CAVASSON

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

FINAL WATER REPORT – TOLL AT CAVASSON
BASIS OF DESIGN

October 4, 2024

Project No.: 18114-750

FINAL Basis of Design Report
☐ APPROVED
☑ APPROVED AS NOTED
☐ REVISE AND RESUBMIT

CITY OF SCOTTSDALE
SCOTTSDALE WATER
9379 E San Salvador Dr.
Scottsdale, AZ 85258

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.

BY apritchard DATE 11/18/2024

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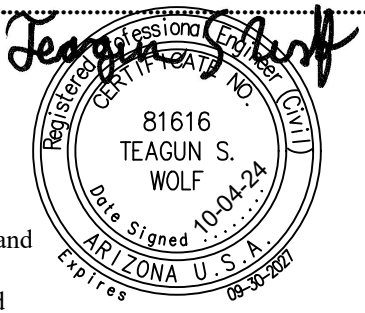
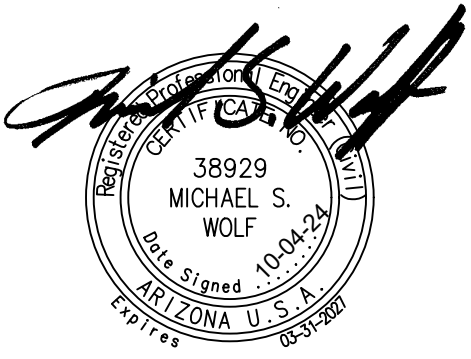




1. INTRODUCTION

1.1 Project Scope

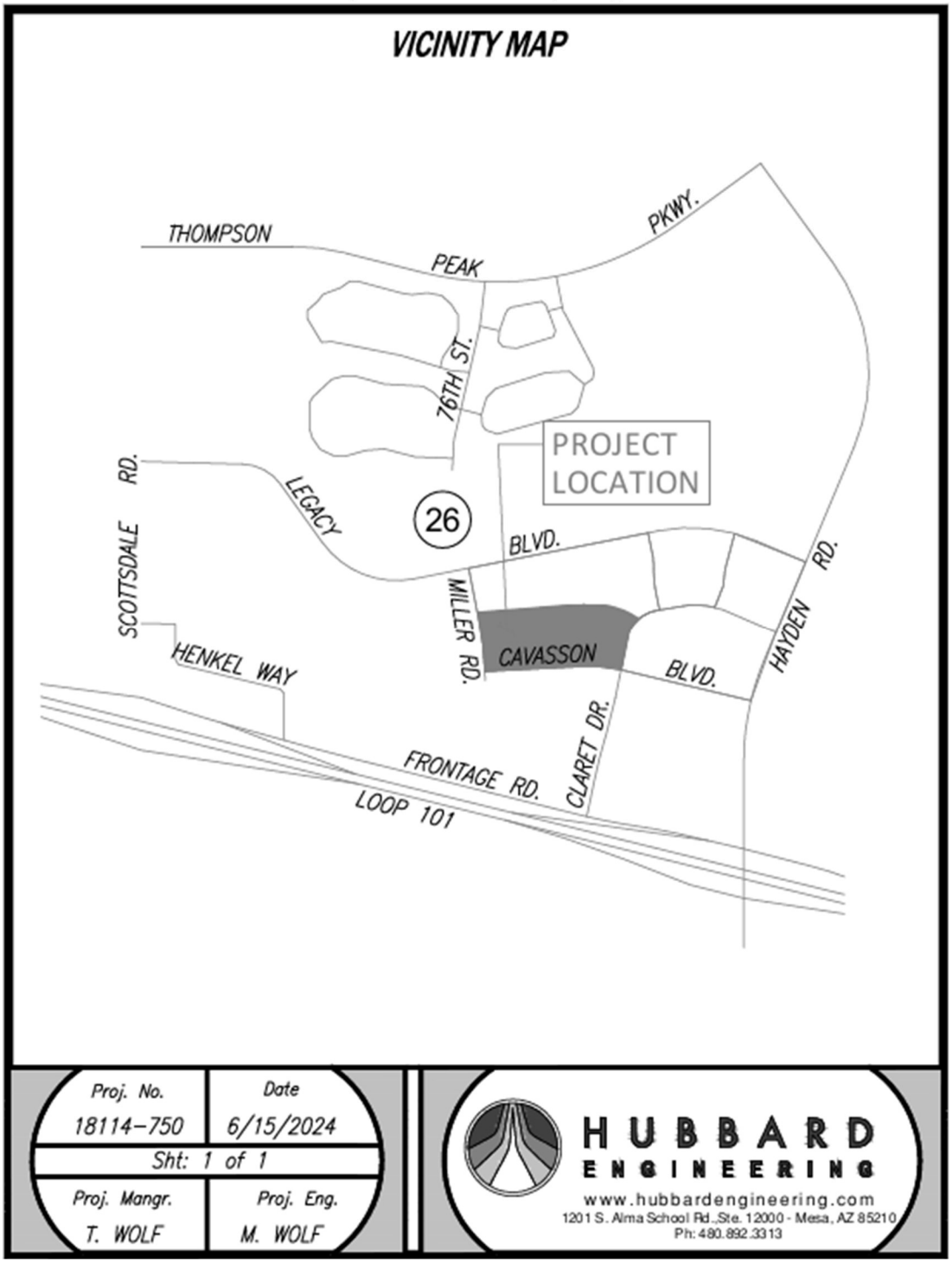
This report presents the results of a *Final Water Study* conducted by Hubbard Engineering at the request of Toll Brothers ("client"), for the Toll at Cavasson development ("site"). The purpose of this report is to provide an evaluation of the proposed distribution system for the site. This report addresses 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 Toll at Cavasson project site specifically is approximately 11.26 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.

Toll at Cavasson is specifically located in the northwest portion of the Cavasson Development and is bounded by Cavasson Boulevard to the south, Claret Drive to the east, Miller Road to the west, and undeveloped desert to the north. 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.

Toll at Cavasson is proposing a 135-dwelling unit, townhouse style single family development located on Lot 1 of Cavasson Phase 3. The largest townhouse will be approximately 3,200 square feet including the 2-bay garage. Improvements will include private streets throughout the development, multiple amenity spaces throughout the development, as well as proposed public water main and private sewer located within the proposed private streets.

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 Toll at Cavasson. 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 Toll at Cavasson will connect to existing 12-inch stubs provided off of Miller Road and Claret Drive with 12-inch public water main. This public water main will then downsize to 8-inch public water main within the private streets of the development.

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 Toll at Cavasson development is proposing construction of 135 new townhouse buildings, with the largest having an approximate square footage of 3,200 square feet, including the 2-bay garage. Improvements will include proposed private streets and connections to the existing public water mains at existing stubs. The buildings will be equipped with an automatic sprinkler system (NFPA 13D) per the 2021 International Fire Code and 2021 International Residential Code. The buildings will additionally be Type VB construction and each townhome unit within a grouping (two-plex four-plex, three-plex) will be separated from the adjacent units by a 3.5" gap with a shaft liner assembly providing the fire rated wall which will be detailed on the architectural plans. There will additionally be no penetrations between each unit.

2.3 Right of Way and Easements

The proposed public water main for Toll at Cavasson will be within 12-foot public water easements with a 20' access easement over the top.

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 12-22 DU/ac residential is 0.33 gallons per minute per dwelling unit.

The total service area for Toll at Cavasson is 135 dwelling units.

Thus, the total Average Daily Demand for Toll at Cavasson is:

(0.33 gpm/D.U.) x (135 D.U.) = **44.55 gpm.**

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 demands for Cavasson Lot 1H PrePlat as well as Cavasson Phase 3C will be accounted for in the modeling for this report as both preliminary plats are currently approved and not constructed. These demands are documented in the Approved *Preliminary Water Report Cavasson Lot 1H – Basis of Design* (Reference 12).

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

Max Day Demand = ADD * 2

3.2.2 Peak Hour Demand

Peak Hour Demand = 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 ***Toll at Cavasson***

Land Use	Dwelling Unit	ADD (gpm/D.U.)	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)
Residential	136	0.33	44.55	89.1	155.93	1,500	1,589.1

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	336.7	673.6	1,179	2,500	3,173.6
Combined Total	**464.50**	**929.10**	**1,626.2**	**2,500**	**3,429.10****

**Total Max Day Plus Fire Flow is based on 2,500 gpm required fire flow added to the total Max Day Demand of 929.1 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*
Lot 1H PrePlat	127.77	255.54	447.20	2,500	2,755.54**
Phase 3C Minor Land Division	336.73	673.56	1179	2,500	3,172.9**
BB Living at Cavasson	62.70	125.40	219.45	2,500	2,625.40
Combined Total	**571.75**	**1,143.60**	**2,001.6**	**1,500**	**2,643.60*** **

* 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 1,500 gpm required for the Toll at Cavasson development added to the combined total Max Day Demand of 1,143.6 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 as updated by this report 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 Lot 1H 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 Lot 1H 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 that recently had a pre-

application meeting. 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 will be 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	127.77	255.54	447.19	2755.54
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	62.70	125.40	219.45	2,625.40
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	**1,550**	**3,101**	**5,426**	

*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 1,000 gpm for 1 hour is based on Townhouses of Type VB construction with a maximum fire calculation area square footage of 3,200 sq. ft. (inclusive of 2-bay garage) due to the fire rated walls separating each unit, per City of Scottsdale Fire Code.

However, due to the density of the proposed development, the project site is classified as multifamily residential which has a Minimum Fire Flow of **1,500 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:

$$Q_R = Q_F \, X \left(\frac{H_R}{H_F}\right)^{0.54}$$

$$Q_R = 3{,}866 \; gpm \; X \left(\frac{59.4 \; psi - 30 \; psi}{59.4 \; psi - 42.4 \; psi}\right)^{0.54}$$

$$= 5{,}196.7 \text{ gpm @ } 30 \text{ psi}$$

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.

Final meter size will be determined during the building plan review process per DSPM 6-1.416.

Toll at Cavasson will use a master meter for the subdivision that feeds into a booster pump serving every unit within the development. The booster pump will be designed to provide a minimum pressure of 50 psi on the top floor of each building for domestic demand by the plumbing engineer. Note, fire sprinklers will be fed through the domestic connection to each building in accordance with International Residential Code.

The proposed master meter has been sized based on a domestic demand of 250 gpm as calculated by the plumbing engineer, see **Appendix H** for sealed plumbing fixture count calculations. Additionally, the fire sprinkler demand has been calculated to be 35 gpm by the fire suppression engineer which has been added to the domestic demand and rounded up to the nearest hundred for a total of 300 gpm through the master meter. In order to be conservative, a safety factor of 1.5 has been applied to the combined domestic and fire sprinkler demands for an Initial Service Line Design Flow of 450 gpm. Based on these criteria, a 4-inch compound water meter was selected as the master meter. A reduced pressure principal backflow preventer will be installed immediately after the master meter as required by the City of Scottsdale to protect the public water supply from contamination.

Demand node D-1C-2 is located at the proposed water meter and private pump location for the Toll at Cavasson project with an elevation of 1626. The proposed buildings for Toll at Cavasson are 3-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 49 psi under the Velocity Check scenario which meets the criteria even accounting for a 16 psi pressure loss to reach the roof of the proposed buildings.

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 before reducing to 8-inch diameter public water mains through the development.

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 Toll at Cavasson is 44.55 gpm. This conforms to the Master Study.
- The Maximum Daily Demand for Toll at Cavasson is 89.10 gpm. This conforms to the Master Study.
- The Peak Hour Demand for Toll at Cavasson is 155.94 gpm. This conforms to the Master Study.
- The required fire flow for Toll at Cavasson is 1,500 gpm.
- The required Maximum Day Plus Fire Flow for the proposed improvements is 2,644 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 2,644 gpm for the proposed improvements.
- Based on the results of the water model, the Cavasson development system can maintain a flow of 2,657 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 Toll at Cavasson development under Maximum Day Plus Fire Flow demand is 47 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.
3. Coe & Van Loo Consultants, Inc. (CVL) *Arizona State Land Department- Crossroads East Water Master Plan Update,* April 13, 2008.
4. Arizona Department of Environmental Quality (ADEQ). *Engineering Bulletin 11: Minimum Requirements for Design, Submission of Plans and Specifications of Sewage Works.* May 1978.
5. Arizona Department of Environmental Quality (ADEQ). *Aquifer Protection Permit (APP) Program*.
6. Maricopa Association of Governments (MAG). *Uniform Standard Specifications and Details for Public Works Construction.* January 2024.
7. International Code Council. *2021 International Fire Code.*
8. International Code Council. *2021 Edition of the International Plumbing Code*.
9. City of Scottsdale, *Ordinance No. 4346,* June 17, 2018.
10. City of Scottsdale, *Resolution No. 1147,* June 17, 2018.
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.*

Appendix A
Average Day Demand
Toll at Cavasson

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>	128	1,744.58	59.4
1199	D-1C-1	1,631.00	Zone - 4	<Collection: 1 item>	63	1,744.57	49.1
843	D-1C-10	1,633.79	Zone - 4	<Collection: 1 item>	46	1,744.56	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	1,744.55	49.2
811	D-1C-3-B	1,628.48	Zone - 4	<Collection: 1 item>	51	1,744.55	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
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	1,744.55	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	1,744.57	41.2
701	J-8	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.57	41.3
703	J-9	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.57	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	1,744.57	42.6
709	J-12	1,643.00	Zone - 4	<Collection: 0 items>	0	1,744.57	43.9
711	J-13	1,637.84	Zone - 4	<Collection: 0 items>	0	1,744.57	46.2
713	J-14	1,633.68	Zone - 4	<Collection: 0 items>	0	1,744.57	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	1,744.58	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	1,744.57	42.7
848	J-32	1,648.15	Zone - 4	<Collection: 0 items>	0	1,744.57	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	1,744.57	45.2
903	J-40	1,631.38	Zone - 4	<Collection: 0 items>	0	1,744.57	49.0
907	J-41	1,626.75	Zone - 4	<Collection: 0 items>	0	1,744.55	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	1,744.57	46.1
1042	J-52	1,641.32	Zone - 4	<Collection: 0 items>	0	1,744.57	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	1,744.57	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	1,744.57	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	1,744.57	49.5
1139	J-351	1,635.01	Zone - 4	<Collection: 0 items>	0	1,744.57	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	1,744.57	46.5
1195	J-371	1,641.00	Zone - 4	<Collection: 0 items>	0	1,744.57	44.8
1197	J-372	1,637.00	Zone - 4	<Collection: 0 items>	0	1,744.57	46.5
1201	J-374	1,631.00	Zone - 4	<Collection: 0 items>	0	1,744.57	49.1
1203	J-375	1,634.00	Zone - 4	<Collection: 0 items>	0	1,744.57	47.8
1205	J-376	1,635.00	Zone - 4	<Collection: 0 items>	0	1,744.57	47.4
1211	J-378	1,624.42	Zone - 4	<Collection: 0 items>	0	1,744.57	52.0
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

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	197	0.31	0.031
694	P-2	135	J-4	J-5	16.0	Ductile Iron	130.0	False	0.000	114	0.18	0.011
696	P-3	134	J-5	J-6	16.0	Ductile Iron	130.0	False	0.000	114	0.18	0.012
702	P-4	65	J-7	J-8	16.0	Ductile Iron	130.0	False	0.000	15	0.02	0.000
704	P-5	155	J-8	J-9	16.0	Ductile Iron	130.0	False	0.000	15	0.02	0.000
710	P-6	281	J-11	J-12	16.0	Ductile Iron	130.0	False	0.000	-26	0.04	0.000
714	P-7	126	J-13	J-14	16.0	Ductile Iron	130.0	False	0.000	-33	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	-388	0.62	0.105
1008	P-13	319	R-11	J-2	48.0	Ductile Iron	130.0	False	0.000	585	0.10	0.000
1022	P-14	236	J-3	FH-A1-2	12.0	Ductile Iron	130.0	False	0.000	43	0.12	0.007
1010	P-15	379	ZD-1A-1-B	FH-A1-3	24.0	Ductile Iron	130.0	False	0.000	-388	0.27	0.015
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	-37	0.11	0.006
763	P-20	168	ZD-1A-4-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	-52	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	-28	0.08	0.003
1019	P-23	350	J-18	FH-A2-4	12.0	Ductile Iron	130.0	False	0.000	-53	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	-28	0.08	0.003
779	P-27	244	J-18	FH-A2-3	16.0	Ductile Iron	130.0	False	0.000	3	0.00	0.000
780	P-28	327	FH-A2-3	J-20	16.0	Ductile Iron	130.0	False	0.000	3	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	-41	0.07	0.002
809	P-42	330	FH-C3-2	J-4	16.0	Ductile Iron	130.0	False	0.000	-41	0.07	0.001
817	P-45	210	D-1C-3-B	FH-C3	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
819	P-46	371	J-6	J-29	16.0	Ductile Iron	130.0	False	0.000	114	0.18	0.011
822	P-47	175	D-1C-3-B	D-1C-3-A	12.0	Ductile Iron	130.0	False	0.000	-51	0.15	0.010
826	P-48	331	J-9	J-30	16.0	Ductile Iron	130.0	False	0.000	15	0.02	0.000
827	P-49	219	J-30	J-10	16.0	Ductile Iron	130.0	False	0.000	15	0.02	0.000
829	P-50	316	J-29	J-31	16.0	Ductile Iron	130.0	False	0.000	63	0.10	0.003
830	P-51	268	J-31	J-7	16.0	Ductile Iron	130.0	False	0.000	15	0.02	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	97	0.28	0.035
1108	P-56	524	FH-C8	J-342	12.0	Ductile Iron	130.0	False	0.000	45	0.13	0.008
989	P-57	328	J-29	FH-C10	12.0	Ductile Iron	130.0	False	0.000	51	0.15	0.010
845	P-58	234	D-1C-10	D-1C-3-A	12.0	Ductile Iron	130.0	False	0.000	103	0.29	0.038
1060	P-59	83	D-1C-8	J-55	12.0	Ductile Iron	130.0	False	0.000	23	0.06	0.003
849	P-60	295	J-10	J-32	16.0	Ductile Iron	130.0	False	0.000	-26	0.04	0.000
850	P-61	197	J-32	J-11	16.0	Ductile Iron	130.0	False	0.000	-26	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	0.02	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	-20	0.06	0.002
878	P-75	434	J-12	J-37	16.0	Ductile Iron	130.0	False	0.000	-33	0.05	0.001
879	P-76	264	J-37	J-13	16.0	Ductile Iron	130.0	False	0.000	-33	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	-52	0.15	0.011
1075	P-79	221	J-330	FH-C8	12.0	Ductile Iron	130.0	False	0.000	-52	0.15	0.010
1140	P-80	229	J-40	J-351	12.0	Ductile Iron	130.0	False	0.000	-6	0.02	0.000
1141	P-81	41	J-351	J-51	12.0	Ductile Iron	130.0	False	0.000	-6	0.02	0.000
1084	P-82	76	J-51	J-336	12.0	Ductile Iron	130.0	False	0.000	-6	0.02	0.002
1085	P-83	108	J-336	J-52	12.0	Ductile Iron	130.0	False	0.000	-6	0.02	0.000
1046	P-84	253	J-52	J-12	12.0	Ductile Iron	130.0	False	0.000	-6	0.02	0.000
1090	P-85	253	J-10	J-338	12.0	Ductile Iron	130.0	False	0.000	42	0.12	0.007
1091	P-86	151	J-338	J-327	12.0	Ductile Iron	130.0	False	0.000	12	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	-43	0.12	0.008
1071	P-92	136	J-40	J-329	12.0	Ductile Iron	130.0	False	0.000	-36	0.10	0.005
909	P-95	108	J-41	FH-C3	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
913	P-97	605	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-25	0.07	0.003
914	P-98	67	FH-C9	J-20	12.0	Ductile Iron	130.0	False	0.000	-111	0.31	0.043
915	P-99	64	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-85	0.24	0.027
990	P-102	396	FH-C10	D-1C-10	12.0	Ductile Iron	130.0	False	0.000	59	0.17	0.014
987	P-107	217	FH-A8	ZD-1A-7	12.0	Ductile Iron	130.0	False	0.000	41	0.12	0.006
934	P-111	533	J-16	J-44	16.0	Ductile Iron	130.0	False	0.000	-54	0.09	0.003
935	P-112	404	J-44	J-17	16.0	Ductile Iron	130.0	False	0.000	-122	0.19	0.013
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	-205	0.15	0.005
941	P-116	245	J-45	J-26	24.0	Ductile Iron	130.0	False	0.000	175	0.12	0.003
961	P-127	487	FH-A1	ZD-1A-3-A	12.0	Ductile Iron	130.0	False	0.000	37	0.11	0.006
962	P-128	216	ZD-1A-3-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	36	0.10	0.006
1013	P-129	138	ZD-1A-4-B	FH-A3	24.0	Ductile Iron	130.0	False	0.000	-222	0.16	0.005
965	P-130	231	D-1A-3-B	ZD-1A-1-B	24.0	Ductile Iron	130.0	False	0.000	-349	0.25	0.013
1014	P-131	123	FH-A3	D-1A-3-B	24.0	Ductile Iron	130.0	False	0.000	-222	0.16	0.005
968	P-132	400	J-3	J-47	16.0	Ductile Iron	130.0	False	0.000	155	0.25	0.020
969	P-133	161	J-47	J-4	16.0	Ductile Iron	130.0	False	0.000	155	0.25	0.020
986	P-135	137	ZD-1A-8	FH-A8	12.0	Ductile Iron	130.0	False	0.000	41	0.12	0.007
974	P-136	246	ZD-1A-7	J-50	12.0	Ductile Iron	130.0	False	0.000	40	0.11	0.006
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	54	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	0.003
1027	P-443	109	J-23	J-25	12.0	Ductile Iron	130.0	False	0.000	28	0.08	0.003
1023	P-444	104	FH-A1-2	ZD-1A-8	12.0	Ductile Iron	130.0	False	0.000	43	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	-388	0.27	0.015
1020	P-447	51	FH-A2-4	J-22	12.0	Ductile Iron	130.0	False	0.000	-53	0.15	0.012
1068	P-449	141	J-327	J-53	12.0	Ductile Iron	130.0	False	0.000	12	0.03	0.001
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	1	0.00	0.000
1063	P-455	296	D-1C-9	J-55	12.0	Ductile Iron	130.0	False	0.000	65	0.19	0.016
1159	P-456	678	J-26	J-355	24.0	Ductile Iron	130.0	False	0.000	175	0.12	0.003
1082	P-458	265	J-36	J-54	12.0	Ductile Iron	130.0	False	0.000	23	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	170	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	169	0.12	0.003
1035	P-483	102	ZD-1A-4-B	FH-A4-4	12.0	Ductile Iron	130.0	False	0.000	16	0.05	0.001
1212	P-483(1)	140	J-44	J-378	12.0	Ductile Iron	130.0	False	0.000	68	0.19	0.017
1213	P-483(2)	125	J-378	J-358	12.0	Ductile Iron	130.0	False	0.000	26	0.07	0.003
1036	P-484	215	FH-A4-4	FH-A4	12.0	Ductile Iron	130.0	False	0.000	16	0.05	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
1061	P-485	189	J-55	D-1C-10	12.0	Ductile Iron	130.0	False	0.000	89	0.25	0.028
1172	P-485	169	J-358	FH-C2-2	8.0	Ductile Iron	130.0	False	0.000	26	0.17	0.022
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	26	0.17	0.022
1191	P-487	13	FH-C2-3	D-1C-2	8.0	Ductile Iron	130.0	False	0.000	26	0.17	0.018
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	8	0.02	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	0.012
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	12.0	Ductile Iron	130.0	False	0.000	21	0.06	0.003
1196	P-496	642	J-370	J-371	12.0	Ductile Iron	130.0	False	0.000	10	0.03	0.000
1198	P-497	425	J-371	J-372	12.0	Ductile Iron	130.0	False	0.000	10	0.03	0.001
1200	P-498	813	J-372	D-1C-1	12.0	Ductile Iron	130.0	False	0.000	10	0.03	0.000
1202	P-499	561	D-1C-1	J-374	12.0	Ductile Iron	130.0	False	0.000	-26	0.07	0.003
1204	P-500	240	J-374	J-375	12.0	Ductile Iron	130.0	False	0.000	15	0.04	0.001
1206	P-501	557	J-375	J-376	12.0	Ductile Iron	130.0	False	0.000	15	0.04	0.001
1207	P-502	41	J-376	J-370	12.0	Ductile Iron	130.0	False	0.000	-12	0.03	0.000
1208	P-503	267	J-376	D-1C-1	12.0	Ductile Iron	130.0	False	0.000	27	0.08	0.003
1214	P-505	119	J-374	J-378	12.0	Ductile Iron	130.0	False	0.000	-41	0.12	0.007

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	585	1,744.60

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Appendix B
Max Day Demand
Toll at Cavasson

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>	256	1,744.54	59.4
1199	D-1C-1	1,631.00	Zone - 4	<Collection: 1 item>	125	1,744.48	49.1
843	D-1C-10	1,633.79	Zone - 4	<Collection: 1 item>	91	1,744.45	47.9
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	1,744.42	49.2
811	D-1C-3-B	1,628.48	Zone - 4	<Collection: 1 item>	103	1,744.41	50.2
869	D-1C-4-A	1,639.16	Zone - 4	<Collection: 1 item>	103	1,744.47	45.6
835	D-1C-4-B	1,648.76	Zone - 4	<Collection: 1 item>	103	1,744.47	41.4
841	D-1C-8	1,632.97	Zone - 4	<Collection: 1 item>	79	1,744.47	48.2
910	D-1C-9	1,627.00	Zone - 4	<Collection: 1 item>	91	1,744.49	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	1,744.52	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	1,744.52	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	1,744.54	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	1,744.54	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	1,744.52	64.3
970	FH-A7	1,621.59	Zone - 4	<Collection: 0 items>	0	1,744.53	53.2
985	FH-A8	1,618.53	Zone - 4	<Collection: 0 items>	0	1,744.53	54.5
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	1,744.41	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	1,744.47	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	1,744.55	52.6
691	J-4	1,629.00	Zone - 4	<Collection: 0 items>	0	1,744.51	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	1,744.48	41.2
701	J-8	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.48	41.3
703	J-9	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.48	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	1,744.48	42.6
709	J-12	1,643.00	Zone - 4	<Collection: 0 items>	0	1,744.48	43.9
711	J-13	1,637.84	Zone - 4	<Collection: 0 items>	0	1,744.48	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	1,744.49	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	1,744.52	54.5
768	J-23	1,618.40	Zone - 4	<Collection: 0 items>	0	1,744.53	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	1,744.53	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	1,744.51	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	1,744.48	42.7
848	J-32	1,648.15	Zone - 4	<Collection: 0 items>	0	1,744.48	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	1,744.48	45.2
903	J-40	1,631.38	Zone - 4	<Collection: 0 items>	0	1,744.48	48.9
907	J-41	1,626.75	Zone - 4	<Collection: 0 items>	0	1,744.41	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	1,744.54	59.7
967	J-47	1,628.00	Zone - 4	<Collection: 0 items>	0	1,744.52	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	1,744.48	46.1
1042	J-52	1,641.32	Zone - 4	<Collection: 0 items>	0	1,744.48	44.6
1048	J-53	1,640.08	Zone - 4	<Collection: 0 items>	0	1,744.47	45.2
1055	J-54	1,635.94	Zone - 4	<Collection: 0 items>	0	1,744.47	47.0
1059	J-55	1,633.17	Zone - 4	<Collection: 0 items>	0	1,744.47	48.2
1066	J-327	1,642.62	Zone - 4	<Collection: 0 items>	0	1,744.47	44.1
1070	J-329	1,630.95	Zone - 4	<Collection: 0 items>	0	1,744.48	49.1
1073	J-330	1,627.87	Zone - 4	<Collection: 0 items>	0	1,744.49	50.5
1083	J-336	1,639.94	Zone - 4	<Collection: 0 items>	0	1,744.48	45.2
1089	J-338	1,647.37	Zone - 4	<Collection: 0 items>	0	1,744.47	42.0
1098	J-340	1,644.85	Zone - 4	<Collection: 0 items>	0	1,744.47	43.1
1107	J-342	1,630.06	Zone - 4	<Collection: 0 items>	0	1,744.48	49.5
1139	J-351	1,635.01	Zone - 4	<Collection: 0 items>	0	1,744.48	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	1,744.48	46.5
1195	J-371	1,641.00	Zone - 4	<Collection: 0 items>	0	1,744.48	44.8
1197	J-372	1,637.00	Zone - 4	<Collection: 0 items>	0	1,744.48	46.5
1201	J-374	1,631.00	Zone - 4	<Collection: 0 items>	0	1,744.48	49.1
1203	J-375	1,634.00	Zone - 4	<Collection: 0 items>	0	1,744.48	47.8
1205	J-376	1,635.00	Zone - 4	<Collection: 0 items>	0	1,744.48	47.4
1211	J-378	1,624.42	Zone - 4	<Collection: 0 items>	0	1,744.48	51.9
976	ZD-1A-1-A	1,614.93	Zone - 4	<Collection: 1 item>	1	1,744.54	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	1,744.54	59.4
972	ZD-1A-7	1,620.59	Zone - 4	<Collection: 1 item>	1	1,744.53	53.6
735	ZD-1A-8	1,616.47	Zone - 4	<Collection: 1 item>	1	1,744.54	55.4

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	391	0.62	0.109
694	P-2	135	J-4	J-5	16.0	Ductile Iron	130.0	False	0.000	227	0.36	0.040
696	P-3	134	J-5	J-6	16.0	Ductile Iron	130.0	False	0.000	227	0.36	0.041
702	P-4	65	J-7	J-8	16.0	Ductile Iron	130.0	False	0.000	31	0.05	0.002
704	P-5	155	J-8	J-9	16.0	Ductile Iron	130.0	False	0.000	31	0.05	0.001
710	P-6	281	J-11	J-12	16.0	Ductile Iron	130.0	False	0.000	-53	0.08	0.003
714	P-7	126	J-13	J-14	16.0	Ductile Iron	130.0	False	0.000	-66	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	-766	1.22	0.383
1008	P-13	319	R-11	J-2	48.0	Ductile Iron	130.0	False	0.000	1,157	0.21	0.000
1022	P-14	236	J-3	FH-A1-2	12.0	Ductile Iron	130.0	False	0.000	83	0.23	0.025
1010	P-15	379	ZD-1A-1-B	FH-A1-3	24.0	Ductile Iron	130.0	False	0.000	-766	0.54	0.053
1025	P-16	83	J-50	FH-A2-1	12.0	Ductile Iron	130.0	False	0.000	135	0.38	0.061
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	-73	0.21	0.020
763	P-20	168	ZD-1A-4-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	-103	0.29	0.038
1031	P-21	45	ZD-1A-4-A	FH-A4-6	12.0	Ductile Iron	130.0	False	0.000	47	0.13	0.011
770	P-22	306	J-23	ZD-1A-4-A	12.0	Ductile Iron	130.0	False	0.000	-55	0.16	0.012
1019	P-23	350	J-18	FH-A2-4	12.0	Ductile Iron	130.0	False	0.000	-106	0.30	0.040
773	P-24	293	J-22	J-21	12.0	Ductile Iron	130.0	False	0.000	-106	0.30	0.040
776	P-26	317	J-50	J-25	12.0	Ductile Iron	130.0	False	0.000	-55	0.16	0.012
779	P-27	244	J-18	FH-A2-3	16.0	Ductile Iron	130.0	False	0.000	7	0.01	0.000
780	P-28	327	FH-A2-3	J-20	16.0	Ductile Iron	130.0	False	0.000	7	0.01	0.000
785	P-31	316	J-24	J-18	16.0	Ductile Iron	130.0	False	0.000	96	0.15	0.008
800	P-35	536	J-17	J-27	16.0	Ductile Iron	130.0	False	0.000	96	0.15	0.008
801	P-36	355	J-27	J-24	16.0	Ductile Iron	130.0	False	0.000	96	0.15	0.008
808	P-41	276	J-20	FH-C3-2	16.0	Ductile Iron	130.0	False	0.000	-80	0.13	0.006
809	P-42	330	FH-C3-2	J-4	16.0	Ductile Iron	130.0	False	0.000	-80	0.13	0.006
817	P-45	210	D-1C-3-B	FH-C3	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
819	P-46	371	J-6	J-29	16.0	Ductile Iron	130.0	False	0.000	227	0.36	0.040
822	P-47	175	D-1C-3-B	D-1C-3-A	12.0	Ductile Iron	130.0	False	0.000	-103	0.29	0.038
826	P-48	331	J-9	J-30	16.0	Ductile Iron	130.0	False	0.000	31	0.05	0.001
827	P-49	219	J-30	J-10	16.0	Ductile Iron	130.0	False	0.000	31	0.05	0.001
829	P-50	316	J-29	J-31	16.0	Ductile Iron	130.0	False	0.000	125	0.20	0.013
830	P-51	268	J-31	J-7	16.0	Ductile Iron	130.0	False	0.000	31	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	85	0.24	0.026
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	195	0.55	0.122
1108	P-56	524	FH-C8	J-342	12.0	Ductile Iron	130.0	False	0.000	90	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	12.0	Ductile Iron	130.0	False	0.000	205	0.58	0.135
1060	P-59	83	D-1C-8	J-55	12.0	Ductile Iron	130.0	False	0.000	46	0.13	0.007
849	P-60	295	J-10	J-32	16.0	Ductile Iron	130.0	False	0.000	-53	0.08	0.003
850	P-61	197	J-32	J-11	16.0	Ductile Iron	130.0	False	0.000	-53	0.08	0.002
1099	P-62	232	D-1C-4-B	J-340	12.0	Ductile Iron	130.0	False	0.000	-50	0.14	0.009
1100	P-70	339	J-340	D-1C-4-A	12.0	Ductile Iron	130.0	False	0.000	11	0.03	0.000
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	-40	0.11	0.007
878	P-75	434	J-12	J-37	16.0	Ductile Iron	130.0	False	0.000	-66	0.10	0.004
879	P-76	264	J-37	J-13	16.0	Ductile Iron	130.0	False	0.000	-66	0.10	0.004
1144	P-77	146	J-329	J-352	12.0	Ductile Iron	130.0	False	0.000	-67	0.19	0.018
1145	P-78	116	J-352	J-330	12.0	Ductile Iron	130.0	False	0.000	-104	0.30	0.038
1075	P-79	221	J-330	FH-C8	12.0	Ductile Iron	130.0	False	0.000	-104	0.30	0.039
1140	P-80	229	J-40	J-351	12.0	Ductile Iron	130.0	False	0.000	-13	0.04	0.001
1141	P-81	41	J-351	J-51	12.0	Ductile Iron	130.0	False	0.000	-13	0.04	0.000
1084	P-82	76	J-51	J-336	12.0	Ductile Iron	130.0	False	0.000	-13	0.04	0.000
1085	P-83	108	J-336	J-52	12.0	Ductile Iron	130.0	False	0.000	-13	0.04	0.001
1046	P-84	253	J-52	J-12	12.0	Ductile Iron	130.0	False	0.000	-13	0.04	0.001
1090	P-85	253	J-10	J-338	12.0	Ductile Iron	130.0	False	0.000	84	0.24	0.026
1091	P-86	151	J-338	J-327	12.0	Ductile Iron	130.0	False	0.000	23	0.07	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	-73	0.21	0.020
909	P-95	108	J-41	FH-C3	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
913	P-97	605	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-51	0.14	0.010
914	P-98	67	FH-C9	J-20	12.0	Ductile Iron	130.0	False	0.000	-222	0.63	0.156
915	P-99	64	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-171	0.48	0.097
990	P-102	396	FH-C10	D-1C-10	12.0	Ductile Iron	130.0	False	0.000	119	0.34	0.049
987	P-107	217	FH-A8	ZD-1A-7	12.0	Ductile Iron	130.0	False	0.000	81	0.23	0.024
934	P-111	533	J-16	J-44	16.0	Ductile Iron	130.0	False	0.000	-108	0.17	0.010
935	P-112	404	J-44	J-17	16.0	Ductile Iron	130.0	False	0.000	-244	0.39	0.046
1016	P-114	272	J-21	FH-A4-3	12.0	Ductile Iron	130.0	False	0.000	-58	0.17	0.013
939	P-115	235	J-45	ZD-1A-4-B	24.0	Ductile Iron	130.0	False	0.000	-404	0.29	0.016
941	P-116	245	J-45	J-26	24.0	Ductile Iron	130.0	False	0.000	346	0.25	0.012
961	P-127	487	FH-A1	ZD-1A-3-A	12.0	Ductile Iron	130.0	False	0.000	73	0.21	0.020
962	P-128	216	ZD-1A-3-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	72	0.20	0.019
1013	P-129	138	ZD-1A-4-B	FH-A3	24.0	Ductile Iron	130.0	False	0.000	-436	0.31	0.019
965	P-130	231	D-1A-3-B	ZD-1A-1-B	24.0	Ductile Iron	130.0	False	0.000	-692	0.49	0.044
1014	P-131	123	FH-A3	D-1A-3-B	24.0	Ductile Iron	130.0	False	0.000	-436	0.31	0.019
968	P-132	400	J-3	J-47	16.0	Ductile Iron	130.0	False	0.000	308	0.49	0.071
969	P-133	161	J-47	J-4	16.0	Ductile Iron	130.0	False	0.000	308	0.49	0.070
986	P-135	137	ZD-1A-8	FH-A8	12.0	Ductile Iron	130.0	False	0.000	81	0.23	0.024
974	P-136	246	ZD-1A-7	J-50	12.0	Ductile Iron	130.0	False	0.000	80	0.23	0.023
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	108	0.17	0.010
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	47	0.13	0.008
1017	P-443	125	FH-A4-3	J-45	12.0	Ductile Iron	130.0	False	0.000	-58	0.17	0.014
1027	P-443	109	J-23	J-25	12.0	Ductile Iron	130.0	False	0.000	55	0.16	0.011
1023	P-444	104	FH-A1-2	ZD-1A-8	12.0	Ductile Iron	130.0	False	0.000	83	0.23	0.025
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	-766	0.54	0.053
1020	P-447	51	FH-A2-4	J-22	12.0	Ductile Iron	130.0	False	0.000	-106	0.30	0.041
1068	P-449	141	J-327	J-53	12.0	Ductile Iron	130.0	False	0.000	23	0.07	0.002
1058	P-453	148	J-54	J-53	12.0	Ductile Iron	130.0	False	0.000	28	0.08	0.003
1062	P-454	306	J-54	J-55	12.0	Ductile Iron	130.0	False	0.000	1	0.00	0.000
1063	P-455	296	D-1C-9	J-55	12.0	Ductile Iron	130.0	False	0.000	131	0.37	0.058
1159	P-456	678	J-26	J-355	24.0	Ductile Iron	130.0	False	0.000	346	0.25	0.012
1082	P-458	265	J-36	J-54	12.0	Ductile Iron	130.0	False	0.000	46	0.13	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	-5	0.02	0.000
1162	P-480	114	J-355	J-356	24.0	Ductile Iron	130.0	False	0.000	341	0.24	0.012
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	340	0.24	0.012
1035	P-483	102	ZD-1A-4-B	FH-A4-4	12.0	Ductile Iron	130.0	False	0.000	31	0.09	0.005
1212	P-483(1)	140	J-44	J-378	12.0	Ductile Iron	130.0	False	0.000	136	0.38	0.063
1213	P-483(2)	125	J-378	J-358	12.0	Ductile Iron	130.0	False	0.000	53	0.15	0.011
1036	P-484	215	FH-A4-4	FH-A4	12.0	Ductile Iron	130.0	False	0.000	31	0.09	0.004
1170	P-484	182	J-358	FH-C2-1	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1061	P-485	189	J-55	D-1C-10	12.0	Ductile Iron	130.0	False	0.000	178	0.50	0.104
1172	P-485	169	J-358	FH-C2-2	8.0	Ductile Iron	130.0	False	0.000	53	0.34	0.079
1050	P-486	45	J-53	D-1C-4-A	12.0	Ductile Iron	130.0	False	0.000	51	0.15	0.011
1174	P-486	265	FH-C2-2	FH-C2-3	8.0	Ductile Iron	130.0	False	0.000	53	0.34	0.079
1191	P-487	13	FH-C2-3	D-1C-2	8.0	Ductile Iron	130.0	False	0.000	53	0.34	0.083
1192	P-487(2)	133	D-1C-2	J-369	8.0	Ductile Iron	130.0	False	0.000	-37	0.24	0.041
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	16	0.05	0.001
1180	P-489	165	J-369	J-364	8.0	Ductile Iron	130.0	False	0.000	-37	0.24	0.041
1182	P-490	30	J-364	FH-C2-5	8.0	Ductile Iron	130.0	False	0.000	-37	0.24	0.040
1184	P-491	235	FH-C2-5	FH-C2-6	8.0	Ductile Iron	130.0	False	0.000	-37	0.24	0.041
1186	P-492	236	FH-C2-6	J-367	8.0	Ductile Iron	130.0	False	0.000	-37	0.24	0.040
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	-37	0.10	0.006
1194	P-495	195	J-14	J-370	12.0	Ductile Iron	130.0	False	0.000	43	0.12	0.008
1196	P-496	642	J-370	J-371	12.0	Ductile Iron	130.0	False	0.000	19	0.05	0.002
1198	P-497	425	J-371	J-372	12.0	Ductile Iron	130.0	False	0.000	19	0.05	0.001
1200	P-498	813	J-372	D-1C-1	12.0	Ductile Iron	130.0	False	0.000	19	0.05	0.002
1202	P-499	561	D-1C-1	J-374	12.0	Ductile Iron	130.0	False	0.000	-53	0.15	0.011
1204	P-500	240	J-374	J-375	12.0	Ductile Iron	130.0	False	0.000	30	0.09	0.004
1206	P-501	557	J-375	J-376	12.0	Ductile Iron	130.0	False	0.000	30	0.09	0.004
1207	P-502	41	J-376	J-370	12.0	Ductile Iron	130.0	False	0.000	-24	0.07	0.003
1208	P-503	267	J-376	D-1C-1	12.0	Ductile Iron	130.0	False	0.000	54	0.15	0.011
1214	P-505	119	J-374	J-378	12.0	Ductile Iron	130.0	False	0.000	-83	0.23	0.025

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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	1,157	1,744.60

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Appendix C
Peak Hour Demand
Toll at Cavasson

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>	447	1,744.44	59.4
1199	D-1C-1	1,631.00	Zone - 4	<Collection: 1 item>	219	1,744.25	49.0
843	D-1C-10	1,633.79	Zone - 4	<Collection: 1 item>	159	1,744.17	47.8
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	1,744.09	49.0
811	D-1C-3-B	1,628.48	Zone - 4	<Collection: 1 item>	180	1,744.07	50.0
869	D-1C-4-A	1,639.16	Zone - 4	<Collection: 1 item>	180	1,744.23	45.5
835	D-1C-4-B	1,648.76	Zone - 4	<Collection: 1 item>	180	1,744.22	41.3
841	D-1C-8	1,632.97	Zone - 4	<Collection: 1 item>	139	1,744.23	48.1
910	D-1C-9	1,627.00	Zone - 4	<Collection: 1 item>	159	1,744.28	50.7
754	FH-A1	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.46	57.3
1021	FH-A1-2	1,618.47	Zone - 4	<Collection: 0 items>	0	1,744.43	54.5
1009	FH-A1-3	1,609.45	Zone - 4	<Collection: 0 items>	0	1,744.53	58.4
1024	FH-A2-1	1,621.00	Zone - 4	<Collection: 0 items>	0	1,744.37	53.4
778	FH-A2-3	1,625.00	Zone - 4	<Collection: 0 items>	0	1,744.33	51.6
1018	FH-A2-4	1,619.38	Zone - 4	<Collection: 0 items>	0	1,744.37	54.1
1012	FH-A3	1,607.19	Zone - 4	<Collection: 0 items>	0	1,744.44	59.4
757	FH-A4	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.43	57.3
1015	FH-A4-3	1,608.46	Zone - 4	<Collection: 0 items>	0	1,744.41	58.8
1034	FH-A4-4	1,608.76	Zone - 4	<Collection: 0 items>	0	1,744.43	58.7
1030	FH-A4-6	1,613.08	Zone - 4	<Collection: 0 items>	0	1,744.41	56.8
1028	FH-A5	1,596.00	Zone - 4	<Collection: 0 items>	0	1,744.37	64.2
970	FH-A7	1,621.59	Zone - 4	<Collection: 0 items>	0	1,744.40	53.1
985	FH-A8	1,618.53	Zone - 4	<Collection: 0 items>	0	1,744.41	54.5
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	1,744.24	51.2
1173	FH-C2-3	1,626.50	Zone - 4	<Collection: 0 items>	0	1,744.18	50.9
1177	FH-C2-4	1,623.80	Zone - 4	<Collection: 0 items>	0	1,744.19	52.1
1181	FH-C2-5	1,627.30	Zone - 4	<Collection: 0 items>	0	1,744.21	50.6
1183	FH-C2-6	1,629.50	Zone - 4	<Collection: 0 items>	0	1,744.24	49.6
1187	FH-C2-7	1,628.00	Zone - 4	<Collection: 0 items>	0	1,744.27	50.3
814	FH-C3	1,627.82	Zone - 4	<Collection: 0 items>	0	1,744.07	50.3
807	FH-C3-2	1,626.64	Zone - 4	<Collection: 0 items>	0	1,744.33	50.9
832	FH-C4	1,644.28	Zone - 4	<Collection: 0 items>	0	1,744.24	43.2
839	FH-C8	1,626.14	Zone - 4	<Collection: 0 items>	0	1,744.30	51.1
912	FH-C9	1,626.65	Zone - 4	<Collection: 0 items>	0	1,744.30	50.9
988	FH-C10	1,635.38	Zone - 4	<Collection: 0 items>	0	1,744.23	47.1
1064	FUTURE CONNECTION ACROSS 101	1,596.00	Zone - 4	<Collection: 1 item>	5	1,744.39	64.2
1163	FUTURE MILLER	1,596.00	Zone - 4	<Collection: 1 item>	1	1,744.38	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	1,744.45	52.5
691	J-4	1,629.00	Zone - 4	<Collection: 0 items>	0	1,744.34	49.9
693	J-5	1,629.90	Zone - 4	<Collection: 0 items>	0	1,744.32	49.5
695	J-6	1,631.92	Zone - 4	<Collection: 0 items>	0	1,744.31	48.6
697	J-7	1,649.25	Zone - 4	<Collection: 0 items>	0	1,744.25	41.1
701	J-8	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.25	41.2
703	J-9	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.25	41.2
705	J-10	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.25	41.2
707	J-11	1,646.00	Zone - 4	<Collection: 0 items>	0	1,744.25	42.5
709	J-12	1,643.00	Zone - 4	<Collection: 0 items>	0	1,744.25	43.8
711	J-13	1,637.84	Zone - 4	<Collection: 0 items>	0	1,744.26	46.0
713	J-14	1,633.68	Zone - 4	<Collection: 0 items>	0	1,744.26	47.8
717	J-16	1,630.55	Zone - 4	<Collection: 0 items>	0	1,744.29	49.2
719	J-17	1,617.54	Zone - 4	<Collection: 0 items>	0	1,744.35	54.9
721	J-18	1,625.17	Zone - 4	<Collection: 0 items>	0	1,744.33	51.6
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	1,744.33	51.4
764	J-21	1,612.50	Zone - 4	<Collection: 0 items>	0	1,744.40	57.1
771	J-22	1,618.54	Zone - 4	<Collection: 0 items>	0	1,744.37	54.4
768	J-23	1,618.40	Zone - 4	<Collection: 0 items>	0	1,744.40	54.5
783	J-24	1,623.83	Zone - 4	<Collection: 0 items>	0	1,744.33	52.1
775	J-25	1,619.21	Zone - 4	<Collection: 0 items>	0	1,744.39	54.2
940	J-26	1,604.52	Zone - 4	<Collection: 0 items>	0	1,744.41	60.5
799	J-27	1,619.36	Zone - 4	<Collection: 0 items>	0	1,744.34	54.1

818	J-29	1,636.73	Zone - 4	<Collection: 0 items>	0	1,744.26	46.5
825	J-30	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.25	41.2
828	J-31	1,645.84	Zone - 4	<Collection: 0 items>	0	1,744.25	42.6
848	J-32	1,648.15	Zone - 4	<Collection: 0 items>	0	1,744.25	41.6
873	J-36	1,636.30	Zone - 4	<Collection: 0 items>	0	1,744.24	46.7
877	J-37	1,640.12	Zone - 4	<Collection: 0 items>	0	1,744.26	45.1
903	J-40	1,631.38	Zone - 4	<Collection: 0 items>	0	1,744.25	48.8
907	J-41	1,626.75	Zone - 4	<Collection: 0 items>	0	1,744.07	50.8
933	J-44	1,624.90	Zone - 4	<Collection: 0 items>	0	1,744.30	51.7
937	J-45	1,606.60	Zone - 4	<Collection: 0 items>	0	1,744.42	59.6
967	J-47	1,628.00	Zone - 4	<Collection: 0 items>	0	1,744.37	50.3
745	J-50	1,619.49	Zone - 4	<Collection: 0 items>	0	1,744.38	54.0
1037	J-51	1,637.97	Zone - 4	<Collection: 0 items>	0	1,744.25	46.0
1042	J-52	1,641.32	Zone - 4	<Collection: 0 items>	0	1,744.25	44.5
1048	J-53	1,640.08	Zone - 4	<Collection: 0 items>	0	1,744.23	45.1
1055	J-54	1,635.94	Zone - 4	<Collection: 0 items>	0	1,744.23	46.9
1059	J-55	1,633.17	Zone - 4	<Collection: 0 items>	0	1,744.23	48.0
1066	J-327	1,642.62	Zone - 4	<Collection: 0 items>	0	1,744.23	44.0
1070	J-329	1,630.95	Zone - 4	<Collection: 0 items>	0	1,744.26	49.0
1073	J-330	1,627.87	Zone - 4	<Collection: 0 items>	0	1,744.28	50.4
1083	J-336	1,639.94	Zone - 4	<Collection: 0 items>	0	1,744.25	45.1
1089	J-338	1,647.37	Zone - 4	<Collection: 0 items>	0	1,744.23	41.9
1098	J-340	1,644.85	Zone - 4	<Collection: 0 items>	0	1,744.23	43.0
1107	J-342	1,630.06	Zone - 4	<Collection: 0 items>	0	1,744.26	49.4
1139	J-351	1,635.01	Zone - 4	<Collection: 0 items>	0	1,744.25	47.3
1143	J-352	1,629.23	Zone - 4	<Collection: 0 items>	0	1,744.27	49.8
1158	J-355	1,596.58	Zone - 4	<Collection: 0 items>	0	1,744.39	64.0
1161	J-356	1,596.00	Zone - 4	<Collection: 0 items>	0	1,744.38	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	1,744.21	50.8
1185	J-367	1,631.00	Zone - 4	<Collection: 0 items>	0	1,744.27	49.0
1175	J-369	1,625.20	Zone - 4	<Collection: 0 items>	0	1,744.19	51.5
1193	J-370	1,637.00	Zone - 4	<Collection: 0 items>	0	1,744.26	46.4
1195	J-371	1,641.00	Zone - 4	<Collection: 0 items>	0	1,744.26	44.7
1197	J-372	1,637.00	Zone - 4	<Collection: 0 items>	0	1,744.26	46.4
1201	J-374	1,631.00	Zone - 4	<Collection: 0 items>	0	1,744.27	49.0
1203	J-375	1,634.00	Zone - 4	<Collection: 0 items>	0	1,744.27	47.7
1205	J-376	1,635.00	Zone - 4	<Collection: 0 items>	0	1,744.26	47.3
1211	J-378	1,624.42	Zone - 4	<Collection: 0 items>	0	1,744.28	51.9
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	1,744.47	59.6
960	ZD-1A-3-A	1,612.51	Zone - 4	<Collection: 1 item>	1	1,744.44	57.1
761	ZD-1A-4-A	1,613.33	Zone - 4	<Collection: 1 item>	1	1,744.41	56.7
750	ZD-1A-4-B	1,607.21	Zone - 4	<Collection: 1 item>	1	1,744.43	59.4
972	ZD-1A-7	1,620.59	Zone - 4	<Collection: 1 item>	1	1,744.40	53.6
735	ZD-1A-8	1,616.47	Zone - 4	<Collection: 1 item>	1	1,744.42	55.4

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	680	1.09	0.306
694	P-2	135	J-4	J-5	16.0	Ductile Iron	130.0	False	0.000	398	0.63	0.114
696	P-3	134	J-5	J-6	16.0	Ductile Iron	130.0	False	0.000	398	0.63	0.114
702	P-4	65	J-7	J-8	16.0	Ductile Iron	130.0	False	0.000	54	0.09	0.004
704	P-5	155	J-8	J-9	16.0	Ductile Iron	130.0	False	0.000	54	0.09	0.002
710	P-6	281	J-11	J-12	16.0	Ductile Iron	130.0	False	0.000	-93	0.15	0.008
714	P-7	126	J-13	J-14	16.0	Ductile Iron	130.0	False	0.000	-115	0.18	0.012
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	-1,334	2.13	1.067
1008	P-13	319	R-11	J-2	48.0	Ductile Iron	130.0	False	0.000	2,014	0.36	0.000
1022	P-14	236	J-3	FH-A1-2	12.0	Ductile Iron	130.0	False	0.000	143	0.41	0.069
1010	P-15	379	ZD-1A-1-B	FH-A1-3	24.0	Ductile Iron	130.0	False	0.000	-1,334	0.95	0.148
1025	P-16	83	J-50	FH-A2-1	12.0	Ductile Iron	130.0	False	0.000	236	0.67	0.174
977	P-17	120	ZD-1A-8	ZD-1A-1-A	12.0	Ductile Iron	130.0	False	0.000	1	0.00	0.001
756	P-18	119	FH-A1	ZD-1A-1-B	12.0	Ductile Iron	130.0	False	0.000	-127	0.36	0.055
763	P-20	168	ZD-1A-4-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	-180	0.51	0.106
1031	P-21	45	ZD-1A-4-A	FH-A4-6	12.0	Ductile Iron	130.0	False	0.000	83	0.24	0.025
770	P-22	306	J-23	ZD-1A-4-A	12.0	Ductile Iron	130.0	False	0.000	-96	0.27	0.033
1019	P-23	350	J-18	FH-A2-4	12.0	Ductile Iron	130.0	False	0.000	-185	0.53	0.112
773	P-24	293	J-22	J-21	12.0	Ductile Iron	130.0	False	0.000	-185	0.53	0.112
776	P-26	317	J-50	J-25	12.0	Ductile Iron	130.0	False	0.000	-96	0.27	0.033
779	P-27	244	J-18	FH-A2-3	16.0	Ductile Iron	130.0	False	0.000	13	0.02	0.000
780	P-28	327	FH-A2-3	J-20	16.0	Ductile Iron	130.0	False	0.000	13	0.02	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	-140	0.22	0.016
809	P-42	330	FH-C3-2	J-4	16.0	Ductile Iron	130.0	False	0.000	-140	0.22	0.017
817	P-45	210	D-1C-3-B	FH-C3	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
819	P-46	371	J-6	J-29	16.0	Ductile Iron	130.0	False	0.000	398	0.63	0.113
822	P-47	175	D-1C-3-B	D-1C-3-A	12.0	Ductile Iron	130.0	False	0.000	-180	0.51	0.106
826	P-48	331	J-9	J-30	16.0	Ductile Iron	130.0	False	0.000	54	0.09	0.003
827	P-49	219	J-30	J-10	16.0	Ductile Iron	130.0	False	0.000	54	0.09	0.003
829	P-50	316	J-29	J-31	16.0	Ductile Iron	130.0	False	0.000	219	0.35	0.037
830	P-51	268	J-31	J-7	16.0	Ductile Iron	130.0	False	0.000	54	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	149	0.42	0.075
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	341	0.97	0.344
1108	P-56	524	FH-C8	J-342	12.0	Ductile Iron	130.0	False	0.000	158	0.45	0.083
989	P-57	328	J-29	FH-C10	12.0	Ductile Iron	130.0	False	0.000	179	0.51	0.105
845	P-58	234	D-1C-10	D-1C-3-A	12.0	Ductile Iron	130.0	False	0.000	359	1.02	0.381
1060	P-59	83	D-1C-8	J-55	12.0	Ductile Iron	130.0	False	0.000	80	0.23	0.024
849	P-60	295	J-10	J-32	16.0	Ductile Iron	130.0	False	0.000	-93	0.15	0.008
850	P-61	197	J-32	J-11	16.0	Ductile Iron	130.0	False	0.000	-93	0.15	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	19	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	-69	0.20	0.018
878	P-75	434	J-12	J-37	16.0	Ductile Iron	130.0	False	0.000	-115	0.18	0.012
879	P-76	264	J-37	J-13	16.0	Ductile Iron	130.0	False	0.000	-115	0.18	0.011
1144	P-77	146	J-329	J-352	12.0	Ductile Iron	130.0	False	0.000	-118	0.34	0.049
1145	P-78	116	J-352	J-330	12.0	Ductile Iron	130.0	False	0.000	-183	0.52	0.109
1075	P-79	221	J-330	FH-C8	12.0	Ductile Iron	130.0	False	0.000	-183	0.52	0.109
1140	P-80	229	J-40	J-351	12.0	Ductile Iron	130.0	False	0.000	-22	0.06	0.002
1141	P-81	41	J-351	J-51	12.0	Ductile Iron	130.0	False	0.000	-22	0.06	0.003
1084	P-82	76	J-51	J-336	12.0	Ductile Iron	130.0	False	0.000	-22	0.06	0.003
1085	P-83	108	J-336	J-52	12.0	Ductile Iron	130.0	False	0.000	-22	0.06	0.001
1046	P-84	253	J-52	J-12	12.0	Ductile Iron	130.0	False	0.000	-22	0.06	0.002
1090	P-85	253	J-10	J-338	12.0	Ductile Iron	130.0	False	0.000	147	0.42	0.072
1091	P-86	151	J-338	J-327	12.0	Ductile Iron	130.0	False	0.000	41	0.12	0.007
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	-150	0.42	0.075
1071	P-92	136	J-40	J-329	12.0	Ductile Iron	130.0	False	0.000	-127	0.36	0.056
909	P-95	108	J-41	FH-C3	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
913	P-97	605	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-89	0.25	0.029
914	P-98	67	FH-C9	J-20	12.0	Ductile Iron	130.0	False	0.000	-388	1.10	0.438
915	P-99	64	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-299	0.85	0.271
990	P-102	396	FH-C10	D-1C-10	12.0	Ductile Iron	130.0	False	0.000	207	0.59	0.138
987	P-107	217	FH-A8	ZD-1A-7	12.0	Ductile Iron	130.0	False	0.000	141	0.40	0.067
934	P-111	533	J-16	J-44	16.0	Ductile Iron	130.0	False	0.000	-190	0.30	0.029
935	P-112	404	J-44	J-17	16.0	Ductile Iron	130.0	False	0.000	-427	0.68	0.129
1016	P-114	272	J-21	FH-A4-3	12.0	Ductile Iron	130.0	False	0.000	-102	0.29	0.037
939	P-115	235	J-45	ZD-1A-4-B	24.0	Ductile Iron	130.0	False	0.000	-703	0.50	0.045
941	P-116	245	J-45	J-26	24.0	Ductile Iron	130.0	False	0.000	601	0.43	0.034
961	P-127	487	FH-A1	ZD-1A-3-A	12.0	Ductile Iron	130.0	False	0.000	127	0.36	0.056
962	P-128	216	ZD-1A-3-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	126	0.36	0.055
1013	P-129	138	ZD-1A-4-B	FH-A3	24.0	Ductile Iron	130.0	False	0.000	-759	0.54	0.052
965	P-130	231	D-1A-3-B	ZD-1A-1-B	24.0	Ductile Iron	130.0	False	0.000	-1,206	0.86	0.122
1014	P-131	123	FH-A3	D-1A-3-B	24.0	Ductile Iron	130.0	False	0.000	-759	0.54	0.051
968	P-132	400	J-3	J-47	16.0	Ductile Iron	130.0	False	0.000	538	0.86	0.198
969	P-133	161	J-47	J-4	16.0	Ductile Iron	130.0	False	0.000	538	0.86	0.198
986	P-135	137	ZD-1A-8	FH-A8	12.0	Ductile Iron	130.0	False	0.000	141	0.40	0.068
974	P-136	246	ZD-1A-7	J-50	12.0	Ductile Iron	130.0	False	0.000	140	0.40	0.067
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	190	0.30	0.029
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	83	0.24	0.026
1017	P-443	125	FH-A4-3	J-45	12.0	Ductile Iron	130.0	False	0.000	-102	0.29	0.037
1027	P-443	109	J-23	J-25	12.0	Ductile Iron	130.0	False	0.000	96	0.27	0.033
1023	P-444	104	FH-A1-2	ZD-1A-8	12.0	Ductile Iron	130.0	False	0.000	143	0.41	0.068
1026	P-445	246	FH-A2-1	J-20	12.0	Ductile Iron	130.0	False	0.000	236	0.67	0.175
1011	P-446	352	FH-A1-3	J-19	24.0	Ductile Iron	130.0	False	0.000	-1,334	0.95	0.147
1020	P-447	51	FH-A2-4	J-22	12.0	Ductile Iron	130.0	False	0.000	-185	0.53	0.112
1068	P-449	141	J-327	J-53	12.0	Ductile Iron	130.0	False	0.000	41	0.12	0.006
1058	P-453	148	J-54	J-53	12.0	Ductile Iron	130.0	False	0.000	49	0.14	0.009
1062	P-454	306	J-54	J-55	12.0	Ductile Iron	130.0	False	0.000	3	0.01	0.000
1063	P-455	296	D-1C-9	J-55	12.0	Ductile Iron	130.0	False	0.000	229	0.65	0.166
1159	P-456	678	J-26	J-355	24.0	Ductile Iron	130.0	False	0.000	601	0.43	0.034
1082	P-458	265	J-36	J-54	12.0	Ductile Iron	130.0	False	0.000	80	0.23	0.024

1101	P-462	69	J-338	J-340	12.0	Ductile Iron	130.0	False	0.000	106	0.30	0.041
1110	P-465	121	J-329	J-342	12.0	Ductile Iron	130.0	False	0.000	-9	0.03	0.001
1162	P-480	114	J-355	J-356	24.0	Ductile Iron	130.0	False	0.000	596	0.42	0.033
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	595	0.42	0.033
1035	P-483	102	ZD-1A-4-B	FH-A4-4	12.0	Ductile Iron	130.0	False	0.000	54	0.15	0.011
1212	P-483(1)	140	J-44	J-378	12.0	Ductile Iron	130.0	False	0.000	238	0.67	0.177
1213	P-483(2)	125	J-378	J-358	12.0	Ductile Iron	130.0	False	0.000	92	0.26	0.030
1036	P-484	215	FH-A4-4	FH-A4	12.0	Ductile Iron	130.0	False	0.000	54	0.15	0.012
1170	P-484	182	J-358	FH-C2-1	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1061	P-485	189	J-55	D-1C-10	12.0	Ductile Iron	130.0	False	0.000	311	0.88	0.292
1172	P-485	169	J-358	FH-C2-2	8.0	Ductile Iron	130.0	False	0.000	92	0.59	0.222
1050	P-486	45	J-53	D-1C-4-A	12.0	Ductile Iron	130.0	False	0.000	90	0.26	0.030
1174	P-486	265	FH-C2-2	FH-C2-3	8.0	Ductile Iron	130.0	False	0.000	92	0.59	0.222
1191	P-487	13	FH-C2-3	D-1C-2	8.0	Ductile Iron	130.0	False	0.000	92	0.59	0.229
1192	P-487(2)	133	D-1C-2	J-369	8.0	Ductile Iron	130.0	False	0.000	-65	0.41	0.115
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	28	0.08	0.003
1180	P-489	165	J-369	J-364	8.0	Ductile Iron	130.0	False	0.000	-65	0.41	0.114
1182	P-490	30	J-364	FH-C2-5	8.0	Ductile Iron	130.0	False	0.000	-65	0.41	0.113
1184	P-491	235	FH-C2-5	FH-C2-6	8.0	Ductile Iron	130.0	False	0.000	-65	0.41	0.114
1186	P-492	236	FH-C2-6	J-367	8.0	Ductile Iron	130.0	False	0.000	-65	0.41	0.115
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	-65	0.18	0.015
1194	P-495	195	J-14	J-370	12.0	Ductile Iron	130.0	False	0.000	74	0.21	0.021
1196	P-496	642	J-370	J-371	12.0	Ductile Iron	130.0	False	0.000	33	0.09	0.005
1198	P-497	425	J-371	J-372	12.0	Ductile Iron	130.0	False	0.000	33	0.09	0.005
1200	P-498	813	J-372	D-1C-1	12.0	Ductile Iron	130.0	False	0.000	33	0.09	0.005
1202	P-499	561	D-1C-1	J-374	12.0	Ductile Iron	130.0	False	0.000	-92	0.26	0.031
1204	P-500	240	J-374	J-375	12.0	Ductile Iron	130.0	False	0.000	53	0.15	0.011
1206	P-501	557	J-375	J-376	12.0	Ductile Iron	130.0	False	0.000	53	0.15	0.011
1207	P-502	41	J-376	J-370	12.0	Ductile Iron	130.0	False	0.000	-41	0.12	0.006
1208	P-503	267	J-376	D-1C-1	12.0	Ductile Iron	130.0	False	0.000	94	0.27	0.032
1214	P-505	119	J-374	J-378	12.0	Ductile Iron	130.0	False	0.000	-145	0.41	0.070

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	2,014	1,744.60

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Appendix D
Max Day + Fire Flow
Toll at Cavasson

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)	Pr (S L Lim
FH-A1	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	57.1	30.0	41.1	J-7	
FH-A1-2	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	54.1	30.0	41.1	J-7	
FH-A1-3	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	58.4	30.0	41.2	J-7	
FH-A2-1	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	53.1	30.0	41.0	J-7	
FH-A2-3	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	51.4	30.0	41.0	J-7	
FH-A2-4	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	53.7	30.0	41.0	J-7	
FH-A3	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	59.3	30.0	41.1	J-7	
FH-A4	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	57.1	30.0	41.1	J-7	
FH-A4-3	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	58.6	30.0	41.1	J-7	
FH-A4-4	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	58.5	30.0	41.1	J-7	
FH-A4-6	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	56.6	30.0	41.1	J-7	
FH-A5	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	63.6	30.0	41.0	J-7	
FH-A7	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	52.7	30.0	41.1	J-7	
FH-A8	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	54.0	30.0	41.1	J-7	
FH-C2-1	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	40.3	30.0	41.0	J-7	
FH-C2-2	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	49.1	30.0	41.0	J-7	
FH-C2-3	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	47.6	30.0	41.0	J-7	
FH-C2-4	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	41.5	30.0	41.0	J-7	
FH-C2-5	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	47.3	30.0	41.0	J-7	
FH-C2-6	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	47.2	30.0	41.0	J-7	
FH-C2-7	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	39.4	30.0	41.0	J-7	
FH-C3	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	48.3	30.0	40.9	J-7	
FH-C3-2	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	50.7	30.0	41.0	J-7	
FH-C4	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	42.9	30.0	40.9	J-7	
FH-C8	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	50.9	30.0	41.0	J-7	
FH-C9	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	50.7	30.0	41.0	J-7	
FH-C10	Zone - 4	2	True	1,500	1,505	1,500	1,505	30.0	46.8	30.0	40.9	J-7	

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>	256	1,744.54	59.4
1199	D-1C-1	1,631.00	Zone - 4	<Collection: 1 item>	125	1,744.48	49.1
843	D-1C-10	1,633.79	Zone - 4	<Collection: 1 item>	91	1,744.45	47.9
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	1,744.42	49.2
811	D-1C-3-B	1,628.48	Zone - 4	<Collection: 1 item>	103	1,744.41	50.2
869	D-1C-4-A	1,639.16	Zone - 4	<Collection: 1 item>	103	1,744.47	45.6
835	D-1C-4-B	1,648.76	Zone - 4	<Collection: 1 item>	103	1,744.47	41.4
841	D-1C-8	1,632.97	Zone - 4	<Collection: 1 item>	79	1,744.47	48.2
910	D-1C-9	1,627.00	Zone - 4	<Collection: 1 item>	91	1,744.49	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	1,744.52	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	1,744.52	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	1,744.54	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	1,744.54	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	1,744.52	64.3
970	FH-A7	1,621.59	Zone - 4	<Collection: 0 items>	0	1,744.53	53.2
985	FH-A8	1,618.53	Zone - 4	<Collection: 0 items>	0	1,744.53	54.5
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	1,744.41	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	1,744.47	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	1,744.55	52.6
691	J-4	1,629.00	Zone - 4	<Collection: 0 items>	0	1,744.51	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	1,744.48	41.2
701	J-8	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.48	41.3
703	J-9	1,649.00	Zone - 4	<Collection: 0 items>	0	1,744.48	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	1,744.48	42.6
709	J-12	1,643.00	Zone - 4	<Collection: 0 items>	0	1,744.48	43.9
711	J-13	1,637.84	Zone - 4	<Collection: 0 items>	0	1,744.48	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	1,744.49	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	1,744.52	54.5
768	J-23	1,618.40	Zone - 4	<Collection: 0 items>	0	1,744.53	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	1,744.53	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	1,744.51	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	1,744.48	42.7
848	J-32	1,648.15	Zone - 4	<Collection: 0 items>	0	1,744.48	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	1,744.48	45.2
903	J-40	1,631.38	Zone - 4	<Collection: 0 items>	0	1,744.48	48.9
907	J-41	1,626.75	Zone - 4	<Collection: 0 items>	0	1,744.41	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	1,744.54	59.7
967	J-47	1,628.00	Zone - 4	<Collection: 0 items>	0	1,744.52	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	1,744.48	46.1
1042	J-52	1,641.32	Zone - 4	<Collection: 0 items>	0	1,744.48	44.6
1048	J-53	1,640.08	Zone - 4	<Collection: 0 items>	0	1,744.47	45.2
1055	J-54	1,635.94	Zone - 4	<Collection: 0 items>	0	1,744.47	47.0
1059	J-55	1,633.17	Zone - 4	<Collection: 0 items>	0	1,744.47	48.2
1066	J-327	1,642.62	Zone - 4	<Collection: 0 items>	0	1,744.47	44.1
1070	J-329	1,630.95	Zone - 4	<Collection: 0 items>	0	1,744.48	49.1
1073	J-330	1,627.87	Zone - 4	<Collection: 0 items>	0	1,744.49	50.5
1083	J-336	1,639.94	Zone - 4	<Collection: 0 items>	0	1,744.48	45.2
1089	J-338	1,647.37	Zone - 4	<Collection: 0 items>	0	1,744.47	42.0
1098	J-340	1,644.85	Zone - 4	<Collection: 0 items>	0	1,744.47	43.1
1107	J-342	1,630.06	Zone - 4	<Collection: 0 items>	0	1,744.48	49.5
1139	J-351	1,635.01	Zone - 4	<Collection: 0 items>	0	1,744.48	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	1,744.48	46.5
1195	J-371	1,641.00	Zone - 4	<Collection: 0 items>	0	1,744.48	44.8
1197	J-372	1,637.00	Zone - 4	<Collection: 0 items>	0	1,744.48	46.5
1201	J-374	1,631.00	Zone - 4	<Collection: 0 items>	0	1,744.48	49.1
1203	J-375	1,634.00	Zone - 4	<Collection: 0 items>	0	1,744.48	47.8
1205	J-376	1,635.00	Zone - 4	<Collection: 0 items>	0	1,744.48	47.4
1211	J-378	1,624.42	Zone - 4	<Collection: 0 items>	0	1,744.48	51.9
976	ZD-1A-1-A	1,614.93	Zone - 4	<Collection: 1 item>	1	1,744.54	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	1,744.54	59.4
972	ZD-1A-7	1,620.59	Zone - 4	<Collection: 1 item>	1	1,744.53	53.6
735	ZD-1A-8	1,616.47	Zone - 4	<Collection: 1 item>	1	1,744.54	55.4

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	391	0.62	0.109
694	P-2	135	J-4	J-5	16.0	Ductile Iron	130.0	False	0.000	227	0.36	0.040
696	P-3	134	J-5	J-6	16.0	Ductile Iron	130.0	False	0.000	227	0.36	0.041
702	P-4	65	J-7	J-8	16.0	Ductile Iron	130.0	False	0.000	31	0.05	0.002
704	P-5	155	J-8	J-9	16.0	Ductile Iron	130.0	False	0.000	31	0.05	0.001
710	P-6	281	J-11	J-12	16.0	Ductile Iron	130.0	False	0.000	-53	0.08	0.003
714	P-7	126	J-13	J-14	16.0	Ductile Iron	130.0	False	0.000	-66	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	-766	1.22	0.383
1008	P-13	319	R-11	J-2	48.0	Ductile Iron	130.0	False	0.000	1,157	0.21	0.000
1022	P-14	236	J-3	FH-A1-2	12.0	Ductile Iron	130.0	False	0.000	83	0.23	0.025
1010	P-15	379	ZD-1A-1-B	FH-A1-3	24.0	Ductile Iron	130.0	False	0.000	-766	0.54	0.053
1025	P-16	83	J-50	FH-A2-1	12.0	Ductile Iron	130.0	False	0.000	135	0.38	0.061
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	-73	0.21	0.020
763	P-20	168	ZD-1A-4-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	-103	0.29	0.038
1031	P-21	45	ZD-1A-4-A	FH-A4-6	12.0	Ductile Iron	130.0	False	0.000	47	0.13	0.011
770	P-22	306	J-23	ZD-1A-4-A	12.0	Ductile Iron	130.0	False	0.000	-55	0.16	0.012
1019	P-23	350	J-18	FH-A2-4	12.0	Ductile Iron	130.0	False	0.000	-106	0.30	0.040
773	P-24	293	J-22	J-21	12.0	Ductile Iron	130.0	False	0.000	-106	0.30	0.040
776	P-26	317	J-50	J-25	12.0	Ductile Iron	130.0	False	0.000	-55	0.16	0.012
779	P-27	244	J-18	FH-A2-3	16.0	Ductile Iron	130.0	False	0.000	7	0.01	0.000
780	P-28	327	FH-A2-3	J-20	16.0	Ductile Iron	130.0	False	0.000	7	0.01	0.000
785	P-31	316	J-24	J-18	16.0	Ductile Iron	130.0	False	0.000	96	0.15	0.008
800	P-35	536	J-17	J-27	16.0	Ductile Iron	130.0	False	0.000	96	0.15	0.008
801	P-36	355	J-27	J-24	16.0	Ductile Iron	130.0	False	0.000	96	0.15	0.008
808	P-41	276	J-20	FH-C3-2	16.0	Ductile Iron	130.0	False	0.000	-80	0.13	0.006
809	P-42	330	FH-C3-2	J-4	16.0	Ductile Iron	130.0	False	0.000	-80	0.13	0.006
817	P-45	210	D-1C-3-B	FH-C3	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
819	P-46	371	J-6	J-29	16.0	Ductile Iron	130.0	False	0.000	227	0.36	0.040
822	P-47	175	D-1C-3-B	D-1C-3-A	12.0	Ductile Iron	130.0	False	0.000	-103	0.29	0.038
826	P-48	331	J-9	J-30	16.0	Ductile Iron	130.0	False	0.000	31	0.05	0.001
827	P-49	219	J-30	J-10	16.0	Ductile Iron	130.0	False	0.000	31	0.05	0.001
829	P-50	316	J-29	J-31	16.0	Ductile Iron	130.0	False	0.000	125	0.20	0.013
830	P-51	268	J-31	J-7	16.0	Ductile Iron	130.0	False	0.000	31	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	85	0.24	0.026
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	195	0.55	0.122
1108	P-56	524	FH-C8	J-342	12.0	Ductile Iron	130.0	False	0.000	90	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	12.0	Ductile Iron	130.0	False	0.000	205	0.58	0.135
1060	P-59	83	D-1C-8	J-55	12.0	Ductile Iron	130.0	False	0.000	46	0.13	0.007
849	P-60	295	J-10	J-32	16.0	Ductile Iron	130.0	False	0.000	-53	0.08	0.003
850	P-61	197	J-32	J-11	16.0	Ductile Iron	130.0	False	0.000	-53	0.08	0.002
1099	P-62	232	D-1C-4-B	J-340	12.0	Ductile Iron	130.0	False	0.000	-50	0.14	0.009
1100	P-70	339	J-340	D-1C-4-A	12.0	Ductile Iron	130.0	False	0.000	11	0.03	0.000
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	-40	0.11	0.007
878	P-75	434	J-12	J-37	16.0	Ductile Iron	130.0	False	0.000	-66	0.10	0.004
879	P-76	264	J-37	J-13	16.0	Ductile Iron	130.0	False	0.000	-66	0.10	0.004
1144	P-77	146	J-329	J-352	12.0	Ductile Iron	130.0	False	0.000	-67	0.19	0.018
1145	P-78	116	J-352	J-330	12.0	Ductile Iron	130.0	False	0.000	-104	0.30	0.038
1075	P-79	221	J-330	FH-C8	12.0	Ductile Iron	130.0	False	0.000	-104	0.30	0.039
1140	P-80	229	J-40	J-351	12.0	Ductile Iron	130.0	False	0.000	-13	0.04	0.001
1141	P-81	41	J-351	J-51	12.0	Ductile Iron	130.0	False	0.000	-13	0.04	0.000
1084	P-82	76	J-51	J-336	12.0	Ductile Iron	130.0	False	0.000	-13	0.04	0.000
1085	P-83	108	J-336	J-52	12.0	Ductile Iron	130.0	False	0.000	-13	0.04	0.001
1046	P-84	253	J-52	J-12	12.0	Ductile Iron	130.0	False	0.000	-13	0.04	0.001
1090	P-85	253	J-10	J-338	12.0	Ductile Iron	130.0	False	0.000	84	0.24	0.026
1091	P-86	151	J-338	J-327	12.0	Ductile Iron	130.0	False	0.000	23	0.07	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	-73	0.21	0.020
909	P-95	108	J-41	FH-C3	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
913	P-97	605	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-51	0.14	0.010
914	P-98	67	FH-C9	J-20	12.0	Ductile Iron	130.0	False	0.000	-222	0.63	0.156
915	P-99	64	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-171	0.48	0.097
990	P-102	396	FH-C10	D-1C-10	12.0	Ductile Iron	130.0	False	0.000	119	0.34	0.049
987	P-107	217	FH-A8	ZD-1A-7	12.0	Ductile Iron	130.0	False	0.000	81	0.23	0.024
934	P-111	533	J-16	J-44	16.0	Ductile Iron	130.0	False	0.000	-108	0.17	0.010
935	P-112	404	J-44	J-17	16.0	Ductile Iron	130.0	False	0.000	-244	0.39	0.046
1016	P-114	272	J-21	FH-A4-3	12.0	Ductile Iron	130.0	False	0.000	-58	0.17	0.013
939	P-115	235	J-45	ZD-1A-4-B	24.0	Ductile Iron	130.0	False	0.000	-404	0.29	0.016
941	P-116	245	J-45	J-26	24.0	Ductile Iron	130.0	False	0.000	346	0.25	0.012
961	P-127	487	FH-A1	ZD-1A-3-A	12.0	Ductile Iron	130.0	False	0.000	73	0.21	0.020
962	P-128	216	ZD-1A-3-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	72	0.20	0.019
1013	P-129	138	ZD-1A-4-B	FH-A3	24.0	Ductile Iron	130.0	False	0.000	-436	0.31	0.019
965	P-130	231	D-1A-3-B	ZD-1A-1-B	24.0	Ductile Iron	130.0	False	0.000	-692	0.49	0.044
1014	P-131	123	FH-A3	D-1A-3-B	24.0	Ductile Iron	130.0	False	0.000	-436	0.31	0.019
968	P-132	400	J-3	J-47	16.0	Ductile Iron	130.0	False	0.000	308	0.49	0.071
969	P-133	161	J-47	J-4	16.0	Ductile Iron	130.0	False	0.000	308	0.49	0.070
986	P-135	137	ZD-1A-8	FH-A8	12.0	Ductile Iron	130.0	False	0.000	81	0.23	0.024
974	P-136	246	ZD-1A-7	J-50	12.0	Ductile Iron	130.0	False	0.000	80	0.23	0.023
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	108	0.17	0.010
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	47	0.13	0.008
1017	P-443	125	FH-A4-3	J-45	12.0	Ductile Iron	130.0	False	0.000	-58	0.17	0.014
1027	P-443	109	J-23	J-25	12.0	Ductile Iron	130.0	False	0.000	55	0.16	0.011
1023	P-444	104	FH-A1-2	ZD-1A-8	12.0	Ductile Iron	130.0	False	0.000	83	0.23	0.025
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	-766	0.54	0.053
1020	P-447	51	FH-A2-4	J-22	12.0	Ductile Iron	130.0	False	0.000	-106	0.30	0.041
1068	P-449	141	J-327	J-53	12.0	Ductile Iron	130.0	False	0.000	23	0.07	0.002
1058	P-453	148	J-54	J-53	12.0	Ductile Iron	130.0	False	0.000	28	0.08	0.003
1062	P-454	306	J-54	J-55	12.0	Ductile Iron	130.0	False	0.000	1	0.00	0.000
1063	P-455	296	D-1C-9	J-55	12.0	Ductile Iron	130.0	False	0.000	131	0.37	0.058
1159	P-456	678	J-26	J-355	24.0	Ductile Iron	130.0	False	0.000	346	0.25	0.012
1082	P-458	265	J-36	J-54	12.0	Ductile Iron	130.0	False	0.000	46	0.13	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	-5	0.02	0.000
1162	P-480	114	J-355	J-356	24.0	Ductile Iron	130.0	False	0.000	341	0.24	0.012
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	340	0.24	0.012
1035	P-483	102	ZD-1A-4-B	FH-A4-4	12.0	Ductile Iron	130.0	False	0.000	31	0.09	0.005
1212	P-483(1)	140	J-44	J-378	12.0	Ductile Iron	130.0	False	0.000	136	0.38	0.063
1213	P-483(2)	125	J-378	J-358	12.0	Ductile Iron	130.0	False	0.000	53	0.15	0.011
1036	P-484	215	FH-A4-4	FH-A4	12.0	Ductile Iron	130.0	False	0.000	31	0.09	0.004
1170	P-484	182	J-358	FH-C2-1	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1061	P-485	189	J-55	D-1C-10	12.0	Ductile Iron	130.0	False	0.000	178	0.50	0.104
1172	P-485	169	J-358	FH-C2-2	8.0	Ductile Iron	130.0	False	0.000	53	0.34	0.079
1050	P-486	45	J-53	D-1C-4-A	12.0	Ductile Iron	130.0	False	0.000	51	0.15	0.011
1174	P-486	265	FH-C2-2	FH-C2-3	8.0	Ductile Iron	130.0	False	0.000	53	0.34	0.079
1191	P-487	13	FH-C2-3	D-1C-2	8.0	Ductile Iron	130.0	False	0.000	53	0.34	0.083
1192	P-487(2)	133	D-1C-2	J-369	8.0	Ductile Iron	130.0	False	0.000	-37	0.24	0.041
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	16	0.05	0.001
1180	P-489	165	J-369	J-364	8.0	Ductile Iron	130.0	False	0.000	-37	0.24	0.041
1182	P-490	30	J-364	FH-C2-5	8.0	Ductile Iron	130.0	False	0.000	-37	0.24	0.040
1184	P-491	235	FH-C2-5	FH-C2-6	8.0	Ductile Iron	130.0	False	0.000	-37	0.24	0.041
1186	P-492	236	FH-C2-6	J-367	8.0	Ductile Iron	130.0	False	0.000	-37	0.24	0.040
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	-37	0.10	0.006
1194	P-495	195	J-14	J-370	12.0	Ductile Iron	130.0	False	0.000	43	0.12	0.008
1196	P-496	642	J-370	J-371	12.0	Ductile Iron	130.0	False	0.000	19	0.05	0.002
1198	P-497	425	J-371	J-372	12.0	Ductile Iron	130.0	False	0.000	19	0.05	0.001
1200	P-498	813	J-372	D-1C-1	12.0	Ductile Iron	130.0	False	0.000	19	0.05	0.002
1202	P-499	561	D-1C-1	J-374	12.0	Ductile Iron	130.0	False	0.000	-53	0.15	0.011
1204	P-500	240	J-374	J-375	12.0	Ductile Iron	130.0	False	0.000	30	0.09	0.004
1206	P-501	557	J-375	J-376	12.0	Ductile Iron	130.0	False	0.000	30	0.09	0.004
1207	P-502	41	J-376	J-370	12.0	Ductile Iron	130.0	False	0.000	-24	0.07	0.003
1208	P-503	267	J-376	D-1C-1	12.0	Ductile Iron	130.0	False	0.000	54	0.15	0.011
1214	P-505	119	J-374	J-378	12.0	Ductile Iron	130.0	False	0.000	-83	0.23	0.025

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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	1,157	1,744.60

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Appendix E
Hydrant Flow Test Result
Toll at Cavasson

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 F_1

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 F_2

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 F_1 and R
333 ft (measured linearly)

Static-Residual Elevation
1611 ft (above sea level)

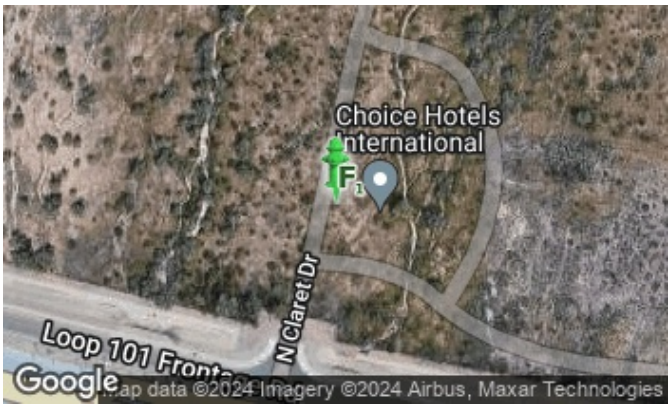
Flow Hydrant (F_1) Elevation
1611 ft (above sea level)

Elevation & distance values are approximate

Flow Test Summary

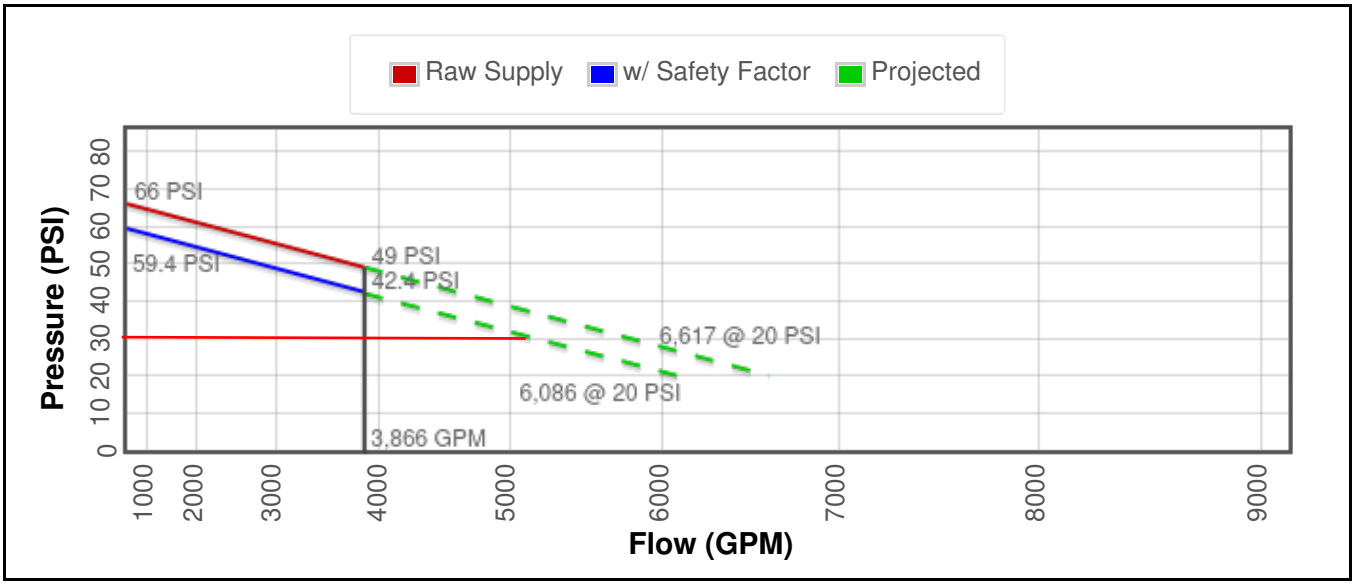
Static-Residual Hydrant

Flow Hydrant (only hydrant F1 shown for clarity)



Approximate Project Site

Water Supply Curve $N^{1.85}$ Graph



Appendix F
Velocity Check Results
Toll at Cavasson

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>	256	1,744.35	59.3
1199	D-1C-1	1,631.00	Zone - 4	<Collection: 1 item>	125	1,743.90	48.8
843	D-1C-10	1,633.79	Zone - 4	<Collection: 1 item>	91	1,743.91	47.6
1190	D-1C-2	1,626.38	Zone - 4	<Collection: 1 item>	90	1,741.10	49.6
821	D-1C-3-A	1,630.73	Zone - 4	<Collection: 1 item>	103	1,743.88	49.0
811	D-1C-3-B	1,628.48	Zone - 4	<Collection: 1 item>	103	1,743.87	49.9
869	D-1C-4-A	1,639.16	Zone - 4	<Collection: 1 item>	103	1,743.93	45.3
835	D-1C-4-B	1,648.76	Zone - 4	<Collection: 1 item>	103	1,743.93	41.2
841	D-1C-8	1,632.97	Zone - 4	<Collection: 1 item>	79	1,743.92	48.0
910	D-1C-9	1,627.00	Zone - 4	<Collection: 1 item>	91	1,744.02	50.6
754	FH-A1	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.38	57.3
1021	FH-A1-2	1,618.47	Zone - 4	<Collection: 0 items>	0	1,744.29	54.4
1009	FH-A1-3	1,609.45	Zone - 4	<Collection: 0 items>	0	1,744.49	58.4
1024	FH-A2-1	1,621.00	Zone - 4	<Collection: 0 items>	0	1,744.17	53.3
778	FH-A2-3	1,625.00	Zone - 4	<Collection: 0 items>	0	1,744.07	51.5
1018	FH-A2-4	1,619.38	Zone - 4	<Collection: 0 items>	0	1,744.16	54.0
1012	FH-A3	1,607.19	Zone - 4	<Collection: 0 items>	0	1,744.34	59.3
757	FH-A4	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.31	57.2
1015	FH-A4-3	1,608.46	Zone - 4	<Collection: 0 items>	0	1,744.28	58.8
1034	FH-A4-4	1,608.76	Zone - 4	<Collection: 0 items>	0	1,744.31	58.6
1030	FH-A4-6	1,613.08	Zone - 4	<Collection: 0 items>	0	1,744.26	56.8
1028	FH-A5	1,596.00	Zone - 4	<Collection: 0 items>	0	1,744.18	64.1
970	FH-A7	1,621.59	Zone - 4	<Collection: 0 items>	0	1,744.23	53.1
985	FH-A8	1,618.53	Zone - 4	<Collection: 0 items>	0	1,744.26	54.4
1169	FH-C2-1	1,621.00	Zone - 4	<Collection: 0 items>	0	1,743.79	53.1
1171	FH-C2-2	1,626.00	Zone - 4	<Collection: 0 items>	0	1,742.78	50.5
1173	FH-C2-3	1,626.50	Zone - 4	<Collection: 0 items>	0	1,741.18	49.6
1177	FH-C2-4	1,623.80	Zone - 4	<Collection: 0 items>	0	1,740.53	50.5
1181	FH-C2-5	1,627.30	Zone - 4	<Collection: 0 items>	0	1,739.68	48.6
1183	FH-C2-6	1,629.50	Zone - 4	<Collection: 1 item>	1,500	1,738.67	47.2
1187	FH-C2-7	1,628.00	Zone - 4	<Collection: 0 items>	0	1,743.32	49.9
814	FH-C3	1,627.82	Zone - 4	<Collection: 0 items>	0	1,743.87	50.2
807	FH-C3-2	1,626.64	Zone - 4	<Collection: 0 items>	0	1,744.09	50.8
832	FH-C4	1,644.28	Zone - 4	<Collection: 0 items>	0	1,743.94	43.1
839	FH-C8	1,626.14	Zone - 4	<Collection: 0 items>	0	1,743.98	51.0
912	FH-C9	1,626.65	Zone - 4	<Collection: 0 items>	0	1,744.05	50.8
988	FH-C10	1,635.38	Zone - 4	<Collection: 0 items>	0	1,743.93	47.0
1064	FUTURE CONNECTION ACROSS 101	1,596.00	Zone - 4	<Collection: 1 item>	5	1,744.21	64.1
1163	FUTURE MILLER	1,596.00	Zone - 4	<Collection: 1 item>	1	1,744.20	64.1
686	J-1	1,609.00	Zone - 4	<Collection: 0 items>	0	1,744.57	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	1,744.31	52.5
691	J-4	1,629.00	Zone - 4	<Collection: 0 items>	0	1,744.10	49.8
693	J-5	1,629.90	Zone - 4	<Collection: 0 items>	0	1,744.08	49.4
695	J-6	1,631.92	Zone - 4	<Collection: 0 items>	0	1,744.05	48.5
697	J-7	1,649.25	Zone - 4	<Collection: 0 items>	0	1,743.95	41.0
701	J-8	1,649.00	Zone - 4	<Collection: 0 items>	0	1,743.95	41.1
703	J-9	1,649.00	Zone - 4	<Collection: 0 items>	0	1,743.95	41.1
705	J-10	1,649.00	Zone - 4	<Collection: 0 items>	0	1,743.94	41.1
707	J-11	1,646.00	Zone - 4	<Collection: 0 items>	0	1,743.93	42.4
709	J-12	1,643.00	Zone - 4	<Collection: 0 items>	0	1,743.93	43.7
711	J-13	1,637.84	Zone - 4	<Collection: 0 items>	0	1,743.94	45.9
713	J-14	1,633.68	Zone - 4	<Collection: 0 items>	0	1,743.94	47.7
717	J-16	1,630.55	Zone - 4	<Collection: 0 items>	0	1,743.97	49.1
719	J-17	1,617.54	Zone - 4	<Collection: 0 items>	0	1,744.13	54.8
721	J-18	1,625.17	Zone - 4	<Collection: 0 items>	0	1,744.07	51.4
724	J-19	1,612.00	Zone - 4	<Collection: 0 items>	0	1,744.57	57.4
737	J-20	1,625.50	Zone - 4	<Collection: 0 items>	0	1,744.08	51.3
764	J-21	1,612.50	Zone - 4	<Collection: 0 items>	0	1,744.25	57.0
771	J-22	1,618.54	Zone - 4	<Collection: 0 items>	0	1,744.18	54.4
768	J-23	1,618.40	Zone - 4	<Collection: 0 items>	0	1,744.24	54.4
783	J-24	1,623.83	Zone - 4	<Collection: 0 items>	0	1,744.09	52.0
775	J-25	1,619.21	Zone - 4	<Collection: 0 items>	0	1,744.23	54.1
940	J-26	1,604.52	Zone - 4	<Collection: 0 items>	0	1,744.27	60.5
799	J-27	1,619.36	Zone - 4	<Collection: 0 items>	0	1,744.10	54.0

818	J-29	1,636.73	Zone - 4	<Collection: 0 items>	0	1,743.98	46.4
825	J-30	1,649.00	Zone - 4	<Collection: 0 items>	0	1,743.94	41.1
828	J-31	1,645.84	Zone - 4	<Collection: 0 items>	0	1,743.96	42.5
848	J-32	1,648.15	Zone - 4	<Collection: 0 items>	0	1,743.94	41.4
873	J-36	1,636.30	Zone - 4	<Collection: 0 items>	0	1,743.92	46.6
877	J-37	1,640.12	Zone - 4	<Collection: 0 items>	0	1,743.93	44.9
903	J-40	1,631.38	Zone - 4	<Collection: 0 items>	0	1,743.90	48.7
907	J-41	1,626.75	Zone - 4	<Collection: 0 items>	0	1,743.87	50.7
933	J-44	1,624.90	Zone - 4	<Collection: 0 items>	0	1,743.99	51.5
937	J-45	1,606.60	Zone - 4	<Collection: 0 items>	0	1,744.29	59.6
967	J-47	1,628.00	Zone - 4	<Collection: 0 items>	0	1,744.16	50.3
745	J-50	1,619.49	Zone - 4	<Collection: 0 items>	0	1,744.20	54.0
1037	J-51	1,637.97	Zone - 4	<Collection: 0 items>	0	1,743.91	45.8
1042	J-52	1,641.32	Zone - 4	<Collection: 0 items>	0	1,743.92	44.4
1048	J-53	1,640.08	Zone - 4	<Collection: 0 items>	0	1,743.93	44.9
1055	J-54	1,635.94	Zone - 4	<Collection: 0 items>	0	1,743.93	46.7
1059	J-55	1,633.17	Zone - 4	<Collection: 0 items>	0	1,743.93	47.9
1066	J-327	1,642.62	Zone - 4	<Collection: 0 items>	0	1,743.93	43.8
1070	J-329	1,630.95	Zone - 4	<Collection: 0 items>	0	1,743.88	48.9
1073	J-330	1,627.87	Zone - 4	<Collection: 0 items>	0	1,743.83	50.2
1083	J-336	1,639.94	Zone - 4	<Collection: 0 items>	0	1,743.92	45.0
1089	J-338	1,647.37	Zone - 4	<Collection: 0 items>	0	1,743.93	41.8
1098	J-340	1,644.85	Zone - 4	<Collection: 0 items>	0	1,743.93	42.9
1107	J-342	1,630.06	Zone - 4	<Collection: 0 items>	0	1,743.91	49.3
1139	J-351	1,635.01	Zone - 4	<Collection: 0 items>	0	1,743.91	47.1
1143	J-352	1,629.23	Zone - 4	<Collection: 0 items>	0	1,743.75	49.5
1158	J-355	1,596.58	Zone - 4	<Collection: 0 items>	0	1,744.21	63.9
1161	J-356	1,596.00	Zone - 4	<Collection: 0 items>	0	1,744.20	64.1
1167	J-358	1,624.00	Zone - 4	<Collection: 0 items>	0	1,743.79	51.8
1179	J-364	1,626.90	Zone - 4	<Collection: 0 items>	0	1,739.81	48.9
1185	J-367	1,631.00	Zone - 4	<Collection: 0 items>	0	1,743.32	48.6
1175	J-369	1,625.20	Zone - 4	<Collection: 0 items>	0	1,740.53	49.9
1193	J-370	1,637.00	Zone - 4	<Collection: 0 items>	0	1,743.91	46.3
1195	J-371	1,641.00	Zone - 4	<Collection: 0 items>	0	1,743.91	44.5
1197	J-372	1,637.00	Zone - 4	<Collection: 0 items>	0	1,743.91	46.3
1201	J-374	1,631.00	Zone - 4	<Collection: 0 items>	0	1,743.90	48.8
1203	J-375	1,634.00	Zone - 4	<Collection: 0 items>	0	1,743.90	47.6
1205	J-376	1,635.00	Zone - 4	<Collection: 0 items>	0	1,743.91	47.1
1211	J-378	1,624.42	Zone - 4	<Collection: 0 items>	0	1,743.90	51.7
976	ZD-1A-1-A	1,614.93	Zone - 4	<Collection: 1 item>	1	1,744.27	56.0
741	ZD-1A-1-B	1,606.70	Zone - 4	<Collection: 1 item>	1	1,744.40	59.6
960	ZD-1A-3-A	1,612.51	Zone - 4	<Collection: 1 item>	1	1,744.33	57.0
761	ZD-1A-4-A	1,613.33	Zone - 4	<Collection: 1 item>	1	1,744.26	56.6
750	ZD-1A-4-B	1,607.21	Zone - 4	<Collection: 1 item>	1	1,744.32	59.3
972	ZD-1A-7	1,620.59	Zone - 4	<Collection: 1 item>	1	1,744.23	53.5
735	ZD-1A-8	1,616.47	Zone - 4	<Collection: 1 item>	1	1,744.27	55.3

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	953	1.52	0.571
694	P-2	135	J-4	J-5	16.0	Ductile Iron	130.0	False	0.000	532	0.85	0.193
696	P-3	134	J-5	J-6	16.0	Ductile Iron	130.0	False	0.000	532	0.85	0.194
702	P-4	65	J-7	J-8	16.0	Ductile Iron	130.0	False	0.000	152	0.24	0.019
704	P-5	155	J-8	J-9	16.0	Ductile Iron	130.0	False	0.000	152	0.24	0.019
710	P-6	281	J-11	J-12	16.0	Ductile Iron	130.0	False	0.000	66	0.11	0.004
714	P-7	126	J-13	J-14	16.0	Ductile Iron	130.0	False	0.000	-48	0.08	0.002
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	-1,703	2.72	1.672
1008	P-13	319	R-11	J-2	48.0	Ductile Iron	130.0	False	0.000	2,657	0.47	0.000
1022	P-14	236	J-3	FH-A1-2	12.0	Ductile Iron	130.0	False	0.000	195	0.55	0.122
1010	P-15	379	ZD-1A-1-B	FH-A1-3	24.0	Ductile Iron	130.0	False	0.000	-1,703	1.21	0.232
1025	P-16	83	J-50	FH-A2-1	12.0	Ductile Iron	130.0	False	0.000	352	1.00	0.366
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	-184	0.52	0.110
763	P-20	168	ZD-1A-4-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	-289	0.82	0.255
1031	P-21	45	ZD-1A-4-A	FH-A4-6	12.0	Ductile Iron	130.0	False	0.000	128	0.36	0.055
770	P-22	306	J-23	ZD-1A-4-A	12.0	Ductile Iron	130.0	False	0.000	-160	0.45	0.085
1019	P-23	350	J-18	FH-A2-4	12.0	Ductile Iron	130.0	False	0.000	-297	0.84	0.267
773	P-24	293	J-22	J-21	12.0	Ductile Iron	130.0	False	0.000	-297	0.84	0.267
776	P-26	317	J-50	J-25	12.0	Ductile Iron	130.0	False	0.000	-160	0.45	0.085
779	P-27	244	J-18	FH-A2-3	16.0	Ductile Iron	130.0	False	0.000	-154	0.25	0.019
780	P-28	327	FH-A2-3	J-20	16.0	Ductile Iron	130.0	False	0.000	-154	0.25	0.019
785	P-31	316	J-24	J-18	16.0	Ductile Iron	130.0	False	0.000	258	0.41	0.051
800	P-35	536	J-17	J-27	16.0	Ductile Iron	130.0	False	0.000	258	0.41	0.051
801	P-36	355	J-27	J-24	16.0	Ductile Iron	130.0	False	0.000	258	0.41	0.051
808	P-41	276	J-20	FH-C3-2	16.0	Ductile Iron	130.0	False	0.000	-227	0.36	0.040
809	P-42	330	FH-C3-2	J-4	16.0	Ductile Iron	130.0	False	0.000	-227	0.36	0.040
817	P-45	210	D-1C-3-B	FH-C3	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
819	P-46	371	J-6	J-29	16.0	Ductile Iron	130.0	False	0.000	532	0.85	0.194
822	P-47	175	D-1C-3-B	D-1C-3-A	12.0	Ductile Iron	130.0	False	0.000	-103	0.29	0.038
826	P-48	331	J-9	J-30	16.0	Ductile Iron	130.0	False	0.000	152	0.24	0.019
827	P-49	219	J-30	J-10	16.0	Ductile Iron	130.0	False	0.000	152	0.24	0.019
829	P-50	316	J-29	J-31	16.0	Ductile Iron	130.0	False	0.000	319	0.51	0.075
830	P-51	268	J-31	J-7	16.0	Ductile Iron	130.0	False	0.000	152	0.24	0.019
834	P-52	148	FH-C4	J-31	12.0	Ductile Iron	130.0	False	0.000	-167	0.47	0.093
1109	P-53	388	J-342	D-1C-8	12.0	Ductile Iron	130.0	False	0.000	-81	0.23	0.024
838	P-54	534	FH-C4	D-1C-4-B	12.0	Ductile Iron	130.0	False	0.000	84	0.24	0.026
840	P-55	63	J-18	FH-C8	12.0	Ductile Iron	130.0	False	0.000	709	2.01	1.341
1108	P-56	524	FH-C8	J-342	12.0	Ductile Iron	130.0	False	0.000	216	0.61	0.148
989	P-57	328	J-29	FH-C10	12.0	Ductile Iron	130.0	False	0.000	212	0.60	0.144
845	P-58	234	D-1C-10	D-1C-3-A	12.0	Ductile Iron	130.0	False	0.000	205	0.58	0.135
1060	P-59	83	D-1C-8	J-55	12.0	Ductile Iron	130.0	False	0.000	-189	0.54	0.115
849	P-60	295	J-10	J-32	16.0	Ductile Iron	130.0	False	0.000	66	0.11	0.004
850	P-61	197	J-32	J-11	16.0	Ductile Iron	130.0	False	0.000	66	0.11	0.004
1099	P-62	232	D-1C-4-B	J-340	12.0	Ductile Iron	130.0	False	0.000	-19	0.05	0.002
1100	P-70	339	J-340	D-1C-4-A	12.0	Ductile Iron	130.0	False	0.000	28	0.08	0.004
871	P-71	583	D-1C-4-A	FH-C4	12.0	Ductile Iron	130.0	False	0.000	-83	0.24	0.025
874	P-73	240	D-1C-8	J-36	12.0	Ductile Iron	130.0	False	0.000	29	0.08	0.004
878	P-75	434	J-12	J-37	16.0	Ductile Iron	130.0	False	0.000	-48	0.08	0.002
879	P-76	264	J-37	J-13	16.0	Ductile Iron	130.0	False	0.000	-48	0.08	0.002
1144	P-77	146	J-329	J-352	12.0	Ductile Iron	130.0	False	0.000	547	1.55	0.830
1145	P-78	116	J-352	J-330	12.0	Ductile Iron	130.0	False	0.000	-494	1.40	0.686
1075	P-79	221	J-330	FH-C8	12.0	Ductile Iron	130.0	False	0.000	-494	1.40	0.686
1140	P-80	229	J-40	J-351	12.0	Ductile Iron	130.0	False	0.000	-114	0.32	0.045
1141	P-81	41	J-351	J-51	12.0	Ductile Iron	130.0	False	0.000	-114	0.32	0.044
1084	P-82	76	J-51	J-336	12.0	Ductile Iron	130.0	False	0.000	-114	0.32	0.045
1085	P-83	108	J-336	J-52	12.0	Ductile Iron	130.0	False	0.000	-114	0.32	0.045
1046	P-84	253	J-52	J-12	12.0	Ductile Iron	130.0	False	0.000	-114	0.32	0.045
1090	P-85	253	J-10	J-338	12.0	Ductile Iron	130.0	False	0.000	86	0.24	0.027
1091	P-86	151	J-338	J-327	12.0	Ductile Iron	130.0	False	0.000	39	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	137	0.39	0.063
1071	P-92	136	J-40	J-329	12.0	Ductile Iron	130.0	False	0.000	250	0.71	0.195
909	P-95	108	J-41	FH-C3	12.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
913	P-97	605	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-98	0.28	0.034
914	P-98	67	FH-C9	J-20	12.0	Ductile Iron	130.0	False	0.000	-425	1.20	0.518
915	P-99	64	D-1C-9	FH-C9	12.0	Ductile Iron	130.0	False	0.000	-327	0.93	0.320
990	P-102	396	FH-C10	D-1C-10	12.0	Ductile Iron	130.0	False	0.000	132	0.38	0.060
987	P-107	217	FH-A8	ZD-1A-7	12.0	Ductile Iron	130.0	False	0.000	193	0.55	0.120
934	P-111	533	J-16	J-44	16.0	Ductile Iron	130.0	False	0.000	-237	0.38	0.043
935	P-112	404	J-44	J-17	16.0	Ductile Iron	130.0	False	0.000	-722	1.15	0.342
1016	P-114	272	J-21	FH-A4-3	12.0	Ductile Iron	130.0	False	0.000	-169	0.48	0.094
939	P-115	235	J-45	ZD-1A-4-B	24.0	Ductile Iron	130.0	False	0.000	-1,155	0.82	0.113
941	P-116	245	J-45	J-26	24.0	Ductile Iron	130.0	False	0.000	987	0.70	0.084
961	P-127	487	FH-A1	ZD-1A-3-A	12.0	Ductile Iron	130.0	False	0.000	184	0.52	0.111
962	P-128	216	ZD-1A-3-A	FH-A4	12.0	Ductile Iron	130.0	False	0.000	183	0.52	0.109
1013	P-129	138	ZD-1A-4-B	FH-A3	24.0	Ductile Iron	130.0	False	0.000	-1,262	0.90	0.134
965	P-130	231	D-1A-3-B	ZD-1A-1-B	24.0	Ductile Iron	130.0	False	0.000	-1,518	1.08	0.188
1014	P-131	123	FH-A3	D-1A-3-B	24.0	Ductile Iron	130.0	False	0.000	-1,262	0.90	0.133
968	P-132	400	J-3	J-47	16.0	Ductile Iron	130.0	False	0.000	758	1.21	0.374
969	P-133	161	J-47	J-4	16.0	Ductile Iron	130.0	False	0.000	758	1.21	0.374
986	P-135	137	ZD-1A-8	FH-A8	12.0	Ductile Iron	130.0	False	0.000	193	0.55	0.120
974	P-136	246	ZD-1A-7	J-50	12.0	Ductile Iron	130.0	False	0.000	192	0.54	0.119
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	237	0.38	0.043
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	128	0.36	0.057
1017	P-443	125	FH-A4-3	J-45	12.0	Ductile Iron	130.0	False	0.000	-169	0.48	0.094
1027	P-443	109	J-23	J-25	12.0	Ductile Iron	130.0	False	0.000	160	0.45	0.085
1023	P-444	104	FH-A1-2	ZD-1A-8	12.0	Ductile Iron	130.0	False	0.000	195	0.55	0.123
1026	P-445	246	FH-A2-1	J-20	12.0	Ductile Iron	130.0	False	0.000	352	1.00	0.367
1011	P-446	352	FH-A1-3	J-19	24.0	Ductile Iron	130.0	False	0.000	-1,703	1.21	0.232
1020	P-447	51	FH-A2-4	J-22	12.0	Ductile Iron	130.0	False	0.000	-297	0.84	0.270
1068	P-449	141	J-327	J-53	12.0	Ductile Iron	130.0	False	0.000	39	0.11	0.006
1058	P-453	148	J-54	J-53	12.0	Ductile Iron	130.0	False	0.000	-47	0.13	0.009
1062	P-454	306	J-54	J-55	12.0	Ductile Iron	130.0	False	0.000	19	0.05	0.002
1063	P-455	296	D-1C-9	J-55	12.0	Ductile Iron	130.0	False	0.000	334	0.95	0.332
1159	P-456	678	J-26	J-355	24.0	Ductile Iron	130.0	False	0.000	987	0.70	0.085
1082	P-458	265	J-36	J-54	12.0	Ductile Iron	130.0	False	0.000	-108	0.31	0.041

1101	P-462	69	J-338	J-340	12.0	Ductile Iron	130.0	False	0.000	47	0.13	0.009
1110	P-465	121	J-329	J-342	12.0	Ductile Iron	130.0	False	0.000	-297	0.84	0.267
1162	P-480	114	J-355	J-356	24.0	Ductile Iron	130.0	False	0.000	982	0.70	0.083
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	981	0.70	0.083
1035	P-483	102	ZD-1A-4-B	FH-A4-4	12.0	Ductile Iron	130.0	False	0.000	106	0.30	0.039
1212	P-483(1)	140	J-44	J-378	12.0	Ductile Iron	130.0	False	0.000	486	1.38	0.666
1213	P-483(2)	125	J-378	J-358	12.0	Ductile Iron	130.0	False	0.000	549	1.56	0.835
1036	P-484	215	FH-A4-4	FH-A4	12.0	Ductile Iron	130.0	False	0.000	106	0.30	0.040
1170	P-484	182	J-358	FH-C2-1	6.0	Ductile Iron	130.0	False	0.000	0	0.00	0.000
1061	P-485	189	J-55	D-1C-10	12.0	Ductile Iron	130.0	False	0.000	164	0.47	0.089
1172	P-485	169	J-358	FH-C2-2	8.0	Ductile Iron	130.0	False	0.000	549	3.51	6.019
1050	P-486	45	J-53	D-1C-4-A	12.0	Ductile Iron	130.0	False	0.000	-8	0.02	0.000
1174	P-486	265	FH-C2-2	FH-C2-3	8.0	Ductile Iron	130.0	False	0.000	549	3.51	6.019
1191	P-487	13	FH-C2-3	D-1C-2	8.0	Ductile Iron	130.0	False	0.000	549	3.51	6.018
1192	P-487(2)	133	D-1C-2	J-369	8.0	Ductile Iron	130.0	False	0.000	459	2.93	4.326
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	-80	0.23	0.024
1180	P-489	165	J-369	J-364	8.0	Ductile Iron	130.0	False	0.000	459	2.93	4.325
1182	P-490	30	J-364	FH-C2-5	8.0	Ductile Iron	130.0	False	0.000	459	2.93	4.324
1184	P-491	235	FH-C2-5	FH-C2-6	8.0	Ductile Iron	130.0	False	0.000	459	2.93	4.325
1186	P-492	236	FH-C2-6	J-367	8.0	Ductile Iron	130.0	False	0.000	-1,041	6.64	19.664
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	-1,041	2.95	2.729
1194	P-495	195	J-14	J-370	12.0	Ductile Iron	130.0	False	0.000	189	0.54	0.115
1196	P-496	642	J-370	J-371	12.0	Ductile Iron	130.0	False	0.000	39	0.11	0.006
1198	P-497	425	J-371	J-372	12.0	Ductile Iron	130.0	False	0.000	39	0.11	0.006
1200	P-498	813	J-372	D-1C-1	12.0	Ductile Iron	130.0	False	0.000	39	0.11	0.006
1202	P-499	561	D-1C-1	J-374	12.0	Ductile Iron	130.0	False	0.000	10	0.03	0.000
1204	P-500	240	J-374	J-375	12.0	Ductile Iron	130.0	False	0.000	-54	0.15	0.011
1206	P-501	557	J-375	J-376	12.0	Ductile Iron	130.0	False	0.000	-54	0.15	0.011
1207	P-502	41	J-376	J-370	12.0	Ductile Iron	130.0	False	0.000	-150	0.42	0.075
1208	P-503	267	J-376	D-1C-1	12.0	Ductile Iron	130.0	False	0.000	96	0.27	0.033
1214	P-505	119	J-374	J-378	12.0	Ductile Iron	130.0	False	0.000	63	0.18	0.015

P:\2018\18114\Design-Reports\18114-750\Water\Preliminary\Sub 2\Model\18114-750 Water Model Sub 2.wtg

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	2,657	1,744.60

P:\2018\18114\Design-Reports\18114-750\Water\Preliminary\Sub 2\Model\18114-750 Water Model Sub 2.wtg

Appendix G
Static Pressure Junction Results
Toll at Cavasson

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	1,631.00	Zone - 4	<Collection: 0 items>	0	1,744.60	49.1
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
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
1195	J-371	1,641.00	Zone - 4	<Collection: 0 items>	0	1,744.60	44.8
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
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

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\18114-750\Water\Preliminary\Sub 2\Model\18114-750 Water Model Sub 2.wtg

Appendix H
Plumbing Fixture Calculations
Toll at Cavasson

harris & sloan

toll free 800.877.1430
www.harrisandsloan.com

Structural
Mechanical
Electrical
Plumbing
Energy

Cavasson for Toll Brothers

to be constructed in Scottsdale, AZ

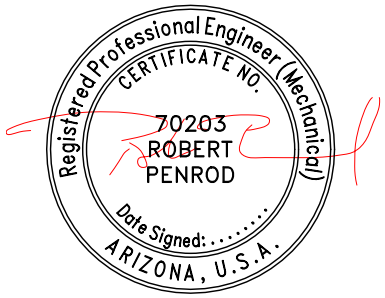
Plumbing Calculations per 2021 IRC

Harris & Sloan Job # HS24279

harris & sloan

Cavasson for
Harris & Sloan Job # HS24279, by LC
September 18, 2024

Building Water Use Summary										
			Fixture Counts by Building Type							
Fixture	Max Flow (gpm)	WSFU/ Fixture	1x-4	1x-1-3	1x-1-4	1x-2-4	1x-2-1-3	4-1-3	4-2-1-3	Site Total
Water Closet	3.0	2.5	8	12	12	12	16	12	16	544
LAV	1.2	1.0	12	18	18	18	24	18	24	816
Shower	2.0	2.0	6	9	9	9	12	9	12	408
TUB/SH	5.5	4.0	2	3	3	3	4	3	4	136
Clothes Washer	3.5	4.0	2	3	3	3	4	3	4	136
SINK	2.2	1.5	4	6	6	6	8	6	8	272
Dishwasher	1.3	1.5	2	3	3	3	4	3	4	136
Ice Maker	1.0	0.5	2	3	3	3	4	3	4	136
Hose Bib	2.0	2.5	2	3	3	3	4	3	4	136
Total WSFUs			75	113	113	113	150	113	150	5,100
Total Demand (gpm)			14.8	15.6	15.6	15.6	16.4	15.6	16.4	250.0



EXPIRES 12-31-2025

Exhibits
Toll at Cavasson

LOT 4
[ASLD]

LOT *3*
[ASLD]

J-16
49.3 psi

J-14
48.0 psi

J-13
46.2 psi

J-37
45.2 psi

J-12
43.9 psi

J-371
44.8 psi

J-376
47.4 psi

J-370
46.5 psi

J-375
47.8 psi

1C-1

D-1C-1
49.1 psi
63 gpm

J-372
46.5 psi

J-374
49.1 psi

J-378
52.0 psi

J-44
51.8 psi

FH-C2-2
51.3 psi

D-1C-2
51.1 psi
45 gpm

FH-C2-6
49.8 psi

J-367
49.1 psi

FH-C2-3
51.1 psi

FH-C2-5
50.7 psi

J-358
52.2 psi

1C-2

J-369
51.6 psi

J-364
50.9 psi

FH-C2-4
52.2 psi

FH-C2-1
53.5 psi

FH-C2-7
50.4 psi

J-330
50.5 psi

1C-8

J-352
49.9 psi

J-342
49.5 psi

D-1C-8
40 gpm
48.3 psi

J-55
48.2 psi

1C-5

J-52
44.7 psi

J-336
45.3 psi

J-51
46.1 psi

1C-6

J-351
47.4 psi

J-36
46.8 psi

J-329
49.2 psi

J-40
49.0 psi

FH-C8
51.2 psi

1C-9

D-1C-9
45 gpm
50.9 psi

1C-3

J-41
51.0 p

FH-C
50.5 p

J-27
54.2 psi

J-24
52.2 psi

J-18
51.7 psi

FH-A2-3
51.7 psi

FH-C9
51.0 psi

J-20
51.5 psi

J-17
55.0 psi

1B-2

1A-5

1A-2

FH-A2-4
54.2 psi

J-25
54.2 psi

FH-A2-1
53.5 psi

J-22
54.5 psi

0 gpm

J-50
54.1 psi

1A-7

FH-A5
64.3 psi

0 gpm

J-23
54.6 psi

FH-A1
53.2 p

1B-3

Color Coding Legend
Pipe: Diameter (in)

<= 6.0
<= 8.0
<= 12.0
<= 16.0
<= 24.0
Other

N

80 0 80 160 feet

HUBBARD ENGINEERING
1201 S. Alma School Rd.
Suite 12000
Mesa, AZ 85210
PH: 480.892.3513
www.hubbardengineering.com

AVERAGE DAY DEMAND SITE SPECIFIC WATER SYSTEM MAP

Date	Project Eng.
09/20/2024	T. WOLF
Project No.	Project Mgr.
18114-750	T. WOLF

SHT: 01 OF 01
EXHIBIT 1

HUBBARD ENGINEERING
1201 S. Alma School Rd.
Suite 12000
Mesa, AZ 85210
Ph: 480.892.3313
www.hubbardengineering.com

AVERAGE DAY DEMAND WATER SYSTEM MAP

Date	Project Eng.
09/20/2024	T. WOLF
Project No.	Project Mgr.
18114-750	T. WOLF

SHT: 01 OF 01

EXHIBIT 2

HUBBARD ENGINEERING
1201 S. Alma School Rd.
Suite 12000
Mesa, AZ 85210
Ph: 480.892.3313
www.hubbardengineering.com

MAX DAY DEMAND WATER SYSTEM MAP

Date	Project Eng.
09/20/2024	T. WOLF
Project No.	Project Mgr.
18114-750	T. WOLF

SHT: 01 OF 01

EXHIBIT 3

HUBBARD ENGINEERING
1201 S. Alma School Rd.
Suite 12000
Mesa, AZ 85210
PH: 480.892.3513
www.hubbardengineering.com

PEAK HOUR DEMAND
WATER SYSTEM MAP

Date	Project Eng.
09/20/2024	T. WOLF
Project No.	Project Mgr.
18114-750	T. WOLF

SHT: 01 OF 01

EXHIBIT 4

HUBBARD ENGINEERING
1201 S. Alma School Rd.
Suite 12000
Mesa, AZ 85210
Ph: 480.892.3313
www.hubbardengineering.com

MAX DAY PLUS FIRE FLOW WATER SYSTEM MAP

Date	Project Eng.
09/20/2024	T. WOLF
Project No.	Project Mgr.
18114-750	T. WOLF

SHT: 01 OF 01

EXHIBIT 5

PHASE 1 PRIVATE STREET LIMITS

PHASE 1 TEMPORARY STABILIZED FIRE ACCESS PATH

PHASE 1 LIMITS

PHASE 2 LIMITS

PHASE 3 LIMITS

NOTE: ALL PUBLIC WATER MAIN WILL BE CONSTRUCTED AS PART OF PHASE 1 INCLUDING SITE WATER METER, BACKFLOW, AND BOOSTER PUMP

NOTE: DOMESTIC WATER LINE AFTER THE BOOSTER PUMP WILL BE CONSTRUCTED AS NEEDED TO ENSURE ADEQUATE PRESSURES IN EACH UNIT CONSTRUCTED

NOTE: ALL UNDERGROUND RETENTION WILL BE CONSTRUCTED AS PART OF PHASE 1
THE SITE WILL BE MASS GRADED TO DIRECT RUNOFF TO THE UNDERGROUND RETENTION TANK INLETS

NOTE: PRIVATE SEWER MAIN WILL BE PHASED AS NOTED BELOW

NOTE: TRASH COMPACTOR WILL BE INSTALLED AS PART OF PHASE 1 OF THE DEVELOPMENT

Provide 20' easement, DSPM 6-1.419

All service connections within development shall be conneted to private water main downstream from the master meter, booster pump, and RPP BFP (not shown on this phasing plan)

Meter vault per DSPM 6-1.416. Extend easement to include meter and meter vault.

PRIVATE BOOSTER PUMP ENCLOSURE AND MASTER METER/RPP BACKFLOW TO BE CONSTRUCTED WITH PHASE 1

SEWER TO BE CONSTRUCTED WITH PHASE 2

Diameter = 8" min

Landscape meter?

PROPOSED VEHICULAR GATE EQUIPPED WITH KNOX BOX AND PREEMPTION SENSOR WITH PHASE 1

Shutoff valve and valve on public main required per DSPM 6-1.416.

PROPOSED VEHICULAR GATE EQUIPPED WITH KNOX BOX AND PREEMPTION SENSOR WITH PHASE 3

EXISTING DRIVEWAY TO BE USED FOR FIRE ACCESS UNTIL PHASE 3 CONSTRUCTION

SALES OFFICE WITH PHASE 1

SEWER TO BE CONSTRUCTED WITH PHASE 1

SEWER TO BE CONSTRUCTED WITH PHASE 2

SEWER TO BE CONSTRUCTED WITH PHASE 3

TEMPORARY PARKING FOR PHASE 1 TOWNHOUSES CONSTRUCTED AS PART OF PHASE 3

TEMPORARY FIRE TURNAROUND HAMMERHEAD

CONNECTION TO EXISTING SEWER WITH PHASE 1

MILLER ROAD

CAVASSON BLVD.

CLARET DRIVE

N

50 0 50 100
scale feet

HUBBARD ENGINEERING
1201 S. Alma School Rd.
Suite 12000
Mesa, AZ 85210
Ph: 480.892.3313
www.hubbardengineering.com

PHASING PLAN

TOLL AT CAVASSON - PRELIMINARY

A PORTION OF SECTION 26, TOWNSHIP 4 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA

Date	Project Eng.
09/20/2024	M. WOLF
Project No.	Project Mgr.
18114-750	T. WOLF

NOT FOR CONSTRUCTION
PRELIMINARY
OR RECORDING
BID AT RISK

811
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