


CAVASSON

LOCATED NEAR THE NORTHWEST CORNER OF THE HAYDEN ROAD AND THE LOOP 101
FRONTAGE ROAD INTERSECTION

FINAL WATER REPORT – RETAIL NORTH AND M.O.B. BASIS OF DESIGN

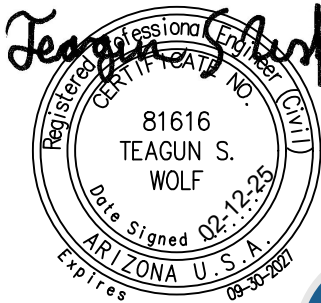
October 23, 2024
Revised: February 12, 2025

Project No.: 18114-506

FINAL Basis of Design Report	
<input type="checkbox"/> APPROVED	
<input checked="" type="checkbox"/> APPROVED AS NOTED	
<input type="checkbox"/> REVISE AND RESUBMIT	
<small>Disclaimer: If approved, the approval is granted under the condition that the final construction documents submitted for city review will match the information herein. Any subsequent changes in the water or sewer design that materially impact design criteria or standards will require re-analysis, re-submittal, and approval of a revised basis of design report prior to the plan review submission.; this approval is not a guarantee of construction document acceptance. For questions or clarifications contact the Water Resources Planning and Engineering Department at 480-312-5685.</small>	
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H U B B A R D
E N G I N E E R I N G

Per analysis conducted in this report, booster pumps will be required for multi-story buildings to assure the pressure requirements of DSPM 6-1.202 and 6-1.406.

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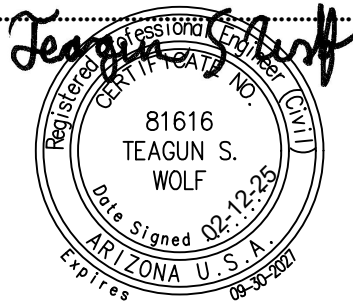
Figure 1.1 Site Vicinity Map

APPENDICES

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1. INTRODUCTION

1.1 Project Scope

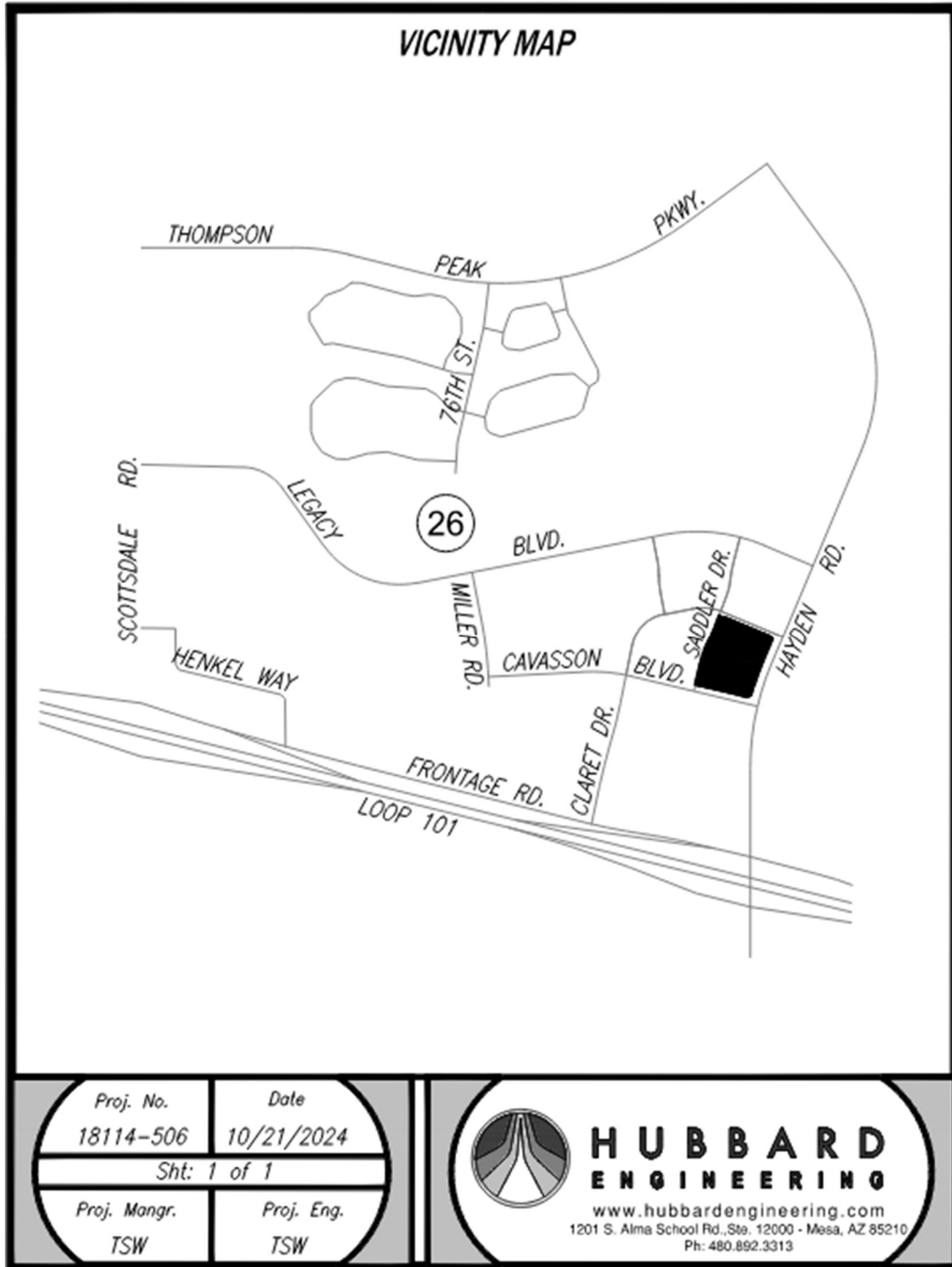
This report presents the results of a *Final Water Study* conducted by Hubbard Engineering at the request of Butler Design Group (“client”), for the Retail North and M.O.B. development (“site”). The purpose of this report is to provide an evaluation of the proposed distribution system for the site. This report addresses design flows and basis of design as well as design criteria. The water analysis of this report will adhere to Hubbard Engineering’s submitted and approved *Master Water Report*.

1.2 Site Description

The project site is located in the southeast quarter of Section 26, Township 4N, Range 4E of the Gila and Salt River Base and Meridian, Maricopa County, Arizona. The overall Cavasson Master project site is irregular in shape and encompasses approximately 136 acres. The Retail North and M.O.B. project site specifically is approximately 7.05 acres of the overall development. Phase 1 of the site has largely been developed to full build out with the exception of the northwest corner as well as the east half of Cavasson Lot 1H, proposed to become Cavasson Lot 1K. Additionally, all of the main infrastructure roads and water mains have been constructed and accepted by the City of Scottsdale. The remainder of the site is currently undeveloped with the Phase 3B roadways currently under construction. For the purposes of this report, the Phase 3B Roadways will be assumed to have completed construction as the public water main proposed as part of Phase 3B will be necessary to serve Cavasson Phase 3C. Prior to Nationwide Reality Investor’s acquisition, the site was held in trust by the Arizona State Land Department (ASLD) as a portion of the overall Crossroads East development, which encompasses approximately 883 gross acres. The site has been rezoned as a Planned Community District. The overall development is bounded by the Loop 101 Freeway to the south, East Legacy Boulevard to the north, the Miller Road alignment to the west, and North Hayden Road to the east. Phase 1 of the overall development is bounded by the Loop 101 Freeway to the south, Cavasson Boulevard to the north, Claret Drive to the west, and North Hayden Road to the east.

Retail North and M.O.B. is specifically located in the northeast portion of the Cavasson Development within Phase 3C and is bounded by Cavasson Boulevard to the south, Claret Drive to the north, undeveloped desert to the west, and Hayden Road to the east. The site location is shown in **Figure 1.1 – Vicinity Map**.

Figure 1.1 – Vicinity Map



1.3 Project Type

The overall Cavasson project is being developed by Nationwide Reality Investors as a master planned, mixed-use development with office, retail, hotels, and multifamily residential parcels with public and private roadways that run adjacent and through the development.

Retail North and M.O.B. is proposing a 37,000 square foot medical office building and 13,000± square foot retail building located on Lot 5 of Cavasson Phase 3C. Improvements will include proposed parking and drive aisles, proposed public water main and private sewer, as well as the private street Saddler Drive (Private).

The analysis for the overall development was conducted in Hubbard's *Master Water Report Phase 3 Update* and will be referenced as it applies to Retail North and M.O.B. Future preliminary plats and minor land divisions at the Cavasson Development will follow this format of presenting a basis of design report rather than an update to the Master Water Report. The Master Water Report will be updated with the next block plat for the Cavasson Development which will be the Phase 2 Update.

1.4 Regulatory Requirements

The following documents were utilized in the preparation of this report:

- City of Scottsdale, *Design Standards & Policies Manual*.
- Maricopa Association of Governments (MAG), *Uniform Standard Specifications and Details for Public Works Construction, 2024 Edition*.
- *2021 Edition of the International Fire Code*.
- *2021 Edition of the International Plumbing Code*.
- Hubbard Engineering, *Master Water Report for Cavasson, Phase 3 Update, May 21, 2021*.

2. PROJECT DESCRIPTION

2.1 Tie-In to Existing System

The proposed public water main for Retail North and M.O.B. will connect to existing 12-inch stubs provided off of Cavasson Boulevard and Claret Drive with 12-inch public water main. This public water main will then downsize to 8-inch public water main on the Retail North and M.O.B. project site. The public water main within Saddler Drive (Private) will be 12-inch diameter.

See **Exhibit 1** for proposed tie-in locations.

2.2 Service Area

The water service provider for the existing site is the City of Scottsdale. The Cavasson development is being developed by Nationwide Realty Investors as a master planned mixed use development with office, retail, hotels, and multifamily residential parcels with public and private roadways that run adjacent and through the development. The Cavasson development is located within Zone 4 and is discussed in more detail in the previously submitted *Cavasson Master Water Plan Phase 3 Update*.

The Retail North and M.O.B. development is proposing construction of an approximately 37,000 square foot M.O.B. building and 13,000± square foot retail building. Improvements will include an onsite parking lot and drive aisles and connections to the existing public water mains at existing stubs. The buildings will be equipped with an automatic sprinkler system per NFPA 13 and 2021 IFC. The buildings are assumed to be Type V-B construction at this time.

2.3 Right of Way and Easements

The proposed public water main for Retail North and M.O.B. will be within 12-foot public water easements with a 20' access easement over the top on site and within 12-foot public water easements with a 64' Private Roadway Tract providing access over the top within Saddler Drive (Private).

3. DESIGN FLOWS AND BASIS OF DESIGN

3.1 Average Daily Demands

In accordance with the City of Scottsdale Design Standard & Policies Manual Chapter 6 Section 6-1.205 (Reference 1), the design unit water demand for Office is 8.34E-04 gallons per minute per square foot.

Similarly, the design unit water demand for Hotel is 0.63 gallons per minute per room, and for commercial/retail is 1.11E-03 gallons per minute per square foot.

Similarly, the design unit water demand for Commercial/Retail is 1.11E-03 gallons per minute per square foot.

The Retail North and M.O.B. development is located on Parcel 1C-10 and 1C-3 of the Cavasson Master Development and the Preliminary Water Basis of Design Report for Cavasson Phase 3C Minor Land Division. The total service area for Retail North and M.O.B. development is 37,000 square feet of Office and 13,000 square feet of commercial/retail. Parcel 1C-3 is currently planned to be a future hotel development with the remaining 163 keys that the Cavasson development is entitled to use. The remaining parcels for Cavasson Phase 3C are not being modified from the Preliminary Water Basis of Design Report for Cavasson Phase 3C Minor Land Division at this time.

Thus, the total Average Daily Demand for Retail North and M.O.B. is:

$$\begin{aligned}(0.63 \text{ gpm/room}) \times (163 \text{ rooms}) &= \mathbf{102.69 \text{ gpm.}} \\(0.00111 \text{ gpm/sq. ft.}) \times (13,000 \text{ sq. ft.}) &= \mathbf{14.43 \text{ gpm}} \\(0.000834 \text{ gpm/sq. ft.}) \times (37,000 \text{ sq. ft.}) &= \mathbf{30.86 \text{ gpm}} \\102.69 \text{ gpm} + 14.43 \text{ gpm} + 30.86 \text{ gpm} &= \mathbf{147.98 \text{ gpm}}\end{aligned}$$

This demand is in conformance with the demand for the Toll at Cavasson development in the Approved *Cavasson Master Water Report Phase 3 Update* (Reference 11) as it is a reduction.

Additionally, the remaining demands for Cavasson Phase 3C and all demands for Cavasson Lot 1H PrePlat as well as Toll at Cavasson will be accounted for in the modeling for this report as these preliminary plats are currently approved and not constructed. It is worth noting that the Toll at Cavasson DRB is considered approved for the purposes of this report. These demands are documented in the Approved *Preliminary Water Report Cavasson Lot 1H – Basis of Design* (Reference 12) and Toll at Cavasson Final Water Basis of Design Report (Reference 13).

3.2 Maximum Daily Demand and Peak Hour Flow

In accordance with the *City of Scottsdale Design Standards & Policies Manual Chapter 6 Section 6-1.404* (Reference 1), the maximum day peaking factor and peak hour peaking factor are as follows:

3.2.1 Maximum Day Demand

$$\text{Max Day Demand} = \text{ADD} * 2$$

3.2.2 Peak Hour Demand

$$\text{Peak Hour Demand} = \text{ADD} * 3.5$$

3.3 Water and Fire Demand Calculations

A summary of the water and fire demand calculations can be found in **Table 1, Table 2, and Table 3** below.

Table 1: Water and Fire Demand Calculation Summary Retail North and M.O.B.

Land Use	Applicable Unit	ADD (gpm/Unit)	ADD (gpm)	Max Day Demand (ADD x 2) (gpm)	Peak Hour Demand (ADD x 3.5) (gpm)	Fire Flow Required (gpm)	Max Day Plus Fire Flow (gpm)
Office	37,000 sq. ft.	8.34E-04	30.86	61.72	108.01	2,500	2,561.7
Hotel	163 rooms	0.63	102.69	205.38	359.42	2,500	2,705.4
Commercial/ Retail	13,000 sq. ft.	1.11E-03	14.43	28.86	50.51	2,500	2,528.9
Total			147.98	295.96	517.94	2,500	2796.0*

*Total Max Day Plus Fire Flow is based on 2,500 gpm required fire flow added to the total Max Day Demand of 295.96 gpm.

Table 2: Water and Fire Demand Summary Previously Approved Projects

Applicable Project	ADD (gpm)	Max Day Demand (ADD x 2) (gpm)	Peak Hour Demand (ADD x 3.5) (gpm)	Fire Flow Required (gpm)	Max Day Plus Fire Flow (gpm)
Lot 1H PrePlat	127.77	255.54	447.20	2,500	2,755.54
Phase 3C Minor Land Division Remainder	188.72	377.64	661.06	2,500	2877.64
Toll at Cavasson	44.55	89.1	155.93	1,500	1,589.1
Combined Total	361.04	722.28	1,264.2	2,500	3,222.28**

**Total Max Day Plus Fire Flow is based on 2,500 gpm required fire flow added to the total Max Day Demand of 722.28 gpm.

Table 3: Total Water and Fire Demand Calculation Summary for Modeling

Applicable Project	ADD (gpm)	Max Day Demand (ADD x 2) (gpm)	Peak Hour Demand (ADD x 3.5) (gpm)	Fire Flow Required (gpm)	Max Day Plus Fire Flow (gpm)
Toll at Cavasson	44.55	89.10	155.93	1,500	1,589.10*
Cavasson Office C	149.29	298.57	522.50	2,500	2,798.57**
Phase 3C Minor Land Division	336.73	673.56	1179	2,500	3,172.9**
BB Living at Cavasson	63.03	126.06	220.61	1,500	1,626.10*
Combined Total	593.60	1,187.29	2,078.04	2,500	3,687.29***

* Multifamily Residential Fire Flow demand is 1,500 gpm as described in Section 4.2. All other fire flow demands are based on 2,500 gpm due to high-rise buildings within the development.

**Max Day Plus Fire Flow for the development is based on 2,500 gpm required fire flow added to the Max Day Demand.

***Total Max Day Plus Fire Flow is based on 2,500 gpm required for the Retail North and M.O.B. development added to the combined total Max Day Demand of 1,187.29 gpm.

3.4 Existing Overall Development Demand Discussion

The remainder of Cavasson Phase 1 that is planned at this time has been constructed and occupied so the demand has already been accounted for with the latest hydrant flow test. As a result, the demand nodes for these existing buildings have been reduced to 1 gpm in the modeling for this report to ensure flow is still being routed through those pipes. In addition, the demand nodes for the existing buildings have been renamed to have a z prefix in order to allow them to be sorted to the bottom of the tables. As a result of these demands, the modeled flow for all scenarios is 13 gpm higher than the demands listed in Table 3. These existing demands are discussed and calculated in the *Approved Cavasson Master Water Report Phase 3 Update* (Reference 11) and summarized in Table 4 below.

Table 4: Cavasson Development **Existing** Water Demands

Area ID	Land Use Designation	ADD [gpm]	*MDD (ADD*2) [gpm]	*PHD (ADD*3.5) [gpm]	Max Day + Fire Flow [gpm]
1A-1	Office	375.30	750.60	1313.55	3250.60
1A-3A	Office	134.52	269.05	470.83	2769.05
1A-4	Office	137.19	274.39	480.18	2774.39
1A-6	Garage	0.00	0.00	0.00	2500.00
1A-7	Hotel	149.31	298.62	522.59	2798.62
1A-8	Restaurant/Retail	25.20	50.40	88.20	2550.40
	Total	822	1,643	2,875	

The required fire flow for the development is 2,500 gpm due to high-rise buildings within the development as discussed in Section 4.2 of this report.

3.5 Total Demand for Overall Development

Table 5 below presents the max entitlement water demands for the Cavasson Development at full build-out as detailed in the Approved Cavasson Master Water Report Phase 3 Update, based on the approved zoning case for 1,600 dwelling units, 400 hotel rooms, 200,000 square feet of commercial/retail, and 1,800,000 square feet of office, using the unit demand rates detailed in Section 3.1 of this report.

Table 5: Max Entitlement Total Water Demands at **Full Build-Out**

Land Use Designation	ADD [gpm]	*MDD (ADD*2) [gpm]	*PHD (ADD*3.5) [gpm]	Max Day + Fire Flow [gpm]
Office	1,501	3,002	5,254	5,502
Hotel	252	504	882	3,004
11.9 DU/acre Residential	528	1,056	1,848	3,556
Commercial/Retail	222	444	777	2944
Total	2,503	5,006	8,761	7,506

Table 6 below presents a summary of the remaining demands for the overall Cavasson Development at full build-out. The demand summary for Toll at Cavasson has been highlighted with a light purple color, for Cavasson Phase 3C has been highlighted with a light green color, BB Living at Cavasson with a light blue color and for Cavasson Office C has been highlighted with a peach color. The demands that are not highlighted are not anticipated to be developed in the near future and have been neglected from the model at this time. Any future basis of design report to develop those land areas will have to continue including the proposed demands from Toll at Cavasson, Cavasson Phase 3C and Cavasson Office C until construction has completed and the respective developments have been fully occupied. It is worth noting that parcel 1C-1 is the BB Living at Cavasson project which has been submitted for DRB. These demands have

been updated for the projected new unit count for this parcel as the original permits for 1C-1 were all allowed to expire without beginning construction and a new site plan with lower density is now being proposed for that site. The demands for Parcel 1C-1 have been calculated in a separate basis of design report that will be submitted as part of that project’s DRB submittal.

Table 6: Overall Cavasson Development Remaining Demands at Full Build-Out

Area ID	Land Use Designation	ADD [gpm]	*MDD (ADD*2) [gpm]	*PHD (ADD*3.5) [gpm]	Max Day + Fire Flow [gpm]
1A-2	Residential	41.58	83.16	145.53	2583.16
1A-3B	Office	149.29	298.57	522.50	2798.60
1A-5	Residential	80.52	161.04	281.82	2661.04
1B-1	Office	505.82	1011.64	1770.37	3511.64
1B-2	Residential	238.92	477.84	836.22	2977.84
1B-3	Garage	0.00	0.00	0.00	2500.00
1C-1	Residential	63.03	126.06	220.61	1,626.06*
1C-2	Residential	44.55	89.10	155.94	1,589.10*
1C-3	Hotel	102.69	205.38	359.42	2705.38
1C-4	Commercial/ Retail	103.14	206.28	360.98	2706.28
1C-5	Office	91.74	183.48	321.09	2683.48
1C-6	Residential	19.80	39.60	69.30	2539.60
1C-8	Residential	39.93	79.86	139.76	2579.20
1C-9	Office	45.45	90.91	159.09	2590.91
1C-10	Commercial/ Retail	45.54	91.09	159.39	2591.09
Total		1,572	3,144	5,502	

*Multifamily Residential Fire Flow demand is 1,500 gpm before reduction as described in Section 4.2. All other fire flow demands are based on 2,500 gpm due to high-rise buildings within the development.

4. DESIGN CRITERIA

4.1 Minimum Pressure

The water distribution system shall be designed and constructed to maintain the following minimum pressures:

1. Max Day Demand plus Fire Flow – minimum of 30 psi
2. Peak Hour Demand – ≥ 50 psi and ≤ 120 psi, to achieve minimum service pressure of 40 psi (Note: Per the City of Scottsdale Design Standards and Policies Manual, all metered services are required to have a pressure-regulating valve installed on the private service line.).

4.2 Fire Flows

Fire flow requirements are typically determined by the local fire department. The latest version of the International Fire Code (IFC), adopted by the City of Scottsdale, will serve as guidelines. A minimum Fire Flow of 5,250 gpm for 4 hours is based on a 37,000 square foot building of Type VB construction. A 75% reduction is allowed due to the NFPA 13 sprinkler system which results in a required fire flow of 1,312.5 gpm for 4 hours, per City of Scottsdale Fire Code.

However, due to high-rise buildings within the development, a Minimum Fire Flow of **2,500 gpm** which will be used in accordance with City of Scottsdale Fire Code.

4.3 Water Modeling Discussion

A water model was run for the proposed system using WaterCAD. The basis of this model was developed using information from a fire hydrant flow test conducted on October 16, 2018, updated October 13, 2020, and a third update conducted on August 27, 2021. The current model has been updated to use the results from the most recently conducted fire hydrant flow test conducted on April 18, 2024, on the 24-inch waterline within the private access drive. The results from this hydrant flow test have been adjusted in accordance with the City of Scottsdale Design Standards and Policies Manual Chapter 6, Section 6-1.405 to use the 10% safety factor pressure results in order to account for system supply variations. The results of the most recent fire flow test are included in **Appendix E – Fire Flow Test Results**. The Static Residual Hydrant is located at node FH-A3 within the model.

Additionally, the supply at 30 psi based on the most recent hydrant flow test has been calculated as:

$$Q_R = Q_F \times \left(\frac{H_R}{H_F} \right)^{0.54}$$
$$Q_R = 3,866 \text{ gpm} \times \left(\frac{59.4 \text{ psi} - 30 \text{ psi}}{59.4 \text{ psi} - 42.4 \text{ psi}} \right)^{0.54}$$
$$= 5,196.7 \text{ gpm @ 30 psi}$$

Based on the results of this fire hydrant flow test, the existing water supply system can provide adequate supply at 30 psi for the proposed Maximum Day Demand Plus Fire Flow scenario.

It should be noted that the PRV station located at Legacy Boulevard and Hayden Road is undergoing pressure variation due to City of Scottsdale operational needs to maintain water quality within the reservoir serving Pressure Zone 4. The lowest pressure observed on the pressure recorder was 44 psi, so this was reduced by 6 psi to match the reduction on the static pressure from the hydrant flow test and then the modeling accounted for this minimum static pressure within the pressure zone to have an engineering factor of safety. Additionally, all proposed buildings greater than two stories within the Cavasson Development will install a

booster pump internal to the building to ensure domestic service pressures at the highest floor of the building meet the minimum of 15 psi. This pump will be designed by the building plumbing engineer with each building as has been done on the buildings constructed to date.

The meters for both the M.O.B. building and the Retail North building are proposed to be 2-inch diameter. For the Retail North building, it is proposed as a shell with no fixtures proposed at this time. It is assumed at this time that the M.O.B. building will have 20 service sinks (60 WSFU), 4 urinals (20 WSFU) and 6 Bathroom Group (21.6 WSFU). Water Service Fixture Units (WSFU) are based on Table E103.3(2) of 2021 IPC. In order to be conservative, these WSFU will be converted to gpm assuming supply systems predominately for flushometer valves from Table E103.3(3) of 2021 IPC. This results in a estimated demand of 67.5 gpm based on 100 WSFU (rounding down from the sum total of 101.6). In order to be conservative, a safety factor of 1.5 has been applied to this value for an Initial Service Line Design Flow of 101.25 gpm. Based on these criteria, a 2-inch water meter was selected. The meter size will be confirmed by the plumbing engineer for each building during the building plan review process. A reduced pressure principal backflow preventer will be installed immediately after each meter as required by the City of Scottsdale to protect the public water supply from contamination.

Demand node D-1C-4-B is located at the highest finished floor proposed at this time with an elevation of 1648. Area ID 1C-4, which is represented by the demand node D-1C-4-B, is currently planned to consist exclusively of single-story buildings. As a result, this demand node was checked to meet the requirement that the pressure at the highest finished floor is greater than 15 psi under Max Day Plus Fire Flow conditions. This demand node was modeled to have a pressure of 41 psi which meets the criteria.

4.3.1 Fire Flow Modeling

The Max Day Demand plus Fire Flow scenario was modeled two different ways. The first analysis method used the WaterCAD Fire Flow calculation methodology which uses a genetic algorithm to iterate through the system, applying the required fire flow demand to each fire flow node in the system, up to a specified maximum to determine the maximum available fire flow available at each node. If the specified maximum fire flow is available at each node, then the residual pressure when providing that fire flow on top of maximum day demand is provided. This information is found in the Fire Flow summary table presented in Appendix D. One thing to note, the fire flow demand does not appear on the junction or pipe summary tables in this model scenario due to the way WaterCAD applies the fire flow demand. This methodology ensures that every single fire flow node is tested to find the worst-case node.

The second methodology that was used to model the Maximum Day Demand plus Fire Flow scenario was to manually apply the fire flow demand to the worst-case fire flow node determined using the WaterCAD Fire Flow calculation methodology. This methodology uses traditional Hardy Cross calculations and does show the fire flow demand in the junction and pipe summary tables. These results are included in Appendix F and the model scenario is named Velocity Check.

4.4 Minimum Pipe Sizing

The proposed water mains will be 12-inch diameter at the connections to the existing stubs and within the proposed Saddler Drive (Private). The proposed water mains on site will be 8-inch diameter.

4.5 Pipe Material

All new water mains and fire lines will be Ductile Iron Pipe.

5. SUMMARY

- Per the City of Scottsdale Water System Pressure Zone Map, the Cavasson Development is located within Pressure Zone 4.
- The Average Daily Demand for Retail North and M.O.B. is 147.98 gpm. This conforms to the Master Study.
- The Maximum Daily Demand for Retail North and M.O.B. is 295.96 gpm. This conforms to the Master Study.
- The Peak Hour Demand for Retail North and M.O.B. is 517.94 gpm. This conforms to the Master Study.
- The required fire flow for Retail North and M.O.B. is 2,500 gpm.
- The required Maximum Day Plus Fire Flow for the proposed improvements is 3,687 gpm.
- The latest fire flow test showed the existing system can supply 5,197 gpm at 30 psi after reducing the pressure results by 10 percent of the static pressure. This is adequate to meet the Maximum Day Plus Fire Flow demand of 3,687 gpm for the proposed improvements.
- Based on the results of the water model, the Cavasson development system can maintain a flow of 3,700 gallons per minute at a pressure of 41 psi.
- Based on the results of the model, the pressure at the worst-case node for the Retail North and M.O.B. development under Maximum Day Plus Fire Flow demand is 46 psi, which meets the requirement of exceeding 15 psi.
- The results from the proposed water model show there are adequate flows and pressures being provided by the existing and proposed planned infrastructure for the Cavasson development.

6. REFERENCES

1. City of Scottsdale. *Design Standards & Policies Manual*. January 18, 2018.
2. Carollo Engineers. *2008 Scottsdale Integrated Water Resources Master Plan*. March 2008.
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11. Hubbard Engineering, *Master Water Report for Cavasson, Phase 3 Update, May 21, 2021*.
12. Hubbard Engineering, *Preliminary Water Report Cavasson Lot 1H – Basis of Design, March 15, 2024*.
13. Hubbard Engineering, *Final Water Report Toll at Cavasson – Basis of Design, October 4, 2024*.
14. Hubbard Engineering, *Final Water Report Cavasson Office C – Basis of Design, October 29, 2024*.
15. Hubbard Engineering, *Final Water Report BB Living at Cavasson – Basis of Design, October 31, 2024*.

Appendix A
Average Day Demand
Retail North And M.O.B.

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

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
963	D-1A-3-B	1,607.18	Zone - 4	<Collection: 1 item>	149	1,744.58	59.4
1199	D-1C-1	1,634.00	Zone - 4	<Collection: 1 item>	63	1,744.54	47.8
843	D-1C-10	1,633.79	Zone - 4	<Collection: 1 item>	46	1,744.53	47.9
1190	D-1C-2	1,626.38	Zone - 4	<Collection: 1 item>	45	1,744.56	51.1
821	D-1C-3-A	1,630.73	Zone - 4	<Collection: 1 item>	51	1,744.51	49.2
811	D-1C-3-B	1,628.48	Zone - 4	<Collection: 1 item>	51	1,744.51	50.2
869	D-1C-4-A	1,639.16	Zone - 4	<Collection: 1 item>	52	1,744.56	45.6
835	D-1C-4-B	1,648.76	Zone - 4	<Collection: 1 item>	52	1,744.56	41.4
841	D-1C-8	1,632.97	Zone - 4	<Collection: 1 item>	40	1,744.56	48.3
910	D-1C-9	1,627.00	Zone - 4	<Collection: 1 item>	45	1,744.57	50.9
754	FH-A1	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.59	57.4
1021	FH-A1-2	1,618.47	Zone - 4	<Collection: 0 items>	0	1,744.58	54.6
1009	FH-A1-3	1,609.45	Zone - 4	<Collection: 0 items>	0	1,744.59	58.5
1024	FH-A2-1	1,621.00	Zone - 4	<Collection: 0 items>	0	1,744.58	53.5
778	FH-A2-3	1,625.00	Zone - 4	<Collection: 0 items>	0	1,744.57	51.7
1018	FH-A2-4	1,619.38	Zone - 4	<Collection: 0 items>	0	1,744.58	54.2
1012	FH-A3	1,607.19	Zone - 4	<Collection: 0 items>	0	1,744.58	59.4
757	FH-A4	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.58	57.4
1015	FH-A4-3	1,608.46	Zone - 4	<Collection: 0 items>	0	1,744.58	58.9
1034	FH-A4-4	1,608.76	Zone - 4	<Collection: 0 items>	0	1,744.58	58.8
1030	FH-A4-6	1,613.08	Zone - 4	<Collection: 0 items>	0	1,744.58	56.9
1028	FH-A5	1,596.00	Zone - 4	<Collection: 0 items>	0	1,744.58	64.3
970	FH-A7	1,621.59	Zone - 4	<Collection: 0 items>	0	1,744.58	53.2
985	FH-A8	1,618.53	Zone - 4	<Collection: 0 items>	0	1,744.58	54.5
1195	FH-C1	1,641.00	Zone - 4	<Collection: 0 items>	0	1,744.55	44.8
1169	FH-C2-1	1,621.00	Zone - 4	<Collection: 0 items>	0	1,744.57	53.5
1171	FH-C2-2	1,626.00	Zone - 4	<Collection: 0 items>	0	1,744.56	51.3
1173	FH-C2-3	1,626.50	Zone - 4	<Collection: 0 items>	0	1,744.56	51.1
1177	FH-C2-4	1,623.80	Zone - 4	<Collection: 0 items>	0	1,744.56	52.2
1181	FH-C2-5	1,627.30	Zone - 4	<Collection: 0 items>	0	1,744.56	50.7
1183	FH-C2-6	1,629.50	Zone - 4	<Collection: 0 items>	0	1,744.56	49.8
1187	FH-C2-7	1,628.00	Zone - 4	<Collection: 0 items>	0	1,744.57	50.4
814	FH-C3	1,627.82	Zone - 4	<Collection: 0 items>	0	1,744.52	50.5
807	FH-C3-2	1,626.64	Zone - 4	<Collection: 0 items>	0	1,744.57	51.0
832	FH-C4	1,644.28	Zone - 4	<Collection: 0 items>	0	1,744.56	43.4
839	FH-C8	1,626.14	Zone - 4	<Collection: 0 items>	0	1,744.57	51.2
912	FH-C9	1,626.65	Zone - 4	<Collection: 0 items>	0	1,744.57	51.0
988	FH-C10	1,635.38	Zone - 4	<Collection: 0 items>	0	1,744.56	47.2
1064	FUTURE CONNECTION ACROSS 101	1,596.00	Zone - 4	<Collection: 1 item>	5	1,744.58	64.3
1163	FUTURE MILLER	1,596.00	Zone - 4	<Collection: 1 item>	1	1,744.58	64.3
686	J-1	1,609.00	Zone - 4	<Collection: 0 items>	0	1,744.60	58.7
687	J-2	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.60	57.4
689	J-3	1,623.00	Zone - 4	<Collection: 0 items>	0	1,744.58	52.6
691	J-4	1,629.00	Zone - 4	<Collection: 0 items>	0	1,744.57	50.0
693	J-5	1,629.90	Zone - 4	<Collection: 0 items>	0	1,744.57	49.6
695	J-6	1,631.92	Zone - 4	<Collection: 0 items>	0	1,744.57	48.7
697	J-7	1,649.25	Zone - 4	<Collection: 0 items>	0	1,744.56	41.2
701	J-8	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.56	41.3
703	J-9	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.56	41.3
705	J-10	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.56	41.3
707	J-11	1,646.00	Zone - 4	<Collection: 0 items>	0	1,744.56	42.6
709	J-12	1,643.00	Zone - 4	<Collection: 0 items>	0	1,744.56	43.9
711	J-13	1,637.84	Zone - 4	<Collection: 0 items>	0	1,744.56	46.2
713	J-14	1,633.68	Zone - 4	<Collection: 0 items>	0	1,744.56	48.0
717	J-16	1,630.55	Zone - 4	<Collection: 0 items>	0	1,744.57	49.3
719	J-17	1,617.54	Zone - 4	<Collection: 0 items>	0	1,744.57	55.0
721	J-18	1,625.17	Zone - 4	<Collection: 0 items>	0	1,744.57	51.7
724	J-19	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.60	57.4
737	J-20	1,625.50	Zone - 4	<Collection: 0 items>	0	1,744.57	51.5
764	J-21	1,612.50	Zone - 4	<Collection: 0 items>	0	1,744.58	57.1
771	J-22	1,618.54	Zone - 4	<Collection: 0 items>	0	1,744.58	54.5
768	J-23	1,618.40	Zone - 4	<Collection: 0 items>	0	1,744.58	54.6
783	J-24	1,623.83	Zone - 4	<Collection: 0 items>	0	1,744.57	52.2
775	J-25	1,619.21	Zone - 4	<Collection: 0 items>	0	1,744.58	54.2
940	J-26	1,604.52	Zone - 4	<Collection: 0 items>	0	1,744.58	60.6

799	J-27	1,619.36	Zone - 4	<Collection: 0 items>	0	1,744.57	54.2
818	J-29	1,636.73	Zone - 4	<Collection: 0 items>	0	1,744.57	46.7
825	J-30	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.56	41.3
828	J-31	1,645.84	Zone - 4	<Collection: 0 items>	0	1,744.56	42.7
848	J-32	1,648.15	Zone - 4	<Collection: 0 items>	0	1,744.56	41.7
873	J-36	1,636.30	Zone - 4	<Collection: 0 items>	0	1,744.56	46.8
877	J-37	1,640.12	Zone - 4	<Collection: 0 items>	0	1,744.56	45.2
903	J-40	1,631.38	Zone - 4	<Collection: 0 items>	0	1,744.56	49.0
907	J-41	1,626.75	Zone - 4	<Collection: 0 items>	0	1,744.53	51.0
933	J-44	1,624.90	Zone - 4	<Collection: 0 items>	0	1,744.57	51.8
937	J-45	1,606.60	Zone - 4	<Collection: 0 items>	0	1,744.58	59.7
967	J-47	1,628.00	Zone - 4	<Collection: 0 items>	0	1,744.58	50.4
745	J-50	1,619.49	Zone - 4	<Collection: 0 items>	0	1,744.58	54.1
1037	J-51	1,637.97	Zone - 4	<Collection: 0 items>	0	1,744.56	46.1
1042	J-52	1,641.32	Zone - 4	<Collection: 0 items>	0	1,744.56	44.7
1048	J-53	1,640.08	Zone - 4	<Collection: 0 items>	0	1,744.56	45.2
1055	J-54	1,635.94	Zone - 4	<Collection: 0 items>	0	1,744.56	47.0
1059	J-55	1,633.17	Zone - 4	<Collection: 0 items>	0	1,744.56	48.2
1066	J-327	1,642.62	Zone - 4	<Collection: 0 items>	0	1,744.56	44.1
1070	J-329	1,630.95	Zone - 4	<Collection: 0 items>	0	1,744.56	49.2
1073	J-330	1,627.87	Zone - 4	<Collection: 0 items>	0	1,744.57	50.5
1083	J-336	1,639.94	Zone - 4	<Collection: 0 items>	0	1,744.56	45.3
1089	J-338	1,647.37	Zone - 4	<Collection: 0 items>	0	1,744.56	42.0
1098	J-340	1,644.85	Zone - 4	<Collection: 0 items>	0	1,744.56	43.1
1107	J-342	1,630.06	Zone - 4	<Collection: 0 items>	0	1,744.56	49.5
1139	J-351	1,635.01	Zone - 4	<Collection: 0 items>	0	1,744.56	47.4
1143	J-352	1,629.23	Zone - 4	<Collection: 0 items>	0	1,744.57	49.9
1158	J-355	1,596.58	Zone - 4	<Collection: 0 items>	0	1,744.58	64.0
1161	J-356	1,596.00	Zone - 4	<Collection: 0 items>	0	1,744.58	64.3
1167	J-358	1,624.00	Zone - 4	<Collection: 0 items>	0	1,744.57	52.2
1179	J-364	1,626.90	Zone - 4	<Collection: 0 items>	0	1,744.56	50.9
1185	J-367	1,631.00	Zone - 4	<Collection: 0 items>	0	1,744.57	49.1
1175	J-369	1,625.20	Zone - 4	<Collection: 0 items>	0	1,744.56	51.6
1193	J-370	1,637.00	Zone - 4	<Collection: 0 items>	0	1,744.56	46.5
1197	J-372	1,637.00	Zone - 4	<Collection: 0 items>	0	1,744.55	46.5
1201	J-374	1,631.00	Zone - 4	<Collection: 0 items>	0	1,744.56	49.1
1203	J-375	1,634.00	Zone - 4	<Collection: 0 items>	0	1,744.56	47.8
1205	J-376	1,635.00	Zone - 4	<Collection: 0 items>	0	1,744.56	47.4
1211	J-378	1,624.42	Zone - 4	<Collection: 0 items>	0	1,744.57	52.0
1215	J-379	1,633.43	Zone - 4	<Collection: 0 items>	0	1,744.54	48.1
1219	J-380	1,638.59	Zone - 4	<Collection: 0 items>	0	1,744.55	45.8
976	ZD-1A-1-A	1,614.93	Zone - 4	<Collection: 1 item>	1	1,744.58	56.1
741	ZD-1A-1-B	1,606.70	Zone - 4	<Collection: 1 item>	1	1,744.59	59.7
960	ZD-1A-3-A	1,612.51	Zone - 4	<Collection: 1 item>	1	1,744.58	57.1
761	ZD-1A-4-A	1,613.33	Zone - 4	<Collection: 1 item>	1	1,744.58	56.8
750	ZD-1A-4-B	1,607.21	Zone - 4	<Collection: 1 item>	1	1,744.58	59.4
972	ZD-1A-7	1,620.59	Zone - 4	<Collection: 1 item>	1	1,744.58	53.6
735	ZD-1A-8	1,616.47	Zone - 4	<Collection: 1 item>	1	1,744.58	55.4

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Scenario: Avg Day
Current Time Step: 0.000 h
FlexTable: Pipe Table

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
690	P-1	500	J-2	J-3	16.0	Ductile Iron	130.0	False	0.000	202	0.32	0.032
694	P-2	135	J-4	J-5	16.0	Ductile Iron	130.0	False	0.000	115	0.18	0.012
696	P-3	134	J-5	J-6	16.0	Ductile Iron	130.0	False	0.000	115	0.18	0.011
702	P-4	65	J-7	J-8	16.0	Ductile Iron	130.0	False	0.000	17	0.03	0.002
704	P-5	155	J-8	J-9	16.0	Ductile Iron	130.0	False	0.000	17	0.03	0.000
710	P-6	281	J-11	J-12	16.0	Ductile Iron	130.0	False	0.000	-25	0.04	0.001
714	P-7	126	J-13	J-14	16.0	Ductile Iron	130.0	False	0.000	-30	0.05	0.001
725	P-10	181	J-1	J-19	16.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
726	P-11	20	J-19	J-2	16.0	Ductile Iron	130.0	False	0.000	-405	0.65	0.117
1008	P-13	319	R-11	J-2	48.0	Ductile Iron	130.0	False	0.000	607	0.11	0.000
1022	P-14	236	J-3	FH-A1-2	12.0	Ductile Iron	130.0	False	0.000	44	0.12	0.008
1010	P-15	379	ZD-1A-1-B	FH-A1-3	24.0	Ductile Iron	130.0	False	0.000	-405	0.29	0.016
1025	P-16	83	J-50	FH-A2-1	12.0	Ductile Iron	130.0	False	0.000	67	0.19	0.018
977	P-17	120	ZD-1A-8	ZD-1A-1-A	12.0	Ductile Iron	130.0	False	0.000	1	0.00	0.000
756	P-18	119	FH-A1	ZD-1A-1-B	12.0	Ductile Iron	130.0	False	0.000	-38	0.11	0.006
763	P-20	168	ZD-1A-4-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	-51	0.15	0.011
1031	P-21	45	ZD-1A-4-A	FH-A4-6	12.0	Ductile Iron	130.0	False	0.000	24	0.07	0.003
770	P-22	306	J-23	ZD-1A-4-A	12.0	Ductile Iron	130.0	False	0.000	-26	0.08	0.003
1019	P-23	350	J-18	FH-A2-4	12.0	Ductile Iron	130.0	False	0.000	-52	0.15	0.011
773	P-24	293	J-22	J-21	12.0	Ductile Iron	130.0	False	0.000	-53	0.15	0.011
776	P-26	317	J-50	J-25	12.0	Ductile Iron	130.0	False	0.000	-26	0.08	0.003
779	P-27	244	J-18	FH-A2-3	16.0	Ductile Iron	130.0	False	0.000	2	0.00	0.000
780	P-28	327	FH-A2-3	J-20	16.0	Ductile Iron	130.0	False	0.000	2	0.00	0.000
785	P-31	316	J-24	J-18	16.0	Ductile Iron	130.0	False	0.000	47	0.08	0.002
800	P-35	536	J-17	J-27	16.0	Ductile Iron	130.0	False	0.000	47	0.08	0.002
801	P-36	355	J-27	J-24	16.0	Ductile Iron	130.0	False	0.000	47	0.08	0.002
808	P-41	276	J-20	FH-C3-2	16.0	Ductile Iron	130.0	False	0.000	-43	0.07	0.002
809	P-42	330	FH-C3-2	J-4	16.0	Ductile Iron	130.0	False	0.000	-43	0.07	0.002
817	P-45	210	D-1C-3-B	FH-C3	8.0	Ductile Iron	130.0	False	0.000	-45	0.29	0.059
819	P-46	371	J-6	J-29	16.0	Ductile Iron	130.0	False	0.000	115	0.18	0.012
822	P-47	175	D-1C-3-B	D-1C-3-A	8.0	Ductile Iron	130.0	False	0.000	-6	0.04	0.001
826	P-48	331	J-9	J-30	16.0	Ductile Iron	130.0	False	0.000	17	0.03	0.000
827	P-49	219	J-30	J-10	16.0	Ductile Iron	130.0	False	0.000	17	0.03	0.000
829	P-50	316	J-29	J-31	16.0	Ductile Iron	130.0	False	0.000	64	0.10	0.004
830	P-51	268	J-31	J-7	16.0	Ductile Iron	130.0	False	0.000	17	0.03	0.000
834	P-52	148	FH-C4	J-31	12.0	Ductile Iron	130.0	False	0.000	-47	0.13	0.009
1109	P-53	388	J-342	D-1C-8	12.0	Ductile Iron	130.0	False	0.000	43	0.12	0.007
838	P-54	534	FH-C4	D-1C-4-B	12.0	Ductile Iron	130.0	False	0.000	27	0.08	0.003
840	P-55	63	J-18	FH-C8	12.0	Ductile Iron	130.0	False	0.000	98	0.28	0.035
1108	P-56	524	FH-C8	J-342	12.0	Ductile Iron	130.0	False	0.000	46	0.13	0.008
989	P-57	328	J-29	FH-C10	12.0	Ductile Iron	130.0	False	0.000	51	0.14	0.010
845	P-58	234	D-1C-10	D-1C-3-A	8.0	Ductile Iron	130.0	False	0.000	57	0.37	0.092
1060	P-59	83	D-1C-8	J-55	12.0	Ductile Iron	130.0	False	0.000	24	0.07	0.003
849	P-60	295	J-10	J-32	16.0	Ductile Iron	130.0	False	0.000	-25	0.04	0.000
850	P-61	197	J-32	J-11	16.0	Ductile Iron	130.0	False	0.000	-25	0.04	0.001
1099	P-62	232	D-1C-4-B	J-340	12.0	Ductile Iron	130.0	False	0.000	-25	0.07	0.003
1100	P-70	339	J-340	D-1C-4-A	12.0	Ductile Iron	130.0	False	0.000	5	0.01	0.000
871	P-71	583	D-1C-4-A	FH-C4	12.0	Ductile Iron	130.0	False	0.000	-20	0.06	0.002
874	P-73	240	D-1C-8	J-36	12.0	Ductile Iron	130.0	False	0.000	-21	0.06	0.002
878	P-75	434	J-12	J-37	16.0	Ductile Iron	130.0	False	0.000	-30	0.05	0.001
879	P-76	284	J-37	J-13	16.0	Ductile Iron	130.0	False	0.000	-30	0.05	0.001
1144	P-77	146	J-329	J-352	12.0	Ductile Iron	130.0	False	0.000	-34	0.10	0.005
1145	P-78	116	J-352	J-330	12.0	Ductile Iron	130.0	False	0.000	-53	0.15	0.011
1075	P-79	221	J-330	FH-C8	12.0	Ductile Iron	130.0	False	0.000	-53	0.15	0.011
1140	P-80	229	J-40	J-351	12.0	Ductile Iron	130.0	False	0.000	-5	0.01	0.000
1141	P-81	41	J-351	J-51	12.0	Ductile Iron	130.0	False	0.000	-5	0.01	0.000
1084	P-82	76	J-51	J-336	12.0	Ductile Iron	130.0	False	0.000	-5	0.01	0.000
1085	P-83	108	J-336	J-52	12.0	Ductile Iron	130.0	False	0.000	-5	0.01	0.000
1046	P-84	253	J-52	J-12	12.0	Ductile Iron	130.0	False	0.000	-5	0.01	0.000
1090	P-85	253	J-10	J-338	12.0	Ductile Iron	130.0	False	0.000	41	0.12	0.007
1091	P-86	151	J-338	J-327	12.0	Ductile Iron	130.0	False	0.000	11	0.03	0.001
1160	P-87	49	J-355	FUTURE CONNECTION ACROSS 101	16.0	Ductile Iron	130.0	False	0.000	5	0.01	0.000
904	P-91	225	J-36	J-40	12.0	Ductile Iron	130.0	False	0.000	-42	0.12	0.008
1071	P-92	136	J-40	J-329	12.0	Ductile Iron	130.0	False	0.000	-37	0.11	0.005
909	P-95	108	J-41	FH-C3	8.0	Ductile Iron	130.0	False	0.000	45	0.29	0.059
913	P-97	605	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-26	0.07	0.003
914	P-98	67	FH-C9	J-20	12.0	Ductile Iron	130.0	False	0.000	-112	0.32	0.043
915	P-99	64	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-86	0.24	0.028
990	P-102	396	FH-C10	D-1C-10	8.0	Ductile Iron	130.0	False	0.000	50	0.32	0.072
987	P-107	217	FH-A8	ZD-1A-7	12.0	Ductile Iron	130.0	False	0.000	42	0.12	0.007
934	P-111	533	J-16	J-44	16.0	Ductile Iron	130.0	False	0.000	-58	0.09	0.003
935	P-112	404	J-44	J-17	16.0	Ductile Iron	130.0	False	0.000	-120	0.19	0.012
1016	P-114	272	J-21	FH-A4-3	12.0	Ductile Iron	130.0	False	0.000	-29	0.08	0.004
939	P-115	235	J-45	ZD-1A-4-B	24.0	Ductile Iron	130.0	False	0.000	-201	0.14	0.004
941	P-116	245	J-45	J-26	24.0	Ductile Iron	130.0	False	0.000	173	0.12	0.003
961	P-127	487	FH-A1	ZD-1A-3-A	12.0	Ductile Iron	130.0	False	0.000	38	0.11	0.006
962	P-128	216	ZD-1A-3-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	37	0.10	0.006
1013	P-129	138	ZD-1A-4-B	FH-A3	24.0	Ductile Iron	130.0	False	0.000	-217	0.15	0.005
965	P-130	231	D-1A-3-B	ZD-1A-1-B	24.0	Ductile Iron	130.0	False	0.000	-366	0.26	0.014
1014	P-131	123	FH-A3	D-1A-3-B	24.0	Ductile Iron	130.0	False	0.000	-217	0.15	0.005
968	P-132	400	J-3	J-47	16.0	Ductile Iron	130.0	False	0.000	158	0.25	0.020
969	P-133	161	J-47	J-4	16.0	Ductile Iron	130.0	False	0.000	158	0.25	0.020
986	P-135	137	ZD-1A-8	FH-A8	12.0	Ductile Iron	130.0	False	0.000	42	0.12	0.007
974	P-136	246	ZD-1A-7	J-50	12.0	Ductile Iron	130.0	False	0.000	41	0.12	0.007
975	P-137	24	FH-A7	ZD-1A-7	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1001	P-438	777	J-16	J-14	16.0	Ductile Iron	130.0	False	0.000	58	0.09	0.003
1029	P-441	121	J-22	FH-A5	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1032	P-442	105	FH-A4-6	J-21	12.0	Ductile Iron	130.0	False	0.000	24	0.07	0.002
1017	P-443	125	FH-A4-3	J-45	12.0	Ductile Iron	130.0	False	0.000	-29	0.08	0.004
1027	P-443	109	J-23	J-25	12.0	Ductile Iron	130.0	False	0.000	26	0.08	0.003
1023	P-444	104	FH-A1-2	ZD-1A-8	12.0	Ductile Iron	130.0	False	0.000	44	0.12	0.007
1026	P-445	246	FH-A2-1	J-20	12.0	Ductile Iron	130.0	False	0.000	67	0.19	0.017
1011	P-446	352	FH-A1-3	J-19	24.0	Ductile Iron	130.0	False	0.000	-405	0.29	0.016
1020	P-447	51	FH-A2-4	J-22	12.0	Ductile Iron	130.0	False	0.000	-52	0.15	0.010
1068	P-449	141	J-327	J-53	12.0	Ductile Iron	130.0	False	0.000	11	0.03	0.000
1058	P-453	148	J-54	J-53	12.0	Ductile Iron	130.0	False	0.000	14	0.04	0.001
1062	P-454	306	J-54	J-55	12.0	Ductile Iron	130.0	False	0.000	8	0.02	0.000
1063	P-455	296	D-1C-9	J-55	12.0	Ductile Iron	130.0	False	0.000	66	0.19	0.016
1159	P-456	678	J-26	J-355	24.0	Ductile Iron	130.0	False	0.000	173	0.12	0.003
1082	P-458	265	J-36	J-54	12.0	Ductile Iron	130.0	False	0.000	22	0.06	0.002

1101	P-462	69	J-338	J-340	12.0	Ductile Iron	130.0	False	0.000	30	0.09	0.004
1110	P-465	121	J-329	J-342	12.0	Ductile Iron	130.0	False	0.000	-3	0.01	0.000
1162	P-480	114	J-355	J-356	24.0	Ductile Iron	130.0	False	0.000	168	0.12	0.003
1164	P-481	43	J-356	FUTURE MILLER	24.0	Ductile Iron	130.0	False	0.000	1	0.00	0.000
1165	P-482	891	J-356	J-17	24.0	Ductile Iron	130.0	False	0.000	167	0.12	0.003
1035	P-483	102	ZD-1A-4-B	FH-A4-4	12.0	Ductile Iron	130.0	False	0.000	15	0.04	0.001
1212	P-483(1)	140	J-44	J-378	12.0	Ductile Iron	130.0	False	0.000	62	0.18	0.015
1213	P-483(2)	125	J-378	J-358	12.0	Ductile Iron	130.0	False	0.000	27	0.08	0.003
1036	P-484	215	FH-A4-4	FH-A4	12.0	Ductile Iron	130.0	False	0.000	15	0.04	0.001
1170	P-484	182	J-358	FH-C2-1	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1172	P-485	169	J-358	FH-C2-2	8.0	Ductile Iron	130.0	False	0.000	27	0.17	0.022
1216	P-485(1)	80	J-55	J-379	8.0	Ductile Iron	130.0	False	0.000	98	0.63	0.248
1217	P-485(2)	110	J-379	D-1C-10	8.0	Ductile Iron	130.0	False	0.000	53	0.34	0.078
1050	P-486	45	J-53	D-1C-4-A	12.0	Ductile Iron	130.0	False	0.000	26	0.07	0.003
1174	P-486	265	FH-C2-2	FH-C2-3	8.0	Ductile Iron	130.0	False	0.000	27	0.17	0.022
1191	P-487	13	FH-C2-3	D-1C-2	8.0	Ductile Iron	130.0	False	0.000	27	0.17	0.028
1192	P-487(2)	133	D-1C-2	J-369	8.0	Ductile Iron	130.0	False	0.000	-18	0.12	0.011
1178	P-488	105	J-369	FH-C2-4	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1057	P-489	266	J-54	FH-C10	12.0	Ductile Iron	130.0	False	0.000	-1	0.00	0.000
1180	P-489	165	J-369	J-364	8.0	Ductile Iron	130.0	False	0.000	-18	0.12	0.011
1182	P-490	30	J-364	FH-C2-5	8.0	Ductile Iron	130.0	False	0.000	-18	0.12	0.008
1184	P-491	235	FH-C2-5	FH-C2-6	8.0	Ductile Iron	130.0	False	0.000	-18	0.12	0.011
1186	P-492	236	FH-C2-6	J-367	8.0	Ductile Iron	130.0	False	0.000	-18	0.12	0.011
1188	P-493	150	J-367	FH-C2-7	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1189	P-494	160	J-367	J-352	12.0	Ductile Iron	130.0	False	0.000	-18	0.05	0.002
1194	P-495	195	J-14	J-370	8.0	Ductile Iron	130.0	False	0.000	28	0.18	0.024
1220	P-496(1)	255	J-370	J-380	8.0	Ductile Iron	130.0	False	0.000	37	0.23	0.040
1221	P-496(2)	387	J-380	FH-C1	8.0	Ductile Iron	130.0	False	0.000	11	0.07	0.004
1198	P-497	425	FH-C1	J-372	8.0	Ductile Iron	130.0	False	0.000	11	0.07	0.005
1200	P-498	519	J-372	D-1C-1	8.0	Ductile Iron	130.0	False	0.000	11	0.07	0.004
1202	P-499	855	D-1C-1	J-374	8.0	Ductile Iron	130.0	False	0.000	-26	0.17	0.022
1204	P-500	240	J-374	J-375	8.0	Ductile Iron	130.0	False	0.000	9	0.06	0.003
1206	P-501	557	J-375	J-376	8.0	Ductile Iron	130.0	False	0.000	9	0.06	0.003
1207	P-502	41	J-376	J-370	8.0	Ductile Iron	130.0	False	0.000	9	0.06	0.003
1214	P-505	119	J-374	J-378	8.0	Ductile Iron	130.0	False	0.000	-35	0.22	0.037
1218	P-506	195	J-41	J-379	8.0	Ductile Iron	130.0	False	0.000	-45	0.29	0.059
1222	P-507	280	D-1C-1	J-380	8.0	Ductile Iron	130.0	False	0.000	-26	0.16	0.020

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Scenario: Avg Day
Current Time Step: 0.000 h
FlexTable: Reservoir Table

ID	Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)
731	R-11	1,744.60	Zone - 4	607	1,744.60

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Appendix B
Max Day Demand
Retail North And M.O.B.

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

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
963	D-1A-3-B	1,607.18	Zone - 4	<Collection: 1 item>	299	1,744.54	59.4
1199	D-1C-1	1,634.00	Zone - 4	<Collection: 1 item>	126	1,744.40	47.8
843	D-1C-10	1,633.79	Zone - 4	<Collection: 1 item>	91	1,744.36	47.8
1190	D-1C-2	1,626.38	Zone - 4	<Collection: 1 item>	90	1,744.45	51.1
821	D-1C-3-A	1,630.73	Zone - 4	<Collection: 1 item>	103	1,744.28	49.1
811	D-1C-3-B	1,628.48	Zone - 4	<Collection: 1 item>	103	1,744.28	50.1
869	D-1C-4-A	1,639.16	Zone - 4	<Collection: 1 item>	103	1,744.46	45.6
835	D-1C-4-B	1,648.76	Zone - 4	<Collection: 1 item>	103	1,744.46	41.4
841	D-1C-8	1,632.97	Zone - 4	<Collection: 1 item>	79	1,744.46	48.2
910	D-1C-9	1,627.00	Zone - 4	<Collection: 1 item>	91	1,744.48	50.8
754	FH-A1	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.55	57.3
1021	FH-A1-2	1,618.47	Zone - 4	<Collection: 0 items>	0	1,744.54	54.5
1009	FH-A1-3	1,609.45	Zone - 4	<Collection: 0 items>	0	1,744.57	58.5
1024	FH-A2-1	1,621.00	Zone - 4	<Collection: 0 items>	0	1,744.51	53.4
778	FH-A2-3	1,625.00	Zone - 4	<Collection: 0 items>	0	1,744.50	51.7
1018	FH-A2-4	1,619.38	Zone - 4	<Collection: 0 items>	0	1,744.51	54.1
1012	FH-A3	1,607.19	Zone - 4	<Collection: 0 items>	0	1,744.54	59.4
757	FH-A4	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.53	57.3
1015	FH-A4-3	1,608.46	Zone - 4	<Collection: 0 items>	0	1,744.53	58.9
1034	FH-A4-4	1,608.76	Zone - 4	<Collection: 0 items>	0	1,744.53	58.7
1030	FH-A4-6	1,613.08	Zone - 4	<Collection: 0 items>	0	1,744.53	56.9
1028	FH-A5	1,596.00	Zone - 4	<Collection: 0 items>	0	1,744.51	64.3
970	FH-A7	1,621.59	Zone - 4	<Collection: 0 items>	0	1,744.52	53.2
985	FH-A8	1,618.53	Zone - 4	<Collection: 0 items>	0	1,744.53	54.5
1195	FH-C1	1,641.00	Zone - 4	<Collection: 0 items>	0	1,744.42	44.7
1169	FH-C2-1	1,621.00	Zone - 4	<Collection: 0 items>	0	1,744.48	53.4
1171	FH-C2-2	1,626.00	Zone - 4	<Collection: 0 items>	0	1,744.47	51.3
1173	FH-C2-3	1,626.50	Zone - 4	<Collection: 0 items>	0	1,744.45	51.0
1177	FH-C2-4	1,623.80	Zone - 4	<Collection: 0 items>	0	1,744.45	52.2
1181	FH-C2-5	1,627.30	Zone - 4	<Collection: 0 items>	0	1,744.46	50.7
1183	FH-C2-6	1,629.50	Zone - 4	<Collection: 0 items>	0	1,744.47	49.7
1187	FH-C2-7	1,628.00	Zone - 4	<Collection: 0 items>	0	1,744.48	50.4
814	FH-C3	1,627.82	Zone - 4	<Collection: 0 items>	0	1,744.33	50.4
807	FH-C3-2	1,626.64	Zone - 4	<Collection: 0 items>	0	1,744.50	51.0
832	FH-C4	1,644.28	Zone - 4	<Collection: 0 items>	0	1,744.47	43.3
839	FH-C8	1,626.14	Zone - 4	<Collection: 0 items>	0	1,744.49	51.2
912	FH-C9	1,626.65	Zone - 4	<Collection: 0 items>	0	1,744.49	51.0
988	FH-C10	1,635.38	Zone - 4	<Collection: 0 items>	0	1,744.46	47.2
1064	FUTURE CONNECTION ACROSS 101	1,596.00	Zone - 4	<Collection: 1 item>	5	1,744.52	64.3
1163	FUTURE MILLER	1,596.00	Zone - 4	<Collection: 1 item>	1	1,744.52	64.3
686	J-1	1,609.00	Zone - 4	<Collection: 0 items>	0	1,744.59	58.7
687	J-2	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.60	57.4
689	J-3	1,623.00	Zone - 4	<Collection: 0 items>	0	1,744.54	52.6
691	J-4	1,629.00	Zone - 4	<Collection: 0 items>	0	1,744.50	50.0
693	J-5	1,629.90	Zone - 4	<Collection: 0 items>	0	1,744.50	49.6
695	J-6	1,631.92	Zone - 4	<Collection: 0 items>	0	1,744.49	48.7
697	J-7	1,649.25	Zone - 4	<Collection: 0 items>	0	1,744.47	41.2
701	J-8	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.47	41.3
703	J-9	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.47	41.3
705	J-10	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.47	41.3
707	J-11	1,646.00	Zone - 4	<Collection: 0 items>	0	1,744.47	42.6
709	J-12	1,643.00	Zone - 4	<Collection: 0 items>	0	1,744.47	43.9
711	J-13	1,637.84	Zone - 4	<Collection: 0 items>	0	1,744.47	46.1
713	J-14	1,633.68	Zone - 4	<Collection: 0 items>	0	1,744.48	47.9
717	J-16	1,630.55	Zone - 4	<Collection: 0 items>	0	1,744.48	49.3
719	J-17	1,617.54	Zone - 4	<Collection: 0 items>	0	1,744.51	54.9
721	J-18	1,625.17	Zone - 4	<Collection: 0 items>	0	1,744.50	51.6
724	J-19	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.59	57.4
737	J-20	1,625.50	Zone - 4	<Collection: 0 items>	0	1,744.50	51.5
764	J-21	1,612.50	Zone - 4	<Collection: 0 items>	0	1,744.53	57.1
771	J-22	1,618.54	Zone - 4	<Collection: 0 items>	0	1,744.51	54.5
768	J-23	1,618.40	Zone - 4	<Collection: 0 items>	0	1,744.52	54.6
783	J-24	1,623.83	Zone - 4	<Collection: 0 items>	0	1,744.50	52.2
775	J-25	1,619.21	Zone - 4	<Collection: 0 items>	0	1,744.52	54.2
940	J-26	1,604.52	Zone - 4	<Collection: 0 items>	0	1,744.53	60.6

799	J-27	1,619.36	Zone - 4	<Collection: 0 items>	0	1,744.50	54.1
818	J-29	1,636.73	Zone - 4	<Collection: 0 items>	0	1,744.48	46.6
825	J-30	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.47	41.3
828	J-31	1,645.84	Zone - 4	<Collection: 0 items>	0	1,744.47	42.7
848	J-32	1,648.15	Zone - 4	<Collection: 0 items>	0	1,744.47	41.7
873	J-36	1,636.30	Zone - 4	<Collection: 0 items>	0	1,744.47	46.8
877	J-37	1,640.12	Zone - 4	<Collection: 0 items>	0	1,744.47	45.1
903	J-40	1,631.38	Zone - 4	<Collection: 0 items>	0	1,744.47	48.9
907	J-41	1,626.75	Zone - 4	<Collection: 0 items>	0	1,744.35	50.9
933	J-44	1,624.90	Zone - 4	<Collection: 0 items>	0	1,744.49	51.7
937	J-45	1,606.60	Zone - 4	<Collection: 0 items>	0	1,744.53	59.7
967	J-47	1,628.00	Zone - 4	<Collection: 0 items>	0	1,744.51	50.4
745	J-50	1,619.49	Zone - 4	<Collection: 0 items>	0	1,744.52	54.1
1037	J-51	1,637.97	Zone - 4	<Collection: 0 items>	0	1,744.47	46.1
1042	J-52	1,641.32	Zone - 4	<Collection: 0 items>	0	1,744.47	44.6
1048	J-53	1,640.08	Zone - 4	<Collection: 0 items>	0	1,744.46	45.2
1055	J-54	1,635.94	Zone - 4	<Collection: 0 items>	0	1,744.46	47.0
1059	J-55	1,633.17	Zone - 4	<Collection: 0 items>	0	1,744.46	48.1
1066	J-327	1,642.62	Zone - 4	<Collection: 0 items>	0	1,744.46	44.1
1070	J-329	1,630.95	Zone - 4	<Collection: 0 items>	0	1,744.47	49.1
1073	J-330	1,627.87	Zone - 4	<Collection: 0 items>	0	1,744.48	50.5
1083	J-336	1,639.94	Zone - 4	<Collection: 0 items>	0	1,744.47	45.2
1089	J-338	1,647.37	Zone - 4	<Collection: 0 items>	0	1,744.46	42.0
1098	J-340	1,644.85	Zone - 4	<Collection: 0 items>	0	1,744.46	43.1
1107	J-342	1,630.06	Zone - 4	<Collection: 0 items>	0	1,744.47	49.5
1139	J-351	1,635.01	Zone - 4	<Collection: 0 items>	0	1,744.47	47.4
1143	J-352	1,629.23	Zone - 4	<Collection: 0 items>	0	1,744.48	49.9
1158	J-355	1,596.58	Zone - 4	<Collection: 0 items>	0	1,744.52	64.0
1161	J-356	1,596.00	Zone - 4	<Collection: 0 items>	0	1,744.52	64.3
1167	J-358	1,624.00	Zone - 4	<Collection: 0 items>	0	1,744.48	52.1
1179	J-364	1,626.90	Zone - 4	<Collection: 0 items>	0	1,744.46	50.9
1185	J-367	1,631.00	Zone - 4	<Collection: 0 items>	0	1,744.48	49.1
1175	J-369	1,625.20	Zone - 4	<Collection: 0 items>	0	1,744.45	51.6
1193	J-370	1,637.00	Zone - 4	<Collection: 0 items>	0	1,744.46	46.5
1197	J-372	1,637.00	Zone - 4	<Collection: 0 items>	0	1,744.41	46.5
1201	J-374	1,631.00	Zone - 4	<Collection: 0 items>	0	1,744.47	49.1
1203	J-375	1,634.00	Zone - 4	<Collection: 0 items>	0	1,744.46	47.8
1205	J-376	1,635.00	Zone - 4	<Collection: 0 items>	0	1,744.46	47.4
1211	J-378	1,624.42	Zone - 4	<Collection: 0 items>	0	1,744.48	51.9
1215	J-379	1,633.43	Zone - 4	<Collection: 0 items>	0	1,744.39	48.0
1219	J-380	1,638.59	Zone - 4	<Collection: 0 items>	0	1,744.42	45.8
976	ZD-1A-1-A	1,614.93	Zone - 4	<Collection: 1 item>	1	1,744.53	56.1
741	ZD-1A-1-B	1,606.70	Zone - 4	<Collection: 1 item>	1	1,744.55	59.6
960	ZD-1A-3-A	1,612.51	Zone - 4	<Collection: 1 item>	1	1,744.54	57.1
761	ZD-1A-4-A	1,613.33	Zone - 4	<Collection: 1 item>	1	1,744.53	56.8
750	ZD-1A-4-B	1,607.21	Zone - 4	<Collection: 1 item>	1	1,744.53	59.4
972	ZD-1A-7	1,620.59	Zone - 4	<Collection: 1 item>	1	1,744.52	53.6
735	ZD-1A-8	1,616.47	Zone - 4	<Collection: 1 item>	1	1,744.53	55.4

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

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
690	P-1	500	J-2	J-3	16.0	Ductile Iron	130.0	False	0.000	399	0.64	0.114
694	P-2	135	J-4	J-5	16.0	Ductile Iron	130.0	False	0.000	229	0.37	0.041
696	P-3	134	J-5	J-6	16.0	Ductile Iron	130.0	False	0.000	229	0.37	0.041
702	P-4	65	J-7	J-8	16.0	Ductile Iron	130.0	False	0.000	33	0.05	0.002
704	P-5	155	J-8	J-9	16.0	Ductile Iron	130.0	False	0.000	33	0.05	0.001
710	P-6	281	J-11	J-12	16.0	Ductile Iron	130.0	False	0.000	-49	0.08	0.003
714	P-7	126	J-13	J-14	16.0	Ductile Iron	130.0	False	0.000	-60	0.10	0.004
725	P-10	181	J-1	J-19	16.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
726	P-11	20	J-19	J-2	16.0	Ductile Iron	130.0	False	0.000	-801	1.28	0.413
1008	P-13	319	R-11	J-2	48.0	Ductile Iron	130.0	False	0.000	1,200	0.21	0.000
1022	P-14	236	J-3	FH-A1-2	12.0	Ductile Iron	130.0	False	0.000	86	0.24	0.026
1010	P-15	379	ZD-1A-1-B	FH-A1-3	24.0	Ductile Iron	130.0	False	0.000	-801	0.57	0.057
1025	P-16	83	J-50	FH-A2-1	12.0	Ductile Iron	130.0	False	0.000	135	0.38	0.063
977	P-17	120	ZD-1A-8	ZD-1A-1-A	12.0	Ductile Iron	130.0	False	0.000	1	0.00	0.000
756	P-18	119	FH-A1	ZD-1A-1-B	12.0	Ductile Iron	130.0	False	0.000	-74	0.21	0.020
763	P-20	168	ZD-1A-4-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	-102	0.29	0.037
1031	P-21	45	ZD-1A-4-A	FH-A4-6	12.0	Ductile Iron	130.0	False	0.000	48	0.14	0.008
770	P-22	306	J-23	ZD-1A-4-A	12.0	Ductile Iron	130.0	False	0.000	-53	0.15	0.011
1019	P-23	350	J-18	FH-A2-4	12.0	Ductile Iron	130.0	False	0.000	-105	0.30	0.039
773	P-24	293	J-22	J-21	12.0	Ductile Iron	130.0	False	0.000	-105	0.30	0.039
776	P-26	317	J-50	J-25	12.0	Ductile Iron	130.0	False	0.000	-53	0.15	0.011
779	P-27	244	J-18	FH-A2-3	16.0	Ductile Iron	130.0	False	0.000	4	0.01	0.000
780	P-28	327	FH-A2-3	J-20	16.0	Ductile Iron	130.0	False	0.000	4	0.01	0.000
785	P-31	316	J-24	J-18	16.0	Ductile Iron	130.0	False	0.000	95	0.15	0.008
800	P-35	536	J-17	J-27	16.0	Ductile Iron	130.0	False	0.000	95	0.15	0.008
801	P-36	355	J-27	J-24	16.0	Ductile Iron	130.0	False	0.000	95	0.15	0.008
808	P-41	276	J-20	FH-C3-2	16.0	Ductile Iron	130.0	False	0.000	-84	0.13	0.006
809	P-42	330	FH-C3-2	J-4	16.0	Ductile Iron	130.0	False	0.000	-84	0.13	0.006
817	P-45	210	D-1C-3-B	FH-C3	8.0	Ductile Iron	130.0	False	0.000	-91	0.58	0.214
819	P-46	371	J-6	J-29	16.0	Ductile Iron	130.0	False	0.000	229	0.37	0.041
822	P-47	175	D-1C-3-B	D-1C-3-A	8.0	Ductile Iron	130.0	False	0.000	-12	0.08	0.006
826	P-48	331	J-9	J-30	16.0	Ductile Iron	130.0	False	0.000	33	0.05	0.001
827	P-49	219	J-30	J-10	16.0	Ductile Iron	130.0	False	0.000	33	0.05	0.001
829	P-50	316	J-29	J-31	16.0	Ductile Iron	130.0	False	0.000	128	0.20	0.014
830	P-51	268	J-31	J-7	16.0	Ductile Iron	130.0	False	0.000	33	0.05	0.001
834	P-52	148	FH-C4	J-31	12.0	Ductile Iron	130.0	False	0.000	-94	0.27	0.032
1109	P-53	388	J-342	D-1C-8	12.0	Ductile Iron	130.0	False	0.000	86	0.24	0.027
838	P-54	534	FH-C4	D-1C-4-B	12.0	Ductile Iron	130.0	False	0.000	54	0.15	0.011
840	P-55	63	J-18	FH-C8	12.0	Ductile Iron	130.0	False	0.000	196	0.56	0.124
1108	P-56	524	FH-C8	J-342	12.0	Ductile Iron	130.0	False	0.000	91	0.26	0.030
989	P-57	328	J-29	FH-C10	12.0	Ductile Iron	130.0	False	0.000	102	0.29	0.037
845	P-58	234	D-1C-10	D-1C-3-A	8.0	Ductile Iron	130.0	False	0.000	115	0.73	0.332
1060	P-59	83	D-1C-8	J-55	12.0	Ductile Iron	130.0	False	0.000	48	0.14	0.010
849	P-60	295	J-10	J-32	16.0	Ductile Iron	130.0	False	0.000	-49	0.08	0.002
850	P-61	197	J-32	J-11	16.0	Ductile Iron	130.0	False	0.000	-49	0.08	0.002
1099	P-62	232	D-1C-4-B	J-340	12.0	Ductile Iron	130.0	False	0.000	-49	0.14	0.010
1100	P-70	339	J-340	D-1C-4-A	12.0	Ductile Iron	130.0	False	0.000	11	0.03	0.001
871	P-71	583	D-1C-4-A	FH-C4	12.0	Ductile Iron	130.0	False	0.000	-41	0.12	0.007
874	P-73	240	D-1C-8	J-36	12.0	Ductile Iron	130.0	False	0.000	-41	0.12	0.007
878	P-75	434	J-12	J-37	16.0	Ductile Iron	130.0	False	0.000	-60	0.10	0.003
879	P-76	264	J-37	J-13	16.0	Ductile Iron	130.0	False	0.000	-60	0.10	0.003
1144	P-77	146	J-329	J-352	12.0	Ductile Iron	130.0	False	0.000	-69	0.20	0.018
1145	P-78	116	J-352	J-330	12.0	Ductile Iron	130.0	False	0.000	-105	0.30	0.039
1075	P-79	221	J-330	FH-C8	12.0	Ductile Iron	130.0	False	0.000	-105	0.30	0.039
1140	P-80	229	J-40	J-351	12.0	Ductile Iron	130.0	False	0.000	-10	0.03	0.001
1141	P-81	41	J-351	J-51	12.0	Ductile Iron	130.0	False	0.000	-10	0.03	0.000
1084	P-82	76	J-51	J-336	12.0	Ductile Iron	130.0	False	0.000	-10	0.03	0.000
1085	P-83	108	J-336	J-52	12.0	Ductile Iron	130.0	False	0.000	-10	0.03	0.001
1046	P-84	253	J-52	J-12	12.0	Ductile Iron	130.0	False	0.000	-10	0.03	0.000
1090	P-85	253	J-10	J-338	12.0	Ductile Iron	130.0	False	0.000	83	0.24	0.025
1091	P-86	151	J-338	J-327	12.0	Ductile Iron	130.0	False	0.000	23	0.06	0.002
1160	P-87	49	J-355	FUTURE CONNECTION ACROSS 101	16.0	Ductile Iron	130.0	False	0.000	5	0.01	0.000
904	P-91	225	J-36	J-40	12.0	Ductile Iron	130.0	False	0.000	-85	0.24	0.027
1071	P-92	136	J-40	J-329	12.0	Ductile Iron	130.0	False	0.000	-74	0.21	0.021
909	P-95	108	J-41	FH-C3	8.0	Ductile Iron	130.0	False	0.000	91	0.58	0.214
913	P-97	605	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-51	0.15	0.010
914	P-98	67	FH-C9	J-20	12.0	Ductile Iron	130.0	False	0.000	-223	0.63	0.157
915	P-99	64	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-172	0.49	0.099
990	P-102	396	FH-C10	D-1C-10	8.0	Ductile Iron	130.0	False	0.000	101	0.64	0.259
987	P-107	217	FH-A8	ZD-1A-7	12.0	Ductile Iron	130.0	False	0.000	84	0.24	0.025
934	P-111	533	J-16	J-44	16.0	Ductile Iron	130.0	False	0.000	-116	0.18	0.011
935	P-112	404	J-44	J-17	16.0	Ductile Iron	130.0	False	0.000	-239	0.38	0.044
1016	P-114	272	J-21	FH-A4-3	12.0	Ductile Iron	130.0	False	0.000	-57	0.16	0.013
939	P-115	235	J-45	ZD-1A-4-B	24.0	Ductile Iron	130.0	False	0.000	-398	0.28	0.016
941	P-116	245	J-45	J-26	24.0	Ductile Iron	130.0	False	0.000	341	0.24	0.012
961	P-127	487	FH-A1	ZD-1A-3-A	12.0	Ductile Iron	130.0	False	0.000	74	0.21	0.021
962	P-128	216	ZD-1A-3-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	73	0.21	0.020
1013	P-129	138	ZD-1A-4-B	FH-A3	24.0	Ductile Iron	130.0	False	0.000	-427	0.30	0.018
965	P-130	231	D-1A-3-B	ZD-1A-1-B	24.0	Ductile Iron	130.0	False	0.000	-726	0.51	0.048
1014	P-131	123	FH-A3	D-1A-3-B	24.0	Ductile Iron	130.0	False	0.000	-427	0.30	0.018
968	P-132	400	J-3	J-47	16.0	Ductile Iron	130.0	False	0.000	314	0.50	0.073
969	P-133	161	J-47	J-4	16.0	Ductile Iron	130.0	False	0.000	314	0.50	0.073
986	P-135	137	ZD-1A-8	FH-A8	12.0	Ductile Iron	130.0	False	0.000	84	0.24	0.026
974	P-136	246	ZD-1A-7	J-50	12.0	Ductile Iron	130.0	False	0.000	83	0.23	0.025
975	P-137	24	FH-A7	ZD-1A-7	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1001	P-438	777	J-16	J-14	16.0	Ductile Iron	130.0	False	0.000	116	0.18	0.011
1029	P-441	121	J-22	FH-A5	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1032	P-442	105	FH-A4-6	J-21	12.0	Ductile Iron	130.0	False	0.000	48	0.14	0.009
1017	P-443	125	FH-A4-3	J-45	12.0	Ductile Iron	130.0	False	0.000	-57	0.16	0.013
1027	P-443	109	J-23	J-25	12.0	Ductile Iron	130.0	False	0.000	53	0.15	0.011
1023	P-444	104	FH-A1-2	ZD-1A-8	12.0	Ductile Iron	130.0	False	0.000	86	0.24	0.027
1026	P-445	246	FH-A2-1	J-20	12.0	Ductile Iron	130.0	False	0.000	135	0.38	0.062
1011	P-446	352	FH-A1-3	J-19	24.0	Ductile Iron	130.0	False	0.000	-801	0.57	0.058
1020	P-447	51	FH-A2-4	J-22	12.0	Ductile Iron	130.0	False	0.000	-105	0.30	0.038
1068	P-449	141	J-327	J-53	12.0	Ductile Iron	130.0	False	0.000	23	0.06	0.003
1058	P-453	148	J-54	J-53	12.0	Ductile Iron	130.0	False	0.000	29	0.08	0.003
1062	P-454	306	J-54	J-55	12.0	Ductile Iron	130.0	False	0.000	16	0.04	0.001
1063	P-455	296	D-1C-9	J-55	12.0	Ductile Iron	130.0	False	0.000	132	0.38	0.060
1159	P-456	678	J-26	J-355	24.0	Ductile Iron	130.0	False	0.000	341	0.24	0.012
1082	P-458	265	J-36	J-54	12.0	Ductile Iron	130.0	False	0.000	44	0.12	0.008

1101	P-462	69	J-338	J-340	12.0	Ductile Iron	130.0	False	0.000	60	0.17	0.014
1110	P-465	121	J-329	J-342	12.0	Ductile Iron	130.0	False	0.000	-6	0.02	0.000
1162	P-480	114	J-355	J-356	24.0	Ductile Iron	130.0	False	0.000	336	0.24	0.011
1164	P-481	43	J-356	FUTURE MILLER	24.0	Ductile Iron	130.0	False	0.000	1	0.00	0.000
1165	P-482	891	J-356	J-17	24.0	Ductile Iron	130.0	False	0.000	335	0.24	0.012
1035	P-483	102	ZD-1A-4-B	FH-A4-4	12.0	Ductile Iron	130.0	False	0.000	28	0.08	0.004
1212	P-483(1)	140	J-44	J-378	12.0	Ductile Iron	130.0	False	0.000	124	0.35	0.053
1213	P-483(2)	125	J-378	J-358	12.0	Ductile Iron	130.0	False	0.000	54	0.15	0.011
1036	P-484	215	FH-A4-4	FH-A4	12.0	Ductile Iron	130.0	False	0.000	28	0.08	0.003
1170	P-484	182	J-358	FH-C2-1	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1172	P-485	169	J-358	FH-C2-2	8.0	Ductile Iron	130.0	False	0.000	54	0.34	0.081
1216	P-485(1)	80	J-55	J-379	8.0	Ductile Iron	130.0	False	0.000	196	1.25	0.892
1217	P-485(2)	110	J-379	D-1C-10	8.0	Ductile Iron	130.0	False	0.000	105	0.67	0.283
1050	P-486	45	J-53	D-1C-4-A	12.0	Ductile Iron	130.0	False	0.000	52	0.15	0.011
1174	P-486	265	FH-C2-2	FH-C2-3	8.0	Ductile Iron	130.0	False	0.000	54	0.34	0.081
1191	P-487	13	FH-C2-3	D-1C-2	8.0	Ductile Iron	130.0	False	0.000	54	0.34	0.083
1192	P-487(2)	133	D-1C-2	J-369	8.0	Ductile Iron	130.0	False	0.000	-36	0.23	0.039
1178	P-488	105	J-369	FH-C2-4	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1057	P-489	266	J-54	FH-C10	12.0	Ductile Iron	130.0	False	0.000	-1	0.00	0.000
1180	P-489	165	J-369	J-364	8.0	Ductile Iron	130.0	False	0.000	-36	0.23	0.039
1182	P-490	30	J-364	FH-C2-5	8.0	Ductile Iron	130.0	False	0.000	-36	0.23	0.040
1184	P-491	235	FH-C2-5	FH-C2-6	8.0	Ductile Iron	130.0	False	0.000	-36	0.23	0.039
1186	P-492	236	FH-C2-6	J-367	8.0	Ductile Iron	130.0	False	0.000	-36	0.23	0.039
1188	P-493	150	J-367	FH-C2-7	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1189	P-494	160	J-367	J-352	12.0	Ductile Iron	130.0	False	0.000	-36	0.10	0.005
1194	P-495	195	J-14	J-370	8.0	Ductile Iron	130.0	False	0.000	56	0.36	0.087
1220	P-496(1)	255	J-370	J-380	8.0	Ductile Iron	130.0	False	0.000	74	0.47	0.145
1221	P-496(2)	387	J-380	FH-C1	8.0	Ductile Iron	130.0	False	0.000	22	0.14	0.016
1198	P-497	425	FH-C1	J-372	8.0	Ductile Iron	130.0	False	0.000	22	0.14	0.016
1200	P-498	519	J-372	D-1C-1	8.0	Ductile Iron	130.0	False	0.000	22	0.14	0.016
1202	P-499	855	D-1C-1	J-374	8.0	Ductile Iron	130.0	False	0.000	-53	0.34	0.078
1204	P-500	240	J-374	J-375	8.0	Ductile Iron	130.0	False	0.000	18	0.11	0.010
1206	P-501	557	J-375	J-376	8.0	Ductile Iron	130.0	False	0.000	18	0.11	0.011
1207	P-502	41	J-376	J-370	8.0	Ductile Iron	130.0	False	0.000	18	0.11	0.009
1214	P-505	119	J-374	J-378	8.0	Ductile Iron	130.0	False	0.000	-70	0.45	0.134
1218	P-506	195	J-41	J-379	8.0	Ductile Iron	130.0	False	0.000	-91	0.58	0.214
1222	P-507	280	D-1C-1	J-380	8.0	Ductile Iron	130.0	False	0.000	-51	0.33	0.075

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

ID	Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)
731	R-11	1,744.60	Zone - 4	1,200	1,744.60

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Appendix C
Peak Hour Demand
Retail North And M.O.B.

Scenario: Peak Hour
Current Time Step: 0.000 h
FlexTable: Junction Table

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
963	D-1A-3-B	1,607.18	Zone - 4	<Collection: 1 item>	523	1,744.43	59.4
1199	D-1C-1	1,634.00	Zone - 4	<Collection: 1 item>	221	1,744.04	47.6
843	D-1C-10	1,633.79	Zone - 4	<Collection: 1 item>	159	1,743.93	47.7
1190	D-1C-2	1,626.38	Zone - 4	<Collection: 1 item>	157	1,744.17	51.0
821	D-1C-3-A	1,630.73	Zone - 4	<Collection: 1 item>	180	1,743.71	48.9
811	D-1C-3-B	1,628.48	Zone - 4	<Collection: 1 item>	180	1,743.71	49.9
869	D-1C-4-A	1,639.16	Zone - 4	<Collection: 1 item>	180	1,744.22	45.5
835	D-1C-4-B	1,648.76	Zone - 4	<Collection: 1 item>	180	1,744.21	41.3
841	D-1C-8	1,632.97	Zone - 4	<Collection: 1 item>	139	1,744.22	48.1
910	D-1C-9	1,627.00	Zone - 4	<Collection: 1 item>	159	1,744.27	50.7
754	FH-A1	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.45	57.3
1021	FH-A1-2	1,618.47	Zone - 4	<Collection: 0 items>	0	1,744.42	54.5
1009	FH-A1-3	1,609.45	Zone - 4	<Collection: 0 items>	0	1,744.52	58.4
1024	FH-A2-1	1,621.00	Zone - 4	<Collection: 0 items>	0	1,744.36	53.4
778	FH-A2-3	1,625.00	Zone - 4	<Collection: 0 items>	0	1,744.32	51.6
1018	FH-A2-4	1,619.38	Zone - 4	<Collection: 0 items>	0	1,744.35	54.1
1012	FH-A3	1,607.19	Zone - 4	<Collection: 0 items>	0	1,744.42	59.4
757	FH-A4	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.41	57.3
1015	FH-A4-3	1,608.46	Zone - 4	<Collection: 0 items>	0	1,744.40	58.8
1034	FH-A4-4	1,608.76	Zone - 4	<Collection: 0 items>	0	1,744.41	58.7
1030	FH-A4-6	1,613.08	Zone - 4	<Collection: 0 items>	0	1,744.39	56.8
1028	FH-A5	1,596.00	Zone - 4	<Collection: 0 items>	0	1,744.36	64.2
970	FH-A7	1,621.59	Zone - 4	<Collection: 0 items>	0	1,744.39	53.1
985	FH-A8	1,618.53	Zone - 4	<Collection: 0 items>	0	1,744.41	54.5
1195	FH-C1	1,641.00	Zone - 4	<Collection: 0 items>	0	1,744.08	44.6
1169	FH-C2-1	1,621.00	Zone - 4	<Collection: 0 items>	0	1,744.27	53.3
1171	FH-C2-2	1,626.00	Zone - 4	<Collection: 0 items>	0	1,744.23	51.2
1173	FH-C2-3	1,626.50	Zone - 4	<Collection: 0 items>	0	1,744.17	50.9
1177	FH-C2-4	1,623.80	Zone - 4	<Collection: 0 items>	0	1,744.18	52.1
1181	FH-C2-5	1,627.30	Zone - 4	<Collection: 0 items>	0	1,744.20	50.6
1183	FH-C2-6	1,629.50	Zone - 4	<Collection: 0 items>	0	1,744.23	49.6
1187	FH-C2-7	1,628.00	Zone - 4	<Collection: 0 items>	0	1,744.25	50.3
814	FH-C3	1,627.82	Zone - 4	<Collection: 0 items>	0	1,743.83	50.2
807	FH-C3-2	1,626.64	Zone - 4	<Collection: 0 items>	0	1,744.32	50.9
832	FH-C4	1,644.28	Zone - 4	<Collection: 0 items>	0	1,744.23	43.2
839	FH-C8	1,626.14	Zone - 4	<Collection: 0 items>	0	1,744.29	51.1
912	FH-C9	1,626.65	Zone - 4	<Collection: 0 items>	0	1,744.29	50.9
988	FH-C10	1,635.38	Zone - 4	<Collection: 0 items>	0	1,744.22	47.1
1064	FUTURE CONNECTION ACROSS 101	1,596.00	Zone - 4	<Collection: 1 item>	5	1,744.38	64.2
1163	FUTURE MILLER	1,596.00	Zone - 4	<Collection: 1 item>	1	1,744.37	64.2
686	J-1	1,609.00	Zone - 4	<Collection: 0 items>	0	1,744.58	58.7
687	J-2	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.60	57.4
689	J-3	1,623.00	Zone - 4	<Collection: 0 items>	0	1,744.44	52.5
691	J-4	1,629.00	Zone - 4	<Collection: 0 items>	0	1,744.33	49.9
693	J-5	1,629.90	Zone - 4	<Collection: 0 items>	0	1,744.31	49.5
695	J-6	1,631.92	Zone - 4	<Collection: 0 items>	0	1,744.29	48.6
697	J-7	1,649.25	Zone - 4	<Collection: 0 items>	0	1,744.24	41.1
701	J-8	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.24	41.2
703	J-9	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.24	41.2
705	J-10	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.24	41.2
707	J-11	1,646.00	Zone - 4	<Collection: 0 items>	0	1,744.24	42.5
709	J-12	1,643.00	Zone - 4	<Collection: 0 items>	0	1,744.24	43.8
711	J-13	1,637.84	Zone - 4	<Collection: 0 items>	0	1,744.25	46.0
713	J-14	1,633.68	Zone - 4	<Collection: 0 items>	0	1,744.25	47.8
717	J-16	1,630.55	Zone - 4	<Collection: 0 items>	0	1,744.27	49.2
719	J-17	1,617.54	Zone - 4	<Collection: 0 items>	0	1,744.34	54.9
721	J-18	1,625.17	Zone - 4	<Collection: 0 items>	0	1,744.32	51.5
724	J-19	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.58	57.4
737	J-20	1,625.50	Zone - 4	<Collection: 0 items>	0	1,744.32	51.4
764	J-21	1,612.50	Zone - 4	<Collection: 0 items>	0	1,744.39	57.1
771	J-22	1,618.54	Zone - 4	<Collection: 0 items>	0	1,744.36	54.4
768	J-23	1,618.40	Zone - 4	<Collection: 0 items>	0	1,744.39	54.5
783	J-24	1,623.83	Zone - 4	<Collection: 0 items>	0	1,744.32	52.1
775	J-25	1,619.21	Zone - 4	<Collection: 0 items>	0	1,744.38	54.2
940	J-26	1,604.52	Zone - 4	<Collection: 0 items>	0	1,744.40	60.5

799	J-27	1,619.36	Zone - 4	<Collection: 0 items>	0	1,744.33	54.1
818	J-29	1,636.73	Zone - 4	<Collection: 0 items>	0	1,744.25	46.5
825	J-30	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.24	41.2
828	J-31	1,645.84	Zone - 4	<Collection: 0 items>	0	1,744.24	42.6
848	J-32	1,648.15	Zone - 4	<Collection: 0 items>	0	1,744.24	41.6
873	J-36	1,636.30	Zone - 4	<Collection: 0 items>	0	1,744.22	46.7
877	J-37	1,640.12	Zone - 4	<Collection: 0 items>	0	1,744.25	45.1
903	J-40	1,631.38	Zone - 4	<Collection: 0 items>	0	1,744.24	48.8
907	J-41	1,626.75	Zone - 4	<Collection: 0 items>	0	1,743.90	50.7
933	J-44	1,624.90	Zone - 4	<Collection: 0 items>	0	1,744.29	51.7
937	J-45	1,606.60	Zone - 4	<Collection: 0 items>	0	1,744.41	59.6
967	J-47	1,628.00	Zone - 4	<Collection: 0 items>	0	1,744.36	50.3
745	J-50	1,619.49	Zone - 4	<Collection: 0 items>	0	1,744.37	54.0
1037	J-51	1,637.97	Zone - 4	<Collection: 0 items>	0	1,744.24	46.0
1042	J-52	1,641.32	Zone - 4	<Collection: 0 items>	0	1,744.24	44.5
1048	J-53	1,640.08	Zone - 4	<Collection: 0 items>	0	1,744.22	45.1
1055	J-54	1,635.94	Zone - 4	<Collection: 0 items>	0	1,744.22	46.8
1059	J-55	1,633.17	Zone - 4	<Collection: 0 items>	0	1,744.22	48.0
1066	J-327	1,642.62	Zone - 4	<Collection: 0 items>	0	1,744.22	44.0
1070	J-329	1,630.95	Zone - 4	<Collection: 0 items>	0	1,744.25	49.0
1073	J-330	1,627.87	Zone - 4	<Collection: 0 items>	0	1,744.27	50.4
1083	J-336	1,639.94	Zone - 4	<Collection: 0 items>	0	1,744.24	45.1
1089	J-338	1,647.37	Zone - 4	<Collection: 0 items>	0	1,744.22	41.9
1098	J-340	1,644.85	Zone - 4	<Collection: 0 items>	0	1,744.22	43.0
1107	J-342	1,630.06	Zone - 4	<Collection: 0 items>	0	1,744.25	49.4
1139	J-351	1,635.01	Zone - 4	<Collection: 0 items>	0	1,744.24	47.3
1143	J-352	1,629.23	Zone - 4	<Collection: 0 items>	0	1,744.26	49.8
1158	J-355	1,596.58	Zone - 4	<Collection: 0 items>	0	1,744.38	63.9
1161	J-356	1,596.00	Zone - 4	<Collection: 0 items>	0	1,744.37	64.2
1167	J-358	1,624.00	Zone - 4	<Collection: 0 items>	0	1,744.27	52.0
1179	J-364	1,626.90	Zone - 4	<Collection: 0 items>	0	1,744.20	50.7
1185	J-367	1,631.00	Zone - 4	<Collection: 0 items>	0	1,744.25	49.0
1175	J-369	1,625.20	Zone - 4	<Collection: 0 items>	0	1,744.18	51.5
1193	J-370	1,637.00	Zone - 4	<Collection: 0 items>	0	1,744.20	46.4
1197	J-372	1,637.00	Zone - 4	<Collection: 0 items>	0	1,744.06	46.3
1201	J-374	1,631.00	Zone - 4	<Collection: 0 items>	0	1,744.23	49.0
1203	J-375	1,634.00	Zone - 4	<Collection: 0 items>	0	1,744.22	47.7
1205	J-376	1,635.00	Zone - 4	<Collection: 0 items>	0	1,744.20	47.2
1211	J-378	1,624.42	Zone - 4	<Collection: 0 items>	0	1,744.27	51.9
1215	J-379	1,633.43	Zone - 4	<Collection: 0 items>	0	1,744.02	47.8
1219	J-380	1,638.59	Zone - 4	<Collection: 0 items>	0	1,744.10	45.6
976	ZD-1A-1-A	1,614.93	Zone - 4	<Collection: 1 item>	1	1,744.42	56.0
741	ZD-1A-1-B	1,606.70	Zone - 4	<Collection: 1 item>	1	1,744.46	59.6
960	ZD-1A-3-A	1,612.51	Zone - 4	<Collection: 1 item>	1	1,744.42	57.1
761	ZD-1A-4-A	1,613.33	Zone - 4	<Collection: 1 item>	1	1,744.40	56.7
750	ZD-1A-4-B	1,607.21	Zone - 4	<Collection: 1 item>	1	1,744.42	59.4
972	ZD-1A-7	1,620.59	Zone - 4	<Collection: 1 item>	1	1,744.39	53.6
735	ZD-1A-8	1,616.47	Zone - 4	<Collection: 1 item>	1	1,744.42	55.4

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Scenario: Peak Hour
 Current Time Step: 0.000 h
 FlexTable: Pipe Table

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
690	P-1	500	J-2	J-3	16.0	Ductile Iron	130.0	False	0.000	695	1.11	0.319
694	P-2	135	J-4	J-5	16.0	Ductile Iron	130.0	False	0.000	401	0.64	0.115
696	P-3	134	J-5	J-6	16.0	Ductile Iron	130.0	False	0.000	401	0.64	0.115
702	P-4	65	J-7	J-8	16.0	Ductile Iron	130.0	False	0.000	58	0.09	0.004
704	P-5	155	J-8	J-9	16.0	Ductile Iron	130.0	False	0.000	58	0.09	0.003
710	P-6	281	J-11	J-12	16.0	Ductile Iron	130.0	False	0.000	-87	0.14	0.007
714	P-7	126	J-13	J-14	16.0	Ductile Iron	130.0	False	0.000	-105	0.17	0.010
725	P-10	181	J-1	J-19	16.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
726	P-11	20	J-19	J-2	16.0	Ductile Iron	130.0	False	0.000	-1,395	2.23	1.160
1008	P-13	319	R-11	J-2	16.0	Ductile Iron	130.0	False	0.000	2,091	0.37	0.000
1022	P-14	236	J-3	FH-A1-2	12.0	Ductile Iron	130.0	False	0.000	148	0.42	0.073
1010	P-15	379	ZD-1A-1-B	FH-A1-3	24.0	Ductile Iron	130.0	False	0.000	-1,395	0.99	0.161
1025	P-16	83	J-50	FH-A2-1	12.0	Ductile Iron	130.0	False	0.000	237	0.67	0.176
977	P-17	120	ZD-1A-8	ZD-1A-1-A	12.0	Ductile Iron	130.0	False	0.000	1	0.00	0.000
756	P-18	119	FH-A1	ZD-1A-1-B	12.0	Ductile Iron	130.0	False	0.000	-129	0.37	0.057
763	P-20	168	ZD-1A-4-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	-178	0.50	0.103
1031	P-21	45	ZD-1A-4-A	FH-A4-6	12.0	Ductile Iron	130.0	False	0.000	84	0.24	0.027
770	P-22	306	J-23	ZD-1A-4-A	12.0	Ductile Iron	130.0	False	0.000	-92	0.26	0.031
1019	P-23	350	J-18	FH-A2-4	12.0	Ductile Iron	130.0	False	0.000	-184	0.52	0.110
773	P-24	293	J-22	J-21	12.0	Ductile Iron	130.0	False	0.000	-184	0.52	0.110
776	P-26	317	J-50	J-25	12.0	Ductile Iron	130.0	False	0.000	-92	0.26	0.031
779	P-27	244	J-18	FH-A2-3	16.0	Ductile Iron	130.0	False	0.000	8	0.01	0.000
780	P-28	327	FH-A2-3	J-20	16.0	Ductile Iron	130.0	False	0.000	8	0.01	0.000
785	P-31	316	J-24	J-18	16.0	Ductile Iron	130.0	False	0.000	168	0.27	0.023
800	P-35	536	J-17	J-27	16.0	Ductile Iron	130.0	False	0.000	168	0.27	0.023
801	P-36	355	J-27	J-24	16.0	Ductile Iron	130.0	False	0.000	168	0.27	0.023
808	P-41	276	J-20	FH-C3-2	16.0	Ductile Iron	130.0	False	0.000	-146	0.23	0.018
809	P-42	330	FH-C3-2	J-4	16.0	Ductile Iron	130.0	False	0.000	-146	0.23	0.018
817	P-45	210	D-1C-3-B	FH-C3	8.0	Ductile Iron	130.0	False	0.000	-158	1.01	0.602
819	P-46	371	J-6	J-29	16.0	Ductile Iron	130.0	False	0.000	401	0.64	0.115
822	P-47	175	D-1C-3-B	D-1C-3-A	8.0	Ductile Iron	130.0	False	0.000	-21	0.14	0.015
826	P-48	331	J-9	J-30	16.0	Ductile Iron	130.0	False	0.000	58	0.09	0.003
827	P-49	219	J-30	J-10	16.0	Ductile Iron	130.0	False	0.000	58	0.09	0.003
829	P-50	316	J-29	J-31	16.0	Ductile Iron	130.0	False	0.000	223	0.36	0.039
830	P-51	268	J-31	J-7	16.0	Ductile Iron	130.0	False	0.000	58	0.09	0.003
834	P-52	148	FH-C4	J-31	12.0	Ductile Iron	130.0	False	0.000	-165	0.47	0.090
1109	P-53	388	J-342	D-1C-8	12.0	Ductile Iron	130.0	False	0.000	150	0.43	0.076
838	P-54	534	FH-C4	D-1C-4-B	12.0	Ductile Iron	130.0	False	0.000	94	0.27	0.032
840	P-55	63	J-18	FH-C8	12.0	Ductile Iron	130.0	False	0.000	344	0.97	0.350
1108	P-56	524	FH-C8	J-342	12.0	Ductile Iron	130.0	False	0.000	160	0.45	0.085
989	P-57	328	J-29	FH-C10	12.0	Ductile Iron	130.0	False	0.000	178	0.50	0.103
845	P-58	234	D-1C-10	D-1C-3-A	8.0	Ductile Iron	130.0	False	0.000	201	1.28	0.936
1060	P-59	83	D-1C-8	J-55	12.0	Ductile Iron	130.0	False	0.000	83	0.24	0.025
849	P-60	295	J-10	J-32	16.0	Ductile Iron	130.0	False	0.000	-87	0.14	0.007
850	P-61	197	J-32	J-11	16.0	Ductile Iron	130.0	False	0.000	-87	0.14	0.007
1099	P-62	232	D-1C-4-B	J-340	12.0	Ductile Iron	130.0	False	0.000	-87	0.25	0.027
1100	P-70	339	J-340	D-1C-4-A	12.0	Ductile Iron	130.0	False	0.000	18	0.05	0.001
871	P-71	583	D-1C-4-A	FH-C4	12.0	Ductile Iron	130.0	False	0.000	-71	0.20	0.019
874	P-73	240	D-1C-8	J-36	12.0	Ductile Iron	130.0	False	0.000	-72	0.20	0.019
878	P-75	434	J-12	J-37	16.0	Ductile Iron	130.0	False	0.000	-105	0.17	0.010
879	P-76	264	J-37	J-13	16.0	Ductile Iron	130.0	False	0.000	-105	0.17	0.009
1144	P-77	146	J-329	J-352	12.0	Ductile Iron	130.0	False	0.000	-121	0.34	0.050
1145	P-78	116	J-352	J-330	12.0	Ductile Iron	130.0	False	0.000	-184	0.52	0.110
1075	P-79	221	J-330	FH-C8	12.0	Ductile Iron	130.0	False	0.000	-184	0.52	0.110
1140	P-80	229	J-40	J-351	12.0	Ductile Iron	130.0	False	0.000	-18	0.05	0.002
1141	P-81	41	J-351	J-51	12.0	Ductile Iron	130.0	False	0.000	-18	0.05	0.000
1084	P-82	76	J-51	J-336	12.0	Ductile Iron	130.0	False	0.000	-18	0.05	0.002
1085	P-83	108	J-336	J-52	12.0	Ductile Iron	130.0	False	0.000	-18	0.05	0.001
1046	P-84	253	J-52	J-12	12.0	Ductile Iron	130.0	False	0.000	-18	0.05	0.002
1090	P-85	253	J-10	J-338	12.0	Ductile Iron	130.0	False	0.000	145	0.41	0.071
1091	P-86	151	J-338	J-327	12.0	Ductile Iron	130.0	False	0.000	40	0.11	0.006
1160	P-87	49	J-355	FUTURE CONNECTION ACROSS 101	16.0	Ductile Iron	130.0	False	0.000	5	0.01	0.000
904	P-91	225	J-36	J-40	12.0	Ductile Iron	130.0	False	0.000	-149	0.42	0.074
1071	P-92	136	J-40	J-329	12.0	Ductile Iron	130.0	False	0.000	-130	0.37	0.058
909	P-95	108	J-41	FH-C3	8.0	Ductile Iron	130.0	False	0.000	158	1.01	0.603
913	P-97	605	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-90	0.25	0.029
914	P-98	67	FH-C9	J-20	12.0	Ductile Iron	130.0	False	0.000	-391	1.11	0.445
915	P-99	64	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-301	0.85	0.275
990	P-102	396	FH-C10	D-1C-10	8.0	Ductile Iron	130.0	False	0.000	176	1.12	0.731
987	P-107	217	FH-A8	ZD-1A-7	12.0	Ductile Iron	130.0	False	0.000	146	0.41	0.071
934	P-111	533	J-16	J-44	16.0	Ductile Iron	130.0	False	0.000	-203	0.32	0.033
935	P-112	404	J-44	J-17	16.0	Ductile Iron	130.0	False	0.000	-419	0.67	0.125
1016	P-114	272	J-21	FH-A4-3	12.0	Ductile Iron	130.0	False	0.000	-99	0.28	0.035
939	P-115	235	J-45	ZD-1A-4-B	24.0	Ductile Iron	130.0	False	0.000	-692	0.49	0.044
941	P-116	245	J-45	J-26	24.0	Ductile Iron	130.0	False	0.000	593	0.42	0.033
961	P-127	487	FH-A1	ZD-1A-3-A	12.0	Ductile Iron	130.0	False	0.000	129	0.37	0.057
962	P-128	216	ZD-1A-3-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	128	0.36	0.056
1013	P-129	138	ZD-1A-4-B	FH-A3	24.0	Ductile Iron	130.0	False	0.000	-742	0.53	0.050
965	P-130	231	D-1A-3-B	ZD-1A-1-B	24.0	Ductile Iron	130.0	False	0.000	-1,265	0.90	0.134
1014	P-131	123	FH-A3	D-1A-3-B	24.0	Ductile Iron	130.0	False	0.000	-742	0.53	0.051
968	P-132	400	J-3	J-47	16.0	Ductile Iron	130.0	False	0.000	548	0.87	0.205
969	P-133	161	J-47	J-4	16.0	Ductile Iron	130.0	False	0.000	548	0.87	0.205
986	P-135	137	ZD-1A-8	FH-A8	12.0	Ductile Iron	130.0	False	0.000	146	0.41	0.071
974	P-136	246	ZD-1A-7	J-50	12.0	Ductile Iron	130.0	False	0.000	145	0.41	0.071
975	P-137	24	FH-A7	ZD-1A-7	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1001	P-438	777	J-16	J-14	16.0	Ductile Iron	130.0	False	0.000	203	0.32	0.033
1029	P-441	121	J-22	FH-A5	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1032	P-442	105	FH-A4-6	J-21	12.0	Ductile Iron	130.0	False	0.000	84	0.24	0.026
1017	P-443	125	FH-A4-3	J-45	12.0	Ductile Iron	130.0	False	0.000	-99	0.28	0.035
1027	P-443	109	J-23	J-25	12.0	Ductile Iron	130.0	False	0.000	92	0.26	0.030
1023	P-444	104	FH-A1-2	ZD-1A-8	12.0	Ductile Iron	130.0	False	0.000	148	0.42	0.074
1026	P-445	246	FH-A2-1	J-20	12.0	Ductile Iron	130.0	False	0.000	237	0.67	0.176
1011	P-446	352	FH-A1-3	J-19	24.0	Ductile Iron	130.0	False	0.000	-1,395	0.99	0.160
1020	P-447	51	FH-A2-4	J-22	12.0	Ductile Iron	130.0	False	0.000	-184	0.52	0.110
1068	P-449	141	J-327	J-53	12.0	Ductile Iron	130.0	False	0.000	40	0.11	0.006
1058	P-453	148	J-54	J-53	12.0	Ductile Iron	130.0	False	0.000	51	0.14	0.010
1062	P-454	306	J-54	J-55	12.0	Ductile Iron	130.0	False	0.000	28	0.08	0.003
1063	P-455	296	D-1C-9	J-55	12.0	Ductile Iron	130.0	False	0.000	232	0.66	0.169
1159	P-456	678	J-26	J-355	24.0	Ductile Iron	130.0	False	0.000	593	0.42	0.033
1082	P-458	265	J-36	J-54	12.0	Ductile Iron	130.0	False	0.000	77	0.22	0.022

1101	P-462	69	J-338	J-340	12.0	Ductile Iron	130.0	False	0.000	105	0.30	0.039
1110	P-465	121	J-329	J-342	12.0	Ductile Iron	130.0	False	0.000	-10	0.03	0.000
1162	P-480	114	J-355	J-356	24.0	Ductile Iron	130.0	False	0.000	588	0.42	0.032
1164	P-481	43	J-356	FUTURE MILLER	24.0	Ductile Iron	130.0	False	0.000	1	0.00	0.000
1165	P-482	891	J-356	J-17	24.0	Ductile Iron	130.0	False	0.000	587	0.42	0.032
1035	P-483	102	ZD-1A-4-B	FH-A4-4	12.0	Ductile Iron	130.0	False	0.000	49	0.14	0.010
1212	P-483(1)	140	J-44	J-378	12.0	Ductile Iron	130.0	False	0.000	217	0.61	0.150
1213	P-483(2)	125	J-378	J-358	12.0	Ductile Iron	130.0	False	0.000	94	0.27	0.031
1036	P-484	215	FH-A4-4	FH-A4	12.0	Ductile Iron	130.0	False	0.000	49	0.14	0.010
1170	P-484	182	J-358	FH-C2-1	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1172	P-485	169	J-358	FH-C2-2	8.0	Ductile Iron	130.0	False	0.000	94	0.60	0.228
1216	P-485(1)	80	J-55	J-379	8.0	Ductile Iron	130.0	False	0.000	343	2.19	2.517
1217	P-485(2)	110	J-379	D-1C-10	8.0	Ductile Iron	130.0	False	0.000	184	1.18	0.798
1050	P-486	45	J-53	D-1C-4-A	12.0	Ductile Iron	130.0	False	0.000	91	0.26	0.030
1174	P-486	265	FH-C2-2	FH-C2-3	8.0	Ductile Iron	130.0	False	0.000	94	0.60	0.228
1191	P-487	13	FH-C2-3	D-1C-2	8.0	Ductile Iron	130.0	False	0.000	94	0.60	0.229
1192	P-487(2)	133	D-1C-2	J-369	8.0	Ductile Iron	130.0	False	0.000	-63	0.40	0.110
1178	P-488	105	J-369	FH-C2-4	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1057	P-489	266	J-54	FH-C10	12.0	Ductile Iron	130.0	False	0.000	-2	0.01	0.000
1180	P-489	165	J-369	J-364	8.0	Ductile Iron	130.0	False	0.000	-63	0.40	0.110
1182	P-490	30	J-364	FH-C2-5	8.0	Ductile Iron	130.0	False	0.000	-63	0.40	0.113
1184	P-491	235	FH-C2-5	FH-C2-6	8.0	Ductile Iron	130.0	False	0.000	-63	0.40	0.110
1186	P-492	236	FH-C2-6	J-367	8.0	Ductile Iron	130.0	False	0.000	-63	0.40	0.110
1188	P-493	150	J-367	FH-C2-7	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1189	P-494	160	J-367	J-352	12.0	Ductile Iron	130.0	False	0.000	-63	0.18	0.015
1194	P-495	195	J-14	J-370	8.0	Ductile Iron	130.0	False	0.000	98	0.62	0.245
1220	P-496(1)	255	J-370	J-380	8.0	Ductile Iron	130.0	False	0.000	129	0.82	0.409
1221	P-496(2)	387	J-380	FH-C1	8.0	Ductile Iron	130.0	False	0.000	39	0.25	0.044
1198	P-497	425	FH-C1	J-372	8.0	Ductile Iron	130.0	False	0.000	39	0.25	0.044
1200	P-498	519	J-372	D-1C-1	8.0	Ductile Iron	130.0	False	0.000	39	0.25	0.044
1202	P-499	855	D-1C-1	J-374	8.0	Ductile Iron	130.0	False	0.000	-92	0.59	0.220
1204	P-500	240	J-374	J-375	8.0	Ductile Iron	130.0	False	0.000	31	0.20	0.029
1206	P-501	557	J-375	J-376	8.0	Ductile Iron	130.0	False	0.000	31	0.20	0.029
1207	P-502	41	J-376	J-370	8.0	Ductile Iron	130.0	False	0.000	31	0.20	0.030
1214	P-505	119	J-374	J-378	8.0	Ductile Iron	130.0	False	0.000	-123	0.79	0.377
1218	P-506	195	J-41	J-379	8.0	Ductile Iron	130.0	False	0.000	-158	1.01	0.602
1222	P-507	280	D-1C-1	J-380	8.0	Ductile Iron	130.0	False	0.000	-90	0.57	0.211

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Scenario: Peak Hour
Current Time Step: 0.000 h
FlexTable: Reservoir Table

ID	Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)
731	R-11	1,744.60	Zone - 4	2,091	1,744.60

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Appendix D
Max Day + Fire Flow
Retail North And M.O.B.

Scenario: Fire Flow
Current Time Step: 0.000 h
Fire Flow Node FlexTable: Fire Flow Report

Label	Zone	Fire Flow Iterations	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (System Lower Limit) (psi)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)	Is Fire Flow Run Balanced?
FH-A1	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	56.7	30.0	41.0	J-7	30.0	41.0	J-7	True
FH-A1-2	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	53.6	30.0	40.9	J-7	30.0	40.9	J-7	True
FH-A1-3	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	58.3	30.0	41.1	J-7	30.0	41.1	J-7	True
FH-A2-1	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	52.7	30.0	40.9	J-7	30.0	40.9	J-7	True
FH-A2-3	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	51.1	30.0	40.8	J-7	30.0	40.8	J-7	True
FH-A2-4	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	53.2	30.0	40.9	J-7	30.0	40.9	J-7	True
FH-A3	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	59.2	30.0	41.0	J-7	30.0	41.0	J-7	True
FH-A4	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	56.8	30.0	41.0	J-7	30.0	41.0	J-7	True
FH-A4-3	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	58.3	30.0	41.0	J-7	30.0	41.0	J-7	True
FH-A4-4	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	58.2	30.0	41.0	J-7	30.0	41.0	J-7	True
FH-A4-6	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	56.3	30.0	40.9	J-7	30.0	40.9	J-7	True
FH-A5	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	62.6	30.0	40.9	J-7	30.0	40.9	J-7	True
FH-A7	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	51.9	30.0	40.9	J-7	30.0	40.9	J-7	True
FH-A8	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	53.3	30.0	40.9	J-7	30.0	40.9	J-7	True
FH-C1	Zone - 4	3	False	2,500	2,444	2,500	2,444	30.0	30.0	30.0	34.7	J-372	30.0	34.7	J-372	True
FH-C2-1	Zone - 4	3	False	2,500	2,056	2,500	2,056	30.0	30.0	30.0	40.9	J-7	30.0	40.9	J-7	True
FH-C2-2	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	45.8	30.0	40.8	J-7	30.0	40.8	J-7	True
FH-C2-3	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	42.7	30.0	40.7	J-7	30.0	40.7	J-7	True
FH-C2-4	Zone - 4	3	False	2,500	2,239	2,500	2,239	30.0	30.0	30.0	40.8	J-7	30.0	40.8	J-7	True
FH-C2-5	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	42.4	30.0	40.7	J-7	30.0	40.7	J-7	True
FH-C2-6	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	43.5	30.0	40.7	J-7	30.0	40.7	J-7	True
FH-C2-7	Zone - 4	3	False	2,500	2,109	2,500	2,109	30.0	30.0	30.0	40.8	J-7	30.0	40.8	J-7	True
FH-C3	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	42.1	30.0	40.6	J-7	30.0	40.6	J-7	True
FH-C3-2	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	50.4	30.0	40.8	J-7	30.0	40.8	J-7	True
FH-C4	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	42.3	30.0	40.5	J-7	30.0	40.5	J-7	True
FH-C8	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	50.6	30.0	40.8	J-7	30.0	40.8	J-7	True
FH-C9	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	50.3	30.0	40.8	J-7	30.0	40.8	J-7	True
FH-C10	Zone - 4	2	True	2,500	2,505	2,500	2,505	30.0	46.1	30.0	40.6	J-7	30.0	40.6	J-7	True

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Scenario: Fire Flow
Current Time Step: 0.000 h
FlexTable: Junction Table

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
963	D-1A-3-B	1,607.18	Zone - 4	<Collection: 1 item>	299	1,744.54	59.4
1199	D-1C-1	1,634.00	Zone - 4	<Collection: 1 item>	126	1,744.40	47.8
843	D-1C-10	1,633.79	Zone - 4	<Collection: 1 item>	91	1,744.36	47.8
1190	D-1C-2	1,626.38	Zone - 4	<Collection: 1 item>	90	1,744.45	51.1
821	D-1C-3-A	1,630.73	Zone - 4	<Collection: 1 item>	103	1,744.28	49.1
811	D-1C-3-B	1,628.48	Zone - 4	<Collection: 1 item>	103	1,744.28	50.1
869	D-1C-4-A	1,639.16	Zone - 4	<Collection: 1 item>	103	1,744.46	45.6
835	D-1C-4-B	1,648.76	Zone - 4	<Collection: 1 item>	103	1,744.46	41.4
841	D-1C-8	1,632.97	Zone - 4	<Collection: 1 item>	79	1,744.46	48.2
910	D-1C-9	1,627.00	Zone - 4	<Collection: 1 item>	91	1,744.48	50.8
754	FH-A1	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.55	57.3
1021	FH-A1-2	1,618.47	Zone - 4	<Collection: 0 items>	0	1,744.54	54.5
1009	FH-A1-3	1,609.45	Zone - 4	<Collection: 0 items>	0	1,744.57	58.5
1024	FH-A2-1	1,621.00	Zone - 4	<Collection: 0 items>	0	1,744.51	53.4
778	FH-A2-3	1,625.00	Zone - 4	<Collection: 0 items>	0	1,744.50	51.7
1018	FH-A2-4	1,619.38	Zone - 4	<Collection: 0 items>	0	1,744.51	54.1
1012	FH-A3	1,607.19	Zone - 4	<Collection: 0 items>	0	1,744.54	59.4
757	FH-A4	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.53	57.3
1015	FH-A4-3	1,608.46	Zone - 4	<Collection: 0 items>	0	1,744.53	58.9
1034	FH-A4-4	1,608.76	Zone - 4	<Collection: 0 items>	0	1,744.53	58.7
1030	FH-A4-6	1,613.08	Zone - 4	<Collection: 0 items>	0	1,744.53	56.9
1028	FH-A5	1,596.00	Zone - 4	<Collection: 0 items>	0	1,744.51	64.3
970	FH-A7	1,621.59	Zone - 4	<Collection: 0 items>	0	1,744.52	53.2
985	FH-A8	1,618.53	Zone - 4	<Collection: 0 items>	0	1,744.53	54.5
1195	FH-C1	1,641.00	Zone - 4	<Collection: 0 items>	0	1,744.42	44.7
1169	FH-C2-1	1,621.00	Zone - 4	<Collection: 0 items>	0	1,744.48	53.4
1171	FH-C2-2	1,626.00	Zone - 4	<Collection: 0 items>	0	1,744.47	51.3
1173	FH-C2-3	1,626.50	Zone - 4	<Collection: 0 items>	0	1,744.45	51.0
1177	FH-C2-4	1,623.80	Zone - 4	<Collection: 0 items>	0	1,744.45	52.2
1181	FH-C2-5	1,627.30	Zone - 4	<Collection: 0 items>	0	1,744.46	50.7
1183	FH-C2-6	1,629.50	Zone - 4	<Collection: 0 items>	0	1,744.47	49.7
1187	FH-C2-7	1,628.00	Zone - 4	<Collection: 0 items>	0	1,744.48	50.4
814	FH-C3	1,627.82	Zone - 4	<Collection: 0 items>	0	1,744.33	50.4
807	FH-C3-2	1,626.64	Zone - 4	<Collection: 0 items>	0	1,744.50	51.0
832	FH-C4	1,644.28	Zone - 4	<Collection: 0 items>	0	1,744.47	43.3
839	FH-C8	1,626.14	Zone - 4	<Collection: 0 items>	0	1,744.49	51.2
912	FH-C9	1,626.65	Zone - 4	<Collection: 0 items>	0	1,744.49	51.0
988	FH-C10	1,635.38	Zone - 4	<Collection: 0 items>	0	1,744.46	47.2
1064	FUTURE CONNECTION ACROSS 101	1,596.00	Zone - 4	<Collection: 1 item>	5	1,744.52	64.3
1163	FUTURE MILLER	1,596.00	Zone - 4	<Collection: 1 item>	1	1,744.52	64.3
686	J-1	1,609.00	Zone - 4	<Collection: 0 items>	0	1,744.59	58.7
687	J-2	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.60	57.4
689	J-3	1,623.00	Zone - 4	<Collection: 0 items>	0	1,744.54	52.6
691	J-4	1,629.00	Zone - 4	<Collection: 0 items>	0	1,744.50	50.0
693	J-5	1,629.90	Zone - 4	<Collection: 0 items>	0	1,744.50	49.6
695	J-6	1,631.92	Zone - 4	<Collection: 0 items>	0	1,744.49	48.7
697	J-7	1,649.25	Zone - 4	<Collection: 0 items>	0	1,744.47	41.2
701	J-8	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.47	41.3
703	J-9	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.47	41.3
705	J-10	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.47	41.3
707	J-11	1,646.00	Zone - 4	<Collection: 0 items>	0	1,744.47	42.6
709	J-12	1,643.00	Zone - 4	<Collection: 0 items>	0	1,744.47	43.9
711	J-13	1,637.84	Zone - 4	<Collection: 0 items>	0	1,744.47	46.1
713	J-14	1,633.68	Zone - 4	<Collection: 0 items>	0	1,744.48	47.9
717	J-16	1,630.55	Zone - 4	<Collection: 0 items>	0	1,744.48	49.3
719	J-17	1,617.54	Zone - 4	<Collection: 0 items>	0	1,744.51	54.9
721	J-18	1,625.17	Zone - 4	<Collection: 0 items>	0	1,744.50	51.6
724	J-19	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.59	57.4
737	J-20	1,625.50	Zone - 4	<Collection: 0 items>	0	1,744.50	51.5
764	J-21	1,612.50	Zone - 4	<Collection: 0 items>	0	1,744.53	57.1
771	J-22	1,618.54	Zone - 4	<Collection: 0 items>	0	1,744.51	54.5
768	J-23	1,618.40	Zone - 4	<Collection: 0 items>	0	1,744.52	54.6
783	J-24	1,623.83	Zone - 4	<Collection: 0 items>	0	1,744.50	52.2
775	J-25	1,619.21	Zone - 4	<Collection: 0 items>	0	1,744.52	54.2
940	J-26	1,604.52	Zone - 4	<Collection: 0 items>	0	1,744.53	60.6

799	J-27	1,619.36	Zone - 4	<Collection: 0 items>	0	1,744.50	54.1
818	J-29	1,636.73	Zone - 4	<Collection: 0 items>	0	1,744.48	46.6
825	J-30	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.47	41.3
828	J-31	1,645.84	Zone - 4	<Collection: 0 items>	0	1,744.47	42.7
848	J-32	1,648.15	Zone - 4	<Collection: 0 items>	0	1,744.47	41.7
873	J-36	1,636.30	Zone - 4	<Collection: 0 items>	0	1,744.47	46.8
877	J-37	1,640.12	Zone - 4	<Collection: 0 items>	0	1,744.47	45.1
903	J-40	1,631.38	Zone - 4	<Collection: 0 items>	0	1,744.47	48.9
907	J-41	1,626.75	Zone - 4	<Collection: 0 items>	0	1,744.35	50.9
933	J-44	1,624.90	Zone - 4	<Collection: 0 items>	0	1,744.49	51.7
937	J-45	1,606.60	Zone - 4	<Collection: 0 items>	0	1,744.53	59.7
967	J-47	1,628.00	Zone - 4	<Collection: 0 items>	0	1,744.51	50.4
745	J-50	1,619.49	Zone - 4	<Collection: 0 items>	0	1,744.52	54.1
1037	J-51	1,637.97	Zone - 4	<Collection: 0 items>	0	1,744.47	46.1
1042	J-52	1,641.32	Zone - 4	<Collection: 0 items>	0	1,744.47	44.6
1048	J-53	1,640.08	Zone - 4	<Collection: 0 items>	0	1,744.46	45.2
1055	J-54	1,635.94	Zone - 4	<Collection: 0 items>	0	1,744.46	47.0
1059	J-55	1,633.17	Zone - 4	<Collection: 0 items>	0	1,744.46	48.1
1066	J-327	1,642.62	Zone - 4	<Collection: 0 items>	0	1,744.46	44.1
1070	J-329	1,630.95	Zone - 4	<Collection: 0 items>	0	1,744.47	49.1
1073	J-330	1,627.87	Zone - 4	<Collection: 0 items>	0	1,744.48	50.5
1083	J-336	1,639.94	Zone - 4	<Collection: 0 items>	0	1,744.47	45.2
1089	J-338	1,647.37	Zone - 4	<Collection: 0 items>	0	1,744.46	42.0
1098	J-340	1,644.85	Zone - 4	<Collection: 0 items>	0	1,744.46	43.1
1107	J-342	1,630.06	Zone - 4	<Collection: 0 items>	0	1,744.47	49.5
1139	J-351	1,635.01	Zone - 4	<Collection: 0 items>	0	1,744.47	47.4
1143	J-352	1,629.23	Zone - 4	<Collection: 0 items>	0	1,744.48	49.9
1158	J-355	1,596.58	Zone - 4	<Collection: 0 items>	0	1,744.52	64.0
1161	J-356	1,596.00	Zone - 4	<Collection: 0 items>	0	1,744.52	64.3
1167	J-358	1,624.00	Zone - 4	<Collection: 0 items>	0	1,744.48	52.1
1179	J-364	1,626.90	Zone - 4	<Collection: 0 items>	0	1,744.46	50.9
1185	J-367	1,631.00	Zone - 4	<Collection: 0 items>	0	1,744.48	49.1
1175	J-369	1,625.20	Zone - 4	<Collection: 0 items>	0	1,744.45	51.6
1193	J-370	1,637.00	Zone - 4	<Collection: 0 items>	0	1,744.46	46.5
1197	J-372	1,637.00	Zone - 4	<Collection: 0 items>	0	1,744.41	46.5
1201	J-374	1,631.00	Zone - 4	<Collection: 0 items>	0	1,744.47	49.1
1203	J-375	1,634.00	Zone - 4	<Collection: 0 items>	0	1,744.46	47.8
1205	J-376	1,635.00	Zone - 4	<Collection: 0 items>	0	1,744.46	47.4
1211	J-378	1,624.42	Zone - 4	<Collection: 0 items>	0	1,744.48	51.9
1215	J-379	1,633.43	Zone - 4	<Collection: 0 items>	0	1,744.39	48.0
1219	J-380	1,638.59	Zone - 4	<Collection: 0 items>	0	1,744.42	45.8
976	ZD-1A-1-A	1,614.93	Zone - 4	<Collection: 1 item>	1	1,744.53	56.1
741	ZD-1A-1-B	1,606.70	Zone - 4	<Collection: 1 item>	1	1,744.55	59.6
960	ZD-1A-3-A	1,612.51	Zone - 4	<Collection: 1 item>	1	1,744.54	57.1
761	ZD-1A-4-A	1,613.33	Zone - 4	<Collection: 1 item>	1	1,744.53	56.8
750	ZD-1A-4-B	1,607.21	Zone - 4	<Collection: 1 item>	1	1,744.53	59.4
972	ZD-1A-7	1,620.59	Zone - 4	<Collection: 1 item>	1	1,744.52	53.6
735	ZD-1A-8	1,616.47	Zone - 4	<Collection: 1 item>	1	1,744.53	55.4

P:\2018\18114\Design-Reports\18114-506\Water\DRB\Sub 2\Model\18114-506 Water Model Sub 2.wtg

Scenario: Fire Flow
Current Time Step: 0.000 h
FlexTable: Pipe Table

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
690	P-1	500	J-2	J-3	16.0	Ductile Iron	130.0	False	0.000	399	0.64	0.114
694	P-2	135	J-4	J-5	16.0	Ductile Iron	130.0	False	0.000	229	0.37	0.041
696	P-3	134	J-5	J-6	16.0	Ductile Iron	130.0	False	0.000	229	0.37	0.041
702	P-4	65	J-7	J-8	16.0	Ductile Iron	130.0	False	0.000	33	0.05	0.002
704	P-5	155	J-8	J-9	16.0	Ductile Iron	130.0	False	0.000	33	0.05	0.001
710	P-6	281	J-11	J-12	16.0	Ductile Iron	130.0	False	0.000	-49	0.08	0.003
714	P-7	126	J-13	J-14	16.0	Ductile Iron	130.0	False	0.000	-60	0.10	0.004
725	P-10	181	J-1	J-19	16.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
726	P-11	20	J-19	J-2	16.0	Ductile Iron	130.0	False	0.000	-801	1.28	0.413
1008	P-13	319	R-11	J-2	48.0	Ductile Iron	130.0	False	0.000	1,200	0.21	0.000
1022	P-14	236	J-3	FH-A1-2	12.0	Ductile Iron	130.0	False	0.000	86	0.24	0.026
1010	P-15	379	ZD-1A-1-B	FH-A1-3	24.0	Ductile Iron	130.0	False	0.000	-801	0.57	0.057
1025	P-16	83	J-50	FH-A2-1	12.0	Ductile Iron	130.0	False	0.000	135	0.38	0.063
977	P-17	120	ZD-1A-8	ZD-1A-1-A	12.0	Ductile Iron	130.0	False	0.000	1	0.00	0.000
756	P-18	119	FH-A1	ZD-1A-1-B	12.0	Ductile Iron	130.0	False	0.000	-74	0.21	0.020
763	P-20	168	ZD-1A-4-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	-102	0.29	0.037
1031	P-21	45	ZD-1A-4-A	FH-A4-6	12.0	Ductile Iron	130.0	False	0.000	48	0.14	0.008
770	P-22	306	J-23	ZD-1A-4-A	12.0	Ductile Iron	130.0	False	0.000	-53	0.15	0.011
1019	P-23	350	J-18	FH-A2-4	12.0	Ductile Iron	130.0	False	0.000	-105	0.30	0.039
773	P-24	293	J-22	J-21	12.0	Ductile Iron	130.0	False	0.000	-105	0.30	0.039
776	P-26	317	J-50	J-25	12.0	Ductile Iron	130.0	False	0.000	-53	0.15	0.011
779	P-27	244	J-18	FH-A2-3	16.0	Ductile Iron	130.0	False	0.000	4	0.01	0.000
780	P-28	327	FH-A2-3	J-20	16.0	Ductile Iron	130.0	False	0.000	4	0.01	0.000
785	P-31	316	J-24	J-18	16.0	Ductile Iron	130.0	False	0.000	95	0.15	0.008
800	P-35	536	J-17	J-27	16.0	Ductile Iron	130.0	False	0.000	95	0.15	0.008
801	P-36	355	J-27	J-24	16.0	Ductile Iron	130.0	False	0.000	95	0.15	0.008
808	P-41	276	J-20	FH-C3-2	16.0	Ductile Iron	130.0	False	0.000	-84	0.13	0.006
809	P-42	330	FH-C3-2	J-4	16.0	Ductile Iron	130.0	False	0.000	-84	0.13	0.006
817	P-45	210	D-1C-3-B	FH-C3	8.0	Ductile Iron	130.0	False	0.000	-91	0.58	0.214
819	P-46	371	J-6	J-29	16.0	Ductile Iron	130.0	False	0.000	229	0.37	0.041
822	P-47	175	D-1C-3-B	D-1C-3-A	8.0	Ductile Iron	130.0	False	0.000	-12	0.08	0.006
826	P-48	331	J-9	J-30	16.0	Ductile Iron	130.0	False	0.000	33	0.05	0.001
827	P-49	219	J-30	J-10	16.0	Ductile Iron	130.0	False	0.000	33	0.05	0.001
829	P-50	316	J-29	J-31	16.0	Ductile Iron	130.0	False	0.000	128	0.20	0.014
830	P-51	268	J-31	J-7	16.0	Ductile Iron	130.0	False	0.000	33	0.05	0.001
834	P-52	148	FH-C4	J-31	12.0	Ductile Iron	130.0	False	0.000	-94	0.27	0.032
1109	P-53	388	J-342	D-1C-8	12.0	Ductile Iron	130.0	False	0.000	86	0.24	0.027
838	P-54	534	FH-C4	D-1C-4-B	12.0	Ductile Iron	130.0	False	0.000	54	0.15	0.011
840	P-55	63	J-18	FH-C8	12.0	Ductile Iron	130.0	False	0.000	196	0.56	0.124
1108	P-56	524	FH-C8	J-342	12.0	Ductile Iron	130.0	False	0.000	91	0.26	0.030
989	P-57	328	J-29	FH-C10	12.0	Ductile Iron	130.0	False	0.000	102	0.29	0.037
845	P-58	234	D-1C-10	D-1C-3-A	8.0	Ductile Iron	130.0	False	0.000	115	0.73	0.332
1060	P-59	83	D-1C-8	J-55	12.0	Ductile Iron	130.0	False	0.000	48	0.14	0.010
849	P-60	295	J-10	J-32	16.0	Ductile Iron	130.0	False	0.000	-49	0.08	0.002
850	P-61	197	J-32	J-11	16.0	Ductile Iron	130.0	False	0.000	-49	0.08	0.002
1099	P-62	232	D-1C-4-B	J-340	12.0	Ductile Iron	130.0	False	0.000	-49	0.14	0.010
1100	P-70	339	J-340	D-1C-4-A	12.0	Ductile Iron	130.0	False	0.000	11	0.03	0.001
871	P-71	583	D-1C-4-A	FH-C4	12.0	Ductile Iron	130.0	False	0.000	-41	0.12	0.007
874	P-73	240	D-1C-8	J-36	12.0	Ductile Iron	130.0	False	0.000	-41	0.12	0.007
878	P-75	434	J-12	J-37	16.0	Ductile Iron	130.0	False	0.000	-60	0.10	0.003
879	P-76	264	J-37	J-13	16.0	Ductile Iron	130.0	False	0.000	-60	0.10	0.003
1144	P-77	146	J-329	J-352	12.0	Ductile Iron	130.0	False	0.000	-69	0.20	0.018
1145	P-78	116	J-352	J-330	12.0	Ductile Iron	130.0	False	0.000	-105	0.30	0.039
1075	P-79	221	J-330	FH-C8	12.0	Ductile Iron	130.0	False	0.000	-105	0.30	0.039
1140	P-80	229	J-40	J-351	12.0	Ductile Iron	130.0	False	0.000	-10	0.03	0.001
1141	P-81	41	J-351	J-51	12.0	Ductile Iron	130.0	False	0.000	-10	0.03	0.000
1084	P-82	76	J-51	J-336	12.0	Ductile Iron	130.0	False	0.000	-10	0.03	0.000
1085	P-83	108	J-336	J-52	12.0	Ductile Iron	130.0	False	0.000	-10	0.03	0.001
1046	P-84	253	J-52	J-12	12.0	Ductile Iron	130.0	False	0.000	-10	0.03	0.000
1090	P-85	253	J-10	J-338	12.0	Ductile Iron	130.0	False	0.000	83	0.24	0.025
1091	P-86	151	J-338	J-327	12.0	Ductile Iron	130.0	False	0.000	23	0.06	0.002
1160	P-87	49	J-355	FUTURE CONNECTION ACROSS 101	16.0	Ductile Iron	130.0	False	0.000	5	0.01	0.000
904	P-91	225	J-36	J-40	12.0	Ductile Iron	130.0	False	0.000	-85	0.24	0.027
1071	P-92	136	J-40	J-329	12.0	Ductile Iron	130.0	False	0.000	-74	0.21	0.021
909	P-95	108	J-41	FH-C3	8.0	Ductile Iron	130.0	False	0.000	91	0.58	0.214
913	P-97	605	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-51	0.15	0.010
914	P-98	67	FH-C9	J-20	12.0	Ductile Iron	130.0	False	0.000	-223	0.63	0.157
915	P-99	64	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-172	0.49	0.099
990	P-102	396	FH-C10	D-1C-10	8.0	Ductile Iron	130.0	False	0.000	101	0.64	0.259
987	P-107	217	FH-A8	ZD-1A-7	12.0	Ductile Iron	130.0	False	0.000	84	0.24	0.025
934	P-111	533	J-16	J-44	16.0	Ductile Iron	130.0	False	0.000	-116	0.18	0.011
935	P-112	404	J-44	J-17	16.0	Ductile Iron	130.0	False	0.000	-239	0.38	0.044
1016	P-114	272	J-21	FH-A4-3	12.0	Ductile Iron	130.0	False	0.000	-57	0.16	0.013
939	P-115	235	J-45	ZD-1A-4-B	24.0	Ductile Iron	130.0	False	0.000	-398	0.28	0.016
941	P-116	245	J-45	J-26	24.0	Ductile Iron	130.0	False	0.000	341	0.24	0.012
961	P-127	487	FH-A1	ZD-1A-3-A	12.0	Ductile Iron	130.0	False	0.000	74	0.21	0.021
962	P-128	216	ZD-1A-3-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	73	0.21	0.020
1013	P-129	138	ZD-1A-4-B	FH-A3	24.0	Ductile Iron	130.0	False	0.000	-427	0.30	0.018
965	P-130	231	D-1A-3-B	ZD-1A-1-B	24.0	Ductile Iron	130.0	False	0.000	-726	0.51	0.048
1014	P-131	123	FH-A3	D-1A-3-B	24.0	Ductile Iron	130.0	False	0.000	-427	0.30	0.018
968	P-132	400	J-3	J-47	16.0	Ductile Iron	130.0	False	0.000	314	0.50	0.073
969	P-133	161	J-47	J-4	16.0	Ductile Iron	130.0	False	0.000	314	0.50	0.073
986	P-135	137	ZD-1A-8	FH-A8	12.0	Ductile Iron	130.0	False	0.000	84	0.24	0.026
974	P-136	246	ZD-1A-7	J-50	12.0	Ductile Iron	130.0	False	0.000	83	0.23	0.025
975	P-137	24	FH-A7	ZD-1A-7	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1001	P-438	777	J-16	J-14	16.0	Ductile Iron	130.0	False	0.000	116	0.18	0.011
1029	P-441	121	J-22	FH-A5	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1032	P-442	105	FH-A4-6	J-21	12.0	Ductile Iron	130.0	False	0.000	48	0.14	0.009
1017	P-443	125	FH-A4-3	J-45	12.0	Ductile Iron	130.0	False	0.000	-57	0.16	0.013
1027	P-443	109	J-23	J-25	12.0	Ductile Iron	130.0	False	0.000	53	0.15	0.011
1023	P-444	104	FH-A1-2	ZD-1A-8	12.0	Ductile Iron	130.0	False	0.000	86	0.24	0.027
1026	P-445	246	FH-A2-1	J-20	12.0	Ductile Iron	130.0	False	0.000	135	0.38	0.062
1011	P-446	352	FH-A1-3	J-19	24.0	Ductile Iron	130.0	False	0.000	-801	0.57	0.058
1020	P-447	51	FH-A2-4	J-22	12.0	Ductile Iron	130.0	False	0.000	-105	0.30	0.038
1068	P-449	141	J-327	J-53	12.0	Ductile Iron	130.0	False	0.000	23	0.06	0.003
1058	P-453	148	J-54	J-53	12.0	Ductile Iron	130.0	False	0.000	29	0.08	0.003
1062	P-454	306	J-54	J-55	12.0	Ductile Iron	130.0	False	0.000	16	0.04	0.001
1063	P-455	296	D-1C-9	J-55	12.0	Ductile Iron	130.0	False	0.000	132	0.38	0.060
1159	P-456	678	J-26	J-355	24.0	Ductile Iron	130.0	False	0.000	341	0.24	0.012
1082	P-458	265	J-36	J-54	12.0	Ductile Iron	130.0	False	0.000	44	0.12	0.008

1101	P-462	69	J-338	J-340	12.0	Ductile Iron	130.0	False	0.000	60	0.17	0.014
1110	P-465	121	J-329	J-342	12.0	Ductile Iron	130.0	False	0.000	-6	0.02	0.000
1162	P-480	114	J-355	J-356	24.0	Ductile Iron	130.0	False	0.000	336	0.24	0.011
1164	P-481	43	J-356	FUTURE MILLER	24.0	Ductile Iron	130.0	False	0.000	1	0.00	0.000
1165	P-482	891	J-356	J-17	24.0	Ductile Iron	130.0	False	0.000	335	0.24	0.012
1035	P-483	102	ZD-1A-4-B	FH-A4-4	12.0	Ductile Iron	130.0	False	0.000	28	0.08	0.004
1212	P-483(1)	140	J-44	J-378	12.0	Ductile Iron	130.0	False	0.000	124	0.35	0.053
1213	P-483(2)	125	J-378	J-358	12.0	Ductile Iron	130.0	False	0.000	54	0.15	0.011
1036	P-484	215	FH-A4-4	FH-A4	12.0	Ductile Iron	130.0	False	0.000	28	0.08	0.003
1170	P-484	182	J-358	FH-C2-1	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1172	P-485	169	J-358	FH-C2-2	8.0	Ductile Iron	130.0	False	0.000	54	0.34	0.081
1216	P-485(1)	80	J-55	J-379	8.0	Ductile Iron	130.0	False	0.000	196	1.25	0.892
1217	P-485(2)	110	J-379	D-1C-10	8.0	Ductile Iron	130.0	False	0.000	105	0.67	0.283
1050	P-486	45	J-53	D-1C-4-A	12.0	Ductile Iron	130.0	False	0.000	52	0.15	0.011
1174	P-486	265	FH-C2-2	FH-C2-3	8.0	Ductile Iron	130.0	False	0.000	54	0.34	0.081
1191	P-487	13	FH-C2-3	D-1C-2	8.0	Ductile Iron	130.0	False	0.000	54	0.34	0.083
1192	P-487(2)	133	D-1C-2	J-369	8.0	Ductile Iron	130.0	False	0.000	-36	0.23	0.039
1178	P-488	105	J-369	FH-C2-4	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1057	P-489	266	J-54	FH-C10	12.0	Ductile Iron	130.0	False	0.000	-1	0.00	0.000
1180	P-489	165	J-369	J-364	8.0	Ductile Iron	130.0	False	0.000	-36	0.23	0.039
1182	P-490	30	J-364	FH-C2-5	8.0	Ductile Iron	130.0	False	0.000	-36	0.23	0.040
1184	P-491	235	FH-C2-5	FH-C2-6	8.0	Ductile Iron	130.0	False	0.000	-36	0.23	0.039
1186	P-492	236	FH-C2-6	J-367	8.0	Ductile Iron	130.0	False	0.000	-36	0.23	0.039
1188	P-493	150	J-367	FH-C2-7	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1189	P-494	160	J-367	J-352	12.0	Ductile Iron	130.0	False	0.000	-36	0.10	0.005
1194	P-495	195	J-14	J-370	8.0	Ductile Iron	130.0	False	0.000	56	0.36	0.087
1220	P-496(1)	255	J-370	J-380	8.0	Ductile Iron	130.0	False	0.000	74	0.47	0.145
1221	P-496(2)	387	J-380	FH-C1	8.0	Ductile Iron	130.0	False	0.000	22	0.14	0.016
1198	P-497	425	FH-C1	J-372	8.0	Ductile Iron	130.0	False	0.000	22	0.14	0.016
1200	P-498	519	J-372	D-1C-1	8.0	Ductile Iron	130.0	False	0.000	22	0.14	0.016
1202	P-499	855	D-1C-1	J-374	8.0	Ductile Iron	130.0	False	0.000	-53	0.34	0.078
1204	P-500	240	J-374	J-375	8.0	Ductile Iron	130.0	False	0.000	18	0.11	0.010
1206	P-501	557	J-375	J-376	8.0	Ductile Iron	130.0	False	0.000	18	0.11	0.011
1207	P-502	41	J-376	J-370	8.0	Ductile Iron	130.0	False	0.000	18	0.11	0.009
1214	P-505	119	J-374	J-378	8.0	Ductile Iron	130.0	False	0.000	-70	0.45	0.134
1218	P-506	195	J-41	J-379	8.0	Ductile Iron	130.0	False	0.000	-91	0.58	0.214
1222	P-507	280	D-1C-1	J-380	8.0	Ductile Iron	130.0	False	0.000	-51	0.33	0.075

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Scenario: Fire Flow
Current Time Step: 0.000 h
FlexTable: Reservoir Table

ID	Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)
731	R-11	1,744.60	Zone - 4	1,200	1,744.60

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Appendix E
Hydrant Flow Test Result
Retail North And M.O.B.



Flow Test Summary

Project Name: EJFT 24105 - Cavasson
Project Address: N. Hayden Road & Loop 101, Scottsdale, Az 85255
Date of Flow Test: 2024-04-18
Time of Flow Test: 7:22 AM
Data Reliable Until: 2024-10-18
Conducted By: Steven Saethre & Simon Rohklin (EJ Flow Tests) 602.999.7637
Witnessed By: Christopher Mendez (City of Scottsdale) 602.908.9046
City Forces Contacted: City of Scottsdale (602.908.9046)
Permit Number: C4981

Raw Flow Test Data

Static Pressure: 66.0 PSI
Residual Pressure: 49.0 PSI
Flowing GPM: 3,866
GPM @ 20 PSI: 6,617

Data with a 10 % Safety Factor

Static Pressure: 59.4 PSI
Residual Pressure: 42.4 PSI
Flowing GPM: 3,866
GPM @ 20 PSI: 6,086


Hydrant F₁

Pitot Pressure (1): 40 PSI
Coefficient of Discharge (1): 0.9
Hydrant Orifice Diameter (1): 4 inches
Additional Coefficient 0.83 on orifice #1

Hydrant F₂

Pitot Pressure (1): 23 PSI
Coefficient of Discharge (1): 0.9
Hydrant Orifice Diameter (1): 2.5 inches
Pitot Pressure (2): 23 PSI
Coefficient of Discharge (2): 0.9
Hydrant Orifice Diameter (2): 2.5 inches



 Static-Residual Hydrant

 Flow Hydrant

Distance Between F₁ and R
333 ft (measured linearly)

Static-Residual Elevation
1611 ft (above sea level)

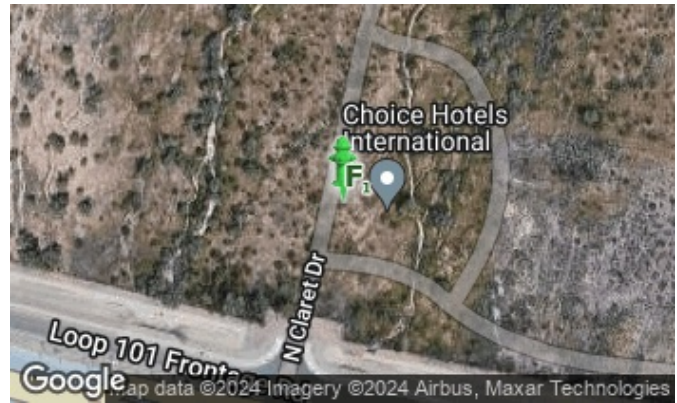
Flow Hydrant (F₁) Elevation
1611 ft (above sea level)

Elevation & distance values are approximate

Static-Residual Hydrant



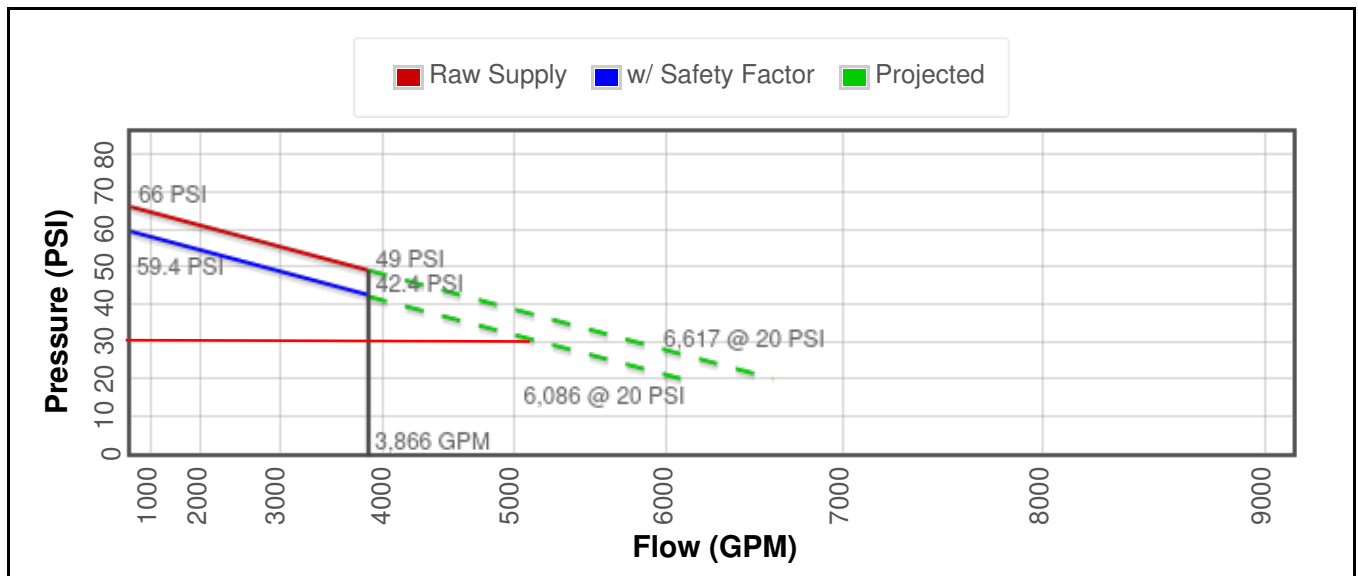
Flow Hydrant (only hydrant F1 shown for clarity)



Approximate Project Site



Water Supply Curve N^{1.85} Graph



Appendix F
Velocity Check Results
Retail North And M.O.B.

Scenario: Velocity Check
Current Time Step: 0.000 h
FlexTable: Junction Table

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
963	D-1A-3-B	1,607.18	Zone - 4	<Collection: 1 item>	299	1,744.17	59.3
1199	D-1C-1	1,634.00	Zone - 4	<Collection: 1 item>	126	1,743.38	47.3
843	D-1C-10	1,633.79	Zone - 4	<Collection: 1 item>	91	1,742.42	47.0
1190	D-1C-2	1,626.38	Zone - 4	<Collection: 1 item>	90	1,743.40	50.6
821	D-1C-3-A	1,630.73	Zone - 4	<Collection: 1 item>	103	1,742.40	48.3
811	D-1C-3-B	1,628.48	Zone - 4	<Collection: 1 item>	103	1,742.41	49.3
869	D-1C-4-A	1,639.16	Zone - 4	<Collection: 1 item>	103	1,743.01	44.9
835	D-1C-4-B	1,648.76	Zone - 4	<Collection: 1 item>	103	1,743.03	40.8
841	D-1C-8	1,632.97	Zone - 4	<Collection: 1 item>	79	1,743.12	47.7
910	D-1C-9	1,627.00	Zone - 4	<Collection: 1 item>	91	1,743.42	50.4
754	FH-A1	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.22	57.2
1021	FH-A1-2	1,618.47	Zone - 4	<Collection: 0 items>	0	1,743.97	54.3
1009	FH-A1-3	1,609.45	Zone - 4	<Collection: 0 items>	0	1,744.40	58.4
1024	FH-A2-1	1,621.00	Zone - 4	<Collection: 0 items>	0	1,743.76	53.1
778	FH-A2-3	1,625.00	Zone - 4	<Collection: 0 items>	0	1,743.58	51.3
1018	FH-A2-4	1,619.38	Zone - 4	<Collection: 0 items>	0	1,743.78	53.8
1012	FH-A3	1,607.19	Zone - 4	<Collection: 0 items>	0	1,744.14	59.3
757	FH-A4	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.08	57.1
1015	FH-A4-3	1,608.46	Zone - 4	<Collection: 0 items>	0	1,744.03	58.7
1034	FH-A4-4	1,608.76	Zone - 4	<Collection: 0 items>	0	1,744.10	58.6
1030	FH-A4-6	1,613.08	Zone - 4	<Collection: 0 items>	0	1,743.98	56.6
1028	FH-A5	1,596.00	Zone - 4	<Collection: 0 items>	0	1,743.81	64.0
970	FH-A7	1,621.59	Zone - 4	<Collection: 0 items>	0	1,743.87	52.9
985	FH-A8	1,618.53	Zone - 4	<Collection: 0 items>	0	1,743.92	54.2
1195	FH-C1	1,641.00	Zone - 4	<Collection: 0 items>	0	1,743.38	44.3
1169	FH-C2-1	1,621.00	Zone - 4	<Collection: 0 items>	0	1,743.59	53.0
1171	FH-C2-2	1,626.00	Zone - 4	<Collection: 0 items>	0	1,743.52	50.8
1173	FH-C2-3	1,626.50	Zone - 4	<Collection: 0 items>	0	1,743.41	50.6
1177	FH-C2-4	1,623.80	Zone - 4	<Collection: 0 items>	0	1,743.40	51.7
1181	FH-C2-5	1,627.30	Zone - 4	<Collection: 0 items>	0	1,743.39	50.2
1183	FH-C2-6	1,629.50	Zone - 4	<Collection: 0 items>	0	1,743.38	49.3
1187	FH-C2-7	1,628.00	Zone - 4	<Collection: 0 items>	0	1,743.36	49.9
814	FH-C3	1,627.82	Zone - 4	<Collection: 0 items>	0	1,742.53	49.6
807	FH-C3-2	1,626.64	Zone - 4	<Collection: 0 items>	0	1,743.57	50.6
832	FH-C4	1,644.28	Zone - 4	<Collection: 0 items>	0	1,743.04	42.7
839	FH-C8	1,626.14	Zone - 4	<Collection: 0 items>	0	1,743.50	50.8
912	FH-C9	1,626.65	Zone - 4	<Collection: 0 items>	0	1,743.48	50.5
988	FH-C10	1,635.38	Zone - 4	<Collection: 1 item>	2,500	1,742.04	46.1
1064	FUTURE CONNECTION ACROSS 101	1,596.00	Zone - 4	<Collection: 1 item>	5	1,743.93	64.0
1163	FUTURE MILLER	1,596.00	Zone - 4	<Collection: 1 item>	1	1,743.92	64.0
686	J-1	1,609.00	Zone - 4	<Collection: 0 items>	0	1,744.54	58.6
687	J-2	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.60	57.4
689	J-3	1,623.00	Zone - 4	<Collection: 0 items>	0	1,744.02	52.4
691	J-4	1,629.00	Zone - 4	<Collection: 0 items>	0	1,743.57	49.6
693	J-5	1,629.90	Zone - 4	<Collection: 0 items>	0	1,743.46	49.1
695	J-6	1,631.92	Zone - 4	<Collection: 0 items>	0	1,743.36	48.2
697	J-7	1,649.25	Zone - 4	<Collection: 0 items>	0	1,743.07	40.6
701	J-8	1,649.00	Zone - 4	<Collection: 0 items>	0	1,743.08	40.7
703	J-9	1,649.00	Zone - 4	<Collection: 0 items>	0	1,743.08	40.7
705	J-10	1,649.00	Zone - 4	<Collection: 0 items>	0	1,743.10	40.7
707	J-11	1,646.00	Zone - 4	<Collection: 0 items>	0	1,743.19	42.0
709	J-12	1,643.00	Zone - 4	<Collection: 0 items>	0	1,743.23	43.4
711	J-13	1,637.84	Zone - 4	<Collection: 0 items>	0	1,743.37	45.7
713	J-14	1,633.68	Zone - 4	<Collection: 0 items>	0	1,743.40	47.5
717	J-16	1,630.55	Zone - 4	<Collection: 0 items>	0	1,743.54	48.9
719	J-17	1,617.54	Zone - 4	<Collection: 0 items>	0	1,743.79	54.6
721	J-18	1,625.17	Zone - 4	<Collection: 0 items>	0	1,743.59	51.2
724	J-19	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.54	57.3
737	J-20	1,625.50	Zone - 4	<Collection: 0 items>	0	1,743.57	51.1
764	J-21	1,612.50	Zone - 4	<Collection: 0 items>	0	1,743.97	56.9
771	J-22	1,618.54	Zone - 4	<Collection: 0 items>	0	1,743.81	54.2
768	J-23	1,618.40	Zone - 4	<Collection: 0 items>	0	1,743.92	54.3
783	J-24	1,623.83	Zone - 4	<Collection: 0 items>	0	1,743.64	51.8
775	J-25	1,619.21	Zone - 4	<Collection: 0 items>	0	1,743.89	53.9
940	J-26	1,604.52	Zone - 4	<Collection: 0 items>	0	1,744.03	60.4

799	J-27	1,619.36	Zone - 4	<Collection: 0 items>	0	1,743.70	53.8
818	J-29	1,636.73	Zone - 4	<Collection: 0 items>	0	1,743.06	46.0
825	J-30	1,649.00	Zone - 4	<Collection: 0 items>	0	1,743.09	40.7
828	J-31	1,645.84	Zone - 4	<Collection: 0 items>	0	1,743.06	42.1
848	J-32	1,648.15	Zone - 4	<Collection: 0 items>	0	1,743.15	41.1
873	J-36	1,636.30	Zone - 4	<Collection: 0 items>	0	1,743.12	46.2
877	J-37	1,640.12	Zone - 4	<Collection: 0 items>	0	1,743.32	44.6
903	J-40	1,631.38	Zone - 4	<Collection: 0 items>	0	1,743.23	48.4
907	J-41	1,626.75	Zone - 4	<Collection: 0 items>	0	1,742.59	50.1
933	J-44	1,624.90	Zone - 4	<Collection: 0 items>	0	1,743.63	51.4
937	J-45	1,606.60	Zone - 4	<Collection: 0 items>	0	1,744.06	59.5
967	J-47	1,628.00	Zone - 4	<Collection: 0 items>	0	1,743.70	50.1
745	J-50	1,619.49	Zone - 4	<Collection: 0 items>	0	1,743.82	53.8
1037	J-51	1,637.97	Zone - 4	<Collection: 0 items>	0	1,743.23	45.5
1042	J-52	1,641.32	Zone - 4	<Collection: 0 items>	0	1,743.23	44.1
1048	J-53	1,640.08	Zone - 4	<Collection: 0 items>	0	1,743.00	44.5
1055	J-54	1,635.94	Zone - 4	<Collection: 0 items>	0	1,742.96	46.3
1059	J-55	1,633.17	Zone - 4	<Collection: 0 items>	0	1,743.10	47.6
1066	J-327	1,642.62	Zone - 4	<Collection: 0 items>	0	1,743.02	43.4
1070	J-329	1,630.95	Zone - 4	<Collection: 0 items>	0	1,743.29	48.6
1073	J-330	1,627.87	Zone - 4	<Collection: 0 items>	0	1,743.41	50.0
1083	J-336	1,639.94	Zone - 4	<Collection: 0 items>	0	1,743.23	44.7
1089	J-338	1,647.37	Zone - 4	<Collection: 0 items>	0	1,743.03	41.4
1098	J-340	1,644.85	Zone - 4	<Collection: 0 items>	0	1,743.03	42.5
1107	J-342	1,630.06	Zone - 4	<Collection: 0 items>	0	1,743.29	49.0
1139	J-351	1,635.01	Zone - 4	<Collection: 0 items>	0	1,743.23	46.8
1143	J-352	1,629.23	Zone - 4	<Collection: 0 items>	0	1,743.36	49.4
1158	J-355	1,596.58	Zone - 4	<Collection: 0 items>	0	1,743.93	63.8
1161	J-356	1,596.00	Zone - 4	<Collection: 0 items>	0	1,743.92	64.0
1167	J-358	1,624.00	Zone - 4	<Collection: 0 items>	0	1,743.59	51.7
1179	J-364	1,626.90	Zone - 4	<Collection: 0 items>	0	1,743.39	50.4
1185	J-367	1,631.00	Zone - 4	<Collection: 0 items>	0	1,743.36	48.6
1175	J-369	1,625.20	Zone - 4	<Collection: 0 items>	0	1,743.40	51.1
1193	J-370	1,637.00	Zone - 4	<Collection: 0 items>	0	1,743.40	46.0
1197	J-372	1,637.00	Zone - 4	<Collection: 0 items>	0	1,743.38	46.0
1201	J-374	1,631.00	Zone - 4	<Collection: 0 items>	0	1,743.53	48.7
1203	J-375	1,634.00	Zone - 4	<Collection: 0 items>	0	1,743.49	47.4
1205	J-376	1,635.00	Zone - 4	<Collection: 0 items>	0	1,743.41	46.9
1211	J-378	1,624.42	Zone - 4	<Collection: 0 items>	0	1,743.60	51.6
1215	J-379	1,633.43	Zone - 4	<Collection: 0 items>	0	1,742.70	47.3
1219	J-380	1,638.59	Zone - 4	<Collection: 0 items>	0	1,743.39	45.3
976	ZD-1A-1-A	1,614.93	Zone - 4	<Collection: 1 item>	1	1,743.95	55.8
741	ZD-1A-1-B	1,606.70	Zone - 4	<Collection: 1 item>	1	1,744.25	59.5
960	ZD-1A-3-A	1,612.51	Zone - 4	<Collection: 1 item>	1	1,744.12	56.9
761	ZD-1A-4-A	1,613.33	Zone - 4	<Collection: 1 item>	1	1,743.98	56.5
750	ZD-1A-4-B	1,607.21	Zone - 4	<Collection: 1 item>	1	1,744.11	59.2
972	ZD-1A-7	1,620.59	Zone - 4	<Collection: 1 item>	1	1,743.87	53.3
735	ZD-1A-8	1,616.47	Zone - 4	<Collection: 1 item>	1	1,743.95	55.2

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Scenario: Velocity Check
Current Time Step: 0.000 h
FlexTable: Pipe Table

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
690	P-1	500	J-2	J-3	16.0	Ductile Iron	130.0	False	0.000	1,400	2.23	1.164
694	P-2	135	J-4	J-5	16.0	Ductile Iron	130.0	False	0.000	1,137	1.81	0.792
696	P-3	134	J-5	J-6	16.0	Ductile Iron	130.0	False	0.000	1,137	1.81	0.791
702	P-4	65	J-7	J-8	16.0	Ductile Iron	130.0	False	0.000	-204	0.33	0.034
704	P-5	155	J-8	J-9	16.0	Ductile Iron	130.0	False	0.000	-204	0.33	0.032
710	P-6	281	J-11	J-12	16.0	Ductile Iron	130.0	False	0.000	-505	0.81	0.176
714	P-7	126	J-13	J-14	16.0	Ductile Iron	130.0	False	0.000	-536	0.86	0.196
725	P-10	181	J-1	J-19	16.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
726	P-11	20	J-19	J-2	16.0	Ductile Iron	130.0	False	0.000	-2,300	3.67	2.925
1008	P-13	319	R-11	J-2	16.0	Ductile Iron	130.0	False	0.000	3,700	0.66	0.000
1022	P-14	236	J-3	FH-A1-2	12.0	Ductile Iron	130.0	False	0.000	260	0.74	0.209
1010	P-15	379	ZD-1A-1-B	FH-A1-3	24.0	Ductile Iron	130.0	False	0.000	-2,300	1.63	0.405
1025	P-16	83	J-50	FH-A2-1	12.0	Ductile Iron	130.0	False	0.000	524	1.49	0.766
977	P-17	120	ZD-1A-8	ZD-1A-1-A	12.0	Ductile Iron	130.0	False	0.000	1	0.00	0.000
756	P-18	119	FH-A1	ZD-1A-1-B	12.0	Ductile Iron	130.0	False	0.000	-259	0.73	0.208
763	P-20	168	ZD-1A-4-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	-434	1.23	0.541
1031	P-21	45	ZD-1A-4-A	FH-A4-6	12.0	Ductile Iron	130.0	False	0.000	166	0.47	0.091
770	P-22	306	J-23	ZD-1A-4-A	12.0	Ductile Iron	130.0	False	0.000	-267	0.76	0.220
1019	P-23	350	J-18	FH-A2-4	12.0	Ductile Iron	130.0	False	0.000	-438	1.24	0.550
773	P-24	293	J-22	J-21	12.0	Ductile Iron	130.0	False	0.000	-438	1.24	0.549
776	P-26	317	J-50	J-25	12.0	Ductile Iron	130.0	False	0.000	-267	0.76	0.220
779	P-27	244	J-18	FH-A2-3	16.0	Ductile Iron	130.0	False	0.000	196	0.31	0.030
780	P-28	327	FH-A2-3	J-20	16.0	Ductile Iron	130.0	False	0.000	196	0.31	0.031
785	P-31	316	J-24	J-18	16.0	Ductile Iron	130.0	False	0.000	495	0.79	0.170
800	P-35	536	J-17	J-27	16.0	Ductile Iron	130.0	False	0.000	495	0.79	0.170
801	P-36	355	J-27	J-24	16.0	Ductile Iron	130.0	False	0.000	495	0.79	0.170
808	P-41	276	J-20	FH-C3-2	16.0	Ductile Iron	130.0	False	0.000	-3	0.01	0.000
809	P-42	330	FH-C3-2	J-4	16.0	Ductile Iron	130.0	False	0.000	-3	0.01	0.000
817	P-45	210	D-1C-3-B	FH-C3	8.0	Ductile Iron	130.0	False	0.000	-152	0.97	0.560
819	P-46	371	J-6	J-29	16.0	Ductile Iron	130.0	False	0.000	1,137	1.81	0.792
822	P-47	175	D-1C-3-B	D-1C-3-A	8.0	Ductile Iron	130.0	False	0.000	50	0.32	0.070
826	P-48	331	J-9	J-30	16.0	Ductile Iron	130.0	False	0.000	-204	0.33	0.033
827	P-49	219	J-30	J-10	16.0	Ductile Iron	130.0	False	0.000	-204	0.33	0.032
829	P-50	316	J-29	J-31	16.0	Ductile Iron	130.0	False	0.000	20	0.03	0.000
830	P-51	268	J-31	J-7	16.0	Ductile Iron	130.0	False	0.000	-204	0.33	0.033
834	P-52	148	FH-C4	J-31	12.0	Ductile Iron	130.0	False	0.000	-224	0.63	0.158
1109	P-53	388	J-342	D-1C-8	12.0	Ductile Iron	130.0	False	0.000	389	1.10	0.442
838	P-54	534	FH-C4	D-1C-4-B	12.0	Ductile Iron	130.0	False	0.000	92	0.26	0.030
840	P-55	63	J-18	FH-C8	12.0	Ductile Iron	130.0	False	0.000	737	2.09	1.440
1108	P-56	524	FH-C8	J-342	12.0	Ductile Iron	130.0	False	0.000	367	1.04	0.395
989	P-57	328	J-29	FH-C10	12.0	Ductile Iron	130.0	False	0.000	1,117	3.17	3.111
845	P-58	234	D-1C-10	D-1C-3-A	8.0	Ductile Iron	130.0	False	0.000	53	0.34	0.079
1060	P-59	83	D-1C-8	J-55	12.0	Ductile Iron	130.0	False	0.000	269	0.76	0.222
849	P-60	295	J-10	J-32	16.0	Ductile Iron	130.0	False	0.000	-505	0.81	0.176
850	P-61	197	J-32	J-11	16.0	Ductile Iron	130.0	False	0.000	-505	0.81	0.176
1099	P-62	232	D-1C-4-B	J-340	12.0	Ductile Iron	130.0	False	0.000	-11	0.03	0.001
1100	P-70	339	J-340	D-1C-4-A	12.0	Ductile Iron	130.0	False	0.000	125	0.36	0.054
871	P-71	583	D-1C-4-A	FH-C4	12.0	Ductile Iron	130.0	False	0.000	-132	0.37	0.059
874	P-73	240	D-1C-8	J-36	12.0	Ductile Iron	130.0	False	0.000	42	0.12	0.007
878	P-75	434	J-12	J-37	16.0	Ductile Iron	130.0	False	0.000	-536	0.86	0.197
879	P-76	264	J-37	J-13	16.0	Ductile Iron	130.0	False	0.000	-536	0.86	0.197
1144	P-77	146	J-329	J-352	12.0	Ductile Iron	130.0	False	0.000	-411	1.16	0.488
1145	P-78	116	J-352	J-330	12.0	Ductile Iron	130.0	False	0.000	-370	1.05	0.402
1075	P-79	221	J-330	FH-C8	12.0	Ductile Iron	130.0	False	0.000	-370	1.05	0.403
1140	P-80	229	J-40	J-351	12.0	Ductile Iron	130.0	False	0.000	-31	0.09	0.004
1141	P-81	41	J-351	J-51	12.0	Ductile Iron	130.0	False	0.000	-31	0.09	0.006
1084	P-82	76	J-51	J-336	12.0	Ductile Iron	130.0	False	0.000	-31	0.09	0.003
1085	P-83	108	J-336	J-52	12.0	Ductile Iron	130.0	False	0.000	-31	0.09	0.005
1046	P-84	253	J-52	J-12	12.0	Ductile Iron	130.0	False	0.000	-31	0.09	0.004
1090	P-85	253	J-10	J-338	12.0	Ductile Iron	130.0	False	0.000	301	0.85	0.274
1091	P-86	151	J-338	J-327	12.0	Ductile Iron	130.0	False	0.000	165	0.47	0.090
1160	P-87	49	J-355	FUTURE CONNECTION ACROSS 101	16.0	Ductile Iron	130.0	False	0.000	5	0.01	0.000
904	P-91	225	J-36	J-40	12.0	Ductile Iron	130.0	False	0.000	-419	1.19	0.506
1071	P-92	136	J-40	J-329	12.0	Ductile Iron	130.0	False	0.000	-388	1.10	0.438
909	P-95	108	J-41	FH-C3	8.0	Ductile Iron	130.0	False	0.000	152	0.97	0.561
913	P-97	605	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-166	0.47	0.091
914	P-98	67	FH-C9	J-20	12.0	Ductile Iron	130.0	False	0.000	-723	2.05	1.390
915	P-99	64	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-557	1.58	0.857
990	P-102	396	FH-C10	D-1C-10	8.0	Ductile Iron	130.0	False	0.000	-202	1.29	0.948
987	P-107	217	FH-A8	ZD-1A-7	12.0	Ductile Iron	130.0	False	0.000	258	0.73	0.206
934	P-111	533	J-16	J-44	16.0	Ductile Iron	130.0	False	0.000	-507	0.81	0.178
935	P-112	404	J-44	J-17	16.0	Ductile Iron	130.0	False	0.000	-792	1.26	0.405
1016	P-114	272	J-21	FH-A4-3	12.0	Ductile Iron	130.0	False	0.000	-272	0.77	0.227
939	P-115	235	J-45	ZD-1A-4-B	24.0	Ductile Iron	130.0	False	0.000	-1,565	1.11	0.198
941	P-116	245	J-45	J-26	24.0	Ductile Iron	130.0	False	0.000	1,293	0.92	0.140
961	P-127	487	FH-A1	ZD-1A-3-A	12.0	Ductile Iron	130.0	False	0.000	259	0.73	0.208
962	P-128	216	ZD-1A-3-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	258	0.73	0.206
1013	P-129	138	ZD-1A-4-B	FH-A3	24.0	Ductile Iron	130.0	False	0.000	-1,742	1.24	0.242
965	P-130	231	D-1A-3-B	ZD-1A-1-B	24.0	Ductile Iron	130.0	False	0.000	-2,041	1.45	0.325
1014	P-131	123	FH-A3	D-1A-3-B	24.0	Ductile Iron	130.0	False	0.000	-1,742	1.24	0.242
968	P-132	400	J-3	J-47	16.0	Ductile Iron	130.0	False	0.000	1,140	1.82	0.795
969	P-133	161	J-47	J-4	16.0	Ductile Iron	130.0	False	0.000	1,140	1.82	0.796
986	P-135	137	ZD-1A-8	FH-A8	12.0	Ductile Iron	130.0	False	0.000	258	0.73	0.206
974	P-136	246	ZD-1A-7	J-50	12.0	Ductile Iron	130.0	False	0.000	257	0.73	0.204
975	P-137	24	FH-A7	ZD-1A-7	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1001	P-438	777	J-16	J-14	16.0	Ductile Iron	130.0	False	0.000	507	0.81	0.178
1029	P-441	121	J-22	FH-A5	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1032	P-442	105	FH-A4-6	J-21	12.0	Ductile Iron	130.0	False	0.000	166	0.47	0.092
1017	P-443	125	FH-A4-3	J-45	12.0	Ductile Iron	130.0	False	0.000	-272	0.77	0.227
1027	P-443	109	J-23	J-25	12.0	Ductile Iron	130.0	False	0.000	267	0.76	0.219
1023	P-444	104	FH-A1-2	ZD-1A-8	12.0	Ductile Iron	130.0	False	0.000	260	0.74	0.209
1026	P-445	246	FH-A2-1	J-20	12.0	Ductile Iron	130.0	False	0.000	524	1.49	0.766
1011	P-446	352	FH-A1-3	J-19	24.0	Ductile Iron	130.0	False	0.000	-2,300	1.63	0.405
1020	P-447	51	FH-A2-4	J-22	12.0	Ductile Iron	130.0	False	0.000	-438	1.24	0.549
1068	P-449	141	J-327	J-53	12.0	Ductile Iron	130.0	False	0.000	165	0.47	0.089
1058	P-453	148	J-54	J-53	12.0	Ductile Iron	130.0	False	0.000	-318	0.90	0.304
1062	P-454	306	J-54	J-55	12.0	Ductile Iron	130.0	False	0.000	-402	1.14	0.468
1063	P-455	296	D-1C-9	J-55	12.0	Ductile Iron	130.0	False	0.000	632	1.79	1.083
1159	P-456	678	J-26	J-355	24.0	Ductile Iron	130.0	False	0.000	1,293	0.92	0.139
1082	P-458	265	J-36	J-54	12.0	Ductile Iron	130.0	False	0.000	461	1.31	0.603

1101	P-462	69	J-338	J-340	12.0	Ductile Iron	130.0	False	0.000	136	0.39	0.063
1110	P-465	121	J-329	J-342	12.0	Ductile Iron	130.0	False	0.000	23	0.06	0.002
1162	P-480	114	J-355	J-356	24.0	Ductile Iron	130.0	False	0.000	1,288	0.91	0.139
1164	P-481	43	J-356	FUTURE MILLER	24.0	Ductile Iron	130.0	False	0.000	1	0.00	0.000
1165	P-482	891	J-356	J-17	24.0	Ductile Iron	130.0	False	0.000	1,287	0.91	0.138
1035	P-483	102	ZD-1A-4-B	FH-A4-4	12.0	Ductile Iron	130.0	False	0.000	176	0.50	0.103
1212	P-483(1)	140	J-44	J-378	12.0	Ductile Iron	130.0	False	0.000	285	0.81	0.248
1213	P-483(2)	125	J-378	J-358	12.0	Ductile Iron	130.0	False	0.000	130	0.37	0.058
1036	P-484	215	FH-A4-4	FH-A4	12.0	Ductile Iron	130.0	False	0.000	176	0.50	0.102
1170	P-484	182	J-358	FH-C2-1	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1172	P-485	169	J-358	FH-C2-2	8.0	Ductile Iron	130.0	False	0.000	130	0.83	0.417
1216	P-485(1)	80	J-55	J-379	8.0	Ductile Iron	130.0	False	0.000	499	3.18	5.041
1217	P-485(2)	110	J-379	D-1C-10	8.0	Ductile Iron	130.0	False	0.000	347	2.21	2.566
1050	P-486	45	J-53	D-1C-4-A	12.0	Ductile Iron	130.0	False	0.000	-154	0.44	0.079
1174	P-486	265	FH-C2-2	FH-C2-3	8.0	Ductile Iron	130.0	False	0.000	130	0.83	0.416
1191	P-487	13	FH-C2-3	D-1C-2	8.0	Ductile Iron	130.0	False	0.000	130	0.83	0.413
1192	P-487(2)	133	D-1C-2	J-369	8.0	Ductile Iron	130.0	False	0.000	40	0.26	0.048
1178	P-488	105	J-369	FH-C2-4	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1057	P-489	266	J-54	FH-C10	12.0	Ductile Iron	130.0	False	0.000	1,180	3.35	3.446
1180	P-489	165	J-369	J-364	8.0	Ductile Iron	130.0	False	0.000	40	0.26	0.047
1182	P-490	30	J-364	FH-C2-5	8.0	Ductile Iron	130.0	False	0.000	40	0.26	0.044
1184	P-491	235	FH-C2-5	FH-C2-6	8.0	Ductile Iron	130.0	False	0.000	40	0.26	0.047
1186	P-492	236	FH-C2-6	J-367	8.0	Ductile Iron	130.0	False	0.000	40	0.26	0.047
1188	P-493	150	J-367	FH-C2-7	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1189	P-494	160	J-367	J-352	12.0	Ductile Iron	130.0	False	0.000	40	0.11	0.006
1194	P-495	195	J-14	J-370	8.0	Ductile Iron	130.0	False	0.000	-29	0.19	0.026
1220	P-496(1)	255	J-370	J-380	8.0	Ductile Iron	130.0	False	0.000	45	0.29	0.059
1221	P-496(2)	387	J-380	FH-C1	8.0	Ductile Iron	130.0	False	0.000	14	0.09	0.006
1198	P-497	425	FH-C1	J-372	8.0	Ductile Iron	130.0	False	0.000	14	0.09	0.007
1200	P-498	519	J-372	D-1C-1	8.0	Ductile Iron	130.0	False	0.000	14	0.09	0.006
1202	P-499	855	D-1C-1	J-374	8.0	Ductile Iron	130.0	False	0.000	-81	0.52	0.173
1204	P-500	240	J-374	J-375	8.0	Ductile Iron	130.0	False	0.000	74	0.47	0.148
1206	P-501	557	J-375	J-376	8.0	Ductile Iron	130.0	False	0.000	74	0.47	0.148
1207	P-502	41	J-376	J-370	8.0	Ductile Iron	130.0	False	0.000	74	0.47	0.146
1214	P-505	119	J-374	J-378	8.0	Ductile Iron	130.0	False	0.000	-155	0.99	0.579
1218	P-506	195	J-41	J-379	8.0	Ductile Iron	130.0	False	0.000	-152	0.97	0.560
1222	P-507	280	D-1C-1	J-380	8.0	Ductile Iron	130.0	False	0.000	-32	0.20	0.030

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Scenario: Velocity Check
Current Time Step: 0.000 h
FlexTable: Reservoir Table

ID	Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)
731	R-11	1,744.60	Zone - 4	3,700	1,744.60

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Appendix G
Static Pressure Junction Results
Retail North And M.O.B.

Scenario: Static Model
Current Time Step: 0.000 h
FlexTable: Junction Table

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
963	D-1A-3-B	1,607.18	Zone - 4	<Collection: 0 items>	0	1,744.60	59.5
1199	D-1C-1	1,634.00	Zone - 4	<Collection: 0 items>	0	1,744.60	47.9
843	D-1C-10	1,633.79	Zone - 4	<Collection: 0 items>	0	1,744.60	47.9
1190	D-1C-2	1,626.38	Zone - 4	<Collection: 0 items>	0	1,744.60	51.1
821	D-1C-3-A	1,630.73	Zone - 4	<Collection: 0 items>	0	1,744.60	49.3
811	D-1C-3-B	1,628.48	Zone - 4	<Collection: 0 items>	0	1,744.60	50.2
869	D-1C-4-A	1,639.16	Zone - 4	<Collection: 0 items>	0	1,744.60	45.6
835	D-1C-4-B	1,648.76	Zone - 4	<Collection: 0 items>	0	1,744.60	41.5
841	D-1C-8	1,632.97	Zone - 4	<Collection: 0 items>	0	1,744.60	48.3
910	D-1C-9	1,627.00	Zone - 4	<Collection: 0 items>	0	1,744.60	50.9
754	FH-A1	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.60	57.4
1021	FH-A1-2	1,618.47	Zone - 4	<Collection: 0 items>	0	1,744.60	54.6
1009	FH-A1-3	1,609.45	Zone - 4	<Collection: 0 items>	0	1,744.60	58.5
1024	FH-A2-1	1,621.00	Zone - 4	<Collection: 0 items>	0	1,744.60	53.5
778	FH-A2-3	1,625.00	Zone - 4	<Collection: 0 items>	0	1,744.60	51.7
1018	FH-A2-4	1,619.38	Zone - 4	<Collection: 0 items>	0	1,744.60	54.2
1012	FH-A3	1,607.19	Zone - 4	<Collection: 0 items>	0	1,744.60	59.4
757	FH-A4	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.60	57.4
1015	FH-A4-3	1,608.46	Zone - 4	<Collection: 0 items>	0	1,744.60	58.9
1034	FH-A4-4	1,608.76	Zone - 4	<Collection: 0 items>	0	1,744.60	58.8
1030	FH-A4-6	1,613.08	Zone - 4	<Collection: 0 items>	0	1,744.60	56.9
1028	FH-A5	1,596.00	Zone - 4	<Collection: 0 items>	0	1,744.60	64.3
970	FH-A7	1,621.59	Zone - 4	<Collection: 0 items>	0	1,744.60	53.2
985	FH-A8	1,618.53	Zone - 4	<Collection: 0 items>	0	1,744.60	54.5
1195	FH-C1	1,641.00	Zone - 4	<Collection: 0 items>	0	1,744.60	44.8
1169	FH-C2-1	1,621.00	Zone - 4	<Collection: 0 items>	0	1,744.60	53.5
1171	FH-C2-2	1,626.00	Zone - 4	<Collection: 0 items>	0	1,744.60	51.3
1173	FH-C2-3	1,626.50	Zone - 4	<Collection: 0 items>	0	1,744.60	51.1
1177	FH-C2-4	1,623.80	Zone - 4	<Collection: 0 items>	0	1,744.60	52.3
1181	FH-C2-5	1,627.30	Zone - 4	<Collection: 0 items>	0	1,744.60	50.8
1183	FH-C2-6	1,629.50	Zone - 4	<Collection: 0 items>	0	1,744.60	49.8
1187	FH-C2-7	1,628.00	Zone - 4	<Collection: 0 items>	0	1,744.60	50.4
814	FH-C3	1,627.82	Zone - 4	<Collection: 0 items>	0	1,744.60	50.5
807	FH-C3-2	1,626.64	Zone - 4	<Collection: 0 items>	0	1,744.60	51.0
832	FH-C4	1,644.28	Zone - 4	<Collection: 0 items>	0	1,744.60	43.4
839	FH-C8	1,626.14	Zone - 4	<Collection: 0 items>	0	1,744.60	51.3
912	FH-C9	1,626.65	Zone - 4	<Collection: 0 items>	0	1,744.60	51.0
988	FH-C10	1,635.38	Zone - 4	<Collection: 0 items>	0	1,744.60	47.3
1064	FUTURE CONNECTION ACROSS 101	1,596.00	Zone - 4	<Collection: 0 items>	0	1,744.60	64.3
1163	FUTURE MILLER	1,596.00	Zone - 4	<Collection: 0 items>	0	1,744.60	64.3
686	J-1	1,609.00	Zone - 4	<Collection: 0 items>	0	1,744.60	58.7
687	J-2	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.60	57.4
689	J-3	1,623.00	Zone - 4	<Collection: 0 items>	0	1,744.60	52.6
691	J-4	1,629.00	Zone - 4	<Collection: 0 items>	0	1,744.60	50.0
693	J-5	1,629.90	Zone - 4	<Collection: 0 items>	0	1,744.60	49.6
695	J-6	1,631.92	Zone - 4	<Collection: 0 items>	0	1,744.60	48.8
697	J-7	1,649.25	Zone - 4	<Collection: 0 items>	0	1,744.60	41.3
701	J-8	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.60	41.4
703	J-9	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.60	41.4
705	J-10	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.60	41.4
707	J-11	1,646.00	Zone - 4	<Collection: 0 items>	0	1,744.60	42.7
709	J-12	1,643.00	Zone - 4	<Collection: 0 items>	0	1,744.60	44.0
711	J-13	1,637.84	Zone - 4	<Collection: 0 items>	0	1,744.60	46.2
713	J-14	1,633.68	Zone - 4	<Collection: 0 items>	0	1,744.60	48.0
717	J-16	1,630.55	Zone - 4	<Collection: 0 items>	0	1,744.60	49.3
719	J-17	1,617.54	Zone - 4	<Collection: 0 items>	0	1,744.60	55.0
721	J-18	1,625.17	Zone - 4	<Collection: 0 items>	0	1,744.60	51.7
724	J-19	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.60	57.4
737	J-20	1,625.50	Zone - 4	<Collection: 0 items>	0	1,744.60	51.5
764	J-21	1,612.50	Zone - 4	<Collection: 0 items>	0	1,744.60	57.2
771	J-22	1,618.54	Zone - 4	<Collection: 0 items>	0	1,744.60	54.5
768	J-23	1,618.40	Zone - 4	<Collection: 0 items>	0	1,744.60	54.6
783	J-24	1,623.83	Zone - 4	<Collection: 0 items>	0	1,744.60	52.3
775	J-25	1,619.21	Zone - 4	<Collection: 0 items>	0	1,744.60	54.3
940	J-26	1,604.52	Zone - 4	<Collection: 0 items>	0	1,744.60	60.6

799	J-27	1,619.36	Zone - 4	<Collection: 0 items>	0	1,744.60	54.2
818	J-29	1,636.73	Zone - 4	<Collection: 0 items>	0	1,744.60	46.7
825	J-30	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.60	41.4
828	J-31	1,645.84	Zone - 4	<Collection: 0 items>	0	1,744.60	42.7
848	J-32	1,648.15	Zone - 4	<Collection: 0 items>	0	1,744.60	41.7
873	J-36	1,636.30	Zone - 4	<Collection: 0 items>	0	1,744.60	46.9
877	J-37	1,640.12	Zone - 4	<Collection: 0 items>	0	1,744.60	45.2
903	J-40	1,631.38	Zone - 4	<Collection: 0 items>	0	1,744.60	49.0
907	J-41	1,626.75	Zone - 4	<Collection: 0 items>	0	1,744.60	51.0
933	J-44	1,624.90	Zone - 4	<Collection: 0 items>	0	1,744.60	51.8
937	J-45	1,606.60	Zone - 4	<Collection: 0 items>	0	1,744.60	59.7
967	J-47	1,628.00	Zone - 4	<Collection: 0 items>	0	1,744.60	50.4
745	J-50	1,619.49	Zone - 4	<Collection: 0 items>	0	1,744.60	54.1
1037	J-51	1,637.97	Zone - 4	<Collection: 0 items>	0	1,744.60	46.1
1042	J-52	1,641.32	Zone - 4	<Collection: 0 items>	0	1,744.60	44.7
1048	J-53	1,640.08	Zone - 4	<Collection: 0 items>	0	1,744.60	45.2
1055	J-54	1,635.94	Zone - 4	<Collection: 0 items>	0	1,744.60	47.0
1059	J-55	1,633.17	Zone - 4	<Collection: 0 items>	0	1,744.60	48.2
1066	J-327	1,642.62	Zone - 4	<Collection: 0 items>	0	1,744.60	44.1
1070	J-329	1,630.95	Zone - 4	<Collection: 0 items>	0	1,744.60	49.2
1073	J-330	1,627.87	Zone - 4	<Collection: 0 items>	0	1,744.60	50.5
1083	J-336	1,639.94	Zone - 4	<Collection: 0 items>	0	1,744.60	45.3
1089	J-338	1,647.37	Zone - 4	<Collection: 0 items>	0	1,744.60	42.1
1098	J-340	1,644.85	Zone - 4	<Collection: 0 items>	0	1,744.60	43.2
1107	J-342	1,630.06	Zone - 4	<Collection: 0 items>	0	1,744.60	49.6
1139	J-351	1,635.01	Zone - 4	<Collection: 0 items>	0	1,744.60	47.4
1143	J-352	1,629.23	Zone - 4	<Collection: 0 items>	0	1,744.60	49.9
1158	J-355	1,596.58	Zone - 4	<Collection: 0 items>	0	1,744.60	64.0
1161	J-356	1,596.00	Zone - 4	<Collection: 0 items>	0	1,744.60	64.3
1167	J-358	1,624.00	Zone - 4	<Collection: 0 items>	0	1,744.60	52.2
1179	J-364	1,626.90	Zone - 4	<Collection: 0 items>	0	1,744.60	50.9
1185	J-367	1,631.00	Zone - 4	<Collection: 0 items>	0	1,744.60	49.1
1175	J-369	1,625.20	Zone - 4	<Collection: 0 items>	0	1,744.60	51.7
1193	J-370	1,637.00	Zone - 4	<Collection: 0 items>	0	1,744.60	46.6
1197	J-372	1,637.00	Zone - 4	<Collection: 0 items>	0	1,744.60	46.6
1201	J-374	1,631.00	Zone - 4	<Collection: 0 items>	0	1,744.60	49.1
1203	J-375	1,634.00	Zone - 4	<Collection: 0 items>	0	1,744.60	47.9
1205	J-376	1,635.00	Zone - 4	<Collection: 0 items>	0	1,744.60	47.4
1211	J-378	1,624.42	Zone - 4	<Collection: 0 items>	0	1,744.60	52.0
1215	J-379	1,633.43	Zone - 4	<Collection: 0 items>	0	1,744.60	48.1
1219	J-380	1,638.59	Zone - 4	<Collection: 0 items>	0	1,744.60	45.9
976	ZD-1A-1-A	1,614.93	Zone - 4	<Collection: 0 items>	0	1,744.60	56.1
741	ZD-1A-1-B	1,606.70	Zone - 4	<Collection: 0 items>	0	1,744.60	59.7
960	ZD-1A-3-A	1,612.51	Zone - 4	<Collection: 0 items>	0	1,744.60	57.1
761	ZD-1A-4-A	1,613.33	Zone - 4	<Collection: 0 items>	0	1,744.60	56.8
750	ZD-1A-4-B	1,607.21	Zone - 4	<Collection: 0 items>	0	1,744.60	59.4
972	ZD-1A-7	1,620.59	Zone - 4	<Collection: 0 items>	0	1,744.60	53.7
735	ZD-1A-8	1,616.47	Zone - 4	<Collection: 0 items>	0	1,744.60	55.4

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Scenario: Static Model
Current Time Step: 0.000 h
FlexTable: Reservoir Table

ID	Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)
731	R-11	1,744.60	Zone - 4	0	1,744.60

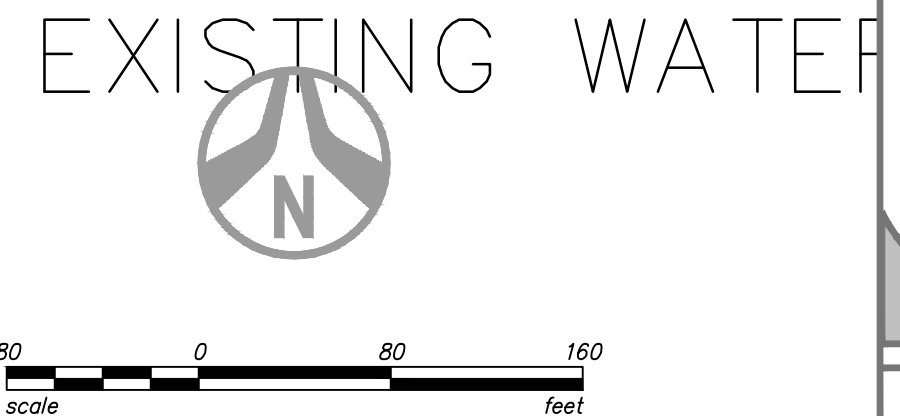
P:\2018\18114\Design-Reports\18114-506\Water\DRB\Sub 2\Model\18114-506 Water Model Sub 2.wtg

Exhibits
Retail North And M.O.B.



Color Coding Legend
Pipe: Diameter (in)

Black line	<= 6.0
Blue line	<= 8.0
Green line	<= 12.0
Yellow line	<= 16.0
Orange line	<= 24.0
Red line	Other



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**AVERAGE DAY DEMAND SITE SPECIFIC
WATER SYSTEM MAP**

Date	02/12/2025
Project Eng.	TSW
Project No.	18114-506
Project Mgr.	TSW

SHT: 01 OF 01
EXHIBIT 1

EXISTING WATER LINE

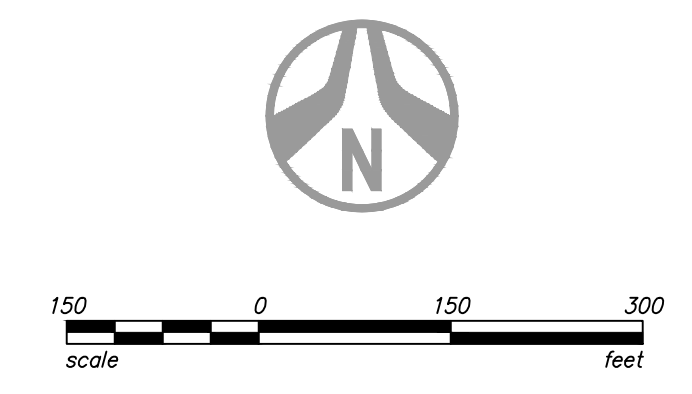


Color Coding Legend
Pipe: Velocity (ft/s)

Green line	<= 5.00
Blue line	<= 10.00
Red line	Other

EXISTING WATER LINE

SYSTEM RESERVOIR



**AVERAGE DAY DEMAND
WATER SYSTEM MAP**

Date	02/12/2025
Project No.	18114-506
Project Eng.	TSW
Project Mgr.	TSW



Color Coding Legend	
Pipe: Velocity (ft/s)	
	<= 5.00
	<= 10.00
	Other

LOT 2 [ASLD]

LOT 3 [ASLD]

LOT 4 [ASLD]

FUTURE MILLER
FUTURE CONNECTION ACROSS 101

SYSTEM RESERVOIR



**MAX DAY DEMAND
WATER SYSTEM MAP**

Date	02/12/2025
Project No.	18114-506
Project Eng.	TSW
Project Mgr.	TSW

SHT: 01 OF 01
EXHIBIT 3



Color Coding Legend
Pipe: Velocity (ft/s)

Green	≤ 5.00
Blue	≤ 10.00
Red	Other

**PEAK HOUR DEMAND
WATER SYSTEM MAP**

Date: 02/12/2025
Project Eng.: TSW

Project No.: 18114-506
Project Mgr.: TSW

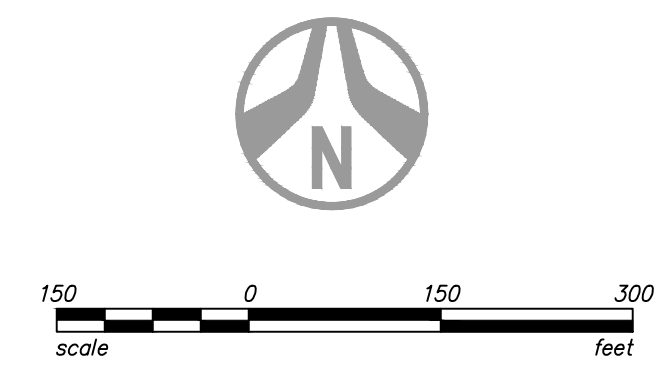
**MAX DAY PLUS FIRE FLOW
 WATER SYSTEM MAP**

Date	2/12/2025
Project No.	18114-506
Project Eng.	TSW
Project Mgr.	TSW



Color Coding Legend
 Pipe: Velocity (ft/s)

Green	<= 5.00
Blue	<= 10.00
Red	Other



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PRELIMINARY UTILITY PLAN
RETAIL NORTH AND MOB - PRELIMINARY
A PORTION OF THE EAST HALF OF SECTION 08 AND THE WEST HALF OF SECTION 25
TOWNSHIP 4 NORTH, RANGE 1 EAST OF THE OLD AND SALT RIVER MERIDIAN,
MARICOPA COUNTY, ARIZONA

Date	01/28/2025
Project No.	18114-506
Project Mgr.	TSW
Project Eng.	TSW

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BY ANY AGENCY

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