# CAVASSON

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

Final

# ~~PRELIMINARY~~ WATER REPORT – VI AT CAVASSON
# BASIS OF DESIGN

September 16, 2021

Project No.: 18114-701

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 scan DATE 10/28/2021


PREPARED FOR:
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HUBBARD ENGINEERING

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## EXHIBITS

# 1. INTRODUCTION

## 1.1 Project Scope

Final

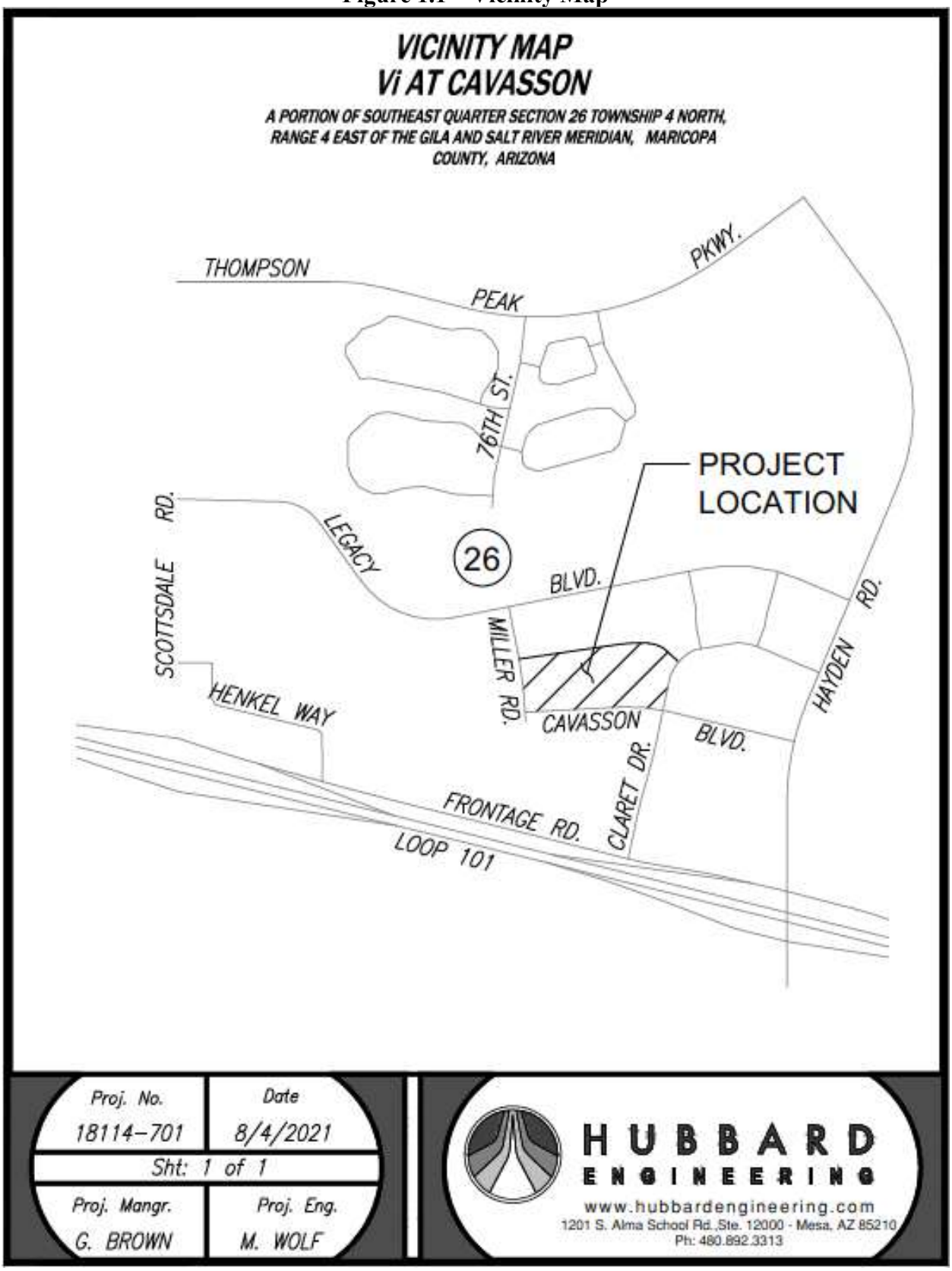
This report presents the results of a ~~*Preliminary*~~ *Water Study* conducted by Hubbard Engineering at the request of Orcutt | Winslow ("client"), for Vi at Cavasson development ("site"). The purpose of this report is to provide an evaluation of the proposed distribution system for the site. This 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 Phase 3 Update* and original *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 site is currently undeveloped, and prior to Nationwide Realty Investor's acquisition, 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 Vi at Cavasson development is located in the Northwest corner of the overall Crossroads East development, near the Cavasson Boulevard and Miller Road intersection. The land naturally falls from northeast to southwest.

The project site is bounded by undeveloped desert to the north, Claret Road to the east, North Miller Road to the west, and Legacy Boulevard to the south. 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. Vi at Cavasson will include construction of a new senior living facility with 320 total dwelling units over the 11.3-acre site in multiple buildings. Improvements will also include surrounding access drives, parking, and extending existing private utility stubs to service the building.

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 Vi at Cavasson.

### 1.4 Regulatory Requirements

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

- City of Scottsdale, *Design Standards & Policies Manual*.
- Arizona Department of Environmental Quality (ADEQ), *Aquifer Protection Permit (APP) Program.*
- Maricopa Association of Governments (MAG), *Uniform Standard Specifications and Details for Public Works Construction, 2016 Edition.*
- *2018 Edition of the International Fire Code.*
- *2015 Edition of the International Plumbing Code.*
- Hubbard Engineering, *Master Water Report for Cavasson, February 14, 2019.*
- 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 water system for Vi at Cavasson will include connections to an existing 12" water line stub off of Miller Road, 12" water line stub off of Claret Road, and connecting to an existing 12" water stub off of Cavasson Boulevard.

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*.

Vi at Cavasson will include construction of multiple new residential buildings with 320 total dwelling units and the largest building having a square footage of approximately 480,000± square feet. Improvements will include surrounding access drives and utilities through the property to provide domestic water, fire, and sewer services to the proposed building. The building construction type will be type VA and it will be equipped with an automatic sprinkler system (NFPA13) per the 2018 International Fire Code.

### 2.3 Right of Way and Easements

The proposed water lines will be within 20-foot public water easements.

## 3. DESIGN FLOWS AND BASIS OF DESIGN

### 3.1 Average Daily Demands

In accordance with the *City of Scottsdale Design Standards & Policies Manual Chapter 6* Section 6-1.205 (Reference 1), the design unit water demand for multi-family residential is 0.33 gallons per minute per dwelling unit.

The total service area tributary to the proposed water main consists of 320 dwelling units.

Thus, the total Average Daily Demand is:

*(0.33 gpm/DU) x (320 dwelling units)* **= 105.6 gpm**

This demand matches the demand in the *Cavasson Master Water Report Phase 3 Update*. Note, actual unit counts are slightly lower, but we have maintained the unit counts documented in the Approved Master Report for the preliminary.

### 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** below.

*Table 1: Water and Fire Demand Calculation Summary*

| Land Use | Dwelling Units | 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 | 320 | 0.33 | 105.6 | 211.2 | 369.6 | 2,000 | 2,211.2 |

## 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.

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 results of these fire flow test are included in **Appendix A – Fire Flow Test Results**.

### 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 8,000 gpm for 4 hours is based on a 480,000 sq. ft. building, per City of Scottsdale Fire Code, with 75% reduction Minimum Fire Flow of 2,000 gpm will be used due to NFPA 13 sprinkler system.

### 4.3 Minimum Pipe Sizing

The proposed water main line will be 12-inch diameter, the proposed fire lines to the buildings will be 8-inch diameter. The proposed domestic lines will be 3-inch diameter.

### 4.4 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 planned future Average Daily Demand for development is 105.6 gpm. This conforms to the Master Study.
- The planned future Maximum Daily Demand for the development is 211.2 gpm. This conforms to the Master Study.
- The planned future Peak Hour Demand for the development is 369.6 gpm. This conforms to the Master Study.
- The required fire flow is 2,000 gpm.
- Based on the results of the water model, the Cavasson development system can maintain a flow of 2,020 gallons per minute at a pressure of 48 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 2016.
7. International Code Council. *2015 International Fire Code.*
8. International Code Council. *2015 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, February 14, 2019.*
12. Hubbard Engineering, *Master Water Report for Cavasson, Phase 3 Update, May 21, 2021.*

**Appendix A**
Average Day Demand
*Vi 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) | Pressure (Calculated Residual) (psi) |
|---|---|---|---|---|---|---|---|---|
| 686 | J-1 | 1,609.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.78 | 66 | (N/A) |
| 687 | J-2 | 1,612.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.80 | 64 | (N/A) |
| 689 | J-3 | 1,623.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.65 | 60 | (N/A) |
| 691 | J-4 | 1,629.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.59 | 57 | (N/A) |
| 693 | J-5 | 1,629.90 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.58 | 57 | (N/A) |
| 695 | J-6 | 1,631.92 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.58 | 56 | (N/A) |
| 697 | J-7 | 1,649.25 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.57 | 48 | (N/A) |
| 701 | J-8 | 1,649.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.57 | 48 | (N/A) |
| 703 | J-9 | 1,649.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 48 | (N/A) |
| 705 | J-10 | 1,649.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 48 | (N/A) |
| 707 | J-11 | 1,646.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 50 | (N/A) |
| 709 | J-12 | 1,643.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 51 | (N/A) |
| 711 | J-13 | 1,637.84 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 53 | (N/A) |
| 713 | J-14 | 1,633.68 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 55 | (N/A) |
| 717 | J-16 | 1,630.55 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 56 | (N/A) |
| 719 | J-17 | 1,617.54 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 62 | (N/A) |
| 721 | J-18 | 1,625.17 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 59 | (N/A) |
| 724 | J-19 | 1,612.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.78 | 64 | (N/A) |
| 735 | D-1A-8 | 1,616.47 | Zone - 4 | <Collection: 1 item> | 25 | 1,760.56 | 62 | (N/A) |
| 737 | J-20 | 1,625.50 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 58 | (N/A) |
| 741 | D-1A-1-B | 1,606.70 | Zone - 4 | <Collection: 1 item> | 188 | 1,760.66 | 67 | (N/A) |
| 745 | J-50 | 1,619.49 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 61 | (N/A) |
| 750 | D-1A-4-B | 1,607.21 | Zone - 4 | <Collection: 1 item> | 69 | 1,760.62 | 66 | (N/A) |
| 754 | FH-A1 | 1,612.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.65 | 64 | (N/A) |
| 757 | FH-A4 | 1,612.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.60 | 64 | (N/A) |
| 761 | D-1A-4-A | 1,613.33 | Zone - 4 | <Collection: 1 item> | 69 | 1,760.57 | 64 | (N/A) |
| 764 | J-21 | 1,612.50 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.57 | 64 | (N/A) |
| 768 | D-1A-5 | 1,618.40 | Zone - 4 | <Collection: 1 item> | 81 | 1,760.56 | 62 | (N/A) |
| 771 | J-22 | 1,618.54 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 61 | (N/A) |
| 775 | D-1A-2 | 1,619.21 | Zone - 4 | <Collection: 1 item> | 42 | 1,760.56 | 61 | (N/A) |
| 778 | FH-A2-3 | 1,625.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 59 | (N/A) |
| 783 | J-24 | 1,623.83 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 59 | (N/A) |
| 787 | J-25 | 1,622.54 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 60 | (N/A) |
| 790 | J-26 | 1,617.86 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 62 | (N/A) |
| 794 | FH-B2 | 1,617.09 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 62 | (N/A) |
| 797 | D-1B-2-B | 1,617.90 | Zone - 4 | <Collection: 1 item> | 54 | 1,760.56 | 62 | (N/A) |
| 799 | J-27 | 1,619.36 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 61 | (N/A) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 803 | J-48 | 1,621.39 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 60 | (N/A) |
| 807 | FH-C3-2 | 1,626.64 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.57 | 58 | (N/A) |
| 818 | J-29 | 1,636.73 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.57 | 54 | (N/A) |
| 825 | J-30 | 1,649.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 48 | (N/A) |
| 828 | J-31 | 1,645.84 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.57 | 50 | (N/A) |
| 839 | FH-C8 | 1,626.14 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 58 | (N/A) |
| 848 | J-32 | 1,648.15 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 49 | (N/A) |
| 851 | J-33 | 1,647.28 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 49 | (N/A) |
| 853 | D-1C-5-B | 1,643.51 | Zone - 4 | <Collection: 1 item> | 46 | 1,760.56 | 51 | (N/A) |
| 855 | FH-C5 | 1,646.19 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 49 | (N/A) |
| 873 | J-36 | 1,636.30 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 54 | (N/A) |
| 877 | J-37 | 1,640.12 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 52 | (N/A) |
| 889 | D-1C-5-A | 1,641.50 | Zone - 4 | <Collection: 1 item> | 46 | 1,760.56 | 52 | (N/A) |
| 895 | FH-C1-D | 1,632.44 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.53 | 55 | (N/A) |
| 903 | J-40 | 1,631.38 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 56 | (N/A) |
| 910 | D-1C-9 | 1,627.00 | Zone - 4 | <Collection: 1 item> | 45 | 1,760.56 | 58 | (N/A) |
| 912 | FH-C9 | 1,626.65 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 58 | (N/A) |
| 916 | D-1C-2-B | 1,622.25 | Zone - 4 | <Collection: 1 item> | 53 | 1,760.55 | 60 | (N/A) |
| 920 | D-1C-1-A | 1,630.50 | Zone - 4 | <Collection: 1 item> | 66 | 1,760.52 | 56 | (N/A) |
| 922 | J-600 | 1,634.90 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 54 | (N/A) |
| 924 | J-42 | 1,631.50 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 56 | (N/A) |
| 926 | J-381 | 1,624.74 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 59 | (N/A) |
| 933 | J-44 | 1,624.90 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 59 | (N/A) |
| 937 | J-45 | 1,606.60 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.61 | 67 | (N/A) |
| 940 | D-1B-1-A | 1,604.52 | Zone - 4 | <Collection: 1 item> | 169 | 1,760.61 | 68 | (N/A) |
| 942 | D-1B-1-C | 1,610.26 | Zone - 4 | <Collection: 1 item> | 169 | 1,760.56 | 65 | (N/A) |
| 944 | FH-B1 | 1,610.90 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 65 | (N/A) |
| 946 | D-1B-1-B | 1,610.50 | Zone - 4 | <Collection: 1 item> | 169 | 1,760.57 | 65 | (N/A) |
| 951 | D-1B-2-A | 1,616.50 | Zone - 4 | <Collection: 1 item> | 54 | 1,760.56 | 62 | (N/A) |
| 956 | J-46 | 1,614.37 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 63 | (N/A) |
| 960 | D-1A-3-A | 1,612.51 | Zone - 4 | <Collection: 1 item> | 131 | 1,760.60 | 64 | (N/A) |
| 963 | D-1A-3-B | 1,607.18 | Zone - 4 | <Collection: 1 item> | 131 | 1,760.64 | 66 | (N/A) |
| 967 | J-47 | 1,628.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.60 | 57 | (N/A) |
| 970 | FH-A7 | 1,621.59 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 60 | (N/A) |
| 972 | D-1A-7 | 1,620.59 | Zone - 4 | <Collection: 1 item> | 149 | 1,760.55 | 61 | (N/A) |
| 976 | D-1A-1-A | 1,614.93 | Zone - 4 | <Collection: 1 item> | 188 | 1,760.55 | 63 | (N/A) |
| 985 | FH-A8 | 1,618.53 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 61 | (N/A) |
| 988 | FH-C10 | 1,635.38 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.57 | 54 | (N/A) |
| 1004 | J-49 | 1,612.04 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.57 | 64 | (N/A) |
| 1009 | FH-A1-3 | 1,609.45 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.72 | 65 | (N/A) |
| 1012 | FH-A3 | 1,607.19 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.63 | 66 | (N/A) |
| 1015 | FH-A4-3 | 1,608.46 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.60 | 66 | (N/A) |
| 1018 | FH-A2-4 | 1,619.38 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 61 | (N/A) |
| 1021 | FH-A1-2 | 1,618.47 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.59 | 61 | (N/A) |
| 1024 | FH-A2-1 | 1,621.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 60 | (N/A) |
| 1028 | FH-A5 | 1,596.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 71 | (N/A) |
| 1030 | FH-A4-6 | 1,613.08 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.57 | 64 | (N/A) |
| 1034 | FH-A4-4 | 1,608.76 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.61 | 66 | (N/A) |
| 1037 | J-51 | 1,637.97 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 53 | (N/A) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | J-52 | 1,641.32 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 52 | (N/A) |
| 1048 | J-53 | 1,640.08 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 52 | (N/A) |
| 1055 | J-54 | 1,635.94 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 54 | (N/A) |
| 1059 | J-55 | 1,633.17 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 55 | (N/A) |
| 1064 | FUTURE CONNECTION ACROSS 101 | 1,596.00 | Zone - 4 | <Collection: 1 item> | 5 | 1,760.61 | 71 | (N/A) |
| 1066 | J-327 | 1,642.62 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 51 | (N/A) |
| 1070 | J-329 | 1,630.95 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 56 | (N/A) |
| 1073 | J-330 | 1,627.87 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 57 | (N/A) |
| 1083 | J-336 | 1,639.94 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 52 | (N/A) |
| 1086 | J-337 | 1,645.41 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 50 | (N/A) |
| 1089 | J-338 | 1,647.37 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 49 | (N/A) |
| 1102 | FH-C2-B | 1,626.84 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 58 | (N/A) |
| 1111 | J-343 | 1,596.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.54 | 71 | (N/A) |
| 1118 | J-601 | 1,622.88 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.54 | 60 | (N/A) |
| 1121 | FH-C2-C | 1,624.26 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 59 | (N/A) |
| 1124 | J-346 | 1,624.60 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 59 | (N/A) |
| 1128 | D-1C-2-A | 1,630.25 | Zone - 4 | <Collection: 1 item> | 53 | 1,760.55 | 56 | (N/A) |
| 1132 | D-1C-1-B | 1,610.52 | Zone - 4 | <Collection: 1 item> | 66 | 1,760.53 | 65 | (N/A) |
| 1135 | FH-C2-A | 1,623.86 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 59 | (N/A) |
| 1139 | J-351 | 1,635.01 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 54 | (N/A) |
| 1143 | J-352 | 1,629.23 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 57 | (N/A) |
| 1147 | J-353 | 1,633.87 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 55 | (N/A) |
| 1150 | FH -C1-E | 1,596.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 71 | (N/A) |
| 1152 | J-355 | 1,634.18 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 55 | (N/A) |
| 1156 | FH-C1-L | 1,632.81 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 55 | (N/A) |
| 1159 | FH-C1-C | 1,627.92 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.54 | 57 | (N/A) |
| 1162 | FH-C1-K | 1,615.47 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.53 | 63 | (N/A) |
| 1165 | FH-C1-J | 1,608.97 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.53 | 66 | (N/A) |
| 1168 | FH-C1-I | 1,603.12 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.53 | 68 | (N/A) |
| 1171 | FH-C1-B | 1,616.08 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 63 | (N/A) |
| 1174 | FC-C1-H | 1,605.61 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.53 | 67 | (N/A) |
| 1177 | FH-C1-G | 1,623.82 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.52 | 59 | (N/A) |
| 1180 | FH-C1-A | 1,634.63 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 54 | (N/A) |
| 1183 | FH-C1-F | 1,634.02 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.54 | 55 | (N/A) |
| 1187 | FH-C2-G | 1,596.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 71 | (N/A) |
| 1189 | FH-C2-F | 1,629.82 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.56 | 57 | (N/A) |
| 1192 | FH-C2-D | 1,626.58 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 58 | (N/A) |
| 1195 | FH-C2-E | 1,628.51 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.55 | 57 | (N/A) |

**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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 726 | P-11 | 20 | J-19 | J-2 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -1,387 | 2.21 | 1.141 |
| 690 | P-1 | 500 | J-2 | J-3 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 679 | 1.08 | 0.305 |
| 1010 | P-15 | 379 | D-1A-1-B | FH-A1-3 | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -1,387 | 0.98 | 0.159 |
| 1011 | P-446 | 352 | FH-A1-3 | J-19 | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -1,387 | 0.98 | 0.159 |
| 1022 | P-14 | 236 | J-3 | FH-A1-2 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 291 | 0.82 | 0.257 |
| 1023 | P-444 | 104 | FH-A1-2 | D-1A-8 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 291 | 0.82 | 0.257 |
| 965 | P-130 | 231 | D-1A-3-B | D-1A-1-B | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -1,020 | 0.72 | 0.090 |
| 1013 | P-129 | 138 | D-1A-4-B | FH-A3 | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -889 | 0.63 | 0.070 |
| 1014 | P-131 | 123 | FH-A3 | D-1A-3-B | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -889 | 0.63 | 0.069 |
| 968 | P-132 | 400 | J-3 | J-47 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 389 | 0.62 | 0.108 |
| 969 | P-133 | 161 | J-47 | J-4 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 389 | 0.62 | 0.108 |
| 763 | P-20 | 168 | D-1A-4-A | FH-A4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -207 | 0.59 | 0.136 |
| 955 | P-123 | 347 | D-1B-1-B | D-1B-1-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -197 | 0.56 | 0.125 |
| 977 | P-17 | 120 | D-1A-8 | D-1A-1-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 188 | 0.53 | 0.115 |
| 756 | P-18 | 119 | FH-A1 | D-1A-1-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -179 | 0.51 | 0.104 |
| 961 | P-127 | 487 | FH-A1 | D-1A-3-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 179 | 0.51 | 0.105 |
| 1016 | P-114 | 272 | J-21 | FH-A4-3 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -176 | 0.50 | 0.101 |
| 1017 | P-443 | 125 | FH-A4-3 | J-45 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -176 | 0.50 | 0.102 |
| 939 | P-115 | 235 | J-45 | D-1A-4-B | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -661 | 0.47 | 0.040 |
| 1035 | P-483 | 102 | D-1A-4-B | FH-A4-4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 159 | 0.45 | 0.083 |
| 1036 | P-484 | 215 | FH-A4-4 | FH-A4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 159 | 0.45 | 0.084 |
| 1172 | P-466(1) | 49 | J-381 | FH-C1-B | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 60 | 0.39 | 0.101 |
| 1173 | P-466(2) | 117 | FH-C1-B | J-343 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 60 | 0.39 | 0.102 |
| 1008 | P-13 | 319 | R-11 | J-2 | 48.0 | Ductile Iron | 130.0 | False | 0.000 | 2,066 | 0.37 | 0.000 |
| 808 | P-41 | 276 | J-20 | FH-C3-2 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -220 | 0.35 | 0.038 |
| 809 | P-42 | 330 | FH-C3-2 | J-4 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -220 | 0.35 | 0.038 |
| 941 | P-116 | 126 | J-45 | D-1B-1-A | 24.0 | Ductile Iron | 130.0 | False | 0.000 | 485 | 0.34 | 0.023 |
| 770 | P-22 | 306 | D-1A-5 | D-1A-4-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -120 | 0.34 | 0.050 |
| 943 | P-117 | 1,126 | D-1B-1-A | D-1B-1-C | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 115 | 0.33 | 0.046 |
| 1007 | P-439 | 166 | J-21 | J-49 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 98 | 0.28 | 0.035 |
| 773 | P-24 | 293 | J-22 | J-21 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -96 | 0.27 | 0.033 |
| 694 | P-2 | 135 | J-4 | J-5 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 168 | 0.27 | 0.023 |
| 696 | P-3 | 134 | J-5 | J-6 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 168 | 0.27 | 0.023 |
| 819 | P-46 | 371 | J-6 | J-29 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 168 | 0.27 | 0.023 |
| 932 | P-110 | 204 | J-42 | J-14 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -38 | 0.24 | 0.043 |
| 1160 | P-206 | 117 | J-601 | FH-C1-C | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -36 | 0.23 | 0.040 |
| 1161 | P-207 | 82 | FH-C1-C | J-42 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -36 | 0.23 | 0.039 |
| 1163 | P-204 | 111 | D-1C-1-B | FH-C1-K | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -36 | 0.23 | 0.038 |
| 1164 | P-205 | 161 | FH-C1-K | J-601 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -36 | 0.23 | 0.039 |
| 930 | P-108 | 183 | D-1C-1-A | FH-C1-D | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -36 | 0.23 | 0.039 |
| 1184 | P-469(1) | 289 | FH-C1-D | FH-C1-F | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -36 | 0.23 | 0.039 |
| 1185 | P-469(2) | 176 | FH-C1-F | J-600 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -36 | 0.23 | 0.039 |
| 986 | P-135 | 137 | D-1A-8 | FH-A8 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 78 | 0.22 | 0.022 |
| 987 | P-107 | 217 | FH-A8 | D-1A-7 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 78 | 0.22 | 0.022 |
| 1114 | P-468 | 289 | J-600 | J-51 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -34 | 0.22 | 0.035 |
| 1025 | P-16 | 83 | J-50 | FH-A2-1 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -74 | 0.21 | 0.020 |
| 1026 | P-445 | 246 | FH-A2-1 | J-20 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -74 | 0.21 | 0.020 |
| 1006 | P-200 | 265 | J-49 | D-1B-2-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 73 | 0.21 | 0.020 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 974 | P-136 | 246 | D-1A-7 | J-50 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -72 | 0.20 | 0.019 |
| 1175 | P-470(1) | 206 | J-343 | FC-C1-H | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 30 | 0.19 | 0.028 |
| 1178 | P-208 | 247 | FC-C1-H | FH-C1-G | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 30 | 0.19 | 0.028 |
| 1179 | P-209 | 110 | FH-C1-G | D-1C-1-A | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 30 | 0.19 | 0.028 |
| 989 | P-57 | 328 | J-29 | FH-C10 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 68 | 0.19 | 0.017 |
| 1057 | P-489 | 266 | J-54 | FH-C10 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -68 | 0.19 | 0.017 |
| 1167 | P-203 | 35 | FH-C1-J | D-1C-1-B | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 30 | 0.19 | 0.028 |
| 1169 | P-201 | 157 | J-343 | FH-C1-I | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 30 | 0.19 | 0.028 |
| 1170 | P-202 | 131 | FH-C1-I | FH-C1-J | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 30 | 0.19 | 0.027 |
| 1092 | P-459 | 78 | J-337 | J-338 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -68 | 0.19 | 0.017 |
| 1186 | P-478 | 73 | D-1C-2-B | J-27 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -67 | 0.19 | 0.017 |
| 914 | P-98 | 67 | FH-C9 | J-20 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -61 | 0.17 | 0.014 |
| 702 | P-4 | 65 | J-7 | J-8 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 100 | 0.16 | 0.009 |
| 704 | P-5 | 155 | J-8 | J-9 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 100 | 0.16 | 0.009 |
| 826 | P-48 | 331 | J-9 | J-30 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 100 | 0.16 | 0.009 |
| 827 | P-49 | 219 | J-30 | J-10 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 100 | 0.16 | 0.009 |
| 829 | P-50 | 316 | J-29 | J-31 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 100 | 0.16 | 0.009 |
| 830 | P-51 | 268 | J-31 | J-7 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 100 | 0.16 | 0.009 |
| 791 | P-33 | 103 | J-22 | J-26 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 55 | 0.16 | 0.012 |
| 945 | P-118 | 316 | D-1B-1-C | FH-B1 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -53 | 0.15 | 0.011 |
| 947 | P-119 | 416 | FH-B1 | D-1B-1-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -53 | 0.15 | 0.011 |
| 1190 | P-475(1) | 148 | D-1C-2-A | FH-C2-F | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -51 | 0.14 | 0.011 |
| 1191 | P-475(2) | 203 | FH-C2-F | J-352 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -51 | 0.14 | 0.010 |
| 936 | P-113 | 149 | J-381 | J-44 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -48 | 0.14 | 0.009 |
| 962 | P-128 | 216 | D-1A-3-A | FH-A4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 48 | 0.14 | 0.009 |
| 785 | P-31 | 316 | J-24 | J-18 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -85 | 0.14 | 0.007 |
| 801 | P-36 | 355 | J-27 | J-24 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -85 | 0.14 | 0.007 |
| 779 | P-27 | 244 | J-18 | FH-A2-3 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -85 | 0.14 | 0.006 |
| 780 | P-28 | 327 | FH-A2-3 | J-20 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -85 | 0.14 | 0.006 |
| 915 | P-99 | 64 | D-1C-9 | FH-C9 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -47 | 0.13 | 0.009 |
| 904 | P-91 | 225 | J-36 | J-40 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 46 | 0.13 | 0.008 |
| 1082 | P-458 | 265 | J-36 | J-54 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -46 | 0.13 | 0.009 |
| 1088 | P-63 | 250 | J-337 | D-1C-5-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 44 | 0.13 | 0.008 |
| 793 | P-34 | 444 | J-25 | J-26 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -42 | 0.12 | 0.007 |
| 805 | P-39 | 153 | J-48 | J-25 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -42 | 0.12 | 0.007 |
| 806 | P-40 | 206 | D-1B-2-B | J-48 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -42 | 0.12 | 0.007 |
| 1019 | P-23 | 350 | J-18 | FH-A2-4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -42 | 0.12 | 0.007 |
| 1020 | P-447 | 51 | FH-A2-4 | J-22 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -42 | 0.12 | 0.007 |
| 840 | P-55 | 63 | J-18 | FH-C8 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 42 | 0.12 | 0.008 |
| 1075 | P-85 | 221 | J-330 | FH-C8 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -42 | 0.12 | 0.007 |
| 1145 | P-84 | 116 | J-352 | J-330 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -42 | 0.12 | 0.006 |
| 710 | P-6 | 281 | J-11 | J-12 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 70 | 0.11 | 0.004 |
| 849 | P-60 | 295 | J-10 | J-32 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 70 | 0.11 | 0.005 |
| 850 | P-61 | 197 | J-32 | J-11 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 70 | 0.11 | 0.005 |
| 1027 | P-443 | 109 | D-1A-5 | D-1A-2 | 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 | 38 | 0.11 | 0.006 |
| 1068 | P-449(2) | 141 | J-327 | J-53 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -38 | 0.11 | 0.006 |
| 1091 | P-449 | 151 | J-338 | J-327 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -38 | 0.11 | 0.006 |
| 1140 | P-444(1) | 229 | J-40 | J-351 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 37 | 0.10 | 0.006 |
| 1141 | P-444(2) | 41 | J-351 | J-51 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 37 | 0.10 | 0.003 |
| 953 | P-121 | 279 | D-1B-2-A | FH-B2 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 32 | 0.09 | 0.004 |
| 957 | P-124 | 461 | FH-B2 | J-46 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 32 | 0.09 | 0.004 |
| 958 | P-125 | 639 | J-46 | D-1B-2-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 31 | 0.09 | 0.004 |
| 1090 | P-448 | 253 | J-10 | J-338 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 30 | 0.09 | 0.004 |
| 714 | P-7 | 126 | J-13 | J-14 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 49 | 0.08 | 0.003 |
| 878 | P-75 | 434 | J-12 | J-37 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 49 | 0.08 | 0.002 |
| 879 | P-76 | 264 | J-37 | J-13 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 49 | 0.08 | 0.002 |
| 1005 | P-122 | 92 | D-1B-1-B | J-49 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -25 | 0.07 | 0.003 |
| 1044 | P-487 | 78 | J-52 | D-1C-5-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 24 | 0.07 | 0.002 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | P-64 | 136 | FH-C5 | J-33 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -24 | 0.07 | 0.002 |
| 891 | P-83 | 336 | D-1C-5-A | FH-C5 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -24 | 0.07 | 0.003 |
| 1087 | P-62 | 327 | J-33 | J-337 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -24 | 0.07 | 0.003 |
| 1046 | P-447 | 253 | J-52 | J-12 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -22 | 0.06 | 0.002 |
| 800 | P-35 | 536 | J-17 | J-27 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -38 | 0.06 | 0.001 |
| 935 | P-112 | 404 | J-44 | J-17 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -38 | 0.06 | 0.002 |
| 802 | P-37 | 86 | D-1B-2-B | J-27 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 19 | 0.05 | 0.001 |
| 1031 | P-21 | 45 | D-1A-4-A | FH-A4-6 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 19 | 0.05 | 0.003 |
| 1032 | P-442 | 105 | FH-A4-6 | J-21 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 19 | 0.05 | 0.001 |
| 1062 | P-454 | 237 | J-54 | J-55 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -16 | 0.04 | 0.001 |
| 1063 | P-455 | 358 | D-1C-9 | J-55 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 16 | 0.04 | 0.001 |
| 913 | P-97 | 604 | D-1C-9 | FH-C9 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -14 | 0.04 | 0.001 |
| 1122 | P-100 | 257 | D-1C-2-B | FH-C2-C | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 14 | 0.04 | 0.001 |
| 1123 | P-101 | 358 | FH-C2-C | FH-C2-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 14 | 0.04 | 0.001 |
| 1129 | P-471(1) | 229 | FH-C2-B | D-1C-2-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 14 | 0.04 | 0.001 |
| 952 | P-120 | 114 | J-26 | D-1B-2-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 12 | 0.04 | 0.001 |
| 1125 | P-106 | 23 | J-381 | J-346 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -12 | 0.04 | 0.000 |
| 1194 | P-473(2) | 309 | FH-C2-D | J-346 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 12 | 0.04 | 0.001 |
| 1196 | P-473(1)(1) | 271 | D-1C-2-A | FH-C2-E | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 12 | 0.04 | 0.000 |
| 1197 | P-473(1)(2) | 299 | FH-C2-E | FH-C2-D | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 12 | 0.04 | 0.001 |
| 1071 | P-80 | 136 | J-40 | J-329 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 10 | 0.03 | 0.001 |
| 1144 | P-81 | 146 | J-329 | J-352 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 10 | 0.03 | 0.000 |
| 934 | P-111 | 533 | J-16 | J-44 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 10 | 0.02 | 0.000 |
| 1001 | P-438 | 777 | J-16 | J-14 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -10 | 0.02 | 0.000 |
| 1157 | P-86 | 221 | J-353 | FH-C1-L | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -2 | 0.01 | 0.000 |
| 1158 | P-87 | 276 | FH-C1-L | J-42 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -2 | 0.01 | 0.000 |
| 1181 | P-102 | 50 | J-600 | FH-C1-A | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -2 | 0.01 | 0.000 |
| 1182 | P-103 | 84 | FH-C1-A | J-355 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -2 | 0.01 | 0.000 |
| 776 | P-26 | 317 | J-50 | D-1A-2 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 3 | 0.01 | 0.000 |
| 1154 | P-104 | 66 | J-355 | J-353 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -1 | 0.01 | 0.000 |
| 1084 | P-446(1) | 76 | J-51 | J-336 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 2 | 0.01 | 0.000 |
| 1085 | P-446(2) | 108 | J-336 | J-52 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 2 | 0.01 | 0.001 |
| 890 | P-82 | 417 | D-1C-5-B | D-1C-5-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -2 | 0.01 | 0.000 |
| 1151 | P-476 | 86 | J-353 | FH -C1-E | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 1 | 0.00 | 0.000 |
| 1155 | P-477 | 478 | FH -C1-E | J-355 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 1 | 0.00 | 0.000 |
| 1065 | P-456 | 992 | D-1B-1-A | FUTURE CONNECTION ACROSS 101 | 24.0 | Ductile Iron | 130.0 | False | 0.000 | 5 | 0.00 | 0.000 |
| 959 | P-126 | 340 | D-1B-1-C | J-46 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |
| 975 | P-137 | 24 | FH-A7 | D-1A-7 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |
| 1029 | P-441 | 121 | J-22 | FH-A5 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |
| 725 | P-10 | 181 | J-1 | J-19 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |
| 1136 | P-89 | 248 | J-346 | FH-C2-A | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |
| 1188 | P-479 | 120 | D-1C-2-B | FH-C2-G | 6.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |

**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 | 1,760.80 | Zone - 4 | 2,066 | 1,760.80 |

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**Appendix B**
Max Day Demand
*Vi 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) | Pressure (Calculated Residual) (psi) |
|---|---|---|---|---|---|---|---|---|
| 686 | J-1 | 1,609.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.72 | 66 | (N/A) |
| 687 | J-2 | 1,612.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.80 | 64 | (N/A) |
| 689 | J-3 | 1,623.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.25 | 59 | (N/A) |
| 691 | J-4 | 1,629.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.03 | 57 | (N/A) |
| 693 | J-5 | 1,629.90 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.02 | 56 | (N/A) |
| 695 | J-6 | 1,631.92 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.01 | 55 | (N/A) |
| 697 | J-7 | 1,649.25 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.96 | 48 | (N/A) |
| 701 | J-8 | 1,649.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.96 | 48 | (N/A) |
| 703 | J-9 | 1,649.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.95 | 48 | (N/A) |
| 705 | J-10 | 1,649.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 48 | (N/A) |
| 707 | J-11 | 1,646.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 49 | (N/A) |
| 709 | J-12 | 1,643.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 51 | (N/A) |
| 711 | J-13 | 1,637.84 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 53 | (N/A) |
| 713 | J-14 | 1,633.68 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 55 | (N/A) |
| 717 | J-16 | 1,630.55 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 56 | (N/A) |
| 719 | J-17 | 1,617.54 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 62 | (N/A) |
| 721 | J-18 | 1,625.17 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 58 | (N/A) |
| 724 | J-19 | 1,612.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.72 | 64 | (N/A) |
| 735 | D-1A-8 | 1,616.47 | Zone - 4 | <Collection: 1 item> | 51 | 1,759.94 | 62 | (N/A) |
| 737 | J-20 | 1,625.50 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.95 | 58 | (N/A) |
| 741 | D-1A-1-B | 1,606.70 | Zone - 4 | <Collection: 1 item> | 375 | 1,760.30 | 66 | (N/A) |
| 745 | J-50 | 1,619.49 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 61 | (N/A) |
| 750 | D-1A-4-B | 1,607.21 | Zone - 4 | <Collection: 1 item> | 137 | 1,760.16 | 66 | (N/A) |
| 754 | FH-A1 | 1,612.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.26 | 64 | (N/A) |
| 757 | FH-A4 | 1,612.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.06 | 64 | (N/A) |
| 761 | D-1A-4-A | 1,613.33 | Zone - 4 | <Collection: 1 item> | 137 | 1,759.98 | 63 | (N/A) |
| 764 | J-21 | 1,612.50 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.98 | 64 | (N/A) |
| 768 | D-1A-5 | 1,618.40 | Zone - 4 | <Collection: 1 item> | 161 | 1,759.93 | 61 | (N/A) |
| 771 | J-22 | 1,618.54 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.95 | 61 | (N/A) |
| 775 | D-1A-2 | 1,619.21 | Zone - 4 | <Collection: 1 item> | 83 | 1,759.92 | 61 | (N/A) |
| 778 | FH-A2-3 | 1,625.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 58 | (N/A) |
| 783 | J-24 | 1,623.83 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 59 | (N/A) |
| 787 | J-25 | 1,622.54 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 59 | (N/A) |
| 790 | J-26 | 1,617.86 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 61 | (N/A) |
| 794 | FH-B2 | 1,617.09 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 62 | (N/A) |
| 797 | D-1B-2-B | 1,617.90 | Zone - 4 | <Collection: 1 item> | 108 | 1,759.92 | 61 | (N/A) |
| 799 | J-27 | 1,619.36 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 61 | (N/A) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 803 | J-48 | 1,621.39 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 60 | (N/A) |
| 807 | FH-C3-2 | 1,626.64 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.99 | 58 | (N/A) |
| 818 | J-29 | 1,636.73 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.98 | 53 | (N/A) |
| 825 | J-30 | 1,649.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 48 | (N/A) |
| 828 | J-31 | 1,645.84 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.97 | 49 | (N/A) |
| 839 | FH-C8 | 1,626.14 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 58 | (N/A) |
| 848 | J-32 | 1,648.15 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 48 | (N/A) |
| 851 | J-33 | 1,647.28 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 49 | (N/A) |
| 853 | D-1C-5-B | 1,643.51 | Zone - 4 | <Collection: 1 item> | 92 | 1,759.92 | 50 | (N/A) |
| 855 | FH-C5 | 1,646.19 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 49 | (N/A) |
| 873 | J-36 | 1,636.30 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 53 | (N/A) |
| 877 | J-37 | 1,640.12 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 52 | (N/A) |
| 889 | D-1C-5-A | 1,641.50 | Zone - 4 | <Collection: 1 item> | 92 | 1,759.92 | 51 | (N/A) |
| 895 | FH-C1-D | 1,632.44 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.82 | 55 | (N/A) |
| 903 | J-40 | 1,631.38 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 56 | (N/A) |
| 910 | D-1C-9 | 1,627.00 | Zone - 4 | <Collection: 1 item> | 91 | 1,759.94 | 58 | (N/A) |
| 912 | FH-C9 | 1,626.65 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 58 | (N/A) |
| 916 | D-1C-2-B | 1,622.25 | Zone - 4 | <Collection: 1 item> | 106 | 1,759.91 | 60 | (N/A) |
| 920 | D-1C-1-A | 1,630.50 | Zone - 4 | <Collection: 1 item> | 133 | 1,759.79 | 56 | (N/A) |
| 922 | J-600 | 1,634.90 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.88 | 54 | (N/A) |
| 924 | J-42 | 1,631.50 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.88 | 56 | (N/A) |
| 926 | J-381 | 1,624.74 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 58 | (N/A) |
| 933 | J-44 | 1,624.90 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 58 | (N/A) |
| 937 | J-45 | 1,606.60 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.13 | 66 | (N/A) |
| 940 | D-1B-1-A | 1,604.52 | Zone - 4 | <Collection: 1 item> | 337 | 1,760.12 | 67 | (N/A) |
| 942 | D-1B-1-C | 1,610.26 | Zone - 4 | <Collection: 1 item> | 337 | 1,759.93 | 65 | (N/A) |
| 944 | FH-B1 | 1,610.90 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 64 | (N/A) |
| 946 | D-1B-1-B | 1,610.50 | Zone - 4 | <Collection: 1 item> | 337 | 1,759.96 | 65 | (N/A) |
| 951 | D-1B-2-A | 1,616.50 | Zone - 4 | <Collection: 1 item> | 108 | 1,759.94 | 62 | (N/A) |
| 956 | J-46 | 1,614.37 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 63 | (N/A) |
| 960 | D-1A-3-A | 1,612.51 | Zone - 4 | <Collection: 1 item> | 262 | 1,760.07 | 64 | (N/A) |
| 963 | D-1A-3-B | 1,607.18 | Zone - 4 | <Collection: 1 item> | 262 | 1,760.23 | 66 | (N/A) |
| 967 | J-47 | 1,628.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.09 | 57 | (N/A) |
| 970 | FH-A7 | 1,621.59 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 60 | (N/A) |
| 972 | D-1A-7 | 1,620.59 | Zone - 4 | <Collection: 1 item> | 299 | 1,759.91 | 60 | (N/A) |
| 976 | D-1A-1-A | 1,614.93 | Zone - 4 | <Collection: 1 item> | 375 | 1,759.89 | 63 | (N/A) |
| 985 | FH-A8 | 1,618.53 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 61 | (N/A) |
| 988 | FH-C10 | 1,635.38 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.96 | 54 | (N/A) |
| 1004 | J-49 | 1,612.04 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.96 | 64 | (N/A) |
| 1009 | FH-A1-3 | 1,609.45 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.52 | 65 | (N/A) |
| 1012 | FH-A3 | 1,607.19 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.20 | 66 | (N/A) |
| 1015 | FH-A4-3 | 1,608.46 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.08 | 66 | (N/A) |
| 1018 | FH-A2-4 | 1,619.38 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 61 | (N/A) |
| 1021 | FH-A1-2 | 1,618.47 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.03 | 61 | (N/A) |
| 1024 | FH-A2-1 | 1,621.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 60 | (N/A) |
| 1028 | FH-A5 | 1,596.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.95 | 71 | (N/A) |
| 1030 | FH-A4-6 | 1,613.08 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.98 | 64 | (N/A) |
| 1034 | FH-A4-4 | 1,608.76 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.13 | 65 | (N/A) |
| 1037 | J-51 | 1,637.97 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 53 | (N/A) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | J-52 | 1,641.32 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 51 | (N/A) |
| 1048 | J-53 | 1,640.08 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 52 | (N/A) |
| 1055 | J-54 | 1,635.94 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 54 | (N/A) |
| 1059 | J-55 | 1,633.17 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 55 | (N/A) |
| 1064 | FUTURE CONNECTION ACROSS 101 | 1,596.00 | Zone - 4 | <Collection: 1 item> | 5 | 1,760.12 | 71 | (N/A) |
| 1066 | J-327 | 1,642.62 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 51 | (N/A) |
| 1070 | J-329 | 1,630.95 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 56 | (N/A) |
| 1073 | J-330 | 1,627.87 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 57 | (N/A) |
| 1083 | J-336 | 1,639.94 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 52 | (N/A) |
| 1086 | J-337 | 1,645.41 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 50 | (N/A) |
| 1089 | J-338 | 1,647.37 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 49 | (N/A) |
| 1102 | FH-C2-B | 1,626.84 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 58 | (N/A) |
| 1111 | J-343 | 1,596.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.85 | 71 | (N/A) |
| 1118 | J-601 | 1,622.88 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.86 | 59 | (N/A) |
| 1121 | FH-C2-C | 1,624.26 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 59 | (N/A) |
| 1124 | J-346 | 1,624.60 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 59 | (N/A) |
| 1128 | D-1C-2-A | 1,630.25 | Zone - 4 | <Collection: 1 item> | 106 | 1,759.91 | 56 | (N/A) |
| 1132 | D-1C-1-B | 1,610.52 | Zone - 4 | <Collection: 1 item> | 133 | 1,759.82 | 65 | (N/A) |
| 1135 | FH-C2-A | 1,623.86 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 59 | (N/A) |
| 1139 | J-351 | 1,635.01 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 54 | (N/A) |
| 1143 | J-352 | 1,629.23 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 57 | (N/A) |
| 1147 | J-353 | 1,633.87 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.88 | 55 | (N/A) |
| 1150 | FH -C1-E | 1,596.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.88 | 71 | (N/A) |
| 1152 | J-355 | 1,634.18 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.88 | 54 | (N/A) |
| 1156 | FH-C1-L | 1,632.81 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.88 | 55 | (N/A) |
| 1159 | FH-C1-C | 1,627.92 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.87 | 57 | (N/A) |
| 1162 | FH-C1-K | 1,615.47 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.83 | 62 | (N/A) |
| 1165 | FH-C1-J | 1,608.97 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.82 | 65 | (N/A) |
| 1168 | FH-C1-I | 1,603.12 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.83 | 68 | (N/A) |
| 1171 | FH-C1-B | 1,616.08 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.89 | 62 | (N/A) |
| 1174 | FC-C1-H | 1,605.61 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.83 | 67 | (N/A) |
| 1177 | FH-C1-G | 1,623.82 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.80 | 59 | (N/A) |
| 1180 | FH-C1-A | 1,634.63 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.88 | 54 | (N/A) |
| 1183 | FH-C1-F | 1,634.02 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.86 | 54 | (N/A) |
| 1187 | FH-C2-G | 1,596.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 71 | (N/A) |
| 1189 | FH-C2-F | 1,629.82 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 56 | (N/A) |
| 1192 | FH-C2-D | 1,626.58 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 58 | (N/A) |
| 1195 | FH-C2-E | 1,628.51 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 57 | (N/A) |

**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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 726 | P-11 | 20 | J-19 | J-2 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -2,770 | 4.42 | 4.122 |
| 690 | P-1 | 500 | J-2 | J-3 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 1,357 | 2.17 | 1.099 |
| 1010 | P-15 | 379 | D-1A-1-B | FH-A1-3 | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -2,770 | 1.96 | 0.571 |
| 1011 | P-446 | 352 | FH-A1-3 | J-19 | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -2,770 | 1.96 | 0.571 |
| 1022 | P-14 | 236 | J-3 | FH-A1-2 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 581 | 1.65 | 0.927 |
| 1023 | P-444 | 104 | FH-A1-2 | D-1A-8 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 581 | 1.65 | 0.928 |
| 965 | P-130 | 231 | D-1A-3-B | D-1A-1-B | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -2,036 | 1.44 | 0.323 |
| 1013 | P-129 | 138 | D-1A-4-B | FH-A3 | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -1,774 | 1.26 | 0.250 |
| 1014 | P-131 | 123 | FH-A3 | D-1A-3-B | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -1,774 | 1.26 | 0.251 |
| 968 | P-132 | 400 | J-3 | J-47 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 776 | 1.24 | 0.391 |
| 969 | P-133 | 161 | J-47 | J-4 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 776 | 1.24 | 0.390 |
| 763 | P-20 | 168 | D-1A-4-A | FH-A4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -413 | 1.17 | 0.493 |
| 955 | P-123 | 347 | D-1B-1-B | D-1B-1-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -395 | 1.12 | 0.453 |
| 977 | P-17 | 120 | D-1A-8 | D-1A-1-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 375 | 1.06 | 0.412 |
| 756 | P-18 | 119 | FH-A1 | D-1A-1-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -358 | 1.02 | 0.377 |
| 961 | P-127 | 487 | FH-A1 | D-1A-3-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 358 | 1.02 | 0.378 |
| 1016 | P-114 | 272 | J-21 | FH-A4-3 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -353 | 1.00 | 0.368 |
| 1017 | P-443 | 125 | FH-A4-3 | J-45 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -353 | 1.00 | 0.368 |
| 939 | P-115 | 235 | J-45 | D-1A-4-B | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -1,319 | 0.94 | 0.145 |
| 1035 | P-483 | 102 | D-1A-4-B | FH-A4-4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 318 | 0.90 | 0.304 |
| 1036 | P-484 | 215 | FH-A4-4 | FH-A4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 318 | 0.90 | 0.303 |
| 1172 | P-466(1) | 49 | J-381 | FH-C1-B | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 121 | 0.77 | 0.364 |
| 1173 | P-466(2) | 117 | FH-C1-B | J-343 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 121 | 0.77 | 0.364 |
| 1008 | P-13 | 319 | R-11 | J-2 | 48.0 | Ductile Iron | 130.0 | False | 0.000 | 4,127 | 0.73 | 0.000 |
| 808 | P-41 | 276 | J-20 | FH-C3-2 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -440 | 0.70 | 0.136 |
| 809 | P-42 | 330 | FH-C3-2 | J-4 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -440 | 0.70 | 0.136 |
| 941 | P-116 | 126 | J-45 | D-1B-1-A | 24.0 | Ductile Iron | 130.0 | False | 0.000 | 966 | 0.69 | 0.081 |
| 770 | P-22 | 306 | D-1A-5 | D-1A-4-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -239 | 0.68 | 0.180 |
| 943 | P-117 | 1,126 | D-1B-1-A | D-1B-1-C | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 230 | 0.65 | 0.166 |
| 1007 | P-439 | 166 | J-21 | J-49 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 197 | 0.56 | 0.125 |
| 773 | P-24 | 293 | J-22 | J-21 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -193 | 0.55 | 0.120 |
| 694 | P-2 | 135 | J-4 | J-5 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 337 | 0.54 | 0.083 |
| 696 | P-3 | 134 | J-5 | J-6 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 337 | 0.54 | 0.084 |
| 819 | P-46 | 371 | J-6 | J-29 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 337 | 0.54 | 0.083 |
| 932 | P-110 | 204 | J-42 | J-14 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -76 | 0.49 | 0.155 |
| 1160 | P-206 | 117 | J-601 | FH-C1-C | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -72 | 0.46 | 0.141 |
| 1161 | P-207 | 82 | FH-C1-C | J-42 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -72 | 0.46 | 0.142 |
| 1163 | P-204 | 111 | D-1C-1-B | FH-C1-K | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -72 | 0.46 | 0.141 |
| 1164 | P-205 | 161 | FH-C1-K | J-601 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -72 | 0.46 | 0.142 |
| 930 | P-108 | 183 | D-1C-1-A | FH-C1-D | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -72 | 0.46 | 0.140 |
| 1184 | P-469(1) | 289 | FH-C1-D | FH-C1-F | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -72 | 0.46 | 0.140 |
| 1185 | P-469(2) | 176 | FH-C1-F | J-600 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -72 | 0.46 | 0.140 |
| 986 | P-135 | 137 | D-1A-8 | FH-A8 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 155 | 0.44 | 0.080 |
| 987 | P-107 | 217 | FH-A8 | D-1A-7 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 155 | 0.44 | 0.080 |
| 1114 | P-468 | 289 | J-600 | J-51 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -68 | 0.44 | 0.127 |
| 1025 | P-16 | 83 | J-50 | FH-A2-1 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -148 | 0.42 | 0.073 |
| 1026 | P-445 | 246 | FH-A2-1 | J-20 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -148 | 0.42 | 0.074 |
| 1006 | P-200 | 265 | J-49 | D-1B-2-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 147 | 0.42 | 0.073 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 974 | P-136 | 246 | D-1A-7 | J-50 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -144 | 0.41 | 0.070 |
| 1175 | P-470(1) | 206 | J-343 | FC-C1-H | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 61 | 0.39 | 0.102 |
| 1178 | P-208 | 247 | FC-C1-H | FH-C1-G | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 61 | 0.39 | 0.101 |
| 1179 | P-209 | 110 | FH-C1-G | D-1C-1-A | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 61 | 0.39 | 0.102 |
| 989 | P-57 | 328 | J-29 | FH-C10 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 136 | 0.39 | 0.063 |
| 1057 | P-489 | 266 | J-54 | FH-C10 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -136 | 0.39 | 0.063 |
| 1167 | P-203 | 35 | FH-C1-J | D-1C-1-B | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 60 | 0.38 | 0.099 |
| 1169 | P-201 | 157 | J-343 | FH-C1-I | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 60 | 0.38 | 0.100 |
| 1170 | P-202 | 131 | FH-C1-I | FH-C1-J | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 60 | 0.38 | 0.100 |
| 1092 | P-459 | 78 | J-337 | J-338 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -135 | 0.38 | 0.062 |
| 1186 | P-478 | 73 | D-1C-2-B | J-27 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -134 | 0.38 | 0.062 |
| 914 | P-98 | 67 | FH-C9 | J-20 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -122 | 0.35 | 0.052 |
| 702 | P-4 | 65 | J-7 | J-8 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 201 | 0.32 | 0.032 |
| 704 | P-5 | 155 | J-8 | J-9 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 201 | 0.32 | 0.032 |
| 826 | P-48 | 331 | J-9 | J-30 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 201 | 0.32 | 0.032 |
| 827 | P-49 | 219 | J-30 | J-10 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 201 | 0.32 | 0.032 |
| 829 | P-50 | 316 | J-29 | J-31 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 201 | 0.32 | 0.032 |
| 830 | P-51 | 268 | J-31 | J-7 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 201 | 0.32 | 0.031 |
| 791 | P-33 | 103 | J-22 | J-26 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 109 | 0.31 | 0.043 |
| 945 | P-118 | 316 | D-1B-1-C | FH-B1 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -107 | 0.30 | 0.041 |
| 947 | P-119 | 416 | FH-B1 | D-1B-1-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -107 | 0.30 | 0.040 |
| 1190 | P-475(1) | 148 | D-1C-2-A | FH-C2-F | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -102 | 0.29 | 0.036 |
| 1191 | P-475(2) | 203 | FH-C2-F | J-352 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -102 | 0.29 | 0.037 |
| 936 | P-113 | 149 | J-381 | J-44 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -96 | 0.27 | 0.033 |
| 962 | P-128 | 216 | D-1A-3-A | FH-A4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 96 | 0.27 | 0.033 |
| 785 | P-31 | 316 | J-24 | J-18 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -170 | 0.27 | 0.024 |
| 801 | P-36 | 355 | J-27 | J-24 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -170 | 0.27 | 0.023 |
| 779 | P-27 | 244 | J-18 | FH-A2-3 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -169 | 0.27 | 0.023 |
| 780 | P-28 | 327 | FH-A2-3 | J-20 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -169 | 0.27 | 0.024 |
| 915 | P-99 | 64 | D-1C-9 | FH-C9 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -94 | 0.27 | 0.030 |
| 904 | P-91 | 225 | J-36 | J-40 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 92 | 0.26 | 0.030 |
| 1082 | P-458 | 265 | J-36 | J-54 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -92 | 0.26 | 0.031 |
| 1088 | P-63 | 250 | J-337 | D-1C-5-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 88 | 0.25 | 0.028 |
| 793 | P-34 | 444 | J-25 | J-26 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -85 | 0.24 | 0.026 |
| 805 | P-39 | 153 | J-48 | J-25 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -85 | 0.24 | 0.026 |
| 806 | P-40 | 206 | D-1B-2-B | J-48 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -85 | 0.24 | 0.026 |
| 1019 | P-23 | 350 | J-18 | FH-A2-4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -84 | 0.24 | 0.025 |
| 1020 | P-447 | 51 | FH-A2-4 | J-22 | 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 | 83 | 0.24 | 0.025 |
| 1075 | P-85 | 221 | J-330 | FH-C8 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -83 | 0.24 | 0.025 |
| 1145 | P-84 | 116 | J-352 | J-330 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -83 | 0.24 | 0.025 |
| 710 | P-6 | 281 | J-11 | J-12 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 141 | 0.22 | 0.017 |
| 849 | P-60 | 295 | J-10 | J-32 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 141 | 0.22 | 0.017 |
| 850 | P-61 | 197 | J-32 | J-11 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 141 | 0.22 | 0.017 |
| 1027 | P-443 | 109 | D-1A-5 | D-1A-2 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 78 | 0.22 | 0.023 |
| 1058 | P-453 | 148 | J-54 | J-53 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 75 | 0.21 | 0.022 |
| 1068 | P-449(2) | 141 | J-327 | J-53 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -75 | 0.21 | 0.021 |
| 1091 | P-449 | 151 | J-338 | J-327 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -75 | 0.21 | 0.021 |
| 1140 | P-444(1) | 229 | J-40 | J-351 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 73 | 0.21 | 0.020 |
| 1141 | P-444(2) | 41 | J-351 | J-51 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 73 | 0.21 | 0.018 |
| 953 | P-121 | 279 | D-1B-2-A | FH-B2 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 63 | 0.18 | 0.015 |
| 957 | P-124 | 461 | FH-B2 | J-46 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 63 | 0.18 | 0.015 |
| 958 | P-125 | 639 | J-46 | D-1B-2-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 63 | 0.18 | 0.015 |
| 1090 | P-448 | 253 | J-10 | J-338 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 60 | 0.17 | 0.014 |
| 714 | P-7 | 126 | J-13 | J-14 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 97 | 0.15 | 0.009 |
| 878 | P-75 | 434 | J-12 | J-37 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 97 | 0.15 | 0.008 |
| 879 | P-76 | 264 | J-37 | J-13 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 97 | 0.15 | 0.008 |
| 1005 | P-122 | 92 | D-1B-1-B | J-49 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -50 | 0.14 | 0.009 |
| 1044 | P-487 | 78 | J-52 | D-1C-5-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 48 | 0.14 | 0.009 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | P-64 | 136 | FH-C5 | J-33 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -47 | 0.13 | 0.008 |
| 891 | P-83 | 336 | D-1C-5-A | FH-C5 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -47 | 0.13 | 0.009 |
| 1087 | P-62 | 327 | J-33 | J-337 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -47 | 0.13 | 0.009 |
| 1046 | P-447 | 253 | J-52 | J-12 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -44 | 0.12 | 0.008 |
| 800 | P-35 | 536 | J-17 | J-27 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -75 | 0.12 | 0.005 |
| 935 | P-112 | 404 | J-44 | J-17 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -75 | 0.12 | 0.005 |
| 802 | P-37 | 86 | D-1B-2-B | J-27 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 39 | 0.11 | 0.007 |
| 1031 | P-21 | 45 | D-1A-4-A | FH-A4-6 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 37 | 0.10 | 0.005 |
| 1032 | P-442 | 105 | FH-A4-6 | J-21 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 37 | 0.10 | 0.006 |
| 1062 | P-454 | 237 | J-54 | J-55 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -31 | 0.09 | 0.004 |
| 1063 | P-455 | 358 | D-1C-9 | J-55 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 31 | 0.09 | 0.004 |
| 1122 | P-100 | 257 | D-1C-2-B | FH-C2-C | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 28 | 0.08 | 0.003 |
| 1123 | P-101 | 358 | FH-C2-C | FH-C2-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 28 | 0.08 | 0.003 |
| 1129 | P-471(1) | 229 | FH-C2-B | D-1C-2-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 28 | 0.08 | 0.003 |
| 913 | P-97 | 604 | D-1C-9 | FH-C9 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -28 | 0.08 | 0.003 |
| 1194 | P-473(2) | 309 | FH-C2-D | J-346 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 25 | 0.07 | 0.003 |
| 1196 | P-473(1)(1) | 271 | D-1C-2-A | FH-C2-E | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 25 | 0.07 | 0.003 |
| 1197 | P-473(1)(2) | 299 | FH-C2-E | FH-C2-D | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 25 | 0.07 | 0.003 |
| 1125 | P-106 | 23 | J-381 | J-346 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -25 | 0.07 | 0.000 |
| 952 | P-120 | 114 | J-26 | D-1B-2-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 24 | 0.07 | 0.002 |
| 1071 | P-80 | 136 | J-40 | J-329 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 19 | 0.05 | 0.002 |
| 1144 | P-81 | 146 | J-329 | J-352 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 19 | 0.05 | 0.002 |
| 934 | P-111 | 533 | J-16 | J-44 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 21 | 0.03 | 0.000 |
| 1001 | P-438 | 777 | J-16 | J-14 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -21 | 0.03 | 0.000 |
| 1157 | P-86 | 221 | J-353 | FH-C1-L | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -4 | 0.02 | 0.001 |
| 1158 | P-87 | 276 | FH-C1-L | J-42 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -4 | 0.02 | 0.000 |
| 1181 | P-102 | 50 | J-600 | FH-C1-A | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -4 | 0.02 | 0.000 |
| 1182 | P-103 | 84 | FH-C1-A | J-355 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -4 | 0.02 | 0.001 |
| 1084 | P-446(1) | 76 | J-51 | J-336 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 5 | 0.01 | 0.002 |
| 1085 | P-446(2) | 108 | J-336 | J-52 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 5 | 0.01 | 0.000 |
| 776 | P-26 | 317 | J-50 | D-1A-2 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 5 | 0.01 | 0.000 |
| 1154 | P-104 | 66 | J-355 | J-353 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -2 | 0.01 | 0.000 |
| 1151 | P-476 | 86 | J-353 | FH -C1-E | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 2 | 0.01 | 0.000 |
| 1155 | P-477 | 478 | FH -C1-E | J-355 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 2 | 0.01 | 0.000 |
| 890 | P-82 | 417 | D-1C-5-B | D-1C-5-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -4 | 0.01 | 0.000 |
| 1065 | P-456 | 992 | D-1B-1-A | FUTURE CONNECTION ACROSS 101 | 24.0 | Ductile Iron | 130.0 | False | 0.000 | 5 | 0.00 | 0.000 |
| 959 | P-126 | 340 | D-1B-1-C | J-46 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -1 | 0.00 | 0.000 |
| 1136 | P-89 | 248 | J-346 | FH-C2-A | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |
| 1188 | P-479 | 120 | D-1C-2-B | FH-C2-G | 6.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |
| 975 | P-137 | 24 | FH-A7 | D-1A-7 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |
| 1029 | P-441 | 121 | J-22 | FH-A5 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |
| 725 | P-10 | 181 | J-1 | J-19 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |

**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 | 1,760.80 | Zone - 4 | 4,127 | 1,760.80 |

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**Appendix C**
Peak Hour Demand
*Vi 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) | Pressure (Calculated Residual) (psi) |
|---|---|---|---|---|---|---|---|---|
| 686 | J-1 | 1,609.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.57 | 66 | (N/A) |
| 687 | J-2 | 1,612.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.80 | 64 | (N/A) |
| 689 | J-3 | 1,623.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.25 | 59 | (N/A) |
| 691 | J-4 | 1,629.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.63 | 56 | (N/A) |
| 693 | J-5 | 1,629.90 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.60 | 56 | (N/A) |
| 695 | J-6 | 1,631.92 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.57 | 55 | (N/A) |
| 697 | J-7 | 1,649.25 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.43 | 47 | (N/A) |
| 701 | J-8 | 1,649.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.43 | 47 | (N/A) |
| 703 | J-9 | 1,649.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.41 | 47 | (N/A) |
| 705 | J-10 | 1,649.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.36 | 47 | (N/A) |
| 707 | J-11 | 1,646.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.34 | 49 | (N/A) |
| 709 | J-12 | 1,643.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.33 | 50 | (N/A) |
| 711 | J-13 | 1,637.84 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.31 | 52 | (N/A) |
| 713 | J-14 | 1,633.68 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.31 | 54 | (N/A) |
| 717 | J-16 | 1,630.55 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.31 | 55 | (N/A) |
| 719 | J-17 | 1,617.54 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.31 | 61 | (N/A) |
| 721 | J-18 | 1,625.17 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.36 | 58 | (N/A) |
| 724 | J-19 | 1,612.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.57 | 64 | (N/A) |
| 735 | D-1A-8 | 1,616.47 | Zone - 4 | <Collection: 1 item> | 89 | 1,758.36 | 61 | (N/A) |
| 737 | J-20 | 1,625.50 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.40 | 57 | (N/A) |
| 741 | D-1A-1-B | 1,606.70 | Zone - 4 | <Collection: 1 item> | 657 | 1,759.39 | 66 | (N/A) |
| 745 | J-50 | 1,619.49 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.33 | 60 | (N/A) |
| 750 | D-1A-4-B | 1,607.21 | Zone - 4 | <Collection: 1 item> | 240 | 1,759.00 | 66 | (N/A) |
| 754 | FH-A1 | 1,612.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.27 | 64 | (N/A) |
| 757 | FH-A4 | 1,612.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.73 | 63 | (N/A) |
| 761 | D-1A-4-A | 1,613.33 | Zone - 4 | <Collection: 1 item> | 240 | 1,758.49 | 63 | (N/A) |
| 764 | J-21 | 1,612.50 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.49 | 63 | (N/A) |
| 768 | D-1A-5 | 1,618.40 | Zone - 4 | <Collection: 1 item> | 282 | 1,758.34 | 61 | (N/A) |
| 771 | J-22 | 1,618.54 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.39 | 61 | (N/A) |
| 775 | D-1A-2 | 1,619.21 | Zone - 4 | <Collection: 1 item> | 146 | 1,758.33 | 60 | (N/A) |
| 778 | FH-A2-3 | 1,625.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.38 | 58 | (N/A) |
| 783 | J-24 | 1,623.83 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.34 | 58 | (N/A) |
| 787 | J-25 | 1,622.54 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.35 | 59 | (N/A) |
| 790 | J-26 | 1,617.86 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.38 | 61 | (N/A) |
| 794 | FH-B2 | 1,617.09 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.37 | 61 | (N/A) |
| 797 | D-1B-2-B | 1,617.90 | Zone - 4 | <Collection: 1 item> | 189 | 1,758.32 | 61 | (N/A) |
| 799 | J-27 | 1,619.36 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.32 | 60 | (N/A) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 803 | J-48 | 1,621.39 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.34 | 59 | (N/A) |
| 807 | FH-C3-2 | 1,626.64 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.51 | 57 | (N/A) |
| 818 | J-29 | 1,636.73 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.48 | 53 | (N/A) |
| 825 | J-30 | 1,649.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.38 | 47 | (N/A) |
| 828 | J-31 | 1,645.84 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.46 | 49 | (N/A) |
| 839 | FH-C8 | 1,626.14 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.36 | 57 | (N/A) |
| 848 | J-32 | 1,648.15 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.35 | 48 | (N/A) |
| 851 | J-33 | 1,647.28 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.33 | 48 | (N/A) |
| 853 | D-1C-5-B | 1,643.51 | Zone - 4 | <Collection: 1 item> | 161 | 1,758.32 | 50 | (N/A) |
| 855 | FH-C5 | 1,646.19 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.33 | 49 | (N/A) |
| 873 | J-36 | 1,636.30 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.36 | 53 | (N/A) |
| 877 | J-37 | 1,640.12 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.32 | 51 | (N/A) |
| 889 | D-1C-5-A | 1,641.50 | Zone - 4 | <Collection: 1 item> | 161 | 1,758.32 | 51 | (N/A) |
| 895 | FH-C1-D | 1,632.44 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.03 | 54 | (N/A) |
| 903 | J-40 | 1,631.38 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.34 | 55 | (N/A) |
| 910 | D-1C-9 | 1,627.00 | Zone - 4 | <Collection: 1 item> | 159 | 1,758.39 | 57 | (N/A) |
| 912 | FH-C9 | 1,626.65 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.39 | 57 | (N/A) |
| 916 | D-1C-2-B | 1,622.25 | Zone - 4 | <Collection: 1 item> | 185 | 1,758.31 | 59 | (N/A) |
| 920 | D-1C-1-A | 1,630.50 | Zone - 4 | <Collection: 1 item> | 232 | 1,757.96 | 55 | (N/A) |
| 922 | J-600 | 1,634.90 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.22 | 53 | (N/A) |
| 924 | J-42 | 1,631.50 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.22 | 55 | (N/A) |
| 926 | J-381 | 1,624.74 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.29 | 58 | (N/A) |
| 933 | J-44 | 1,624.90 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.31 | 58 | (N/A) |
| 937 | J-45 | 1,606.60 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.90 | 66 | (N/A) |
| 940 | D-1B-1-A | 1,604.52 | Zone - 4 | <Collection: 1 item> | 590 | 1,758.88 | 67 | (N/A) |
| 942 | D-1B-1-C | 1,610.26 | Zone - 4 | <Collection: 1 item> | 590 | 1,758.35 | 64 | (N/A) |
| 944 | FH-B1 | 1,610.90 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.38 | 64 | (N/A) |
| 946 | D-1B-1-B | 1,610.50 | Zone - 4 | <Collection: 1 item> | 590 | 1,758.43 | 64 | (N/A) |
| 951 | D-1B-2-A | 1,616.50 | Zone - 4 | <Collection: 1 item> | 189 | 1,758.38 | 61 | (N/A) |
| 956 | J-46 | 1,614.37 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.35 | 62 | (N/A) |
| 960 | D-1A-3-A | 1,612.51 | Zone - 4 | <Collection: 1 item> | 459 | 1,758.75 | 63 | (N/A) |
| 963 | D-1A-3-B | 1,607.18 | Zone - 4 | <Collection: 1 item> | 459 | 1,759.18 | 66 | (N/A) |
| 967 | J-47 | 1,628.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.81 | 57 | (N/A) |
| 970 | FH-A7 | 1,621.59 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.28 | 59 | (N/A) |
| 972 | D-1A-7 | 1,620.59 | Zone - 4 | <Collection: 1 item> | 523 | 1,758.28 | 60 | (N/A) |
| 976 | D-1A-1-A | 1,614.93 | Zone - 4 | <Collection: 1 item> | 657 | 1,758.22 | 62 | (N/A) |
| 985 | FH-A8 | 1,618.53 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.33 | 60 | (N/A) |
| 988 | FH-C10 | 1,635.38 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.43 | 53 | (N/A) |
| 1004 | J-49 | 1,612.04 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.43 | 63 | (N/A) |
| 1009 | FH-A1-3 | 1,609.45 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.00 | 65 | (N/A) |
| 1012 | FH-A3 | 1,607.19 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.10 | 66 | (N/A) |
| 1015 | FH-A4-3 | 1,608.46 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.77 | 65 | (N/A) |
| 1018 | FH-A2-4 | 1,619.38 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.39 | 60 | (N/A) |
| 1021 | FH-A1-2 | 1,618.47 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.64 | 61 | (N/A) |
| 1024 | FH-A2-1 | 1,621.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.35 | 59 | (N/A) |
| 1028 | FH-A5 | 1,596.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.39 | 70 | (N/A) |
| 1030 | FH-A4-6 | 1,613.08 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.49 | 63 | (N/A) |
| 1034 | FH-A4-4 | 1,608.76 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.91 | 65 | (N/A) |
| 1037 | J-51 | 1,637.97 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.32 | 52 | (N/A) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | J-52 | 1,641.32 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.32 | 51 | (N/A) |
| 1048 | J-53 | 1,640.08 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.37 | 51 | (N/A) |
| 1055 | J-54 | 1,635.94 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.38 | 53 | (N/A) |
| 1059 | J-55 | 1,633.17 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.38 | 54 | (N/A) |
| 1064 | FUTURE CONNECTION ACROSS 101 | 1,596.00 | Zone - 4 | <Collection: 1 item> | 5 | 1,758.88 | 70 | (N/A) |
| 1066 | J-327 | 1,642.62 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.36 | 50 | (N/A) |
| 1070 | J-329 | 1,630.95 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.34 | 55 | (N/A) |
| 1073 | J-330 | 1,627.87 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.34 | 56 | (N/A) |
| 1083 | J-336 | 1,639.94 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.32 | 51 | (N/A) |
| 1086 | J-337 | 1,645.41 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.34 | 49 | (N/A) |
| 1089 | J-338 | 1,647.37 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.35 | 48 | (N/A) |
| 1102 | FH-C2-B | 1,626.84 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.30 | 57 | (N/A) |
| 1111 | J-343 | 1,596.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.12 | 70 | (N/A) |
| 1118 | J-601 | 1,622.88 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.14 | 59 | (N/A) |
| 1121 | FH-C2-C | 1,624.26 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.30 | 58 | (N/A) |
| 1124 | J-346 | 1,624.60 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.29 | 58 | (N/A) |
| 1128 | D-1C-2-A | 1,630.25 | Zone - 4 | <Collection: 1 item> | 185 | 1,758.30 | 55 | (N/A) |
| 1132 | D-1C-1-B | 1,610.52 | Zone - 4 | <Collection: 1 item> | 232 | 1,758.03 | 64 | (N/A) |
| 1135 | FH-C2-A | 1,623.86 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.29 | 58 | (N/A) |
| 1139 | J-351 | 1,635.01 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.32 | 53 | (N/A) |
| 1143 | J-352 | 1,629.23 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.33 | 56 | (N/A) |
| 1147 | J-353 | 1,633.87 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.22 | 54 | (N/A) |
| 1150 | FH -C1-E | 1,596.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.22 | 70 | (N/A) |
| 1152 | J-355 | 1,634.18 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.22 | 54 | (N/A) |
| 1156 | FH-C1-L | 1,632.81 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.22 | 54 | (N/A) |
| 1159 | FH-C1-C | 1,627.92 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.19 | 56 | (N/A) |
| 1162 | FH-C1-K | 1,615.47 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.07 | 62 | (N/A) |
| 1165 | FH-C1-J | 1,608.97 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.04 | 64 | (N/A) |
| 1168 | FH-C1-I | 1,603.12 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.08 | 67 | (N/A) |
| 1171 | FH-C1-B | 1,616.08 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.24 | 62 | (N/A) |
| 1174 | FC-C1-H | 1,605.61 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.06 | 66 | (N/A) |
| 1177 | FH-C1-G | 1,623.82 | Zone - 4 | <Collection: 0 items> | 0 | 1,757.99 | 58 | (N/A) |
| 1180 | FH-C1-A | 1,634.63 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.22 | 53 | (N/A) |
| 1183 | FH-C1-F | 1,634.02 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.15 | 54 | (N/A) |
| 1187 | FH-C2-G | 1,596.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.31 | 70 | (N/A) |
| 1189 | FH-C2-F | 1,629.82 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.31 | 56 | (N/A) |
| 1192 | FH-C2-D | 1,626.58 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.29 | 57 | (N/A) |
| 1195 | FH-C2-E | 1,628.51 | Zone - 4 | <Collection: 0 items> | 0 | 1,758.30 | 56 | (N/A) |

**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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 726 | P-11 | 20 | J-19 | J-2 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -4,844 | 7.73 | 11.594 |
| 690 | P-1 | 500 | J-2 | J-3 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 2,375 | 3.79 | 3.097 |
| 1010 | P-15 | 379 | D-1A-1-B | FH-A1-3 | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -4,844 | 3.44 | 1.609 |
| 1011 | P-446 | 352 | FH-A1-3 | J-19 | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -4,844 | 3.44 | 1.609 |
| 1022 | P-14 | 236 | J-3 | FH-A1-2 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 1,016 | 2.88 | 2.612 |
| 1023 | P-444 | 104 | FH-A1-2 | D-1A-8 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 1,016 | 2.88 | 2.612 |
| 965 | P-130 | 231 | D-1A-3-B | D-1A-1-B | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -3,561 | 2.53 | 0.910 |
| 1013 | P-129 | 138 | D-1A-4-B | FH-A3 | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -3,102 | 2.20 | 0.705 |
| 1014 | P-131 | 123 | FH-A3 | D-1A-3-B | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -3,102 | 2.20 | 0.705 |
| 968 | P-132 | 400 | J-3 | J-47 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 1,358 | 2.17 | 1.100 |
| 969 | P-133 | 161 | J-47 | J-4 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 1,358 | 2.17 | 1.100 |
| 763 | P-20 | 168 | D-1A-4-A | FH-A4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -724 | 2.05 | 1.392 |
| 955 | P-123 | 347 | D-1B-1-B | D-1B-1-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -691 | 1.96 | 1.278 |
| 977 | P-17 | 120 | D-1A-8 | D-1A-1-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 657 | 1.86 | 1.164 |
| 756 | P-18 | 119 | FH-A1 | D-1A-1-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -626 | 1.78 | 1.065 |
| 961 | P-127 | 487 | FH-A1 | D-1A-3-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 626 | 1.78 | 1.065 |
| 1016 | P-114 | 272 | J-21 | FH-A4-3 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -618 | 1.75 | 1.038 |
| 1017 | P-443 | 125 | FH-A4-3 | J-45 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -618 | 1.75 | 1.038 |
| 939 | P-115 | 235 | J-45 | D-1A-4-B | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -2,306 | 1.64 | 0.407 |
| 1035 | P-483 | 102 | D-1A-4-B | FH-A4-4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 556 | 1.58 | 0.857 |
| 1036 | P-484 | 215 | FH-A4-4 | FH-A4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 556 | 1.58 | 0.856 |
| 1172 | P-466(1) | 49 | J-381 | FH-C1-B | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 211 | 1.35 | 1.028 |
| 1173 | P-466(2) | 117 | FH-C1-B | J-343 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 211 | 1.35 | 1.026 |
| 1008 | P-13 | 319 | R-11 | J-2 | 48.0 | Ductile Iron | 130.0 | False | 0.000 | 7,219 | 1.28 | 0.122 |
| 808 | P-41 | 276 | J-20 | FH-C3-2 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -769 | 1.23 | 0.384 |
| 809 | P-42 | 330 | FH-C3-2 | J-4 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -769 | 1.23 | 0.384 |
| 941 | P-116 | 126 | J-45 | D-1B-1-A | 24.0 | Ductile Iron | 130.0 | False | 0.000 | 1,688 | 1.20 | 0.229 |
| 770 | P-22 | 306 | D-1A-5 | D-1A-4-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -419 | 1.19 | 0.507 |
| 943 | P-117 | 1,126 | D-1B-1-A | D-1B-1-C | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 402 | 1.14 | 0.469 |
| 1007 | P-439 | 166 | J-21 | J-49 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 344 | 0.98 | 0.351 |
| 773 | P-24 | 293 | J-22 | J-21 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -338 | 0.96 | 0.339 |
| 694 | P-2 | 135 | J-4 | J-5 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 589 | 0.94 | 0.235 |
| 696 | P-3 | 134 | J-5 | J-6 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 589 | 0.94 | 0.233 |
| 819 | P-46 | 371 | J-6 | J-29 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 589 | 0.94 | 0.234 |
| 932 | P-110 | 204 | J-42 | J-14 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -133 | 0.85 | 0.437 |
| 1160 | P-206 | 117 | J-601 | FH-C1-C | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -127 | 0.81 | 0.399 |
| 1161 | P-207 | 82 | FH-C1-C | J-42 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -127 | 0.81 | 0.397 |
| 1163 | P-204 | 111 | D-1C-1-B | FH-C1-K | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -127 | 0.81 | 0.399 |
| 1164 | P-205 | 161 | FH-C1-K | J-601 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -127 | 0.81 | 0.399 |
| 930 | P-108 | 183 | D-1C-1-A | FH-C1-D | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -126 | 0.81 | 0.395 |
| 1184 | P-469(1) | 289 | FH-C1-D | FH-C1-F | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -126 | 0.81 | 0.394 |
| 1185 | P-469(2) | 176 | FH-C1-F | J-600 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -126 | 0.81 | 0.395 |
| 986 | P-135 | 137 | D-1A-8 | FH-A8 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 271 | 0.77 | 0.226 |
| 987 | P-107 | 217 | FH-A8 | D-1A-7 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 271 | 0.77 | 0.226 |
| 1114 | P-468 | 289 | J-600 | J-51 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -120 | 0.76 | 0.358 |
| 1025 | P-16 | 83 | J-50 | FH-A2-1 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -259 | 0.74 | 0.208 |
| 1026 | P-445 | 246 | FH-A2-1 | J-20 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -259 | 0.74 | 0.208 |
| 1006 | P-200 | 265 | J-49 | D-1B-2-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 257 | 0.73 | 0.205 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 974 | P-136 | 246 | D-1A-7 | J-50 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -252 | 0.71 | 0.197 |
| 1175 | P-470(1) | 206 | J-343 | FC-C1-H | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 106 | 0.68 | 0.286 |
| 1178 | P-208 | 247 | FC-C1-H | FH-C1-G | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 106 | 0.68 | 0.287 |
| 1179 | P-209 | 110 | FH-C1-G | D-1C-1-A | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 106 | 0.68 | 0.286 |
| 989 | P-57 | 328 | J-29 | FH-C10 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 238 | 0.67 | 0.177 |
| 1057 | P-489 | 266 | J-54 | FH-C10 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -238 | 0.67 | 0.177 |
| 1167 | P-203 | 35 | FH-C1-J | D-1C-1-B | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 105 | 0.67 | 0.286 |
| 1169 | P-201 | 157 | J-343 | FH-C1-I | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 105 | 0.67 | 0.283 |
| 1170 | P-202 | 131 | FH-C1-I | FH-C1-J | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 105 | 0.67 | 0.282 |
| 1092 | P-459 | 78 | J-337 | J-338 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -236 | 0.67 | 0.176 |
| 1186 | P-478 | 73 | D-1C-2-B | J-27 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -234 | 0.66 | 0.172 |
| 914 | P-98 | 67 | FH-C9 | J-20 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -214 | 0.61 | 0.145 |
| 702 | P-4 | 65 | J-7 | J-8 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 351 | 0.56 | 0.090 |
| 704 | P-5 | 155 | J-8 | J-9 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 351 | 0.56 | 0.090 |
| 826 | P-48 | 331 | J-9 | J-30 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 351 | 0.56 | 0.090 |
| 827 | P-49 | 219 | J-30 | J-10 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 351 | 0.56 | 0.090 |
| 829 | P-50 | 316 | J-29 | J-31 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 351 | 0.56 | 0.090 |
| 830 | P-51 | 268 | J-31 | J-7 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 351 | 0.56 | 0.090 |
| 791 | P-33 | 103 | J-22 | J-26 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 191 | 0.54 | 0.119 |
| 945 | P-118 | 316 | D-1B-1-C | FH-B1 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -187 | 0.53 | 0.114 |
| 947 | P-119 | 416 | FH-B1 | D-1B-1-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -187 | 0.53 | 0.114 |
| 1190 | P-475(1) | 148 | D-1C-2-A | FH-C2-F | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -178 | 0.51 | 0.104 |
| 1191 | P-475(2) | 203 | FH-C2-F | J-352 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -178 | 0.51 | 0.104 |
| 936 | P-113 | 149 | J-381 | J-44 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -168 | 0.48 | 0.094 |
| 785 | P-31 | 316 | J-24 | J-18 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -297 | 0.47 | 0.066 |
| 801 | P-36 | 355 | J-27 | J-24 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -297 | 0.47 | 0.066 |
| 962 | P-128 | 216 | D-1A-3-A | FH-A4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 167 | 0.47 | 0.092 |
| 779 | P-27 | 244 | J-18 | FH-A2-3 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -296 | 0.47 | 0.065 |
| 780 | P-28 | 327 | FH-A2-3 | J-20 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -296 | 0.47 | 0.066 |
| 915 | P-99 | 64 | D-1C-9 | FH-C9 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -165 | 0.47 | 0.091 |
| 904 | P-91 | 225 | J-36 | J-40 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 161 | 0.46 | 0.086 |
| 1082 | P-458 | 265 | J-36 | J-54 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -161 | 0.46 | 0.086 |
| 1088 | P-63 | 250 | J-337 | D-1C-5-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 154 | 0.44 | 0.079 |
| 793 | P-34 | 444 | J-25 | J-26 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -149 | 0.42 | 0.074 |
| 805 | P-39 | 153 | J-48 | J-25 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -149 | 0.42 | 0.074 |
| 806 | P-40 | 206 | D-1B-2-B | J-48 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -149 | 0.42 | 0.074 |
| 1019 | P-23 | 350 | J-18 | FH-A2-4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -146 | 0.42 | 0.072 |
| 1020 | P-447 | 51 | FH-A2-4 | J-22 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -146 | 0.42 | 0.074 |
| 840 | P-55 | 63 | J-18 | FH-C8 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 145 | 0.41 | 0.072 |
| 1075 | P-85 | 221 | J-330 | FH-C8 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -145 | 0.41 | 0.071 |
| 1145 | P-84 | 116 | J-352 | J-330 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -145 | 0.41 | 0.072 |
| 710 | P-6 | 281 | J-11 | J-12 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 246 | 0.39 | 0.046 |
| 849 | P-60 | 295 | J-10 | J-32 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 246 | 0.39 | 0.046 |
| 850 | P-61 | 197 | J-32 | J-11 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 246 | 0.39 | 0.047 |
| 1027 | P-443 | 109 | D-1A-5 | D-1A-2 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 138 | 0.39 | 0.064 |
| 1058 | P-453 | 148 | J-54 | J-53 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 131 | 0.37 | 0.060 |
| 1068 | P-449(2) | 141 | J-327 | J-53 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -131 | 0.37 | 0.059 |
| 1091 | P-449 | 151 | J-338 | J-327 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -131 | 0.37 | 0.059 |
| 1140 | P-444(1) | 229 | J-40 | J-351 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 128 | 0.36 | 0.057 |
| 1141 | P-444(2) | 41 | J-351 | J-51 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 128 | 0.36 | 0.056 |
| 953 | P-121 | 279 | D-1B-2-A | FH-B2 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 110 | 0.31 | 0.043 |
| 957 | P-124 | 461 | FH-B2 | J-46 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 110 | 0.31 | 0.043 |
| 958 | P-125 | 639 | J-46 | D-1B-2-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 110 | 0.31 | 0.042 |
| 1090 | P-448 | 253 | J-10 | J-338 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 105 | 0.30 | 0.039 |
| 714 | P-7 | 126 | J-13 | J-14 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 169 | 0.27 | 0.023 |
| 878 | P-75 | 434 | J-12 | J-37 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 169 | 0.27 | 0.023 |
| 879 | P-76 | 264 | J-37 | J-13 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 169 | 0.27 | 0.024 |
| 1005 | P-122 | 92 | D-1B-1-B | J-49 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -87 | 0.25 | 0.028 |
| 1044 | P-487 | 78 | J-52 | D-1C-5-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 85 | 0.24 | 0.027 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | P-64 | 136 | FH-C5 | J-33 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -82 | 0.23 | 0.025 |
| 891 | P-83 | 336 | D-1C-5-A | FH-C5 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -82 | 0.23 | 0.025 |
| 1087 | P-62 | 327 | J-33 | J-337 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -82 | 0.23 | 0.025 |
| 1046 | P-447 | 253 | J-52 | J-12 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -76 | 0.22 | 0.022 |
| 800 | P-35 | 536 | J-17 | J-27 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -132 | 0.21 | 0.015 |
| 935 | P-112 | 404 | J-44 | J-17 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -132 | 0.21 | 0.014 |
| 802 | P-37 | 86 | D-1B-2-B | J-27 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 69 | 0.20 | 0.018 |
| 1031 | P-21 | 45 | D-1A-4-A | FH-A4-6 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 64 | 0.18 | 0.014 |
| 1032 | P-442 | 105 | FH-A4-6 | J-21 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 64 | 0.18 | 0.016 |
| 1062 | P-454 | 237 | J-54 | J-55 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -55 | 0.15 | 0.011 |
| 1063 | P-455 | 358 | D-1C-9 | J-55 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 55 | 0.15 | 0.012 |
| 1122 | P-100 | 257 | D-1C-2-B | FH-C2-C | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 50 | 0.14 | 0.010 |
| 1123 | P-101 | 358 | FH-C2-C | FH-C2-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 50 | 0.14 | 0.010 |
| 1129 | P-471(1) | 229 | FH-C2-B | D-1C-2-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 50 | 0.14 | 0.010 |
| 913 | P-97 | 604 | D-1C-9 | FH-C9 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -49 | 0.14 | 0.010 |
| 1194 | P-473(2) | 309 | FH-C2-D | J-346 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 43 | 0.12 | 0.008 |
| 1196 | P-473(1)(1) | 271 | D-1C-2-A | FH-C2-E | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 43 | 0.12 | 0.008 |
| 1197 | P-473(1)(2) | 299 | FH-C2-E | FH-C2-D | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 43 | 0.12 | 0.007 |
| 1125 | P-106 | 23 | J-381 | J-346 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -43 | 0.12 | 0.010 |
| 952 | P-120 | 114 | J-26 | D-1B-2-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 43 | 0.12 | 0.008 |
| 1071 | P-80 | 136 | J-40 | J-329 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 33 | 0.09 | 0.004 |
| 1144 | P-81 | 146 | J-329 | J-352 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 33 | 0.09 | 0.005 |
| 934 | P-111 | 533 | J-16 | J-44 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 36 | 0.06 | 0.001 |
| 1001 | P-438 | 777 | J-16 | J-14 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -36 | 0.06 | 0.001 |
| 1157 | P-86 | 221 | J-353 | FH-C1-L | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -6 | 0.04 | 0.002 |
| 1158 | P-87 | 276 | FH-C1-L | J-42 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -6 | 0.04 | 0.001 |
| 1181 | P-102 | 50 | J-600 | FH-C1-A | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -6 | 0.04 | 0.002 |
| 1182 | P-103 | 84 | FH-C1-A | J-355 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -6 | 0.04 | 0.001 |
| 1154 | P-104 | 66 | J-355 | J-353 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -4 | 0.03 | 0.000 |
| 1084 | P-446(1) | 76 | J-51 | J-336 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 8 | 0.02 | 0.000 |
| 1085 | P-446(2) | 108 | J-336 | J-52 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 8 | 0.02 | 0.000 |
| 776 | P-26 | 317 | J-50 | D-1A-2 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 8 | 0.02 | 0.000 |
| 890 | P-82 | 417 | D-1C-5-B | D-1C-5-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -6 | 0.02 | 0.000 |
| 1151 | P-476 | 86 | J-353 | FH -C1-E | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 2 | 0.01 | 0.000 |
| 1155 | P-477 | 478 | FH -C1-E | J-355 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 2 | 0.01 | 0.000 |
| 1065 | P-456 | 992 | D-1B-1-A | FUTURE CONNECTION ACROSS 101 | 24.0 | Ductile Iron | 130.0 | False | 0.000 | 5 | 0.00 | 0.000 |
| 959 | P-126 | 340 | D-1B-1-C | J-46 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -1 | 0.00 | 0.000 |
| 1188 | P-479 | 120 | D-1C-2-B | FH-C2-G | 6.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |
| 1136 | P-89 | 248 | J-346 | FH-C2-A | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |
| 1029 | P-441 | 121 | J-22 | FH-A5 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |
| 975 | P-137 | 24 | FH-A7 | D-1A-7 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |
| 725 | P-10 | 181 | J-1 | J-19 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |

**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 | 1,760.80 | Zone - 4 | 7,219 | 1,760.80 |

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**Appendix D**
Max Day + Fire Flow
*Vi 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) | Pressure (System Lower Limit) (psi) | Pressure (Calculated System Lower Limit) (psi) | Junction w/ Minimum Pressure (System) | Is Fire Flow Run Balanced? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FC-C1-H | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 61 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH -C1-E | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 65 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-A1 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 64 | 30 | 48 | J-7 | 30 | 48 | J-7 | True |
| FH-A1-2 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 60 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-A1-3 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 65 | 30 | 48 | J-7 | 30 | 48 | J-7 | True |
| FH-A2-1 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 59 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-A2-3 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 58 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-A2-4 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 60 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-A3 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 66 | 30 | 48 | J-7 | 30 | 48 | J-7 | True |
| FH-A4 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 63 | 30 | 48 | J-7 | 30 | 48 | J-7 | True |
| FH-A4-3 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 65 | 30 | 48 | J-7 | 30 | 48 | J-7 | True |
| FH-A4-4 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 65 | 30 | 48 | J-7 | 30 | 48 | J-7 | True |
| FH-A4-6 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 63 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-A5 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 70 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-A7 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 59 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-A8 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 60 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-B1 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 63 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-B2 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 61 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C1-A | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 50 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C1-B | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 60 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C1-C | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 53 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C1-D | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 48 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C1-F | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 49 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C1-G | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 52 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C1-I | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 63 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C1-J | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 60 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C1-K | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 57 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C1-L | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 50 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C2-A | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 50 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C2-B | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 56 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C2-C | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 57 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C2-D | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 56 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C2-E | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 55 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C2-F | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 55 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C2-G | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 56 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C3-2 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 57 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C5 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 48 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C8 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 57 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C9 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 57 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |
| FH-C10 | Zone - 4 | 2 | True | 2,000 | 2,020 | 2,000 | 2,020 | 30 | 53 | 30 | 47 | J-7 | 30 | 47 | J-7 | True |

**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) | Pressure (Calculated Residual) (psi) |
|---|---|---|---|---|---|---|---|---|
| 686 | J-1 | 1,609.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.72 | 66 | (N/A) |
| 687 | J-2 | 1,612.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.80 | 64 | (N/A) |
| 689 | J-3 | 1,623.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.25 | 59 | (N/A) |
| 691 | J-4 | 1,629.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.03 | 57 | (N/A) |
| 693 | J-5 | 1,629.90 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.02 | 56 | (N/A) |
| 695 | J-6 | 1,631.92 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.01 | 55 | (N/A) |
| 697 | J-7 | 1,649.25 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.96 | 48 | (N/A) |
| 701 | J-8 | 1,649.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.96 | 48 | (N/A) |
| 703 | J-9 | 1,649.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.95 | 48 | (N/A) |
| 705 | J-10 | 1,649.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 48 | (N/A) |
| 707 | J-11 | 1,646.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 49 | (N/A) |
| 709 | J-12 | 1,643.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 51 | (N/A) |
| 711 | J-13 | 1,637.84 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 53 | (N/A) |
| 713 | J-14 | 1,633.68 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 55 | (N/A) |
| 717 | J-16 | 1,630.55 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 56 | (N/A) |
| 719 | J-17 | 1,617.54 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 62 | (N/A) |
| 721 | J-18 | 1,625.17 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 58 | (N/A) |
| 724 | J-19 | 1,612.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.72 | 64 | (N/A) |
| 735 | D-1A-8 | 1,616.47 | Zone - 4 | <Collection: 1 item> | 51 | 1,759.94 | 62 | (N/A) |
| 737 | J-20 | 1,625.50 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.95 | 58 | (N/A) |
| 741 | D-1A-1-B | 1,606.70 | Zone - 4 | <Collection: 1 item> | 375 | 1,760.30 | 66 | (N/A) |
| 745 | J-50 | 1,619.49 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 61 | (N/A) |
| 750 | D-1A-4-B | 1,607.21 | Zone - 4 | <Collection: 1 item> | 137 | 1,760.16 | 66 | (N/A) |
| 754 | FH-A1 | 1,612.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.26 | 64 | 64 |
| 757 | FH-A4 | 1,612.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.06 | 64 | 63 |
| 761 | D-1A-4-A | 1,613.33 | Zone - 4 | <Collection: 1 item> | 137 | 1,759.98 | 63 | (N/A) |
| 764 | J-21 | 1,612.50 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.98 | 64 | (N/A) |
| 768 | D-1A-5 | 1,618.40 | Zone - 4 | <Collection: 1 item> | 161 | 1,759.93 | 61 | (N/A) |
| 771 | J-22 | 1,618.54 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.95 | 61 | (N/A) |
| 775 | D-1A-2 | 1,619.21 | Zone - 4 | <Collection: 1 item> | 83 | 1,759.92 | 61 | (N/A) |
| 778 | FH-A2-3 | 1,625.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 58 | 58 |
| 783 | J-24 | 1,623.83 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 59 | (N/A) |
| 787 | J-25 | 1,622.54 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 59 | (N/A) |
| 790 | J-26 | 1,617.86 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 61 | (N/A) |
| 794 | FH-B2 | 1,617.09 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 62 | 61 |
| 797 | D-1B-2-B | 1,617.90 | Zone - 4 | <Collection: 1 item> | 108 | 1,759.92 | 61 | (N/A) |
| 799 | J-27 | 1,619.36 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 61 | (N/A) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 803 | J-48 | 1,621.39 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 60 | (N/A) |
| 807 | FH-C3-2 | 1,626.64 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.99 | 58 | 57 |
| 818 | J-29 | 1,636.73 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.98 | 53 | (N/A) |
| 825 | J-30 | 1,649.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 48 | (N/A) |
| 828 | J-31 | 1,645.84 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.97 | 49 | (N/A) |
| 839 | FH-C8 | 1,626.14 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 58 | 57 |
| 848 | J-32 | 1,648.15 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 48 | (N/A) |
| 851 | J-33 | 1,647.28 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 49 | (N/A) |
| 853 | D-1C-5-B | 1,643.51 | Zone - 4 | <Collection: 1 item> | 92 | 1,759.92 | 50 | (N/A) |
| 855 | FH-C5 | 1,646.19 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 49 | 48 |
| 873 | J-36 | 1,636.30 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 53 | (N/A) |
| 877 | J-37 | 1,640.12 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 52 | (N/A) |
| 889 | D-1C-5-A | 1,641.50 | Zone - 4 | <Collection: 1 item> | 92 | 1,759.92 | 51 | (N/A) |
| 895 | FH-C1-D | 1,632.44 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.82 | 55 | 48 |
| 903 | J-40 | 1,631.38 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 56 | (N/A) |
| 910 | D-1C-9 | 1,627.00 | Zone - 4 | <Collection: 1 item> | 91 | 1,759.94 | 58 | (N/A) |
| 912 | FH-C9 | 1,626.65 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 58 | 57 |
| 916 | D-1C-2-B | 1,622.25 | Zone - 4 | <Collection: 1 item> | 106 | 1,759.91 | 60 | (N/A) |
| 920 | D-1C-1-A | 1,630.50 | Zone - 4 | <Collection: 1 item> | 133 | 1,759.79 | 56 | (N/A) |
| 922 | J-600 | 1,634.90 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.88 | 54 | (N/A) |
| 924 | J-42 | 1,631.50 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.88 | 56 | (N/A) |
| 926 | J-381 | 1,624.74 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 58 | (N/A) |
| 933 | J-44 | 1,624.90 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 58 | (N/A) |
| 937 | J-45 | 1,606.60 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.13 | 66 | (N/A) |
| 940 | D-1B-1-A | 1,604.52 | Zone - 4 | <Collection: 1 item> | 337 | 1,760.12 | 67 | (N/A) |
| 942 | D-1B-1-C | 1,610.26 | Zone - 4 | <Collection: 1 item> | 337 | 1,759.93 | 65 | (N/A) |
| 944 | FH-B1 | 1,610.90 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 64 | 63 |
| 946 | D-1B-1-B | 1,610.50 | Zone - 4 | <Collection: 1 item> | 337 | 1,759.96 | 65 | (N/A) |
| 951 | D-1B-2-A | 1,616.50 | Zone - 4 | <Collection: 1 item> | 108 | 1,759.94 | 62 | (N/A) |
| 956 | J-46 | 1,614.37 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 63 | (N/A) |
| 960 | D-1A-3-A | 1,612.51 | Zone - 4 | <Collection: 1 item> | 262 | 1,760.07 | 64 | (N/A) |
| 963 | D-1A-3-B | 1,607.18 | Zone - 4 | <Collection: 1 item> | 262 | 1,760.23 | 66 | (N/A) |
| 967 | J-47 | 1,628.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.09 | 57 | (N/A) |
| 970 | FH-A7 | 1,621.59 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 60 | 59 |
| 972 | D-1A-7 | 1,620.59 | Zone - 4 | <Collection: 1 item> | 299 | 1,759.91 | 60 | (N/A) |
| 976 | D-1A-1-A | 1,614.93 | Zone - 4 | <Collection: 1 item> | 375 | 1,759.89 | 63 | (N/A) |
| 985 | FH-A8 | 1,618.53 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 61 | 60 |
| 988 | FH-C10 | 1,635.38 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.96 | 54 | 53 |
| 1004 | J-49 | 1,612.04 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.96 | 64 | (N/A) |
| 1009 | FH-A1-3 | 1,609.45 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.52 | 65 | 65 |
| 1012 | FH-A3 | 1,607.19 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.20 | 66 | 66 |
| 1015 | FH-A4-3 | 1,608.46 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.08 | 66 | 65 |
| 1018 | FH-A2-4 | 1,619.38 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 61 | 60 |
| 1021 | FH-A1-2 | 1,618.47 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.03 | 61 | 60 |
| 1024 | FH-A2-1 | 1,621.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 60 | 59 |
| 1028 | FH-A5 | 1,596.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.95 | 71 | 70 |
| 1030 | FH-A4-6 | 1,613.08 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.98 | 64 | 63 |
| 1034 | FH-A4-4 | 1,608.76 | Zone - 4 | <Collection: 0 items> | 0 | 1,760.13 | 65 | 65 |
| 1037 | J-51 | 1,637.97 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 53 | (N/A) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | J-52 | 1,641.32 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 51 | (N/A) |
| 1048 | J-53 | 1,640.08 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 52 | (N/A) |
| 1055 | J-54 | 1,635.94 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 54 | (N/A) |
| 1059 | J-55 | 1,633.17 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.94 | 55 | (N/A) |
| 1064 | FUTURE CONNECTION ACROSS 101 | 1,596.00 | Zone - 4 | <Collection: 1 item> | 5 | 1,760.12 | 71 | (N/A) |
| 1066 | J-327 | 1,642.62 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 51 | (N/A) |
| 1070 | J-329 | 1,630.95 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 56 | (N/A) |
| 1073 | J-330 | 1,627.87 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 57 | (N/A) |
| 1083 | J-336 | 1,639.94 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 52 | (N/A) |
| 1086 | J-337 | 1,645.41 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 50 | (N/A) |
| 1089 | J-338 | 1,647.37 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.93 | 49 | (N/A) |
| 1102 | FH-C2-B | 1,626.84 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 58 | 56 |
| 1111 | J-343 | 1,596.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.85 | 71 | (N/A) |
| 1118 | J-601 | 1,622.88 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.86 | 59 | (N/A) |
| 1121 | FH-C2-C | 1,624.26 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 59 | 57 |
| 1124 | J-346 | 1,624.60 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 59 | (N/A) |
| 1128 | D-1C-2-A | 1,630.25 | Zone - 4 | <Collection: 1 item> | 106 | 1,759.91 | 56 | (N/A) |
| 1132 | D-1C-1-B | 1,610.52 | Zone - 4 | <Collection: 1 item> | 133 | 1,759.82 | 65 | (N/A) |
| 1135 | FH-C2-A | 1,623.86 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 59 | 50 |
| 1139 | J-351 | 1,635.01 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 54 | (N/A) |
| 1143 | J-352 | 1,629.23 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 57 | (N/A) |
| 1147 | J-353 | 1,633.87 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.88 | 55 | (N/A) |
| 1150 | FH -C1-E | 1,596.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.88 | 71 | 65 |
| 1152 | J-355 | 1,634.18 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.88 | 54 | (N/A) |
| 1156 | FH-C1-L | 1,632.81 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.88 | 55 | 50 |
| 1159 | FH-C1-C | 1,627.92 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.87 | 57 | 53 |
| 1162 | FH-C1-K | 1,615.47 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.83 | 62 | 57 |
| 1165 | FH-C1-J | 1,608.97 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.82 | 65 | 60 |
| 1168 | FH-C1-I | 1,603.12 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.83 | 68 | 63 |
| 1171 | FH-C1-B | 1,616.08 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.89 | 62 | 60 |
| 1174 | FC-C1-H | 1,605.61 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.83 | 67 | 61 |
| 1177 | FH-C1-G | 1,623.82 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.80 | 59 | 52 |
| 1180 | FH-C1-A | 1,634.63 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.88 | 54 | 50 |
| 1183 | FH-C1-F | 1,634.02 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.86 | 54 | 49 |
| 1187 | FH-C2-G | 1,596.00 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 71 | 56 |
| 1189 | FH-C2-F | 1,629.82 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.92 | 56 | 55 |
| 1192 | FH-C2-D | 1,626.58 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 58 | 56 |
| 1195 | FH-C2-E | 1,628.51 | Zone - 4 | <Collection: 0 items> | 0 | 1,759.91 | 57 | 55 |

**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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 726 | P-11 | 20 | J-19 | J-2 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -2,770 | 4.42 | 4.122 |
| 690 | P-1 | 500 | J-2 | J-3 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 1,357 | 2.17 | 1.099 |
| 1010 | P-15 | 379 | D-1A-1-B | FH-A1-3 | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -2,770 | 1.96 | 0.571 |
| 1011 | P-446 | 352 | FH-A1-3 | J-19 | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -2,770 | 1.96 | 0.571 |
| 1022 | P-14 | 236 | J-3 | FH-A1-2 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 581 | 1.65 | 0.927 |
| 1023 | P-444 | 104 | FH-A1-2 | D-1A-8 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 581 | 1.65 | 0.928 |
| 965 | P-130 | 231 | D-1A-3-B | D-1A-1-B | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -2,036 | 1.44 | 0.323 |
| 1013 | P-129 | 138 | D-1A-4-B | FH-A3 | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -1,774 | 1.26 | 0.250 |
| 1014 | P-131 | 123 | FH-A3 | D-1A-3-B | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -1,774 | 1.26 | 0.251 |
| 968 | P-132 | 400 | J-3 | J-47 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 776 | 1.24 | 0.391 |
| 969 | P-133 | 161 | J-47 | J-4 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 776 | 1.24 | 0.390 |
| 763 | P-20 | 168 | D-1A-4-A | FH-A4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -413 | 1.17 | 0.493 |
| 955 | P-123 | 347 | D-1B-1-B | D-1B-1-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -395 | 1.12 | 0.453 |
| 977 | P-17 | 120 | D-1A-8 | D-1A-1-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 375 | 1.06 | 0.412 |
| 756 | P-18 | 119 | FH-A1 | D-1A-1-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -358 | 1.02 | 0.377 |
| 961 | P-127 | 487 | FH-A1 | D-1A-3-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 358 | 1.02 | 0.378 |
| 1016 | P-114 | 272 | J-21 | FH-A4-3 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -353 | 1.00 | 0.368 |
| 1017 | P-443 | 125 | FH-A4-3 | J-45 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -353 | 1.00 | 0.368 |
| 939 | P-115 | 235 | J-45 | D-1A-4-B | 24.0 | Ductile Iron | 130.0 | False | 0.000 | -1,319 | 0.94 | 0.145 |
| 1035 | P-483 | 102 | D-1A-4-B | FH-A4-4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 318 | 0.90 | 0.304 |
| 1036 | P-484 | 215 | FH-A4-4 | FH-A4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 318 | 0.90 | 0.303 |
| 1172 | P-466(1) | 49 | J-381 | FH-C1-B | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 121 | 0.77 | 0.364 |
| 1173 | P-466(2) | 117 | FH-C1-B | J-343 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 121 | 0.77 | 0.364 |
| 1008 | P-13 | 319 | R-11 | J-2 | 48.0 | Ductile Iron | 130.0 | False | 0.000 | 4,127 | 0.73 | 0.000 |
| 808 | P-41 | 276 | J-20 | FH-C3-2 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -440 | 0.70 | 0.136 |
| 809 | P-42 | 330 | FH-C3-2 | J-4 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -440 | 0.70 | 0.136 |
| 941 | P-116 | 126 | J-45 | D-1B-1-A | 24.0 | Ductile Iron | 130.0 | False | 0.000 | 966 | 0.69 | 0.081 |
| 770 | P-22 | 306 | D-1A-5 | D-1A-4-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -239 | 0.68 | 0.180 |
| 943 | P-117 | 1,126 | D-1B-1-A | D-1B-1-C | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 230 | 0.65 | 0.166 |
| 1007 | P-439 | 166 | J-21 | J-49 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 197 | 0.56 | 0.125 |
| 773 | P-24 | 293 | J-22 | J-21 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -193 | 0.55 | 0.120 |
| 694 | P-2 | 135 | J-4 | J-5 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 337 | 0.54 | 0.083 |
| 696 | P-3 | 134 | J-5 | J-6 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 337 | 0.54 | 0.084 |
| 819 | P-46 | 371 | J-6 | J-29 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 337 | 0.54 | 0.083 |
| 932 | P-110 | 204 | J-42 | J-14 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -76 | 0.49 | 0.155 |
| 1160 | P-206 | 117 | J-601 | FH-C1-C | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -72 | 0.46 | 0.141 |
| 1161 | P-207 | 82 | FH-C1-C | J-42 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -72 | 0.46 | 0.142 |
| 1163 | P-204 | 111 | D-1C-1-B | FH-C1-K | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -72 | 0.46 | 0.141 |
| 1164 | P-205 | 161 | FH-C1-K | J-601 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -72 | 0.46 | 0.142 |
| 930 | P-108 | 183 | D-1C-1-A | FH-C1-D | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -72 | 0.46 | 0.140 |
| 1184 | P-469(1) | 289 | FH-C1-D | FH-C1-F | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -72 | 0.46 | 0.140 |
| 1185 | P-469(2) | 176 | FH-C1-F | J-600 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -72 | 0.46 | 0.140 |
| 986 | P-135 | 137 | D-1A-8 | FH-A8 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 155 | 0.44 | 0.080 |
| 987 | P-107 | 217 | FH-A8 | D-1A-7 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 155 | 0.44 | 0.080 |
| 1114 | P-468 | 289 | J-600 | J-51 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -68 | 0.44 | 0.127 |
| 1025 | P-16 | 83 | J-50 | FH-A2-1 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -148 | 0.42 | 0.073 |
| 1026 | P-445 | 246 | FH-A2-1 | J-20 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -148 | 0.42 | 0.074 |
| 1006 | P-200 | 265 | J-49 | D-1B-2-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 147 | 0.42 | 0.073 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 974 | P-136 | 246 | D-1A-7 | J-50 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -144 | 0.41 | 0.070 |
| 1175 | P-470(1) | 206 | J-343 | FC-C1-H | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 61 | 0.39 | 0.102 |
| 1178 | P-208 | 247 | FC-C1-H | FH-C1-G | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 61 | 0.39 | 0.101 |
| 1179 | P-209 | 110 | FH-C1-G | D-1C-1-A | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 61 | 0.39 | 0.102 |
| 989 | P-57 | 328 | J-29 | FH-C10 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 136 | 0.39 | 0.063 |
| 1057 | P-489 | 266 | J-54 | FH-C10 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -136 | 0.39 | 0.063 |
| 1167 | P-203 | 35 | FH-C1-J | D-1C-1-B | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 60 | 0.38 | 0.099 |
| 1169 | P-201 | 157 | J-343 | FH-C1-I | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 60 | 0.38 | 0.100 |
| 1170 | P-202 | 131 | FH-C1-I | FH-C1-J | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 60 | 0.38 | 0.100 |
| 1092 | P-459 | 78 | J-337 | J-338 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -135 | 0.38 | 0.062 |
| 1186 | P-478 | 73 | D-1C-2-B | J-27 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -134 | 0.38 | 0.062 |
| 914 | P-98 | 67 | FH-C9 | J-20 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -122 | 0.35 | 0.052 |
| 702 | P-4 | 65 | J-7 | J-8 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 201 | 0.32 | 0.032 |
| 704 | P-5 | 155 | J-8 | J-9 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 201 | 0.32 | 0.032 |
| 826 | P-48 | 331 | J-9 | J-30 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 201 | 0.32 | 0.032 |
| 827 | P-49 | 219 | J-30 | J-10 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 201 | 0.32 | 0.032 |
| 829 | P-50 | 316 | J-29 | J-31 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 201 | 0.32 | 0.032 |
| 830 | P-51 | 268 | J-31 | J-7 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 201 | 0.32 | 0.031 |
| 791 | P-33 | 103 | J-22 | J-26 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 109 | 0.31 | 0.043 |
| 945 | P-118 | 316 | D-1B-1-C | FH-B1 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -107 | 0.30 | 0.041 |
| 947 | P-119 | 416 | FH-B1 | D-1B-1-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -107 | 0.30 | 0.040 |
| 1190 | P-475(1) | 148 | D-1C-2-A | FH-C2-F | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -102 | 0.29 | 0.036 |
| 1191 | P-475(2) | 203 | FH-C2-F | J-352 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -102 | 0.29 | 0.037 |
| 936 | P-113 | 149 | J-381 | J-44 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -96 | 0.27 | 0.033 |
| 962 | P-128 | 216 | D-1A-3-A | FH-A4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 96 | 0.27 | 0.033 |
| 785 | P-31 | 316 | J-24 | J-18 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -170 | 0.27 | 0.024 |
| 801 | P-36 | 355 | J-27 | J-24 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -170 | 0.27 | 0.023 |
| 779 | P-27 | 244 | J-18 | FH-A2-3 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -169 | 0.27 | 0.023 |
| 780 | P-28 | 327 | FH-A2-3 | J-20 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -169 | 0.27 | 0.024 |
| 915 | P-99 | 64 | D-1C-9 | FH-C9 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -94 | 0.27 | 0.030 |
| 904 | P-91 | 225 | J-36 | J-40 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 92 | 0.26 | 0.030 |
| 1082 | P-458 | 265 | J-36 | J-54 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -92 | 0.26 | 0.031 |
| 1088 | P-63 | 250 | J-337 | D-1C-5-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 88 | 0.25 | 0.028 |
| 793 | P-34 | 444 | J-25 | J-26 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -85 | 0.24 | 0.026 |
| 805 | P-39 | 153 | J-48 | J-25 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -85 | 0.24 | 0.026 |
| 806 | P-40 | 206 | D-1B-2-B | J-48 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -85 | 0.24 | 0.026 |
| 1019 | P-23 | 350 | J-18 | FH-A2-4 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -84 | 0.24 | 0.025 |
| 1020 | P-447 | 51 | FH-A2-4 | J-22 | 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 | 83 | 0.24 | 0.025 |
| 1075 | P-85 | 221 | J-330 | FH-C8 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -83 | 0.24 | 0.025 |
| 1145 | P-84 | 116 | J-352 | J-330 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -83 | 0.24 | 0.025 |
| 710 | P-6 | 281 | J-11 | J-12 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 141 | 0.22 | 0.017 |
| 849 | P-60 | 295 | J-10 | J-32 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 141 | 0.22 | 0.017 |
| 850 | P-61 | 197 | J-32 | J-11 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 141 | 0.22 | 0.017 |
| 1027 | P-443 | 109 | D-1A-5 | D-1A-2 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 78 | 0.22 | 0.023 |
| 1058 | P-453 | 148 | J-54 | J-53 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 75 | 0.21 | 0.022 |
| 1068 | P-449(2) | 141 | J-327 | J-53 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -75 | 0.21 | 0.021 |
| 1091 | P-449 | 151 | J-338 | J-327 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -75 | 0.21 | 0.021 |
| 1140 | P-444(1) | 229 | J-40 | J-351 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 73 | 0.21 | 0.020 |
| 1141 | P-444(2) | 41 | J-351 | J-51 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 73 | 0.21 | 0.018 |
| 953 | P-121 | 279 | D-1B-2-A | FH-B2 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 63 | 0.18 | 0.015 |
| 957 | P-124 | 461 | FH-B2 | J-46 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 63 | 0.18 | 0.015 |
| 958 | P-125 | 639 | J-46 | D-1B-2-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 63 | 0.18 | 0.015 |
| 1090 | P-448 | 253 | J-10 | J-338 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 60 | 0.17 | 0.014 |
| 714 | P-7 | 126 | J-13 | J-14 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 97 | 0.15 | 0.009 |
| 878 | P-75 | 434 | J-12 | J-37 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 97 | 0.15 | 0.008 |
| 879 | P-76 | 264 | J-37 | J-13 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 97 | 0.15 | 0.008 |
| 1005 | P-122 | 92 | D-1B-1-B | J-49 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -50 | 0.14 | 0.009 |
| 1044 | P-487 | 78 | J-52 | D-1C-5-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 48 | 0.14 | 0.009 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | P-64 | 136 | FH-C5 | J-33 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -47 | 0.13 | 0.008 |
| 891 | P-83 | 336 | D-1C-5-A | FH-C5 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -47 | 0.13 | 0.009 |
| 1087 | P-62 | 327 | J-33 | J-337 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -47 | 0.13 | 0.009 |
| 1046 | P-447 | 253 | J-52 | J-12 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -44 | 0.12 | 0.008 |
| 800 | P-35 | 536 | J-17 | J-27 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -75 | 0.12 | 0.005 |
| 935 | P-112 | 404 | J-44 | J-17 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -75 | 0.12 | 0.005 |
| 802 | P-37 | 86 | D-1B-2-B | J-27 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 39 | 0.11 | 0.007 |
| 1031 | P-21 | 45 | D-1A-4-A | FH-A4-6 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 37 | 0.10 | 0.005 |
| 1032 | P-442 | 105 | FH-A4-6 | J-21 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 37 | 0.10 | 0.006 |
| 1062 | P-454 | 237 | J-54 | J-55 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -31 | 0.09 | 0.004 |
| 1063 | P-455 | 358 | D-1C-9 | J-55 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 31 | 0.09 | 0.004 |
| 1122 | P-100 | 257 | D-1C-2-B | FH-C2-C | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 28 | 0.08 | 0.003 |
| 1123 | P-101 | 358 | FH-C2-C | FH-C2-B | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 28 | 0.08 | 0.003 |
| 1129 | P-471(1) | 229 | FH-C2-B | D-1C-2-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 28 | 0.08 | 0.003 |
| 913 | P-97 | 604 | D-1C-9 | FH-C9 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -28 | 0.08 | 0.003 |
| 1194 | P-473(2) | 309 | FH-C2-D | J-346 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 25 | 0.07 | 0.003 |
| 1196 | P-473(1)(1) | 271 | D-1C-2-A | FH-C2-E | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 25 | 0.07 | 0.003 |
| 1197 | P-473(1)(2) | 299 | FH-C2-E | FH-C2-D | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 25 | 0.07 | 0.003 |
| 1125 | P-106 | 23 | J-381 | J-346 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -25 | 0.07 | 0.000 |
| 952 | P-120 | 114 | J-26 | D-1B-2-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 24 | 0.07 | 0.002 |
| 1071 | P-80 | 136 | J-40 | J-329 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 19 | 0.05 | 0.002 |
| 1144 | P-81 | 146 | J-329 | J-352 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 19 | 0.05 | 0.002 |
| 934 | P-111 | 533 | J-16 | J-44 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 21 | 0.03 | 0.000 |
| 1001 | P-438 | 777 | J-16 | J-14 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | -21 | 0.03 | 0.000 |
| 1157 | P-86 | 221 | J-353 | FH-C1-L | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -4 | 0.02 | 0.001 |
| 1158 | P-87 | 276 | FH-C1-L | J-42 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -4 | 0.02 | 0.000 |
| 1181 | P-102 | 50 | J-600 | FH-C1-A | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -4 | 0.02 | 0.000 |
| 1182 | P-103 | 84 | FH-C1-A | J-355 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -4 | 0.02 | 0.001 |
| 1084 | P-446(1) | 76 | J-51 | J-336 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 5 | 0.01 | 0.002 |
| 1085 | P-446(2) | 108 | J-336 | J-52 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 5 | 0.01 | 0.000 |
| 776 | P-26 | 317 | J-50 | D-1A-2 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 5 | 0.01 | 0.000 |
| 1154 | P-104 | 66 | J-355 | J-353 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | -2 | 0.01 | 0.000 |
| 1151 | P-476 | 86 | J-353 | FH -C1-E | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 2 | 0.01 | 0.000 |
| 1155 | P-477 | 478 | FH -C1-E | J-355 | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 2 | 0.01 | 0.000 |
| 890 | P-82 | 417 | D-1C-5-B | D-1C-5-A | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -4 | 0.01 | 0.000 |
| 1065 | P-456 | 992 | D-1B-1-A | FUTURE CONNECTION ACROSS 101 | 24.0 | Ductile Iron | 130.0 | False | 0.000 | 5 | 0.00 | 0.000 |
| 959 | P-126 | 340 | D-1B-1-C | J-46 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | -1 | 0.00 | 0.000 |
| 1136 | P-89 | 248 | J-346 | FH-C2-A | 8.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |
| 1188 | P-479 | 120 | D-1C-2-B | FH-C2-G | 6.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |
| 975 | P-137 | 24 | FH-A7 | D-1A-7 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |
| 1029 | P-441 | 121 | J-22 | FH-A5 | 12.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |
| 725 | P-10 | 181 | J-1 | J-19 | 16.0 | Ductile Iron | 130.0 | False | 0.000 | 0 | 0.00 | 0.000 |

**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 | 1,760.80 | Zone - 4 | 4,127 | 1,760.80 |

P:\2018\18114\Design-Reports\18114-701\Water\Model\18114-701 Water Model Sub 1.wtg

**Appendix E**
Fire Flow
*Vi at Cavasson*

# Flow Test Summary

| | |
|---|---|
| Project Name: | EJFT 21361-1 - Cavasson |
| Project Address: | Loop 101 & N Hayden Road, Scottsdale, AZ 85255 |
| Date of Flow Test: | 2021-08-27 |
| Time of Flow Test: | 6:25 AM |
| Data Reliable Until: | 2022-02-27 |
| Conducted By: | Steven Saethre & Eder Cueva (EJ Flow Tests) 602.999.7637 |
| Witnessed By: | Sonny Schreiner (City of Scottsdale) 602.819.7718 |
| City Forces Contacted: | City of Scottsdale (602.819.7718) |
| Permit Number: | C66213 |

## Raw Flow Test Data

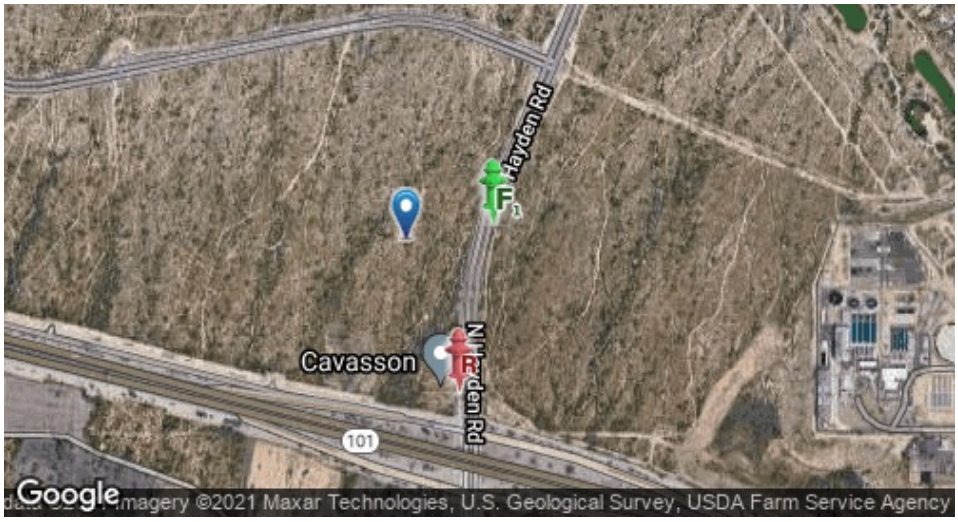
| | |
|---|---|
| Static Pressure: | 62.0 PSI |
| Residual Pressure: | 52.0 PSI |
| Flowing GPM: | 1,743 |
| GPM @ 20 PSI: | 3,783 |

## Data with a 10 % Safety Factor

| | |
|---|---|
| Static Pressure: | 55.8 PSI |
| Residual Pressure: | 45.8 PSI |
| Flowing GPM: | 1,743 |
| GPM @ 20 PSI: | 3,471 |

### Hydrant $F_1$

| | | |
|---|---|---|
| Pitot Pressure (1): | 25 | PSI |
| Coefficient of Discharge (1): | 0.9 | |
| Hydrant Orifice Diameter (1): | 2.5 | inches |
| Pitot Pressure (2): | 29 | PSI |
| Coefficient of Discharge (2): | 0.9 | |
| Hydrant Orifice Diameter (2): | 2.5 | inches |




Project Site

Static-Residual Hydrant

Flow Hydrant

Distance Between $F_1$ and R
1181 ft (measured linearly)

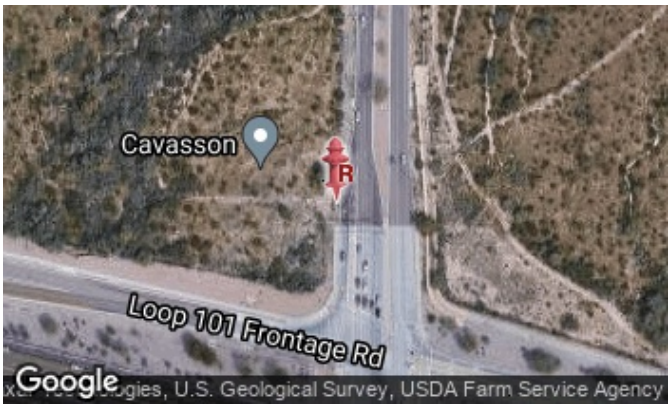
Static-Residual Elevation
1614 ft (above sea level)

Flow Hydrant ($F_1$) Elevation
1633 ft (above sea level)

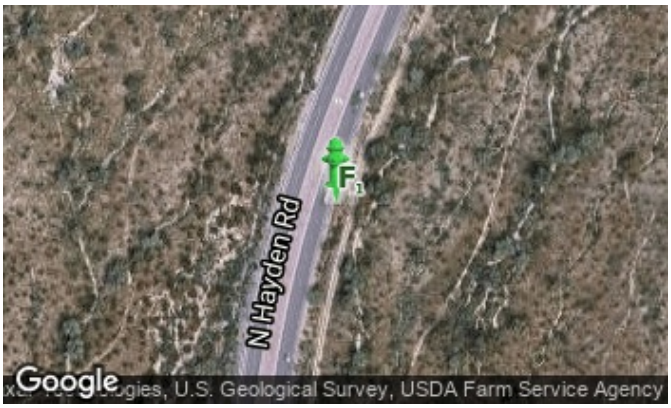
Elevation & distance values are approximate

# Flow Test Summary

**Static-Residual Hydrant**

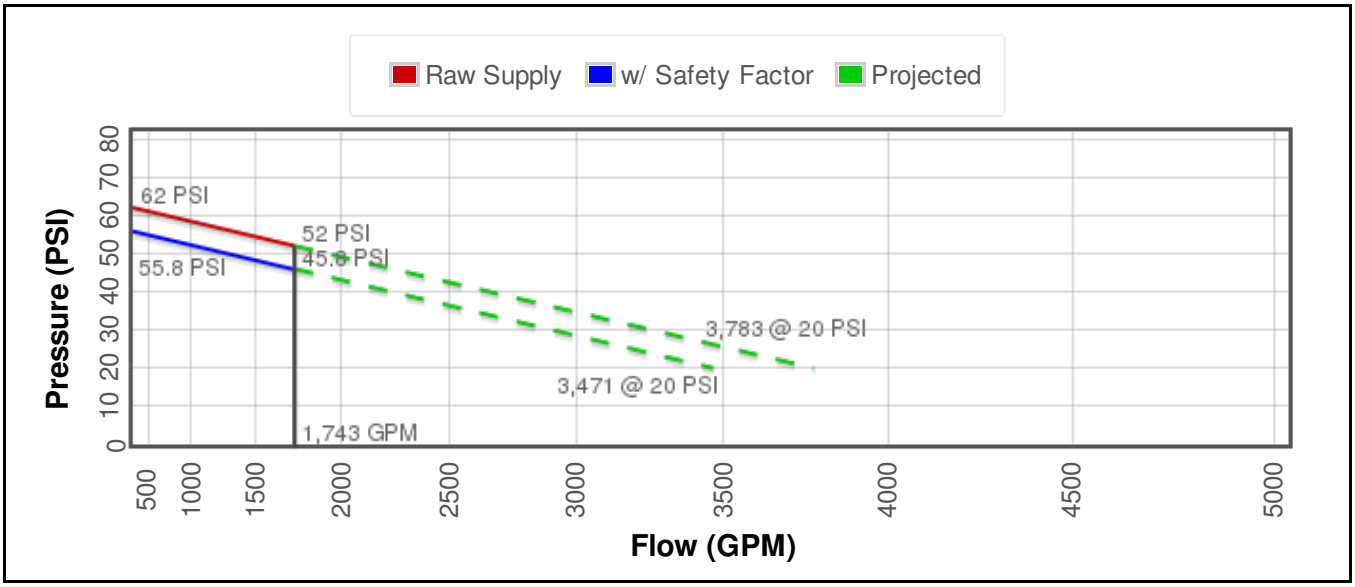



**Flow Hydrant** (only hydrant F1 shown for clarity)




**Approximate Project Site**


**Water Supply Curve $N^{1.85}$ Graph**



# Flow Test Summary

| | |
|---|---|
| Project Name: | EJFT 21361-2 - Cavasson |
| Project Address: | N Hayden Rd & Legacy Blvd, Scottsdale, AZ 85255 |
| Date of Flow Test: | 2021-08-27 |
| Time of Flow Test: | 6:55 AM |
| Data Reliable Until: | 2022-02-27 |
| Conducted By: | Steven Saethre & Eder Cueva (EJ Flow Tests) 602.999.7637 |
| Witnessed By: | Sonny Schreiner (City of Scottsdale) 602.819.7718 |
| City Forces Contacted: | City of Scottsdale (602.819.7718) |
| Permit Number: | C66213 |

## Raw Flow Test Data

| | |
|---|---|
| Static Pressure: | 50.0 PSI |
| Residual Pressure: | 40.0 PSI |
| Flowing GPM: | 1,610 |
| GPM @ 20 PSI: | 2,914 |

## Data with a 10 % Safety Factor

| | |
|---|---|
| Static Pressure: | 45.0 PSI |
| Residual Pressure: | 35.0 PSI |
| Flowing GPM: | 1,610 |
| GPM @ 20 PSI: | 2,641 |

### Hydrant $F_1$

| | | |
|---|---|---|
| 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 |


Project Site

Static-Residual Hydrant

Flow Hydrant

Distance Between $F_1$ and R
490 ft (measured linearly)

Static-Residual Elevation
1650 ft (above sea level)

Flow Hydrant ($F_1$) Elevation
1647 ft (above sea level)

Elevation & distance values are approximate

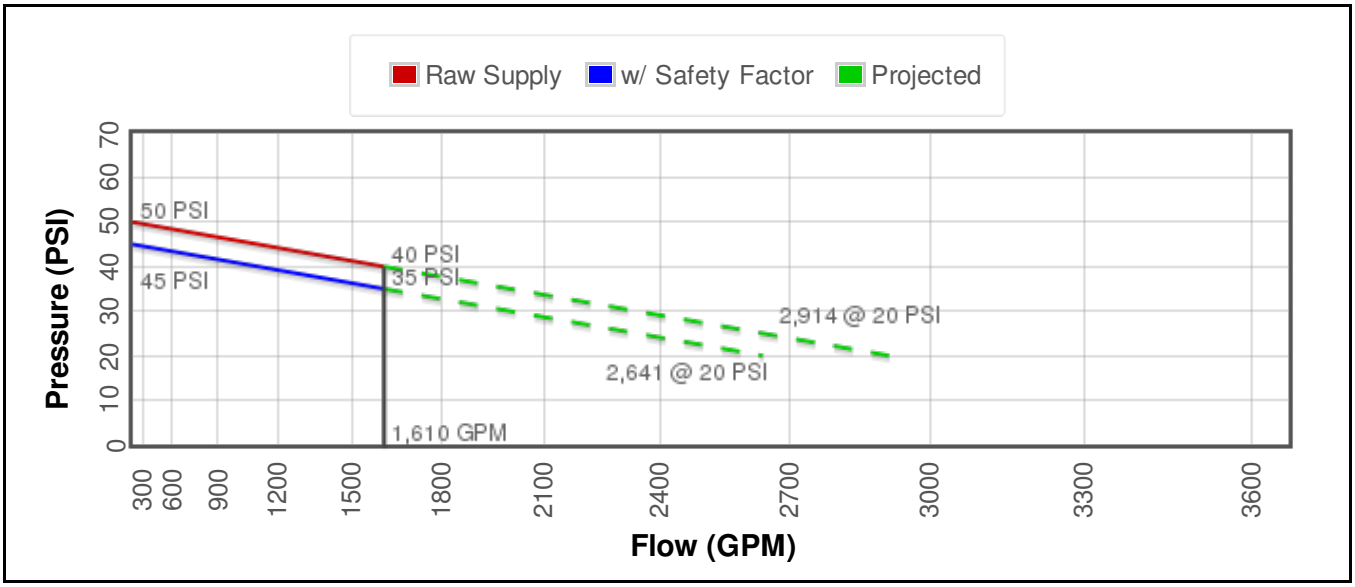
# Flow Test Summary

**Static-Residual Hydrant**


**Flow Hydrant** (only hydrant F1 shown for clarity)


**Approximate Project Site**


**Water Supply Curve $N^{1.85}$ Graph**



# Flow Test Summary

| | |
|---|---|
| Project Name: | EJFT 20256-1 |
| Project Address: | N Hayden Rd & Legacy Blvd, Scottsdale, AZ 85255 |
| Date of Flow Test: | 2020-10-13 |
| Time of Flow Test: | 6:30 AM |
| Data Reliable Until: | 2021-04-13 |
| Conducted By: | Eder Cueva & Steven Saethre (EJ Flow Tests) 602.999.7637 |
| Witnessed By: | Sonny Schreiner (City of Scottsdale) 602.819.7718 |
| City Forces Contacted: | City of Scottsdale (602.819.7718) |
| Permit Number: | C63258 |

## Raw Flow Test Data

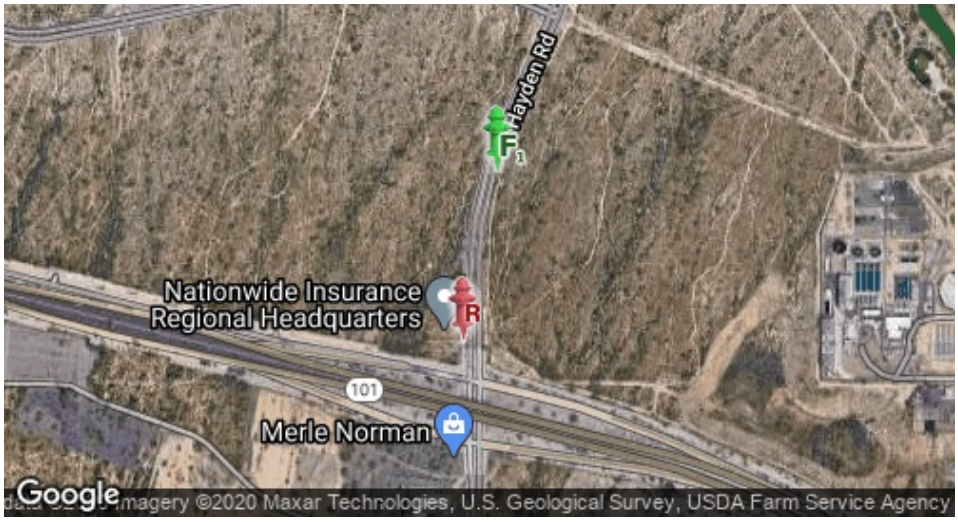
| | |
|---|---|
| Static Pressure: | 62.0 PSI |
| Residual Pressure: | 52.0 PSI |
| Flowing GPM: | 1,744 |
| GPM @ 20 PSI: | 3,786 |

## Data with a 10 % Safety Factor

| | |
|---|---|
| Static Pressure: | 55.8 PSI |
| Residual Pressure: | 45.8 PSI |
| Flowing GPM: | 1,744 |
| GPM @ 20 PSI: | 3,473 |

### Hydrant $F_1$

| | | |
|---|---|---|
| Pitot Pressure (1): | 27 | PSI |
| Coefficient of Discharge (1): | 0.9 | |
| Hydrant Orifice Diameter (1): | 2.5 | inches |
| Pitot Pressure (2): | 27 | 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
1189 ft (measured linearly)

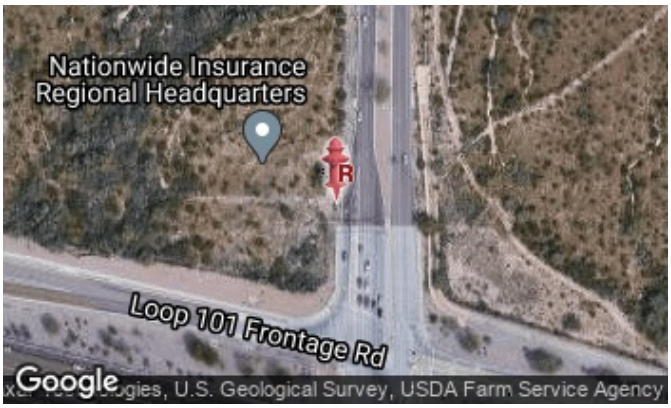
Static-Residual Elevation
1614 ft (above sea level)

Flow Hydrant ($F_1$) Elevation
1633 ft (above sea level)

Elevation & distance values are approximate

# Flow Test Summary

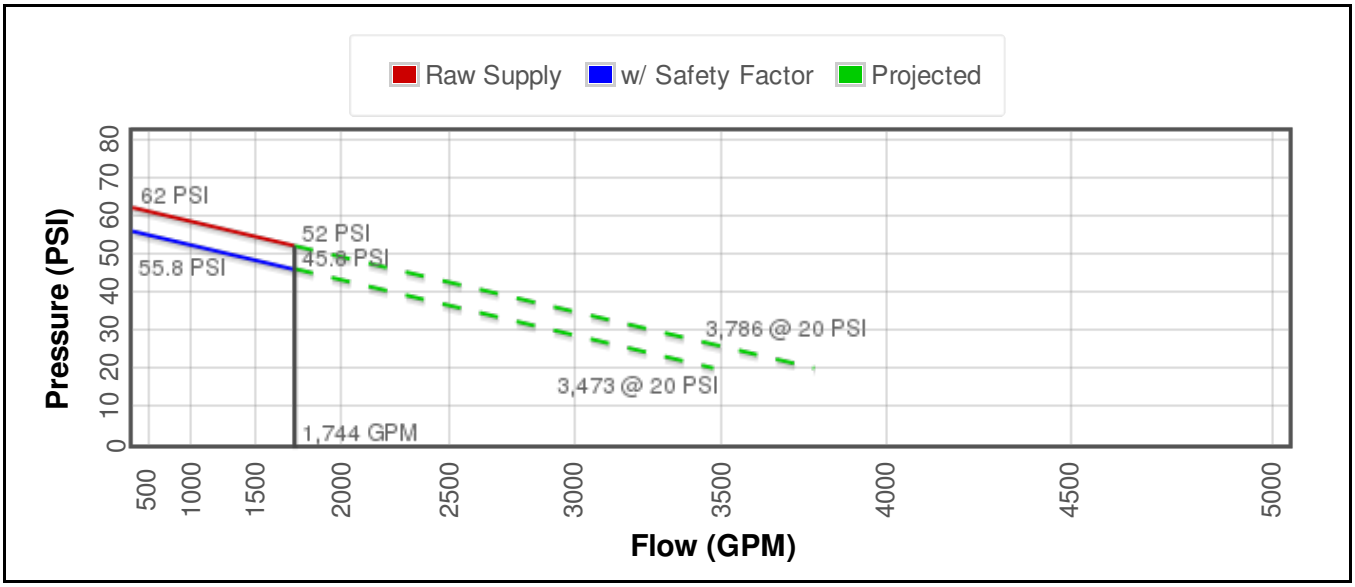
**Static-Residual Hydrant**




**Flow Hydrant** (only hydrant F1 shown for clarity)


**Approximate Project Site**


**Water Supply Curve $N^{1.85}$ Graph**



# Flow Test Summary

| | |
|---|---|
| Project Name: | EJFT 20256-2 |
| Project Address: | N Hayden Rd & Legacy Blvd, Scottsdale, AZ 85255 |
| Date of Flow Test: | 2020-10-13 |
| Time of Flow Test: | 6:50 AM |
| Data Reliable Until: | 2021-04-13 |
| Conducted By: | Eder Cueva & Steven Saethre (EJ Flow Tests) 602.999.7637 |
| Witnessed By: | Sonny Schreiner (City of Scottsdale) 602.819.7718 |
| City Forces Contacted: | City of Scottsdale (602.819.7718) |
| Permit Number: | C63258 |

## Raw Flow Test Data

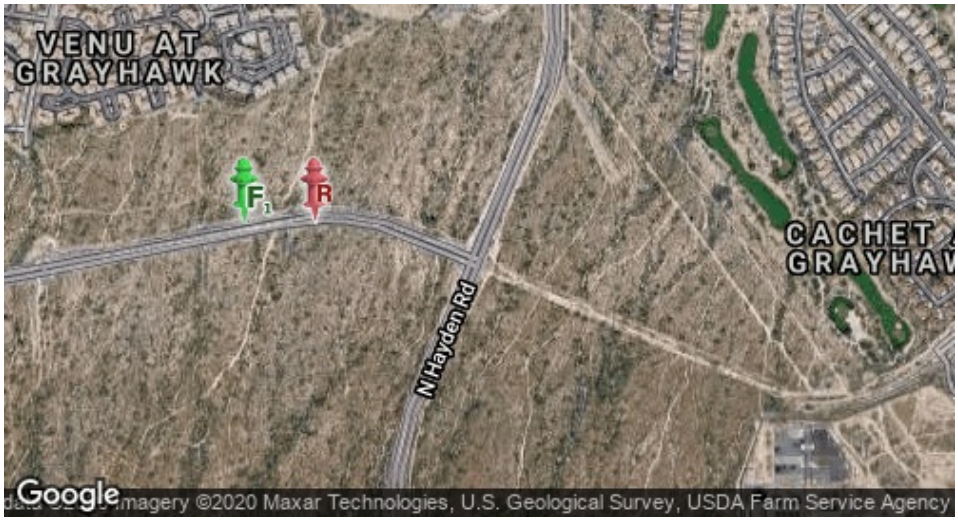
| | |
|---|---|
| Static Pressure: | 46.0 PSI |
| Residual Pressure: | 38.0 PSI |
| Flowing GPM: | 1,520 |
| GPM @ 20 PSI: | 2,872 |

## Data with a 10 % Safety Factor

| | |
|---|---|
| Static Pressure: | 41.4 PSI |
| Residual Pressure: | 33.4 PSI |
| Flowing GPM: | 1,520 |
| GPM @ 20 PSI: | 2,586 |

### Hydrant $F_1$

| | | |
|---|---|---|
| Pitot Pressure (1): | 20 | PSI |
| Coefficient of Discharge (1): | 0.9 | |
| Hydrant Orifice Diameter (1): | 2.5 | inches |
| Pitot Pressure (2): | 21 | 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
488 ft (measured linearly)

Static-Residual Elevation
1650 ft (above sea level)

Flow Hydrant ($F_1$) Elevation
1647 ft (above sea level)

Elevation & distance values are approximate

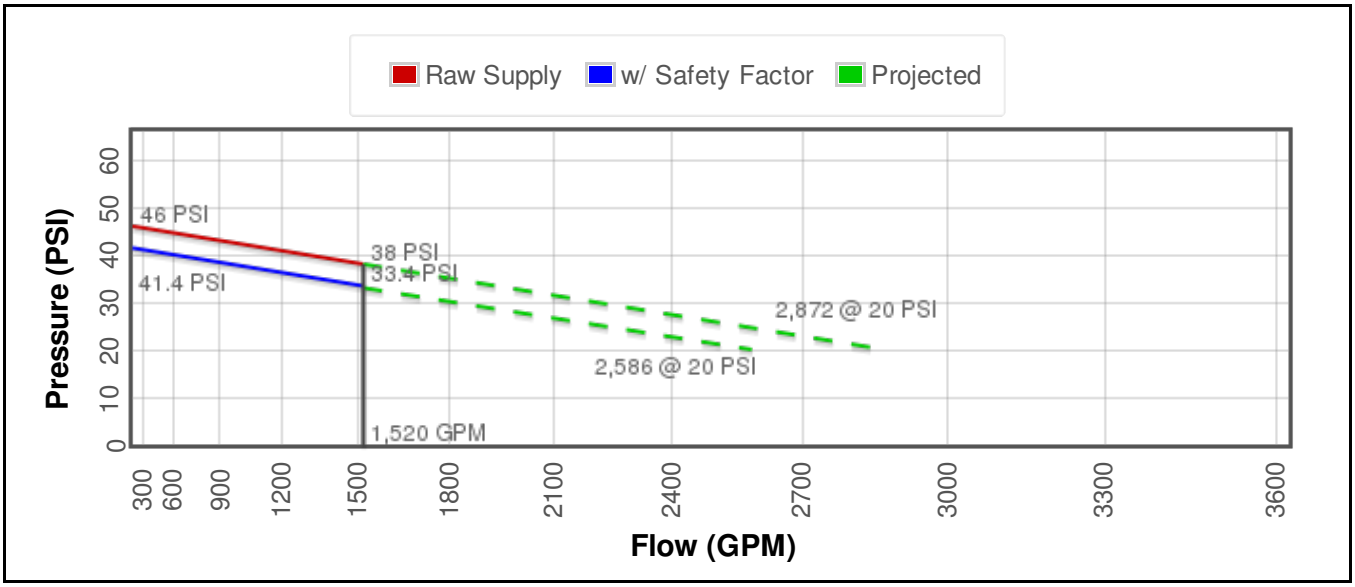
# Flow Test Summary

**Static-Residual Hydrant**


**Flow Hydrant** (only hydrant F1 shown for clarity)


**Approximate Project Site**


**Water Supply Curve $N^{1.85}$ Graph**



# Flow Test Summary

| | |
|---|---|
| Project Name: | EJFT 18250-1 |
| Project Address: | N Hayden Rd & Legacy Blvd, Scottsdale, AZ 85255 |
| Date of Flow Test: | 2018-10-16 |
| Time of Flow Test: | 7:30 AM |
| Data Reliable Until: | 2019-04-16 |
| Conducted By: | Cesar Reyna & Austin Gourley (EJ Flow Tests) 602.999.7637 |
| Witnessed By: | Jared Berry (City of Scottsdale) 602.541.4942 |
| City Forces Contacted: | City of Scottsdale (602.541.4942) |
| Permit Number: | C56459 |

## Raw Flow Test Data

| | |
|---|---|
| Static Pressure: | 66.0 PSI |
| Residual Pressure: | 59.0 PSI |
| Flowing GPM: | 1,839 |
| GPM @ 20 PSI: | 5,082 |

## Data with a 10 % Safety Factor

| | |
|---|---|
| Static Pressure: | 59.4 PSI |
| Residual Pressure: | 52.4 PSI |
| Flowing GPM: | 1,839 |
| GPM @ 20 PSI: | 4,674 |

### Hydrant $F_1$

| | | |
|---|---|---|
| Pitot Pressure (1): | 30 | PSI |
| Coefficient of Discharge (1): | 0.9 | |
| Hydrant Orifice Diameter (1): | 2.5 | inches |
| Pitot Pressure (2): | 30 | 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
1190 ft (measured linearly)

Static-Residual Elevation
1614 ft (above sea level)

Flow Hydrant ($F_1$) Elevation
1633 ft (above sea level)

Elevation & distance values are approximate

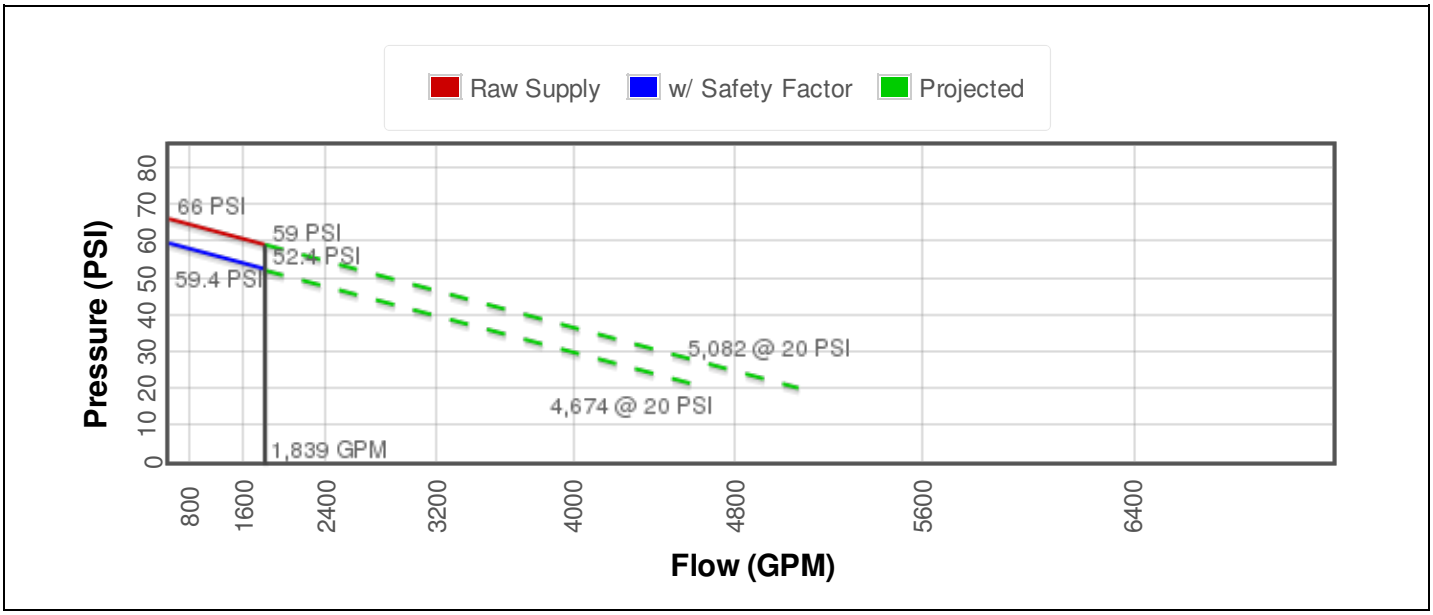
# Flow Test Summary

**Static-Residual Hydrant**


**Flow Hydrant** (only hydrant F1 shown for clarity)


**Approximate Project Site**


**Water Supply Curve $N^{1.85}$ Graph**



# Flow Test Summary

| | |
|---|---|
| Project Name: | EJFT 18250-2 |
| Project Address: | N Hayden Rd & Legacy Blvd, Scottsdale, AZ 85255 |
| Date of Flow Test: | 2018-10-16 |
| Time of Flow Test: | 7:50 AM |
| Data Reliable Until: | 2019-04-16 |
| Conducted By: | Cesar Reyna & Austin Gourley (EJ Flow Tests) 602.999.7637 |
| Witnessed By: | Jared Berry (City of Scottsdale) 602.541.4942 |
| City Forces Contacted: | City of Scottsdale (602.541.4942) |
| Permit Number: | C56459 |

## Raw Flow Test Data

| | |
|---|---|
| Static Pressure: | 51.0 PSI |
| Residual Pressure: | 44.0 PSI |
| Flowing GPM: | 1,645 |
| GPM @ 20 PSI: | 3,673 |

## Data with a 10 % Safety Factor

| | |
|---|---|
| Static Pressure: | 45.9 PSI |
| Residual Pressure: | 38.9 PSI |
| Flowing GPM: | 1,645 |
| GPM @ 20 PSI: | 3,333 |

### Hydrant $F_1$

| | | |
|---|---|---|
| Pitot Pressure (1): | 24 | PSI |
| Coefficient of Discharge (1): | 0.9 | |
| Hydrant Orifice Diameter (1): | 2.5 | inches |
| Pitot Pressure (2): | 24 | 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
489 ft (measured linearly)

Static-Residual Elevation
1650 ft (above sea level)

Flow Hydrant ($F_1$) Elevation
1647 ft (above sea level)

Elevation & distance values are approximate

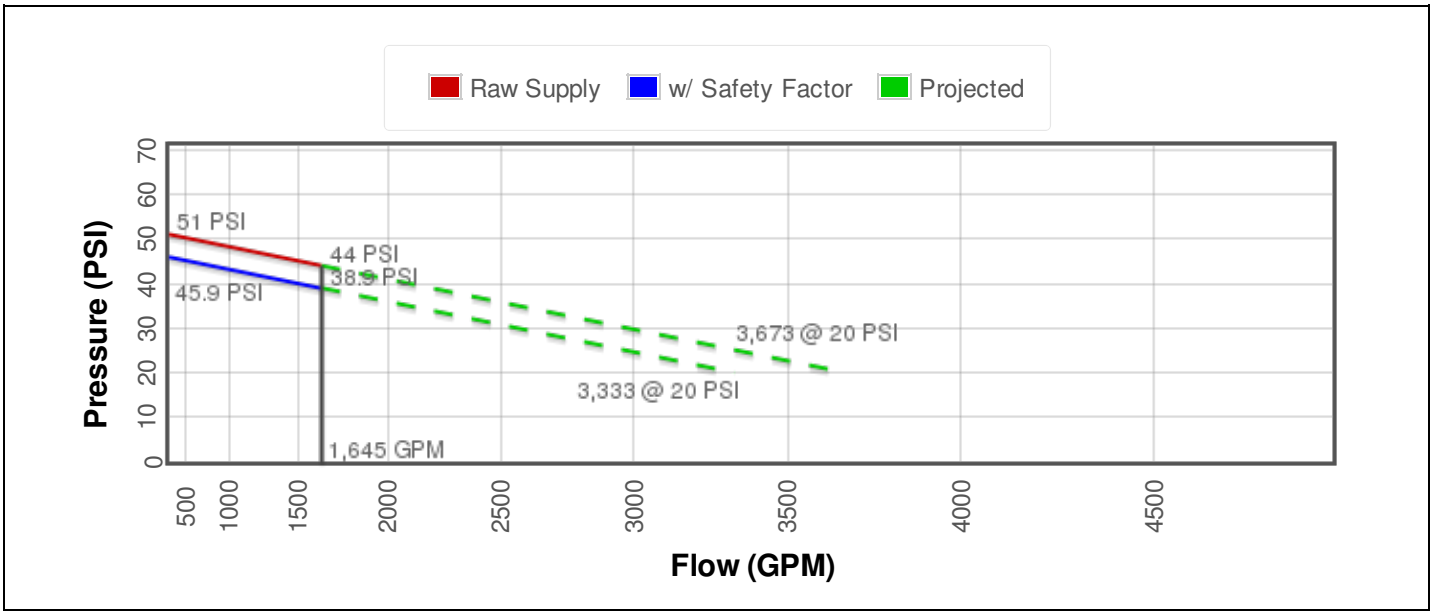
# Flow Test Summary

**Static-Residual Hydrant**


**Flow Hydrant** (only hydrant F1 shown for clarity)


**Approximate Project Site**


**Water Supply Curve $N^{1.85}$ Graph**



**Exhibits**
*Vi at Cavasson*

LOT 4
*[ASLD]*

LOT *3*
*[ASLD]*

J–16
56 psi

J–14
55 psi

J–13
53 psi

J–37
52 psi

J–12
51 psi

J–11
50 psi

FH–C5

1C-5

D–1C–5–A
46 gpm
52 psi

J–52
52 psi

J–336
52 psi

J–51
53 psi

J–351
54 psi

1C-6

FH–C1–C

FH–C1–K

FH–C1–L

FH–C1–E

J–353
55 psi

J–355
55 psi

FH–C1–A

J–600
54 psi

D–1C–1–B
66 gpm
65 psi

J–601
60 psi

J–42
56 psi

FH–C1–J

1C-1

FH–C1–I

FH–C1–D

D–1C–1–A

FH–C1–G
66 gpm
56 psi

FC–C1–H

FH–C1–F

FH–C1–B

D–1C–2–A
53 gpm
56 psi

J–343
71 psi

J–381
59 psi

J–346
59 psi

FH–C2–E

FH–C2–F

FH–C2–D

J–329
56 psi

J–40
56 psi

J–36
54 psi

J–352
57 psi

J–44
59 psi

1C-2

FH–C2–B

1C-8

J–330
57 psi

FH–C2–A

FH–C2–G

D–1C–2–B
53 gpm
60 psi

FH–C2–C

FH–C8

1C-9

D–1C–9
45 gpm
58 psi

J–27
61 psi

J–24
59 psi

J–18
59 psi

FH–A2–3

FH–C9

J–20
58 psi

J–17
62 psi

D–1B–2–B
54 gpm
62 psi

J–48
60 psi

J–25
60 psi

1B-2

1A-5

1A-2

J–46
63 psi

D–1B–2–A
62 psi

FH–A2–4

D–1A–2

Color Coding Legend
Pipe: Diameter (in)

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

75 0 75 150
scale feet

HUBBARD ENGINEERING
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Suite 12000
Mesa, AZ 85210
PH: 480.892.3313
www.hubbardengineering.com

# AVERAGE DAY DEMAND
# WATER SYSTEM MAP SITE SPECIFIC

| Date | Project Eng. |
|---|---|
| 09/10/2021 | M. WOLF |
| Project No. | Project Mgr. |
| 18114–701 | M. WOLF |

SHT: 01 OF 01
EXHIBIT 1


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Mesa, AZ 85210
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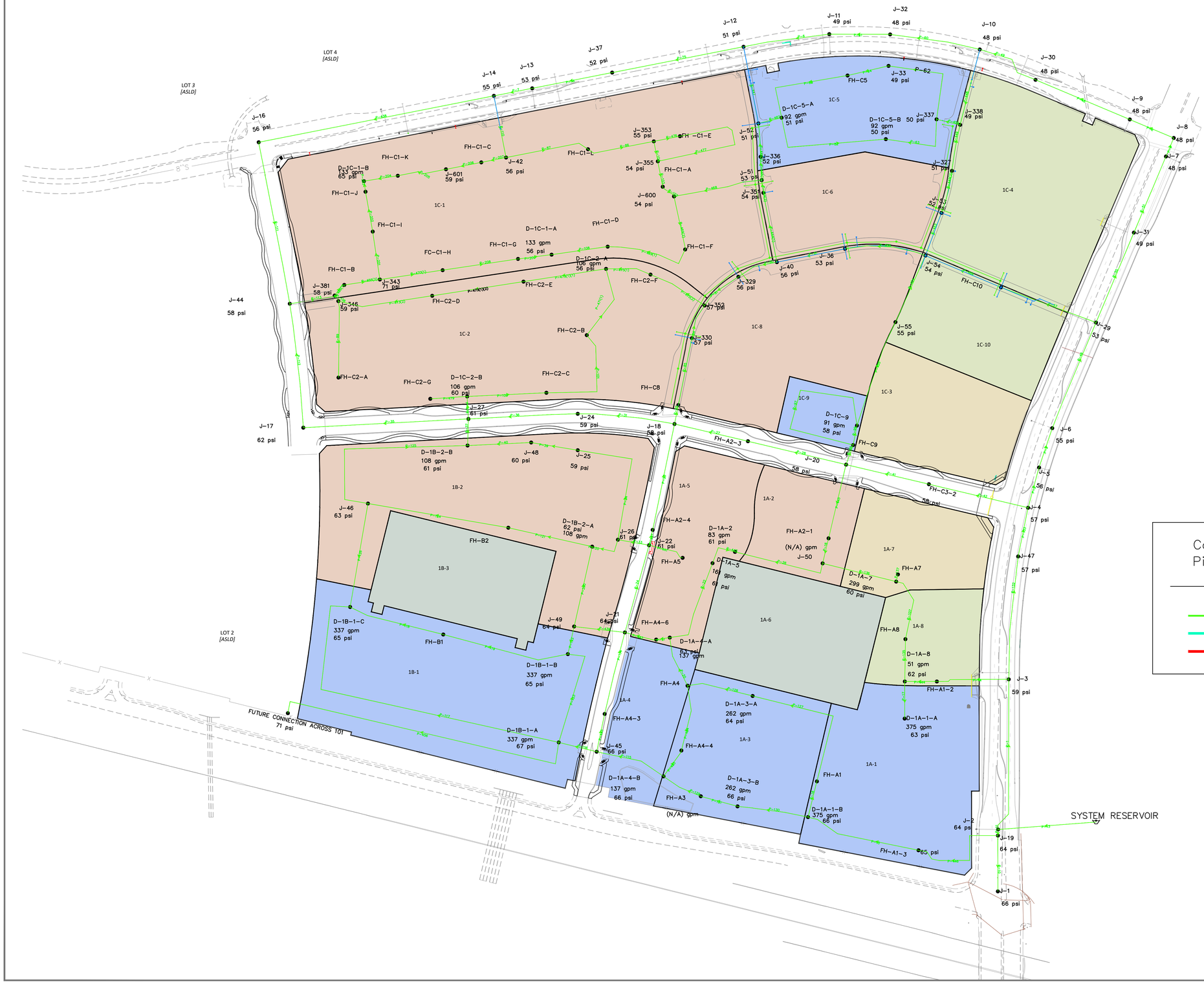
# AVERAGE DAY DEMAND WATER SYSTEM MAP

| Date | Project Eng. |
|---|---|
| 09/10/2021 | M. WOLF |
| Project No. | Project Mgr. |
| 18114-701 | M. WOLF |

SHT: 01 OF 01
EXHIBIT 2

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Mesa, AZ 85210
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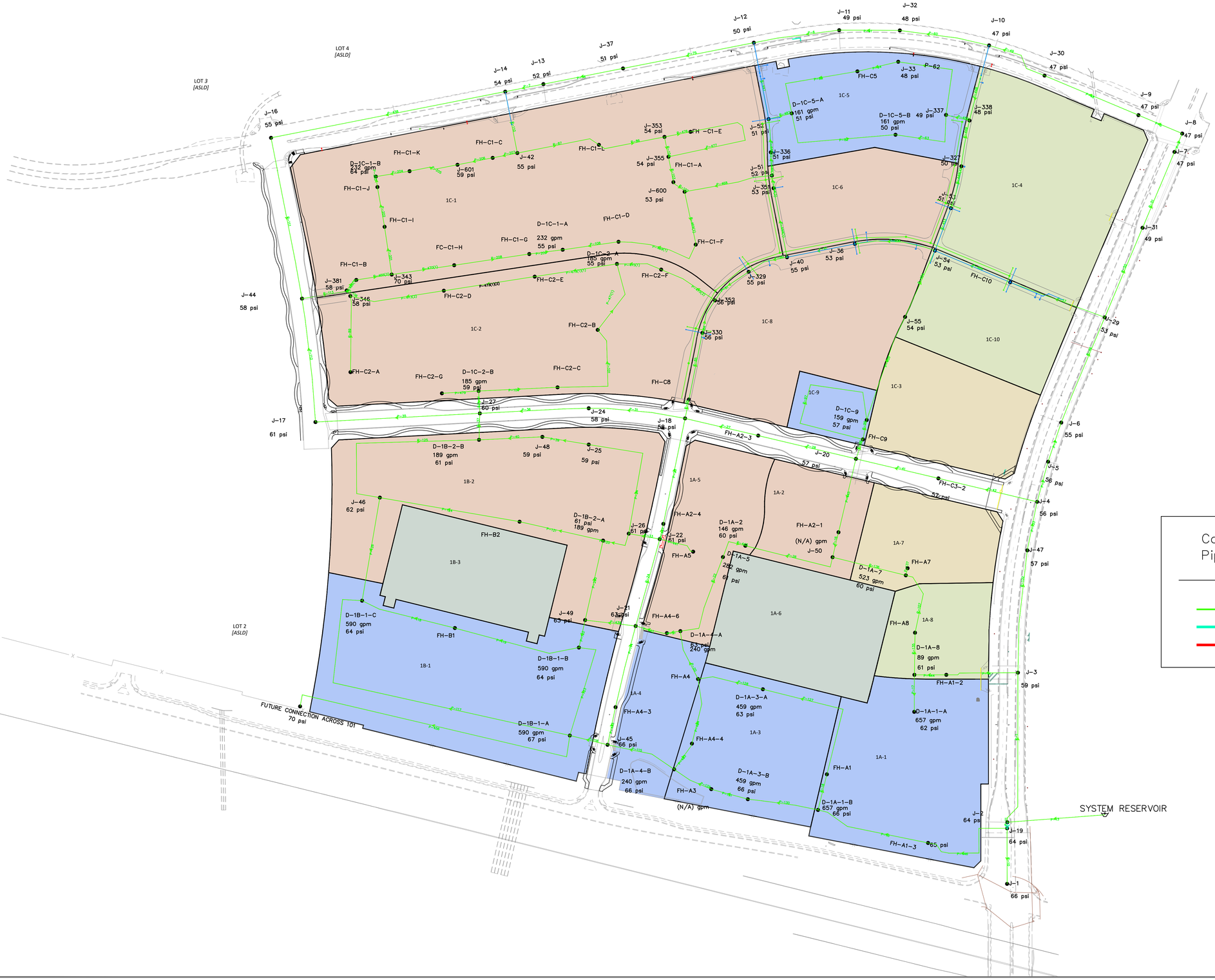
# MAX DAY DEMAND
# WATER SYSTEM MAP

| Date | Project Eng. |
|---|---|
| 09/10/2021 | M. WOLF |
| Project No. | Project Mgr. |
| 18114-701 | G. BROWN |

SHT: 01 OF 01

EXHIBIT 3




Color Coding Legend
Pipe: Velocity (ft/s)

<= 5.00
<= 10.00
Other

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# PEAK HOUR DEMAND
# WATER SYSTEM MAP

| Date | Project Eng. |
|---|---|
| 09/10/2021 | M. WOLF |
| Project No. | Project Mgr. |
| 18114-701 | G. BROWN |

SHT: 01 OF 01
EXHIBIT 4


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Suite 12000
Mesa, AZ 85210
PH: 480.892.3313
www.hubbardengineering.com

# MAX DAY PLUS FIRE FLOW WATER SYSTEM MAP

| Date | Project Eng. |
|---|---|
| 09/10/2021 | M. WOLF |
| Project No. | Project Mgr. |
| 18114-701 | G. BROWN |

SHT: 01 OF 01
EXHIBIT 5