11	0.30	1.68	120
382	10.0	J-845	J-824	1,650	406.01	1.01	1.67	1.66	140
349	10.0	J-521	J-824	1,063	-397.69	0.97	1.03	1.62	140
P-54	12.0	J-696	J-725	2,401	571.94	1.04	2.51	1.62	120
707	10.0	J-86	J-521	326	-393.39	1.78	0.58	1.61	100
664	12.0	J-676	J-677	543	-554.00	1.16	0.63	1.57	110
656	10.0	J-191	J-192	82	-373.59	1.36	0.11	1.53	110
P-205	8.0	J-191	J-548	167	232.79	2.43	0.41	1.49	90
P-200	8.0	J-619	J-820	688	-231.87	2.41	1.66	1.48	90
P-257	8.0	J-316	J-527	2,569	230.48	1.40	3.59	1.47	120
P-117	8.0	J-231	J-758	2,090	229.61	1.95	4.07	1.47	100
292	8.0	J-607	J-790	952	-227.55	1.91	1.82	1.45	100
P-206	8.0	J-548	J-496	672	222.11	2.22	1.50	1.42	90
311	8.0	J-607	J-340	1,142	221.64	1.30	1.49	1.41	120
297	8.0	Overlook Drive Tank	J-496	3,260	-220.43	1.51	4.93	1.41	110
P-197	8.0	J-440	J-275	181	-215.51	2.10	0.38	1.38	90
438	12.0	J-189	Tara Road Tank	82	482.32	0.76	0.06	1.37	120
782	8.0	J-340	J-341	186	212.54	1.69	0.31	1.36	100
P-256	8.0	J-734	J-839	21	212.20	1.20	0.02	1.35	120
330	8.0	J-839	J-789	1,207	210.12	1.65	1.99	1.34	100
269	8.0	J-341	J-114	293	208.57	1.63	0.48	1.33	100
332	8.0	J-292	J-789	855	-204.82	1.58	1.35	1.31	100
432	12.0	J-725	J-576	609	459.19	0.82	0.50	1.30	110
665	12.0	J-576	J-633	1,837	449.24	0.78	1.44	1.27	110
370	8.0	J-826	J-827	1,045	199.37	1.07	1.12	1.27	120
290	8.0	J-827	J-790	1,737	195.58	1.03	1.79	1.25	120
666	10.0	J-207	J-208	89	301.93	0.78	0.07	1.23	120
409	10.0	J-208	J-232	559	299.55	0.77	0.43	1.22	120
224	12.0	J-633	J-634	437	429.29	0.61	0.27	1.22	120
743	6.0	J-330	J-331	170	104.03	1.82	0.31	1.18	100
208	12.0	J-611	J-676	834	-403.67	0.64	0.54	1.15	110
207	12.0	J-611	J-189	884	398.22	0.63	0.55	1.13	110
383	8.0	J-543	J-818	986	175.23	1.18	1.16	1.12	100
P-296	8.0	J-178	J-763	344	-169.74	1.11	0.38	1.08	100
P-211	8.0	J-826	J-108	1,814	-167.48	1.32	2.39	1.07	90
P-210	12.0	J-853	J-192	987	374.66	0.56	0.55	1.06	110
679	8.0	J-47	J-48	14	-165.74	1.29	0.02	1.06	90
696	12.0	J-315	J-316	160	357.97	0.38	0.06	1.02	130
P-118	8.0	J-758	J-765	447	155.20	0.94	0.42	0.99	100
684	8.0	J-708	J-681	625	-152.68	0.77	0.48	0.97	110
P-239	12.0	J-822	J-845	792	-343.16	0.41	0.32	0.97	120

Active Scenario: MDD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
667	10.0	J-231	J-232	108	-233.19	0.68	0.07	0.95	100
P-245	12.0	J-344	J-822	16	-334.85	0.46	0.01	0.95	110
P-221	8.0	J-708	J-4	776	145.83	0.70	0.55	0.93	110
150	8.0	J-42	J-676	1,238	-145.83	0.60	0.74	0.93	120
494	6.0	J-565	J-181	496	79.85	1.12	0.55	0.91	100
210	6.0	J-602	J-603	385	78.30	0.90	0.35	0.89	110
206	8.0	J-41	J-99	614	138.86	0.55	0.34	0.89	120
P-295	8.0	J-762	J-178	389	-138.61	0.76	0.30	0.88	100
701	8.0	J-762	J-689	1,993	137.71	0.76	1.50	0.88	100
337	12.0	J-215	J-329	170	-309.00	0.57	0.10	0.88	90
340	12.0	J-216	J-86	393	308.19	0.33	0.13	0.87	120
P-63	6.0	J-399	J-75	127	-75.54	1.01	0.13	0.86	100
703	8.0	J-350	J-351	184	134.10	0.60	0.11	0.86	110
P-258	8.0	J-527	J-734	845	133.90	0.51	0.43	0.85	120
P-64	6.0	J-75	J-635	313	75.15	1.00	0.31	0.85	100
353	12.0	J-78	J-719	619	-297.28	0.27	0.17	0.84	130
697	12.0	J-315	J-78	624	-296.32	0.27	0.17	0.84	130
279	8.0	J-439	J-440	265	-131.21	0.68	0.18	0.84	101
329	8.0	J-351	J-171	239	129.00	0.56	0.13	0.82	110
P-302	8.0	J-861	J-4	1,541	-126.30	0.54	0.83	0.81	110
P-6	8.0	J-690	J-116	1,656	126.25	0.64	1.06	0.81	100
P-304	8.0	J-861	J-817	1,245	120.55	0.49	0.62	0.77	110
367	6.0	J-87	J-464	299	66.81	2.07	0.62	0.76	60
P-209	12.0	J-820	J-853	9	-265.89	0.30	0.00	0.75	110
225	8.0	J-701	J-602	948	117.08	0.56	0.53	0.75	100
P-199	8.0	J-275	J-619	416	-116.11	0.67	0.28	0.74	90
P-111	8.0	J-765	J-525	329	116.08	0.39	0.13	0.74	120
P-195	8.0	J-619	J-476	387	113.56	0.28	0.11	0.72	140
324	8.0	J-171	J-505	306	113.20	0.44	0.13	0.72	110
144	8.0	J-29	J-30	7	112.88	0.28	0.00	0.72	140
2	8.0	J-537	J-538	337	112.88	0.37	0.13	0.72	120
3	8.0	J-538	J-29	755	112.88	0.37	0.28	0.72	120
P-114	8.0	J-510	J-537	100	112.88	0.37	0.04	0.72	120
344	6.0	J-357	J-315	189	62.84	1.85	0.35	0.71	60
765	8.0	J-763	J-670	1,311	110.25	0.31	0.40	0.70	130
P-77	6.0	J-635	J-605	2,063	61.76	0.69	1.43	0.70	100
313	8.0	J-330	J-543	1,080	-109.39	0.49	0.53	0.70	100
508	8.0	J-505	J-309	319	105.58	0.39	0.12	0.67	110
76	8.0	J-699	J-700	594	-101.12	0.43	0.25	0.65	100
P-193	8.0	J-476	J-35	302	100.84	0.23	0.07	0.64	140
285	8.0	J-151	J-152	63	100.83	0.23	0.01	0.64	140
287	8.0	J-265	J-151	179	100.83	0.30	0.05	0.64	120
P-194	8.0	J-35	J-265	6	100.83	0.23	0.00	0.64	140
504	8.0	J-309	J-468	318	100.25	0.35	0.11	0.64	110
280	8.0	J-275	J-152	134	-100.12	0.22	0.03	0.64	140

Active Scenario: MDD-Buildout
FlexTable: Pipe Table
Steady State Analysis

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534	2.0	J-273	J-274	135	6.16	2.03	0.27	0.63	101
652	6.0	J-323	J-324	166	54.96	0.56	0.09	0.62	100
103	8.0	J-695	J-740	656	96.49	0.39	0.26	0.62	100
P-285	8.0	J-740	J-95	16	96.49	0.39	0.01	0.62	100
505	8.0	J-115	J-2	375	-96.24	0.33	0.12	0.61	110
744	6.0	J-331	J-565	350	53.56	0.53	0.19	0.61	100
463	8.0	J-116	J-67	888	93.26	0.37	0.33	0.60	100
308	8.0	J-11	J-650	752	91.93	0.30	0.23	0.59	110
296	10.0	J-601	J-191	3,623	-140.80	0.27	0.96	0.58	100
P-150	8.0	J-30	J-778	752	89.96	0.18	0.14	0.57	140
217	6.0	J-324	J-494	622	50.60	0.48	0.30	0.57	100
351	8.0	J-527	J-528	380	89.53	0.34	0.13	0.57	101
410	2.0	J-279	J-280	147	5.51	1.03	0.15	0.56	130
699	8.0	J-650	J-291	508	87.78	0.27	0.14	0.56	110
P-5	8.0	J-689	J-690	564	87.68	0.33	0.18	0.56	100
P-176	8.0	J-778	J-686	1,068	87.31	0.32	0.35	0.56	100
671	8.0	J-701	J-338	583	-87.29	0.32	0.19	0.56	100
331	8.0	J-291	J-292	145	86.59	0.27	0.04	0.55	110
561	8.0	J-528	J-800	858	86.54	0.23	0.20	0.55	120
770	8.0	J-599	J-440	635	-83.50	0.30	0.19	0.53	100
734	8.0	J-67	J-68	21	81.80	0.29	0.01	0.52	100
P-132	8.0	J-64	J-173	86	79.22	0.27	0.02	0.51	100
P-253	8.0	J-734	J-800	413	-78.30	0.26	0.11	0.50	101
P-130	8.0	J-173	J-813	1,227	77.51	0.26	0.32	0.49	100
72	6.0	J-103	J-407	231	43.30	0.30	0.07	0.49	110
P-108	8.0	J-699	J-119	19	76.82	0.26	0.01	0.49	100
317	8.0	J-181	J-182	79	76.62	0.25	0.02	0.49	100
8	8.0	J-846	J-570	1,512	76.45	0.21	0.32	0.49	110
P-155	6.0	J-235	J-104	1,492	-42.77	0.35	0.52	0.49	100
760	8.0	J-570	J-571	376	75.65	0.25	0.09	0.48	100
P-131	8.0	J-319	J-64	7	75.32	0.24	0.00	0.48	100
385	12.0	J-818	J-704	2,189	167.44	0.13	0.28	0.47	110
589	8.0	J-399	J-400	229	73.88	0.24	0.05	0.47	100
65	12.0	J-22	J-47	20	-165.02	0.18	0.00	0.47	90
779	8.0	J-603	J-596	1,746	72.58	0.19	0.34	0.46	110
496	12.0	J-796	J-704	1,312	-161.15	0.10	0.13	0.46	120
655	10.0	J-749	J-601	688	-109.99	0.17	0.12	0.45	100
419	8.0	J-222	J-223	115	-69.72	0.21	0.02	0.45	100
420	8.0	J-758	J-223	722	69.72	0.21	0.15	0.45	100
171	8.0	J-571	J-647	494	69.07	0.21	0.10	0.44	100
100	6.0	J-741	J-742	688	-38.38	0.29	0.20	0.44	100
P-263	12.0	J-796	J-737	403	153.37	0.09	0.04	0.44	120
P-61	12.0	J-677	J-74	24	152.21	0.09	0.00	0.43	120
148	12.0	J-74	J-75	22	151.35	0.09	0.00	0.43	120
161	8.0	J-647	J-483	575	66.67	0.20	0.11	0.43	100

Active Scenario: MDD-Buildout
FlexTable: Pipe Table
Steady State Analysis

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182	8.0	J-813	J-586	1,156	66.34	0.20	0.23	0.42	100
P-120	8.0	J-222	J-669	13	65.75	0.12	0.00	0.42	130
368	8.0	J-464	J-357	596	65.24	0.49	0.29	0.42	60
262	10.0	J-700	J-749	1,081	-101.81	0.15	0.16	0.42	100
459	8.0	J-816	J-400	1,295	-63.88	0.18	0.24	0.41	100
675	10.0	J-417	J-102	242	98.50	0.17	0.04	0.40	90
151	12.0	J-41	J-42	13	-140.40	0.08	0.00	0.40	120
691	8.0	J-235	J-319	326	62.10	0.17	0.06	0.40	100
P-68	12.0	J-492	J-99	16	-138.86	0.11	0.00	0.39	100
503	10.0	J-114	J-115	39	-96.24	0.11	0.00	0.39	110
468	8.0	J-394	J-363	399	-61.56	0.17	0.07	0.39	100
140	8.0	J-586	J-695	697	61.42	0.17	0.12	0.39	100
492	6.0	J-469	J-386	377	-34.47	0.20	0.07	0.39	110
P-112	8.0	J-525	J-509	408	58.84	0.11	0.05	0.38	120
636	8.0	J-122	J-123	42	57.52	0.09	0.00	0.37	130
178	8.0	J-525	J-526	329	57.24	0.11	0.03	0.37	120
P-113	8.0	J-526	J-510	399	57.24	0.11	0.04	0.37	120
P-2	8.0	J-468	J-2	390	57.17	0.12	0.05	0.36	110
678	8.0	J-133	J-599	380	-56.88	0.15	0.06	0.36	100
66	12.0	J-48	J-439	860	-127.56	0.09	0.08	0.36	101
754	8.0	J-609	J-386	652	56.59	0.15	0.09	0.36	100
18	8.0	J-509	J-510	315	55.64	0.10	0.03	0.36	120
P-300	12.0	J-350	J-316	1,903	-125.00	0.05	0.10	0.35	130
77	6.0	J-239	J-118	292	-31.12	0.24	0.07	0.35	90
126	2.0	J-106	J-107	33	3.44	0.43	0.01	0.35	130
303	8.0	J-792	J-670	847	-53.87	0.11	0.09	0.34	110
247	10.0	J-729	J-730	629	84.11	2.01	1.27	0.34	20
733	8.0	J-68	J-499	337	52.47	0.13	0.04	0.33	100
316	8.0	J-772	J-182	761	-52.30	0.11	0.08	0.33	110
177	12.0	J-207	J-799	2,611	116.78	0.06	0.14	0.33	120
P-190	6.0	J-793	J-711	590	-28.65	0.17	0.10	0.33	100
132	8.0	J-448	J-456	819	50.73	0.12	0.10	0.32	100
700	8.0	J-670	J-428	552	49.83	0.11	0.06	0.32	100
493	8.0	J-394	J-193	224	49.75	0.11	0.03	0.32	100
145	6.0	J-653	J-781	770	27.86	0.11	0.09	0.32	120
P-353	10.0	J-730	Overlook Drive Tank	48	77.06	0.11	0.01	0.31	90
112	12.0	J-297	J-799	874	-110.89	0.05	0.04	0.31	120
245	8.0	J-581	J-786	813	48.53	0.11	0.09	0.31	100
304	8.0	J-11	J-428	758	-48.44	0.09	0.07	0.31	110
P-346	12.0	J-49	J-725	1,349	-108.92	0.06	0.08	0.31	110
556	8.0	J-7	J-8	3	-48.29	0.08	0.00	0.31	120
554	8.0	J-8	J-221	97	-48.29	0.06	0.01	0.31	140
557	8.0	J-221	J-524	370	-48.29	0.08	0.03	0.31	120

Active Scenario: MDD-Buildout
FlexTable: Pipe Table
Steady State Analysis

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246	8.0	J-786	J-293	952	48.12	0.11	0.10	0.31	100
P-189	6.0	J-710	J-793	18	-27.00	0.15	0.00	0.31	100
745	8.0	J-331	J-349	642	47.83	0.11	0.07	0.31	100
51	8.0	J-686	J-335	540	47.43	0.10	0.06	0.30	100
647	12.0	J-297	J-298	149	106.68	0.05	0.01	0.30	120
P-275	8.0	J-7	J-32	47	47.40	0.10	0.00	0.30	100
755	8.0	J-547	J-545	342	47.37	0.10	0.04	0.30	100
P-264	12.0	J-737	J-663	475	105.74	0.05	0.02	0.30	120
731	8.0	J-447	J-448	268	46.63	0.10	0.03	0.30	100
753	8.0	J-193	J-581	426	45.79	0.10	0.04	0.29	100
283	2.0	J-165	J-166	70	-2.82	0.48	0.03	0.29	101
P-148	8.0	J-707	J-816	449	-45.01	0.10	0.04	0.29	100
63	12.0	J-417	J-22	242	-100.57	0.07	0.02	0.29	90
681	8.0	J-132	J-133	44	-44.62	0.07	0.00	0.28	120
153	12.0	J-605	J-266	2,598	99.52	0.05	0.13	0.28	110
732	8.0	J-499	J-447	303	44.22	0.09	0.03	0.28	100
P-156	6.0	J-104	J-781	3	-24.66	0.12	0.00	0.28	100
P-260	8.0	J-792	J-11	514	43.50	0.07	0.04	0.28	110
259	8.0	J-689	J-690	2,072	43.42	0.09	0.18	0.28	100
470	8.0	J-545	J-364	573	43.28	0.09	0.05	0.28	100
80	8.0	J-119	J-486	294	43.20	0.09	0.03	0.28	100
P-1	8.0	J-2	J-468	679	-42.36	0.07	0.05	0.27	110
756	8.0	J-363	J-364	196	-42.29	0.08	0.02	0.27	100
79	8.0	J-674	J-486	587	-42.10	0.08	0.05	0.27	100
491	8.0	J-561	J-469	395	-41.93	0.08	0.03	0.27	100
P-351	8.0	J-407	J-25	726	41.19	0.07	0.05	0.26	110
479	8.0	J-644	J-737	672	-40.88	0.08	0.05	0.26	100
418	10.0	J-669	J-338	1,418	63.58	0.06	0.09	0.26	100
646	12.0	J-629	J-287	435	91.49	0.04	0.02	0.26	110
P-107	6.0	J-729	J-699	1,901	-22.69	2.14	4.07	0.26	20
574	12.0	J-251	Oak Hill Road Tank	683	-90.24	0.03	0.02	0.26	120
P-265	8.0	J-415	J-10	53	39.92	0.08	0.00	0.25	100
P-123	12.0	J-481	J-745	9	89.74	0.03	0.00	0.25	120
P-126	12.0	J-809	J-481	349	89.74	0.04	0.01	0.25	110
277	10.0	J-729	J-21	3,154	-62.14	1.15	3.62	0.25	20
555	8.0	J-31	J-32	11	-39.72	0.05	0.00	0.25	120
P-127	12.0	J-745	J-846	383	88.46	0.04	0.01	0.25	110
509	8.0	J-349	J-373	867	39.17	0.07	0.06	0.25	100
437	12.0	J-189	J-492	298	-88.14	0.04	0.01	0.25	110
266	6.0	J-599	J-472	504	21.85	0.10	0.05	0.25	100
P-352	8.0	J-25	J-529	291	38.81	0.06	0.02	0.25	110
216	8.0	J-768	J-742	955	38.38	0.07	0.07	0.24	100
680	8.0	J-48	J-132	119	-38.18	0.09	0.01	0.24	90

Active Scenario: MDD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-345	12.0	J-692	J-49	990	-85.51	0.04	0.04	0.24	110
179	12.0	J-298	J-629	526	83.50	0.03	0.02	0.24	110
762	8.0	J-529	J-530	328	36.85	0.07	0.02	0.24	100
500	8.0	J-116	J-609	1,586	36.79	0.07	0.10	0.23	100
184	6.0	J-38	J-766	757	-20.47	0.08	0.06	0.23	110
P-116	8.0	J-765	J-701	549	36.19	0.06	0.03	0.23	100
P-48	12.0	J-844	J-727	419	80.48	0.04	0.02	0.23	100
773	8.0	J-65	J-711	1,302	35.66	0.06	0.08	0.23	100
687	8.0	J-602	J-653	488	35.61	0.04	0.02	0.23	120
P-268	8.0	J-9	J-547	571	35.59	0.06	0.04	0.23	100
138	8.0	J-493	J-467	300	35.56	0.06	0.02	0.23	100
689	8.0	J-483	J-484	293	35.38	0.06	0.02	0.23	100
146	6.0	J-104	J-105	31	-19.75	0.05	0.00	0.22	140
203	8.0	J-686	J-256	1,492	34.85	0.06	0.09	0.22	100
P-282	6.0	J-642	J-819	16	19.48	0.08	0.00	0.22	100
P-271	8.0	J-493	J-835	258	-34.45	0.06	0.01	0.22	100
477	8.0	J-138	J-644	546	-34.42	0.06	0.03	0.22	100
490	8.0	J-580	J-561	565	-34.14	0.06	0.03	0.22	100
674	10.0	J-102	J-65	114	53.08	0.05	0.01	0.22	90
486	6.0	J-389	J-415	239	-19.10	0.10	0.02	0.22	90
48	12.0	J-752	J-97	906	75.98	0.03	0.03	0.22	110
291	8.0	J-720	J-790	857	33.55	0.06	0.05	0.21	100
78	8.0	J-118	J-119	40	-32.55	0.06	0.00	0.21	90
474	8.0	J-565	J-373	1,065	-32.15	0.05	0.05	0.21	100
P-207	8.0	J-820	J-826	24	31.89	0.06	0.00	0.20	90
729	8.0	J-446	J-293	263	-31.48	0.05	0.01	0.20	100
P-288	8.0	J-782	J-380	414	31.15	0.05	0.02	0.20	100
P-269	8.0	J-772	J-458	518	30.39	0.04	0.02	0.19	110
608	12.0	J-94	J-95	31	-66.52	0.02	0.00	0.19	120
618	4.0	J-183	J-393	322	7.37	0.07	0.02	0.19	120
P-36	12.0	J-838	J-97	373	-66.34	0.03	0.01	0.19	100
539	2.0	J-285	J-286	143	1.84	0.22	0.03	0.19	101
692	6.0	J-273	J-256	351	-16.55	0.06	0.02	0.19	100
637	8.0	J-150	J-239	116	-29.31	0.05	0.01	0.19	90
P-287	8.0	J-95	J-782	657	29.04	0.04	0.03	0.19	100
499	2.0	J-458	J-459	283	1.81	0.13	0.04	0.18	130
64	12.0	J-21	J-22	5	-64.45	0.03	0.00	0.18	100
P-289	8.0	J-380	J-766	214	28.60	0.04	0.01	0.18	100
73	10.0	J-102	J-103	32	44.64	0.03	0.00	0.18	110
441	2.0	J-579	J-531	428	1.78	0.13	0.05	0.18	130
518	8.0	J-178	J-179	76	28.47	0.03	0.00	0.18	120
143	12.0	J-232	J-780	766	63.84	0.02	0.01	0.18	130
P-283	12.0	J-502	J-94	215	-63.67	0.03	0.01	0.18	100
366	2.0	J-268	J-269	128	1.72	0.19	0.02	0.18	101
658	8.0	J-600	J-601	381	-27.43	0.05	0.02	0.18	90

Active Scenario: MDD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
694	6.0	J-37	J-38	12	-15.37	0.04	0.00	0.17	110
645	12.0	J-287	J-288	143	61.18	0.02	0.00	0.17	110
565	2.0	J-659	J-660	528	1.69	0.12	0.06	0.17	130
670	8.0	J-338	J-339	175	-27.06	0.04	0.01	0.17	100
511	12.0	J-415	J-805	1,748	-60.86	0.02	0.03	0.17	120
594	6.0	J-134	J-135	52	-15.11	0.03	0.00	0.17	140
P-136	6.0	J-843	J-135	258	15.11	0.05	0.01	0.17	100
265	2.0	J-507	J-508	318	-1.66	0.11	0.04	0.17	130
728	6.0	J-293	J-294	145	14.95	0.04	0.01	0.17	120
P-7	12.0	J-780	J-768	327	59.31	0.01	0.00	0.17	130
268	8.0	J-767	J-530	759	-26.25	0.04	0.03	0.17	100
P-232	8.0	J-732	J-798	321	-26.14	0.03	0.01	0.17	110
273	8.0	J-68	J-559	957	25.98	0.03	0.03	0.17	100
741	8.0	J-467	J-205	275	25.60	0.03	0.01	0.16	100
195	12.0	J-123	J-539	435	57.52	0.01	0.01	0.16	130
P-270	8.0	J-458	J-608	459	25.56	0.03	0.01	0.16	110
157	12.0	J-838	J-773	1,176	57.01	0.01	0.02	0.16	120
735	6.0	J-205	J-206	89	14.20	0.05	0.00	0.16	100
761	12.0	J-539	J-323	338	56.54	0.02	0.01	0.16	100
740	12.0	J-663	J-664	513	56.40	0.01	0.01	0.16	120
769	12.0	J-502	J-503	303	55.37	0.02	0.01	0.16	100
141	10.0	J-484	J-695	569	37.20	0.02	0.01	0.15	100
P-103	12.0	J-266	J-295	102	53.51	0.01	0.00	0.15	120
542	8.0	J-201	J-446	707	-23.77	0.03	0.02	0.15	100
543	6.0	J-294	J-202	996	13.29	0.03	0.03	0.15	120
524	8.0	J-5	J-6	2	23.49	0.01	0.00	0.15	140
525	8.0	J-179	J-5	398	23.49	0.02	0.01	0.15	120
P-297	8.0	J-6	J-756	76	23.49	0.02	0.00	0.15	110
677	8.0	J-710	J-720	724	23.35	0.03	0.02	0.15	100
P-125	12.0	J-596	J-809	31	52.27	0.01	0.00	0.15	110
P-152	8.0	J-321	J-30	85	-22.92	0.01	0.00	0.15	140
117	8.0	J-289	J-290	144	-22.92	0.01	0.00	0.15	140
114	8.0	J-321	J-322	169	22.92	0.01	0.00	0.15	140
116	8.0	J-290	J-322	231	-22.92	0.02	0.00	0.15	120
P-154	8.0	J-185	J-289	155	-22.92	0.01	0.00	0.15	140
P-153	8.0	J-105	J-185	515	-22.92	0.01	0.01	0.15	140
538	8.0	J-33	J-590	521	22.79	0.02	0.01	0.15	110
P-231	8.0	J-797	J-732	545	-22.76	0.02	0.01	0.15	110
P-67	12.0	J-98	J-492	13	-50.72	0.02	0.00	0.14	100
84	2.0	J-750	J-751	735	1.40	0.09	0.07	0.14	120
690	8.0	J-335	J-235	173	22.27	0.03	0.00	0.14	100
P-267	8.0	J-10	J-9	3	22.18	0.02	0.00	0.14	100
230	12.0	J-98	J-569	352	49.80	0.02	0.01	0.14	100
436	12.0	J-617	J-462	1,123	49.80	0.02	0.02	0.14	100
P-66	12.0	J-569	J-617	364	49.80	0.02	0.01	0.14	100

Active Scenario: MDD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-73	12.0	J-462	J-248	260	49.80	0.02	0.00	0.14	100
P-274	12.0	J-524	J-456	273	-49.57	0.02	0.00	0.14	100
613	2.0	J-472	J-473	277	1.37	0.13	0.03	0.14	100
P-191	8.0	J-299	J-767	685	-21.76	0.02	0.02	0.14	100
639	12.0	J-159	J-773	828	-48.86	0.01	0.01	0.14	120
P-71	12.0	J-463	J-184	84	48.49	0.02	0.00	0.14	100
P-74	12.0	J-248	J-463	17	48.49	0.02	0.00	0.14	100
127	4.0	J-452	J-106	265	5.31	0.03	0.01	0.14	130
P-147	8.0	J-339	J-707	502	-21.19	0.02	0.01	0.14	100
P-134	8.0	J-542	J-335	1,370	-21.18	0.02	0.03	0.14	100
464	8.0	J-386	J-363	219	20.99	0.02	0.01	0.13	100
588	8.0	J-159	J-160	63	20.94	0.02	0.00	0.13	101
593	2.0	J-324	J-646	589	1.28	0.11	0.07	0.13	101
495	12.0	J-664	J-805	894	45.90	0.01	0.01	0.13	120
746	8.0	J-518	J-182	321	-19.75	0.02	0.01	0.13	100
P-70	6.0	J-544	J-184	75	-10.73	0.02	0.00	0.12	120
604	8.0	J-503	J-760	926	19.01	0.02	0.01	0.12	110
336	6.0	J-13	J-14	3	-10.64	0.03	0.00	0.12	120
P-122	12.0	J-555	J-266	253	-42.51	0.01	0.00	0.12	110
346	2.0	J-271	J-272	132	1.17	0.08	0.01	0.12	110
P-105	8.0	J-160	J-655	417	18.72	0.02	0.01	0.12	101
736	6.0	J-206	J-303	500	10.49	0.03	0.01	0.12	100
61	8.0	J-302	J-472	303	-18.61	0.02	0.01	0.12	100
644	12.0	J-288	J-657	1,132	41.87	0.01	0.01	0.12	110
295	8.0	J-835	J-580	1,525	-18.49	0.02	0.03	0.12	100
P-237	8.0	J-414	J-841	1,106	-18.46	0.05	0.05	0.12	60
172	10.0	J-199	J-483	1,101	-28.36	0.01	0.01	0.12	110
P-133	8.0	J-843	J-542	45	-18.13	0.02	0.00	0.12	100
P-344	12.0	J-727	J-325	921	40.72	0.01	0.01	0.12	100
514	8.0	J-332	J-451	309	-17.97	0.01	0.00	0.11	140
523	8.0	J-756	J-451	706	17.97	0.01	0.01	0.11	140
P-272	8.0	J-835	J-559	91	-17.83	0.02	0.00	0.11	100
476	8.0	J-9	J-10	3	-17.74	0.02	0.00	0.11	80
421	8.0	J-707	J-27	639	17.70	0.01	0.01	0.11	120
653	12.0	J-494	J-495	300	38.69	0.01	0.00	0.11	90
625	8.0	J-100	J-101	48	17.11	0.01	0.00	0.11	120
510	12.0	J-663	J-474	1,339	38.36	0.01	0.01	0.11	120
P-45	12.0	J-667	J-830	108	38.33	0.01	0.00	0.11	100
P-343	12.0	J-667	J-727	1,027	-38.33	0.01	0.01	0.11	100
472	8.0	J-772	J-593	1,155	16.79	0.01	0.01	0.11	110
P-72	12.0	J-184	J-511	241	37.76	0.01	0.00	0.11	100
152	12.0	J-511	J-605	415	37.76	0.01	0.00	0.11	100
411	12.0	J-808	J-809	863	37.47	0.01	0.01	0.11	110
P-121	12.0	J-808	J-555	711	-37.47	0.01	0.01	0.11	110
759	10.0	J-199	J-200	87	25.62	0.01	0.00	0.10	110

Active Scenario: MDD-Buildout
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Steady State Analysis

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654	6.0	J-494	J-408	620	9.21	0.02	0.02	0.10	90
P-279	8.0	J-754	J-819	26	-16.36	0.02	0.00	0.10	100
456	8.0	J-164	J-794	1,994	16.34	0.01	0.02	0.10	130
591	8.0	J-50	J-433	242	16.13	0.01	0.00	0.10	101
726	8.0	J-31	J-437	1,600	16.07	0.01	0.02	0.10	110
P-69	6.0	J-183	J-544	6	-8.98	0.01	0.00	0.10	120
P-99	8.0	J-717	J-712	14	15.80	0.01	0.00	0.10	120
705	8.0	J-171	J-172	74	15.80	0.01	0.00	0.10	110
706	8.0	J-172	J-270	128	15.80	0.01	0.00	0.10	101
704	8.0	J-270	J-485	298	15.80	0.01	0.00	0.10	101
624	8.0	J-712	J-713	993	15.80	0.01	0.01	0.10	120
750	8.0	J-618	J-139	410	-15.69	0.01	0.00	0.10	120
P-142	6.0	J-134	J-649	780	8.81	0.02	0.01	0.10	100
434	8.0	J-696	J-697	624	15.60	0.01	0.01	0.10	101
274	8.0	J-709	J-301	599	-15.49	0.01	0.01	0.10	110
544	8.0	J-202	J-155	502	15.41	0.01	0.01	0.10	100
533	6.0	J-564	J-273	430	-8.66	0.02	0.01	0.10	100
P-162	12.0	J-517	J-495	1,538	-33.95	0.01	0.01	0.10	110
135	6.0	J-448	J-205	1,167	-8.49	0.02	0.02	0.10	100
481	8.0	J-594	J-547	1,338	14.87	0.01	0.01	0.09	110
111	10.0	J-298	J-161	2,153	23.18	0.01	0.02	0.09	110
478	12.0	J-138	J-139	60	33.06	0.01	0.00	0.09	100
714	8.0	J-307	J-250	557	-14.48	0.01	0.01	0.09	90
P-227	8.0	J-124	J-831	176	14.13	0.01	0.00	0.09	100
717	10.0	J-200	J-92	489	22.04	0.01	0.00	0.09	110
P-104	12.0	J-295	J-267	25	31.35	0.00	0.00	0.09	120
607	12.0	J-642	J-503	888	-30.80	0.01	0.01	0.09	100
194	12.0	J-674	J-122	526	30.70	0.01	0.00	0.09	110
P-101	12.0	J-267	J-614	354	30.36	0.00	0.00	0.09	120
P-281	6.0	J-583	J-642	1,086	-7.55	0.01	0.02	0.09	100
281	8.0	J-720	J-299	625	-13.26	0.01	0.01	0.08	100
181	8.0	J-319	J-320	164	-13.22	0.01	0.00	0.08	110
301	6.0	J-416	J-572	1,063	7.38	0.01	0.01	0.08	100
258	6.0	J-769	J-37	1,191	-7.37	0.01	0.01	0.08	110
458	8.0	J-816	J-788	930	13.10	0.01	0.01	0.08	100
553	8.0	J-568	J-201	981	-12.86	0.01	0.01	0.08	100
558	6.0	J-337	J-13	1,000	-7.23	0.01	0.01	0.08	110
P-196	8.0	J-476	J-620	27	12.73	0.00	0.00	0.08	140
442	6.0	J-651	J-652	491	7.14	0.01	0.01	0.08	101
541	6.0	J-568	J-519	351	7.13	0.01	0.00	0.08	100
635	12.0	J-122	J-150	60	-28.45	0.01	0.00	0.08	90
97	8.0	J-639	J-785	1,001	12.50	0.01	0.01	0.08	120
455	12.0	J-163	J-164	68	28.09	0.00	0.00	0.08	130
34	12.0	J-554	J-159	1,840	-27.92	0.00	0.01	0.08	120
650	12.0	J-639	J-287	1,208	-27.87	0.00	0.01	0.08	110

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659	8.0	J-325	J-326	173	12.38	0.01	0.00	0.08	101
P-164	12.0	J-661	J-517	222	-27.75	0.00	0.00	0.08	110
P-163	12.0	J-334	J-661	381	-27.75	0.00	0.00	0.08	110
160	12.0	J-598	J-657	1,483	-27.48	0.00	0.01	0.08	110
546	8.0	J-801	J-155	876	-12.12	0.01	0.01	0.08	100
22	8.0	J-288	J-621	2,692	12.09	0.01	0.02	0.08	110
P-165	6.0	J-391	J-259	216	6.76	0.01	0.00	0.08	130
P-167	6.0	J-259	J-237	86	6.76	0.01	0.00	0.08	130
487	6.0	J-389	J-390	220	6.60	0.01	0.00	0.07	120
391	2.0	J-434	J-435	269	0.72	0.02	0.01	0.07	130
747	8.0	J-593	J-594	376	11.43	0.01	0.00	0.07	110
P-204	8.0	J-709	J-747	121	11.40	0.01	0.00	0.07	110
42	6.0	J-76	J-77	22	-6.30	0.01	0.00	0.07	120
12	8.0	J-92	J-93	27	11.14	0.00	0.00	0.07	130
P-102	12.0	J-614	J-180	1,448	25.00	0.00	0.00	0.07	120
28	12.0	J-163	J-325	1,018	-24.96	0.00	0.00	0.07	100
202	6.0	J-408	J-409	248	6.18	0.01	0.00	0.07	101
673	10.0	J-65	J-66	20	16.76	0.01	0.00	0.07	90
433	8.0	J-825	J-554	1,068	-10.51	0.00	0.00	0.07	130
241	8.0	J-754	J-755	846	10.44	0.01	0.01	0.07	100
403	6.0	J-308	J-430	255	5.82	0.01	0.00	0.07	90
407	8.0	J-598	J-279	408	10.34	0.00	0.00	0.07	130
446	8.0	J-326	J-784	844	10.24	0.01	0.01	0.07	101
605	8.0	J-760	J-362	853	10.21	0.01	0.00	0.07	110
263	8.0	J-637	J-600	884	-10.18	0.01	0.01	0.06	90
P-168	6.0	J-237	J-260	36	5.69	0.01	0.00	0.06	130
480	12.0	J-608	J-609	389	22.59	0.00	0.00	0.06	110
P-251	12.0	J-678	J-842	1,278	22.56	0.00	0.00	0.06	120
721	8.0	J-776	J-590	1,326	-9.96	0.00	0.01	0.06	110
P-82	12.0	J-187	J-295	2,225	-22.17	0.00	0.01	0.06	110
406	6.0	J-687	J-688	550	-5.52	0.01	0.00	0.06	110
693	8.0	J-255	J-256	121	-9.80	0.01	0.00	0.06	100
738	12.0	J-678	J-474	564	-22.04	0.00	0.00	0.06	120
682	8.0	J-301	J-302	152	-9.77	0.00	0.00	0.06	120
P-202	6.0	J-746	J-132	689	-5.48	0.01	0.01	0.06	100
752	8.0	J-227	J-139	1,507	-9.60	0.00	0.01	0.06	120
293	6.0	J-309	J-310	156	5.33	0.01	0.00	0.06	101
502	8.0	J-469	J-394	276	-9.44	0.01	0.00	0.06	100
P-11	12.0	J-858	J-334	1,229	-20.91	0.00	0.00	0.06	110
209	8.0	J-339	J-27	1,137	-9.28	0.00	0.00	0.06	120
192	6.0	J-574	J-783	1,143	-5.17	0.01	0.01	0.06	100
302	6.0	J-572	J-573	356	5.12	0.01	0.00	0.06	101
606	12.0	J-31	J-33	860	20.01	0.00	0.00	0.06	100
P-259	8.0	J-671	J-792	4	-8.86	0.00	0.00	0.06	110
526	6.0	J-179	J-387	219	4.98	0.00	0.00	0.06	120

Active Scenario: MDD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
133	6.0	J-499	J-493	1,056	4.96	0.01	0.01	0.06	100
175	8.0	J-180	J-100	78	8.77	0.00	0.00	0.06	120
748	8.0	J-594	J-389	576	-8.74	0.00	0.00	0.06	100
193	8.0	J-783	J-674	793	-8.67	0.00	0.00	0.06	100
P-138	6.0	J-76	J-233	33	4.87	0.00	0.00	0.06	140
715	8.0	J-307	J-308	154	8.63	0.01	0.00	0.06	90
62	8.0	J-133	J-301	478	8.50	0.00	0.00	0.05	120
P-109	6.0	J-409	J-359	191	4.75	0.01	0.00	0.05	101
120	12.0	J-596	J-744	1,086	18.94	0.00	0.00	0.05	110
16	12.0	J-422	J-830	1,368	-18.85	0.00	0.00	0.05	120
174	8.0	J-167	J-100	73	8.34	0.00	0.00	0.05	120
395	6.0	J-613	J-515	413	4.63	0.01	0.00	0.05	80
P-223	6.0	J-515	J-461	170	4.63	0.00	0.00	0.05	120
471	8.0	J-117	J-518	882	-8.14	0.00	0.00	0.05	100
P-46	12.0	J-830	J-209	450	17.88	0.00	0.00	0.05	100
727	8.0	J-201	J-202	87	7.94	0.00	0.00	0.05	100
P-97	8.0	J-101	J-717	1	7.90	0.00	0.00	0.05	120
P-95	8.0	J-717	J-101	1	-7.90	0.00	0.00	0.05	120
482	12.0	J-805	J-369	1,173	-17.51	0.00	0.00	0.05	120
P-181	12.0	J-768	J-391	848	17.29	0.00	0.00	0.05	130
P-276	8.0	J-32	J-34	859	7.68	0.00	0.00	0.05	100
485	8.0	J-664	J-678	1,374	7.60	0.00	0.00	0.05	120
P-185	12.0	J-66	J-488	394	16.99	0.00	0.00	0.05	130
590	8.0	J-187	J-188	82	7.52	0.00	0.00	0.05	130
156	8.0	J-188	J-685	641	7.52	0.00	0.00	0.05	130
549	6.0	J-519	J-197	322	4.22	0.00	0.00	0.05	100
757	8.0	J-548	J-120	344	7.45	0.00	0.00	0.05	110
165	8.0	J-361	J-362	196	-7.37	0.00	0.00	0.05	110
P-42	8.0	J-423	J-452	630	7.36	0.00	0.00	0.05	130
108	6.0	J-446	J-591	369	4.12	0.00	0.00	0.05	130
P-94	12.0	J-180	J-167	25	16.23	0.00	0.00	0.05	120
227	12.0	J-49	J-50	32	16.13	0.00	0.00	0.05	101
P-201	6.0	J-812	J-746	190	-3.97	0.00	0.00	0.05	100
271	8.0	J-679	J-67	564	-7.05	0.00	0.00	0.04	130
620	4.0	J-378	J-379	396	1.75	0.00	0.00	0.04	120
20	12.0	J-422	J-423	249	15.77	0.00	0.00	0.04	120
P-157	8.0	J-600	J-684	1,822	7.01	0.00	0.01	0.04	90
P-225	8.0	J-797	J-224	1,229	6.98	0.00	0.00	0.04	110
25	12.0	J-209	J-195	945	15.62	0.00	0.00	0.04	100
107	6.0	J-202	J-557	458	3.89	0.00	0.00	0.04	100
P-290	8.0	J-766	J-381	3	6.91	0.01	0.00	0.04	100
218	8.0	J-19	J-20	4	6.84	0.00	0.00	0.04	130
88	8.0	J-334	J-19	203	6.84	0.00	0.00	0.04	130
P-10	8.0	J-20	J-365	357	6.84	0.00	0.00	0.04	80
P-13	8.0	J-365	J-480	5	6.84	0.01	0.00	0.04	80

Active Scenario: MDD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-160	6.0	J-604	J-759	633	3.83	0.00	0.00	0.04	90
P-186	12.0	J-488	J-858	621	-15.30	0.00	0.00	0.04	130
634	8.0	J-655	J-656	483	6.78	0.00	0.00	0.04	101
473	8.0	J-618	J-226	953	6.72	0.00	0.00	0.04	120
167	8.0	J-635	J-771	1,085	6.69	0.00	0.00	0.04	101
83	6.0	J-564	J-497	351	3.74	0.00	0.00	0.04	101
P-171	6.0	J-631	J-578	518	3.74	0.00	0.00	0.04	100
725	8.0	J-589	J-590	367	-6.60	0.00	0.00	0.04	130
405	6.0	J-588	J-268	364	3.68	0.00	0.00	0.04	101
445	8.0	J-773	J-774	760	6.54	0.00	0.00	0.04	130
67	8.0	J-302	J-436	261	6.52	0.00	0.00	0.04	120
170	8.0	J-813	J-570	943	6.52	0.00	0.00	0.04	110
777	8.0	J-757	J-755	762	-6.35	0.00	0.00	0.04	100
651	10.0	J-161	J-629	817	9.92	0.00	0.00	0.04	110
1	12.0	J-744	J-320	678	14.23	0.00	0.00	0.04	110
489	8.0	J-116	J-117	39	-6.32	0.00	0.00	0.04	100
244	8.0	J-303	J-786	880	6.31	0.00	0.00	0.04	100
P-21	8.0	J-517	J-470	139	6.20	0.00	0.00	0.04	130
89	8.0	J-376	J-377	213	6.20	0.00	0.00	0.04	120
234	8.0	J-604	J-377	510	-6.20	0.00	0.00	0.04	120
P-22	8.0	J-470	J-376	187	6.20	0.00	0.00	0.04	130
122	8.0	J-361	J-688	791	6.15	0.00	0.00	0.04	110
134	8.0	J-447	J-467	1,096	-6.05	0.00	0.00	0.04	100
198	8.0	J-621	J-622	437	6.04	0.00	0.00	0.04	130
294	8.0	J-580	J-581	362	6.00	0.00	0.00	0.04	100
578	6.0	J-214	J-748	683	3.35	0.00	0.00	0.04	101
P-39	12.0	J-195	J-153	63	13.39	0.00	0.00	0.04	100
587	4.0	J-343	J-346	179	1.49	0.00	0.00	0.04	130
552	8.0	J-437	J-776	994	5.94	0.00	0.00	0.04	110
P-277	8.0	J-228	J-754	66	-5.92	0.00	0.00	0.04	100
162	8.0	J-502	J-791	882	5.89	0.00	0.00	0.04	130
P-228	8.0	J-831	J-806	685	5.80	0.00	0.00	0.04	100
P-215	12.0	J-14	J-855	399	-12.94	0.00	0.00	0.04	110
P-172	6.0	J-578	J-810	428	3.18	0.00	0.00	0.04	100
P-139	6.0	J-134	J-77	1	3.15	0.02	0.00	0.04	100
P-141	6.0	J-77	J-134	1	-3.15	0.02	0.00	0.04	100
P-298	8.0	J-756	J-327	249	5.52	0.00	0.00	0.04	110
55	8.0	J-166	J-518	527	-5.49	0.00	0.00	0.04	101
21	10.0	J-851	J-633	2,127	-8.56	0.00	0.00	0.03	100
465	6.0	J-545	J-546	341	3.05	0.00	0.00	0.03	101
P-135	6.0	J-445	J-843	5	-3.02	0.01	0.00	0.03	100
626	8.0	J-614	J-615	408	5.36	0.00	0.00	0.03	120
56	8.0	J-753	J-671	743	-5.21	0.00	0.00	0.03	101
325	8.0	J-351	J-457	312	5.09	0.00	0.00	0.03	101
95	6.0	J-73	J-574	356	-2.83	0.00	0.00	0.03	100

Active Scenario: MDD-Buildout
FlexTable: Pipe Table
Steady State Analysis

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P-235	12.0	J-719	J-403	108	11.27	0.00	0.00	0.03	130
125	8.0	J-423	J-342	1,182	4.99	0.00	0.00	0.03	130
288	8.0	J-530	J-724	608	4.98	0.00	0.00	0.03	100
57	8.0	J-606	J-607	395	-4.96	0.00	0.00	0.03	100
23	12.0	J-847	J-598	1,656	-11.04	0.00	0.00	0.03	110
497	8.0	J-226	J-375	212	4.89	0.00	0.00	0.03	101
397	6.0	J-460	J-461	282	-2.74	0.00	0.00	0.03	120
P-57	8.0	J-400	J-110	1,121	4.87	0.00	0.00	0.03	110
513	8.0	J-37	J-648	467	4.80	0.00	0.00	0.03	101
P-226	8.0	J-224	J-613	55	4.63	0.00	0.00	0.03	110
548	8.0	J-675	J-801	849	-4.59	0.00	0.00	0.03	110
105	8.0	J-33	J-34	11	-4.57	0.00	0.00	0.03	120
P-250	12.0	J-369	J-842	3	-10.16	0.00	0.00	0.03	120
P-252	12.0	J-842	J-369	3	10.14	0.00	0.00	0.03	120
P-128	12.0	J-846	J-406	308	10.12	0.00	0.00	0.03	110
200	8.0	J-638	J-654	480	4.47	0.00	0.00	0.03	130
320	8.0	J-761	J-125	722	-4.47	0.00	0.00	0.03	100
24	12.0	J-276	J-153	137	-10.01	0.00	0.00	0.03	100
649	12.0	J-638	J-639	449	-9.95	0.00	0.00	0.03	110
683	8.0	J-496	J-436	300	-4.39	0.00	0.00	0.03	120
96	8.0	J-419	J-785	2,262	-4.36	0.00	0.00	0.03	120
P-254	8.0	J-800	J-735	294	4.36	0.00	0.00	0.03	101
142	8.0	J-782	J-757	876	-4.33	0.00	0.00	0.03	100
P-15	8.0	J-480	J-490	179	4.33	0.00	0.00	0.03	120
250	8.0	J-176	J-177	74	-4.33	0.00	0.00	0.03	120
249	8.0	J-352	J-176	190	-4.33	0.00	0.00	0.03	120
P-16	8.0	J-490	J-177	207	4.33	0.00	0.00	0.03	120
457	12.0	J-96	J-97	28	-9.64	0.00	0.00	0.03	120
P-81	12.0	J-852	J-187	333	-9.46	0.00	0.00	0.03	110
272	8.0	J-559	J-560	350	4.18	0.00	0.00	0.03	130
550	6.0	J-197	J-592	372	2.34	0.00	0.00	0.03	130
629	8.0	J-27	J-28	516	4.15	0.00	0.00	0.03	101
P-236	12.0	J-403	J-214	1,056	9.28	0.00	0.00	0.03	130
345	6.0	J-14	J-271	459	2.30	0.00	0.00	0.03	110
176	10.0	J-161	J-162	67	6.37	0.00	0.00	0.03	101
P-182	12.0	J-391	J-631	647	9.16	0.00	0.00	0.03	130
261	8.0	J-508	J-749	783	-4.07	0.00	0.00	0.03	130
P-299	12.0	J-340	J-350	1,472	9.10	0.00	0.00	0.03	130
413	10.0	J-92	J-484	1,311	6.30	0.00	0.00	0.03	110
454	8.0	J-500	J-501	303	4.00	0.00	0.00	0.03	130
37	8.0	J-698	J-500	602	4.00	0.00	0.00	0.03	130
P-143	8.0	J-234	J-738	201	3.98	0.00	0.00	0.03	130
P-37	12.0	J-276	J-217	447	8.82	0.00	0.00	0.03	100
52	8.0	J-63	J-64	19	3.90	0.00	0.00	0.02	100
615	8.0	J-120	J-121	41	3.83	0.00	0.00	0.02	110

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774	8.0	J-505	J-431	743	3.79	0.00	0.00	0.02	101
P-247	12.0	J-822	J-395	621	8.31	0.00	0.00	0.02	110
39	8.0	J-281	J-282	142	3.67	0.00	0.00	0.02	120
416	8.0	J-775	J-776	862	-3.65	0.00	0.00	0.02	130
P-92	12.0	J-167	J-427	1,458	7.89	0.00	0.00	0.02	120
P-89	12.0	J-427	J-318	267	7.89	0.00	0.00	0.02	120
P-90	12.0	J-318	J-625	579	7.89	0.00	0.00	0.02	120
P-86	12.0	J-625	J-733	12	7.89	0.00	0.00	0.02	120
P-35	12.0	J-585	J-838	7	-7.88	0.00	0.00	0.02	100
253	8.0	J-488	J-489	295	3.44	0.00	0.00	0.02	140
P-187	8.0	J-489	J-623	7	3.44	0.00	0.00	0.02	120
P-188	8.0	J-623	J-512	325	3.44	0.00	0.00	0.02	120
106	6.0	J-591	J-721	609	1.93	0.00	0.00	0.02	130
223	12.0	J-804	J-96	2,519	-7.68	0.00	0.00	0.02	120
P-32	12.0	J-626	J-804	794	-7.68	0.00	0.00	0.02	130
661	8.0	J-342	J-343	177	3.39	0.00	0.00	0.02	130
183	8.0	J-586	J-587	363	3.38	0.00	0.00	0.02	101
92	6.0	J-359	J-360	192	1.90	0.00	0.00	0.02	101
398	6.0	J-764	J-516	803	-1.89	0.00	0.00	0.02	120
P-224	6.0	J-461	J-516	150	1.89	0.00	0.00	0.02	120
260	8.0	J-683	J-684	542	-3.32	0.00	0.00	0.02	101
P-106	8.0	J-655	J-815	509	3.32	0.00	0.00	0.02	101
540	8.0	J-254	J-285	388	3.21	0.00	0.00	0.02	101
551	8.0	J-590	J-595	378	3.20	0.00	0.00	0.02	130
341	8.0	J-336	J-337	174	-3.17	0.00	0.00	0.02	110
P-261	8.0	J-327	J-424	98	3.17	0.00	0.00	0.02	120
173	8.0	J-571	J-645	472	3.17	0.00	0.00	0.02	101
P-262	8.0	J-424	J-328	70	3.17	0.00	0.00	0.02	120
P-180	8.0	J-352	J-353	351	-3.16	0.00	0.00	0.02	90
377	8.0	J-395	J-396	242	3.15	0.00	0.00	0.02	120
P-84	12.0	J-733	J-852	1,296	-7.03	0.00	0.00	0.02	120
621	6.0	J-378	J-544	340	-1.75	0.00	0.00	0.02	120
P-280	8.0	J-819	J-229	14	3.11	0.00	0.00	0.02	100
723	8.0	J-34	J-254	119	3.11	0.00	0.00	0.02	100
289	8.0	J-299	J-300	150	3.08	0.00	0.00	0.02	101
81	8.0	J-38	J-641	457	3.08	0.00	0.00	0.02	101
5	8.0	J-381	J-779	768	3.08	0.00	0.00	0.02	130
P-55	8.0	J-110	J-579	9	3.06	0.00	0.00	0.02	140
17	8.0	J-787	J-788	821	-3.05	0.00	0.00	0.02	130
121	8.0	J-582	J-583	384	-3.02	0.00	0.00	0.02	101
361	6.0	J-430	J-506	315	1.69	0.00	0.00	0.02	130
P-158	8.0	J-684	J-637	271	-3.01	0.00	0.00	0.02	90
547	6.0	J-557	J-558	347	1.66	0.00	0.00	0.02	100
657	8.0	J-636	J-637	440	-2.88	0.00	0.00	0.02	101
414	12.0	J-93	J-131	941	6.46	0.00	0.00	0.02	130

Active Scenario: MDD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-350	8.0	J-45	J-194	28	-2.85	0.00	0.00	0.02	101
124	8.0	J-788	J-833	1,278	2.85	0.00	0.00	0.02	130
P-178	8.0	J-353	J-759	195	-2.85	0.00	0.00	0.02	90
484	8.0	J-369	J-157	200	2.79	0.00	0.00	0.02	101
444	8.0	J-584	J-585	362	-2.79	0.00	0.00	0.02	100
P-203	8.0	J-746	J-709	561	-2.75	0.00	0.00	0.02	110
P-179	8.0	J-66	J-352	1,403	-2.75	0.00	0.00	0.02	90
307	8.0	J-650	J-736	669	2.70	0.00	0.00	0.02	101
P-242	8.0	J-840	J-345	135	2.70	0.00	0.00	0.02	130
764	6.0	J-564	J-821	1,000	1.52	0.00	0.00	0.02	100
323	8.0	J-831	J-832	1,202	2.67	0.00	0.00	0.02	110
102	6.0	J-235	J-236	109	1.46	0.00	0.00	0.02	140
314	10.0	J-349	J-277	180	4.04	0.00	0.00	0.02	101
123	8.0	J-576	J-577	362	2.55	0.00	0.00	0.02	130
242	8.0	J-206	J-630	460	2.55	0.00	0.00	0.02	101
P-38	12.0	J-217	J-163	580	5.73	0.00	0.00	0.02	100
P-137	6.0	J-348	J-76	153	-1.43	0.00	0.00	0.02	140
315	8.0	J-277	J-278	149	2.52	0.00	0.00	0.02	101
P-19	8.0	J-480	J-441	170	2.51	0.00	0.00	0.02	80
248	8.0	J-353	J-354	201	-2.51	0.00	0.00	0.02	80
P-20	8.0	J-441	J-354	52	2.51	0.00	0.00	0.02	80
180	10.0	J-649	J-63	469	3.90	0.00	0.00	0.02	100
P-119	8.0	J-668	J-222	502	-2.49	0.00	0.00	0.02	130
10	12.0	J-405	J-406	243	-5.52	0.00	0.00	0.02	120
616	8.0	J-121	J-421	244	2.43	0.00	0.00	0.02	110
466	12.0	J-474	J-475	278	5.42	0.00	0.00	0.02	101
68	6.0	J-45	J-46	14	1.34	0.00	0.00	0.02	140
59	8.0	J-770	J-710	760	-2.34	0.00	0.00	0.01	100
622	6.0	J-247	J-248	118	-1.31	0.00	0.00	0.01	120
749	8.0	J-593	J-618	982	-2.31	0.00	0.00	0.01	110
603	8.0	J-801	J-802	854	2.28	0.00	0.00	0.01	100
P-234	6.0	J-823	J-665	587	1.28	0.00	0.00	0.01	101
422	12.0	J-555	J-556	346	5.04	0.00	0.00	0.01	120
399	6.0	J-764	J-460	869	-1.23	0.00	0.00	0.01	120
718	6.0	J-688	J-583	578	-1.21	0.00	0.00	0.01	100
627	8.0	J-556	J-807	1,367	2.14	0.00	0.00	0.01	120
282	8.0	J-149	J-606	399	-2.11	0.00	0.00	0.01	101
381	8.0	J-731	J-732	634	-2.08	0.00	0.00	0.01	130
535	6.0	J-738	J-739	732	1.16	0.00	0.00	0.01	130
614	8.0	J-120	J-627	441	2.02	0.00	0.00	0.01	101
94	8.0	J-72	J-73	21	-1.99	0.00	0.00	0.01	100
243	8.0	J-303	J-304	154	1.99	0.00	0.00	0.01	80
P-110	6.0	J-359	J-514	126	1.10	0.00	0.00	0.01	101
P-169	6.0	J-237	J-126	9	1.07	0.00	0.00	0.01	130
215	6.0	J-578	J-238	429	-1.07	0.00	0.00	0.01	130

Active Scenario: MDD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-170	6.0	J-126	J-238	110	1.07	0.00	0.00	0.01	130
483	6.0	J-157	J-158	62	1.07	0.00	0.00	0.01	120
609	6.0	J-158	J-366	281	1.07	0.00	0.00	0.01	120
P-175	8.0	J-837	J-778	90	-1.90	0.00	0.00	0.01	100
P-184	12.0	J-858	J-632	63	4.24	0.00	0.00	0.01	130
545	8.0	J-155	J-156	62	1.87	0.00	0.00	0.01	101
570	12.0	J-662	J-743	717	-4.20	0.00	0.00	0.01	120
572	6.0	J-430	J-513	317	1.04	0.00	0.00	0.01	90
669	8.0	J-575	J-42	359	-1.84	0.00	0.00	0.01	130
443	8.0	J-531	J-532	331	1.78	0.00	0.00	0.01	140
P-34	12.0	J-698	J-626	57	-4.00	0.00	0.00	0.01	130
4	12.0	J-233	J-234	109	3.98	0.00	0.00	0.01	130
53	8.0	J-173	J-82	74	1.71	0.00	0.00	0.01	120
357	8.0	J-336	J-708	861	1.70	0.00	0.00	0.01	110
730	6.0	J-197	J-198	87	0.96	0.00	0.00	0.01	110
191	8.0	J-497	J-498	312	1.69	0.00	0.00	0.01	101
380	8.0	J-224	J-225	103	1.66	0.00	0.00	0.01	120
563	8.0	J-703	J-704	602	-1.66	0.00	0.00	0.01	110
532	8.0	J-542	J-255	949	1.65	0.00	0.00	0.01	100
P-30	12.0	J-281	J-626	584	-3.68	0.00	0.00	0.01	130
P-41	8.0	J-694	J-423	137	-1.61	0.00	0.00	0.01	130
415	8.0	J-437	J-438	261	1.60	0.00	0.00	0.01	101
254	8.0	J-632	J-367	1,287	1.60	0.00	0.00	0.01	130
642	12.0	J-419	J-420	243	3.59	0.00	0.00	0.01	110
P-159	6.0	J-728	J-604	90	-0.89	0.00	0.00	0.01	90
595	8.0	J-79	J-487	294	1.57	0.00	0.00	0.01	130
P-349	8.0	J-388	J-45	192	-1.52	0.00	0.00	0.01	101
475	10.0	J-373	J-374	212	2.34	0.00	0.00	0.01	101
751	8.0	J-226	J-227	111	-1.49	0.00	0.00	0.01	120
404	6.0	J-403	J-404	483	0.83	0.00	0.00	0.01	120
772	8.0	J-227	J-390	889	-1.45	0.00	0.00	0.01	120
6	12.0	J-834	J-687	1,128	-3.20	0.00	0.00	0.01	110
643	12.0	J-657	J-419	482	3.15	0.00	0.00	0.01	110
P-173	8.0	J-810	J-750	838	1.40	0.00	0.00	0.01	100
537	8.0	J-332	J-333	172	1.40	0.00	0.00	0.01	140
698	8.0	J-428	J-429	253	1.40	0.00	0.00	0.01	101
362	8.0	J-307	J-716	620	1.37	0.00	0.00	0.01	130
69	8.0	J-46	J-240	117	1.34	0.00	0.00	0.01	140
P-248	12.0	J-395	J-829	409	2.96	0.00	0.00	0.01	110
695	8.0	J-148	J-149	55	-1.28	0.00	0.00	0.01	101
P-56	8.0	J-579	J-111	28	1.28	0.00	0.00	0.01	140
469	12.0	J-193	J-194	83	2.85	0.00	0.00	0.01	101
566	12.0	J-662	J-659	500	2.85	0.00	0.00	0.01	130
449	8.0	J-154	J-443	754	1.27	0.00	0.00	0.01	100
450	8.0	J-693	J-694	564	1.27	0.00	0.00	0.01	130

Active Scenario: MDD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
640	12.0	J-553	J-554	346	-2.70	0.00	0.00	0.01	101
724	8.0	J-254	J-568	756	-1.20	0.00	0.00	0.01	100
168	12.0	J-153	J-154	61	2.69	0.00	0.00	0.01	100
347	8.0	J-336	J-272	700	-1.17	0.00	0.00	0.01	110
P-294	8.0	J-327	J-465	111	1.10	0.00	0.00	0.01	110
519	8.0	J-465	J-466	274	1.10	0.00	0.00	0.01	140
P-75	12.0	J-714	J-23	453	2.43	0.00	0.00	0.01	100
P-79	12.0	J-714	J-852	198	-2.43	0.00	0.00	0.01	110
11	6.0	J-408	J-728	632	0.60	0.00	0.00	0.01	90
93	8.0	J-504	J-72	303	-0.83	0.00	0.00	0.01	100
648	8.0	J-621	J-847	1,628	0.83	0.00	0.00	0.01	110
278	8.0	J-25	J-26	8	0.81	0.00	0.00	0.01	140
204	10.0	J-478	J-199	285	-1.22	0.00	0.00	0.00	130
159	8.0	J-420	J-112	1,472	0.73	0.00	0.00	0.00	110
P-347	8.0	J-396	J-412	616	0.72	0.00	0.00	0.00	120
P-348	8.0	J-412	J-434	24	0.72	0.00	0.00	0.00	120
378	12.0	J-536	J-214	334	-1.55	0.00	0.00	0.00	130
P-284	12.0	J-94	J-666	292	1.54	0.00	0.00	0.00	100
364	8.0	J-814	J-797	3,156	-0.66	0.00	0.00	0.00	130
384	12.0	J-818	J-658	1,775	1.42	0.00	0.00	0.00	120
47	12.0	J-203	J-204	89	1.37	0.00	0.00	0.00	101
447	10.0	J-209	J-210	90	0.92	0.00	0.00	0.00	101
452	10.0	J-217	J-218	95	0.89	0.00	0.00	0.00	101
P-124	12.0	J-745	J-482	284	1.28	0.00	0.00	0.00	130
P-273	12.0	J-455	J-524	4	-1.28	0.00	0.00	0.00	100
P-43	12.0	J-443	J-693	156	1.27	0.00	0.00	0.00	100
P-192	8.0	J-767	J-793	229	0.43	0.00	0.00	0.00	100
628	12.0	J-807	J-556	1,805	0.95	0.00	0.00	0.00	120
720	12.0	J-284	J-642	457	-0.95	0.00	0.00	0.00	100
641	12.0	J-420	J-112	1,080	0.93	0.00	0.00	0.00	110
196	12.0	J-130	J-131	43	-0.92	0.00	0.00	0.00	130
663	12.0	J-610	J-611	395	-0.92	0.00	0.00	0.00	120
P-62	12.0	J-74	J-145	24	0.86	0.00	0.00	0.00	120
P-40	12.0	J-153	J-196	25	0.69	0.00	0.00	0.00	100
0	12.0	J-82	J-83	25	0.61	0.00	0.00	0.00	120
188	12.0	J-83	J-405	1,243	0.61	0.00	0.00	0.00	120
768	8.0	J-675	J-198	549	0.26	0.00	0.00	0.00	110
312	8.0	J-149	J-606	1,204	-0.24	0.00	0.00	0.00	101
737	12.0	J-658	J-662	527	-0.51	0.00	0.00	0.00	120
387	2.0	J-566	J-567	354	0.00	0.00	0.00	0.00	101
90	2.0	J-470	J-471	309	0.00	0.00	0.00	0.00	130
564	2.0	J-174	J-175	74	0.00	0.00	0.00	0.00	130
118	4.0	J-185	J-186	92	0.00	0.00	0.00	0.00	140
P-166	6.0	J-259	J-392	11	0.00	0.00	0.00	0.00	130
38	6.0	J-211	J-212	90	0.00	0.00	0.00	0.00	120

Active Scenario: MDD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
610	6.0	J-142	J-143	53	0.00	0.00	0.00	0.00	120
P-28	8.0	J-212	J-258	33	0.00	0.00	0.00	0.00	130
P-17	8.0	J-441	J-142	230	0.00	0.00	0.00	0.00	80
P-24	8.0	J-53	J-706	735	0.00	0.00	0.00	0.00	130
P-78	6.0	J-605	J-230	143	0.00	0.00	0.00	0.00	100
201	8.0	J-53	J-54	15	0.00	0.00	0.00	0.00	130
P-292	8.0	J-465	J-643	18	0.00	0.00	0.00	0.00	110
P-29	12.0	J-258	J-281	15	0.00	0.00	0.00	0.00	130
586	10.0	J-661	J-306	494	0.00	0.00	0.00	0.00	130
P-26	10.0	J-706	J-306	45	0.00	0.00	0.00	0.00	130
155	8.0	J-169	J-170	76	0.00	0.00	0.00	0.00	140
P-23	8.0	J-705	J-53	159	0.00	0.00	0.00	0.00	130
426	8.0	J-479	J-262	288	0.00	0.00	0.00	0.00	140
P-27	8.0	J-257	J-212	90	0.00	0.00	0.00	0.00	130
87	8.0	J-490	J-491	304	0.00	0.00	0.00	0.00	120
612	8.0	J-623	J-624	457	0.00	0.00	0.00	0.00	120
7	8.0	J-24	J-680	546	0.00	0.00	0.00	0.00	110
596	8.0	J-372	J-612	451	0.00	0.00	0.00	0.00	120
428	8.0	J-355	J-356	184	0.00	0.00	0.00	0.00	120
429	8.0	J-625	J-522	425	0.00	0.00	0.00	0.00	80
P-18	8.0	J-142	J-442	40	0.00	0.00	0.00	0.00	80
392	6.0	J-412	J-413	237	0.00	0.00	0.00	0.00	120
360	6.0	J-213	J-214	120	0.00	0.00	0.00	0.00	120
600	6.0	J-172	J-358	191	0.00	0.00	0.00	0.00	101
335	6.0	J-245	J-246	118	0.00	0.00	0.00	0.00	80
P-88	8.0	J-261	J-318	135	0.00	0.00	0.00	0.00	140
P-306	12.0	PRV-1	J-283	29	0.00	0.00	0.00	0.00	100
P-58	8.0	J-110	J-836	20	0.00	0.00	0.00	0.00	110
780	12.0	J-112	J-113	38	0.00	0.00	0.00	0.00	110
371	8.0	J-35	J-36	12	0.00	0.00	0.00	0.00	140
128	8.0	J-230	J-170	141	0.00	0.00	0.00	0.00	140
430	8.0	J-261	J-262	125	0.00	0.00	0.00	0.00	140
P-9	8.0	J-597	J-20	44	0.00	0.00	0.00	0.00	80
528	8.0	J-424	J-425	332	0.00	0.00	0.00	0.00	120
702	8.0	J-431	J-432	256	0.00	0.00	0.00	0.00	101
767	8.0	J-341	J-520	460	0.00	0.00	0.00	0.00	101
P-303	8.0	J-3	J-861	503	0.00	0.00	0.00	0.00	110
425	8.0	J-522	J-523	325	0.00	0.00	0.00	0.00	80
P-100	8.0	J-712	J-718	620	0.00	0.00	0.00	0.00	120
567	8.0	J-658	J-174	510	0.00	0.00	0.00	0.00	130
781	8.0	J-157	J-249	118	0.00	0.00	0.00	0.00	101
P-340	12.0	PRV-3	J-632	161	0.00	0.00	0.00	0.00	130
109	12.0	J-511	J-628	435	0.00	0.00	0.00	0.00	101
P-342	6.0	PRV-2	J-769	469	0.00	0.00	0.00	0.00	100
P-341	6.0	J-762	PRV-2	301	0.00	0.00	0.00	0.00	100

Active Scenario: MDD-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
190	12.0	J-295	J-296	151	0.00	0.00	0.00	0.00	130
P-151	8.0	J-777	J-321	14	0.00	0.00	0.00	0.00	140
688	12.0	J-426	J-427	251	0.00	0.00	0.00	0.00	120
427	10.0	J-733	J-355	674	0.00	0.00	0.00	0.00	120
33	12.0	J-23	J-24	5	0.00	0.00	0.00	0.00	140
P-220	12.0	J-850	J-682	60	0.00	0.00	0.00	0.00	120
P-243	12.0	J-828	J-344	13	0.00	0.00	0.00	0.00	110
130	12.0	J-283	J-284	143	0.00	0.00	0.00	0.00	100
386	12.0	J-536	J-566	850	0.00	0.00	0.00	0.00	130
P-76	12.0	J-23	J-715	218	0.00	0.00	0.00	0.00	100
P-65	12.0	J-616	J-569	50	0.00	0.00	0.00	0.00	100
P-33	12.0	J-803	J-698	9	0.00	0.00	0.00	0.00	130
P-49	12.0	J-726	J-848	40	0.00	0.00	0.00	0.00	100
P-338	12.0	PRV-4	J-638	1,166	0.00	0.00	0.00	0.00	110
P-87	8.0	J-317	J-261	25	0.00	0.00	0.00	0.00	140
P-305	12.0	J-31	PRV-1	314	0.00	0.00	0.00	0.00	100
P-339	12.0	J-631	PRV-3	277	0.00	0.00	0.00	0.00	130
214	6.0	J-126	J-127	43	0.00	0.00	0.00	0.00	130
P-25	10.0	J-305	J-706	109	0.00	0.00	0.00	0.00	130
P-44	12.0	J-693	J-444	108	0.00	0.00	0.00	0.00	100
P-174	8.0	J-750	J-811	128	0.00	0.00	0.00	0.00	100
P-337	12.0	J-495	PRV-4	148	0.00	0.00	0.00	0.00	110
638	8.0	J-794	J-795	840	0.00	0.00	0.00	0.00	101
P-354	12.0	J-553	J-847	714	0.00	0.00	0.00	0.00	130

Active Scenario: MDD-Buildout
FlexTable: Pump Table
Steady State Analysis

Label	Elevation (ft)	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
Boland-1	264.00	On	287.68	536.05	687.96	248.37
Boland-2	264.00	On	287.68	536.12	698.31	248.43
Boland-3	264.00	Off	287.79	535.85	0.00	0.00
Hosmer Pump #1	275.00	On	282.11	538.88	1,003.70	256.77
Hosmer Pump #3	275.00	On	282.18	537.71	977.82	255.53

Active Scenario: MDD-Buildout

FlexTable: Tank Table

Steady State Analysis

Label	Zone	Elevation (Base) (ft)	Elevation (Minimum) (ft)	Elevation (Initial) (ft)	Elevation (Maximum) (ft)	Diameter (ft)	Flow (Out net) (gpm)	Status (Calculated)	Hydraulic Grade (ft)
Tara Road Tank	High Service	467.00	467.00	508.00	515.00	67.00	-482.32	Filling	508.00
Oak Hill Road Tank	Low Service	418.00	418.00	485.00	492.70	25.00	90.24	Emptying	485.00
Overlook Drive Tank	Low Service	460.00	460.00	486.00	493.30	40.00	-297.49	Filling	486.00

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-492	454.31	High Service	Fixed	23	0.00	507.49
J-99	454.14	High Service	Fixed	23	0.00	507.49
J-98	454.09	High Service	Fixed	23	2.33	507.47
J-645	442.00	High Service	Fixed	23	8.00	496.26
J-189	450.90	High Service	Fixed	25	10.16	507.84
J-92	432.80	High Service	Fixed	27	11.57	494.96
J-93	432.24	High Service	Fixed	27	11.80	494.96
J-575	443.73	High Service	Fixed	28	4.64	507.48
J-654	430.41	High Service	Fixed	30	11.28	500.40
J-478	422.78	High Service	Fixed	31	3.07	494.98
J-617	433.40	High Service	Fixed	32	0.00	506.52
J-200	421.49	High Service	Fixed	32	9.04	494.98
J-199	421.00	High Service	Fixed	32	3.82	494.98
J-616	432.82	High Service	Fixed	32	0.00	507.01
J-569	432.77	High Service	Fixed	32	0.00	507.01
J-346	434.86	High Service	Fixed	33	3.74	510.31
J-131	418.68	High Service	Fixed	33	13.96	494.96
J-130	417.77	High Service	Fixed	33	2.33	494.96
J-42	429.80	High Service	Fixed	34	9.04	507.48
J-41	429.71	High Service	Fixed	34	3.89	507.48
J-571	415.51	High Service	Fixed	35	8.59	496.26
J-343	428.08	High Service	Fixed	36	4.79	510.31
J-107	425.26	High Service	Fixed	37	8.67	510.19
J-106	425.20	High Service	Fixed	37	4.71	510.27
J-638	414.27	High Service	Fixed	37	13.81	500.40
J-639	414.04	High Service	Fixed	37	13.66	500.40
J-452	422.38	High Service	Fixed	38	5.16	510.31
J-342	421.14	High Service	Fixed	39	4.04	510.31
J-694	416.00	High Service	Fixed	41	7.25	510.32
J-570	398.67	High Service	Fixed	42	18.44	496.78
J-423	411.16	High Service	Fixed	43	4.57	510.32
J-379	404.81	High Service	Fixed	43	4.42	504.54
J-378	404.39	High Service	Fixed	43	0.00	504.55
J-611	406.03	High Service	Fixed	44	11.43	507.65
J-247	401.49	High Service	Fixed	45	3.30	504.70
J-846	395.08	High Service	Fixed	45	4.79	498.60
J-462	398.21	High Service	Fixed	46	0.00	505.04
J-610	395.42	High Service	Fixed	49	2.33	507.65
J-629	387.93	High Service	Fixed	49	4.86	500.53
J-628	391.61	High Service	Fixed	49	0.00	504.28
J-393	391.00	High Service	Fixed	49	18.58	504.43
J-713	385.67	High Service	Fixed	50	39.84	500.20
J-785	385.14	High Service	Fixed	50	20.52	500.37
J-422	394.58	High Service	Fixed	50	7.77	510.32
J-100	384.34	High Service	Fixed	50	0.00	500.26
J-668	384.00	High Service	Fixed	50	6.28	500.06

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-183	388.00	High Service	Fixed	50	4.04	504.56
J-544	387.66	High Service	Fixed	51	0.00	504.56
J-717	380.75	High Service	Fixed	52	0.00	500.26
J-652	388.14	High Service	Fixed	52	17.99	507.68
J-101	380.69	High Service	Fixed	52	3.30	500.26
J-222	380.20	High Service	Fixed	52	3.74	500.06
J-712	380.32	High Service	Fixed	52	0.00	500.26
J-669	380.11	High Service	Fixed	52	5.46	500.06
J-791	372.34	High Service	Fixed	52	14.86	493.39
J-760	372.11	High Service	Fixed	52	22.16	493.28
J-248	381.76	High Service	Fixed	53	0.00	504.70
J-463	380.94	High Service	Fixed	54	0.00	504.67
J-647	371.61	High Service	Fixed	54	6.06	495.68
J-444	386.09	High Service	Fixed	54	0.00	510.32
J-755	368.98	High Service	Fixed	54	10.31	493.29
J-482	373.41	High Service	Fixed	54	3.22	498.75
J-161	374.38	High Service	Fixed	55	17.39	500.54
J-406	371.87	High Service	Fixed	55	11.57	498.58
J-298	373.45	High Service	Fixed	55	0.00	500.63
J-184	377.12	High Service	Fixed	55	0.00	504.56
J-693	381.63	High Service	Fixed	56	0.00	510.32
J-223	371.21	High Service	Fixed	56	0.00	500.05
J-162	371.38	High Service	Fixed	56	16.05	500.54
J-297	371.00	High Service	Fixed	56	10.61	500.67
J-483	365.11	High Service	Fixed	56	7.40	495.05
J-362	362.71	High Service	Fixed	56	7.18	493.25
J-405	368.00	High Service	Fixed	56	15.45	498.57
J-287	368.79	High Service	Fixed	57	6.13	500.43
J-511	371.02	High Service	Fixed	58	0.00	504.28
J-718	366.82	High Service	Fixed	58	0.00	500.26
J-443	376.17	High Service	Fixed	58	0.00	510.32
J-715	363.53	High Service	Fixed	59	0.00	500.26
J-745	361.79	High Service	Fixed	59	0.00	498.75
J-680	363.00	High Service	Fixed	59	0.00	500.26
J-481	361.14	High Service	Fixed	60	0.00	498.76
J-523	361.28	High Service	Fixed	60	0.00	500.26
J-479	361.00	High Service	Fixed	60	0.00	500.26
J-261	360.78	High Service	Fixed	60	0.00	500.26
J-317	360.69	High Service	Fixed	60	0.00	500.26
J-262	360.00	High Service	Fixed	61	0.00	500.26
J-361	351.85	High Service	Fixed	61	3.07	493.25
J-714	358.58	High Service	Fixed	61	0.00	500.26
J-167	358.00	High Service	Fixed	62	0.00	500.26
J-180	358.00	High Service	Fixed	62	0.00	500.26
J-318	357.62	High Service	Fixed	62	0.00	500.26
J-484	351.91	High Service	Fixed	62	11.28	494.95

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-23	357.00	High Service	Fixed	62	6.13	500.26
J-24	356.98	High Service	Fixed	62	0.00	500.26
J-288	356.93	High Service	Fixed	62	18.21	500.42
J-170	360.00	High Service	Fixed	62	0.00	503.79
J-169	359.32	High Service	Fixed	63	0.00	503.79
J-676	362.77	High Service	Fixed	63	11.35	507.48
J-427	355.00	High Service	Fixed	63	0.00	500.26
J-615	352.38	High Service	Fixed	64	13.51	500.29
J-426	352.28	High Service	Fixed	64	0.00	500.26
J-522	352.27	High Service	Fixed	64	0.00	500.26
J-230	355.09	High Service	Fixed	64	0.00	503.79
J-852	350.64	High Service	Fixed	65	0.00	500.26
J-851	353.00	High Service	Fixed	65	21.57	503.78
J-641	340.75	High Service	Fixed	66	7.77	492.80
J-744	346.41	High Service	Fixed	66	11.87	498.76
J-605	350.00	High Service	Fixed	67	0.00	503.79
J-596	345.00	High Service	Fixed	67	3.45	498.90
J-834	337.96	High Service	Fixed	67	8.07	493.22
J-809	343.60	High Service	Fixed	67	0.00	498.90
J-788	344.37	High Service	Fixed	68	18.14	501.42
J-742	343.47	High Service	Fixed	68	0.00	500.77
J-687	335.28	High Service	Fixed	68	5.83	493.22
J-816	343.43	High Service	Fixed	68	14.56	501.47
J-455	291.00	High Service	Fixed	70	3.22	452.60
J-524	291.00	High Service	Fixed	70	0.00	452.60
J-587	331.62	High Service	Fixed	71	8.52	495.53
J-688	328.97	High Service	Fixed	71	4.64	493.24
J-707	336.13	High Service	Fixed	71	15.45	500.62
J-582	328.62	High Service	Fixed	71	7.62	493.24
J-625	334.69	High Service	Fixed	72	0.00	500.26
J-154	344.19	High Service	Fixed	72	3.60	510.32
J-355	334.00	High Service	Fixed	72	0.00	500.26
J-356	334.00	High Service	Fixed	72	0.00	500.26
J-733	333.95	High Service	Fixed	72	37.60	500.26
J-635	340.10	High Service	Fixed	72	16.87	506.58
J-795	342.79	High Service	Fixed	72	0.00	510.22
J-187	332.67	High Service	Fixed	73	13.07	500.26
J-589	284.69	High Service	Fixed	73	16.65	452.31
J-586	327.91	High Service	Fixed	73	3.89	495.54
J-110	336.81	High Service	Fixed	73	4.57	504.94
J-590	283.71	High Service	Fixed	73	7.62	452.31
J-579	336.17	High Service	Fixed	73	0.00	504.94
J-145	338.56	High Service	Fixed	73	2.18	507.37
J-794	341.38	High Service	Fixed	73	41.18	510.22
J-74	338.49	High Service	Fixed	73	0.00	507.37
J-677	338.12	High Service	Fixed	73	0.00	507.38

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-836	335.57	High Service	Fixed	73	0.00	504.94
J-94	324.00	High Service	Fixed	73	3.30	493.42
J-95	324.00	High Service	Fixed	73	2.33	493.43
J-144	337.95	High Service	Fixed	73	0.00	507.39
J-740	324.00	High Service	Fixed	73	0.00	493.46
J-188	330.78	High Service	Fixed	73	0.00	500.26
J-75	337.75	High Service	Fixed	73	1.66	507.36
J-111	335.00	High Service	Fixed	74	3.22	504.94
J-531	334.53	High Service	Fixed	74	0.00	504.64
J-400	334.74	High Service	Fixed	74	12.92	504.95
J-666	323.00	High Service	Fixed	74	3.89	493.42
J-153	339.00	High Service	Fixed	74	0.00	510.32
J-399	334.08	High Service	Fixed	74	4.19	505.68
J-532	333.00	High Service	Fixed	74	4.49	504.64
J-651	336.00	High Service	Fixed	74	2.03	507.72
J-196	338.53	High Service	Fixed	74	1.73	510.32
J-502	321.20	High Service	Fixed	74	6.06	493.39
J-695	322.34	High Service	Fixed	75	5.39	494.88
J-195	337.74	High Service	Fixed	75	5.61	510.32
J-833	327.91	High Service	Fixed	75	7.18	501.42
J-782	319.29	High Service	Fixed	75	5.61	493.27
J-685	326.20	High Service	Fixed	75	18.96	500.25
J-503	317.42	High Service	Fixed	76	14.04	493.36
J-622	323.07	High Service	Fixed	77	15.23	500.31
J-603	321.39	High Service	Fixed	77	14.41	499.01
J-813	318.95	High Service	Fixed	77	11.72	496.79
J-276	332.15	High Service	Fixed	77	3.00	510.32
J-28	321.50	High Service	Fixed	77	10.46	500.47
J-338	321.00	High Service	Fixed	77	8.44	500.10
J-27	321.34	High Service	Fixed	78	10.75	500.48
J-614	321.00	High Service	Fixed	78	0.00	500.29
J-769	312.79	High Service	Fixed	78	18.58	492.72
J-583	313.13	High Service	Fixed	78	8.37	493.24
J-295	320.13	High Service	Fixed	78	0.00	500.30
J-267	320.00	High Service	Fixed	78	2.48	500.30
J-339	320.00	High Service	Fixed	78	8.59	500.32
J-266	319.56	High Service	Fixed	78	8.82	500.31
J-296	319.54	High Service	Fixed	78	0.00	500.30
J-779	312.17	High Service	Fixed	78	7.77	493.11
J-657	319.37	High Service	Fixed	78	28.35	500.36
J-807	318.73	High Service	Fixed	78	3.00	500.10
J-808	317.83	High Service	Fixed	79	0.00	499.56
J-555	318.37	High Service	Fixed	79	0.00	500.10
J-37	311.00	High Service	Fixed	79	8.07	492.80
J-38	311.00	High Service	Fixed	79	5.09	492.80
J-556	318.19	High Service	Fixed	79	9.71	500.10

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-799	318.93	High Service	Fixed	79	14.86	500.92
J-787	319.00	High Service	Fixed	79	7.70	501.42
J-771	323.61	High Service	Fixed	79	16.87	506.57
J-391	318.00	High Service	Fixed	79	3.45	501.13
J-217	326.91	High Service	Fixed	79	5.53	510.32
J-741	314.95	High Service	Fixed	80	96.73	499.67
J-653	312.00	High Service	Fixed	81	19.55	499.14
J-218	322.93	High Service	Fixed	81	2.25	510.32
J-380	305.73	High Service	Fixed	81	6.43	493.16
J-766	304.98	High Service	Fixed	81	3.07	493.11
J-381	304.94	High Service	Fixed	81	9.64	493.11
J-701	311.53	High Service	Fixed	81	16.12	499.71
J-274	308.50	High Service	Fixed	81	15.53	496.74
J-781	310.55	High Service	Fixed	82	8.07	499.00
J-104	310.47	High Service	Fixed	82	4.12	499.00
J-229	304.77	High Service	Fixed	82	7.85	493.32
J-758	311.28	High Service	Fixed	82	11.80	500.03
J-642	304.45	High Service	Fixed	82	7.10	493.33
J-819	304.05	High Service	Fixed	82	0.00	493.32
J-757	303.87	High Service	Fixed	82	5.09	493.28
J-754	303.46	High Service	Fixed	82	0.00	493.32
J-105	308.40	High Service	Fixed	82	8.00	499.00
J-228	301.87	High Service	Fixed	83	14.93	493.32
J-501	332.31	High Service	Fixed	83	10.08	524.06
J-631	309.06	High Service	Fixed	83	13.66	501.13
J-765	307.57	High Service	Fixed	83	7.40	499.71
J-500	331.02	High Service	Fixed	84	0.00	524.06
J-280	306.29	High Service	Fixed	84	13.89	499.48
J-279	306.72	High Service	Fixed	84	12.17	500.31
J-577	312.65	High Service	Fixed	84	6.43	506.83
J-621	306.13	High Service	Fixed	84	13.14	500.31
J-598	306.11	High Service	Fixed	84	15.38	500.32
J-419	304.80	High Service	Fixed	85	9.86	500.36
J-648	296.75	High Service	Fixed	85	12.10	492.79
J-847	303.53	High Service	Fixed	85	29.92	500.31
J-273	301.00	High Service	Fixed	85	4.34	498.26
J-164	312.66	High Service	Fixed	86	29.62	510.32
J-284	295.14	High Service	Fixed	86	2.40	493.33
J-656	325.46	High Service	Fixed	86	17.09	523.81
J-163	311.64	High Service	Fixed	86	6.58	510.32
J-784	311.62	High Service	Fixed	86	25.82	510.31
J-815	324.78	High Service	Fixed	86	8.37	523.81
J-320	299.65	High Service	Fixed	86	2.55	498.69
J-260	301.38	High Service	Fixed	86	14.33	501.12
J-259	301.06	High Service	Fixed	87	0.00	501.13
J-83	298.43	High Service	Fixed	87	0.00	498.53

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-237	301.00	High Service	Fixed	87	0.00	501.12
J-127	300.87	High Service	Fixed	87	0.00	501.12
J-126	300.81	High Service	Fixed	87	0.00	501.12
J-82	297.19	High Service	Fixed	87	2.78	498.53
J-392	299.57	High Service	Fixed	87	0.00	501.13
J-420	298.29	High Service	Fixed	87	4.86	500.36
J-602	296.63	High Service	Fixed	88	8.00	499.18
J-768	297.28	High Service	Fixed	88	9.19	501.14
J-173	293.92	High Service	Fixed	89	0.00	498.52
J-64	293.12	High Service	Fixed	89	0.00	498.56
J-319	292.73	High Service	Fixed	89	0.00	498.57
J-63	292.56	High Service	Fixed	89	0.00	498.56
J-235	291.00	High Service	Fixed	90	3.74	498.57
J-633	296.00	High Service	Fixed	90	28.73	503.80
J-256	290.25	High Service	Fixed	90	21.42	498.38
J-335	290.00	High Service	Fixed	90	10.01	498.56
J-825	314.97	High Service	Fixed	90	26.49	523.80
J-236	289.27	High Service	Fixed	91	3.67	498.57
J-778	288.96	High Service	Fixed	91	1.88	498.89
J-210	300.33	High Service	Fixed	91	2.33	510.33
J-576	296.79	High Service	Fixed	91	18.66	506.83
J-209	299.73	High Service	Fixed	91	3.37	510.33
J-837	288.00	High Service	Fixed	91	4.79	498.89
J-686	286.63	High Service	Fixed	92	12.69	498.57
J-830	297.99	High Service	Fixed	92	4.04	510.34
J-667	297.92	High Service	Fixed	92	0.00	510.34
J-238	286.97	High Service	Fixed	93	0.00	501.12
J-525	284.36	High Service	Fixed	93	0.00	499.57
J-255	282.52	High Service	Fixed	93	28.88	498.38
J-739	282.10	High Service	Fixed	94	2.92	498.45
J-498	281.80	High Service	Fixed	94	4.27	498.21
J-526	283.07	High Service	Fixed	94	0.00	499.53
J-626	307.53	High Service	Fixed	94	0.00	524.06
J-803	306.90	High Service	Fixed	94	0.00	524.06
J-564	280.92	High Service	Fixed	94	8.59	498.21
J-698	306.63	High Service	Fixed	94	0.00	524.06
J-655	305.73	High Service	Fixed	94	21.72	523.81
J-774	305.00	High Service	Fixed	95	16.50	523.91
J-510	280.55	High Service	Fixed	95	0.00	499.48
J-553	304.56	High Service	Fixed	95	6.80	523.82
J-780	281.72	High Service	Fixed	95	11.43	501.16
J-282	302.84	High Service	Fixed	96	9.26	524.06
J-634	281.99	High Service	Fixed	96	11.65	503.27
J-537	278.11	High Service	Fixed	96	0.00	499.45
J-697	288.62	High Service	Fixed	96	39.32	509.97
J-211	302.56	High Service	Fixed	96	0.00	524.06

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-509	278.00	High Service	Fixed	96	8.07	499.51
J-257	302.48	High Service	Fixed	96	0.00	524.06
J-281	302.11	High Service	Fixed	96	0.00	524.06
J-212	302.00	High Service	Fixed	96	0.00	524.06
J-258	302.00	High Service	Fixed	96	0.00	524.06
J-649	275.00	High Service	Fixed	97	12.40	498.55
J-207	278.09	High Service	Fixed	97	15.01	501.71
J-804	300.11	High Service	Fixed	97	0.00	524.06
J-578	276.96	High Service	Fixed	97	4.12	501.12
J-208	277.00	High Service	Fixed	97	5.98	501.64
J-554	298.95	High Service	Fixed	97	37.08	523.82
J-325	285.29	High Service	Fixed	97	8.52	510.34
J-497	273.00	High Service	Fixed	97	5.16	498.21
J-691	283.35	High Service	Fixed	98	0.00	508.95
J-290	273.00	High Service	Fixed	98	0.00	499.02
J-584	297.92	High Service	Fixed	98	7.03	524.01
J-322	272.74	High Service	Fixed	98	0.00	499.02
J-692	281.81	High Service	Fixed	98	18.81	508.36
J-185	272.17	High Service	Fixed	98	0.00	499.01
J-289	272.05	High Service	Fixed	98	0.00	499.01
J-186	271.42	High Service	Fixed	98	0.00	499.01
J-326	282.49	High Service	Fixed	99	5.39	510.33
J-112	272.13	High Service	Fixed	99	4.19	500.36
J-777	270.16	High Service	Fixed	99	0.00	499.02
J-538	270.10	High Service	Fixed	99	0.00	499.32
J-321	269.76	High Service	Fixed	99	0.00	499.02
J-113	270.13	High Service	Fixed	100	0.00	500.36
J-29	268.18	High Service	Fixed	100	0.00	499.03
J-30	268.00	High Service	Fixed	100	0.00	499.03
J-810	269.31	High Service	Fixed	100	4.49	501.11
J-838	291.90	High Service	Fixed	100	3.67	524.01
J-585	291.85	High Service	Fixed	100	12.84	524.01
J-738	263.86	High Service	Fixed	101	7.10	498.45
J-231	265.66	High Service	Fixed	102	9.04	501.21
J-232	265.68	High Service	Fixed	102	6.35	501.23
J-727	274.60	High Service	Fixed	102	3.60	510.40
J-97	287.92	High Service	Fixed	102	0.00	524.07
J-725	271.00	High Service	Fixed	102	9.64	507.91
J-50	271.00	High Service	Fixed	103	0.00	508.11
J-49	271.00	High Service	Fixed	103	18.36	508.11
J-96	286.82	High Service	Fixed	103	4.94	524.07
J-445	261.14	High Service	Fixed	103	7.62	498.45
J-234	261.01	High Service	Fixed	103	0.00	498.45
J-77	261.01	High Service	Fixed	103	0.00	498.45
J-160	286.40	High Service	Fixed	103	5.61	523.86
J-134	260.99	High Service	Fixed	103	0.00	498.45

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-843	260.94	High Service	Fixed	103	0.00	498.45
J-821	260.57	High Service	Fixed	103	3.82	498.21
J-233	260.81	High Service	Fixed	103	2.25	498.45
J-542	260.80	High Service	Fixed	103	3.52	498.45
J-76	260.11	High Service	Fixed	103	0.00	498.45
J-135	259.94	High Service	Fixed	103	0.00	498.45
J-159	284.47	High Service	Fixed	104	0.00	523.86
J-696	270.48	High Service	Fixed	104	9.56	510.02
J-844	270.90	High Service	Fixed	104	0.00	510.49
J-433	267.53	High Service	Fixed	104	40.66	508.09
J-848	270.50	High Service	Fixed	104	0.00	511.15
J-726	270.00	High Service	Fixed	104	0.00	511.15
J-751	259.34	High Service	Fixed	104	3.52	500.73
J-856	268.57	High Service	Fixed	105	0.00	510.30
J-811	257.90	High Service	Fixed	105	0.00	501.11
J-750	257.59	High Service	Fixed	105	0.00	501.11
J-348	252.33	High Service	Fixed	106	3.60	498.45
J-773	277.00	High Service	Fixed	107	4.04	523.91
J-204	272.32	High Service	Fixed	107	3.45	520.24
J-203	271.53	High Service	Fixed	108	2.55	520.24
J-752	269.57	High Service	Fixed	110	0.00	524.21
J-250	409.79	Low Service	Fixed	29	6.50	475.78
J-251	413.71	Low Service	Fixed	30	5.46	482.01
J-308	406.63	Low Service	Fixed	30	7.10	475.73
J-307	405.37	Low Service	Fixed	30	11.28	475.73
J-670	392.00	Low Service	Fixed	31	16.50	463.80
J-304	380.76	Low Service	Fixed	31	5.01	453.21
J-430	401.88	Low Service	Fixed	32	7.77	475.71
J-506	395.91	Low Service	Fixed	35	4.27	475.71
J-671	382.92	Low Service	Fixed	35	9.19	463.69
J-792	382.82	Low Service	Fixed	35	3.82	463.69
J-206	369.37	Low Service	Fixed	36	2.92	453.26
J-205	368.16	Low Service	Fixed	37	7.32	453.27
J-303	365.68	Low Service	Fixed	38	5.53	453.21
J-467	365.29	Low Service	Fixed	38	9.86	453.32
J-716	385.66	Low Service	Fixed	39	3.45	475.73
J-3	394.00	Low Service	Fixed	41	0.00	487.80
J-4	394.00	Low Service	Fixed	41	49.23	488.51
J-735	375.66	Low Service	Fixed	41	10.98	471.13
J-513	378.57	Low Service	Fixed	42	2.63	475.71
J-630	356.10	Low Service	Fixed	42	6.43	453.26
J-588	381.97	Low Service	Fixed	43	8.29	482.01
J-659	357.55	Low Service	Fixed	46	2.92	462.94
J-268	375.69	Low Service	Fixed	46	4.94	482.00
J-658	356.00	Low Service	Fixed	46	4.86	462.56
J-429	356.15	Low Service	Fixed	47	3.52	463.73

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-552	361.06	Low Service	Fixed	47	5.91	469.18
J-861	378.98	Low Service	Fixed	47	14.48	487.80
J-753	353.85	Low Service	Fixed	48	13.14	463.68
J-800	360.94	Low Service	Fixed	48	9.79	471.13
J-551	356.09	Low Service	Fixed	48	3.97	467.98
J-776	340.07	Low Service	Fixed	49	30.89	452.27
J-428	351.15	Low Service	Fixed	49	0.00	463.73
J-910	350.00	Low Service	Fixed	49	694.40	463.20
J-269	368.35	Low Service	Fixed	49	4.34	481.86
J-743	348.56	Low Service	Fixed	50	0.00	463.47
J-11	348.44	Low Service	Fixed	50	0.00	463.66
J-660	347.17	Low Service	Fixed	50	4.27	462.60
J-662	347.00	Low Service	Fixed	50	2.10	462.94
J-493	337.10	Low Service	Fixed	50	9.71	453.42
J-818	341.79	Low Service	Fixed	52	16.05	461.30
J-174	340.90	Low Service	Fixed	53	0.00	462.56
J-675	329.51	Low Service	Fixed	53	10.90	452.34
J-175	339.00	Low Service	Fixed	53	0.00	462.56
J-839	346.00	Low Service	Fixed	54	5.24	470.84
J-734	346.00	Low Service	Fixed	54	0.00	470.90
J-528	346.62	Low Service	Fixed	54	7.55	471.60
J-832	359.00	Low Service	Fixed	55	6.73	486.87
J-573	346.80	Low Service	Fixed	56	12.92	475.78
J-812	355.14	Low Service	Fixed	56	10.01	484.43
J-775	321.77	Low Service	Fixed	56	9.19	452.27
J-527	340.88	Low Service	Fixed	57	17.76	471.92
J-835	320.00	Low Service	Fixed	58	4.71	453.51
J-435	351.19	Low Service	Fixed	58	1.81	484.97
J-413	350.92	Low Service	Fixed	58	0.00	485.01
J-448	316.56	Low Service	Fixed	59	11.05	453.15
J-650	326.00	Low Service	Fixed	59	3.67	463.49
J-736	325.31	Low Service	Fixed	60	6.80	463.48
J-438	313.00	Low Service	Fixed	60	4.04	452.28
J-559	314.22	Low Service	Fixed	60	10.01	453.51
J-447	313.51	Low Service	Fixed	60	9.19	453.30
J-703	318.43	Low Service	Fixed	61	4.19	458.61
J-330	319.22	Low Service	Fixed	61	13.51	459.69
J-705	342.97	Low Service	Fixed	61	0.00	483.73
J-618	314.91	Low Service	Fixed	61	16.79	455.75
J-789	325.36	Low Service	Fixed	61	13.36	466.33
J-437	310.61	Low Service	Fixed	61	21.49	452.28
J-704	316.85	Low Service	Fixed	61	11.65	458.61
J-331	316.00	Low Service	Fixed	62	6.65	458.40
J-565	315.00	Low Service	Fixed	62	14.78	457.65
J-471	340.67	Low Service	Fixed	62	0.00	483.72
J-709	340.28	Low Service	Fixed	62	3.37	484.46

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-54	339.16	Low Service	Fixed	63	0.00	483.73
J-796	312.30	Low Service	Fixed	63	19.63	457.31
J-376	338.60	Low Service	Fixed	63	0.00	483.72
J-20	338.55	Low Service	Fixed	63	0.00	483.73
J-19	338.52	Low Service	Fixed	63	0.00	483.73
J-491	338.04	Low Service	Fixed	63	0.00	483.72
J-53	337.95	Low Service	Fixed	63	0.00	483.73
J-475	310.43	Low Service	Fixed	63	13.66	456.63
J-597	337.05	Low Service	Fixed	63	0.00	483.73
J-291	316.19	Low Service	Fixed	64	3.00	463.39
J-746	337.22	Low Service	Fixed	64	10.75	484.44
J-442	335.85	Low Service	Fixed	64	0.00	483.72
J-490	335.82	Low Service	Fixed	64	0.00	483.72
J-470	335.73	Low Service	Fixed	64	0.00	483.72
J-543	313.31	Low Service	Fixed	64	14.93	461.93
J-474	307.25	Low Service	Fixed	65	27.46	456.63
J-708	339.74	Low Service	Fixed	65	21.57	489.21
J-177	334.25	Low Service	Fixed	65	0.00	483.72
J-480	334.00	Low Service	Fixed	65	0.00	483.72
J-365	334.00	Low Service	Fixed	65	0.00	483.72
J-142	333.79	Low Service	Fixed	65	0.00	483.72
J-747	334.45	Low Service	Fixed	65	28.73	484.45
J-495	333.64	Low Service	Fixed	65	11.95	483.73
J-292	312.67	Low Service	Fixed	65	2.18	463.37
J-517	333.00	Low Service	Fixed	65	0.00	483.73
J-494	332.93	Low Service	Fixed	65	6.80	483.73
J-181	304.55	Low Service	Fixed	65	8.14	455.57
J-721	301.00	Low Service	Fixed	66	4.86	452.54
J-580	301.87	Low Service	Fixed	66	24.33	453.75
J-377	331.34	Low Service	Fixed	66	0.00	483.72
J-499	300.83	Low Service	Fixed	66	8.29	453.44
J-182	302.38	Low Service	Fixed	66	11.50	455.49
J-143	330.48	Low Service	Fixed	66	0.00	483.72
J-176	330.39	Low Service	Fixed	66	0.00	483.72
J-802	298.92	Low Service	Fixed	66	5.76	452.35
J-138	301.71	Low Service	Fixed	67	3.45	455.84
J-456	298.30	Low Service	Fixed	67	2.92	452.63
J-139	301.00	Low Service	Fixed	67	19.55	455.83
J-434	330.06	Low Service	Fixed	67	0.00	485.01
J-412	329.55	Low Service	Fixed	67	0.00	485.01
J-301	329.00	Low Service	Fixed	67	7.03	484.54
J-518	299.78	Low Service	Fixed	67	15.45	455.37
J-661	328.05	Low Service	Fixed	67	0.00	483.73
J-604	328.00	Low Service	Fixed	67	3.74	483.72
J-441	327.95	Low Service	Fixed	67	0.00	483.72
J-644	300.00	Low Service	Fixed	68	16.27	456.27

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-728	327.44	Low Service	Fixed	68	3.74	483.72
J-302	328.00	Low Service	Fixed	68	5.83	484.64
J-472	327.59	Low Service	Fixed	68	4.71	484.61
J-354	326.60	Low Service	Fixed	68	0.00	483.72
J-473	327.19	Low Service	Fixed	68	3.45	484.42
J-372	324.61	Low Service	Fixed	68	11.80	482.01
J-594	298.13	Low Service	Fixed	68	13.36	455.64
J-334	325.29	Low Service	Fixed	69	0.00	483.73
J-408	325.00	Low Service	Fixed	69	6.13	483.70
J-599	325.09	Low Service	Fixed	69	12.02	484.51
J-278	298.12	Low Service	Fixed	69	6.35	458.11
J-593	295.15	Low Service	Fixed	69	19.33	455.63
J-591	291.96	Low Service	Fixed	69	5.53	452.54
J-436	324.13	Low Service	Fixed	70	5.39	484.90
J-333	301.70	Low Service	Fixed	70	3.52	463.00
J-786	291.38	Low Service	Fixed	70	16.94	453.20
J-572	313.24	Low Service	Fixed	70	5.68	475.80
J-166	292.77	Low Service	Fixed	70	6.73	455.37
J-409	321.00	Low Service	Fixed	70	3.60	483.69
J-496	322.50	Low Service	Fixed	70	15.30	485.23
J-7	289.35	Low Service	Fixed	71	2.25	452.42
J-8	289.27	Low Service	Fixed	71	0.00	452.42
J-31	289.10	Low Service	Fixed	71	9.19	452.39
J-770	319.95	Low Service	Fixed	71	5.91	483.31
J-32	289.01	Low Service	Fixed	71	0.00	452.39
J-679	290.21	Low Service	Fixed	71	17.76	453.66
J-801	288.53	Low Service	Fixed	71	13.22	452.35
J-165	291.10	Low Service	Fixed	71	7.10	455.18
J-627	321.51	Low Service	Fixed	71	5.09	485.81
J-689	293.80	Low Service	Fixed	71	16.65	458.29
J-226	290.87	Low Service	Fixed	71	8.37	455.75
J-737	292.05	Low Service	Fixed	71	17.02	456.93
J-221	287.39	Low Service	Fixed	71	0.00	452.45
J-375	290.60	Low Service	Fixed	71	12.32	455.75
J-421	320.00	Low Service	Fixed	72	6.13	485.81
J-148	315.04	Low Service	Fixed	72	3.22	481.37
J-178	296.69	Low Service	Fixed	72	6.73	463.12
J-560	287.01	Low Service	Fixed	72	10.53	453.51
J-277	291.12	Low Service	Fixed	72	3.82	458.11
J-759	316.59	Low Service	Fixed	72	2.48	483.72
J-539	316.00	Low Service	Fixed	73	2.48	483.89
J-595	284.36	Low Service	Fixed	73	8.07	452.31
J-581	285.25	Low Service	Fixed	73	8.22	453.75
J-748	312.80	Low Service	Fixed	73	8.44	482.09
J-33	283.00	Low Service	Fixed	73	4.49	452.37
J-349	288.61	Low Service	Fixed	73	11.65	458.11

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-34	282.78	Low Service	Fixed	73	0.00	452.37
J-68	284.00	Low Service	Fixed	73	8.44	453.64
J-711	313.88	Low Service	Fixed	73	17.69	483.54
J-353	314.00	Low Service	Fixed	73	5.53	483.72
J-488	313.88	Low Service	Fixed	73	72.72	483.73
J-286	282.25	Low Service	Fixed	74	4.64	452.20
J-67	283.53	Low Service	Fixed	74	11.13	453.67
J-762	292.02	Low Service	Fixed	74	2.25	462.32
J-149	311.05	Low Service	Fixed	74	2.70	481.37
J-374	287.30	Low Service	Fixed	74	5.91	457.85
J-690	287.25	Low Service	Fixed	74	12.25	457.82
J-285	281.70	Low Service	Fixed	74	3.45	452.37
J-227	284.99	Low Service	Fixed	74	24.10	455.75
J-373	287.08	Low Service	Fixed	74	11.80	457.85
J-254	281.58	Low Service	Fixed	74	2.78	452.37
J-772	284.53	Low Service	Fixed	74	12.92	455.42
J-66	312.73	Low Service	Fixed	74	6.35	483.75
J-352	312.61	Low Service	Fixed	74	11.95	483.72
J-729	314.03	Low Service	Fixed	74	1.81	485.51
J-561	282.44	Low Service	Fixed	74	19.63	453.97
J-65	311.85	Low Service	Fixed	74	1.66	483.76
J-324	311.08	Low Service	Fixed	75	7.77	483.83
J-79	309.25	Low Service	Fixed	75	3.97	482.01
J-78	309.15	Low Service	Fixed	75	4.04	482.01
J-179	290.15	Low Service	Fixed	75	0.00	463.11
J-763	291.26	Low Service	Fixed	75	26.86	464.32
J-387	290.00	Low Service	Fixed	75	12.54	463.10
J-446	278.86	Low Service	Fixed	75	9.04	452.55
J-305	308.77	Low Service	Fixed	76	0.00	483.73
J-133	309.48	Low Service	Fixed	76	9.49	484.45
J-121	310.05	Low Service	Fixed	76	3.52	485.81
J-432	303.00	Low Service	Fixed	76	0.00	478.90
J-306	307.00	Low Service	Fixed	76	0.00	483.73
J-706	307.00	Low Service	Fixed	76	0.00	483.73
J-806	310.00	Low Service	Fixed	77	14.63	486.87
J-323	306.91	Low Service	Fixed	77	3.97	483.88
J-132	307.27	Low Service	Fixed	77	2.40	484.42
J-592	274.83	Low Service	Fixed	77	5.91	452.34
J-293	275.10	Low Service	Fixed	77	4.27	452.62
J-359	306.15	Low Service	Fixed	77	4.42	483.68
J-858	305.82	Low Service	Fixed	77	3.45	483.73
J-681	311.83	Low Service	Fixed	77	11.72	489.79
J-632	305.55	Low Service	Fixed	77	6.65	483.73
J-120	307.38	Low Service	Fixed	77	4.04	485.81
J-102	305.26	Low Service	Fixed	77	1.96	483.83
J-332	284.00	Low Service	Fixed	77	41.78	463.00

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-451	284.00	Low Service	Fixed	77	0.00	463.01
J-568	273.09	Low Service	Fixed	78	11.43	452.37
J-103	304.46	Low Service	Fixed	78	3.37	483.83
J-388	274.59	Low Service	Fixed	78	3.82	454.02
J-519	272.31	Low Service	Fixed	78	7.32	452.35
J-431	298.46	Low Service	Fixed	78	9.56	478.90
J-198	271.78	Low Service	Fixed	78	3.07	452.34
J-440	303.33	Low Service	Fixed	78	2.03	484.57
J-275	303.51	Low Service	Fixed	78	1.81	484.85
J-5	280.83	Low Service	Fixed	79	0.00	463.06
J-6	280.79	Low Service	Fixed	79	0.00	463.06
J-360	301.40	Low Service	Fixed	79	4.79	483.68
J-197	270.00	Low Service	Fixed	79	2.33	452.34
J-48	301.49	Low Service	Fixed	79	0.00	484.31
J-47	301.29	Low Service	Fixed	79	1.81	484.26
J-756	280.00	Low Service	Fixed	79	0.00	463.05
J-21	301.19	Low Service	Fixed	79	5.83	484.25
J-458	272.00	Low Service	Fixed	79	7.62	455.21
J-22	301.00	Low Service	Fixed	79	0.00	484.25
J-459	271.51	Low Service	Fixed	79	4.57	455.01
J-678	272.56	Low Service	Fixed	80	17.84	456.61
J-116	271.00	Low Service	Fixed	80	6.35	455.20
J-117	271.00	Low Service	Fixed	80	4.57	455.21
J-417	299.88	Low Service	Fixed	80	5.24	484.13
J-487	297.56	Low Service	Fixed	80	3.97	482.01
J-710	298.48	Low Service	Fixed	80	3.30	483.31
J-514	298.83	Low Service	Fixed	80	2.78	483.68
J-793	298.37	Low Service	Fixed	80	5.24	483.32
J-328	278.00	Low Service	Fixed	80	8.00	463.05
J-201	267.00	Low Service	Fixed	80	7.47	452.43
J-294	267.02	Low Service	Fixed	80	4.19	452.59
J-439	298.67	Low Service	Fixed	80	9.19	484.38
J-425	277.26	Low Service	Fixed	80	0.00	463.05
J-327	277.05	Low Service	Fixed	80	3.15	463.05
J-202	266.26	Low Service	Fixed	81	4.86	452.43
J-193	267.79	Low Service	Fixed	81	2.78	454.02
J-424	276.63	Low Service	Fixed	81	0.00	463.05
J-608	268.45	Low Service	Fixed	81	7.47	455.07
J-407	296.93	Low Service	Fixed	81	5.31	483.62
J-390	268.98	Low Service	Fixed	81	12.99	455.75
J-465	276.00	Low Service	Fixed	81	0.00	463.05
J-643	276.00	Low Service	Fixed	81	0.00	463.05
J-394	267.13	Low Service	Fixed	81	5.98	454.19
J-612	294.84	Low Service	Fixed	81	0.00	482.01
J-404	294.77	Low Service	Fixed	81	2.10	482.11
J-123	296.47	Low Service	Fixed	81	0.00	483.89

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-601	296.73	Low Service	Fixed	81	8.52	484.42
J-489	295.34	Low Service	Fixed	82	0.00	483.73
J-623	294.99	Low Service	Fixed	82	0.00	483.73
J-45	265.23	Low Service	Fixed	82	0.00	454.02
J-469	265.12	Low Service	Fixed	82	5.01	454.18
J-46	264.42	Low Service	Fixed	82	0.00	454.02
J-719	292.24	Low Service	Fixed	82	3.22	482.11
J-414	292.61	Low Service	Fixed	82	10.75	482.54
J-122	293.96	Low Service	Fixed	82	4.12	483.89
J-389	265.43	Low Service	Fixed	82	9.49	455.76
J-194	263.64	Low Service	Fixed	82	0.00	454.02
J-156	261.61	Low Service	Fixed	83	4.71	452.39
J-512	292.68	Low Service	Fixed	83	8.67	483.73
J-155	261.00	Low Service	Fixed	83	3.60	452.39
J-841	289.74	Low Service	Fixed	83	9.71	482.58
J-557	259.56	Low Service	Fixed	83	5.61	452.42
J-609	262.15	Low Service	Fixed	83	7.03	455.05
J-548	292.77	Low Service	Fixed	84	8.14	485.82
J-150	290.79	Low Service	Fixed	84	2.18	483.89
J-637	290.63	Low Service	Fixed	84	10.83	484.29
J-663	263.04	Low Service	Fixed	84	27.68	456.72
J-403	288.18	Low Service	Fixed	84	2.92	482.11
J-558	258.38	Low Service	Fixed	84	4.19	452.42
J-606	287.28	Low Service	Fixed	84	6.58	481.37
J-619	290.87	Low Service	Fixed	84	5.53	485.07
J-396	290.60	Low Service	Fixed	84	6.13	485.01
J-827	290.57	Low Service	Fixed	84	9.56	485.28
J-466	268.02	Low Service	Fixed	84	2.78	463.05
J-850	295.60	Low Service	Fixed	84	2.03	490.82
J-192	290.32	Low Service	Fixed	85	2.70	486.12
J-682	295.00	Low Service	Fixed	85	0.00	490.82
J-239	287.00	Low Service	Fixed	85	4.57	483.90
J-191	288.00	Low Service	Fixed	86	0.00	486.02
J-767	284.93	Low Service	Fixed	86	10.23	483.32
J-240	255.54	Low Service	Fixed	86	3.37	454.02
J-624	284.83	Low Service	Fixed	86	0.00	483.73
J-415	256.97	Low Service	Fixed	86	4.64	456.14
J-336	289.77	Low Service	Fixed	86	6.65	489.22
J-283	293.78	Low Service	Fixed	86	0.00	493.33
J-10	256.52	Low Service	Fixed	86	0.00	456.09
J-566	282.50	Low Service	Fixed	86	0.00	482.10
J-567	282.50	Low Service	Fixed	86	0.00	482.10
J-9	256.30	Low Service	Fixed	86	10.90	456.09
J-87	282.75	Low Service	Fixed	87	3.22	482.74
J-118	284.00	Low Service	Fixed	87	3.60	483.99
J-152	284.45	Low Service	Fixed	87	1.81	484.87

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-699	283.58	Low Service	Fixed	87	4.04	484.00
J-749	283.78	Low Service	Fixed	87	10.38	484.31
J-416	275.16	Low Service	Fixed	87	13.74	475.88
J-119	283.26	Low Service	Fixed	87	2.70	484.00
J-86	281.89	Low Service	Fixed	87	1.88	482.77
J-636	283.15	Low Service	Fixed	87	7.25	484.28
J-395	283.72	Low Service	Fixed	87	5.53	485.01
J-36	283.48	Low Service	Fixed	87	0.00	484.92
J-26	282.03	Low Service	Fixed	87	2.03	483.47
J-35	283.24	Low Service	Fixed	87	0.00	484.92
J-600	282.63	Low Service	Fixed	87	25.82	484.32
J-265	283.11	Low Service	Fixed	87	0.00	484.91
J-151	283.00	Low Service	Fixed	87	0.00	484.88
J-829	282.90	Low Service	Fixed	87	7.47	485.01
J-720	280.90	Low Service	Fixed	88	7.70	483.28
J-25	281.00	Low Service	Fixed	88	3.97	483.47
J-315	277.81	Low Service	Fixed	88	3.00	481.16
J-529	279.97	Low Service	Fixed	88	4.94	483.42
J-337	285.55	Low Service	Fixed	88	10.23	489.22
J-363	250.83	Low Service	Fixed	88	4.34	454.63
J-386	250.07	Low Service	Fixed	89	2.85	454.64
J-546	250.59	Low Service	Fixed	89	7.70	455.28
J-364	250.00	Low Service	Fixed	89	2.48	454.80
J-2	272.90	Low Service	Fixed	89	8.29	478.18
J-468	272.69	Low Service	Fixed	89	1.81	478.30
J-853	280.93	Low Service	Fixed	89	3.45	486.61
J-620	279.25	Low Service	Fixed	89	32.08	484.96
J-820	280.88	Low Service	Fixed	89	5.39	486.60
J-476	279.00	Low Service	Fixed	89	0.00	484.96
J-536	276.13	Low Service	Fixed	89	3.89	482.10
J-530	277.00	Low Service	Fixed	89	14.18	483.36
J-826	280.23	Low Service	Fixed	89	0.00	486.60
J-831	280.38	Low Service	Fixed	89	14.26	486.87
J-665	276.32	Low Service	Fixed	90	3.22	483.30
J-683	277.24	Low Service	Fixed	90	8.37	484.28
J-214	275.00	Low Service	Fixed	90	11.05	482.10
J-724	276.10	Low Service	Fixed	90	12.54	483.36
J-486	276.69	Low Service	Fixed	90	2.78	483.96
J-367	276.29	Low Service	Fixed	90	4.04	483.73
J-505	271.00	Low Service	Fixed	90	9.64	478.91
J-674	274.73	Low Service	Fixed	90	6.88	483.89
J-521	274.00	Low Service	Fixed	91	10.83	483.18
J-824	274.37	Low Service	Fixed	91	20.97	483.95
J-309	268.95	Low Service	Fixed	91	0.00	478.58
J-520	268.91	Low Service	Fixed	91	0.00	479.12
J-216	272.32	Low Service	Fixed	91	0.00	482.87

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-664	245.63	Low Service	Fixed	91	7.32	456.64
J-171	268.26	Low Service	Fixed	91	0.00	479.28
J-270	268.18	Low Service	Fixed	91	0.00	479.27
J-357	270.40	Low Service	Fixed	91	6.06	481.56
J-213	270.88	Low Service	Fixed	91	0.00	482.10
J-366	244.88	Low Service	Fixed	92	2.70	456.57
J-114	266.00	Low Service	Fixed	92	3.37	477.88
J-316	268.79	Low Service	Fixed	92	6.28	480.91
J-115	265.68	Low Service	Fixed	92	0.00	477.89
J-215	270.68	Low Service	Fixed	92	2.03	483.07
J-172	266.78	Low Service	Fixed	92	0.00	479.28
J-805	244.01	Low Service	Fixed	92	6.43	456.53
J-547	243.00	Low Service	Fixed	92	7.77	455.62
J-310	265.64	Low Service	Fixed	92	13.44	478.58
J-684	271.04	Low Service	Fixed	92	16.87	484.28
J-485	265.17	Low Service	Fixed	93	39.84	479.25
J-345	270.71	Low Service	Fixed	93	6.80	484.87
J-457	265.47	Low Service	Fixed	93	12.84	479.70
J-545	241.00	Low Service	Fixed	93	2.63	455.29
J-464	267.63	Low Service	Fixed	93	3.97	481.92
J-158	242.00	Low Service	Fixed	93	0.00	456.57
J-249	241.56	Low Service	Fixed	93	0.00	456.57
J-358	264.00	Low Service	Fixed	93	0.00	479.28
J-828	269.59	Low Service	Fixed	93	0.00	485.01
J-840	269.40	Low Service	Fixed	93	0.00	484.87
J-157	241.00	Low Service	Fixed	93	4.34	456.57
J-351	264.13	Low Service	Fixed	93	0.00	479.70
J-344	268.93	Low Service	Fixed	93	0.00	485.01
J-700	268.00	Low Service	Fixed	94	1.73	484.19
J-574	267.46	Low Service	Fixed	94	5.91	483.83
J-822	268.32	Low Service	Fixed	94	0.00	485.01
J-369	239.00	Low Service	Fixed	94	0.00	456.57
J-842	239.00	Low Service	Fixed	94	5.68	456.57
J-607	263.50	Low Service	Fixed	94	2.40	481.37
J-271	270.56	Low Service	Fixed	95	2.85	489.36
J-823	264.40	Low Service	Fixed	95	5.68	483.30
J-272	270.23	Low Service	Fixed	95	0.00	489.22
J-13	270.37	Low Service	Fixed	95	8.59	489.36
J-329	264.00	Low Service	Fixed	95	0.00	483.15
J-817	268.16	Low Service	Fixed	95	17.91	487.35
J-508	265.08	Low Service	Fixed	95	6.06	484.30
J-341	259.65	Low Service	Fixed	95	10.01	479.12
J-783	264.12	Low Service	Fixed	95	8.82	483.87
J-72	264.00	Low Service	Fixed	95	2.92	483.82
J-73	264.00	Low Service	Fixed	95	2.10	483.82
J-350	260.00	Low Service	Fixed	95	0.00	480.05

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Junction Table
Steady State Analysis

Label	Elevation (ft)	Zone	Pattern (Constituent)	Pressure (psi)	Demand (gpm)	Hydraulic Grade (ft)
J-14	269.17	Low Service	Fixed	95	0.00	489.36
J-299	263.00	Low Service	Fixed	95	13.66	483.29
J-125	266.38	Low Service	Fixed	95	7.18	486.72
J-504	263.26	Low Service	Fixed	95	2.10	483.82
J-507	263.21	Low Service	Fixed	96	4.19	484.11
J-300	261.45	Low Service	Fixed	96	7.77	483.29
J-340	258.00	Low Service	Fixed	96	0.00	479.95
J-124	264.64	Low Service	Fixed	96	3.37	486.89
J-761	264.00	Low Service	Fixed	96	11.28	486.72
J-790	259.19	Low Service	Fixed	97	3.97	483.25
J-245	259.00	Low Service	Fixed	99	0.00	488.78
J-108	258.83	Low Service	Fixed	100	0.00	488.93
J-109	258.00	Low Service	Fixed	100	0.00	489.35
J-855	258.00	Low Service	Fixed	100	0.00	489.37
J-849	262.68	Low Service	Fixed	100	0.00	494.57
J-246	256.85	Low Service	Fixed	100	0.00	488.78
J-814	231.90	Low Service	Fixed	110	1.66	485.55
J-798	230.79	Low Service	Fixed	110	9.71	485.67
J-845	229.55	Low Service	Fixed	111	0.00	485.28
J-732	221.07	Low Service	Fixed	114	3.30	485.62
J-731	218.04	Low Service	Fixed	116	5.24	485.62
J-797	216.00	Low Service	Fixed	117	38.12	485.55
J-224	209.19	Low Service	Fixed	120	1.73	485.54
J-613	207.74	Low Service	Fixed	120	0.00	485.54
J-764	206.00	Low Service	Fixed	121	7.85	485.51
J-225	204.34	Low Service	Fixed	122	4.19	485.54
J-516	201.00	Low Service	Fixed	123	0.00	485.51
J-515	199.62	Low Service	Fixed	124	0.00	485.52
J-461	199.55	Low Service	Fixed	124	0.00	485.51
J-460	188.74	Low Service	Fixed	128	3.82	485.51

Active Scenario: Peak Hour Demand-Buildout

FlexTable: Pump Table

Steady State Analysis

Label	Elevation (ft)	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
Boland-1	264.00	On	287.51	526.02	736.28	238.51
Boland-2	264.00	On	287.51	526.09	744.15	238.57
Boland-3	264.00	Off	287.63	525.79	0.00	0.00
Hosmer Pump #1	275.00	On	281.99	533.34	1,025.91	251.35
Hosmer Pump #3	275.00	On	282.05	532.14	1,000.78	250.08

Active Scenario: Peak Hour Demand-Buildout

FlexTable: Tank Table

Steady State Analysis

Label	Zone	Elevation (Base) (ft)	Elevation (Minimum) (ft)	Elevation (Initial) (ft)	Elevation (Maximum) (ft)	Diameter (ft)	Flow (Out net) (gpm)	Status (Calculated)	Hydraulic Grade (ft)
Tara Road Tank	High Service	467.00	467.00	508.00	515.00	67.00	798.14	Emptying	508.00
Oak Hill Road Tank	Low Service	418.00	418.00	485.00	492.70	25.00	1,240.73	Emptying	485.00
Overlook Drive Tank	Low Service	460.00	460.00	486.00	493.30	40.00	148.97	Emptying	486.00

Active Scenario: Peak Hour Demand-Buildout

FlexTable: Pipe Table

Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
363	8.0	J-250	J-251	119	-1,224.64	52.53	6.23	7.82	90
14	12.0	J-752	J-203	718	1,288.91	5.53	3.97	3.66	110
30	12.0	J-203	J-848	1,660	1,282.91	5.48	9.09	3.64	110
P-50	12.0	J-848	J-844	102	1,282.91	6.54	0.66	3.64	100
574	12.0	J-251	Oak Hill Road Tank	683	-1,240.73	4.38	2.99	3.52	120
P-63	6.0	J-399	J-75	127	-302.67	13.18	1.68	3.43	100
571	12.0	J-552	J-250	1,911	-1,181.65	3.45	6.60	3.35	130
P-218	12.0	J-849	J-855	1,108	1,180.53	4.70	5.20	3.35	110
716	12.0	J-551	J-552	350	-1,175.74	3.42	1.20	3.34	130
771	12.0	J-551	J-743	1,325	1,171.77	3.40	4.51	3.32	130
P-216	12.0	J-855	J-109	4	1,135.32	4.37	0.02	3.22	110
334	8.0	J-108	J-109	33	-501.31	12.49	0.42	3.20	80
784	8.0	J-114	J-416	242	501.11	8.26	2.00	3.20	100
P-51	12.0	J-844	J-856	48	1,080.05	3.98	0.19	3.06	110
P-233	6.0	J-329	J-823	15	-269.71	10.55	0.16	3.06	101
270	8.0	J-416	J-763	1,583	468.77	7.30	11.55	2.99	100
P-217	12.0	J-854	J-849	1,426	1,013.57	2.60	3.70	2.88	130
P-372	12.0	J-854	J-849	1,427	1,013.12	2.60	3.70	2.87	130
743	6.0	J-330	J-331	170	224.44	7.58	1.29	2.55	100
408	10.0	J-634	J-207	544	609.42	2.86	1.55	2.49	120
333	8.0	J-292	J-543	349	378.43	4.12	1.44	2.42	110
P-257	8.0	J-316	J-527	2,569	378.02	3.50	8.98	2.41	120
569	12.0	J-849	J-850	1,739	846.16	2.16	3.75	2.40	120
P-219	12.0	J-681	J-850	478	-844.13	2.15	1.03	2.39	120
782	8.0	J-340	J-341	186	359.78	4.47	0.83	2.30	100
438	12.0	J-189	Tara Road Tank	82	-798.14	1.94	0.16	2.26	120
269	8.0	J-341	J-114	293	349.77	4.24	1.24	2.23	100
696	12.0	J-315	J-316	160	777.66	1.59	0.25	2.21	130
685	8.0	J-245	J-124	395	336.06	4.79	1.89	2.15	90
P-212	8.0	J-108	J-245	32	336.06	4.79	0.15	2.15	90
P-256	8.0	J-734	J-839	21	331.95	2.75	0.06	2.12	120
581	12.0	J-798	J-817	979	-746.09	1.71	1.67	2.12	120
330	8.0	J-839	J-789	1,207	326.71	3.74	4.52	2.09	100
697	12.0	J-315	J-78	624	-713.18	1.36	0.85	2.02	130
P-296	8.0	J-178	J-763	344	-315.01	3.50	1.20	2.01	100
332	8.0	J-292	J-789	855	-313.35	3.46	2.96	2.00	100
432	12.0	J-725	J-576	609	696.45	1.77	1.08	1.98	110
P-373	12.0	J-743	J-910	216	694.40	1.29	0.28	1.97	130
589	8.0	J-399	J-400	229	298.47	3.16	0.72	1.91	100
665	12.0	J-576	J-633	1,837	671.37	1.65	3.03	1.90	110
P-240	12.0	J-845	J-798	281	-670.48	1.40	0.39	1.90	120

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
686	8.0	J-124	J-125	42	297.07	3.81	0.16	1.90	90
583	12.0	J-817	J-681	1,786	-661.99	1.37	2.45	1.88	120
494	6.0	J-565	J-181	496	163.47	4.21	2.09	1.85	100
P-241	8.0	J-344	J-840	73	290.25	1.85	0.14	1.85	130
776	8.0	J-840	J-841	1,293	283.45	1.77	2.29	1.81	130
P-214	12.0	J-109	J-853	1,848	634.01	1.49	2.74	1.80	110
369	8.0	J-125	J-823	1,011	278.62	3.39	3.42	1.78	90
224	12.0	J-633	J-634	437	621.07	1.22	0.53	1.76	120
459	8.0	J-816	J-400	1,295	-273.28	2.69	3.48	1.74	100
339	8.0	J-215	J-216	110	267.68	1.85	0.20	1.71	120
679	8.0	J-47	J-48	14	-266.90	3.12	0.04	1.70	90
153	12.0	J-605	J-266	2,598	599.63	1.34	3.48	1.70	110
708	12.0	J-86	J-87	26	593.28	1.12	0.03	1.68	120
P-238	8.0	J-841	J-719	78	256.11	6.14	0.48	1.63	60
385	12.0	J-818	J-704	2,189	572.71	1.23	2.69	1.62	110
P-53	12.0	J-856	J-696	269	570.26	1.04	0.28	1.62	120
703	8.0	J-350	J-351	184	250.12	1.91	0.35	1.60	110
437	12.0	J-189	J-492	298	561.18	1.18	0.35	1.59	110
534	2.0	J-273	J-274	135	15.53	11.25	1.52	1.59	101
496	12.0	J-796	J-704	1,312	-556.87	0.99	1.30	1.58	120
103	8.0	J-695	J-740	656	243.22	2.17	1.42	1.55	100
P-285	8.0	J-740	J-95	16	243.22	2.16	0.03	1.55	100
P-67	12.0	J-98	J-492	13	-543.63	1.33	0.02	1.54	100
230	12.0	J-98	J-569	352	541.31	1.32	0.47	1.54	100
436	12.0	J-617	J-462	1,123	541.31	1.32	1.48	1.54	100
P-66	12.0	J-569	J-617	364	541.31	1.32	0.48	1.54	100
P-73	12.0	J-462	J-248	260	541.31	1.32	0.34	1.54	100
P-71	12.0	J-463	J-184	84	538.01	1.31	0.11	1.53	100
P-74	12.0	J-248	J-463	17	538.01	1.31	0.02	1.53	100
P-263	12.0	J-796	J-737	403	537.24	0.93	0.37	1.52	120
313	8.0	J-330	J-543	1,080	-237.95	2.08	2.25	1.52	100
329	8.0	J-351	J-171	239	237.28	1.73	0.41	1.51	110
P-295	8.0	J-762	J-178	389	-236.52	2.06	0.80	1.51	100
701	8.0	J-762	J-689	1,993	234.27	2.02	4.03	1.50	100
P-54	12.0	J-696	J-725	2,401	521.39	0.88	2.11	1.48	120
292	8.0	J-607	J-790	952	-231.46	1.98	1.88	1.48	100
710	12.0	J-414	J-78	605	519.43	0.87	0.53	1.47	120
382	10.0	J-845	J-824	1,650	359.28	0.81	1.33	1.47	140
709	12.0	J-87	J-414	237	512.55	0.85	0.20	1.45	120
P-72	12.0	J-184	J-511	241	510.96	1.19	0.29	1.45	100
152	12.0	J-511	J-605	415	510.96	1.19	0.49	1.45	100
758	12.0	J-691	J-692	589	509.79	0.99	0.58	1.45	110
P-52	12.0	J-856	J-691	1,364	509.79	0.99	1.35	1.45	110
P-148	8.0	J-707	J-816	449	-225.71	1.89	0.85	1.44	100
P-200	8.0	J-619	J-820	688	-222.29	2.23	1.53	1.42	90

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
410	2.0	J-279	J-280	147	13.89	5.68	0.83	1.42	130
656	10.0	J-191	J-192	82	-347.00	1.18	0.10	1.42	110
370	8.0	J-826	J-827	1,045	218.43	1.27	1.32	1.39	120
P-64	6.0	J-75	J-635	313	122.41	2.47	0.77	1.39	100
311	8.0	J-607	J-340	1,142	216.55	1.25	1.42	1.38	120
349	10.0	J-521	J-824	1,063	-338.31	0.72	0.77	1.38	140
463	8.0	J-116	J-67	888	214.92	1.72	1.53	1.37	100
P-258	8.0	J-527	J-734	845	213.48	1.21	1.03	1.36	120
570	12.0	J-662	J-743	717	-477.37	0.75	0.54	1.35	120
707	10.0	J-86	J-521	326	-327.48	1.27	0.41	1.34	100
290	8.0	J-827	J-790	1,737	208.87	1.17	2.02	1.33	120
737	12.0	J-658	J-662	527	-468.08	0.72	0.38	1.33	120
384	12.0	J-818	J-658	1,775	-463.21	0.71	1.25	1.31	120
P-6	8.0	J-690	J-116	1,656	205.38	1.58	2.62	1.31	100
P-122	12.0	J-555	J-266	253	-455.94	0.81	0.20	1.29	110
744	6.0	J-331	J-565	350	113.23	2.13	0.75	1.28	100
683	8.0	J-496	J-436	300	200.23	1.08	0.32	1.28	120
324	8.0	J-171	J-505	306	197.44	1.23	0.38	1.26	110
411	12.0	J-808	J-809	863	443.23	0.77	0.66	1.26	110
P-121	12.0	J-808	J-555	711	-443.23	0.77	0.54	1.26	110
8	8.0	J-846	J-570	1,512	195.00	1.21	1.82	1.24	110
67	8.0	J-302	J-436	261	-194.85	1.02	0.27	1.24	120
P-130	8.0	J-173	J-813	1,227	193.08	1.41	1.73	1.23	100
666	10.0	J-207	J-208	89	300.04	0.77	0.07	1.23	120
760	8.0	J-570	J-571	376	190.76	1.38	0.52	1.22	100
P-61	12.0	J-677	J-74	24	428.91	0.61	0.01	1.22	120
148	12.0	J-74	J-75	22	426.73	0.61	0.01	1.21	120
409	10.0	J-208	J-232	559	294.06	0.74	0.41	1.20	120
734	8.0	J-67	J-68	21	186.03	1.32	0.03	1.19	100
675	10.0	J-417	J-102	242	289.09	1.22	0.30	1.18	90
P-197	8.0	J-440	J-275	181	-181.06	1.52	0.28	1.16	90
670	8.0	J-338	J-339	175	-180.46	1.25	0.22	1.15	100
508	8.0	J-505	J-309	319	178.25	1.02	0.33	1.14	110
P-300	12.0	J-350	J-316	1,903	-393.36	0.45	0.86	1.12	130
171	8.0	J-571	J-647	494	174.17	1.17	0.58	1.11	100
100	6.0	J-741	J-742	688	-96.73	1.59	1.10	1.10	100
684	8.0	J-708	J-681	625	-170.41	0.94	0.59	1.09	110
468	8.0	J-394	J-363	399	-169.68	1.11	0.44	1.08	100
161	8.0	J-647	J-483	575	168.11	1.09	0.63	1.07	100
182	8.0	J-813	J-586	1,156	167.17	1.08	1.25	1.07	100
P-221	8.0	J-708	J-4	776	165.72	0.89	0.69	1.06	110
P-211	8.0	J-826	J-108	1,814	-165.25	1.29	2.33	1.05	90
504	8.0	J-309	J-468	318	164.81	0.88	0.28	1.05	110
492	6.0	J-469	J-386	377	-92.56	1.23	0.46	1.05	110
P-205	8.0	J-191	J-548	167	161.40	1.23	0.21	1.03	90

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-264	12.0	J-737	J-663	475	361.75	0.45	0.21	1.03	120
479	8.0	J-644	J-737	672	-158.47	0.98	0.66	1.01	100
755	8.0	J-547	J-545	342	157.66	0.97	0.33	1.01	100
P-77	6.0	J-635	J-605	2,063	88.67	1.36	2.80	1.01	100
486	6.0	J-389	J-415	239	-88.11	1.63	0.39	1.00	90
P-265	8.0	J-415	J-10	53	155.88	0.95	0.05	0.99	100
P-210	12.0	J-853	J-192	987	349.70	0.49	0.49	0.99	110
317	8.0	J-181	J-182	79	155.33	0.94	0.07	0.99	100
140	8.0	J-586	J-695	697	154.76	0.94	0.65	0.99	100
505	8.0	J-115	J-2	375	-154.71	0.79	0.29	0.99	110
181	8.0	J-319	J-320	164	-150.42	0.75	0.12	0.96	110
682	8.0	J-301	J-302	152	-149.48	0.63	0.10	0.95	120
P-131	8.0	J-319	J-64	7	148.14	0.87	0.01	0.95	100
470	8.0	J-545	J-364	573	147.33	0.86	0.49	0.94	100
351	8.0	J-527	J-528	380	146.78	0.84	0.32	0.94	101
P-5	8.0	J-689	J-690	564	145.55	0.84	0.47	0.93	100
P-268	8.0	J-9	J-547	571	144.97	0.83	0.47	0.93	100
756	8.0	J-363	J-364	196	-144.86	0.83	0.16	0.92	100
477	8.0	J-138	J-644	546	-142.20	0.80	0.44	0.91	100
680	8.0	J-48	J-132	119	-141.39	0.96	0.11	0.90	90
72	6.0	J-103	J-407	231	79.19	0.92	0.21	0.90	110
P-123	12.0	J-481	J-745	9	314.75	0.34	0.00	0.89	120
P-126	12.0	J-809	J-481	349	314.75	0.41	0.14	0.89	110
561	8.0	J-528	J-800	858	139.23	0.55	0.47	0.89	120
126	2.0	J-106	J-107	33	8.67	2.37	0.08	0.89	130
P-127	12.0	J-745	J-846	383	311.53	0.40	0.15	0.88	110
P-239	12.0	J-822	J-845	792	-311.20	0.34	0.27	0.88	120
367	6.0	J-87	J-464	299	77.51	2.72	0.82	0.88	60
493	8.0	J-394	J-193	224	136.47	0.74	0.17	0.87	100
681	8.0	J-132	J-133	44	-135.02	0.52	0.02	0.86	120
279	8.0	J-439	J-440	265	-134.70	0.72	0.19	0.86	101
P-206	8.0	J-548	J-496	672	134.47	0.88	0.59	0.86	90
P-118	8.0	J-758	J-765	447	133.23	0.71	0.32	0.85	100
674	10.0	J-102	J-65	114	204.57	0.64	0.07	0.84	90
177	12.0	J-207	J-799	2,611	294.37	0.31	0.80	0.84	120
63	12.0	J-417	J-22	242	-294.32	0.52	0.13	0.83	90
245	8.0	J-581	J-786	813	129.25	0.67	0.55	0.82	100
671	8.0	J-701	J-338	583	-129.25	0.67	0.39	0.82	100
P-245	12.0	J-344	J-822	16	-290.25	0.35	0.01	0.82	110
765	8.0	J-763	J-670	1,311	126.90	0.40	0.52	0.81	130
753	8.0	J-193	J-581	426	126.50	0.65	0.27	0.81	100
132	8.0	J-448	J-456	819	126.23	0.64	0.53	0.81	100
383	8.0	J-543	J-818	986	125.55	0.64	0.63	0.80	100
P-209	12.0	J-820	J-853	9	-280.86	0.33	0.00	0.80	110
754	8.0	J-609	J-386	652	124.58	0.63	0.41	0.80	100

Active Scenario: Peak Hour Demand-Buildout
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Steady State Analysis

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112	12.0	J-297	J-799	874	-279.52	0.28	0.24	0.79	120
246	8.0	J-786	J-293	952	122.94	0.61	0.58	0.78	100
P-147	8.0	J-339	J-707	502	-122.76	0.61	0.31	0.78	100
733	8.0	J-68	J-499	337	122.67	0.61	0.21	0.78	100
P-111	8.0	J-765	J-525	329	122.41	0.43	0.14	0.78	120
556	8.0	J-7	J-8	3	-120.09	0.43	0.00	0.77	120
554	8.0	J-8	J-221	97	-120.09	0.31	0.03	0.77	140
557	8.0	J-221	J-524	370	-120.09	0.42	0.15	0.77	120
344	6.0	J-357	J-315	189	67.48	2.11	0.40	0.77	60
337	12.0	J-215	J-329	170	-269.71	0.44	0.08	0.77	90
647	12.0	J-297	J-298	149	268.91	0.26	0.04	0.76	120
340	12.0	J-216	J-86	393	267.68	0.26	0.10	0.76	120
296	10.0	J-601	J-191	3,623	-185.61	0.44	1.60	0.76	100
P-253	8.0	J-734	J-800	413	-118.46	0.57	0.23	0.76	101
P-275	8.0	J-7	J-32	47	117.83	0.57	0.03	0.75	100
65	12.0	J-22	J-47	20	-265.09	0.43	0.01	0.75	90
P-117	8.0	J-231	J-758	2,090	117.75	0.57	1.18	0.75	100
225	8.0	J-701	J-602	948	116.55	0.55	0.53	0.74	100
P-302	8.0	J-861	J-4	1,541	-116.49	0.46	0.72	0.74	110
731	8.0	J-447	J-448	268	115.16	0.54	0.15	0.74	100
491	8.0	J-561	J-469	395	-114.78	0.54	0.21	0.73	100
144	8.0	J-29	J-30	7	114.34	0.29	0.00	0.73	140
2	8.0	J-537	J-538	337	114.34	0.38	0.13	0.73	120
3	8.0	J-538	J-29	755	114.34	0.38	0.29	0.73	120
P-114	8.0	J-510	J-537	100	114.34	0.38	0.04	0.73	120
P-195	8.0	J-619	J-476	387	113.68	0.28	0.11	0.73	140
283	2.0	J-165	J-166	70	-7.10	2.64	0.18	0.73	101
P-132	8.0	J-64	J-173	86	111.15	0.51	0.04	0.71	100
511	12.0	J-415	J-805	1,748	-248.63	0.22	0.39	0.71	120
226	12.0	J-692	J-651	2,488	247.25	0.26	0.65	0.70	110
P-345	12.0	J-692	J-49	990	243.72	0.25	0.25	0.69	110
P-269	8.0	J-772	J-458	518	106.90	0.40	0.20	0.68	110
732	8.0	J-499	J-447	303	105.66	0.46	0.14	0.67	100
745	8.0	J-331	J-349	642	104.55	0.45	0.29	0.67	100
P-199	8.0	J-275	J-619	416	-103.08	0.54	0.22	0.66	90
646	12.0	J-629	J-287	435	230.61	0.23	0.10	0.65	110
P-304	8.0	J-861	J-817	1,245	102.01	0.36	0.45	0.65	110
662	12.0	J-651	J-144	1,488	227.24	0.22	0.33	0.64	110
P-59	12.0	J-144	J-677	5	227.24	0.19	0.00	0.64	120
207	12.0	J-611	J-189	884	-226.81	0.22	0.20	0.64	110
353	12.0	J-78	J-719	619	-224.46	0.16	0.10	0.64	130
503	10.0	J-114	J-115	39	-154.71	0.26	0.01	0.63	110
555	8.0	J-31	J-32	11	-98.90	0.29	0.00	0.63	120
216	8.0	J-768	J-742	955	96.73	0.39	0.37	0.62	100
210	6.0	J-602	J-603	385	54.22	0.46	0.18	0.62	110

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490	8.0	J-580	J-561	565	-95.15	0.38	0.22	0.61	100
P-108	8.0	J-699	J-119	19	94.82	0.38	0.01	0.61	100
P-270	8.0	J-458	J-608	459	94.71	0.32	0.15	0.60	110
208	12.0	J-611	J-676	834	213.05	0.20	0.16	0.60	110
746	8.0	J-518	J-182	321	-94.11	0.37	0.12	0.60	100
P-2	8.0	J-468	J-2	390	93.63	0.31	0.12	0.60	110
179	12.0	J-298	J-629	526	210.47	0.19	0.10	0.60	110
184	6.0	J-38	J-766	757	-51.61	0.42	0.32	0.59	110
740	12.0	J-663	J-664	513	205.25	0.16	0.08	0.58	120
673	10.0	J-65	J-66	20	141.08	0.32	0.01	0.58	90
P-150	8.0	J-30	J-778	752	90.24	0.19	0.14	0.58	140
P-48	12.0	J-844	J-727	419	202.87	0.21	0.09	0.58	100
664	12.0	J-676	J-677	543	201.67	0.18	0.10	0.57	110
P-271	8.0	J-493	J-835	258	-89.53	0.34	0.09	0.57	100
689	8.0	J-483	J-484	293	89.21	0.34	0.10	0.57	100
138	8.0	J-493	J-467	300	88.53	0.33	0.10	0.57	100
421	8.0	J-707	J-27	639	87.50	0.23	0.15	0.56	120
P-282	6.0	J-642	J-819	16	49.09	0.45	0.01	0.56	100
P-267	8.0	J-10	J-9	3	86.60	0.33	0.00	0.55	100
76	8.0	J-699	J-700	594	-85.59	0.31	0.19	0.55	100
48	12.0	J-752	J-97	906	191.52	0.16	0.15	0.54	110
P-176	8.0	J-778	J-686	1,068	83.58	0.30	0.32	0.53	100
509	8.0	J-349	J-373	867	82.73	0.29	0.25	0.53	100
P-346	12.0	J-49	J-725	1,349	184.70	0.15	0.20	0.52	110
53	8.0	J-173	J-82	74	-81.93	0.21	0.02	0.52	120
P-193	8.0	J-476	J-35	302	81.60	0.15	0.05	0.52	140
285	8.0	J-151	J-152	63	81.60	0.15	0.01	0.52	140
287	8.0	J-265	J-151	179	81.60	0.20	0.04	0.52	120
P-194	8.0	J-35	J-265	6	81.60	0.16	0.00	0.52	140
667	10.0	J-231	J-232	108	-126.78	0.22	0.02	0.52	100
297	8.0	Overlook Drive Tank	J-496	3,260	81.07	0.24	0.77	0.52	110
62	8.0	J-133	J-301	478	-80.82	0.20	0.10	0.52	120
308	8.0	J-11	J-650	752	80.73	0.24	0.18	0.52	110
729	8.0	J-446	J-293	263	-80.44	0.28	0.07	0.51	100
280	8.0	J-275	J-152	134	-79.79	0.15	0.02	0.51	140
750	8.0	J-618	J-139	410	-79.64	0.20	0.08	0.51	120
P-288	8.0	J-782	J-380	414	78.52	0.27	0.11	0.50	100
P-190	6.0	J-793	J-711	590	-44.14	0.37	0.22	0.50	100
495	12.0	J-664	J-805	894	175.14	0.12	0.10	0.50	120
346	2.0	J-271	J-272	132	4.76	1.06	0.14	0.49	110
608	12.0	J-94	J-95	31	-167.68	0.11	0.00	0.48	120
618	4.0	J-183	J-393	322	18.58	0.39	0.12	0.47	120
P-36	12.0	J-838	J-97	373	-167.23	0.15	0.06	0.47	100

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539	2.0	J-285	J-286	143	4.64	1.20	0.17	0.47	101
692	6.0	J-273	J-256	351	-41.71	0.34	0.12	0.47	100
P-351	8.0	J-407	J-25	726	73.88	0.20	0.15	0.47	110
368	8.0	J-464	J-357	596	73.54	0.61	0.36	0.47	60
120	12.0	J-596	J-744	1,086	164.84	0.12	0.13	0.47	110
P-287	8.0	J-95	J-782	657	73.21	0.23	0.15	0.47	100
499	2.0	J-458	J-459	283	4.57	0.72	0.21	0.47	130
P-289	8.0	J-380	J-766	214	72.09	0.23	0.05	0.46	100
259	8.0	J-689	J-690	2,072	72.08	0.23	0.47	0.46	100
441	2.0	J-579	J-531	428	4.49	0.70	0.30	0.46	130
518	8.0	J-178	J-179	76	71.76	0.16	0.01	0.46	120
143	12.0	J-232	J-780	766	160.92	0.09	0.07	0.46	130
P-283	12.0	J-502	J-94	215	-160.49	0.14	0.03	0.46	100
652	6.0	J-323	J-324	166	39.71	0.31	0.05	0.45	100
699	8.0	J-650	J-291	508	70.26	0.18	0.09	0.45	110
472	8.0	J-772	J-593	1,155	-70.10	0.18	0.21	0.45	110
366	2.0	J-268	J-269	128	4.34	1.06	0.14	0.44	101
P-1	8.0	J-2	J-468	679	-69.37	0.18	0.12	0.44	110
476	8.0	J-9	J-10	3	-69.28	0.33	0.00	0.44	80
658	8.0	J-600	J-601	381	-69.13	0.26	0.10	0.44	90
655	10.0	J-749	J-601	688	-107.96	0.16	0.11	0.44	100
694	6.0	J-37	J-38	12	-38.75	0.25	0.00	0.44	110
P-155	6.0	J-235	J-104	1,492	-38.69	0.29	0.44	0.44	100
645	12.0	J-287	J-288	143	154.27	0.11	0.02	0.44	110
565	2.0	J-659	J-660	528	4.27	0.64	0.34	0.44	130
1	12.0	J-744	J-320	678	152.97	0.11	0.07	0.43	110
728	6.0	J-293	J-294	145	38.24	0.20	0.03	0.43	120
P-352	8.0	J-25	J-529	291	67.88	0.17	0.05	0.43	110
331	8.0	J-291	J-292	145	67.26	0.17	0.02	0.43	110
265	2.0	J-507	J-508	318	-4.19	0.62	0.20	0.43	130
336	6.0	J-13	J-14	3	-37.60	0.20	0.00	0.43	120
P-7	12.0	J-780	J-768	327	149.50	0.08	0.02	0.42	130
209	8.0	J-339	J-27	1,137	-66.29	0.14	0.16	0.42	120
748	8.0	J-594	J-389	576	-66.03	0.19	0.11	0.42	100
P-232	8.0	J-732	J-798	321	-65.90	0.16	0.05	0.42	110
474	8.0	J-565	J-373	1,065	-65.03	0.19	0.20	0.42	100
77	6.0	J-239	J-118	292	-36.47	0.32	0.09	0.41	90
471	8.0	J-117	J-518	882	-64.83	0.19	0.16	0.41	100
P-189	6.0	J-710	J-793	18	-35.99	0.26	0.00	0.41	100
157	12.0	J-838	J-773	1,176	143.70	0.08	0.10	0.41	120
678	8.0	J-133	J-599	380	-63.68	0.18	0.07	0.41	100
P-299	12.0	J-340	J-350	1,472	-143.23	0.07	0.10	0.41	130
P-112	8.0	J-525	J-509	408	63.02	0.13	0.05	0.40	120
762	8.0	J-529	J-530	328	62.94	0.18	0.06	0.40	100
769	12.0	J-502	J-503	303	139.57	0.11	0.03	0.40	100

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Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
145	6.0	J-653	J-781	770	34.78	0.17	0.13	0.39	120
773	8.0	J-65	J-711	1,302	61.83	0.17	0.22	0.39	100
478	12.0	J-138	J-139	60	138.76	0.11	0.01	0.39	100
274	8.0	J-709	J-301	599	-61.64	0.14	0.09	0.39	110
542	8.0	J-201	J-446	707	-61.00	0.17	0.12	0.39	100
543	6.0	J-294	J-202	996	34.04	0.16	0.16	0.39	120
489	8.0	J-116	J-117	39	-60.26	0.16	0.01	0.38	100
141	10.0	J-484	J-695	569	93.84	0.13	0.07	0.38	100
741	8.0	J-467	J-205	275	59.98	0.16	0.04	0.38	100
P-103	12.0	J-266	J-295	102	134.88	0.07	0.01	0.38	120
295	8.0	J-835	J-580	1,525	-59.86	0.16	0.25	0.38	100
178	8.0	J-525	J-526	329	59.39	0.11	0.04	0.38	120
P-113	8.0	J-526	J-510	399	59.39	0.11	0.05	0.38	120
524	8.0	J-5	J-6	2	59.22	0.08	0.00	0.38	140
525	8.0	J-179	J-5	398	59.22	0.11	0.04	0.38	120
P-297	8.0	J-6	J-756	76	59.22	0.13	0.01	0.38	110
303	8.0	J-792	J-670	847	-59.06	0.13	0.11	0.38	110
538	8.0	J-33	J-590	521	57.51	0.13	0.07	0.37	110
P-231	8.0	J-797	J-732	545	-57.37	0.13	0.07	0.37	110
510	12.0	J-663	J-474	1,339	128.82	0.07	0.09	0.37	120
749	8.0	J-593	J-618	982	-57.22	0.12	0.12	0.37	110
P-125	12.0	J-596	J-809	31	-128.48	0.08	0.00	0.36	110
84	2.0	J-750	J-751	735	3.52	0.52	0.38	0.36	120
262	10.0	J-700	J-749	1,081	-87.32	0.11	0.12	0.36	100
66	12.0	J-48	J-439	860	-125.51	0.09	0.08	0.36	101
266	6.0	J-599	J-472	504	-31.37	0.20	0.10	0.36	100
613	2.0	J-472	J-473	277	3.45	0.70	0.19	0.35	100
18	8.0	J-509	J-510	315	54.95	0.10	0.03	0.35	120
273	8.0	J-68	J-559	957	54.92	0.14	0.13	0.35	100
P-274	12.0	J-524	J-456	273	-123.31	0.09	0.02	0.35	100
639	12.0	J-159	J-773	828	-123.16	0.06	0.05	0.35	120
687	8.0	J-602	J-653	488	54.33	0.10	0.05	0.35	120
735	6.0	J-205	J-206	89	30.53	0.19	0.02	0.35	100
127	4.0	J-452	J-106	265	13.38	0.18	0.05	0.34	130
P-207	8.0	J-820	J-826	24	53.19	0.16	0.00	0.34	90
203	8.0	J-686	J-256	1,492	52.93	0.13	0.19	0.34	100
73	10.0	J-102	J-103	32	82.56	0.08	0.00	0.34	110
588	8.0	J-159	J-160	63	52.79	0.13	0.01	0.34	101
P-185	12.0	J-66	J-488	394	117.39	0.05	0.02	0.33	130
80	8.0	J-119	J-486	294	52.05	0.12	0.04	0.33	100
558	6.0	J-337	J-13	1,000	-29.01	0.14	0.14	0.33	110
593	2.0	J-324	J-646	589	3.22	0.61	0.36	0.33	101
700	8.0	J-670	J-428	552	51.34	0.12	0.07	0.33	100
217	6.0	J-324	J-494	622	28.71	0.17	0.10	0.33	100
316	8.0	J-772	J-182	761	-49.72	0.10	0.07	0.32	110

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Pipe Table
Steady State Analysis

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P-128	12.0	J-846	J-406	308	111.74	0.06	0.02	0.32	110
79	8.0	J-674	J-486	587	-49.27	0.11	0.07	0.31	100
P-70	6.0	J-544	J-184	75	-27.04	0.11	0.01	0.31	120
604	8.0	J-503	J-760	926	47.91	0.09	0.08	0.31	110
304	8.0	J-11	J-428	758	-47.82	0.09	0.07	0.31	110
P-156	6.0	J-104	J-781	3	-26.71	0.14	0.00	0.30	100
P-105	8.0	J-160	J-655	417	47.18	0.10	0.04	0.30	101
644	12.0	J-288	J-657	1,132	105.59	0.05	0.06	0.30	110
636	8.0	J-122	J-123	42	46.15	0.06	0.00	0.29	130
172	10.0	J-199	J-483	1,101	-71.51	0.06	0.07	0.29	110
P-344	12.0	J-727	J-325	921	102.62	0.06	0.06	0.29	100
514	8.0	J-332	J-451	309	-45.30	0.05	0.02	0.29	140
523	8.0	J-756	J-451	706	45.30	0.05	0.04	0.29	140
10	12.0	J-405	J-406	243	-100.16	0.04	0.01	0.28	120
500	8.0	J-116	J-609	1,586	44.37	0.09	0.15	0.28	100
770	8.0	J-599	J-440	635	-44.34	0.09	0.06	0.28	100
P-142	6.0	J-134	J-649	780	-24.60	0.13	0.10	0.28	100
P-353	10.0	J-730	Overlook Drive Tank	48	-67.90	0.08	0.00	0.28	90
625	8.0	J-100	J-101	48	43.13	0.06	0.00	0.28	120
P-45	12.0	J-667	J-830	108	96.65	0.05	0.01	0.27	100
P-343	12.0	J-667	J-727	1,027	-96.65	0.05	0.06	0.27	100
P-134	8.0	J-542	J-335	1,370	-41.49	0.08	0.11	0.26	100
759	10.0	J-199	J-200	87	64.61	0.05	0.00	0.26	110
P-279	8.0	J-754	J-819	26	-41.25	0.08	0.00	0.26	100
456	8.0	J-164	J-794	1,994	41.18	0.05	0.10	0.26	130
P-251	12.0	J-678	J-842	1,278	92.65	0.04	0.05	0.26	120
591	8.0	J-50	J-433	242	40.66	0.08	0.02	0.26	101
726	8.0	J-31	J-437	1,600	40.44	0.07	0.10	0.26	110
P-69	6.0	J-183	J-544	6	-22.63	0.08	0.00	0.26	120
78	8.0	J-118	J-119	40	-40.07	0.09	0.00	0.26	90
705	8.0	J-171	J-172	74	39.84	0.06	0.00	0.25	110
706	8.0	J-172	J-270	128	39.84	0.08	0.01	0.25	101
704	8.0	J-270	J-485	298	39.84	0.08	0.02	0.25	101
624	8.0	J-712	J-713	993	39.84	0.05	0.05	0.25	120
P-99	8.0	J-717	J-712	14	39.84	0.06	0.00	0.25	120
779	8.0	J-603	J-596	1,746	39.81	0.06	0.11	0.25	110
752	8.0	J-227	J-139	1,507	-39.56	0.05	0.08	0.25	120
61	8.0	J-302	J-472	303	39.53	0.07	0.02	0.25	100
135	6.0	J-448	J-205	1,167	-22.12	0.10	0.12	0.25	100
434	8.0	J-696	J-697	624	39.32	0.07	0.05	0.25	101
544	8.0	J-202	J-155	502	39.25	0.07	0.04	0.25	100
532	8.0	J-542	J-255	949	39.07	0.07	0.07	0.25	100
738	12.0	J-678	J-474	564	-87.70	0.03	0.02	0.25	120

Active Scenario: Peak Hour Demand-Buildout
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Steady State Analysis

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533	6.0	J-564	J-273	430	-21.84	0.10	0.04	0.25	100
480	12.0	J-608	J-609	389	87.24	0.04	0.01	0.25	110
0	12.0	J-82	J-83	25	-84.71	0.03	0.00	0.24	120
188	12.0	J-83	J-405	1,243	-84.71	0.03	0.04	0.24	120
736	6.0	J-206	J-303	500	21.18	0.10	0.05	0.24	100
111	10.0	J-298	J-161	2,153	58.44	0.04	0.09	0.24	110
P-120	8.0	J-222	J-669	13	-37.30	0.04	0.00	0.24	130
52	8.0	J-63	J-64	19	-36.99	0.07	0.00	0.24	100
714	8.0	J-307	J-250	557	-36.49	0.08	0.04	0.23	90
268	8.0	J-767	J-530	759	-36.22	0.06	0.05	0.23	100
P-227	8.0	J-124	J-831	176	35.62	0.06	0.01	0.23	100
717	10.0	J-200	J-92	489	55.57	0.04	0.02	0.23	110
482	12.0	J-805	J-369	1,173	-79.92	0.03	0.03	0.23	120
P-104	12.0	J-295	J-267	25	79.01	0.03	0.00	0.22	120
607	12.0	J-642	J-503	888	-77.63	0.04	0.03	0.22	100
P-272	8.0	J-835	J-559	91	-34.38	0.06	0.01	0.22	100
P-101	12.0	J-267	J-614	354	76.53	0.03	0.01	0.22	120
P-281	6.0	J-583	J-642	1,086	-19.04	0.08	0.09	0.22	100
553	8.0	J-568	J-201	981	-33.66	0.06	0.05	0.21	100
690	8.0	J-335	J-235	173	-33.55	0.06	0.01	0.21	100
301	6.0	J-416	J-572	1,063	18.60	0.08	0.08	0.21	100
258	6.0	J-769	J-37	1,191	-18.58	0.06	0.07	0.21	110
458	8.0	J-816	J-788	930	33.01	0.05	0.05	0.21	100
P-260	8.0	J-792	J-11	514	32.91	0.04	0.02	0.21	110
747	8.0	J-593	J-594	376	-32.21	0.04	0.02	0.21	110
247	10.0	J-729	J-730	629	-50.13	0.77	0.49	0.20	20
P-196	8.0	J-476	J-620	27	32.08	0.03	0.00	0.20	140
442	6.0	J-651	J-652	491	17.99	0.07	0.03	0.20	101
637	8.0	J-150	J-239	116	-31.91	0.06	0.01	0.20	90
455	12.0	J-163	J-164	68	70.80	0.02	0.00	0.20	130
97	8.0	J-639	J-785	1,001	31.45	0.03	0.03	0.20	120
34	12.0	J-554	J-159	1,840	-70.37	0.02	0.04	0.20	120
541	6.0	J-568	J-519	351	17.57	0.07	0.02	0.20	100
659	8.0	J-325	J-326	173	31.20	0.05	0.01	0.20	101
650	12.0	J-639	J-287	1,208	-70.20	0.03	0.03	0.20	110
546	8.0	J-801	J-155	876	-30.94	0.05	0.04	0.20	100
160	12.0	J-598	J-657	1,483	-69.25	0.02	0.04	0.20	110
22	8.0	J-288	J-621	2,692	30.48	0.04	0.10	0.19	110
P-167	6.0	J-259	J-237	86	17.04	0.04	0.00	0.19	130
P-165	6.0	J-391	J-259	216	17.04	0.04	0.01	0.19	130
P-203	8.0	J-746	J-709	561	-29.54	0.04	0.02	0.19	110
464	8.0	J-386	J-363	219	29.17	0.04	0.01	0.19	100
P-191	8.0	J-299	J-767	685	-28.90	0.04	0.03	0.18	100
391	2.0	J-434	J-435	269	1.81	0.13	0.04	0.18	130
P-204	8.0	J-709	J-747	121	28.73	0.03	0.00	0.18	110

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Steady State Analysis

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146	6.0	J-104	J-105	31	-16.10	0.03	0.00	0.18	140
42	6.0	J-76	J-77	22	-15.87	0.04	0.00	0.18	120
12	8.0	J-92	J-93	27	28.09	0.02	0.00	0.18	130
P-102	12.0	J-614	J-180	1,448	63.02	0.02	0.03	0.18	120
28	12.0	J-163	J-325	1,018	-62.90	0.02	0.02	0.18	100
202	6.0	J-408	J-409	248	15.58	0.05	0.01	0.18	101
418	10.0	J-669	J-338	1,418	-42.76	0.03	0.04	0.17	100
419	8.0	J-222	J-223	115	27.28	0.04	0.00	0.17	100
420	8.0	J-758	J-223	722	-27.28	0.04	0.03	0.17	100
502	8.0	J-469	J-394	276	-27.24	0.04	0.01	0.17	100
677	8.0	J-710	J-720	724	26.79	0.04	0.03	0.17	100
291	8.0	J-720	J-790	857	26.55	0.04	0.03	0.17	100
433	8.0	J-825	J-554	1,068	-26.49	0.02	0.02	0.17	130
241	8.0	J-754	J-755	846	26.31	0.04	0.03	0.17	100
403	6.0	J-308	J-430	255	14.66	0.06	0.02	0.17	90
407	8.0	J-598	J-279	408	26.06	0.02	0.01	0.17	130
446	8.0	J-326	J-784	844	25.82	0.03	0.03	0.16	101
605	8.0	J-760	J-362	853	25.75	0.03	0.02	0.16	110
263	8.0	J-637	J-600	884	-25.65	0.04	0.04	0.16	90
P-168	6.0	J-237	J-260	36	14.33	0.03	0.00	0.16	130
721	8.0	J-776	J-590	1,326	-25.17	0.03	0.04	0.16	110
P-82	12.0	J-187	J-295	2,225	-55.87	0.02	0.04	0.16	110
406	6.0	J-687	J-688	550	-13.90	0.04	0.02	0.16	110
P-152	8.0	J-321	J-30	85	-24.09	0.02	0.00	0.15	140
117	8.0	J-289	J-290	144	-24.09	0.02	0.00	0.15	140
114	8.0	J-321	J-322	169	24.09	0.02	0.00	0.15	140
116	8.0	J-290	J-322	231	-24.09	0.02	0.00	0.15	120
P-153	8.0	J-105	J-185	515	-24.09	0.02	0.01	0.15	140
P-154	8.0	J-185	J-289	155	-24.09	0.02	0.00	0.15	140
293	6.0	J-309	J-310	156	13.44	0.04	0.01	0.15	101
180	10.0	J-649	J-63	469	-36.99	0.02	0.01	0.15	100
P-107	6.0	J-729	J-699	1,901	13.27	0.79	1.51	0.15	20
P-159	6.0	J-728	J-604	90	-13.05	0.05	0.00	0.15	90
192	6.0	J-574	J-783	1,143	-13.04	0.04	0.04	0.15	100
302	6.0	J-572	J-573	356	12.92	0.04	0.01	0.15	101
485	8.0	J-664	J-678	1,374	22.79	0.02	0.03	0.15	120
277	10.0	J-729	J-21	3,154	35.06	0.40	1.26	0.14	20
487	6.0	J-389	J-390	220	12.60	0.03	0.01	0.14	120
P-259	8.0	J-671	J-792	4	-22.33	0.02	0.00	0.14	110
526	6.0	J-179	J-387	219	12.54	0.03	0.01	0.14	120
175	8.0	J-180	J-100	78	22.12	0.02	0.00	0.14	120
654	6.0	J-494	J-408	620	12.40	0.04	0.03	0.14	90
606	12.0	J-31	J-33	860	49.27	0.02	0.01	0.14	100
193	8.0	J-783	J-674	793	-21.86	0.02	0.02	0.14	100
P-138	6.0	J-76	J-233	33	12.28	0.02	0.00	0.14	140

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715	8.0	J-307	J-308	154	21.77	0.03	0.00	0.14	90
P-109	6.0	J-409	J-359	191	11.98	0.03	0.01	0.14	101
16	12.0	J-422	J-830	1,368	-47.70	0.01	0.01	0.14	120
174	8.0	J-167	J-100	73	21.02	0.02	0.00	0.13	120
395	6.0	J-613	J-515	413	11.67	0.05	0.02	0.13	80
P-223	6.0	J-515	J-461	170	11.67	0.02	0.00	0.13	120
195	12.0	J-123	J-539	435	46.15	0.01	0.00	0.13	130
481	8.0	J-594	J-547	1,338	20.45	0.02	0.02	0.13	110
P-215	12.0	J-14	J-855	399	-45.21	0.01	0.00	0.13	110
P-46	12.0	J-830	J-209	450	44.91	0.01	0.01	0.13	100
P-95	8.0	J-717	J-101	1	-19.92	0.00	0.00	0.13	120
P-97	8.0	J-101	J-717	1	19.92	0.00	0.00	0.13	120
727	8.0	J-201	J-202	87	19.87	0.02	0.00	0.13	100
761	12.0	J-539	J-323	338	43.67	0.01	0.00	0.12	100
P-181	12.0	J-768	J-391	848	43.57	0.01	0.01	0.12	130
P-250	12.0	J-369	J-842	3	-43.48	0.01	0.00	0.12	120
P-252	12.0	J-842	J-369	3	43.48	0.01	0.00	0.12	120
590	8.0	J-187	J-188	82	18.96	0.01	0.00	0.12	130
156	8.0	J-188	J-685	641	18.96	0.01	0.01	0.12	130
P-276	8.0	J-32	J-34	859	18.93	0.02	0.02	0.12	100
757	8.0	J-548	J-120	344	18.78	0.02	0.01	0.12	110
341	8.0	J-336	J-337	174	-18.78	0.02	0.00	0.12	110
134	8.0	J-447	J-467	1,096	-18.69	0.02	0.02	0.12	100
165	8.0	J-361	J-362	196	-18.57	0.02	0.00	0.12	110
P-42	8.0	J-423	J-452	630	18.54	0.01	0.01	0.12	130
108	6.0	J-446	J-591	369	10.40	0.02	0.01	0.12	130
549	6.0	J-519	J-197	322	10.25	0.02	0.01	0.12	100
P-94	12.0	J-180	J-167	25	40.90	0.01	0.00	0.12	120
227	12.0	J-49	J-50	32	40.66	0.01	0.00	0.12	101
51	8.0	J-686	J-335	540	17.95	0.02	0.01	0.11	100
P-201	6.0	J-812	J-746	190	-10.01	0.02	0.00	0.11	100
271	8.0	J-679	J-67	564	-17.76	0.01	0.01	0.11	130
20	12.0	J-422	J-423	249	39.92	0.01	0.00	0.11	120
620	4.0	J-378	J-379	396	4.42	0.03	0.01	0.11	120
P-157	8.0	J-600	J-684	1,822	17.66	0.02	0.04	0.11	90
P-237	8.0	J-414	J-841	1,106	-17.63	0.04	0.05	0.11	60
P-225	8.0	J-797	J-224	1,229	17.59	0.01	0.02	0.11	110
206	8.0	J-41	J-99	614	-17.54	0.01	0.01	0.11	120
25	12.0	J-209	J-195	945	39.21	0.01	0.01	0.11	100
107	6.0	J-202	J-557	458	9.80	0.02	0.01	0.11	100
P-290	8.0	J-766	J-381	3	17.41	0.02	0.00	0.11	100
P-179	8.0	J-66	J-352	1,403	17.34	0.02	0.03	0.11	90
634	8.0	J-655	J-656	483	17.09	0.02	0.01	0.11	101
357	8.0	J-336	J-708	861	16.88	0.01	0.01	0.11	110
167	8.0	J-635	J-771	1,085	16.87	0.02	0.02	0.11	101

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
83	6.0	J-564	J-497	351	9.43	0.02	0.01	0.11	101
P-171	6.0	J-631	J-578	518	9.42	0.02	0.01	0.11	100
725	8.0	J-589	J-590	367	-16.65	0.01	0.00	0.11	130
11	6.0	J-408	J-728	632	-9.31	0.03	0.02	0.11	90
405	6.0	J-588	J-268	364	9.28	0.02	0.01	0.11	101
445	8.0	J-773	J-774	760	16.50	0.01	0.01	0.11	130
777	8.0	J-757	J-755	762	-16.01	0.01	0.01	0.10	100
651	10.0	J-161	J-629	817	25.00	0.01	0.01	0.10	110
P-186	12.0	J-488	J-858	621	36.00	0.01	0.00	0.10	130
P-202	6.0	J-746	J-132	689	8.77	0.02	0.01	0.10	100
594	6.0	J-134	J-135	52	8.73	0.01	0.00	0.10	140
P-136	6.0	J-843	J-135	258	-8.73	0.02	0.00	0.10	100
122	8.0	J-361	J-688	791	15.50	0.01	0.01	0.10	110
133	6.0	J-499	J-493	1,056	8.71	0.02	0.02	0.10	100
198	8.0	J-621	J-622	437	15.23	0.01	0.00	0.10	130
751	8.0	J-226	J-227	111	-15.07	0.01	0.00	0.10	120
578	6.0	J-214	J-748	683	8.44	0.02	0.01	0.10	101
587	4.0	J-343	J-346	179	3.74	0.02	0.00	0.10	130
P-39	12.0	J-195	J-153	63	33.60	0.01	0.00	0.10	100
P-277	8.0	J-228	J-754	66	-14.93	0.01	0.00	0.10	100
552	8.0	J-437	J-776	994	14.91	0.01	0.01	0.10	110
162	8.0	J-502	J-791	882	14.86	0.01	0.01	0.09	130
P-228	8.0	J-831	J-806	685	14.63	0.01	0.01	0.09	100
P-172	6.0	J-578	J-810	428	8.01	0.02	0.01	0.09	100
170	8.0	J-813	J-570	943	14.19	0.01	0.01	0.09	110
P-139	6.0	J-134	J-77	1	7.94	0.02	0.00	0.09	100
P-141	6.0	J-77	J-134	1	-7.94	0.02	0.00	0.09	100
P-298	8.0	J-756	J-327	249	13.92	0.01	0.00	0.09	110
55	8.0	J-166	J-518	527	-13.83	0.01	0.01	0.09	101
21	10.0	J-851	J-633	2,127	-21.57	0.01	0.02	0.09	100
465	6.0	J-545	J-546	341	7.70	0.01	0.00	0.09	101
P-135	6.0	J-445	J-843	5	-7.62	0.02	0.00	0.09	100
345	6.0	J-14	J-271	459	7.61	0.01	0.01	0.09	110
626	8.0	J-614	J-615	408	13.51	0.01	0.00	0.09	120
635	12.0	J-122	J-150	60	-29.73	0.01	0.00	0.08	90
56	8.0	J-753	J-671	743	-13.14	0.01	0.01	0.08	101
64	12.0	J-21	J-22	5	29.23	0.01	0.00	0.08	100
325	8.0	J-351	J-457	312	12.84	0.01	0.00	0.08	101
105	8.0	J-33	J-34	11	-12.73	0.01	0.00	0.08	120
95	6.0	J-73	J-574	356	-7.13	0.01	0.00	0.08	100
P-235	12.0	J-719	J-403	108	28.42	0.00	0.00	0.08	130
125	8.0	J-423	J-342	1,182	12.58	0.01	0.01	0.08	130
288	8.0	J-530	J-724	608	12.54	0.01	0.01	0.08	100
57	8.0	J-606	J-607	395	-12.50	0.01	0.00	0.08	100
89	8.0	J-376	J-377	213	12.46	0.01	0.00	0.08	120

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
234	8.0	J-604	J-377	510	-12.46	0.01	0.00	0.08	120
P-22	8.0	J-470	J-376	187	12.46	0.01	0.00	0.08	130
P-21	8.0	J-517	J-470	139	12.46	0.01	0.00	0.08	130
23	12.0	J-847	J-598	1,656	-27.81	0.00	0.01	0.08	110
497	8.0	J-226	J-375	212	12.32	0.01	0.00	0.08	101
397	6.0	J-460	J-461	282	-6.91	0.01	0.00	0.08	120
P-57	8.0	J-400	J-110	1,121	12.28	0.01	0.01	0.08	110
513	8.0	J-37	J-648	467	12.10	0.01	0.00	0.08	101
548	8.0	J-675	J-801	849	-11.96	0.01	0.01	0.08	110
711	12.0	J-78	J-79	23	26.68	0.00	0.00	0.08	120
P-226	8.0	J-224	J-613	55	11.67	0.01	0.00	0.07	110
200	8.0	J-638	J-654	480	11.28	0.00	0.00	0.07	130
320	8.0	J-761	J-125	722	-11.28	0.01	0.01	0.07	100
24	12.0	J-276	J-153	137	-25.26	0.00	0.00	0.07	100
649	12.0	J-638	J-639	449	-25.09	0.00	0.00	0.07	110
P-254	8.0	J-800	J-735	294	10.98	0.01	0.00	0.07	101
294	8.0	J-580	J-581	362	10.97	0.01	0.00	0.07	100
96	8.0	J-419	J-785	2,262	-10.93	0.00	0.01	0.07	120
142	8.0	J-782	J-757	876	-10.92	0.01	0.01	0.07	100
457	12.0	J-96	J-97	28	-24.29	0.00	0.00	0.07	120
244	8.0	J-303	J-786	880	10.63	0.01	0.01	0.07	100
P-81	12.0	J-852	J-187	333	-23.85	0.00	0.00	0.07	110
272	8.0	J-559	J-560	350	10.53	0.00	0.00	0.07	130
550	6.0	J-197	J-592	372	5.91	0.01	0.00	0.07	130
629	8.0	J-27	J-28	516	10.46	0.01	0.00	0.07	101
P-236	12.0	J-403	J-214	1,056	23.39	0.00	0.00	0.07	130
176	10.0	J-161	J-162	67	16.05	0.01	0.00	0.07	101
P-182	12.0	J-391	J-631	647	23.09	0.00	0.00	0.07	130
261	8.0	J-508	J-749	783	-10.25	0.00	0.00	0.07	130
693	8.0	J-255	J-256	121	10.20	0.01	0.00	0.07	100
413	10.0	J-92	J-484	1,311	15.91	0.00	0.01	0.06	110
454	8.0	J-500	J-501	303	10.08	0.00	0.00	0.06	130
37	8.0	J-698	J-500	602	10.08	0.00	0.00	0.06	130
P-143	8.0	J-234	J-738	201	10.02	0.00	0.00	0.06	130
P-37	12.0	J-276	J-217	447	22.27	0.00	0.00	0.06	100
P-11	12.0	J-858	J-334	1,229	21.86	0.00	0.00	0.06	110
615	8.0	J-120	J-121	41	9.65	0.01	0.00	0.06	110
774	8.0	J-505	J-431	743	9.56	0.01	0.00	0.06	101
P-247	12.0	J-822	J-395	621	20.94	0.00	0.00	0.06	110
39	8.0	J-281	J-282	142	9.26	0.00	0.00	0.06	120
416	8.0	J-775	J-776	862	-9.19	0.00	0.00	0.06	130
194	12.0	J-674	J-122	526	20.54	0.00	0.00	0.06	110
P-86	12.0	J-625	J-733	12	19.89	0.00	0.00	0.06	120
P-89	12.0	J-427	J-318	267	19.89	0.00	0.00	0.06	120
P-90	12.0	J-318	J-625	579	19.89	0.00	0.00	0.06	120

Active Scenario: Peak Hour Demand-Buildout
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Steady State Analysis

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P-92	12.0	J-167	J-427	1,458	19.89	0.00	0.00	0.06	120
P-35	12.0	J-585	J-838	7	-19.87	0.00	0.00	0.06	100
253	8.0	J-488	J-489	295	8.67	0.00	0.00	0.06	140
P-187	8.0	J-489	J-623	7	8.67	0.00	0.00	0.06	120
P-188	8.0	J-623	J-512	325	8.67	0.00	0.00	0.06	120
106	6.0	J-591	J-721	609	4.86	0.00	0.00	0.06	130
223	12.0	J-804	J-96	2,519	-19.35	0.00	0.01	0.05	120
P-32	12.0	J-626	J-804	794	-19.35	0.00	0.00	0.05	130
661	8.0	J-342	J-343	177	8.53	0.00	0.00	0.05	130
183	8.0	J-586	J-587	363	8.52	0.00	0.00	0.05	101
92	6.0	J-359	J-360	192	4.79	0.01	0.00	0.05	101
398	6.0	J-764	J-516	803	-4.76	0.00	0.00	0.05	120
P-224	6.0	J-461	J-516	150	4.76	0.00	0.00	0.05	120
260	8.0	J-683	J-684	542	-8.37	0.00	0.00	0.05	101
P-106	8.0	J-655	J-815	509	8.37	0.00	0.00	0.05	101
712	12.0	J-79	J-372	206	18.74	0.00	0.00	0.05	120
540	8.0	J-254	J-285	388	8.09	0.00	0.00	0.05	101
551	8.0	J-590	J-595	378	8.07	0.00	0.00	0.05	130
173	8.0	J-571	J-645	472	8.00	0.00	0.00	0.05	101
P-262	8.0	J-424	J-328	70	8.00	0.00	0.00	0.05	120
P-261	8.0	J-327	J-424	98	8.00	0.00	0.00	0.05	120
377	8.0	J-395	J-396	242	7.94	0.00	0.00	0.05	120
P-84	12.0	J-733	J-852	1,296	-17.71	0.00	0.00	0.05	120
621	6.0	J-378	J-544	340	-4.42	0.00	0.00	0.05	120
P-280	8.0	J-819	J-229	14	7.85	0.00	0.00	0.05	100
P-68	12.0	J-492	J-99	16	17.54	0.00	0.00	0.05	100
289	8.0	J-299	J-300	150	7.77	0.00	0.00	0.05	101
81	8.0	J-38	J-641	457	7.77	0.00	0.00	0.05	101
5	8.0	J-381	J-779	768	7.77	0.00	0.00	0.05	130
P-55	8.0	J-110	J-579	9	7.71	0.00	0.00	0.05	140
P-160	6.0	J-604	J-759	633	-4.33	0.01	0.00	0.05	90
17	8.0	J-787	J-788	821	-7.70	0.00	0.00	0.05	130
121	8.0	J-582	J-583	384	-7.62	0.00	0.00	0.05	101
361	6.0	J-430	J-506	315	4.27	0.00	0.00	0.05	130
P-158	8.0	J-684	J-637	271	-7.58	0.00	0.00	0.05	90
281	8.0	J-720	J-299	625	-7.46	0.00	0.00	0.05	100
547	6.0	J-557	J-558	347	4.19	0.00	0.00	0.05	100
657	8.0	J-636	J-637	440	-7.25	0.00	0.00	0.05	101
414	12.0	J-93	J-131	941	16.29	0.00	0.00	0.05	130
P-350	8.0	J-45	J-194	28	-7.19	0.00	0.00	0.05	101
124	8.0	J-788	J-833	1,278	7.18	0.00	0.00	0.05	130
484	8.0	J-369	J-157	200	7.04	0.00	0.00	0.04	101
444	8.0	J-584	J-585	362	-7.03	0.00	0.00	0.04	100
218	8.0	J-19	J-20	4	6.95	0.00	0.00	0.04	130
88	8.0	J-334	J-19	203	6.95	0.00	0.00	0.04	130

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P-10	8.0	J-20	J-365	357	6.95	0.00	0.00	0.04	80
P-13	8.0	J-365	J-480	5	6.95	0.01	0.00	0.04	80
P-178	8.0	J-353	J-759	195	6.81	0.00	0.00	0.04	90
307	8.0	J-650	J-736	669	6.80	0.00	0.00	0.04	101
P-242	8.0	J-840	J-345	135	6.80	0.00	0.00	0.04	130
764	6.0	J-564	J-821	1,000	3.82	0.00	0.00	0.04	100
323	8.0	J-831	J-832	1,202	6.73	0.00	0.00	0.04	110
P-180	8.0	J-352	J-353	351	6.72	0.00	0.00	0.04	90
P-163	12.0	J-334	J-661	381	14.90	0.00	0.00	0.04	110
P-164	12.0	J-661	J-517	222	14.90	0.00	0.00	0.04	110
102	6.0	J-235	J-236	109	3.67	0.00	0.00	0.04	140
314	10.0	J-349	J-277	180	10.17	0.00	0.00	0.04	101
P-38	12.0	J-217	J-163	580	14.48	0.00	0.00	0.04	100
123	8.0	J-576	J-577	362	6.43	0.00	0.00	0.04	130
242	8.0	J-206	J-630	460	6.43	0.00	0.00	0.04	101
P-137	6.0	J-348	J-76	153	-3.60	0.00	0.00	0.04	140
315	8.0	J-277	J-278	149	6.35	0.00	0.00	0.04	101
P-119	8.0	J-668	J-222	502	-6.28	0.00	0.00	0.04	130
723	8.0	J-34	J-254	119	6.20	0.00	0.00	0.04	100
616	8.0	J-121	J-421	244	6.13	0.00	0.00	0.04	110
466	12.0	J-474	J-475	278	13.66	0.00	0.00	0.04	101
151	12.0	J-41	J-42	13	13.65	0.00	0.00	0.04	120
68	6.0	J-45	J-46	14	3.37	0.00	0.00	0.04	140
59	8.0	J-770	J-710	760	-5.91	0.00	0.00	0.04	100
622	6.0	J-247	J-248	118	-3.30	0.00	0.00	0.04	120
603	8.0	J-801	J-802	854	5.76	0.00	0.00	0.04	100
P-234	6.0	J-823	J-665	587	3.22	0.00	0.00	0.04	101
422	12.0	J-555	J-556	346	12.71	0.00	0.00	0.04	120
248	8.0	J-353	J-354	201	-5.62	0.00	0.00	0.04	80
P-20	8.0	J-441	J-354	52	5.62	0.00	0.00	0.04	80
P-19	8.0	J-480	J-441	170	5.62	0.00	0.00	0.04	80
473	8.0	J-618	J-226	953	5.62	0.00	0.00	0.04	120
399	6.0	J-764	J-460	869	-3.09	0.00	0.00	0.04	120
718	6.0	J-688	J-583	578	-3.04	0.00	0.00	0.03	100
381	8.0	J-731	J-732	634	-5.24	0.00	0.00	0.03	130
535	6.0	J-738	J-739	732	2.92	0.00	0.00	0.03	130
614	8.0	J-120	J-627	441	5.09	0.00	0.00	0.03	101
94	8.0	J-72	J-73	21	-5.03	0.00	0.00	0.03	100
243	8.0	J-303	J-304	154	5.01	0.00	0.00	0.03	80
P-110	6.0	J-359	J-514	126	2.78	0.00	0.00	0.03	101
282	8.0	J-149	J-606	399	-4.85	0.00	0.00	0.03	101
P-169	6.0	J-237	J-126	9	2.71	0.00	0.00	0.03	130
215	6.0	J-578	J-238	429	-2.71	0.00	0.00	0.03	130
P-170	6.0	J-126	J-238	110	2.71	0.00	0.00	0.03	130
483	6.0	J-157	J-158	62	2.70	0.00	0.00	0.03	120

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609	6.0	J-158	J-366	281	2.70	0.00	0.00	0.03	120
P-175	8.0	J-837	J-778	90	-4.79	0.00	0.00	0.03	100
347	8.0	J-336	J-272	700	-4.76	0.00	0.00	0.03	110
P-184	12.0	J-858	J-632	63	10.70	0.00	0.00	0.03	130
355	12.0	J-251	J-588	1,011	10.63	0.00	0.00	0.03	120
627	8.0	J-556	J-807	1,367	4.71	0.00	0.00	0.03	120
545	8.0	J-155	J-156	62	4.71	0.00	0.00	0.03	101
572	6.0	J-430	J-513	317	2.63	0.00	0.00	0.03	90
724	8.0	J-254	J-568	756	-4.66	0.00	0.00	0.03	100
669	8.0	J-575	J-42	359	-4.64	0.00	0.00	0.03	130
443	8.0	J-531	J-532	331	4.49	0.00	0.00	0.03	140
P-34	12.0	J-698	J-626	57	-10.08	0.00	0.00	0.03	130
4	12.0	J-233	J-234	109	10.02	0.00	0.00	0.03	130
191	8.0	J-497	J-498	312	4.27	0.00	0.00	0.03	101
P-41	8.0	J-694	J-423	137	-4.24	0.00	0.00	0.03	130
653	12.0	J-494	J-495	300	9.51	0.00	0.00	0.03	90
380	8.0	J-224	J-225	103	4.19	0.00	0.00	0.03	120
563	8.0	J-703	J-704	602	-4.19	0.00	0.00	0.03	110
P-30	12.0	J-281	J-626	584	-9.26	0.00	0.00	0.03	130
415	8.0	J-437	J-438	261	4.04	0.00	0.00	0.03	101
254	8.0	J-632	J-367	1,287	4.04	0.00	0.00	0.03	130
642	12.0	J-419	J-420	243	9.06	0.00	0.00	0.03	110
595	8.0	J-79	J-487	294	3.97	0.00	0.00	0.03	130
P-349	8.0	J-388	J-45	192	-3.82	0.00	0.00	0.02	101
475	10.0	J-373	J-374	212	5.91	0.00	0.00	0.02	101
404	6.0	J-403	J-404	483	2.10	0.00	0.00	0.02	120
6	12.0	J-834	J-687	1,128	-8.07	0.00	0.00	0.02	110
730	6.0	J-197	J-198	87	2.01	0.00	0.00	0.02	110
643	12.0	J-657	J-419	482	7.99	0.00	0.00	0.02	110
537	8.0	J-332	J-333	172	3.52	0.00	0.00	0.02	140
698	8.0	J-428	J-429	253	3.52	0.00	0.00	0.02	101
P-173	8.0	J-810	J-750	838	3.52	0.00	0.00	0.02	100
362	8.0	J-307	J-716	620	3.45	0.00	0.00	0.02	130
P-116	8.0	J-765	J-701	549	3.42	0.00	0.00	0.02	100
69	8.0	J-46	J-240	117	3.37	0.00	0.00	0.02	140
P-248	12.0	J-395	J-829	409	7.47	0.00	0.00	0.02	110
695	8.0	J-148	J-149	55	-3.22	0.00	0.00	0.02	101
P-56	8.0	J-579	J-111	28	3.22	0.00	0.00	0.02	140
469	12.0	J-193	J-194	83	7.19	0.00	0.00	0.02	101
566	12.0	J-662	J-659	500	7.19	0.00	0.00	0.02	130
713	12.0	J-372	J-588	829	6.94	0.00	0.00	0.02	120
640	12.0	J-553	J-554	346	-6.80	0.00	0.00	0.02	101
449	8.0	J-154	J-443	754	3.01	0.00	0.00	0.02	100
450	8.0	J-693	J-694	564	3.01	0.00	0.00	0.02	130
168	12.0	J-153	J-154	61	6.60	0.00	0.00	0.02	100

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-192	8.0	J-767	J-793	229	-2.91	0.00	0.00	0.02	100
P-294	8.0	J-327	J-465	111	2.78	0.00	0.00	0.02	110
519	8.0	J-465	J-466	274	2.78	0.00	0.00	0.02	140
P-75	12.0	J-714	J-23	453	6.13	0.00	0.00	0.02	100
P-79	12.0	J-714	J-852	198	-6.13	0.00	0.00	0.02	110
691	8.0	J-235	J-319	326	-2.27	0.00	0.00	0.01	100
648	8.0	J-621	J-847	1,628	2.11	0.00	0.00	0.01	110
93	8.0	J-504	J-72	303	-2.10	0.00	0.00	0.01	100
278	8.0	J-25	J-26	8	2.03	0.00	0.00	0.01	140
204	10.0	J-478	J-199	285	-3.07	0.00	0.00	0.01	130
P-347	8.0	J-396	J-412	616	1.81	0.00	0.00	0.01	120
P-348	8.0	J-412	J-434	24	1.81	0.00	0.00	0.01	120
378	12.0	J-536	J-214	334	-3.89	0.00	0.00	0.01	130
P-284	12.0	J-94	J-666	292	3.89	0.00	0.00	0.01	100
364	8.0	J-814	J-797	3,156	-1.66	0.00	0.00	0.01	130
159	8.0	J-420	J-112	1,472	1.65	0.00	0.00	0.01	110
47	12.0	J-203	J-204	89	3.45	0.00	0.00	0.01	101
447	10.0	J-209	J-210	90	2.33	0.00	0.00	0.01	101
452	10.0	J-217	J-218	95	2.25	0.00	0.00	0.01	101
P-273	12.0	J-455	J-524	4	-3.22	0.00	0.00	0.01	100
P-124	12.0	J-745	J-482	284	3.22	0.00	0.00	0.01	130
P-43	12.0	J-443	J-693	156	3.01	0.00	0.00	0.01	100
P-15	8.0	J-480	J-490	179	1.33	0.00	0.00	0.01	120
250	8.0	J-176	J-177	74	-1.33	0.00	0.00	0.01	120
249	8.0	J-352	J-176	190	-1.33	0.00	0.00	0.01	120
P-16	8.0	J-490	J-177	207	1.33	0.00	0.00	0.01	120
641	12.0	J-420	J-112	1,080	2.54	0.00	0.00	0.01	110
P-133	8.0	J-843	J-542	45	1.10	0.00	0.00	0.01	100
P-162	12.0	J-517	J-495	1,538	2.44	0.00	0.00	0.01	110
312	8.0	J-149	J-606	1,204	-1.07	0.00	0.00	0.01	101
720	12.0	J-284	J-642	457	-2.40	0.00	0.00	0.01	100
768	8.0	J-675	J-198	549	1.06	0.00	0.00	0.01	110
196	12.0	J-130	J-131	43	-2.33	0.00	0.00	0.01	130
663	12.0	J-610	J-611	395	-2.33	0.00	0.00	0.01	120
P-62	12.0	J-74	J-145	24	2.18	0.00	0.00	0.01	120
P-40	12.0	J-153	J-196	25	1.73	0.00	0.00	0.00	100
628	12.0	J-807	J-556	1,805	1.72	0.00	0.00	0.00	120
772	8.0	J-227	J-390	889	0.39	0.00	0.00	0.00	120
150	8.0	J-42	J-676	1,238	-0.03	0.00	0.00	0.00	120
P-28	8.0	J-212	J-258	33	0.00	0.00	0.00	0.00	130
P-26	10.0	J-706	J-306	45	0.00	0.00	0.00	0.00	130
586	10.0	J-661	J-306	494	0.00	0.00	0.00	0.00	130
P-24	8.0	J-53	J-706	735	0.00	0.00	0.00	0.00	130
P-29	12.0	J-258	J-281	15	0.00	0.00	0.00	0.00	130
201	8.0	J-53	J-54	15	0.00	0.00	0.00	0.00	130

Active Scenario: Peak Hour Demand-Buildout
FlexTable: Pipe Table
Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
P-25	10.0	J-305	J-706	109	0.00	0.00	0.00	0.00	130
P-44	12.0	J-693	J-444	108	0.00	0.00	0.00	0.00	100
P-292	8.0	J-465	J-643	18	0.00	0.00	0.00	0.00	110
P-339	12.0	J-631	PRV-3	277	0.00	0.00	0.00	0.00	130
P-342	6.0	PRV-2	J-769	469	0.00	0.00	0.00	0.00	100
P-341	6.0	J-762	PRV-2	301	0.00	0.00	0.00	0.00	100
P-340	12.0	PRV-3	J-632	161	0.00	0.00	0.00	0.00	130
130	12.0	J-283	J-284	143	0.00	0.00	0.00	0.00	100
P-151	8.0	J-777	J-321	14	0.00	0.00	0.00	0.00	140
P-220	12.0	J-850	J-682	60	0.00	0.00	0.00	0.00	120
P-49	12.0	J-726	J-848	40	0.00	0.00	0.00	0.00	100
P-306	12.0	PRV-1	J-283	29	0.00	0.00	0.00	0.00	100
P-33	12.0	J-803	J-698	9	0.00	0.00	0.00	0.00	130
P-65	12.0	J-616	J-569	50	0.00	0.00	0.00	0.00	100
33	12.0	J-23	J-24	5	0.00	0.00	0.00	0.00	140
P-243	12.0	J-828	J-344	13	0.00	0.00	0.00	0.00	110
371	8.0	J-35	J-36	12	0.00	0.00	0.00	0.00	140
P-305	12.0	J-31	PRV-1	314	0.00	0.00	0.00	0.00	100
780	12.0	J-112	J-113	38	0.00	0.00	0.00	0.00	110
P-337	12.0	J-495	PRV-4	148	0.00	0.00	0.00	0.00	110
P-338	12.0	PRV-4	J-638	1,166	0.00	0.00	0.00	0.00	110
P-166	6.0	J-259	J-392	11	0.00	0.00	0.00	0.00	130
214	6.0	J-126	J-127	43	0.00	0.00	0.00	0.00	130
P-23	8.0	J-705	J-53	159	0.00	0.00	0.00	0.00	130
P-76	12.0	J-23	J-715	218	0.00	0.00	0.00	0.00	100
430	8.0	J-261	J-262	125	0.00	0.00	0.00	0.00	140
109	12.0	J-511	J-628	435	0.00	0.00	0.00	0.00	101
P-87	8.0	J-317	J-261	25	0.00	0.00	0.00	0.00	140
426	8.0	J-479	J-262	288	0.00	0.00	0.00	0.00	140
155	8.0	J-169	J-170	76	0.00	0.00	0.00	0.00	140
P-88	8.0	J-261	J-318	135	0.00	0.00	0.00	0.00	140
360	6.0	J-213	J-214	120	0.00	0.00	0.00	0.00	120
386	12.0	J-536	J-566	850	0.00	0.00	0.00	0.00	130
128	8.0	J-230	J-170	141	0.00	0.00	0.00	0.00	140
596	8.0	J-372	J-612	451	0.00	0.00	0.00	0.00	120
528	8.0	J-424	J-425	332	0.00	0.00	0.00	0.00	120
P-303	8.0	J-3	J-861	503	0.00	0.00	0.00	0.00	110
610	6.0	J-142	J-143	53	0.00	0.00	0.00	0.00	120
425	8.0	J-522	J-523	325	0.00	0.00	0.00	0.00	80
429	8.0	J-625	J-522	425	0.00	0.00	0.00	0.00	80
190	12.0	J-295	J-296	151	0.00	0.00	0.00	0.00	130
392	6.0	J-412	J-413	237	0.00	0.00	0.00	0.00	120
567	8.0	J-658	J-174	510	0.00	0.00	0.00	0.00	130
7	8.0	J-24	J-680	546	0.00	0.00	0.00	0.00	110
335	6.0	J-245	J-246	118	0.00	0.00	0.00	0.00	80

Active Scenario: Peak Hour Demand-Buildout

FlexTable: Pipe Table

Steady State Analysis

Label	Diameter (in)	Start Node	Stop Node	Length (Scaled) (ft)	Flow (gpm)	Headloss Gradient (ft/1000ft)	Headloss (Friction) (ft)	Velocity (ft/s)	Hazen-Williams C
702	8.0	J-431	J-432	256	0.00	0.00	0.00	0.00	101
P-17	8.0	J-441	J-142	230	0.00	0.00	0.00	0.00	80
P-27	8.0	J-257	J-212	90	0.00	0.00	0.00	0.00	130
P-100	8.0	J-712	J-718	620	0.00	0.00	0.00	0.00	120
P-18	8.0	J-142	J-442	40	0.00	0.00	0.00	0.00	80
612	8.0	J-623	J-624	457	0.00	0.00	0.00	0.00	120
600	6.0	J-172	J-358	191	0.00	0.00	0.00	0.00	101
P-58	8.0	J-110	J-836	20	0.00	0.00	0.00	0.00	110
767	8.0	J-341	J-520	460	0.00	0.00	0.00	0.00	101
118	4.0	J-185	J-186	92	0.00	0.00	0.00	0.00	140
638	8.0	J-794	J-795	840	0.00	0.00	0.00	0.00	101
427	10.0	J-733	J-355	674	0.00	0.00	0.00	0.00	120
428	8.0	J-355	J-356	184	0.00	0.00	0.00	0.00	120
87	8.0	J-490	J-491	304	0.00	0.00	0.00	0.00	120
P-78	6.0	J-605	J-230	143	0.00	0.00	0.00	0.00	100
P-9	8.0	J-597	J-20	44	0.00	0.00	0.00	0.00	80
P-174	8.0	J-750	J-811	128	0.00	0.00	0.00	0.00	100
564	2.0	J-174	J-175	74	0.00	0.00	0.00	0.00	130
38	6.0	J-211	J-212	90	0.00	0.00	0.00	0.00	120
781	8.0	J-157	J-249	118	0.00	0.00	0.00	0.00	101
387	2.0	J-566	J-567	354	0.00	0.00	0.00	0.00	101
90	2.0	J-470	J-471	309	0.00	0.00	0.00	0.00	130
688	12.0	J-426	J-427	251	0.00	0.00	0.00	0.00	120
P-354	12.0	J-553	J-847	714	0.00	0.00	0.00	0.00	130

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-645	High Service	442.00	546.66	20	4	20	23
J-571	High Service	415.51	652.79	20	22	31	20
J-769	High Service	312.79	665.72	20	-58	20	21
J-647	High Service	371.61	675.62	20	39	49	20
J-483	High Service	365.11	693.93	20	40	50	20
J-478	High Service	422.78	694.97	20	12	24	20
J-199	High Service	421.00	694.97	20	14	25	20
J-200	High Service	421.49	695.00	20	14	25	20
J-93	High Service	432.24	695.29	20	9	20	20
J-130	High Service	417.77	695.29	20	14	26	20
J-131	High Service	418.68	695.29	20	14	26	20
J-92	High Service	432.80	695.29	20	9	20	20
J-484	High Service	351.91	697.23	20	45	56	20
J-38	High Service	311.00	701.65	20	0	42	20
J-37	High Service	311.00	701.65	20	-1	42	20
J-648	High Service	296.75	701.65	20	-1	45	20
J-641	High Service	340.75	701.74	20	-19	26	20
J-688	High Service	328.97	701.78	20	28	52	20
J-361	High Service	351.85	701.78	20	21	43	20
J-740	High Service	324.00	701.78	20	46	62	20
J-754	High Service	303.46	701.78	20	52	69	20
J-755	High Service	368.98	701.78	20	20	39	20
J-819	High Service	304.05	701.78	20	52	69	20
J-362	High Service	362.71	701.78	20	17	39	20
J-583	High Service	313.13	701.78	20	32	57	20
J-95	High Service	324.00	701.78	20	46	62	20
J-695	High Service	322.34	701.78	20	58	68	20
J-757	High Service	303.87	701.78	20	48	67	20
J-94	High Service	324.00	701.78	20	46	62	20
J-582	High Service	328.62	701.78	20	19	48	20
J-782	High Service	319.29	701.78	20	43	61	20
J-284	High Service	295.14	701.78	20	56	73	20
J-666	High Service	323.00	701.78	20	46	62	20
J-687	High Service	335.28	701.78	20	-1	37	20
J-779	High Service	312.17	701.78	20	30	57	20
J-834	High Service	337.96	701.78	20	-4	35	20
J-766	High Service	304.98	701.78	20	40	63	20
J-502	High Service	321.20	701.78	20	47	63	20
J-229	High Service	304.77	701.78	20	52	69	20
J-642	High Service	304.45	701.78	20	52	69	20
J-380	High Service	305.73	701.78	20	43	64	20
J-381	High Service	304.94	701.78	20	40	63	20
J-791	High Service	372.34	701.78	20	17	37	20

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-228	High Service	301.87	701.78	20	52	70	20
J-503	High Service	317.42	701.78	20	48	64	20
J-760	High Service	372.11	701.78	20	17	37	20
J-586	High Service	327.91	718.77	20	56	66	20
J-587	High Service	331.62	718.78	20	50	62	20
J-570	High Service	398.67	737.81	20	33	39	20
J-813	High Service	318.95	776.09	20	67	73	20
J-654	High Service	430.41	853.26	20	14	20	23
J-821	High Service	260.57	886.95	20	-11	20	23
J-343	High Service	428.08	913.17	20	19	23	20
J-342	High Service	421.14	962.92	20	24	26	20
J-638	High Service	414.27	972.45	20	25	27	20
J-498	High Service	281.80	997.95	20	13	20	22
J-639	High Service	414.04	999.25	20	26	27	20
J-785	High Service	385.14	1,023.77	20	35	36	20
J-497	High Service	273.00	1,027.32	20	21	24	20
J-741	High Service	314.95	1,042.77	20	22	20	23
J-420	High Service	298.29	1,052.17	20	75	75	20
J-113	High Service	270.13	1,052.17	20	86	86	20
J-419	High Service	304.80	1,052.18	20	73	73	20
J-112	High Service	272.13	1,052.19	20	85	85	20
J-657	High Service	319.37	1,053.52	20	67	67	20
J-279	High Service	306.72	1,053.84	20	67	67	20
J-598	High Service	306.11	1,053.92	20	71	71	20
J-847	High Service	303.53	1,054.24	20	71	71	20
J-621	High Service	306.13	1,055.17	20	66	65	20
J-622	High Service	323.07	1,055.17	20	55	54	20
J-288	High Service	356.93	1,056.44	20	52	52	20
J-287	High Service	368.79	1,057.19	20	47	47	20
J-173	High Service	293.92	1,089.71	20	85	84	20
J-629	High Service	387.93	1,095.48	20	39	38	20
J-82	High Service	297.19	1,097.70	20	83	82	20
J-83	High Service	298.43	1,098.02	20	82	82	20
J-846	High Service	395.08	1,103.43	20	41	40	20
J-406	High Service	371.87	1,106.73	20	51	50	20
J-405	High Service	368.00	1,107.21	20	53	52	20
J-161	High Service	374.38	1,108.80	20	44	43	20
J-162	High Service	371.38	1,108.80	20	45	44	20
J-652	High Service	388.14	1,110.80	20	23	20	23
J-64	High Service	293.12	1,119.88	20	85	84	20
J-63	High Service	292.56	1,120.99	20	85	84	20
J-319	High Service	292.73	1,122.22	20	85	84	20
J-649	High Service	275.00	1,125.71	20	91	90	20

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-745	High Service	361.79	1,128.81	20	56	55	20
J-482	High Service	373.41	1,128.89	20	50	49	20
J-481	High Service	361.14	1,129.34	20	56	55	20
J-298	High Service	373.45	1,130.52	20	46	45	20
J-320	High Service	299.65	1,139.95	20	82	81	20
J-297	High Service	371.00	1,143.76	20	48	46	20
J-744	High Service	346.41	1,148.49	20	62	61	20
J-233	High Service	260.81	1,149.17	20	88	85	20
J-234	High Service	261.01	1,149.17	20	88	84	20
J-738	High Service	263.86	1,149.31	20	85	81	20
J-348	High Service	252.33	1,149.33	20	88	84	20
J-134	High Service	260.99	1,149.55	20	90	87	20
J-77	High Service	261.01	1,149.55	20	90	87	20
J-739	High Service	282.10	1,149.57	20	51	43	20
J-76	High Service	260.11	1,149.58	20	89	86	20
J-135	High Service	259.94	1,150.63	20	90	87	20
J-809	High Service	343.60	1,159.98	20	64	63	20
J-596	High Service	345.00	1,160.42	20	63	62	20
J-235	High Service	291.00	1,161.46	20	85	83	20
J-236	High Service	289.27	1,161.63	20	82	80	20
J-843	High Service	260.94	1,164.42	20	94	91	20
J-445	High Service	261.14	1,164.45	20	93	91	20
J-542	High Service	260.80	1,165.27	20	94	91	20
J-378	High Service	404.39	1,168.54	20	25	20	20
J-335	High Service	290.00	1,173.47	20	85	83	20
J-255	High Service	282.52	1,175.77	20	82	79	20
J-564	High Service	280.92	1,177.03	20	38	23	20
J-273	High Service	301.00	1,177.04	20	54	45	20
J-256	High Service	290.25	1,177.07	20	79	75	20
J-686	High Service	286.63	1,200.27	20	85	83	20
J-808	High Service	317.83	1,225.89	20	76	74	20
J-799	High Service	318.93	1,231.52	20	72	68	20
J-575	High Service	443.73	1,248.69	20	22	20	23
J-778	High Service	288.96	1,256.11	20	84	80	20
J-837	High Service	288.00	1,256.19	20	83	79	20
J-603	High Service	321.39	1,267.59	20	69	64	20
J-104	High Service	310.47	1,272.01	20	75	70	20
J-781	High Service	310.55	1,272.34	20	75	70	20
J-105	High Service	308.40	1,272.98	20	75	71	20
J-185	High Service	272.17	1,277.56	20	91	87	20
J-186	High Service	271.42	1,278.29	20	71	58	20
J-289	High Service	272.05	1,279.23	20	92	87	20
J-290	High Service	273.00	1,280.91	20	91	87	20

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-322	High Service	272.74	1,285.04	20	92	88	20
J-321	High Service	269.76	1,287.71	20	94	90	20
J-777	High Service	270.16	1,287.71	20	93	89	20
J-30	High Service	268.00	1,289.19	20	95	91	20
J-29	High Service	268.18	1,289.71	20	94	91	20
J-555	High Service	318.37	1,290.67	20	76	73	20
J-807	High Service	318.73	1,290.69	20	74	71	20
J-556	High Service	318.19	1,290.69	20	75	73	20
J-614	High Service	321.00	1,316.80	20	74	71	20
J-295	High Service	320.13	1,316.80	20	75	72	20
J-296	High Service	319.54	1,316.80	20	75	72	20
J-267	High Service	320.00	1,316.80	20	75	72	20
J-266	High Service	319.56	1,316.81	20	75	73	20
J-187	High Service	332.67	1,316.85	20	68	65	20
J-625	High Service	334.69	1,316.86	20	67	63	20
J-188	High Service	330.78	1,316.89	20	68	64	20
J-733	High Service	333.95	1,316.91	20	67	64	20
J-852	High Service	350.64	1,316.92	20	60	57	20
J-180	High Service	358.00	1,316.93	20	57	54	20
J-167	High Service	358.00	1,316.94	20	57	54	20
J-427	High Service	355.00	1,316.95	20	58	55	20
J-523	High Service	361.28	1,317.23	20	39	28	20
J-713	High Service	385.67	1,317.28	20	35	25	20
J-718	High Service	366.82	1,317.39	20	46	39	20
J-522	High Service	352.27	1,317.39	20	50	42	20
J-680	High Service	363.00	1,317.39	20	47	40	20
J-479	High Service	361.00	1,317.40	20	51	46	20
J-685	High Service	326.20	1,317.40	20	65	58	20
J-615	High Service	352.38	1,317.41	20	57	51	20
J-101	High Service	380.69	1,317.41	20	47	43	20
J-262	High Service	360.00	1,317.41	20	54	50	20
J-712	High Service	380.32	1,317.41	20	47	43	20
J-100	High Service	384.34	1,317.41	20	46	42	20
J-717	High Service	380.75	1,317.41	20	47	43	20
J-356	High Service	334.00	1,317.41	20	63	57	20
J-715	High Service	363.53	1,317.41	20	53	49	20
J-317	High Service	360.69	1,317.42	20	55	50	20
J-23	High Service	357.00	1,317.42	20	56	52	20
J-261	High Service	360.78	1,317.42	20	55	51	20
J-24	High Service	356.98	1,317.42	20	56	52	20
J-355	High Service	334.00	1,317.42	20	65	60	20
J-714	High Service	358.58	1,317.43	20	56	53	20
J-318	High Service	357.62	1,317.43	20	57	54	20

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-426	High Service	352.28	1,317.43	20	59	55	20
J-653	High Service	312.00	1,331.65	20	74	68	20
J-602	High Service	296.63	1,343.76	20	82	77	20
J-811	High Service	257.90	1,347.04	20	53	20	22
J-795	High Service	342.79	1,347.10	20	39	20	23
J-538	High Service	270.10	1,359.58	20	93	88	20
J-750	High Service	257.59	1,365.43	20	54	21	20
J-452	High Service	422.38	1,377.26	20	28	21	20
J-537	High Service	278.11	1,390.20	20	90	85	20
J-510	High Service	280.55	1,399.46	20	89	84	20
J-509	High Service	278.00	1,411.37	20	90	84	20
J-526	High Service	283.07	1,413.50	20	88	82	20
J-525	High Service	284.36	1,421.49	20	88	83	20
J-833	High Service	327.91	1,427.12	20	45	20	23
J-701	High Service	311.53	1,466.92	20	78	72	20
J-765	High Service	307.57	1,470.98	20	79	74	20
J-589	High Service	284.69	1,501.83	20	55	48	20
J-590	High Service	283.71	1,501.84	20	59	55	20
J-810	High Service	269.31	1,521.24	20	61	20	23
J-223	High Service	371.21	1,561.42	20	50	42	20
J-524	High Service	291.00	1,562.10	20	59	56	20
J-455	High Service	291.00	1,562.11	20	59	56	20
J-668	High Service	384.00	1,564.60	20	41	27	20
J-222	High Service	380.20	1,564.63	20	47	38	20
J-669	High Service	380.11	1,564.90	20	47	38	20
J-758	High Service	311.28	1,575.84	20	78	71	20
J-787	High Service	319.00	1,586.39	20	53	20	22
J-338	High Service	321.00	1,598.03	20	74	66	20
J-771	High Service	323.61	1,643.16	20	54	20	23
J-339	High Service	320.00	1,660.91	20	74	64	20
J-742	High Service	343.47	1,662.34	20	49	20	21
J-788	High Service	344.37	1,665.70	20	49	20	22
J-207	High Service	278.09	1,672.27	20	94	86	20
J-208	High Service	277.00	1,682.36	20	94	86	20
J-28	High Service	321.50	1,696.50	20	64	40	20
J-27	High Service	321.34	1,696.53	20	71	58	20
J-794	High Service	341.38	1,697.29	20	52	21	20
J-707	High Service	336.13	1,736.73	20	66	54	20
J-127	High Service	300.87	1,744.29	20	73	49	20
J-260	High Service	301.38	1,744.29	20	74	49	20
J-578	High Service	276.96	1,744.29	20	83	56	20
J-237	High Service	301.00	1,744.29	20	75	53	20
J-126	High Service	300.81	1,744.29	20	75	53	20

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-238	High Service	286.97	1,744.29	20	80	56	20
J-259	High Service	301.06	1,744.29	20	76	56	20
J-392	High Service	299.57	1,744.29	20	76	55	20
J-391	High Service	318.00	1,744.30	20	73	59	20
J-631	High Service	309.06	1,744.30	20	76	62	20
J-768	High Service	297.28	1,744.31	20	83	71	20
J-780	High Service	281.72	1,744.31	20	90	79	20
J-232	High Service	265.68	1,744.31	20	98	88	20
J-423	High Service	411.16	1,747.73	20	38	30	20
J-231	High Service	265.66	1,760.04	20	98	88	20
J-694	High Service	416.00	1,776.88	20	36	27	20
J-422	High Service	394.58	1,777.40	20	46	37	20
J-170	High Service	360.00	1,793.04	20	51	30	20
J-169	High Service	359.32	1,793.12	20	51	29	20
J-230	High Service	355.09	1,793.38	20	54	35	20
J-605	High Service	350.00	1,793.41	20	65	59	20
J-836	High Service	335.57	1,831.73	20	55	20	20
J-579	High Service	336.17	1,833.94	20	55	20	20
J-110	High Service	336.81	1,834.29	20	55	20	20
J-111	High Service	335.00	1,834.44	20	55	20	20
J-634	High Service	281.99	1,836.04	20	93	84	20
J-693	High Service	381.63	1,859.51	20	50	37	20
J-444	High Service	386.09	1,859.51	20	48	35	20
J-443	High Service	376.17	1,863.92	20	52	40	20
J-815	High Service	324.78	1,866.06	20	61	20	23
J-656	High Service	325.46	1,876.88	20	61	20	23
J-633	High Service	296.00	1,900.51	20	87	78	20
J-851	High Service	353.00	1,900.52	20	53	23	20
J-816	High Service	343.43	1,907.50	20	63	46	20
J-42	High Service	429.80	1,910.15	20	31	26	20
J-628	High Service	391.61	1,910.55	20	46	39	20
J-511	High Service	371.02	1,910.56	20	56	50	20
J-41	High Service	429.71	1,912.60	20	31	26	20
J-544	High Service	387.66	1,990.93	20	46	33	20
J-183	High Service	388.00	1,990.94	20	45	32	20
J-184	High Service	377.12	1,991.28	20	53	47	20
J-830	High Service	297.99	2,001.80	20	89	79	20
J-210	High Service	300.33	2,016.64	20	87	76	20
J-209	High Service	299.73	2,016.64	20	88	77	20
J-667	High Service	297.92	2,021.70	20	89	79	20
J-463	High Service	380.94	2,022.34	20	52	46	20
J-247	High Service	401.49	2,028.84	20	38	20	20
J-248	High Service	381.76	2,028.87	20	51	45	20

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-825	High Service	314.97	2,031.40	20	67	20	23
J-154	High Service	344.19	2,041.32	20	68	57	20
J-195	High Service	337.74	2,043.00	20	71	60	20
J-196	High Service	338.53	2,044.95	20	71	60	20
J-153	High Service	339.00	2,044.95	20	71	60	20
J-276	High Service	332.15	2,055.09	20	74	62	20
J-217	High Service	326.91	2,086.79	20	76	64	20
J-218	High Service	322.93	2,086.79	20	77	64	20
J-501	High Service	332.31	2,093.75	20	63	20	23
J-784	High Service	311.62	2,111.26	20	69	20	21
J-164	High Service	312.66	2,126.13	20	82	70	20
J-163	High Service	311.64	2,126.13	20	82	70	20
J-462	High Service	398.21	2,137.59	20	45	38	20
J-325	High Service	285.29	2,198.14	20	94	82	20
J-326	High Service	282.49	2,198.16	20	93	74	20
J-500	High Service	331.02	2,287.84	20	66	21	20
J-655	High Service	305.73	2,291.14	20	76	29	20
J-727	High Service	274.60	2,292.43	20	100	89	20
J-576	High Service	296.79	2,355.01	20	89	78	20
J-577	High Service	312.65	2,355.04	20	79	57	20
J-635	High Service	340.10	2,451.89	20	62	20	22
J-774	High Service	305.00	2,577.99	20	78	20	23
J-211	High Service	302.56	2,585.50	20	79	20	23
J-725	High Service	271.00	2,588.78	20	101	89	20
J-400	High Service	334.74	2,627.85	20	69	42	20
J-844	High Service	270.90	2,628.90	20	102	91	20
J-848	High Service	270.50	2,638.14	20	103	91	20
J-726	High Service	270.00	2,638.14	20	103	91	20
J-856	High Service	268.57	2,645.68	20	103	92	20
J-697	High Service	288.62	2,687.43	20	86	32	20
J-696	High Service	270.48	2,687.49	20	102	90	20
J-203	High Service	271.53	2,772.39	20	103	88	20
J-204	High Service	272.32	2,772.39	20	102	86	20
J-433	High Service	267.53	2,792.44	20	100	67	20
J-49	High Service	271.00	2,792.48	20	102	86	20
J-50	High Service	271.00	2,792.50	20	102	86	20
J-691	High Service	283.35	2,800.36	20	97	82	20
J-554	High Service	298.95	2,807.03	20	83	27	20
J-553	High Service	304.56	2,807.30	20	80	20	20
J-399	High Service	334.08	2,835.16	20	71	44	20
J-282	High Service	302.84	2,835.34	20	81	21	20
J-585	High Service	291.85	2,835.65	20	92	63	20
J-96	High Service	286.82	2,835.66	20	95	70	20

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-773	High Service	277.00	2,835.66	20	97	59	20
J-838	High Service	291.90	2,835.66	20	92	63	20
J-97	High Service	287.92	2,835.67	20	95	70	20
J-752	High Service	269.57	2,835.67	20	104	88	20
J-212	High Service	302.00	2,835.70	20	83	29	20
J-258	High Service	302.00	2,835.70	20	83	31	20
J-281	High Service	302.11	2,835.70	20	83	31	20
J-698	High Service	306.63	2,835.70	20	82	33	20
J-257	High Service	302.48	2,835.70	20	82	24	20
J-626	High Service	307.53	2,835.70	20	81	33	20
J-803	High Service	306.90	2,835.70	20	82	33	20
J-160	High Service	286.40	2,835.70	20	90	42	20
J-584	High Service	297.92	2,835.71	20	84	28	20
J-804	High Service	300.11	2,835.71	20	86	42	20
J-159	High Service	284.47	2,835.71	20	92	48	20
J-692	High Service	281.81	2,907.70	20	98	83	20
J-617	High Service	433.40	3,012.41	20	31	22	20
J-99	High Service	454.14	3,056.61	20	23	20	20
J-98	High Service	454.09	3,069.62	20	23	20	20
J-492	High Service	454.31	3,098.51	20	23	20	20
J-569	High Service	432.77	3,243.58	20	32	25	20
J-616	High Service	432.82	3,243.58	20	31	24	20
J-74	High Service	338.49	3,500.00	20	73	63	22
J-75	High Service	337.75	3,500.00	20	73	63	22
J-144	High Service	337.95	3,500.00	20	73	63	22
J-145	High Service	338.56	3,500.00	20	73	63	22
J-189	High Service	450.90	3,500.00	20	25	24	22
J-610	High Service	395.42	3,500.00	20	48	37	22
J-611	High Service	406.03	3,500.00	20	44	38	22
J-651	High Service	336.00	3,500.00	20	74	57	21
J-676	High Service	362.77	3,500.00	20	63	55	22
J-677	High Service	338.12	3,500.00	20	73	63	22
J-506	Low Service	395.91	613.09	20	-8	20	22
J-430	Low Service	401.88	652.50	20	1	20	23
J-513	Low Service	378.57	652.71	20	-11	21	20
J-573	Low Service	346.80	673.28	20	-28	20	31
J-572	Low Service	313.24	780.76	20	7	35	20
J-504	Low Service	263.26	851.47	20	-17	20	23
J-72	Low Service	264.00	867.17	20	-13	20	20
J-73	Low Service	264.00	868.44	20	-12	20	20
J-304	Low Service	380.76	906.05	20	14	20	29
J-308	Low Service	406.63	907.12	20	16	20	22
J-574	Low Service	267.46	960.46	20	7	20	21

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
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J-303	Low Service	365.68	976.46	20	24	27	20
J-721	Low Service	301.00	995.54	20	16	20	24
J-716	Low Service	385.66	1,007.14	20	23	24	20
J-307	Low Service	405.37	1,007.21	20	20	21	20
J-558	Low Service	258.38	1,076.57	20	23	20	24
J-786	Low Service	291.38	1,105.30	20	60	58	20
J-630	Low Service	356.10	1,121.00	20	23	20	20
J-206	Low Service	369.37	1,125.98	20	24	21	20
J-360	Low Service	301.40	1,154.57	20	30	20	31
J-764	Low Service	206.00	1,178.70	20	40	20	30
J-268	Low Service	375.69	1,189.59	20	26	20	23
J-514	Low Service	298.83	1,216.59	20	35	20	26
J-748	Low Service	312.80	1,218.38	20	33	20	30
J-460	Low Service	188.74	1,250.88	20	52	23	20
J-516	Low Service	201.00	1,258.97	20	49	20	20
J-802	Low Service	298.92	1,276.14	20	32	20	23
J-461	Low Service	199.55	1,283.64	20	54	23	20
J-205	Low Service	368.16	1,285.27	20	27	22	20
J-359	Low Service	306.15	1,294.54	20	39	20	22
J-735	Low Service	375.66	1,314.30	20	29	20	29
J-753	Low Service	353.85	1,325.20	20	32	20	23
J-675	Low Service	329.51	1,328.58	20	29	20	23
J-581	Low Service	285.25	1,341.49	20	66	60	20
J-515	Low Service	199.62	1,358.53	20	61	23	20
J-3	Low Service	394.00	1,369.58	20	28	20	30
J-592	Low Service	274.83	1,370.54	20	39	20	22
J-557	Low Service	259.56	1,372.52	20	42	20	21
J-198	Low Service	271.78	1,399.49	20	54	42	20
J-775	Low Service	321.77	1,423.00	20	31	20	25
J-832	Low Service	359.00	1,426.69	20	36	20	30
J-670	Low Service	392.00	1,432.57	20	28	20	25
J-388	Low Service	274.59	1,432.85	20	67	57	20
J-240	Low Service	255.54	1,432.87	20	77	68	20
J-46	Low Service	264.42	1,432.87	20	74	66	20
J-45	Low Service	265.23	1,432.87	20	74	66	20
J-193	Low Service	267.79	1,432.88	20	73	66	20
J-194	Low Service	263.64	1,432.88	20	75	68	20
J-591	Low Service	291.96	1,438.43	20	41	24	20
J-197	Low Service	270.00	1,447.38	20	54	41	20
J-409	Low Service	321.00	1,448.81	20	43	20	26
J-580	Low Service	301.87	1,454.67	20	58	52	20
J-413	Low Service	350.92	1,454.76	20	38	20	30
J-467	Low Service	365.29	1,455.52	20	29	24	20

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-671	Low Service	382.92	1,464.10	20	30	20	20
J-792	Low Service	382.82	1,466.76	20	30	20	20
J-429	Low Service	356.15	1,473.10	20	38	25	20
J-428	Low Service	351.15	1,473.18	20	43	33	20
J-293	Low Service	275.10	1,476.88	20	62	55	20
J-561	Low Service	282.44	1,482.70	20	66	58	20
J-801	Low Service	288.53	1,485.02	20	48	35	20
J-394	Low Service	267.13	1,486.87	20	75	67	20
J-469	Low Service	265.12	1,489.52	20	75	67	20
J-665	Low Service	276.32	1,520.12	20	55	20	30
J-294	Low Service	267.02	1,522.84	20	63	53	20
J-11	Low Service	348.44	1,532.74	20	46	36	20
J-800	Low Service	360.94	1,535.18	20	39	26	20
J-812	Low Service	355.14	1,536.81	20	39	20	31
J-446	Low Service	278.86	1,537.58	20	60	51	20
J-493	Low Service	337.10	1,550.71	20	42	35	20
J-283	Low Service	293.78	1,573.32	20	56	20	31
J-729	Low Service	314.03	1,579.14	20	49	20	31
J-363	Low Service	250.83	1,607.42	20	83	74	20
J-835	Low Service	320.00	1,612.94	20	49	42	20
J-560	Low Service	287.01	1,624.63	20	60	48	20
J-559	Low Service	314.22	1,624.65	20	51	43	20
J-386	Low Service	250.07	1,626.73	20	83	74	20
J-814	Low Service	231.90	1,646.84	20	71	20	30
J-528	Low Service	346.62	1,648.38	20	45	29	20
J-499	Low Service	300.83	1,656.63	20	57	50	20
J-202	Low Service	266.26	1,661.68	20	65	55	20
J-201	Low Service	267.00	1,663.10	20	65	55	20
J-364	Low Service	250.00	1,663.55	20	83	72	20
J-683	Low Service	277.24	1,664.00	20	61	20	31
J-447	Low Service	313.51	1,682.35	20	51	45	20
J-68	Low Service	284.00	1,685.61	20	66	58	20
J-67	Low Service	283.53	1,691.30	20	66	58	20
J-679	Low Service	290.21	1,691.86	20	58	43	20
J-636	Low Service	283.15	1,694.41	20	61	20	31
J-333	Low Service	301.70	1,699.15	20	53	20	24
J-776	Low Service	340.07	1,700.42	20	31	20	26
J-734	Low Service	346.00	1,701.08	20	47	32	20
J-519	Low Service	272.31	1,702.30	20	56	34	20
J-839	Low Service	346.00	1,706.02	20	47	32	20
J-155	Low Service	261.00	1,715.42	20	64	47	20
J-156	Low Service	261.61	1,715.42	20	63	45	20
J-736	Low Service	325.31	1,722.79	20	47	20	21

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-527	Low Service	340.88	1,743.91	20	50	34	20
J-546	Low Service	250.59	1,744.57	20	64	20	20
J-332	Low Service	284.00	1,754.26	20	62	28	20
J-278	Low Service	298.12	1,766.35	20	54	20	21
J-650	Low Service	326.00	1,774.71	20	56	42	20
J-609	Low Service	262.15	1,800.71	20	79	66	20
J-448	Low Service	316.56	1,806.41	20	49	41	20
J-608	Low Service	268.45	1,806.88	20	76	63	20
J-545	Low Service	241.00	1,808.78	20	87	73	20
J-438	Low Service	313.00	1,824.10	20	39	20	25
J-458	Low Service	272.00	1,844.75	20	74	60	20
J-451	Low Service	284.00	1,869.50	20	64	28	20
J-116	Low Service	271.00	1,869.97	20	76	64	20
J-117	Low Service	271.00	1,871.85	20	75	63	20
J-763	Low Service	291.26	1,872.98	20	74	61	20
J-404	Low Service	294.77	1,884.10	20	61	20	29
J-637	Low Service	290.63	1,886.16	20	64	20	23
J-277	Low Service	291.12	1,890.29	20	59	23	20
J-772	Low Service	284.53	1,894.17	20	70	56	20
J-518	Low Service	299.78	1,900.74	20	62	46	20
J-166	Low Service	292.77	1,901.10	20	58	26	20
J-547	Low Service	243.00	1,906.61	20	88	73	20
J-432	Low Service	303.00	1,907.33	20	59	20	29
J-861	Low Service	378.98	1,911.06	20	41	27	20
J-374	Low Service	287.30	1,926.87	20	60	20	21
J-182	Low Service	302.38	1,930.12	20	62	46	20
J-684	Low Service	271.04	1,932.08	20	72	24	20
J-366	Low Service	244.88	1,939.94	20	72	20	20
J-181	Low Service	304.55	1,946.84	20	61	44	20
J-349	Low Service	288.61	1,953.56	20	61	24	20
J-425	Low Service	277.26	1,953.91	20	65	20	20
J-593	Low Service	295.15	1,956.12	20	66	49	20
J-770	Low Service	319.95	1,960.81	20	57	20	30
J-4	Low Service	394.00	1,965.79	20	35	20	29
J-594	Low Service	298.13	1,968.42	20	64	48	20
J-437	Low Service	310.61	1,973.17	20	44	25	20
J-783	Low Service	264.12	1,977.07	20	74	21	20
J-756	Low Service	280.00	1,978.51	20	72	41	20
J-327	Low Service	277.05	1,978.58	20	70	33	20
J-424	Low Service	276.63	1,978.73	20	69	29	20
J-465	Low Service	276.00	1,978.76	20	69	29	20
J-643	Low Service	276.00	1,978.79	20	69	28	20
J-328	Low Service	278.00	1,978.83	20	68	27	20

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-466	Low Service	268.02	1,978.86	20	70	25	20
J-387	Low Service	290.00	1,978.88	20	63	24	20
J-5	Low Service	280.83	1,978.91	20	72	43	20
J-6	Low Service	280.79	1,978.91	20	72	43	20
J-179	Low Service	290.15	1,978.92	20	72	53	20
J-178	Low Service	296.69	1,978.92	20	70	52	20
J-568	Low Service	273.09	1,982.17	20	64	49	20
J-434	Low Service	330.06	1,985.74	20	56	29	20
J-389	Low Service	265.43	1,987.64	20	78	59	20
J-390	Low Service	268.98	1,996.10	20	74	51	20
J-373	Low Service	287.08	1,997.27	20	61	20	20
J-227	Low Service	284.99	2,007.81	20	68	46	20
J-412	Low Service	329.55	2,007.82	20	56	29	20
J-618	Low Service	314.91	2,007.89	20	56	36	20
J-375	Low Service	290.60	2,008.15	20	63	33	20
J-226	Low Service	290.87	2,008.43	20	65	43	20
J-703	Low Service	318.43	2,009.92	20	52	20	21
J-9	Low Service	256.30	2,015.35	20	83	66	20
J-10	Low Service	256.52	2,015.58	20	83	66	20
J-565	Low Service	315.00	2,018.53	20	53	20	21
J-408	Low Service	325.00	2,020.44	20	56	20	22
J-139	Low Service	301.00	2,021.12	20	62	41	20
J-138	Low Service	301.71	2,021.71	20	62	41	20
J-291	Low Service	316.19	2,026.60	20	62	45	20
J-415	Low Service	256.97	2,028.59	20	83	67	20
J-331	Low Service	316.00	2,039.49	20	53	20	21
J-644	Low Service	300.00	2,054.11	20	62	40	20
J-805	Low Service	244.01	2,070.99	20	89	72	20
J-157	Low Service	241.00	2,079.53	20	87	62	20
J-369	Low Service	239.00	2,079.53	20	91	73	20
J-842	Low Service	239.00	2,079.53	20	91	73	20
J-158	Low Service	242.00	2,079.55	20	84	53	20
J-249	Low Service	241.56	2,079.58	20	85	56	20
J-664	Low Service	245.63	2,084.59	20	88	72	20
J-678	Low Service	272.56	2,085.21	20	77	59	20
J-474	Low Service	307.25	2,086.81	20	62	44	20
J-762	Low Service	292.02	2,086.86	20	72	49	20
J-475	Low Service	310.43	2,087.06	20	60	40	20
J-806	Low Service	310.00	2,089.08	20	62	20	30
J-663	Low Service	263.04	2,092.26	20	81	65	20
J-737	Low Service	292.05	2,116.17	20	69	53	20
J-292	Low Service	312.67	2,126.60	20	64	46	20
J-613	Low Service	207.74	2,129.32	20	93	20	21

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-225	Low Service	204.34	2,129.98	20	95	20	22
J-431	Low Service	298.46	2,132.03	20	64	22	20
J-456	Low Service	298.30	2,141.47	20	56	44	20
J-174	Low Service	340.90	2,146.22	20	47	20	21
J-796	Low Service	312.30	2,147.58	20	61	44	20
J-224	Low Service	209.19	2,149.93	20	94	20	21
J-285	Low Service	281.70	2,163.47	20	57	30	20
J-254	Low Service	281.58	2,163.52	20	63	51	20
J-330	Low Service	319.22	2,169.08	20	54	20	21
J-595	Low Service	284.36	2,171.72	20	55	27	20
J-148	Low Service	315.04	2,174.80	20	60	20	25
J-271	Low Service	270.56	2,177.78	20	76	20	30
J-705	Low Service	342.97	2,189.50	20	52	20	27
J-221	Low Service	287.39	2,194.12	20	61	51	20
J-34	Low Service	282.78	2,198.83	20	63	52	20
J-33	Low Service	283.00	2,200.45	20	63	52	20
J-8	Low Service	289.27	2,206.17	20	60	50	20
J-7	Low Service	289.35	2,206.64	20	60	50	20
J-250	Low Service	409.79	2,212.62	20	27	20	21
J-143	Low Service	330.48	2,214.46	20	57	20	26
J-32	Low Service	289.01	2,217.71	20	60	51	20
J-31	Low Service	289.10	2,219.85	20	60	51	20
J-627	Low Service	321.51	2,230.48	20	60	20	31
J-789	Low Service	325.36	2,232.66	20	56	27	20
J-690	Low Service	287.25	2,234.29	20	66	29	20
J-149	Low Service	311.05	2,241.81	20	62	22	20
J-704	Low Service	316.85	2,263.63	20	59	41	20
J-600	Low Service	282.63	2,263.83	20	74	23	20
J-442	Low Service	335.85	2,289.77	20	56	20	24
J-689	Low Service	293.80	2,294.19	20	64	23	20
J-543	Low Service	313.31	2,334.81	20	63	42	20
J-53	Low Service	337.95	2,344.58	20	56	22	20
J-54	Low Service	339.16	2,344.58	20	55	21	20
J-724	Low Service	276.10	2,359.22	20	76	20	30
J-539	Low Service	316.00	2,376.18	20	63	20	25
J-142	Low Service	333.79	2,387.28	20	58	21	20
J-508	Low Service	265.08	2,392.60	20	80	20	21
J-123	Low Service	296.47	2,393.05	20	71	28	20
J-323	Low Service	306.91	2,393.96	20	67	23	20
J-358	Low Service	264.00	2,400.44	20	79	20	29
J-122	Low Service	293.96	2,404.93	20	72	29	20
J-150	Low Service	290.79	2,407.36	20	74	30	20
J-746	Low Service	337.22	2,408.83	20	58	28	20

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-324	Low Service	311.08	2,416.05	20	65	20	30
J-674	Low Service	274.73	2,421.48	20	80	35	20
J-239	Low Service	287.00	2,435.39	20	75	26	20
J-552	Low Service	361.06	2,464.88	20	45	30	20
J-606	Low Service	287.28	2,502.97	20	75	32	20
J-551	Low Service	356.09	2,504.23	20	47	31	20
J-486	Low Service	276.69	2,510.66	20	79	28	20
J-310	Low Service	265.64	2,544.99	20	80	20	28
J-421	Low Service	320.00	2,552.90	20	63	20	30
J-118	Low Service	284.00	2,562.17	20	77	27	20
J-119	Low Service	283.26	2,575.42	20	78	28	20
J-699	Low Service	283.58	2,586.26	20	77	28	20
J-464	Low Service	267.63	2,589.77	20	80	20	28
J-818	Low Service	341.79	2,590.64	20	51	31	20
J-761	Low Service	264.00	2,618.57	20	83	20	29
J-272	Low Service	270.23	2,637.11	20	81	20	29
J-831	Low Service	280.38	2,675.21	20	84	54	20
J-659	Low Service	357.55	2,679.16	20	44	20	20
J-491	Low Service	338.04	2,708.50	20	58	20	31
J-367	Low Service	276.29	2,715.01	20	81	20	31
J-728	Low Service	327.44	2,729.16	20	62	20	31
J-357	Low Service	270.40	2,743.28	20	81	20	28
J-910	Low Service	350.00	2,769.06	20	52	24	20
J-743	Low Service	348.56	2,769.10	20	48	27	20
J-747	Low Service	334.45	2,786.71	20	60	20	24
J-658	Low Service	356.00	2,844.69	20	45	22	20
J-485	Low Service	265.17	2,892.24	20	83	20	27
J-662	Low Service	347.00	2,918.61	20	49	25	20
J-711	Low Service	313.88	2,920.07	20	68	20	30
J-708	Low Service	339.74	2,922.91	20	61	40	20
J-700	Low Service	268.00	2,924.40	20	85	24	20
J-709	Low Service	340.28	2,937.72	20	58	22	20
J-246	Low Service	256.85	2,968.80	20	89	20	29
J-601	Low Service	296.73	2,969.28	20	74	20	23
J-749	Low Service	283.78	2,983.20	20	79	20	24
J-396	Low Service	290.60	2,991.23	20	80	46	20
J-121	Low Service	310.05	3,056.15	20	70	24	20
J-416	Low Service	275.16	3,088.39	20	84	52	20
J-520	Low Service	268.91	3,099.94	20	83	20	26
J-797	Low Service	216.00	3,115.90	20	105	27	20
J-120	Low Service	307.38	3,149.33	20	72	26	20
J-300	Low Service	261.45	3,253.67	20	89	20	30
J-624	Low Service	284.83	3,258.85	20	81	20	30

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-759	Low Service	316.59	3,309.82	20	69	20	30
J-441	Low Service	327.95	3,332.84	20	65	23	20
J-731	Low Service	218.04	3,380.37	20	106	20	28
J-710	Low Service	298.48	3,401.38	20	77	29	20
J-336	Low Service	289.77	3,405.65	20	80	25	20
J-354	Low Service	326.60	3,412.27	20	66	21	20
J-604	Low Service	328.00	3,415.35	20	65	20	22
J-124	Low Service	264.64	3,441.57	20	93	61	20
J-337	Low Service	285.55	3,450.45	20	81	20	20
J-26	Low Service	282.03	3,462.74	20	82	20	21
J-512	Low Service	292.68	3,466.76	20	79	20	30
J-529	Low Service	279.97	3,467.04	20	83	20	28
J-490	Low Service	335.82	3,471.97	20	62	21	20
J-25	Low Service	281.00	3,477.32	20	83	20	20
J-177	Low Service	334.25	3,478.85	20	63	20	23
J-2	Low Service	272.90	3,500.00	20	86	44	22
J-13	Low Service	270.37	3,500.00	20	94	80	29
J-14	Low Service	269.17	3,500.00	20	95	81	29
J-19	Low Service	338.52	3,500.00	20	63	38	30
J-20	Low Service	338.55	3,500.00	20	63	38	30
J-21	Low Service	301.19	3,500.00	20	80	65	30
J-22	Low Service	301.00	3,500.00	20	80	65	30
J-35	Low Service	283.24	3,500.00	20	85	50	30
J-36	Low Service	283.48	3,500.00	20	85	49	30
J-47	Low Service	301.29	3,500.00	20	80	65	30
J-48	Low Service	301.49	3,500.00	20	80	65	30
J-65	Low Service	311.85	3,500.00	20	76	63	30
J-66	Low Service	312.73	3,500.00	20	76	62	30
J-78	Low Service	309.15	3,500.00	20	75	67	27
J-79	Low Service	309.25	3,500.00	20	75	67	27
J-86	Low Service	281.89	3,500.00	20	87	76	27
J-87	Low Service	282.75	3,500.00	20	87	76	27
J-102	Low Service	305.26	3,500.00	20	79	65	30
J-103	Low Service	304.46	3,500.00	20	79	65	30
J-108	Low Service	258.83	3,500.00	20	99	87	29
J-109	Low Service	258.00	3,500.00	20	100	91	29
J-114	Low Service	266.00	3,500.00	20	90	59	21
J-115	Low Service	265.68	3,500.00	20	90	58	21
J-125	Low Service	266.38	3,500.00	20	92	58	20
J-132	Low Service	307.27	3,500.00	20	77	58	30
J-133	Low Service	309.48	3,500.00	20	76	57	30
J-151	Low Service	283.00	3,500.00	20	86	53	30
J-152	Low Service	284.45	3,500.00	20	85	54	30

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-171	Low Service	268.26	3,500.00	20	89	51	25
J-172	Low Service	266.78	3,500.00	20	88	44	25
J-176	Low Service	330.39	3,500.00	20	65	21	21
J-191	Low Service	288.00	3,500.00	20	86	70	30
J-192	Low Service	290.32	3,500.00	20	85	70	30
J-213	Low Service	270.88	3,500.00	20	85	21	27
J-214	Low Service	275.00	3,500.00	20	88	65	27
J-215	Low Service	270.68	3,500.00	20	91	73	27
J-216	Low Service	272.32	3,500.00	20	91	78	27
J-245	Low Service	259.00	3,500.00	20	98	84	29
J-251	Low Service	413.71	3,500.00	20	30	25	26
J-265	Low Service	283.11	3,500.00	20	85	50	30
J-270	Low Service	268.18	3,500.00	20	86	26	25
J-275	Low Service	303.51	3,500.00	20	78	50	30
J-299	Low Service	263.00	3,500.00	20	90	27	27
J-301	Low Service	329.00	3,500.00	20	67	44	30
J-302	Low Service	328.00	3,500.00	20	67	45	30
J-305	Low Service	308.77	3,500.00	20	75	41	29
J-306	Low Service	307.00	3,500.00	20	76	46	30
J-309	Low Service	268.95	3,500.00	20	87	42	24
J-315	Low Service	277.81	3,500.00	20	88	77	26
J-316	Low Service	268.79	3,500.00	20	92	81	26
J-329	Low Service	264.00	3,500.00	20	94	75	27
J-334	Low Service	325.29	3,500.00	20	70	52	30
J-340	Low Service	258.00	3,500.00	20	95	74	26
J-341	Low Service	259.65	3,500.00	20	93	65	24
J-344	Low Service	268.93	3,500.00	20	92	74	28
J-345	Low Service	270.71	3,500.00	20	90	61	28
J-350	Low Service	260.00	3,500.00	20	95	77	26
J-351	Low Service	264.13	3,500.00	20	91	63	26
J-352	Low Service	312.61	3,500.00	20	73	32	26
J-353	Low Service	314.00	3,500.00	20	72	27	25
J-365	Low Service	334.00	3,500.00	20	64	26	26
J-372	Low Service	324.61	3,500.00	20	69	60	26
J-376	Low Service	338.60	3,500.00	20	62	30	30
J-377	Low Service	331.34	3,500.00	20	64	26	30
J-395	Low Service	283.72	3,500.00	20	85	58	28
J-403	Low Service	288.18	3,500.00	20	84	71	27
J-407	Low Service	296.93	3,500.00	20	77	25	30
J-414	Low Service	292.61	3,500.00	20	83	72	27
J-417	Low Service	299.88	3,500.00	20	81	66	30
J-436	Low Service	324.13	3,500.00	20	69	44	30
J-439	Low Service	298.67	3,500.00	20	81	60	30

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-440	Low Service	303.33	3,500.00	20	78	57	30
J-457	Low Service	265.47	3,500.00	20	87	22	26
J-468	Low Service	272.69	3,500.00	20	86	42	23
J-470	Low Service	335.73	3,500.00	20	64	39	30
J-472	Low Service	327.59	3,500.00	20	66	26	26
J-476	Low Service	279.00	3,500.00	20	87	52	30
J-480	Low Service	334.00	3,500.00	20	64	26	25
J-487	Low Service	297.56	3,500.00	20	78	48	27
J-488	Low Service	313.88	3,500.00	20	76	61	30
J-489	Low Service	295.34	3,500.00	20	81	49	30
J-494	Low Service	332.93	3,500.00	20	65	42	30
J-495	Low Service	333.64	3,500.00	20	65	44	30
J-496	Low Service	322.50	3,500.00	20	70	47	30
J-505	Low Service	271.00	3,500.00	20	87	43	25
J-517	Low Service	333.00	3,500.00	20	66	47	30
J-521	Low Service	274.00	3,500.00	20	90	74	27
J-530	Low Service	277.00	3,500.00	20	84	21	22
J-536	Low Service	276.13	3,500.00	20	88	61	27
J-548	Low Service	292.77	3,500.00	20	83	59	30
J-566	Low Service	282.50	3,500.00	20	84	48	27
J-588	Low Service	381.97	3,500.00	20	44	35	26
J-597	Low Service	337.05	3,500.00	20	63	30	30
J-599	Low Service	325.09	3,500.00	20	68	42	30
J-607	Low Service	263.50	3,500.00	20	91	47	25
J-612	Low Service	294.84	3,500.00	20	77	31	26
J-619	Low Service	290.87	3,500.00	20	83	53	30
J-620	Low Service	279.25	3,500.00	20	87	50	30
J-623	Low Service	294.99	3,500.00	20	82	48	30
J-632	Low Service	305.55	3,500.00	20	79	65	30
J-661	Low Service	328.05	3,500.00	20	68	50	30
J-681	Low Service	311.83	3,500.00	20	75	62	28
J-682	Low Service	295.00	3,500.00	20	83	69	28
J-706	Low Service	307.00	3,500.00	20	76	44	29
J-719	Low Service	292.24	3,500.00	20	82	70	27
J-720	Low Service	280.90	3,500.00	20	84	38	30
J-732	Low Service	221.07	3,500.00	20	110	63	28
J-767	Low Service	284.93	3,500.00	20	83	35	27
J-790	Low Service	259.19	3,500.00	20	95	60	29
J-793	Low Service	298.37	3,500.00	20	77	29	21
J-798	Low Service	230.79	3,500.00	20	109	95	28
J-817	Low Service	268.16	3,500.00	20	93	79	26
J-820	Low Service	280.88	3,500.00	20	90	79	29
J-822	Low Service	268.32	3,500.00	20	93	75	28

Active Scenario: MDD-Buildout_Fire Flow
Fire Flow Node FlexTable: Fire Flow Report
Steady State Analysis

Label	Zone	Elevation (ft)	Fire Flow (Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
J-823	Low Service	264.40	3,500.00	20	94	71	27
J-824	Low Service	274.37	3,500.00	20	90	71	27
J-826	Low Service	280.23	3,500.00	20	90	78	29
J-827	Low Service	290.57	3,500.00	20	81	39	29
J-828	Low Service	269.59	3,500.00	20	92	74	28
J-829	Low Service	282.90	3,500.00	20	85	53	28
J-840	Low Service	269.40	3,500.00	20	92	72	28
J-841	Low Service	289.74	3,500.00	20	83	65	27
J-845	Low Service	229.55	3,500.00	20	110	95	28
J-849	Low Service	262.68	3,500.00	20	99	90	29
J-850	Low Service	295.60	3,500.00	20	82	69	28
J-853	Low Service	280.93	3,500.00	20	90	79	29
J-855	Low Service	258.00	3,500.00	20	100	91	29
J-858	Low Service	305.82	3,500.00	20	79	65	30

ROAD	Length	Width	Area (SY)	Item 129 (SY) Bituminous Concrete Excavation by Cold Planer	Item 220 (EA) Drain Stre. Adjust	Item 220.2 (VF) Drain Struc. Rebuild	Item 358 (EA) Gate box adj.	Item 403 (SY) Reclaimed Base Course	Item 460 (TN) Bituminous Concrete Binder	Item 460 (TN) Type I Wearing Course	Item 464 (GAL) Bitumen for Tack Coat	Item 470.2 (LF)
Constitution Drive	3300	27	9900	9900 $ 49,500.00	30 $ 9,750.00	14 $ 4,550.00	12 $ 3,000.00	0 $ -	0.00 $ -	831.60 $ 81,496.80	495 $ 2,475.00	0
Liberty Drive	2300	26	6644	6644 $ 33,222.22	226 $ 73,450.00	12 $ 3,900.00	13 $ 3,250.00	0 $ -	0.00 $ -	558.13 $ 54,697.07	332 $ 1,661.11	0
Wentworth Drive	775	26	2239	2239 $ 11,194.44	8 $ 2,600.00	2 $ 650.00	3 $ 750.00	0 $ -	0.00 $ -	188.07 $ 18,430.53	112 $ 559.72	0
Adams Circle	250	26	722	722 $ 3,611.11	6 $ 1,950.00	1 $ 325.00	1 $ 250.00	0 $ -	0.00 $ -	60.67 $ 5,945.33	36 $ 180.56	0
Independence Drive	400	26	1156	1156 $ 5,777.78	3 $ 975.00	2 $ 650.00	1 $ 250.00	0 $ -	0.00 $ -	97.07 $ 9,512.53	58 $ 288.89	0
Patriotic development sidewalks	6000	6	4000	4000 $ 20,000.00	0 $ -	0 $ -	0 $ -	0 $ -	0.00 $ -	0.00 $ -	200 $ 1,000.00	0
Carolyn Drive	1100	26	3178	0 $ -	9 $ 2,925.00	5 $ 1,625.00	4 $ 1,000.00	3178 $ 9,533.33	444.89 $ 43,599.11	266.93 $ 26,159.47	159 $ 794.44	0
Ted Lane	1700	26	4911	0 $ -	10 $ 3,250.00	2 $ 650.00	5 $ 1,250.00	4911 $ 14,733.33	687.56 $ 67,380.44	412.53 $ 40,428.27	246 $ 1,227.78	0
Brookside Terrace	400	23	1022	0 $ -	5 $ 1,625.00	1 $ 325.00	2 $ 500.00	1022 $ 3,066.67	143.11 $ 14,024.89	85.87 $ 8,414.93	51 $ 255.56	0
Davis Road	1450	30	4833	4833 $ 24,166.67	17 $ 5,525.00	4 $ 1,300.00	4 $ 1,000.00	0 $ -	30.07 $ 2,947.26	406.00 $ 39,788.00	242 $ 1,208.33	2900
Ashley Drive	750	26	2167	2167 $ 10,833.33	12 $ 3,900.00	5 $ 1,625.00	5 $ 1,250.00	0 $ -	0.00 $ -	182.00 $ 17,836.00	108 $ 541.67	1500
Davis /Ashley sidewalk	2200	6	1467	0 $ -	$ -	$ -		0 $ -	0.00 $ -	0.00 $ -	73 $ 366.67	0
William Onthank	3800	24	10133	$ -	26 $ 8,450.00	10 $ 3,250.00	10	10133 $ 30,400.00	1418.67 $ 139,029.33	851.20 $ 83,417.60	507 $ 2,533.33	8360
William Onthank sidewalks	2500	6	1667	$ -	$ -	$ -		1667 $ 5,000.00	0.00 $ -	140.00 $ 13,720.00	83 $ 416.67	0
Chestnut Hill Farm Road (2 way)	1000	20	2222	0 $ -	2 $ 650.00	1 $ 325.00	0 $ -	2222 $ 6,666.00	311.11 $ 30,488.89	186.67 $ 18,293.33	0 $ -	0
Chestnut Hill Farm Road (1 way)	3250	16	5778	0 $ -	0 $ -	0 $ -	0 $ -	5778 $ 17,334.00	808.89 $ 79,271.11	485.33 $ 47,562.67	0 $ -	0
Ward	2500	20	5556	5556 $ 27,777.78	3 $ 975.00	2 $ 650.00	7	0 $ -	0.00 $ -	466.67 $ 45,733.33	278 $ 1,388.89	0
Bigelow	3000	20	6667	6667 $ 33,333.33	2 $ 650.00	1 $ 325.00	6	0 $ -	0.00 $ -	560.00 $ 54,880.00	333 $ 1,666.67	0
Country Lane	850	20	1889	1889 $ 9,444.44	6 $ 1,950.00	1 $ 325.00	2	0 $ -	0.00 $ -	158.67 $ 15,549.33	94 $ 472.22	0
Blackthorn	1750	22	4278	4278 $ 21,388.89	17 $ 5,525.00	2 $ 650.00	13	0 $ -	0.00 $ -	359.33 $ 35,214.67	214 $ 1,069.44	0
Bantry	1550	24	4133	4133 $ 20,666.67	14 $ 4,550.00	1 $ 325.00	9	0 $ -	0.00 $ -	347.20 $ 34,025.60	207 $ 1,033.33	0
Tara	1800	24	4800	4800 $ 24,000.00	17 $ 5,525.00	$ -	7	0 $ -	0.00 $ -	403.20 $ 39,513.60	240 $ 1,200.00	0
East Main	2200	22	5378	5378 $ 26,888.89	13 $ 4,225.00	5 $ 1,625.00	15 $ 3,750.00	0 $ -	0.00 $ -	451.73 $ 44,269.87	269 $ 1,344.44	0
East Main sidewalk	2200	6	1467	$ -	$ -	$ -		0 $ -	0.00 $ -	0.00 $ -	73 $ 366.67	0
Upland	500	20	1111	1111 $ 5,555.56	0 $ -	$ -	2	0 $ -	0.00 $ -	93.33 $ 9,146.67	56 $ 277.78	0
Winchester	1000	22	2444	2444 $ 12,222.22	9 $ 2,925.00	$ -	6	0 $ -	0.00 $ -	205.33 $ 20,122.67	122 $ 611.11	0
Walker	600	20	1333	1333 $ 6,666.67	3 $ 975.00	1 $ 325.00	5	0 $ -	0.00 $ -	112.00 $ 10,976.00	67 $ 333.33	0
Old Cordaville	410	20	911	911 $ 4,555.56	4 $ 1,300.00	1 $ 325.00	11	0 $ -	0.00 $ -	76.53 $ 7,500.27	46	0
Parker	600	20	1333	1333 $ 6,666.67	0 $ -	$ -	8 $ 2,000.00	0 $ -	0.00 $ -	112.00 $ 10,976.00	67 $ 333.33	0
Hammond	400	20	889	889 $ 4,444.44	0 $ -	$ -	2 $ 500.00	0 $ -	0.00 $ -	99.56 $ 9,756.44	44 $ 222.22	0
Cottage	400	20	889	889 $ 4,444.44	0 $ -	$ -	2 $ 500.00	0 $ -	0.00 $ -	99.56 $ 9,756.44	44 $ 222.22	0
Pine Hill Road	8100	20	18000	18000 $ 90,000.00	16 $ 5,200.00	3 $ 975.00	2 $ 500.00	0 $ -	0.00 $ -	1512.00 $ 148,176.00	900 $ 4,500.00	0
Woodland (9 to 90)	5300	23	13544	13544 $ 67,722.22	10 $ 3,250.00	3 $ 975.00	17 $ 4,250.00	0 $ -	0.00 $ -	1137.73 $ 111,497.87	677 $ 3,386.11	0
White Bagley Causeway	1100	24	2933	2933 $ 14,666.67	0 $ -	0 $ -	0 $ -	0 $ -	0.00 $ -	246.40	147	0
Parkerville Road north side	5500	20	12222	12222 $ 61,111.11	8 $ 2,600.00	2 $ 650.00	11 $ 2,750.00	0 $ -	0.00 $ -	1026.67 $ 100,613.33	611 $ 3,055.56	0
Lovers Lane	4000	18	8000	0 $ -	2 $ 650.00	2 $ 650.00	12 $ 3,000.00	0 $ -	0.00 $ -	896.00 $ 87,808.00	400 $ 2,000.00	0
Harris	1200	26	3467	0 $ -	4 $ 1,300.00	2 $ 650.00	11 $ 2,750.00	3467 $ 10,400.00	485.33 $ 47,562.67	291.20 $ 28,537.60	0 $ -	0
				$ -	$ -	$ -						
Cordaville WW to PS	920	30	3067	3067 $ 15,333.33	7 $ 2,275.00	4 $ 1,300.00	2 $ 500.00	0 $ -	0.00 $ -	257.60 $ 25,244.80	153 $ 766.67	0
Cordaville PS to Causeway	1500	30	5000	5000 $ 25,000.00	13 $ 4,225.00	5 $ 1,625.00	0 $ -	0 $ -	0.00 $ -	420.00 $ 41,160.00	250 $ 1,250.00	0
				$ -	$ -	$ -						
Golf Course Lot and driveway - w/ grading				$ -	$ -	$ -						
	14.88 miles											
Sub-Total				119972.22	482.00	85.00	208.00	32377.78	4329.63	13407.18	7590.83	12760.00
Unit Cost				$ 5.00	$ 325.00	$ 325.00	$ 250.00	$ 3.00	$ 98.00	$ 98.00	$ 5.00	$ 10.00
Total Item Cost				$ 599,861.11	$ 156,650.00	$ 27,625.00	$ 32,500.00	$ 97,133.33	$ 424,303.70	$ 1,289,756.22	$ 36,993.06	

Bit. Conc. Berm (Cape Cod)	**Item 504 (LF)** Granite curb Type VA-4 Straight	**Item 509 (LF)** Granite Transition Curb Straight	**Item 514 (EA)** Granite Curb Inlet Straight	**Item 580 (LF)** Granite Curb Remove and Reset	**Item 702 (TN)** Bit Conc. SW	**Item 702.2 (TN)** Bit. Conc. Wheel Ramp	**Item 703 (TN)** Bit. Conc. DW	**Item 991 (HRS)** Police Details	Total Street Cost		
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	10 $ 1,750.00	32 $ 1,856.00	$ 154,377.80		
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	10 $ 1,750.00	16 $ 928.00	$ 172,858.40		
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	2 $ 350.00	0 $ -	$ 34,534.70		
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	4 $ 700.00	0 $ -	$ 12,962.00		
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	2 $ 350.00	0 $ -	$ 17,804.20		
$ -	0 $ -	0 $ -	0 $ -	0 $ -	280 $ 42,000.00	5 $ 875.00		0 $ -	$ 63,875.00	$ 456,412.10	
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	$ -	10 $ 1,750.00	16 $ 928.00	$ 88,314.36		**X**
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	$ -	6 $ 1,050.00	16 $ 928.00	$ 130,897.82		**X**
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	$ -	3 $ 525.00	0 $ -	$ 28,737.04	$ 247,949.22	**X**
$ 29,000.00	0 $ -	0 $ -	0 $ -	0 $ -	68 $ 10,150.00	0 $ -	25 $ 4,375.00	16 $ 928.00	$ 120,388.26		
$ 15,000.00	0 $ -	0 $ -	0 $ -	0 $ -	35 $ 5,250.00	0 $ -	15 $ 2,625.00	16 $ 928.00	$ 59,789.00		
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	4 $ 700.00	0 $ -		$ 1,066.67	$ 181,243.93	
$ 83,600.00	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	10 $ 1,750.00	16	$ 352,430.27		**X**
$ -	0 $ -	0 $ -	0 $ -	0 $ -	117 $ 17,500.00	3 $ 525.00	0 $ -	0	$ 37,161.67	$ 389,591.93	**X**
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	16 $ 928.00	$ 57,351.22		**X**
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	$ 144,167.78	$ 201,519.00	**X**
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	5 $ 875.00	8	$ 77,400.00		
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	8 $ 1,400.00	8	$ 92,255.00		
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	2 $ 350.00	0	$ 28,091.00	$ 197,746.00	
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	2 $ 350.00	8	$ 64,198.00		
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	2 $ 350.00	0	$ 60,950.60		
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	2 $ 350.00	0	$ 70,588.60	$ 195,737.20	
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	8 $ 1,400.00	32 $ 1,856.00	$ 85,359.20		
$ -	0 $ -	0 $ -	0 $ -	0 $ -	103 $ 15,400.00	8 $ 1,400.00	0 $ -	0	$ 17,166.67		
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	2 $ 350.00	8	$ 15,330.00		
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	3 $ 525.00	8	$ 36,406.00		
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	2 $ 350.00	8	$ 19,626.00	$ 173,887.87	
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	1 $ 175.00	0	$ 13,855.82		**X**
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	2 $ 350.00	16 $ 928.00	$ 21,254.00		**X**
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	1 $ 175.00	0 $ -	$ 15,098.11		**X**
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	1 $ 175.00	0 $ -	$ 15,098.11	$ 65,306.04	**X**
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	15 $ 2,625.00	40 $ 2,320.00	$ 254,296.00		
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	3 $ 525.00	40 $ 2,320.00	$ 193,926.20		**X**
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	16 $ 928.00	$ 15,594.67		
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	5 $ 875.00	32 $ 1,856.00	$ 173,511.00		**X**
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	10 $ 1,750.00	32 $ 1,856.00	$ 97,714.00		**X**
$ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -	15 $ 2,625.00	0 $ -	$ 93,825.27		**X**
	0 $ -	0 $ -	0 $ -	0 $ -	0 $ -						
$ -	1840 $ 82,800.00	0 $ -	$ -	1840 $ 36,800.00	0 $ -	$ -	15 $ 2,625.00	32 $ 1,856.00	Other Contract	$ 169,500.80	
$ -	2600 $ 117,000.00	0 $ -	$ -	2600 $ 52,000.00	0 $ -	$ -	0 $ -	32 $ 1,856.00	Other Contract	$ 244,116.00	
	$ -				0 $ -					$ 413,616.80	
	$ -				0 $ -				$ 350,000.00		**X**
	0.00	0.00	0.00	0.00	602.00	20.00	186.00	400.00			
	$ 45.00	$ 45.00	$ 500.00	$ 20.00	$ 150.00	$ 175.00	$ 175.00	$ 58.00			
$ 127,600.00	$ -	$ -	$ -	$ -	$ 90,300.00	$ 3,500.00	$ 32,550.00	$ 19,488.00	$ 3,288,260.43		**$ 1,813,342.67**
									$ 3,288,260.43		

Road	Location on Road
Alexander Road	
Angelica Lane	All
Atwood	
Bantry Road	
Beechwood Lane	All
Blackthorn Drive	
Boston Road	East Main to Central (less int)
Boston Road	Meadow Lane to White Bagley Road
Boston Road	White Bagley Road to East Main Street
Breakneck Hill Rd	Route 9 to Davis Road
Breakneck Hill Road	All
Brigham Road	Ward Road to Granouille
Brook Lane	All
Bryden Road	
Burnett Road	All
Candlewood Lane	All
Central	Tracks to 9
Central Street	Route 30 to Reservoir Drive
Central Street	Reservoir Drive to Railroad Tracks
Central Street Playground	Off of Winter Street
Cherry Street	All
Chestnut Hill Rd	Entire length of road
Clemmons Street	
Clifford Street	
Clifford Street	From Around 18 Clifford to 24 Clifford
Cordaville Road	Route 9 to Comm Gas
Crestview Drive	Partridge Hill to Partridge Hill
Cross Street	
Darlene Drive	All
Deerfoot Extension	All
Deerfoot Road	Route 9 to Clifford
Deerfoot Road	Route 9 to end (South)
Deerfoot Road	
Deerfoot Road	Clifford Road to Route 9
DPW	
DPW Fuel Station	Around New Fuel Tanks
Eastbrook Farm Lane	All
Edgewood Road	
Fairview Drive	
Fay Court	Bridge Street to end

Fisher Road	All
Flagg Road	Deerfoot to Lovers Lane
Flagg Road	Lovers to 9
Foley	
Garrison Lane	
Gilmore	
Glenwood	
Granuaille Road	All
Grove	All
Heather Lane	All
Hickory Road	All
High Street	
Highland Street	All
Highridge Road	
Hill Side Avenue	Lyman to end
Hill Top	All
Howes Court	Newton Street to Lyman Street
Johnson	
Latisquama	All
Learned	All
Ledge Hill Road	Route 85 to Whistler Lane
Ledge Hill Road	Whistler Lane to Sears Road
Leonard Drive	
Lovers Lane	
Lyman Street	East Main to end
Main Street	Sears to Park Street
Maple	to cul-de-sac
Marlboro	
Marlborough Road	Main Street to CSX Bridge
Meadow Lane	
Michael Circle	All
Middle	
Middle	All
Moulton Road	
Mount Vickery	East & west sides
Mt. Vickery E	
Mt. Vickery W.	
Nathan Stone Road	All
Newton	All
Nichols Street	
Northboro	495 to Town Line
Northboro	495 to Jericho Hill
Northboro Road	Route 30 to corner

Oak Hill	Town Line to Walgreens
Orchard	
Oregon Road	
Overlook Drive	
Parkerville (G-9)	9 to Wedgewood
Parkerville Road	Middle Road to Route 9
Parkerville Road	Gilmore Road to Southville Road
Parkerville Road North	
Parkerville Road South	
Parmenter Road	Framingham Line to Marlboro Line
Partridge Hill Road	White Bagley Road to end
Peggy	
Pine Hill Road	Graystone Way to Parmenter Road
Pine Hill Road	Framingham to Graystone
Pleasant Street	All
Powdermill Lane	
Prentiss Street	Parkerville to end
Presidential	
Red Gate Lane	All
Reservoir Drive	Central Street to Route 9
Richards Rd	
Richards Road	Woodland Road to Cordaville Road
Sadie Hutt	
Sarsen Stone	
School	All
Sears	All
Skylar	
Southville	Town Line to Woodbury
Southwood Drive	All
Stowe Road	Sears to Sears
Summit Road	
Sunrise Drive	All
Tara Road	
Town Hall Parking Lot	See Attached Plan (Gravel area at back of lot)
Town Hall Parking Lot	Paved Lot- See Attached Plan
Town Hall Parking Lot	Western Draiveway - See Attached Plan
Transfer Station	Road to and all Recycling Area
Triangle Walkways	
Trottier/Neary Road	Tennis Court Lot to Trottier Lot
Vale Terrace	All
Valley Road	5 Corners to Meadow Lane
Valley Road	Meadow Lane to End

Various Streets	
Vickery Hill Lane	
View Hill Road	Breakneck Hill to end
Walnut Drive	
Ward Road	Main Street to 495
Whistler Lane	All
White Bagley	Rte 30 to Causeway
Wildwood Drive	All
Willow Street	
Winter Street	All
Wood Street	#6 to intersection
Wood Street	After corner to #6
Woodbury Road	Darlene Drive to Woodland Road
Woodbury Road	Southville Road to Darlene Drive
Woodland	Richards to Cordaville
Woodland Road	Route 9 to Richards Road
Woodland Road	Richards Road to Cordaville Road
Woodward Drive Sidewalk	See Attached Plan
Woodward Drive Wall, sidewalk	See Attached Plan
Woodward Driveway	Cordaville Road to Flagpole
Woodward Lot	Lower Lot
Wyeth Circle	All
Wyndemere Drive	Main Street to end

Treatment	Year
Reclaim, Remove & Reset Granite Edging/Curbing, Cape Cod Berm & Pave	2006
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2015
Reclaim	2008
Level & Overlay	2003
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2018
Level & Overlay	2003
Cold plain, 1.5" overlay, curb	2001-2002
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2015
Grind, Level (As Required) & Pave (1.5" Wearing)	2015
level then chip seal	2001-2002
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2015
level then pave	2001-2002
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2018
Level, Fabric & Pave	2006
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2018
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2018
Reclaim, Grade, R&R Curb, Level & Overlay Sidewalk (1.5" Wearing), Pave (2.5" Binder, 1.5" Wearing)	2013
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2015
Grind, Level (As Required) & Pave (1.5" Wearing)	2015
Bring Gravel, Grade, Pave (2" Binder, 1" Wearing)	2018
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2015
level then chip seal	2001-2002
1-1/2" Overlay	2005
Reclaim, grade and pave (2.5" binder, 1.5" wearing)	2004
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2015
Microseal	2001-2002
Crackfill then pave	2001-2002
Reclaim, grade and pave (2.5" binder, 1.5" wearing)	2005
Overlay (1.5" Wearing)	2015
Grind, Level (As Required) & Pave (1.5" Wearing)	2011
level then chip seal	2001-2002
Chip Seal	2001-2002
Reclaim, grade and pave (2.5" binder, 1.5" wearing)	2004
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2015
Base and overlay/tack	2001-2002
Remove 4" Gravel/Stone Dust, Grade, Pave (2.5" Binder, 1.5" Wearing)	2018
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2015
Reclaim, grade and pave (2.5" binder, 1.5" wearing)	2005
crackseal, fabric & 1.5" overlay	2004
2" overlay	2001-2002

Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2015
Pulverize & pave	2003
Reclaim, grade and pave (2.5" binder, 1.5" wearing)	2004
Overlay	2008
1-1/2" Overlay	2005
Reclaim	2008
Level & Pave	2006
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2018
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2013
Overlay (1.5" Wearing)	2015
Overlay (1.5" Wearing)	2015
Level, Fabric & Pave	2006
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2015
crackseal, fabric & 1.5" overlay	2004
level then pave	2001-2002
Overlay (1.5" Wearing)	2013
level then pave	2001-2002
Reclaim & Guardrail	2008
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2013
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2013
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2015
Overlay (1.5" Wearing)	2015
Reclaim, grade and pave (2.5" binder, 1.5" wearing)	2005
Chip Seal	2001-2002
level then pave	2001-2002
TIP	2019-2020
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2013
Plane, Level, Overlay	2008
Microsurface	2001-2002
Reclaim & Pave	2006
Overlay (1.5" Wearing)	2015
Reclaim	2008
Grind/Plane, Level (As Required) & Pave (1.5" Wearing)	2013
Level, Fabric & Pave	2006
Patch & chip seal	2001-2002
Reclaim	2008
Reclaim	2008
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2015
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2013
1-1/2" Overlay	2005
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2013
Overlay (1.5" Wearing)	2013
level then chip seal	2001-2002

Reclaim, Grade, R&R Curb, Reclaim Sidewalk, Pave Sidewalk (1.5" Binder, 1.5" Wearing), Pave (2.5" Binder, 1.5" Wearing)	2013
Reclaim	2008
Reclaim, grade and pave (2.5" binder, 1.5" wearing)	2005
Level & Overlay	2003
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2011
level then chip seal	2001-2002
Reclaim/curb/intersection	2001-2002
Pulverize & pave	2003
Overlay	2003
Reclaim	2001-2002
Crackfill then pave	2001-2002
Overlay	2008
Reclaim	2001-2002
Pulverize & pave	2003
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2015
1-1/2" Overlay	2005
Reclaim	2001-2002
Level & Pave	2006
Overlay (1.5" Wearing)	2015
Crackfill then pave & berm	2001-2002
Reclaim, Granite Curb, Sidewalk, Pave	2006
Reclaim	2001-2002
Level & Pave	2006
Level, Fabric, Overlay	2008
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2013
Reclaim, Grade, Pave (3" Binder, 1.5" Wearing)	2011
Level, Fabric, Overlay	2008
Grind, Level (As Required), F&I Curb, Overlay Sidewalk (As Required), Pave (1.5" Wearing)	2011
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2018
level then chip seal	2001-2002
crackseal, fabric & 1.5" overlay	2004
Overlay (1.5" Wearing)	2015
Level & Overlay	2003
Remove 3" Gravel/Stone Dust, Grade, Pave (2" Binder, 1" Wearing)	2018
Grind, Level (As Required) & Pave (1.5" Wearing)	2018
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2018
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2015
	2015
Grind, Level (As Required) & Pave (1.5" Wearing) - 2 speed Humps	2018
Overlay (1.5" Wearing)	2015
Grind, Level (As Required) & Pave (1.5" Wearing)	2018
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2018

Crackfill	2001-2002
Reclaim, Remove & Reset Granite Edging/Curbing, Cape Cod Berm, Pave	2006
2" overlay	2001-2002
Reclaim, grade and pave (2.5" binder, 1.5" wearing)	2005
level then pave	2001-2002
Overlay (1.5" Wearing)	2015
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2013
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2018
Reclaim, grade and pave (2.5" binder, 1.5" wearing)	2005
Reclaim, Grade, Pave (2.5" Binder, 1.5" Wearing)	2018
2" overlay	2001-2002
Reclaim	2001-2002
1.5" overlay	2001-2002
Reclaim	2001-2002
Grind, Level (As Required) & Pave (1.5" Wearing)	2011
2" overlay	2001-2002
Microseal	2001-2002
	2018
	2018
Grind, Level (As Required) & Pave (1.5" Wearing)	2018
Grind, Level (As Required) & Pave (1.5" Wearing)	2018
Overlay (1.5" Wearing)	2015
Crackfill then pave & berm	2001-2002

TOWN OF SOUTHBOROUGH **Tel: 508-485-1210**
DEPARTMENT OF PUBLIC WORKS **Fax: 508-229-4444**

147 Cordaville Road
Southborough, MA 01772

DATE: June 9, 2022 **MEMORANDUM**

TO:	**Southborough Select Board**
	Southborough Capital Planning Committee
	Southborough Advisory Committee
	Public Works Planning Board
CC:	**Mark Purple, Town Administrator**
	Brian Ballantine, Treasurer/CFO
FROM:	**Karen Galligan, DPW Superintendent**
SUBJECT:	**Hopkinton Water Interconnection**

The Town of Hopkinton is seeking a connection to the Massachusetts Water Resource Authority (MWRA) system. Their best option for this connection is through the Town of Southborough. Hopkinton, like Ashland, has retained Pare Corporation (Pare) Southborough's Water Engineer to look into this interconnection.

Tim Thies from Pare, John Westerling, Hopkinton DPW Director, Norman Khumalo, Hopkinton Town Manager, Mark Purple, Southborough Town Administrator and I met in January to discuss the results of Pare's hydraulic evaluation of an interconnection between Southborough and Hopkinton. Pare and Hopkinton took Southborough's feedback and revised the project approach. Specifically, Pare evaluated ways to reduce the potential adverse impacts to Southborough's current customers while also looking for opportunities to improve water service in Southborough. Pare developed a project that meets both criteria, and the parties met via Zoom to discuss the revised project. Below is a brief description of the project, followed by a list of the impacts (benefits) it would have on Southborough's system based on discussions and emails with Pare.

The proposed interconnection involves three main elements in the Town of Southborough:

1. Upgrade the Boland and Hosmer pump stations to supply the combined maximum day demands of Southborough and Hopkinton.
2. Install new pipes in various locations around Southborough to improve transmission capacity between the pump stations and the new interconnection.
3. Replace the Oak Hill storage tank with a new larger and taller storage tank.

The benefits to Southborough are as follows:

1. While both pump stations have been recently upgraded, as part of this project they would be further upgraded to increase capacity, which would mean all new pumping and piping in the stations. And while these upgrades are not a high priority for Southborough because the stations were recently upgraded, they would result in extended life of each station. So, while the benefits of this part of the project are not overly significant, they come at no cost to Southborough and provide a benefit through extended service life of each station;
2. The installation of new pipes in certain parts of Town will increase transmission capacity for Hopkinton and improve circulation in the system for Southborough. These new pipes will also

result in improved fire protection in the areas that they serve. These new pipe sections will replace smaller diameter pipes in the system that vary in age from 30 to 60 years old. The benefit to Southborough is improved circulation, improved fire protection, and the replacement of older, small diameter pipe at no cost to Southborough;

3. The benefits of a new, larger and taller tank at Oak Hill are both significant and numerous.
    a. If we replace Oak Hill with a tank that is 23 feet taller than the current tank, we could run the entire Southborough system as a single pressure zone, thereby eliminating the need for the 4 pressure reducing valves that currently exist;
    b. Adding 23 feet would add about 10 psi to the current Low Service Area of the system, which would improve pressure throughout the southern half of Town. The increase in pressure would offset the reduction in pressure that we may see when Hopkinton is drawing water at its maximum draw rate in the summer;
    c. Adding 10 psi to the system would improve fire protection throughout the Low Service Area;
    d. Adding 10 psi to the system would improve delivery capacity to the Ashland interconnection;
    e. The current Oak Hill tank has a significant amount of unusable storage; the new tank would be designed to be almost 100 percent usable;
    f. The new tank would be larger than the old tank, which could eliminate the storage deficit the Town of Southborough has had for many years. This issue has been a significant one for the Town, both in the High Service Area and the Low Service Area. By running the system as a single pressure zone, we no longer need to worry about High Service Area versus Low Service Area and how to fix the storage deficit in each; this one project could eliminate this issue for the entire Town;
    g. Having another tank in the system at the same elevation as Tara means that maintenance on Tara would be much easier. This enables us to take Tara out of service for maintenance, which is very difficult to do currently;
    h. We also may be able to eliminate the Overlook tank entirely (Pare is still evaluating this, but they say it looks favorable). Eliminating Overlook would mean one less tank in the system that would need regular inspections, maintenance, and future replacement.

If this plan were implemented, we would likely need to install a pressure-reducing valve on Boston Road near the base of the Sudbury Reservoir where pressure may be too high. We would also want to notify the existing customers to let them know of the pressure increase so they could make accommodations for sensitive equipment that could be impacted by higher pressure. This project will take careful planning and coordination by both Towns, but the benefits to Southborough make this project worth our consideration.

This plan addresses many of the water system improvements identified in Southborough's most recent Water System Master Plan (WSMP). Many of these improvements are also identified in previous WSMPs, all of which are posted on the DPW's Water Division website. Addressing these issues through the interconnection allows Southborough to address other water system improvements identified in the WSMP in a timelier manner.

RECEIVED
By Town Clerk/amb at 3:15 pm, Jul 11, 2022

Town of Southborough, Massachusetts

Capital Planning Committee

Monday July 18th, 2022 7:30 PM

Public Safety Training Room

Public Safety Building, 32 Cordaville Road, Southborough, MA

Those wishing to watch or participate remotely can do so by accessing the meeting link at: https://www.southboroughtown.com/remotemeetings

Agenda (all items may have one or more votes taken to the extent action is required):

I. Call Meeting to Order

II. Joint Meeting with Public Works Planning Board
   a. Review of Hopkinton request for water connection
   b. Water Master Plan Review in coordination with Hopkinton projects and other unrelated projects
   c. Cordaville Road Proposed Project for 2023 Town Meeting – Review process that will be undertaken to vet project with the public before seeking town meeting approval. Discussion may also include review of federal grant opportunities.

III. Discussion of Road Maintenance RFP Next Steps, including preliminary review of scope. Discussion will include dates for public vetting before issuance.

IV. Approval of Meeting Minutes from June 27, 2022

V. Committee Reorganization for new fiscal year

VI. Chair/Member's Updates
   a. Neary Building Committee Update
   b. SHOPC – South Union Subcommittee Update
   c. Community Center Exploration Committee
   d. Actions taken on ARPA Projects (Historical and Trails) since last meeting
   e. Pavement Management Program process update

VII. Public Comment

VIII. Meeting Schedule

IX. Other business that may properly come before the Committee

X. Adjournment

Jason W. Malinowski, Chair

RECEIVED
By Town Clerk/amb at 10:08 am, Jul 15, 2022

Town of Southborough, Massachusetts

Capital Planning Committee

Monday July 18th, 2022 7:30 PM

Public Safety Training Room

Public Safety Building, 32 Cordaville Road, Southborough, MA

Those wishing to watch or participate remotely can do so by accessing the meeting link at: https://www.southboroughtown.com/remotemeetings

Revised Agenda (all items may have one or more votes taken to the extent action is required):

I. Call Meeting to Order

II. Joint Meeting with Public Works Planning Board
   a. Review of Hopkinton request for water connection
   b. Water Master Plan Review in coordination with Hopkinton projects and other unrelated projects
   c. Cordaville Road Proposed Project for 2023 Town Meeting – Review process that will be undertaken to vet project with the public before seeking town meeting approval. Discussion may also include review of federal grant opportunities.

III. Discussion of Road Maintenance RFP Next Steps, including preliminary review of scope. Discussion will include dates for public vetting before issuance.

IV. Approval of Meeting Minutes from June 27, 2022

V. Committee Reorganization for new fiscal year

VI. Committee Appointment to the Community Center Exploration Committee

VII. Chair/Member's Updates
   a. Neary Building Committee Update
   b. SHOPC – South Union Subcommittee Update
   c. Actions taken on ARPA Projects (Historical and Trails) since last meeting
   d. Pavement Management Program process update

VIII. Public Comment

IX. Meeting Schedule

X. Other business that may properly come before the Committee

XI. Adjournment

Jason W. Malinowski, Chair