PRELIMINARY Basis of Design Report

☑ ACCEPTED

☐ ACCEPTED AS NOTED

☐ REVISE AND RESUBMIT

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

Disclaimer: If accepted; the preliminary approval is granted under the condition that a final basis of design report will also be submitted for city review and approval (typically during the DR or PP case). The final report shall incorporate further water or sewer design and analysis requirements as defined in the city design standards and policy manual and address those items noted in the preliminary review comments (both separate and included herein). The final report shall be submitted and approved prior to the plan review submission.
For questions or clarifications contact the Water Resources Planning and Engineering Department at 480-312-5685.

BY apritchard DATE 1/29/2024

The Roasterie – Phase 4D
Scottsdale, AZ

Preliminary Water Report

Prepared for:
Fairmont Scottsdale Princess
7575 E Princess Drive
Scottsdale, AZ 85255

Prepared by:
Kimley-Horn and Associates, Inc.
1001 W. Southern Ave
Suite 131
Mesa, AZ 85210

Kimley»Horn

291822001
November 22, 2023

Registered Professional Engineer (Civil)
CERTIFICATE NO.
47693
HEATHER
ROBERTS
Date Signed 11/22/23
ARIZONA, USA
Exp. Date 03/31/26

Preliminary Water Report
The Roasterie – Phase 4D
Fairmont Scottsdale Princess

NOVEMBER 22, 2023

Prepared By:

Kimley»Horn

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1. INTRODUCTION

1.1 PROJECT DESCRIPTION

1.1.1. General Project Information

The proposed development, located at 7575 E Princess Drive in Scottsdale, Arizona, consists of ± 1 acre of existing resort property. The proposed development is located within the City of Scottsdale (COS), APN# 215-08-695, in a portion of quarter of Section 35, Township 4 North, Range 4 East relative to the Gila and Salt River Base Line and Meridian, Maricopa County Arizona.

More specifically, the site is located south of the resort's Well & Being Spa and North of Building F of the Fairmont Scottsdale Princess (FSP). Refer to *Appendix A* for the project location. The existing property is currently zoned as C-2 and is primarily developed with buildings, sidewalks, and a variety of desert landscaping.

1.1.2. Type of Report

This Preliminary Water Report is intended to satisfy City of Scottsdale and Maricopa County requirements for the site improvement water system for the proposed restaurant. This report provides a description of the current water infrastructure and systems and a description of the required and proposed water design.

1.1.3. Project Description

As part of Phase 4D of the resort's expansion, the FSP is proposing to construct one restaurant/coffee shop with indoor and outdoor dining areas, bounded by existing FSP buildings. The project is anticipated to consist of one 2-story building, outdoor dining, water features, extensive landscaping with integrated hardscape improvements, and utility improvements to support the development. There is no direct access to the site from public ROW or private vehicular drives.

1.1.4. Existing Water System Studies

A "Master Water Report" in Scottsdale, Arizona was prepared in November 2023 by Wood Patel (Project No. 215319). Refer to *Appendix C* for the Master Water report.

1.1.5. Purpose and Objectives

This report provides a water system design for the subject site that is intended to meet the water demands and evaluate system hydraulics based on the standards and guidelines for the City of Scottsdale and Maricopa County.

1.1.6. Water System Design Criteria

The following is a summary of the primary design criteria utilized:

Average Day Water Demand: …… 1.3 gpd/sf

Peak Flow Demand: ……... 6.0 x ADD

Abbreviations: gpd = gallons per day; sf = square feet; ADD = average day demand.

*Includes both inside and outside use, per Figure 6-1.2, City of Scottsdale *Design Standards and Policies Manual*

2. EXISTING WATER INFRASTRUCTURE

2.1 EXISTING DISTRIBUTION SYSTEM

See *Appendix D* for the Sunset Beach Pool Water and Sewer As-built Plan which shows the anticipated connection point.

3. PROPOSED WATER INFRASTRUCTURE

3.1 ONSITE WATER INFRASTRUCTURE

The proposed water services for this project will include a 6-inch fire service with backflow preventer, a 2-inch domestic service with meter and backflow preventer connected to the existing public 6-inch main running through the Fairmont Scottsdale Princess property south of the Spa Building, one (1) FDC connection, and a proposed water feature. One (1) new fire hydrant will be added for building protection. The water features depicted on the drawing are placeholders and will need to be coordinated with the City of Scottsdale Water Conservation Act as design progresses. Refer to *Appendix F* for the Preliminary Utility Plan.

3.3 WATER DEMAND CALCULATIONS

The average day water demand for the proposed restaurant is projected to be approximately 19 gallons per minute (gpm). Peak hour demands are projected to be 114.1 gpm refer to *Table 1 Water Demands.* Refer to *Appendix C* for the Master Water report for water model and results for the Roasterie and surrounding infrastructure. An additional 51 GPD was added to the Average Daily Flow to account for the water features. Refer to *Appendix D of the Water Master Report, by Wood Patel* for the water feature demand calculation.

Table 1 Water Demands

Land Use	Building SF	Average Daily Demand (gpd/SF)	Average Daily Flow (gpd)	ADF (gpm)	Max Day Flow (gpd)	MDF (gpm)	Peak Hour Flow (gpd)	PHF (gpm)
Restaurant	10,500	1.3	13,702	19.1	27,352	38.1	81,952	114.1

The fire flow requirement was determined from Appendix B of the International Fire Code (IFC), 2018. Refer to *Table 2 Fire Demands* below. Refer to *Appendix C* for the Master Water report for water model and results for the Roasterie and surrounding infrastructure.

Table 2 Fire Demands

Land Use	Building Type	Area (SF)	Fire Flow Required (GPM)	Reduction %	Total Fire Flow (GPM)
Restaurant	V-B	10,500	2,750	Min	1,500

4. MAINTENANCE

Ongoing maintenance is required to preserve the system integrity and avoid overload. Failure to provide adequate maintenance can lead to reduced system performance. Maintenance within the property is the responsibility of the owner/developer.

5. SUMMARY AND CONCLUSIONS

Based on our analysis of the proposed restaurant, the following conclusions can be made:

1. The design criteria used to estimate potable water demands and evaluate system hydraulics are based on the design criteria listed in the *City of Scottsdale Design Standards and Policies Manual, 2018.*

2. The proposed water infrastructure described is adequate to serve the domestic and fire flow requirements for the proposed restaurant based on the current water demand.

6. REFERENCES

Design Standards & Policies Manual, City of Scottsdale, 2018

Water Master Report by Wood Patel & Associates, Inc., dated November 22, 2203

Water Distribution Report for Fairmont Scottsdale Hotel Expansion by Wood, Patel & Associates, Inc., dated July 29, 2022

Appendix A – Resort Map

FAIRMONT GOLD
6101-6114 | 6201-6216
6301-6316 | 6401-6424

B BUILDING
1082-1118 | 2082-2118
3082-3115 | 4082-4098

C BUILDING
1119-1144 | 2119-2144
3119-3141

D BUILDING
1067-1081 | 2067-2081
3061-3081 | 4061-4081

E BUILDING
3038-3060 | 4038-4060

F BUILDING
1014-1037 | 2006-2037
3001-3037 | 4001-4021

G BUILDING
1201-1220 | 2201-2220
3201-3220

SUNSET BEACH
1401-1435 | 2401-2435
3401-3435

CASITAS I
5100-5109
5110-5121
5122-5131
5132-5141

CASITAS II
5200-5209
5210-5221
5222-5231
5232-5241

CASITAS III
5300-5309
5310-5321
5322, 24, 26, 28, 30
5332, 34, 36, 38, 40

CASITAS IV
5400-5409
5410, 12, 14, 16, 18

CASITAS MEETING ROOMS
▲I 5130 Ambassador
▲II 5232 Ambassador
▲III 5308 Chairmans
▲III 5320 Ambassador
▲III 5332 Chairmans
▲IV 5400

Fairmont
SCOTTSDALE PRINCESS

KEY LOCATIONS
★ 1 Lobby
2 Front Desk
3 Bell Desk
4 Concierge/Golf Concierge
5 Car Rental
6 Ironwood Circle
7 Fragrance Garden
8 Fairmont Fitness Center*
9 FedEx Business Center

RESTAURANTS & LOUNGES
10 Bourbon Steak by Michael Mina
11 The Plaza Bar
12 La Hacienda by Richard Sandoval
13 The Social at Princess Pool
14 Sunset Beach Pool Bar
15 Ironwood American Kitchen*
16 Toro Latin Resturant & Rum Bar at TPC *(Complimentary shuttle at front drive)*

POOLS
17 Sonoran Splash Pool & Waterslides
18 Sonoran Landing Pool & Bar *(18 & older)*
19 Princess Pool & Jacuzzis
20 Casita Pool & Jacuzzi
21 Sunset Beach Pool & Splash Pad
22 Well & Being Rooftop Pool *(18 & older)*

RECREATION & RETAIL
23 Provisions Coffee Shop & Retail Market
24 Anna J Women's Boutique
25 Maverick Menswear
26 Trailblazers Recreation Center*
27 Virtual Reality Experience*
28 Sport Court & Playground
29 Well & Being Spa | Sisley-Paris Spa
30 Well & Being Salon

MEETING SPACES
31 Fairmont Gold Meeting Room
32 Princess Plaza
33 Princess Falls*
34 Princess Pool Upper East Deck
35 Princess Pool Upper West Deck
36 Princess Overlook
37 Princess Ballroom & Conference Center
38 Palomino Ballroom & Conference Center
39 North Palomino Plaza
40 East Palomino Plaza
41 Ironwood Meeting Room*
42 Canyon Lawn
43 Hacienda Plaza & Trellis
44 Sunset Lawn
45 Pavilion *(Seasonal)*
46 Copper Canyon Western Town

* = LOWER LEVEL
E = ELEVATORS

View the Resort's Current Events & Offerings
SCAN THIS CODE

Appendix B – Water Demand Calculations

WATER DEMAND CALCULATIONS

KHA No. 291822001

Building	*Projected Land Use*	*Building SF*	*Avg. Daily Demand (GPD/SF)*	*ADD (GPD)**	*Avg. Daily Demand (GPM)*	*Max Daily Demand (GPM)*	*Peak Hour Demand (GPM)*	*Water Meter and RPPA Size (in)*
Roasterie	C-2	10,500	1.3	13701	19.03	38.06	114.18	1" meter, 1" RPPA
TOTAL	**GRAND TOTAL**	**10,500**	**-**	13701	**19.03**	**38.06**	**114.18**	

[1]Areas based on site plan

[2]City of Scottsdale Design Standards and Policies Manual, 2018

[3]Avg. Total Day Demand = (SF x 1.3 gpd/SF)

[4]Max. Day Demand = (2 x Avg Day Demand)

[5]Peak Hour Demand = (6 x Avg Day Demand)

[6]GPM values assume a 12-hour active water use period over 24-hours

*Includes 51 GPD additional demand for fountians

AVERAGE DAY WATER DEMANDS [1]							
IN GALLONS PER DAY (GPD) [2]				IN GALLONS PER MINUTE (GPM) [2][3]			
Land Use	Inside Use	Outside Use	Total Use	Inside Use	Outside Use	Total Use	Units
Residential Demand per Dwelling Unit							
< 2 dwelling unit per acre (DU/ac)	208.9	276.7	485.6	0.30	0.39	0.69	per unit
2 – 2.9 DU/ac	193.7	276.7	470.4	0.27	0.39	0.66	per unit
3 – 7.9 DU/ac	175.9	72.3	248.2	0.25	0.11	0.36	per unit
8 – 11.9 DU/ac	155.3	72.3	227.6	0.22	0.11	0.33	per unit
12 – 22 DU/ac	155.3	72.3	227.6	0.22	0.11	0.33	per unit
High Density Condominium (condo)	155.3	30	185.3	0.22	0.05	0.27	per unit
Resort Hotel (includes site amenities)	401.7	44.6	446.3	0.56	0.07	0.63	per room
Service and Employment							
Restaurant	1.2	0.1	1.3	1.67E-03	1.39E-04	1.81E-03	per square foot (sq.ft.)
Commercial/ Retail	0.7	0.1	0.8	9.73E-04	1.39E-04	1.11E-03	per sq.ft.
Commercial High Rise	0.5	0.1	0.6	6.95E-04	1.39E-04	8.34E-04	per sq.ft.

Appendix C – Fire Flow Test Results

Arizona Flow Testing LLC

HYDRANT FLOW TEST REPORT

Project Name:	Fairmont Scottsdale Princess
Project Address:	7575 East Princess Blvd., Scottsdale, Arizona 85255
Client Project No.:	215319
Arizona Flow Testing Project No.:	22541
Flow Test Permit No.:	C69698
Date and time flow test conducted:	August 4, 2022 at 7:00 AM
Data is current and reliable until:	February 4, 2023
Conducted by:	Floyd Vaughan – Arizona Flow Testing, LLC (480-250-8154)
Witnessed by:	Sonny Schreiner –City of Scottsdale-Inspector (602-819-7718)

Raw Test Data

Static Pressure: **88.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **72.0 PSI**
(Measured in pounds per square inch)

Pitot Pressure: **40.0 PSI**
(Measured in pounds per square inch)

Diffuser Orifice Diameter: One 4-inch Pollard Diffuser
(Measured in inches)

Coefficient of Diffuser: 0.9

Flowing GPM: **2,718 GPM**
(Measured in gallons per minute)

GPM @ 20 PSI: **5,936 GPM**

Data with 16PSI Safety Factor

Static Pressure: **72.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **56.0 PSI**
(Measured in pounds per square inch)

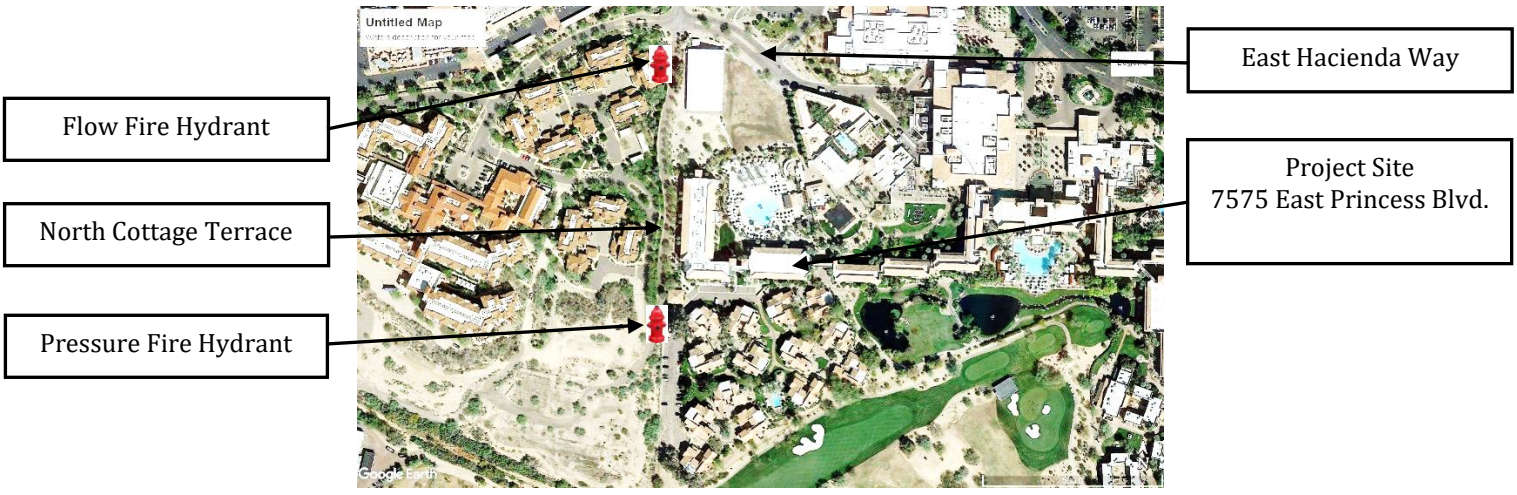
Distance between hydrants: Approx. 810 Feet

Main size: Not Provided

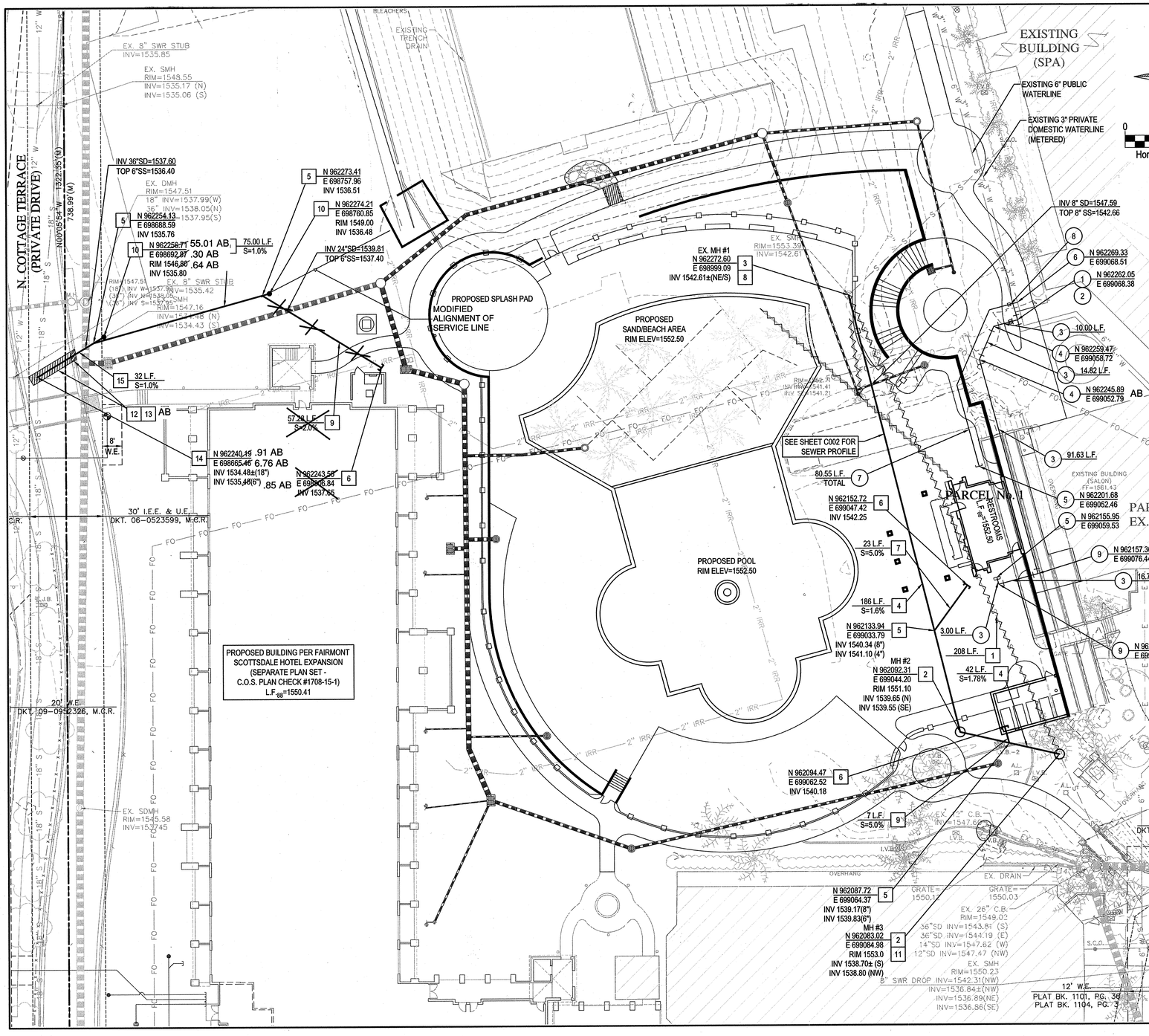
Flowing GPM: **2,718 GPM**

GPM @ 20 PSI**:** **5,136 GPM**

Flow Test Location **North**



Appendix D – Sunset Beach Pool Water and Sewer As-built Plan



SEWER NOTES

1. EXISTING 8" SANITARY SEWER LINE TO BE ABANDON IN PLACE FOR RELOCATION. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF EXISTING SEWER LINE PRIOR TO CONSTRUCTION.
2. CONSTRUCT 4' DIA. MANHOLE PER M.A.G. STD. DETAIL 420 & 424 WITH SEWER SHIELD 100 EPOXY LINING BY ENVIRONMENTAL COATINGS OR APPROVED EQUAL.
3. REMOVE EXISTING SEWER PIPE TO SOUTHEAST AND CORE DRILL NEW SEWER STUB. REWORK EXISTING BENCH AND PATCH EXISTING MANHOLE AS REQUIRED.
4. INSTALL 8" PVC SDR35 SANITARY SEWER PIPE.
5. INSTALL WYE PER M.A.G. STD. DETAIL 440-1.
6. SEE PLUMBING PLANS FOR CONTINUATION, SHEET P-200. CONTRACTOR TO COORDINATE EXACT LOCATION & ELEVATION WITH PLUMBING PLANS. NOTIFY OWNERS AGENT OF ANY DISCREPANCIES.
7. INSTALL 4" PVC SDR35 SANITARY SEWER PIPES.
8. ADJUST SEWER MANHOLE TO NEW GRADE PER M.A.G. STD. DETAIL 522.
9. INSTALL 6" PVC SDR35 SANITARY SEWER PIPE.
10. INSTALL SANITARY SEWER CLEANOUT. USE JAY R. SMITH MODEL NO. 4250 OR EQUAL COVER.
11. CONNECT TO EXISTING SANITARY SEWER AS REQUIRED.
12. SAWCUT, REMOVE, AND REPLACE EXISTING ASPHALT, IN-KIND PER M.A.G. STD. DETAILS 200-1 AND 200-2. USE T-TOP REPLACEMENT WHEN REPLACEMENT IS FOR SEWER INSTALLATION.
13. SAWCUT, REMOVE & REPLACE EXISTING SINGLE CURB, CURB & GUTTER FOR PROPOSED SEWER CONSTRUCTION TO THE NEAREST JOINT OF THE LIMITS SHOWN.
14. CORE DRILL & CONNECT TO EXISTING MANHOLE PER M.A.G. STD. DETAIL 420-1. REWORK EXISTING BENCH AS REQUIRED. FIELD VERIFY EXISTING INVERT PRIOR TO CONSTRUCTION. NOTIFY OWNERS AGENT OF ANY DISCREPANCY.
15. INSTALL 6" RESTRAINED JOINT C-900 PVC PIPE.

WATER NOTES

1. CONNECT TO EXISTING 6" WATERLINE. CONTRACTOR TO FIELD VERIFY EXACT LOCATION & INVERT ELEVATION PRIOR TO CONSTRUCTION. NOTIFY OWNERS AGENT OF ANY DISCREPANCY.
2. INSTALL 6"x4" TAPPING SLEEVE AND VALVE PER M.A.G. STD. DETAIL 340.
3. INSTALL 4" D.I.P. PRESSURE CLASS 350 FIRELINE WITH RESTRAINED JOINTS (3' MIN. COVER).
4. INSTALL 45° BEND.
5. SEE PLUMBING PLANS FOR CONTINUATION, SHEET P-201. CONTRACTOR TO COORDINATE LOCATION AND ELEVATION WITH PLUMBING PLANS PRIOR TO CONSTRUCTION. NOTIFY OWNERS AGENT OF ANY DISCREPANCY.
6. CONNECT TO EXISTING 3" PRIVATE WATERLINE AS REQUIRED.
7. INSTALL 1" TYPE 'K' HARD COPPER DOMESTIC WATERLINE PER M.A.G. SPECIFICATIONS 754.
8. INSTALL BALL VALVE IN CONCRETE METER BOX PER M.A.G. STD. DETAIL 320.
9. INSTALL 90° BEND.

AS-BUILT

WOOD, PATEL & ASSOCIATES, INC.

REGISTERED LAND SURVEYOR — CERTIFICATE NO. 48932 — GABRIEL S. RIOS — Date Signed — ARIZONA, U.S.A. — EXPIRES 12-31-17

NOTES

1) SEWER SYSTEM FOR THIS DEVELOPMENT IS PRIVATE. MAINTENANCE IS THE RESPONSIBILITY OF THE OWNER.
2) ONSITE DOMESTIC WATER AND SEWER SYSTEM CONSTRUCTION TO BE PER 2012 INTERNATIONAL PLUMBING CODE (IPC).
3) C.O.S. PUBLIC WATERLINE EASEMENTS TO BE FREE OF OBSTRUCTIONS AND ACCESSIBLE TO CITY FORCES AT ALL TIMES.
4) RESTRAIN JOINTS SHALL BE INSTALLED ON ALL WATERLINES PER M.A.G. STD. DETAIL 303-1 & 303-2 MEGA-A-LUG OR C.O.S. APPROVED EQUAL.
5) WATERLINES SHALL NOT BE ENCASED AT SEWER CROSSINGS PER THE CITY OF SCOTTSDALE. AT SEWER CROSSINGS, CENTER CONTINUOUS PIPE SECTION (DIP W/ MECHANICAL RESTRAINED JOINTS) TO 6' (MIN) EACH SIDE OF CROSSING.
6) NO METER AND BACKFLOW PREVENTOR PROVIDED FOR LANDSCAPING FROM CITY SERVICES. REFER TO LANDSCAPE PLANS FOR SERVICE FROM EXISTING PRIVATE GREY WATER SYSTEM.
7) CONTRACTOR TO COORDINATE WATER, SEWER, AND GAS UTILITIES WHERE THEY CROSS EACH OTHER PRIOR TO INSTALLATION. NOTIFY ENGINEER OF ANY DISCREPANCIES.

WOOD/PATEL
MISSION: CLIENT SERVICE™
(602) 335-8500
WWW.WOODPATEL.COM
PHOENIX - MESA - TUCSON

Call at least two full working days before you begin excavation. ARIZONA811 Arizona Blue Stake, Inc. Dial 8-1-1 or 1-800-STAKE-IT (782-5348) In Maricopa County: (602) 263-1100

Fairmont SCOTTSDALE PRINCESS

SUNSET BEACH POOL WATER & SEWER PLAN

2nd CITY SUBMITTAL

DR CASE # 605-PA-15 PLAN CHECK # 5048-15

REV	DESCRIPTION	DATE

NOT FOR CONSTRUCTION

SCALE (HORIZONTAL) 1"=20'
SCALE (VERTICAL) N/A
DATE 10/08/2015
JOB NUMBER 154302.30
SHEET C005 OF 5

N:\2015\154302.30\Dwg\[dp]A302_30-005-WS.dwg (CHECKED BY: JB DESIGNED BY: JB DRAFTED BY: JG)

Appendix E – Water Master Report by Wood Patel, November 2023

MASTER WATER REPORT
FOR
FAIRMONT SCOTTSDALE PRINCESS

November 22, 2023
WP# 215319

Prepared by
Robert G. Saunders, EIT

EXPIRES 06-30-25

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APPENDICES

EXHIBITS

EXPIRES 06-30-25

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Y:\WP\Reports\Commercial\215319 FSP Concept Master Water Report.docx

1.0 INTRODUCTION

1.1 General Background

This Concept Master Water Report for the Fairmont Scottsdale Princess addresses the addition of six (6) proposed projects that will improve approximately 15.6 acres across three (3) parcels with a combined total area of 53.4 acres. The three (3) parcels disturbed within the City of Scottsdale are APN#215-08-695, APN#215-08-694, and APN#215-08-693 which are all zoned C-2. Each project will include one (1) or more buildings, hardscape, landscape, and utility improvements.

The design criteria used to estimate water demands and evaluate system hydraulics are based on Wood, Patel & Associates, Inc.'s (WOODPATEL's) understanding of the requirements listed in the *City of Scottsdale Design Standards and Policies Manual, 2018* (Ref. 1).

The following is a summary of the primary design criteria utilized:

Average Day Water Demand, Commercial/Retail: ..... 0.8 gpd/sf
Average Day Water Demand, Resort/Hotel*: ..... 446.3 gpd/DU
Average Day Water Demand, Restaurant: ..... 1.3 gpd/sf
Maximum Pressure: ..... 120 psi
Minimum Pressure: 50psi
Maximum Day Demand: ..... 2 x ADD
Peak Hour Factor; Restaurant: ..... 6.0 x ADD

Abbreviations: gpd = gallons per day; sf = square feet; DU = dwelling units; ADD = average day demand

*Includes both inside and outside use, per Figure 6-1.2, City of Scottsdale *Design Standards and Policies Manual* (Ref. 1)

1.2 Project Location

The Fairmont Scottsdale Princess is a sprawling resort property with multiple guest buildings and amenities including pools, restaurants, conference rooms, and retail. It is located within Section 35, Township 4 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona. Refer to Exhibit 1 - *Vicinity Map* for project location. The specific location of the proposed projects onsite are as follows:

The Sunset Villas and Bungalows project includes nine (9) proposed buildings on approximately 3.7 acres of an approximate 34.4-acre parcel (APN#215-08-695). This project is located east of Cottage Terrace, south of Hacienda Way, and west of the existing Spa Building.

The Conference Center/Event Lawn project includes a proposed building with open space for events on approximately 10.95 acres overlapping two (2) parcels with an approximate area of 44.4 acres (APN#215-08-693 and APN#215-08-695). This project is located east of Cottage Terrace, north of Hacienda Way, and west of the existing Palomino Ballroom.

The Parking Garage project includes a multi-level parking structure on approximately 3.9 acres of an approximate 9.0-acre parcel (APN#215-08-694). This project is located east of Princess Drive and south of Princess Boulevard.

The Guest Room Addition project includes a single building with underground parking on approximately 0.9 acres of an approximate 34.4-acre parcel (APN#215-08-695). This project is located east of Cottage Terrace and south of Hacienda Way.

The Italian Restaurant is a proposed restaurant on approximately 0.37 acres of an approximate 9.94-acre parcel (APN#215-08-693). This project is located on the southeast corner of Princess Boulevard and Cottage Terrace.

The Roasterie Restaurant is a proposed restaurant on approximately 0.24 acres of an approximate 34.4-acre parcel (APN#215-08-695). This project is located approximately 512-feet east of Cottage Terrace, 1151-feet south of East Hacienda Way, and south of the existing Spa Building.

2.0 EXISTING WATER INFRASTRUCTURE

The water infrastructure in the area includes existing public 12-inch water mains within Cottage Terrace, Princess Boulevard, and Princess Drive. There is an existing public 8-inch water main within Hacienda Way that connects to the existing 12-inch water mains within Cottage Terrace and Princess Drive. The existing Hacienda Way public 8-inch water main serves the dock area of the main resort, the existing Spa Building and the existing Palomino Ballroom. In addition, an existing 6-inch public water main extends from Hacienda Way south along the west side of the existing Spa Building through the property where it connects to the existing public 12-inch water main in Cottage Terrace. Refer to Exhibit 2 – *Concept Master Water Layout*.

3.0 PROPOSED WATER INFRASTRUCTURE

Water demands for the proposed projects can be found in Appendix A - *Water Demand and Calculations.* Average day, max day, and peak hour demands were calculated according to their land use in accordance with *City of Scottsdale Design Standards and Policies Manual* (Ref. 1). Although there are multiple projects being proposed, the construction schedule for them will overlap at some point where all the projects will be in construction at the same time. The water main infrastructure in particular will be done together to avoid multiple shutdowns.

3.1 Proposed Layout

A section of the existing public 6-inch water main will be removed west of the Spa Building and south of the public 8-inch water main in Hacienda Way. It will be replaced with a new section of public 8-inch water main extending south from the public 8-inch water main in Hacienda Way through the proposed Sunset Villas and Bungalows project, which connects back into the existing public 6-inch water main. The existing public 8-inch water main along the north side of the Palamino Ballroom, connecting the 8-

inch water main in Hacienda Way to the 12-inch water main in Princess Drive, will be rerouted around the proposed Conference Center. Refer to Exhibit 2 – *Concept Master Water Layout.* All landscape irrigation needed for all projects will be provided by the existing onsite grey water system. Water demands have also been added due to the addition of fountains on Conference Center/Event Lawn, The Italian Restaurant, and The Roasterie Restaurant. These fountains include a capacity of 15,000 gallons, using the small pool capacity, with demand values from Appendix D – *Scottsdale Water Demand Exhibit*.

3.1.1 Sunset Villas and Bungalows

The Sunset Villas and Bungalows improvements include a proposed public 8-inch water line through the Site which will connect to the existing public 8-inch water main in Hacienda Way and the existing public 6-inch water main along the west side of the Spa building as described in Section 3.1. The proposed public 8-inch water main will provide a 4-inch fire service to each of the nine (9) proposed buildings. Domestic demands will be served from a 4-inch water meter, vault, and backflow preventer connected to the existing public 8-inch line within Hacienda Way. This line will route through the site serving five (5) buildings with a 2-inch service and the remaining four (4) buildings will be served by two (2) 2.5-inch services that will each serve two (2) buildings. See plumbing plans for details. There will be one (1) proposed Fire Hydrant connection to the existing public 8-inch water main within Hacienda Way. Each proposed building will have a Fire Department Connection (FDC) with a backflow preventer placed inside the building. See plumbing plans for details.

3.1.2 Conference Center/Event Lawn

The Conference Center/Event Lawn improvements include the removal and re-alignment of the existing public 8-inch water main from Hacienda Way to Princess Drive as described in Section 3.1. The proposed improvements for the project include four (4) proposed fire hydrants, a 4-inch domestic water meter, vault, and backflow preventer, the relocation of two (2) existing fire hydrants, one (1) FDC, one (1) proposed 6-inch fire service with backflow preventer, and two (2) proposed fountains.

3.1.3 Parking Garage

The proposed water service for this project includes a 6-inch fire service with backflow preventer which connects to the existing public 12-inch water main within Princess Drive and one (1) FDC connection.

3.1.4 Guest Room Addition

The proposed water services for this project will include a 6-inch fire service with backflow preventer, a 2-inch domestic water service with meter and backflow preventer connected to the existing public 12-inch water main within Cottage Terrace, and one (1) FDC connection.

3.1.5 The Italian Restaurant

The proposed water services for this project will include a 6-inch fire service with backflow preventer, a 2-inch domestic service with meter and backflow preventer connected to the existing public 12-inch water main within Cottage Terrace, one (1) FDC connection, and a proposed fountain.

3.1.6 The Roasterie Restaurant

The proposed water services for this project will include a 6-inch fire service with backflow preventer, a 2-inch domestic service with meter and backflow preventer connected to the existing public 6-inch main running through the Fairmont Scottsdale Princess property south of the Spa Building, one (1) FDC connection, and a proposed fountain.

4.0 HYDRAULIC MODELING

4.1 Methodology

Bentley WaterCAD version 10i was used to analyze the proposed water system. The existing water infrastructure was calibrated using the results of two (2) hydrant flow tests. Fire Flow Test #1 (Permit #C69698) conducted on August 4, 2022, tested the fire hydrants connected to the existing public 12-inch water main along Cottage Terrace. Fire Flow Test #2 (Permit #C71326) conducted on February 6, 2023, tested the fire hydrants connected to the existing public 12-inch water main along Princess Drive. Refer to Appendix B - *Fire Hydrant Flow Test Results and Calculations*.

The domestic demands calculated for each of the proposed projects are listed in *Table 1: Domestic Demand* below using City of Scottsdale's design criteria (Ref. 1). Refer to Appendix A – *Water Demand and Calculations*. Demands for the Site include only the square footage of the Conference Center considering that the Event Lawn will not be in use simultaneously with the equivalent space in the Conference Center or the existing Palomino Ballroom. If inclement weather forces guests to go indoors, the space will be used in the Conference Center or the existing Palomino Ballroom and the Event Lawn will no longer be in use.

Table 1: Domestic Demand

Contributing Site	Average Daily Demand		Max Day		Peak Hour	
	(gpm)	(gpd)	(gpm)	(gpd)	(gpm)	(gpd)
Italian Restaurant*	29.9	21,502	59.7	42,952	178.9	128,752
Roasterie Restaurant*	19.1	13,702	38.1	27,352	114.1	81,952
Sunset Villas and Bungalows	26.7	19,191	53.4	38,382	93.5	67,169
Conference Center*	110.7	79,723	221.3	159,394	401.7	289,363
Event Lawn	--	--	--	--	--	--
Parking Garage	--	--	--	--	--	--
Guest Room Addition	96.1	69,177	192.2	138,354	336.4	242,120
Total	**282.5**	**203,295**	**564.7**	**406,434**	**1,124.6**	**809,356**

* Additional demands from fountains (Appendix D - *Scottsdale Water Demand Exhibit*)

The modeling results show that the minimum pressure experienced in the system is 62 psi during Peak Hour Demand and the maximum pressure experienced in the system is 74 psi during Average Day Demand. All results fell within the City of Scottsdale Standard allowable operating pressure range of 50 psi and 120 psi. Refer to Appendix C - *Hydraulic Modeling Results*.

The Fire Flow requirement for each project was determined from Appendix B of the International Fire Code (IFC) (Ref. 2). The fire flow requirement for each proposed project can be found in *Table 2: Fire Flow Demand* below. The projects associated with Fire Flow Test #1 are The Italian Restaurant, The Roasterie Restaurant, Sunset Villas and Bungalows, Conference Center/Event Lawn, and the Guest Room Addition. This is reflected within the modeling results which are labeled "Model 1". The only project associated with Fire Flow Test #2 is the Parking Garage. This is reflected within the modeling results which are labeled "Model 2". Applicable junctions were highlighted within each project's fire flow report for reference. Refer to Appendix B - *Fire Hydrant Flow Test Results and Calculations* and Appendix C – *Hydraulic Modeling Results*.

Table 2: Fire Flow Demand

Site	Building Type	Area (sf)	Fire Flow Required (gpm)	Reduction (%)	Total Fire Flow (gpm)
Italian Restaurant	V-B	16,500	3,500	50%	1,750
Roasterie Restaurant	V-B	10,500	2,750	Minimum	1,500
Sunset Villas and Bungalows	V-B	12,131*	3,000	50%	1,500
Conference Center	I-B	97,576	3,250	50%	1,625
Event Lawn	N/A	39,400	N/A	N/A	1,500
Parking Structure	I-B	340,500	6,000	50%	3,000
Guest Room Addition	V-A	151,086**	6,250	50%	3,125

***** Area of largest single building
** Square footage includes the underground parking garage

Modeling results determined that each project achieves its fire flow requirement at or above the minimum pressure of 30 psi established by the City of Scottsdale. Refer to Appendix C – *Hydraulic Modeling Results* for specific results.

The fire hydrants associated with each project in the model are as follows:

- Italian Restaurant: FH-4 & EX FH-5
- Roasterie Restaurant: FH-7
- Sunset Villas and Bungalows: FH-1, FH-2, FH-8, EX FH-1(TEST), & EX FH-3(FLOW)
- Conference Center: FH-1, FH-2, FH-3, FH-4, FH-5, FH-6, & EX FH-7(FLOW2)
- Event Lawn: FH-5 & FH-6
- Parking Structure: EX FH-6(TEST2), EX FH-7(FLOW2), EX FH-10, & EX FH-11
- Guest Room Addition: FH-2, EX FH-1(TEST1), & EX FH-3(FLOW1)

5.0 CONCLUSIONS

The following conclusions can be made based on the above analysis for the six (6) proposed Fairmont Scottsdale Princess projects:

1. The design criteria used to calculate potable water demands and evaluate system hydraulics are based on the *City of Scottsdale Design Standards and Policies Manual, 2018*.

2. The proposed water infrastructure described is adequate to serve the domestic and fire flow demands for the proposed projects.

3. The proposed projects meet or exceed the minimum pressure of 30 psi with their respective fire flow requirements per the City of Scottsdale for the MDD + FF scenarios.

4. The proposed projects exceed the minimum 50-psi pressure requirement as outlined by the City of Scottsdale standards for the ADD, MDD, and PH scenarios.

5. The proposed projects do not exceed the maximum 120-psi pressure requirement as outlined by the City of Scottsdale standards for the ADD, MDD, and PH scenarios.

6.0 REFERENCES

1. *City of Scottsdale Design Standards and Policies Manual*, 2018
2. *International Fire Code, by International Code Council*, 2021
3. *The Italian Restaurant – Phase 4C, Scottsdale, AZ*, by Kimley-Horn and Associates, Inc. November 2023.
4. *The Roasterie Restaurant – Phase 4D, Scottsdale, AZ*, by Kimley-Horn and Associates, Inc. November 2023.
5. *Water Distribution System Basis of Design Report for Fairmont Scottsdale Princess Conference Center & Event Lawn, Scottsdale, AZ,* by Wood, Patel & Associates, Inc. November 2023.
6. *Water Distribution System Basis of Design Report for Fairmont Scottsdale Princess Guest Room Addition, Scottsdale, AZ,* by Wood, Patel & Associates, Inc. November 2023.
7. *Water Distribution System Basis of Design Report for Fairmont Scottsdale Princess Sunset Villas and Bungalows, Scottsdale, AZ,* by Wood, Patel & Associates, Inc. June 2023.
8. *Water Distribution System Basis of Design Report for Fairmont Scottsdale Princess Parking Structure, Scottsdale, AZ,* by Wood, Patel & Associates, Inc. June 2023.

APPENDIX A – WATER DEMAND CALCULATIONS

WOOD PATEL

TABLE 1
WATER DISTRIBUTION SYSTEM DESIGN CRITERIA

Project	Fairmont Scottsdale Princess
Location	Scottsdale AZ
Project Number	215319
Project Engineer	Andrew J. Sanchez, E.I.T.
References	City of Scottsdale Design and Policies Manual (2018)

RESIDENTIAL WATER DEMANDS			
LAND USE	**AVERAGE DAILY DEMAND (ADD)**		**NOTES**
	VALUE	**UNITS**	
High Density Condominium	185.3	gpd/DU	Note 1
Resort Hotel	446.3	gpd/DU	Note 1

NON-RESIDENTIAL WATER DEMANDS			
LAND USE	**AVERAGE DAILY DEMAND (ADD)**		**NOTES**
	VALUE	**UNITS**	
Restaurant	1.3	gpd/sf	Note 1
Commercial/Retail	0.8	gpd/sf	Note 1
Commercial High Rise	0.6	gpd/sf	Note 1
Office	0.6	gpd/sf	Note 1
Institutional	1340	gpd/acre	Note 1
Industrial	1027	gpd/acre	Note 1
Research and Development	1284	gpd/acre	Note 1

HYDRAULIC MODELING CRITERIA				
DESCRIPTION		**VALUE**	**UNITS**	**NOTES**
PEAK FLOW				
	Max Day = Peaking Factor x ADD	2.0 x ADD	gpd	Note 1
	Peak Hour = Peaking Factor x ADD	3.5 x ADD	gpd	Note 1
	Peak Hour = Peaking Factor (Restraunt) x ADD	6.0 x ADD	gpd	Note 1
MODELED FIRE HYDRANT FLOW WITH 50% FIRE SPRINKLER REDUCTION (MINIMUM)				
☐	Residential, 0 - 3,600 sf fire-flow calculation area	1,000	gpm	Note 3
☑	Residential, 3,601 - 4,800 sf fire-flow calculation area	1,750	gpm	Note 4
☐	Residential, 4,801 - 6,200 sf fire-flow calculation area	2,000	gpm	Note 4
☐	Residential, 6,201 - 7,700 sf fire-flow calculation area	2,250	gpm	Note 4
☐	Residential, 7,701 - 9,400 sf fire-flow calculation area	2,500	gpm	Note 4
☐	Residential, 9,401 - 11,300 sf fire-flow calculation area	2,750	gpm	Note 4
☐	Multi-Family Residential	-	gpm	Note 2
☐	Commercial	-	gpm	Note 2
HYDRAULICS				
	Residual Pressure Range, Peak Flow	50-120	psi	Note 1
	Minimum Residual Pressure, Peak Flow + Fire Flow	30	psi	Note 1
	Maximum Velocity, Peak Flow	5	ft/sec	Note 1
	Maximum Velocity, Peak Day + Fire Flow	10	ft/sec	Note 1
	Minimum Pipe Diameter, Looped System	8	in	Note 1
	Hazen-Williams C-value	120	-	Note 1

Notes

1. Per City of Scottsdale Design and Policies Manual (2018)
2. Per 2021 International Fire Code
3. Residential limited to one- and two-family dwellings, assumes Type V-B construction, and has a 1-hour fire duration, with 50% sprinkler reduction
4. Residential limited to one- and two-family dwellings, assumes Type V-B construction, and has a 2-hour fire duration, with 50% sprinkler reduction

WOOD PATEL

WATER DEMAND DESIGN FLOWS

Project Fairmont Scottsdale Princess
Location Scottsdale AZ
Project Number 215319
Project Engineer Andrew J. Sanchez, E.I.T.
References City of Scottsdale Design and Policies Manual (2018)

LAND USE AND DWELLING UNIT BREAKDOWN BY JUNCTION												FIRE FLOW		
HYDRAULIC MODEL NODE	LAND USE	DWELLING UNITS	AREA (SF)	DEMAND VALUE	UNITS	AVERAGE DAILY DEMAND		MAX DAY		PEAK HOUR		FIRE FLOW AREA	FIRE FLOW TYPE	FIRE - FLOW
						(gpm)	(gpd)	(gpm)	(gpd)	(gpm)	(gpd)	(sf)		(gpm)
Italian Restaurant	Restaurant	--	16,500	1.3	gpd/sf	29.8	21,450	59.6	42,900	178.8	128,700	16,500	V-B	1,750
*** Fountain	Small Pool or Spa	--	--	--	--	.1	52	.1	52.0	.1	52.0			
Roasterie Restaurant	Restaurant	--	10,500	1.3	gpd/sf	19.0	13,650	38.0	27,300	114.0	81,900	10,500	V-B	1,500*
*** Fountain	Small Pool or Spa	--	--	--	--	.1	52	.1	52.0	.1	52.0			
Sunset Villas and Bungalows	Resort Hotel	43	--	446.3	gpd/DU	26.7	19,191	53.4	38,382	93.5	67,169	12,131	V-B	1,500
Conference Center	Restaurant (Kitchen)	--	3,219	1.3	gpd/sf	5.8	4,185	11.6	8,370	34.8	25,110	97,576	I-B	1,625
	Commercial/Retail	--	94,357	0.8	gpd/sf	104.8	75,486	209.6	150,972	366.8	264,201			
*** Fountain	Small Pool or Spa	--	--	--	--	.1	52	.1	52.0	.1	52.0			
Event Lawn	N/A	N/A	N/A	N/A	N/A	--	--	--	--	--	--	39,400	N/A	1,500
Parking Garage	N/A	N/A	N/A	N/A	N/A	--	--	--	--	--	--	340,500	I-B	3,000
Guest Room Addition	Resort Hotel	155	--	446.3	gpd/DU	96.1	69,177	192.2	138,354	336.4	242,120	151,086 **	V-A	3,125
Total		**198**	**124,576**			**282.5**	**203,295**	**564.7**	**406,434**	**1,124.6**	**809,356**			

* Adjusted for minimum fire flow requirements based on the square footage being below the minimums per the IFC.

** Square footage includes the underground parking garage.

*** Additional water demands calculated by City of Scottsdale Development Water Demand Exhibit.

APPENDIX B – FIRE HYDRANT FLOW TEST RESULTS AND CALCULATIONS

Arizona Flow Testing LLC

HYDRANT FLOW TEST REPORT

Project Name:	Fairmont Scottsdale Princess
Project Address:	7575 East Princess Blvd., Scottsdale, Arizona 85255
Client Project No.:	215319
Arizona Flow Testing Project No.:	22541
Flow Test Permit No.:	C69698
Date and time flow test conducted:	August 4, 2022 at 7:00 AM
Data is current and reliable until:	February 4, 2023
Conducted by:	Floyd Vaughan – Arizona Flow Testing, LLC (480-250-8154)
Witnessed by:	Sonny Schreiner –City of Scottsdale-Inspector (602-819-7718)

Raw Test Data

Static Pressure: **88.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **72.0 PSI**
(Measured in pounds per square inch)

Pitot Pressure: **40.0 PSI**
(Measured in pounds per square inch)

Diffuser Orifice Diameter: One 4-inch Pollard Diffuser
(Measured in inches)

Coefficient of Diffuser: 0.9

Flowing GPM: **2,718 GPM**
(Measured in gallons per minute)

GPM @ 20 PSI: **5,936 GPM**

Data with 16PSI Safety Factor

Static Pressure: **72.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **56.0 PSI**
(Measured in pounds per square inch)

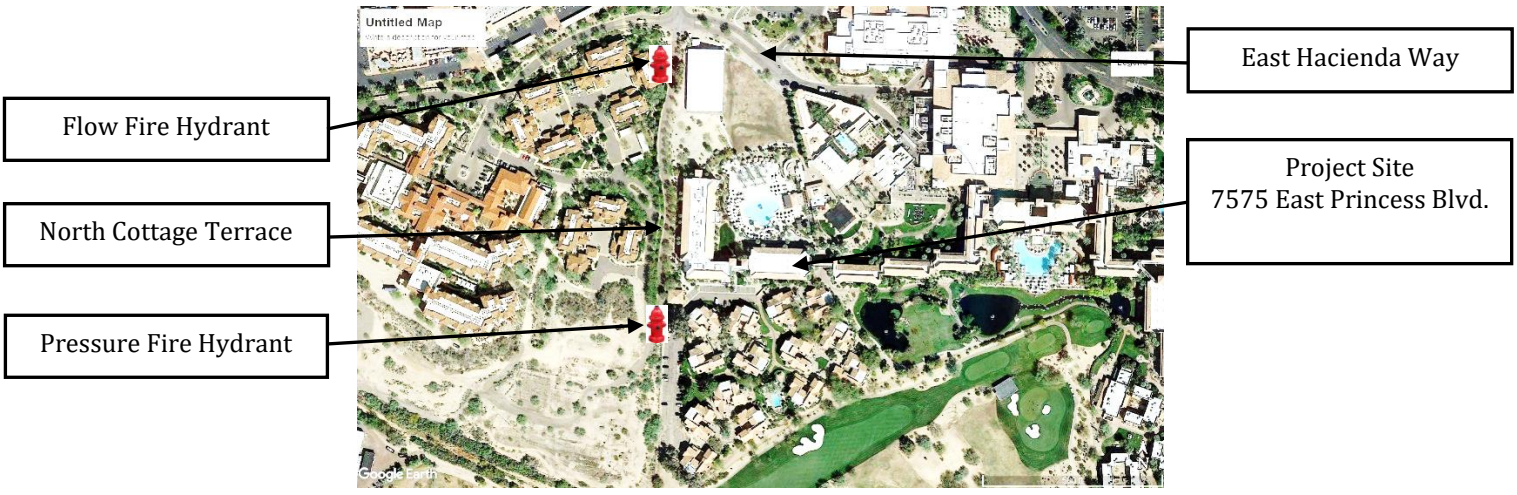
Distance between hydrants: Approx. 810 Feet

Main size: Not Provided

Flowing GPM: **2,718 GPM**

GPM @ 20 PSI**:** **5,136 GPM**

Flow Test Location **North**



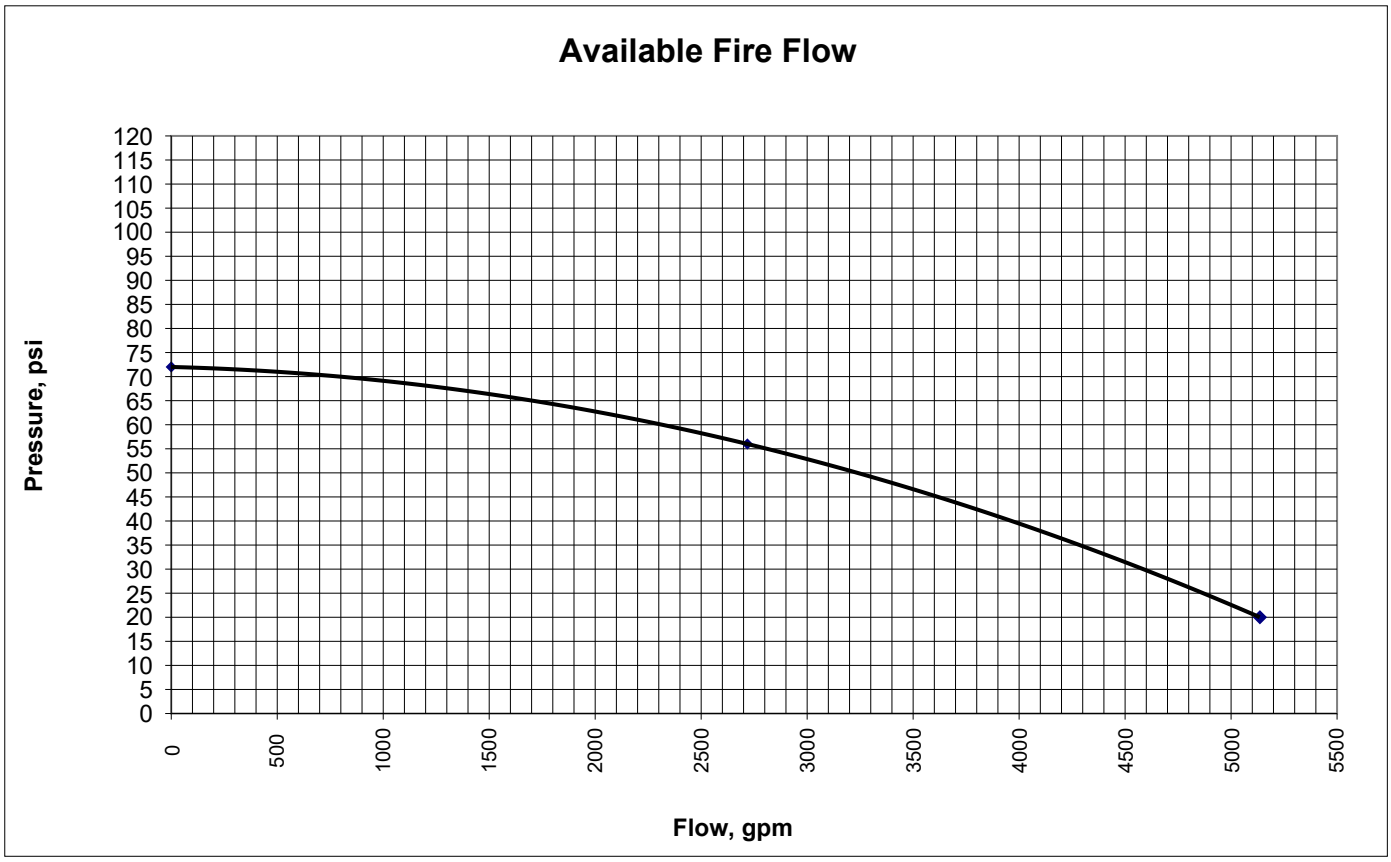
WOOD PATEL

EXISTING WATER SYSTEM PRESSURES (08-2022)

Project	Fairmont Scottsdale Princess
Location	Scottsdale AZ
Project Number	215319
Project Engineer	Andrew J. Sanchez, E.I.T.

Flow Test Location
Date of Flow Test

Pressure Hydrant		**Flow Hydrant**	
Static Pressure (psi)	72.0		
Residual Pressure (psi)	56.0	Flow (gpm)	2718
Calculated Flow at 20 psi	5136 gpm	Calculated Flow at	20 psi



Discharge (gpm)	Pressure (psi)	Head (ft)
0	72	166.2
2718	56	129.3
5136	20	46.2

Notes
1. Values provided from a flow test by Arizona Flow Testing LLC

Arizona Flow Testing LLC

HYDRANT FLOW TEST REPORT

Project Name:	Fairmont Scottsdale Princess - Parking Structure
Project Address:	7575 East Princess Drive, Scottsdale, Arizona, 85255
Client Project No.:	215319.4
Arizona Flow Testing Project No.:	23093
Flow Test Permit No.:	C71326
Date and time flow test conducted:	February 6, 2023 at 6:20 AM
Data is current and reliable until:	August 6, 2023
Conducted by:	Floyd Vaughan-Az Flow Testing, LLC (480-250-8154)
Witnessed by:	Sonny Schreiner – City of Scottsdale-Inspector (602-819-7718)

Raw Test Data

Static Pressure: **84.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **73.0 PSI**
(Measured in pounds per square inch)

Pitot Pressure: **25.0 PSI**
(Measured in pounds per square inch)
+

Diffuser Orifice Diameter: One 4-inch Hose Monster
(Measured in inches)

Coefficient of Diffuser: 0.7875

Flowing GPM: **1,880 GPM**
(Measured in gallons per minute)

GPM @ 20 PSI: **4,865 GPM**

Data with 12 PSI Safety Factor

Static Pressure: **72.0 PSI**
(Measured in pounds per square inch)

Scottsdale requires a maximum Static Pressure of 72 PSI for AFES Design.

Residual Pressure: **61.0 PSI**
(Measured in pounds per square inch)

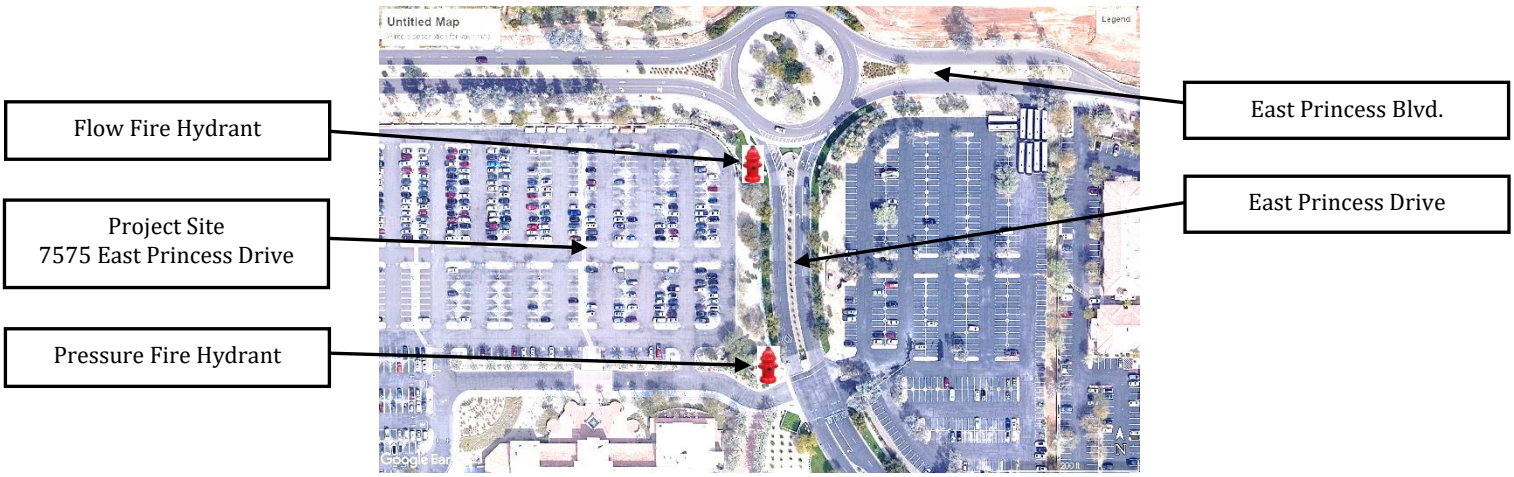
Approx. distance between hydrants: 340 Feet

Main size: Not Provided

Flowing GPM: **1,880 GPM**

GPM @ 20 PSI**:** **4,349 GPM**

Flow Test Location **North**



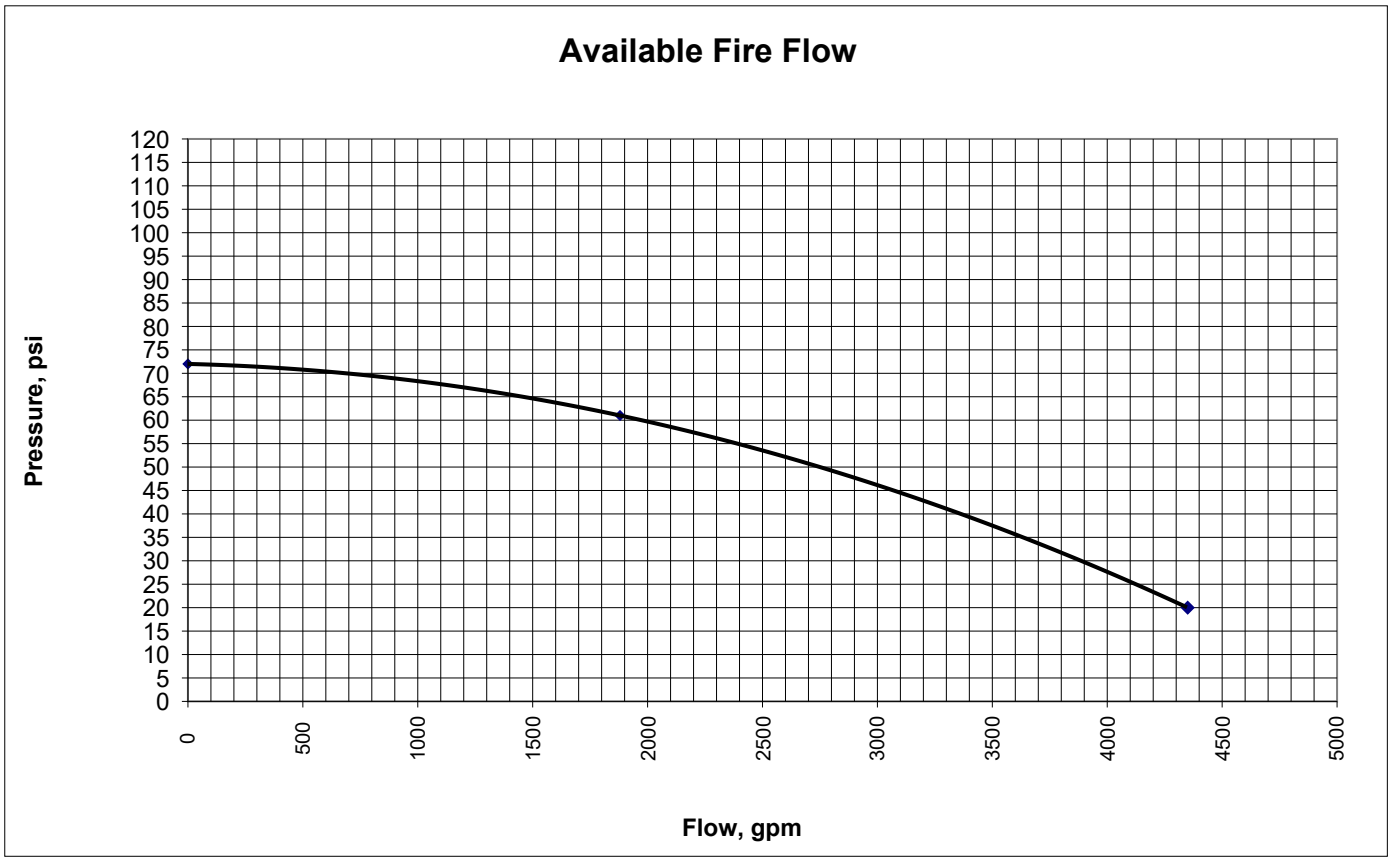
WOOD PATEL

EXISTING WATER SYSTEM PRESSURES (02-2023)

Project	Fairmont Scottsdale Princess
Location	Scottsdale AZ
Project Number	215319
Project Engineer	Andrew J. Sanchez, E.I.T.

Flow Test Location
Date of Flow Test

Pressure Hydrant		**Flow Hydrant**	
Static Pressure (psi)	72.0		
Residual Pressure (psi)	61.0	Flow (gpm)	1880
Calculated Flow at 20 psi	4350 gpm	Calculated Flow at	20 psi



Discharge (gpm)	Pressure (psi)	Head (ft)
0	72	166.2
1880	61	140.8
4350	20	46.2

Notes
1. Values provided from a flow test by Arizona Flow Testing LLC

APPENDIX C – HYDRAULIC MODELING RESULTS

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Static Model 1

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
J-20	1,552.46	0	70	1,713.82	161.36
Fire (Roasterie)	1,559.64	0	67	1,713.82	154.18
Fire (Italian)	1,556.30	0	68	1,713.82	157.52
Fire (Guest Room Addition)	1,550.00	0	71	1,713.82	163.82
Fire (Garage)	1,554.70	0	69	1,713.82	159.12
FH-8	1,552.10	0	70	1,713.82	161.72
FH-7	1,557.87	0	67	1,713.82	155.95
FH-2	1,553.15	0	70	1,713.82	160.67
FH-1	1,552.65	0	70	1,713.82	161.17
EX J-200	1,555.17	0	69	1,713.82	158.65
EX J-194	1,556.60	0	68	1,713.82	157.22
EX J-190	1,556.35	0	68	1,713.82	157.47
EX J-170	1,558.93	0	67	1,713.82	154.89
EX J-160	1,554.89	0	69	1,713.82	158.93
EX J-150	1,557.41	0	68	1,713.82	156.41
EX J-141	1,563.47	0	65	1,713.82	150.35
EX J-140	1,560.63	0	66	1,713.82	153.19
EX J-130	1,558.03	0	67	1,713.82	155.79
EX J-120	1,556.34	0	68	1,713.82	157.48
EX J-110	1,556.50	0	68	1,713.82	157.32
EX J-100	1,550.00	0	71	1,713.82	163.82
EX J-90	1,547.00	0	72	1,713.82	166.82
EX J-80	1,542.85	0	74	1,713.82	170.97
EX J-70	1,542.85	0	74	1,713.82	170.97
EX J-54	1,555.20	0	69	1,713.82	158.62
EX J-50	1,552.03	0	70	1,713.82	161.79
EX J-40	1,552.55	0	70	1,713.82	161.27
EX J-34	1,553.36	0	69	1,713.82	160.46
EX J-30	1,553.00	0	70	1,713.82	160.82
EX J-20	1,553.00	0	70	1,713.82	160.82
EX J-10	1,552.00	0	70	1,713.82	161.82
EX FH-12	1,552.10	0	70	1,713.82	161.72
EX FH-11	1,557.90	0	67	1,713.82	155.92
EX FH-9	1,554.65	0	69	1,713.82	159.17
EX FH-8	1,556.95	0	68	1,713.82	156.87
EX FH-7 (FLOW 2)	1,556.86	0	68	1,713.82	156.96
EX FH-6 (TEST 2)	1,559.33	0	67	1,713.82	154.49
EX FH-5	1,558.03	0	67	1,713.82	155.79
EX FH-4	1,557.29	0	68	1,713.82	156.53
EX FH-3 (FLOW 1)	1,550.00	0	71	1,713.82	163.82
EX FH-2	1,542.85	0	74	1,713.82	170.97
EX FH-1 (TEST 1)	1,547.30	0	72	1,713.82	166.52
Domestic (Villas and Bungalows)	1,553.30	0	69	1,713.82	160.52
Domestic (Roasterie)	1,560.25	0	66	1,713.82	153.57
Domestic (Italian)	1,556.30	0	68	1,713.82	157.52
Domestic (Guest Room Addition)	1,550.00	0	71	1,713.82	163.82
Domestic (Conference Center)	1,553.33	0	69	1,713.82	160.49

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Static Model 2

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
J-20	1,552.46	0	75	1,725.73	173.27
Fire (Roasterie)	1,559.64	0	72	1,725.73	166.09
Fire (Italian)	1,556.30	0	73	1,725.73	169.43
Fire (Guest Room Addition)	1,550.00	0	76	1,725.73	175.73
Fire (Garage)	1,554.70	0	74	1,725.73	171.03
FH-8	1,552.10	0	75	1,725.73	173.63
FH-7	1,557.87	0	73	1,725.73	167.86
FH-2	1,553.15	0	75	1,725.73	172.58
FH-1	1,552.65	0	75	1,725.73	173.08
EX J-200	1,555.17	0	74	1,725.73	170.56
EX J-194	1,556.60	0	73	1,725.73	169.13
EX J-190	1,556.35	0	73	1,725.73	169.38
EX J-170	1,558.93	0	72	1,725.73	166.80
EX J-160	1,554.89	0	74	1,725.73	170.84
EX J-150	1,557.41	0	73	1,725.73	168.32
EX J-141	1,563.47	0	70	1,725.73	162.26
EX J-140	1,560.63	0	71	1,725.73	165.10
EX J-130	1,558.03	0	73	1,725.73	167.70
EX J-120	1,556.34	0	73	1,725.73	169.39
EX J-110	1,556.50	0	73	1,725.73	169.23
EX J-100	1,550.00	0	76	1,725.73	175.73
EX J-90	1,547.00	0	77	1,725.73	178.73
EX J-80	1,542.85	0	79	1,725.73	182.88
EX J-70	1,542.85	0	79	1,725.73	182.88
EX J-54	1,555.20	0	74	1,725.73	170.53
EX J-50	1,552.03	0	75	1,725.73	173.70
EX J-40	1,552.55	0	75	1,725.73	173.18
EX J-34	1,553.36	0	75	1,725.73	172.37
EX J-30	1,553.00	0	75	1,725.73	172.73
EX J-20	1,553.00	0	75	1,725.73	172.73
EX J-10	1,552.00	0	75	1,725.73	173.73
EX FH-12	1,552.10	0	75	1,725.73	173.63
EX FH-11	1,557.90	0	73	1,725.73	167.83
EX FH-9	1,554.65	0	74	1,725.73	171.08
EX FH-8	1,556.95	0	73	1,725.73	168.78
EX FH-7 (FLOW 2)	1,556.86	0	73	1,725.73	168.87
EX FH-6 (TEST 2)	1,559.33	0	72	1,725.73	166.40
EX FH-5	1,558.03	0	73	1,725.73	167.70
EX FH-4	1,557.29	0	73	1,725.73	168.44
EX FH-3 (FLOW 1)	1,550.00	0	76	1,725.73	175.73
EX FH-2	1,542.85	0	79	1,725.73	182.88
EX FH-1 (TEST 1)	1,547.30	0	77	1,725.73	178.43
Domestic (Villas and Bungalows)	1,553.30	0	75	1,725.73	172.43
Domestic (Roasterie)	1,560.25	0	72	1,725.73	165.48
Domestic (Italian)	1,556.30	0	73	1,725.73	169.43
Domestic (Guest Room Addition)	1,550.00	0	76	1,725.73	175.73
Domestic (Conference Center)	1,553.33	0	75	1,725.73	172.40

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Residual Model 1

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
J-20	1,552.46	0	52	1,671.64	119.19
Fire (Roasterie)	1,559.64	0	49	1,672.90	113.27
Fire (Italian)	1,556.30	0	50	1,671.44	115.14
Fire (Guest Room Addition)	1,550.00	0	54	1,675.65	125.65
Fire (Garage)	1,554.70	0	51	1,671.47	116.77
FH-8	1,552.10	0	52	1,671.66	119.56
FH-7	1,557.87	0	50	1,674.07	116.20
FH-2	1,553.15	0	51	1,671.54	118.39
FH-1	1,552.65	0	51	1,671.63	118.98
EX J-200	1,555.17	0	50	1,671.57	116.40
EX J-194	1,556.60	0	50	1,671.49	114.90
EX J-190	1,556.35	0	50	1,671.50	115.15
EX J-170	1,558.93	0	49	1,671.47	112.54
EX J-160	1,554.89	0	50	1,671.47	116.58
EX J-150	1,557.41	0	49	1,671.47	114.06
EX J-141	1,563.47	0	47	1,671.46	107.99
EX J-140	1,560.63	0	48	1,671.46	110.83
EX J-130	1,558.03	0	49	1,671.45	113.42
EX J-120	1,556.34	0	50	1,671.44	115.10
EX J-110	1,556.50	0	50	1,671.44	114.94
EX J-100	1,550.00	0	53	1,671.56	121.56
EX J-90	1,547.00	0	56	1,676.85	129.85
EX J-80	1,542.85	0	58	1,676.80	133.95
EX J-70	1,542.85	0	58	1,676.62	133.77
EX J-54	1,555.20	0	51	1,672.55	117.35
EX J-50	1,552.03	0	52	1,671.66	119.63
EX J-40	1,552.55	0	52	1,671.59	119.04
EX J-34	1,553.36	0	51	1,671.52	118.16
EX J-30	1,553.00	0	51	1,671.49	118.49
EX J-20	1,553.00	0	51	1,671.47	118.47
EX J-10	1,552.00	0	52	1,671.43	119.43
EX FH-12	1,552.10	0	52	1,671.66	119.56
EX FH-11	1,557.90	0	49	1,671.47	113.57
EX FH-9	1,554.65	0	51	1,671.55	116.90
EX FH-8	1,556.95	0	50	1,671.52	114.57
EX FH-7 (FLOW 2)	1,556.86	0	50	1,671.49	114.63
EX FH-6 (TEST 2)	1,559.33	0	49	1,671.47	112.14
EX FH-5	1,558.03	0	49	1,671.45	113.42
EX FH-4	1,557.29	0	49	1,671.45	114.16
EX FH-3 (FLOW 1)	1,550.00	2,718	53	1,671.42	121.42
EX FH-2	1,542.85	0	58	1,676.53	133.68
EX FH-1 (TEST 1)	1,547.30	0	56	1,676.86	129.56
Domestic (Villas and Bungalows)	1,553.30	0	51	1,671.53	118.22
Domestic (Roasterie)	1,560.25	0	49	1,672.95	112.70
Domestic (Italian)	1,556.30	0	50	1,671.44	115.14
Domestic (Guest Room Addition)	1,550.00	0	54	1,675.74	125.74
Domestic (Conference Center)	1,553.33	0	51	1,671.52	118.19

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Residual Model 2

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
J-20	1,552.46	0	63	1,698.53	146.07
Fire (Roasterie)	1,559.64	0	60	1,698.73	139.09
Fire (Italian)	1,556.30	0	62	1,699.58	143.27
Fire (Guest Room Addition)	1,550.00	0	65	1,699.35	149.35
Fire (Garage)	1,554.70	0	62	1,699.02	144.32
FH-8	1,552.10	0	63	1,698.53	146.43
FH-7	1,557.87	0	61	1,698.91	141.04
FH-2	1,553.15	0	63	1,698.79	145.64
FH-1	1,552.65	0	63	1,698.53	145.88
EX J-200	1,555.17	0	62	1,697.96	142.79
EX J-194	1,556.60	0	60	1,695.80	139.21
EX J-190	1,556.35	0	60	1,695.98	139.63
EX J-170	1,558.93	0	61	1,699.99	141.06
EX J-160	1,554.89	0	62	1,699.02	144.13
EX J-150	1,557.41	0	61	1,699.02	141.61
EX J-141	1,563.47	0	59	1,700.21	136.74
EX J-140	1,560.63	0	60	1,700.21	139.58
EX J-130	1,558.03	0	61	1,699.88	141.85
EX J-120	1,556.34	0	62	1,699.65	143.31
EX J-110	1,556.50	0	62	1,699.48	142.98
EX J-100	1,550.00	0	65	1,699.36	149.36
EX J-90	1,547.00	0	66	1,699.35	152.35
EX J-80	1,542.85	0	68	1,699.34	156.49
EX J-70	1,542.85	0	68	1,699.31	156.46
EX J-54	1,555.20	0	62	1,698.67	143.47
EX J-50	1,552.03	0	63	1,698.53	146.50
EX J-40	1,552.55	0	63	1,698.52	145.97
EX J-34	1,553.36	0	63	1,698.88	145.52
EX J-30	1,553.00	0	63	1,699.04	146.04
EX J-20	1,553.00	0	63	1,699.16	146.16
EX J-10	1,552.00	0	64	1,699.36	147.36
EX FH-12	1,552.10	0	63	1,698.53	146.43
EX FH-11	1,557.90	0	61	1,699.02	141.12
EX FH-9	1,554.65	0	62	1,697.48	142.83
EX FH-8	1,556.95	0	60	1,696.45	139.50
EX FH-7 (FLOW 2)	1,556.86	1,880	60	1,695.61	138.75
EX FH-6 (TEST 2)	1,559.33	0	61	1,700.33	141.00
EX FH-5	1,558.03	0	61	1,699.87	141.84
EX FH-4	1,557.29	0	62	1,699.77	142.48
EX FH-3 (FLOW 1)	1,550.00	0	65	1,699.36	149.36
EX FH-2	1,542.85	0	68	1,699.30	156.45
EX FH-1 (TEST 1)	1,547.30	0	66	1,699.35	152.05
Domestic (Villas and Bungalows)	1,553.30	0	63	1,698.86	145.55
Domestic (Roasterie)	1,560.25	0	60	1,698.73	138.48
Domestic (Italian)	1,556.30	0	62	1,699.57	143.27
Domestic (Guest Room Addition)	1,550.00	0	65	1,699.35	149.35
Domestic (Conference Center)	1,553.33	0	63	1,698.87	145.54

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Flow@20 Model 1

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
J-20	1,552.46	0	11	1,576.75	24.29
Fire (Roasterie)	1,559.64	0	9	1,580.85	21.21
Fire (Italian)	1,556.30	0	9	1,576.09	19.79
Fire (Guest Room Addition)	1,550.00	0	17	1,589.77	39.77
Fire (Garage)	1,554.70	0	9	1,576.19	21.49
FH-8	1,552.10	0	11	1,576.81	24.71
FH-7	1,557.87	0	12	1,584.62	26.75
FH-2	1,553.15	0	10	1,576.41	23.26
FH-1	1,552.65	0	10	1,576.72	24.07
EX J-200	1,555.17	0	9	1,576.50	21.33
EX J-194	1,556.60	0	9	1,576.26	19.66
EX J-190	1,556.35	0	9	1,576.28	19.93
EX J-170	1,558.93	0	7	1,576.18	17.25
EX J-160	1,554.89	0	9	1,576.19	21.30
EX J-150	1,557.41	0	8	1,576.19	18.78
EX J-141	1,563.47	0	5	1,576.17	12.70
EX J-140	1,560.63	0	7	1,576.17	15.54
EX J-130	1,558.03	0	8	1,576.13	18.10
EX J-120	1,556.34	0	9	1,576.10	19.76
EX J-110	1,556.50	0	8	1,576.08	19.58
EX J-100	1,550.00	0	11	1,576.48	26.48
EX J-90	1,547.00	0	20	1,593.66	46.66
EX J-80	1,542.85	0	22	1,593.51	50.66
EX J-70	1,542.85	0	22	1,592.91	50.06
EX J-54	1,555.20	0	11	1,579.69	24.49
EX J-50	1,552.03	0	11	1,576.81	24.78
EX J-40	1,552.55	0	10	1,576.57	24.02
EX J-34	1,553.36	0	10	1,576.35	22.99
EX J-30	1,553.00	0	10	1,576.26	23.26
EX J-20	1,553.00	0	10	1,576.19	23.19
EX J-10	1,552.00	0	10	1,576.07	24.07
EX FH-12	1,552.10	0	11	1,576.81	24.71
EX FH-11	1,557.90	0	8	1,576.19	18.29
EX FH-9	1,554.65	0	9	1,576.45	21.80
EX FH-8	1,556.95	0	8	1,576.33	19.38
EX FH-7 (FLOW 2)	1,556.86	0	8	1,576.23	19.37
EX FH-6 (TEST 2)	1,559.33	0	7	1,576.18	16.85
EX FH-5	1,558.03	0	8	1,576.13	18.10
EX FH-4	1,557.29	0	8	1,576.12	18.82
EX FH-3 (FLOW 1)	1,550.00	5,136	11	1,576.01	26.01
EX FH-2	1,542.85	0	22	1,592.61	49.76
EX FH-1 (TEST 1)	1,547.30	0	20	1,593.70	46.40
Domestic (Villas and Bungalows)	1,553.30	0	10	1,576.37	23.06
Domestic (Roasterie)	1,560.25	0	9	1,581.01	20.76
Domestic (Italian)	1,556.30	0	9	1,576.09	19.79
Domestic (Guest Room Addition)	1,550.00	0	17	1,590.05	40.05
Domestic (Conference Center)	1,553.33	0	10	1,576.36	23.03

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Flow@20 Model 2

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
J-20	1,552.46	0	19	1,597.26	44.81
Fire (Roasterie)	1,559.64	0	17	1,598.20	38.57
Fire (Italian)	1,556.30	0	20	1,602.23	45.92
Fire (Guest Room Addition)	1,550.00	0	22	1,601.16	51.16
Fire (Garage)	1,554.70	0	19	1,599.60	44.90
FH-8	1,552.10	0	20	1,597.28	45.18
FH-7	1,557.87	0	18	1,599.07	41.20
FH-2	1,553.15	0	20	1,598.48	45.34
FH-1	1,552.65	0	19	1,597.26	44.61
EX J-200	1,555.17	0	17	1,594.57	39.40
EX J-194	1,556.60	0	12	1,584.39	27.79
EX J-190	1,556.35	0	12	1,585.22	28.87
EX J-170	1,558.93	0	20	1,604.17	45.24
EX J-160	1,554.89	0	19	1,599.60	44.71
EX J-150	1,557.41	0	18	1,599.60	42.19
EX J-141	1,563.47	0	18	1,605.24	41.77
EX J-140	1,560.63	0	19	1,605.24	44.61
EX J-130	1,558.03	0	20	1,603.64	45.61
EX J-120	1,556.34	0	20	1,602.55	46.21
EX J-110	1,556.50	0	20	1,601.78	45.28
EX J-100	1,550.00	0	22	1,601.19	51.19
EX J-90	1,547.00	0	23	1,601.14	54.14
EX J-80	1,542.85	0	25	1,601.11	58.26
EX J-70	1,542.85	0	25	1,600.97	58.12
EX J-54	1,555.20	0	18	1,597.94	42.74
EX J-50	1,552.03	0	20	1,597.28	45.25
EX J-40	1,552.55	0	19	1,597.22	44.67
EX J-34	1,553.36	0	20	1,598.93	45.57
EX J-30	1,553.00	0	20	1,599.70	46.70
EX J-20	1,553.00	0	20	1,600.23	47.23
EX J-10	1,552.00	0	21	1,601.21	49.21
EX FH-12	1,552.10	0	20	1,597.28	45.18
EX FH-11	1,557.90	0	18	1,599.60	41.70
EX FH-9	1,554.65	0	16	1,592.31	37.66
EX FH-8	1,556.95	0	13	1,587.43	30.48
EX FH-7 (FLOW 2)	1,556.86	4,349	12	1,583.49	26.63
EX FH-6 (TEST 2)	1,559.33	0	20	1,605.78	46.45
EX FH-5	1,558.03	0	20	1,603.62	45.59
EX FH-4	1,557.29	0	20	1,603.15	45.86
EX FH-3 (FLOW 1)	1,550.00	0	22	1,601.19	51.19
EX FH-2	1,542.85	0	25	1,600.90	58.05
EX FH-1 (TEST 1)	1,547.30	0	23	1,601.15	53.85
Domestic (Villas and Bungalows)	1,553.30	0	20	1,598.81	45.51
Domestic (Roasterie)	1,560.25	0	16	1,598.24	37.99
Domestic (Italian)	1,556.30	0	20	1,602.20	45.90
Domestic (Guest Room Addition)	1,550.00	0	22	1,601.16	51.16
Domestic (Conference Center)	1,553.33	0	20	1,598.87	45.54

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Average Daily Demand

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
J-66	1,556.22	0	68	1,713.21	156.99
J-20	1,552.46	0	70	1,713.14	160.68
J-10	1,550.14	0	71	1,713.14	163.00
Fire (Villas and Bungalows)	1,553.13	0	69	1,713.14	160.01
Fire (Roasterie)	1,559.64	0	66	1,713.14	153.51
Fire (Italian)	1,556.30	0	68	1,713.21	156.91
Fire (Guest Room Addition)	1,550.00	0	71	1,713.25	163.25
Fire (Garage)	1,554.70	0	69	1,713.21	158.51
Fire (Conf. Center)	1,556.46	0	68	1,713.21	156.75
FH-8	1,552.10	0	70	1,713.14	161.04
FH-7	1,557.87	0	67	1,713.18	155.31
FH-6	1,556.95	0	68	1,713.21	156.26
FH-5	1,556.39	0	68	1,713.21	156.82
FH-4	1,556.42	0	68	1,713.21	156.78
FH-3	1,556.46	0	68	1,713.21	156.75
FH-2	1,553.15	0	69	1,713.14	159.99
FH-1	1,552.65	0	69	1,713.14	160.49
EX J-194	1,556.60	0	68	1,713.21	156.61
EX J-190	1,556.35	0	68	1,713.21	156.86
EX J-170	1,558.93	0	67	1,713.21	154.28
EX J-160	1,554.89	0	68	1,713.21	158.32
EX J-150	1,557.41	0	67	1,713.21	155.80
EX J-141	1,563.47	0	65	1,713.21	149.74
EX J-140	1,560.63	0	66	1,713.21	152.58
EX J-130	1,558.03	0	67	1,713.21	155.18
EX J-120	1,556.34	0	68	1,713.21	156.87
EX J-110	1,556.50	0	68	1,713.21	156.71
EX J-100	1,550.00	0	71	1,713.22	163.22
EX J-90	1,547.00	0	72	1,713.26	166.26
EX J-80	1,542.85	0	74	1,713.26	170.41
EX J-70	1,542.85	0	74	1,713.25	170.40
EX J-54	1,555.20	0	68	1,713.14	157.94
EX J-50	1,552.03	0	70	1,713.14	161.11
EX J-40	1,552.55	0	69	1,713.14	160.59
EX J-34	1,553.36	0	69	1,713.14	159.78
EX J-30	1,553.00	0	69	1,713.16	160.16
EX J-20	1,553.00	0	69	1,713.18	160.18
EX J-10	1,552.00	0	70	1,713.21	161.21
EX FH-12	1,552.10	0	70	1,713.14	161.04
EX FH-11	1,557.90	0	67	1,713.21	155.31
EX FH-10	1,563.50	0	65	1,713.21	149.71
EX FH-7 (FLOW 2)	1,556.86	0	68	1,713.21	156.35
EX FH-6 (TEST 2)	1,559.33	0	67	1,713.21	153.88
EX FH-5	1,558.03	0	67	1,713.21	155.18
EX FH-4	1,557.29	0	67	1,713.21	155.92
EX FH-3 (FLOW 1)	1,550.00	0	71	1,713.22	163.22
EX FH-2	1,542.85	0	74	1,713.25	170.40
EX FH-1 (TEST 1)	1,547.30	0	72	1,713.26	165.96
Domestic (Villas and Bungalows)	1,553.30	27	69	1,713.14	159.83

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Average Daily Demand

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
Domestic (Roasterie)	1,560.25	19	66	1,713.14	152.89
Domestic (Italian)	1,556.30	30	68	1,713.21	156.91
Domestic (Guest Room Addition)	1,550.00	96	71	1,713.25	163.25
Domestic (Conference Center)	1,553.33	111	69	1,713.14	159.80

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pipe Table

Active Scenario: Average Daily Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-R-1	R-1	PMP-1	1	48.0	130.0	283	0.05
P-PMP-1	PMP-1	EX FH-1 (TEST 1)	1	48.0	130.0	283	0.05
P-EX FH-11	EX J-150	EX FH-11	23	12.0	130.0	0	0.00
P-55	FH-6	J-66	125	8.0	130.0	0	0.00
P-50	FH-3	EX J-110	302	8.0	130.0	-3	0.02
P-31	FH-3	Fire (Conf. Center)	51	8.0	130.0	3	0.02
P-29	Fire (Conf. Center)	FH-4	222	8.0	130.0	3	0.02
P-27	FH-4	FH-5	243	8.0	130.0	3	0.02
P-25	FH-5	EX J-190	267	8.0	130.0	3	0.02
P-23	J-66	EX J-190	16	8.0	130.0	-3	0.02
P-21	EX J-194	J-66	44	8.0	130.0	-3	0.02
P-17	EX J-54	Fire (Villas and Bungalows)	73	8.0	130.0	13	0.08
P-15	Fire (Villas and Bungalows)	J-10	106	8.0	130.0	13	0.08
P-5	J-10	EX J-34	333	8.0	130.0	13	0.08
EX P-193	EX FH-7 (FLOW 2)	EX J-194	50	8.0	130.0	-3	0.02
EX P-191	EX J-160	EX FH-7 (FLOW 2)	93	8.0	130.0	-3	0.02
EX P-177	EX FH-6 (TEST 2)	EX J-140	221	12.0	130.0	3	0.01
EX P-175	EX J-170	EX FH-6 (TEST 2)	67	12.0	130.0	3	0.01
EX P-165	EX J-160	EX J-170	191	12.0	130.0	3	0.01
EX P-157	EX J-160	Fire (Garage)	189	12.0	130.0	0	0.00
EX P-155	Fire (Garage)	EX J-150	268	12.0	130.0	0	0.00
EX P-147(1)	EX J-150	EX FH-10	802	6.0	130.0	0	0.00
EX P-147	EX FH-10	EX J-141	91	6.0	130.0	0	0.00
EX P-145	EX J-141	EX J-140	403	12.0	130.0	0	0.00
EX P-135	EX J-140	EX J-130	649	12.0	130.0	3	0.01
EX P-129	EX J-130	EX FH-5	9	12.0	130.0	3	0.01
EX P-127	EX FH-5	EX FH-4	190	12.0	130.0	3	0.01
EX P-125	EX FH-4	EX J-120	245	12.0	130.0	3	0.01
EX P-117	EX J-120	Fire (Italian)	130	12.0	130.0	3	0.01
EX P-115	Fire (Italian)	Domestic (Italian)	13	12.0	130.0	3	0.01
EX P-113	Domestic (Italian)	EX J-110	171	12.0	130.0	-27	0.08
EX P-109	EX J-110	EX J-10	231	12.0	130.0	-30	0.08
EX P-107	EX J-10	EX FH-3 (FLOW 1)	133	12.0	130.0	-155	0.44
EX P-105	EX FH-3 (FLOW 1)	EX J-100	10	12.0	130.0	-155	0.44
EX P-99	EX J-100	Fire (Guest Room Addition)	294	12.0	130.0	-155	0.44
EX P-97	Fire (Guest Room Addition)	Domestic (Guest Room Addition)	6	12.0	130.0	-155	0.44
EX P-95	Domestic (Guest Room Addition)	EX FH-1 (TEST 1)	81	12.0	130.0	-251	0.71
EX P-93	EX FH-1 (TEST 1)	EX J-90	87	12.0	130.0	32	0.09
EX P-85	EX J-90	EX J-80	323	12.0	130.0	32	0.09

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pipe Table

Active Scenario: Average Daily Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-75	EX J-80	EX J-70	46	6.0	130.0	32	0.36
EX P-65	EX J-70	EX FH-2	22	6.0	130.0	32	0.36
EX P-59	EX FH-12	FH-8	37	8.0	130.0	0	0.00
EX P-58	EX J-50	EX FH-12	89	8.0	130.0	0	0.00
EX P-57(2)	FH-7	Domestic (Roasterie)	272	6.0	130.0	32	0.36
EX P-57(1)	EX FH-2	FH-7	603	6.0	130.0	32	0.36
EX P-55	Domestic (Roasterie)	Fire (Roasterie)	12	6.0	130.0	13	0.14
EX P-53	Fire (Roasterie)	EX J-54	87	6.0	130.0	13	0.14
EX P-47(2)	J-20	FH-1	9	8.0	130.0	0	0.00
EX P-47(1)	EX J-50	J-20	19	8.0	130.0	0	0.00
EX P-45	FH-1	EX J-40	46	8.0	130.0	0	0.00
EX P-39	EX J-40	FH-2	103	8.0	130.0	0	0.00
EX P-37	FH-2	Domestic (Villas and Bungalows)	27	8.0	130.0	0	0.00
EX P-35(2)	Domestic (Conference Center)	EX J-34	5	8.0	130.0	-137	0.88
EX P-35(1)	Domestic (Villas and Bungalows)	Domestic (Conference Center)	5	8.0	130.0	-27	0.17
EX P-33	EX J-34	EX J-30	63	8.0	130.0	-125	0.80
EX P-25	EX J-30	EX J-20	43	8.0	130.0	-125	0.80
EX P-15	EX J-20	EX J-10	80	8.0	130.0	-125	0.80

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Max Day

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
J-66	1,556.22	0	67	1,711.62	155.40
J-20	1,552.46	0	69	1,711.35	158.90
J-10	1,550.14	0	70	1,711.37	161.23
Fire (Villas and Bungalows)	1,553.13	0	68	1,711.37	158.24
Fire (Roasterie)	1,559.64	0	66	1,711.38	151.74
Fire (Italian)	1,556.30	0	67	1,711.62	155.31
Fire (Guest Room Addition)	1,550.00	0	70	1,711.75	161.75
Fire (Garage)	1,554.70	0	68	1,711.62	156.92
Fire (Conf. Center)	1,556.46	0	67	1,711.62	155.16
FH-8	1,552.10	0	69	1,711.35	159.25
FH-7	1,557.87	0	66	1,711.50	153.63
FH-6	1,556.95	0	67	1,711.62	154.67
FH-5	1,556.39	0	67	1,711.62	155.23
FH-4	1,556.42	0	67	1,711.62	155.19
FH-3	1,556.46	0	67	1,711.62	155.16
FH-2	1,553.15	0	68	1,711.35	158.21
FH-1	1,552.65	0	69	1,711.35	158.70
EX J-194	1,556.60	0	67	1,711.62	155.02
EX J-190	1,556.35	0	67	1,711.62	155.27
EX J-170	1,558.93	0	66	1,711.62	152.69
EX J-160	1,554.89	0	68	1,711.62	156.73
EX J-150	1,557.41	0	67	1,711.62	154.21
EX J-141	1,563.47	0	64	1,711.62	148.15
EX J-140	1,560.63	0	65	1,711.62	150.99
EX J-130	1,558.03	0	66	1,711.62	153.59
EX J-120	1,556.34	0	67	1,711.62	155.28
EX J-110	1,556.50	0	67	1,711.62	155.12
EX J-100	1,550.00	0	70	1,711.66	161.66
EX J-90	1,547.00	0	71	1,711.81	164.81
EX J-80	1,542.85	0	73	1,711.80	168.95
EX J-70	1,542.85	0	73	1,711.78	168.93
EX J-54	1,555.20	0	68	1,711.37	156.17
EX J-50	1,552.03	0	69	1,711.35	159.32
EX J-40	1,552.55	0	69	1,711.35	158.80
EX J-34	1,553.36	0	68	1,711.36	158.00
EX J-30	1,553.00	0	69	1,711.45	158.45
EX J-20	1,553.00	0	69	1,711.51	158.51
EX J-10	1,552.00	0	69	1,711.62	159.62
EX FH-12	1,552.10	0	69	1,711.35	159.25
EX FH-11	1,557.90	0	67	1,711.62	153.72
EX FH-10	1,563.50	0	64	1,711.62	148.12
EX FH-7 (FLOW 2)	1,556.86	0	67	1,711.62	154.76
EX FH-6 (TEST 2)	1,559.33	0	66	1,711.62	152.29
EX FH-5	1,558.03	0	66	1,711.62	153.59
EX FH-4	1,557.29	0	67	1,711.62	154.33
EX FH-3 (FLOW 1)	1,550.00	0	70	1,711.66	161.66
EX FH-2	1,542.85	0	73	1,711.77	168.92
EX FH-1 (TEST 1)	1,547.30	0	71	1,711.81	164.51
Domestic (Villas and Bungalows)	1,553.30	53	68	1,711.35	158.05

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Max Day

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
Domestic (Roasterie)	1,560.25	38	65	1,711.38	151.13
Domestic (Italian)	1,556.30	60	67	1,711.62	155.32
Domestic (Guest Room Addition)	1,550.00	192	70	1,711.75	161.75
Domestic (Conference Center)	1,553.33	221	68	1,711.35	158.02

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pipe Table

Active Scenario: Max Day

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-R-1	R-1	PMP-1	1	48.0	130.0	565	0.10
P-PMP-1	PMP-1	EX FH-1 (TEST 1)	1	48.0	130.0	565	0.10
P-EX FH-11	EX J-150	EX FH-11	23	12.0	130.0	0	0.00
P-55	FH-6	J-66	125	8.0	130.0	0	0.00
P-50	FH-3	EX J-110	302	8.0	130.0	-6	0.04
P-31	FH-3	Fire (Conf. Center)	51	8.0	130.0	6	0.04
P-29	Fire (Conf. Center)	FH-4	222	8.0	130.0	6	0.04
P-27	FH-4	FH-5	243	8.0	130.0	6	0.04
P-25	FH-5	EX J-190	267	8.0	130.0	6	0.04
P-23	J-66	EX J-190	16	8.0	130.0	-6	0.04
P-21	EX J-194	J-66	44	8.0	130.0	-6	0.04
P-17	EX J-54	Fire (Villas and Bungalows)	73	8.0	130.0	25	0.16
P-15	Fire (Villas and Bungalows)	J-10	106	8.0	130.0	25	0.16
P-5	J-10	EX J-34	333	8.0	130.0	25	0.16
EX P-193	EX FH-7 (FLOW 2)	EX J-194	50	8.0	130.0	-6	0.04
EX P-191	EX J-160	EX FH-7 (FLOW 2)	93	8.0	130.0	-6	0.04
EX P-177	EX FH-6 (TEST 2)	EX J-140	221	12.0	130.0	5	0.01
EX P-175	EX J-170	EX FH-6 (TEST 2)	67	12.0	130.0	5	0.01
EX P-165	EX J-160	EX J-170	191	12.0	130.0	5	0.01
EX P-157	EX J-160	Fire (Garage)	189	12.0	130.0	1	0.00
EX P-155	Fire (Garage)	EX J-150	268	12.0	130.0	1	0.00
EX P-147(1)	EX J-150	EX FH-10	802	6.0	130.0	1	0.01
EX P-147	EX FH-10	EX J-141	91	6.0	130.0	1	0.01
EX P-145	EX J-141	EX J-140	403	12.0	130.0	1	0.00
EX P-135	EX J-140	EX J-130	649	12.0	130.0	6	0.02
EX P-129	EX J-130	EX FH-5	9	12.0	130.0	6	0.02
EX P-127	EX FH-5	EX FH-4	190	12.0	130.0	6	0.02
EX P-125	EX FH-4	EX J-120	245	12.0	130.0	6	0.02
EX P-117	EX J-120	Fire (Italian)	130	12.0	130.0	6	0.02
EX P-115	Fire (Italian)	Domestic (Italian)	13	12.0	130.0	6	0.02
EX P-113	Domestic (Italian)	EX J-110	171	12.0	130.0	-54	0.15
EX P-109	EX J-110	EX J-10	231	12.0	130.0	-60	0.17
EX P-107	EX J-10	EX FH-3 (FLOW 1)	133	12.0	130.0	-309	0.88
EX P-105	EX FH-3 (FLOW 1)	EX J-100	10	12.0	130.0	-309	0.88
EX P-99	EX J-100	Fire (Guest Room Addition)	294	12.0	130.0	-309	0.88
EX P-97	Fire (Guest Room Addition)	Domestic (Guest Room Addition)	6	12.0	130.0	-309	0.88
EX P-95	Domestic (Guest Room Addition)	EX FH-1 (TEST 1)	81	12.0	130.0	-502	1.42
EX P-93	EX FH-1 (TEST 1)	EX J-90	87	12.0	130.0	63	0.18
EX P-85	EX J-90	EX J-80	323	12.0	130.0	63	0.18

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pipe Table

Active Scenario: Max Day

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-75	EX J-80	EX J-70	46	6.0	130.0	63	0.72
EX P-65	EX J-70	EX FH-2	22	6.0	130.0	63	0.72
EX P-59	EX FH-12	FH-8	37	8.0	130.0	0	0.00
EX P-58	EX J-50	EX FH-12	89	8.0	130.0	0	0.00
EX P-57(2)	FH-7	Domestic (Roasterie)	272	6.0	130.0	63	0.72
EX P-57(1)	EX FH-2	FH-7	603	6.0	130.0	63	0.72
EX P-55	Domestic (Roasterie)	Fire (Roasterie)	12	6.0	130.0	25	0.28
EX P-53	Fire (Roasterie)	EX J-54	87	6.0	130.0	25	0.28
EX P-47(2)	J-20	FH-1	9	8.0	130.0	0	0.00
EX P-47(1)	EX J-50	J-20	19	8.0	130.0	0	0.00
EX P-45	FH-1	EX J-40	46	8.0	130.0	0	0.00
EX P-39	EX J-40	FH-2	103	8.0	130.0	0	0.00
EX P-37	FH-2	Domestic (Villas and Bungalows)	27	8.0	130.0	0	0.00
EX P-35(2)	Domestic (Conference Center)	EX J-34	5	8.0	130.0	-275	1.75
EX P-35(1)	Domestic (Villas and Bungalows)	Domestic (Conference Center)	5	8.0	130.0	-53	0.34
EX P-33	EX J-34	EX J-30	63	8.0	130.0	-250	1.59
EX P-25	EX J-30	EX J-20	43	8.0	130.0	-250	1.59
EX P-15	EX J-20	EX J-10	80	8.0	130.0	-250	1.59

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Peak Hour Demand

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
J-66	1,556.22	0	65	1,705.85	149.63
J-20	1,552.46	0	66	1,704.99	152.53
J-10	1,550.14	0	67	1,705.02	154.88
Fire (Villas and Bungalows)	1,553.13	0	66	1,705.02	151.88
Fire (Roasterie)	1,559.64	0	63	1,705.02	145.38
Fire (Italian)	1,556.30	0	65	1,705.85	149.55
Fire (Guest Room Addition)	1,550.00	0	68	1,706.40	156.40
Fire (Garage)	1,554.70	0	65	1,705.85	151.15
Fire (Conf. Center)	1,556.46	0	65	1,705.86	149.40
FH-8	1,552.10	0	66	1,704.99	152.89
FH-7	1,557.87	0	64	1,705.47	147.60
FH-6	1,556.95	0	64	1,705.85	148.90
FH-5	1,556.39	0	65	1,705.86	149.47
FH-4	1,556.42	0	65	1,705.86	149.43
FH-3	1,556.46	0	65	1,705.86	149.40
FH-2	1,553.15	0	66	1,704.99	151.84
FH-1	1,552.65	0	66	1,704.99	152.34
EX J-194	1,556.60	0	65	1,705.85	149.26
EX J-190	1,556.35	0	65	1,705.85	149.50
EX J-170	1,558.93	0	64	1,705.85	146.92
EX J-160	1,554.89	0	65	1,705.85	150.96
EX J-150	1,557.41	0	64	1,705.85	148.44
EX J-141	1,563.47	0	62	1,705.85	142.38
EX J-140	1,560.63	0	63	1,705.85	145.22
EX J-130	1,558.03	0	64	1,705.85	147.82
EX J-120	1,556.34	0	65	1,705.85	149.51
EX J-110	1,556.50	0	65	1,705.86	149.36
EX J-100	1,550.00	0	68	1,706.06	156.06
EX J-90	1,547.00	0	69	1,706.61	159.61
EX J-80	1,542.85	0	71	1,706.59	163.74
EX J-70	1,542.85	0	71	1,706.51	163.66
EX J-54	1,555.20	0	65	1,705.02	149.82
EX J-50	1,552.03	0	66	1,704.99	152.96
EX J-40	1,552.55	0	66	1,704.99	152.44
EX J-34	1,553.36	0	66	1,705.01	151.65
EX J-30	1,553.00	0	66	1,705.31	152.31
EX J-20	1,553.00	0	66	1,705.51	152.51
EX J-10	1,552.00	0	67	1,705.89	153.89
EX FH-12	1,552.10	0	66	1,704.99	152.89
EX FH-11	1,557.90	0	64	1,705.85	147.95
EX FH-10	1,563.50	0	62	1,705.85	142.35
EX FH-7 (FLOW 2)	1,556.86	0	64	1,705.85	148.99
EX FH-6 (TEST 2)	1,559.33	0	63	1,705.85	146.52
EX FH-5	1,558.03	0	64	1,705.85	147.82
EX FH-4	1,557.29	0	64	1,705.85	148.56
EX FH-3 (FLOW 1)	1,550.00	0	68	1,706.04	156.04
EX FH-2	1,542.85	0	71	1,706.47	163.62
EX FH-1 (TEST 1)	1,547.30	0	69	1,706.61	159.31
Domestic (Villas and Bungalows)	1,553.30	94	66	1,704.99	151.68

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Peak Hour Demand

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
Domestic (Roasterie)	1,560.25	114	63	1,705.02	144.77
Domestic (Italian)	1,556.30	179	65	1,705.85	149.55
Domestic (Guest Room Addition)	1,550.00	336	68	1,706.41	156.41
Domestic (Conference Center)	1,553.33	402	66	1,704.99	151.66

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pipe Table

Active Scenario: Peak Hour Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-R-1	R-1	PMP-1	1	48.0	130.0	1,125	0.20
P-PMP-1	PMP-1	EX FH-1 (TEST 1)	1	48.0	130.0	1,125	0.20
P-EX FH-11	EX J-150	EX FH-11	23	12.0	130.0	0	0.00
P-55	FH-6	J-66	125	8.0	130.0	0	0.00
P-50	FH-3	EX J-110	302	8.0	130.0	-17	0.11
P-31	FH-3	Fire (Conf. Center)	51	8.0	130.0	17	0.11
P-29	Fire (Conf. Center)	FH-4	222	8.0	130.0	17	0.11
P-27	FH-4	FH-5	243	8.0	130.0	17	0.11
P-25	FH-5	EX J-190	267	8.0	130.0	17	0.11
P-23	J-66	EX J-190	16	8.0	130.0	-17	0.11
P-21	EX J-194	J-66	44	8.0	130.0	-17	0.11
P-17	EX J-54	Fire (Villas and Bungalows)	73	8.0	130.0	15	0.09
P-15	Fire (Villas and Bungalows)	J-10	106	8.0	130.0	15	0.09
P-5	J-10	EX J-34	333	8.0	130.0	15	0.09
EX P-193	EX FH-7 (FLOW 2)	EX J-194	50	8.0	130.0	-17	0.11
EX P-191	EX J-160	EX FH-7 (FLOW 2)	93	8.0	130.0	-17	0.11
EX P-177	EX FH-6 (TEST 2)	EX J-140	221	12.0	130.0	15	0.04
EX P-175	EX J-170	EX FH-6 (TEST 2)	67	12.0	130.0	15	0.04
EX P-165	EX J-160	EX J-170	191	12.0	130.0	15	0.04
EX P-157	EX J-160	Fire (Garage)	189	12.0	130.0	2	0.01
EX P-155	Fire (Garage)	EX J-150	268	12.0	130.0	2	0.01
EX P-147(1)	EX J-150	EX FH-10	802	6.0	130.0	2	0.02
EX P-147	EX FH-10	EX J-141	91	6.0	130.0	2	0.02
EX P-145	EX J-141	EX J-140	403	12.0	130.0	2	0.01
EX P-135	EX J-140	EX J-130	649	12.0	130.0	17	0.05
EX P-129	EX J-130	EX FH-5	9	12.0	130.0	17	0.05
EX P-127	EX FH-5	EX FH-4	190	12.0	130.0	17	0.05
EX P-125	EX FH-4	EX J-120	245	12.0	130.0	17	0.05
EX P-117	EX J-120	Fire (Italian)	130	12.0	130.0	17	0.05
EX P-115	Fire (Italian)	Domestic (Italian)	13	12.0	130.0	17	0.05
EX P-113	Domestic (Italian)	EX J-110	171	12.0	130.0	-162	0.46
EX P-109	EX J-110	EX J-10	231	12.0	130.0	-179	0.51
EX P-107	EX J-10	EX FH-3 (FLOW 1)	133	12.0	130.0	-660	1.87
EX P-105	EX FH-3 (FLOW 1)	EX J-100	10	12.0	130.0	-660	1.87
EX P-99	EX J-100	Fire (Guest Room Addition)	294	12.0	130.0	-660	1.87
EX P-97	Fire (Guest Room Addition)	Domestic (Guest Room Addition)	6	12.0	130.0	-660	1.87
EX P-95	Domestic (Guest Room Addition)	EX FH-1 (TEST 1)	81	12.0	130.0	-996	2.83
EX P-93	EX FH-1 (TEST 1)	EX J-90	87	12.0	130.0	129	0.36
EX P-85	EX J-90	EX J-80	323	12.0	130.0	129	0.36

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pipe Table

Active Scenario: Peak Hour Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-75	EX J-80	EX J-70	46	6.0	130.0	129	1.46
EX P-65	EX J-70	EX FH-2	22	6.0	130.0	129	1.46
EX P-59	EX FH-12	FH-8	37	8.0	130.0	0	0.00
EX P-58	EX J-50	EX FH-12	89	8.0	130.0	0	0.00
EX P-57(2)	FH-7	Domestic (Roasterie)	272	6.0	130.0	129	1.46
EX P-57(1)	EX FH-2	FH-7	603	6.0	130.0	129	1.46
EX P-55	Domestic (Roasterie)	Fire (Roasterie)	12	6.0	130.0	15	0.16
EX P-53	Fire (Roasterie)	EX J-54	87	6.0	130.0	15	0.16
EX P-47(2)	J-20	FH-1	9	8.0	130.0	0	0.00
EX P-47(1)	EX J-50	J-20	19	8.0	130.0	0	0.00
EX P-45	FH-1	EX J-40	46	8.0	130.0	0	0.00
EX P-39	EX J-40	FH-2	103	8.0	130.0	0	0.00
EX P-37	FH-2	Domestic (Villas and Bungalows)	27	8.0	130.0	0	0.00
EX P-35(2)	Domestic (Conference Center)	EX J-34	5	8.0	130.0	-495	3.16
EX P-35(1)	Domestic (Villas and Bungalows)	Domestic (Conference Center)	5	8.0	130.0	-93	0.60
EX P-33	EX J-34	EX J-30	63	8.0	130.0	-481	3.07
EX P-25	EX J-30	EX J-20	43	8.0	130.0	-481	3.07
EX P-15	EX J-20	EX J-10	80	8.0	130.0	-481	3.07

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: Bungalows/The Roasterie (Model 1)

Label	Elevation (ft)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
J-66	1,556.22	1,500	2,737	30	30	1,711.62
J-20	1,552.46	1,500	2,559	30	30	1,711.35
J-10	1,550.14	1,500	2,572	30	32	1,711.37
Fire (Villas and Bungalows)	1,553.13	1,500	2,486	30	31	1,711.37
Fire (Roasterie)	1,559.64	1,500	2,222	30	30	1,711.38
Fire (Italian)	1,556.30	1,500	3,046	30	33	1,711.62
Fire (Guest Room Addition)	1,550.00	1,500	3,508	30	36	1,711.75
Fire (Garage)	1,554.70	1,500	2,780	30	32	1,711.62
Fire (Conf. Center)	1,556.46	1,500	2,791	30	30	1,711.62
FH-8	1,552.10	1,500	2,340	30	30	1,711.35
FH-7	1,557.87	1,500	2,075	30	30	1,711.50
FH-6	1,556.95	1,500	2,492	30	30	1,711.62
FH-5	1,556.39	1,500	2,681	30	30	1,711.62
FH-4	1,556.42	1,500	2,702	30	30	1,711.62
FH-3	1,556.46	1,500	2,825	30	30	1,711.62
FH-2	1,553.15	1,500	2,884	30	30	1,711.35
FH-1	1,552.65	1,500	2,571	30	30	1,711.35
EX J-194	1,556.60	1,500	2,765	30	30	1,711.62
EX J-190	1,556.35	1,500	2,742	30	30	1,711.62
EX J-170	1,558.93	1,500	2,782	30	31	1,711.62
EX J-160	1,554.89	1,500	2,787	30	32	1,711.62
EX J-150	1,557.41	1,500	2,725	30	30	1,711.62
EX J-141	1,563.47	1,500	2,663	30	30	1,711.62
EX J-140	1,560.63	1,500	2,774	30	31	1,711.62
EX J-130	1,558.03	1,500	2,899	30	32	1,711.62
EX J-120	1,556.34	1,500	3,008	30	33	1,711.62
EX J-110	1,556.50	1,500	3,113	30	33	1,711.62
EX J-100	1,550.00	1,500	3,318	30	36	1,711.66
EX J-90	1,547.00	1,500	3,576	30	36	1,711.81
EX J-80	1,542.85	1,500	3,569	30	35	1,711.80
EX J-70	1,542.85	1,500	3,306	30	30	1,711.78
EX J-54	1,555.20	1,500	2,433	30	31	1,711.37
EX J-50	1,552.03	1,500	2,531	30	30	1,711.35
EX J-40	1,552.55	1,500	2,659	30	30	1,711.35
EX J-34	1,553.36	1,500	2,945	30	31	1,711.36
EX J-30	1,553.00	1,500	3,063	30	31	1,711.45
EX J-20	1,553.00	1,500	3,157	30	32	1,711.51
EX J-10	1,552.00	1,500	3,240	30	35	1,711.62
EX FH-12	1,552.10	1,500	2,392	30	30	1,711.35
EX FH-11	1,557.90	1,500	2,718	30	30	1,711.62
EX FH-10	1,563.50	1,500	2,291	30	30	1,711.62
EX FH-7 (FLOW 2)	1,556.86	1,500	2,789	30	30	1,711.62
EX FH-6 (TEST 2)	1,559.33	1,500	2,780	30	31	1,711.62
EX FH-5	1,558.03	1,500	2,901	30	32	1,711.62
EX FH-4	1,557.29	1,500	2,944	30	32	1,711.62
EX FH-3 (FLOW 1)	1,550.00	1,500	3,312	30	36	1,711.66
EX FH-2	1,542.85	1,500	3,167	30	30	1,711.77

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: Bungalows/The Roasterie (Model 1)

Label	Elevation (ft)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
EX FH-1 (TEST 1)	1,547.30	1,500	3,581	30	37	1,711.81
Domestic (Villas and Bungalows)	1,553.30	1,553	2,999	30	30	1,711.35
Domestic (Roasterie)	1,560.25	1,538	2,236	30	30	1,711.38
Domestic (Italian)	1,556.30	1,560	3,110	30	33	1,711.62
Domestic (Guest Room Addition)	1,550.00	1,692	3,705	30	36	1,711.75
Domestic (Conference Center)	1,553.33	1,721	3,166	30	30	1,711.35

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: Conference Center (Model 1)

Label	Elevation (ft)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
J-66	1,556.22	1,625	2,737	30	30	1,711.62
J-20	1,552.46	1,625	2,559	30	30	1,711.35
J-10	1,550.14	1,625	2,572	30	32	1,711.37
Fire (Villas and Bungalows)	1,553.13	1,625	2,486	30	31	1,711.37
Fire (Roasterie)	1,559.64	1,625	2,222	30	30	1,711.38
Fire (Italian)	1,556.30	1,625	3,046	30	33	1,711.62
Fire (Guest Room Addition)	1,550.00	1,625	3,508	30	36	1,711.75
Fire (Garage)	1,554.70	1,625	2,780	30	32	1,711.62
Fire (Conf. Center)	1,556.46	1,625	2,791	30	30	1,711.62
FH-8	1,552.10	1,625	2,340	30	30	1,711.35
FH-7	1,557.87	1,625	2,074	30	30	1,711.50
FH-6	1,556.95	1,625	2,492	30	30	1,711.62
FH-5	1,556.39	1,625	2,681	30	30	1,711.62
FH-4	1,556.42	1,625	2,702	30	30	1,711.62
FH-3	1,556.46	1,625	2,825	30	30	1,711.62
FH-2	1,553.15	1,625	2,884	30	30	1,711.35
FH-1	1,552.65	1,625	2,571	30	30	1,711.35
EX J-194	1,556.60	1,625	2,765	30	30	1,711.62
EX J-190	1,556.35	1,625	2,742	30	30	1,711.62
EX J-170	1,558.93	1,625	2,782	30	31	1,711.62
EX J-160	1,554.89	1,625	2,787	30	32	1,711.62
EX J-150	1,557.41	1,625	2,725	30	30	1,711.62
EX J-141	1,563.47	1,625	2,663	30	30	1,711.62
EX J-140	1,560.63	1,625	2,774	30	31	1,711.62
EX J-130	1,558.03	1,625	2,899	30	32	1,711.62
EX J-120	1,556.34	1,625	3,008	30	33	1,711.62
EX J-110	1,556.50	1,625	3,113	30	33	1,711.62
EX J-100	1,550.00	1,625	3,318	30	36	1,711.66
EX J-90	1,547.00	1,625	3,576	30	36	1,711.81
EX J-80	1,542.85	1,625	3,569	30	35	1,711.80
EX J-70	1,542.85	1,625	3,306	30	30	1,711.78
EX J-54	1,555.20	1,625	2,433	30	31	1,711.37
EX J-50	1,552.03	1,625	2,531	30	30	1,711.35
EX J-40	1,552.55	1,625	2,659	30	30	1,711.35
EX J-34	1,553.36	1,625	2,945	30	31	1,711.36
EX J-30	1,553.00	1,625	3,063	30	31	1,711.45
EX J-20	1,553.00	1,625	3,157	30	32	1,711.51
EX J-10	1,552.00	1,625	3,240	30	35	1,711.62
EX FH-12	1,552.10	1,625	2,392	30	30	1,711.35
EX FH-11	1,557.90	1,625	2,718	30	30	1,711.62
EX FH-10	1,563.50	1,625	2,291	30	30	1,711.62
EX FH-7 (FLOW 2)	1,556.86	1,625	2,789	30	30	1,711.62
EX FH-6 (TEST 2)	1,559.33	1,625	2,780	30	31	1,711.62
EX FH-5	1,558.03	1,625	2,901	30	32	1,711.62
EX FH-4	1,557.29	1,625	2,944	30	32	1,711.62
EX FH-3 (FLOW 1)	1,550.00	1,625	3,312	30	36	1,711.66
EX FH-2	1,542.85	1,625	3,167	30	30	1,711.77

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: Conference Center (Model 1)

Label	Elevation (ft)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
EX FH-1 (TEST 1)	1,547.30	1,625	3,581	30	37	1,711.81
Domestic (Villas and Bungalows)	1,553.30	1,678	2,999	30	30	1,711.35
Domestic (Roasterie)	1,560.25	1,663	2,236	30	30	1,711.38
Domestic (Italian)	1,556.30	1,685	3,110	30	33	1,711.62
Domestic (Guest Room Addition)	1,550.00	1,817	3,705	30	36	1,711.75
Domestic (Conference Center)	1,553.33	1,846	3,166	30	30	1,711.35

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: Parking Structure (Model 2)

Label	Elevation (ft)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
J-66	1,556.22	3,000	2,967	30	30	1,722.85
J-20	1,552.46	3,000	2,262	30	30	1,721.76
J-10	1,550.14	3,000	2,220	30	33	1,721.76
Fire (Villas and Bungalows)	1,553.13	3,000	2,166	30	32	1,721.76
Fire (Roasterie)	1,559.64	3,000	1,990	30	30	1,721.77
Fire (Italian)	1,556.30	3,000	2,834	30	32	1,722.30
Fire (Guest Room Addition)	1,550.00	3,000	2,666	30	33	1,721.99
Fire (Garage)	1,554.70	3,000	3,183	30	31	1,722.96
Fire (Conf. Center)	1,556.46	3,000	2,735	30	30	1,722.43
FH-8	1,552.10	3,000	2,116	30	30	1,721.76
FH-7	1,557.87	3,000	1,879	30	30	1,721.83
FH-6	1,556.95	3,000	2,690	30	30	1,722.85
FH-5	1,556.39	3,000	2,787	30	30	1,722.69
FH-4	1,556.42	3,000	2,729	30	30	1,722.55
FH-3	1,556.46	3,000	2,745	30	30	1,722.40
FH-2	1,553.15	3,000	2,446	30	30	1,721.76
FH-1	1,552.65	3,000	2,269	30	30	1,721.76
EX J-194	1,556.60	3,000	3,023	30	30	1,722.88
EX J-190	1,556.35	3,000	2,962	30	30	1,722.85
EX J-170	1,558.93	3,000	3,215	30	32	1,722.98
EX J-160	1,554.89	3,000	3,201	30	32	1,722.96
EX J-150	1,557.41	3,000	3,099	30	30	1,722.96
EX J-141	1,563.47	3,000	2,996	30	30	1,722.89
EX J-140	1,560.63	3,000	3,126	30	31	1,722.89
EX J-130	1,558.03	3,000	2,965	30	31	1,722.58
EX J-120	1,556.34	3,000	2,861	30	32	1,722.36
EX J-110	1,556.50	3,000	2,800	30	32	1,722.23
EX J-100	1,550.00	3,000	2,689	30	34	1,722.04
EX J-90	1,547.00	3,000	2,656	30	33	1,721.98
EX J-80	1,542.85	3,000	2,639	30	34	1,721.98
EX J-70	1,542.85	3,000	2,535	30	32	1,721.97
EX J-54	1,555.20	3,000	2,131	30	31	1,721.76
EX J-50	1,552.03	3,000	2,245	30	30	1,721.76
EX J-40	1,552.55	3,000	2,325	30	30	1,721.76
EX J-34	1,553.36	3,000	2,446	30	32	1,721.76
EX J-30	1,553.00	3,000	2,517	30	32	1,721.86
EX J-20	1,553.00	3,000	2,574	30	33	1,721.93
EX J-10	1,552.00	3,000	2,705	30	34	1,722.06
EX FH-12	1,552.10	3,000	2,152	30	30	1,721.76
EX FH-11	1,557.90	3,000	3,090	30	30	1,722.96
EX FH-10	1,563.50	3,000	2,554	30	30	1,722.90
EX FH-7 (FLOW 2)	1,556.86	3,000	3,088	30	30	1,722.91
EX FH-6 (TEST 2)	1,559.33	3,000	3,221	30	32	1,722.99
EX FH-5	1,558.03	3,000	2,963	30	31	1,722.57
EX FH-4	1,557.29	3,000	2,915	30	31	1,722.48
EX FH-3 (FLOW 1)	1,550.00	3,000	2,690	30	34	1,722.04
EX FH-2	1,542.85	3,000	2,494	30	31	1,721.96

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: Parking Structure (Model 2)

Label	Elevation (ft)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
EX FH-1 (TEST 1)	1,547.30	3,000	2,661	30	33	1,721.98
Domestic (Villas and Bungalows)	1,553.30	3,053	2,499	30	31	1,721.76
Domestic (Roasterie)	1,560.25	3,038	2,011	30	30	1,721.77
Domestic (Italian)	1,556.30	3,060	2,891	30	32	1,722.29
Domestic (Guest Room Addition)	1,550.00	3,192	2,858	30	33	1,721.98
Domestic (Conference Center)	1,553.33	3,221	2,667	30	32	1,721.76

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Parking Structure+Fire Flow Split

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
J-66	1,556.22	0	36	1,640.34	84.12
J-20	1,552.46	0	38	1,639.97	87.51
J-10	1,550.14	0	39	1,639.98	89.84
Fire (Villas and Bungalows)	1,553.13	0	38	1,639.98	86.85
Fire (Roasterie)	1,559.64	0	35	1,639.98	80.34
Fire (Italian)	1,556.30	0	36	1,640.60	84.30
Fire (Guest Room Addition)	1,550.00	0	39	1,640.20	90.20
Fire (Garage)	1,554.70	0	37	1,640.81	86.11
Fire (Conf. Center)	1,556.46	0	36	1,640.41	83.95
FH-8	1,552.10	0	38	1,639.97	87.87
FH-7	1,557.87	0	36	1,640.04	82.17
FH-6	1,556.95	0	36	1,640.34	83.39
FH-5	1,556.39	0	36	1,640.37	83.98
FH-4	1,556.42	0	36	1,640.39	83.96
FH-3	1,556.46	0	36	1,640.41	83.95
FH-2	1,553.15	0	38	1,639.97	86.82
FH-1	1,552.65	0	38	1,639.97	87.32
EX J-194	1,556.60	0	36	1,640.34	83.74
EX J-190	1,556.35	0	36	1,640.34	83.99
EX J-170	1,558.93	0	36	1,642.32	83.39
EX J-160	1,554.89	0	37	1,641.19	86.30
EX J-150	1,557.41	0	36	1,640.26	82.85
EX J-141	1,563.47	0	34	1,641.48	78.01
EX J-140	1,560.63	0	35	1,641.89	81.26
EX J-130	1,558.03	0	36	1,641.21	83.18
EX J-120	1,556.34	0	37	1,640.74	84.40
EX J-110	1,556.50	0	36	1,640.44	83.94
EX J-100	1,550.00	0	39	1,640.25	90.25
EX J-90	1,547.00	0	40	1,640.20	93.20
EX J-80	1,542.85	0	42	1,640.19	97.34
EX J-70	1,542.85	0	42	1,640.18	97.33
EX J-54	1,555.20	0	37	1,639.98	84.78
EX J-50	1,552.03	0	38	1,639.97	87.94
EX J-40	1,552.55	0	38	1,639.97	87.42
EX J-34	1,553.36	0	37	1,639.98	86.62
EX J-30	1,553.00	0	38	1,640.08	87.08
EX J-20	1,553.00	0	38	1,640.15	87.15
EX J-10	1,552.00	0	38	1,640.28	88.28
EX FH-12	1,552.10	0	38	1,639.97	87.87
EX FH-11	1,557.90	750	36	1,640.23	82.33
EX FH-10	1,563.50	750	33	1,638.75	75.25
EX FH-7 (FLOW 2)	1,556.86	750	36	1,640.33	83.47
EX FH-6 (TEST 2)	1,559.33	750	36	1,642.72	83.39
EX FH-5	1,558.03	0	36	1,641.20	83.17
EX FH-4	1,557.29	0	36	1,641.00	83.71
EX FH-3 (FLOW 1)	1,550.00	0	39	1,640.25	90.25
EX FH-2	1,542.85	0	42	1,640.18	97.33
EX FH-1 (TEST 1)	1,547.30	0	40	1,640.20	92.90
Domestic (Villas and Bungalows)	1,553.30	53	37	1,639.97	86.67

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Parking Structure+Fire Flow Split

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
Domestic (Roasterie)	1,560.25	38	34	1,639.98	79.73
Domestic (Italian)	1,556.30	60	36	1,640.59	84.29
Domestic (Guest Room Addition)	1,550.00	192	39	1,640.20	90.20
Domestic (Conference Center)	1,553.33	221	37	1,639.97	86.64

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: Guest Room Addition (Model 1)

Label	Elevation (ft)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
J-66	1,556.22	3,125	2,737	30	30	1,711.62
J-20	1,552.46	3,125	2,559	30	30	1,711.35
J-10	1,550.14	3,125	2,572	30	32	1,711.37
Fire (Villas and Bungalows)	1,553.13	3,125	2,486	30	31	1,711.37
Fire (Roasterie)	1,559.64	3,125	2,222	30	30	1,711.38
Fire (Italian)	1,556.30	3,125	3,046	30	33	1,711.62
Fire (Guest Room Addition)	1,550.00	3,125	3,508	30	36	1,711.75
Fire (Garage)	1,554.70	3,125	2,780	30	32	1,711.62
Fire (Conf. Center)	1,556.46	3,125	2,791	30	30	1,711.62
FH-8	1,552.10	3,125	2,340	30	30	1,711.35
FH-7	1,557.87	3,125	2,075	30	30	1,711.50
FH-6	1,556.95	3,125	2,492	30	30	1,711.62
FH-5	1,556.39	3,125	2,681	30	30	1,711.62
FH-4	1,556.42	3,125	2,701	30	30	1,711.62
FH-3	1,556.46	3,125	2,825	30	30	1,711.62
FH-2	1,553.15	3,125	2,884	30	30	1,711.35
FH-1	1,552.65	3,125	2,571	30	30	1,711.35
EX J-194	1,556.60	3,125	2,765	30	30	1,711.62
EX J-190	1,556.35	3,125	2,742	30	30	1,711.62
EX J-170	1,558.93	3,125	2,782	30	31	1,711.62
EX J-160	1,554.89	3,125	2,787	30	32	1,711.62
EX J-150	1,557.41	3,125	2,725	30	30	1,711.62
EX J-141	1,563.47	3,125	2,663	30	30	1,711.62
EX J-140	1,560.63	3,125	2,774	30	31	1,711.62
EX J-130	1,558.03	3,125	2,899	30	32	1,711.62
EX J-120	1,556.34	3,125	3,008	30	33	1,711.62
EX J-110	1,556.50	3,125	3,113	30	33	1,711.62
EX J-100	1,550.00	3,125	3,318	30	36	1,711.66
EX J-90	1,547.00	3,125	3,576	30	36	1,711.81
EX J-80	1,542.85	3,125	3,569	30	35	1,711.80
EX J-70	1,542.85	3,125	3,306	30	30	1,711.78
EX J-54	1,555.20	3,125	2,433	30	31	1,711.37
EX J-50	1,552.03	3,125	2,531	30	30	1,711.35
EX J-40	1,552.55	3,125	2,659	30	30	1,711.35
EX J-34	1,553.36	3,125	2,945	30	31	1,711.36
EX J-30	1,553.00	3,125	3,063	30	31	1,711.45
EX J-20	1,553.00	3,125	3,157	30	32	1,711.51
EX J-10	1,552.00	3,125	3,240	30	35	1,711.62
EX FH-12	1,552.10	3,125	2,392	30	30	1,711.35
EX FH-11	1,557.90	3,125	2,717	30	30	1,711.62
EX FH-10	1,563.50	3,125	2,291	30	30	1,711.62
EX FH-7 (FLOW 2)	1,556.86	3,125	2,789	30	30	1,711.62
EX FH-6 (TEST 2)	1,559.33	3,125	2,780	30	31	1,711.62
EX FH-5	1,558.03	3,125	2,901	30	32	1,711.62
EX FH-4	1,557.29	3,125	2,944	30	32	1,711.62
EX FH-3 (FLOW 1)	1,550.00	3,125	3,312	30	36	1,711.66
EX FH-2	1,542.85	3,125	3,167	30	30	1,711.77

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: Guest Room Addition (Model 1)

Label	Elevation (ft)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
EX FH-1 (TEST 1)	1,547.30	3,125	3,581	30	37	1,711.81
Domestic (Villas and Bungalows)	1,553.30	3,178	2,999	30	30	1,711.35
Domestic (Roasterie)	1,560.25	3,163	2,236	30	30	1,711.38
Domestic (Italian)	1,556.30	3,185	3,110	30	33	1,711.62
Domestic (Guest Room Addition)	1,550.00	3,317	3,705	30	36	1,711.75
Domestic (Conference Center)	1,553.33	3,346	3,166	30	30	1,711.35

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Guest Room Addition+Fire Flow Split

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
J-66	1,556.22	0	38	1,644.04	87.82
J-20	1,552.46	0	38	1,639.46	87.00
J-10	1,550.14	0	39	1,640.71	90.57
Fire (Villas and Bungalows)	1,553.13	0	38	1,640.87	87.73
Fire (Roasterie)	1,559.64	0	35	1,641.48	81.84
Fire (Italian)	1,556.30	0	38	1,644.04	87.74
Fire (Guest Room Addition)	1,550.00	0	42	1,647.69	97.69
Fire (Garage)	1,554.70	0	39	1,644.04	89.34
Fire (Conf. Center)	1,556.46	0	38	1,644.04	87.58
FH-8	1,552.10	0	38	1,639.46	87.36
FH-7	1,557.87	0	37	1,643.60	85.73
FH-6	1,556.95	0	38	1,644.04	87.09
FH-5	1,556.39	0	38	1,644.04	87.65
FH-4	1,556.42	0	38	1,644.04	87.62
FH-3	1,556.46	0	38	1,644.04	87.58
FH-2	1,553.15	1,042	37	1,639.46	86.31
FH-1	1,552.65	0	38	1,639.46	86.81
EX J-194	1,556.60	0	38	1,644.04	87.45
EX J-190	1,556.35	0	38	1,644.04	87.69
EX J-170	1,558.93	0	37	1,644.04	85.11
EX J-160	1,554.89	0	39	1,644.04	89.15
EX J-150	1,557.41	0	37	1,644.04	86.63
EX J-141	1,563.47	0	35	1,644.04	80.57
EX J-140	1,560.63	0	36	1,644.04	83.41
EX J-130	1,558.03	0	37	1,644.04	86.01
EX J-120	1,556.34	0	38	1,644.04	87.70
EX J-110	1,556.50	0	38	1,644.04	87.54
EX J-100	1,550.00	0	41	1,644.57	94.57
EX J-90	1,547.00	0	44	1,648.73	101.73
EX J-80	1,542.85	0	46	1,648.65	105.80
EX J-70	1,542.85	0	46	1,648.30	105.45
EX J-54	1,555.20	0	37	1,640.97	85.77
EX J-50	1,552.03	0	38	1,639.46	87.43
EX J-40	1,552.55	0	38	1,639.46	86.91
EX J-34	1,553.36	0	38	1,640.24	86.88
EX J-30	1,553.00	0	38	1,641.53	88.53
EX J-20	1,553.00	0	39	1,642.41	89.41
EX J-10	1,552.00	0	40	1,644.05	92.05
EX FH-12	1,552.10	0	38	1,639.46	87.36
EX FH-11	1,557.90	0	37	1,644.04	86.14
EX FH-10	1,563.50	0	35	1,644.04	80.54
EX FH-7 (FLOW 2)	1,556.86	0	38	1,644.04	87.18
EX FH-6 (TEST 2)	1,559.33	0	37	1,644.04	84.71
EX FH-5	1,558.03	0	37	1,644.04	86.01
EX FH-4	1,557.29	0	38	1,644.04	86.75
EX FH-3 (FLOW 1)	1,550.00	1,041	41	1,644.46	94.46
EX FH-2	1,542.85	0	46	1,648.14	105.29
EX FH-1 (TEST 1)	1,547.30	1,041	44	1,648.75	101.45
Domestic (Villas and Bungalows)	1,553.30	53	38	1,639.99	86.68

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Guest Room Addition+Fire Flow Split

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
Domestic (Roasterie)	1,560.25	38	35	1,641.55	81.30
Domestic (Italian)	1,556.30	60	38	1,644.04	87.74
Domestic (Guest Room Addition)	1,550.00	192	42	1,647.75	97.75
Domestic (Conference Center)	1,553.33	221	38	1,640.09	86.76

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: The Italian (Model 1)

Label	Elevation (ft)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
J-66	1,556.22	1,750	2,737	30	30	1,711.62
J-20	1,552.46	1,750	2,559	30	30	1,711.35
J-10	1,550.14	1,750	2,572	30	32	1,711.37
Fire (Villas and Bungalows)	1,553.13	1,750	2,486	30	31	1,711.37
Fire (Roasterie)	1,559.64	1,750	2,222	30	30	1,711.38
Fire (Italian)	1,556.30	1,750	3,046	30	33	1,711.62
Fire (Guest Room Addition)	1,550.00	1,750	3,508	30	36	1,711.75
Fire (Garage)	1,554.70	1,750	2,780	30	32	1,711.62
Fire (Conf. Center)	1,556.46	1,750	2,791	30	30	1,711.62
FH-8	1,552.10	1,750	2,340	30	30	1,711.35
FH-7	1,557.87	1,750	2,074	30	30	1,711.50
FH-6	1,556.95	1,750	2,492	30	30	1,711.62
FH-5	1,556.39	1,750	2,681	30	30	1,711.62
FH-4	1,556.42	1,750	2,702	30	30	1,711.62
FH-3	1,556.46	1,750	2,825	30	30	1,711.62
FH-2	1,553.15	1,750	2,884	30	30	1,711.35
FH-1	1,552.65	1,750	2,571	30	30	1,711.35
EX J-194	1,556.60	1,750	2,765	30	30	1,711.62
EX J-190	1,556.35	1,750	2,742	30	30	1,711.62
EX J-170	1,558.93	1,750	2,782	30	31	1,711.62
EX J-160	1,554.89	1,750	2,787	30	32	1,711.62
EX J-150	1,557.41	1,750	2,725	30	30	1,711.62
EX J-141	1,563.47	1,750	2,663	30	30	1,711.62
EX J-140	1,560.63	1,750	2,774	30	31	1,711.62
EX J-130	1,558.03	1,750	2,899	30	32	1,711.62
EX J-120	1,556.34	1,750	3,008	30	33	1,711.62
EX J-110	1,556.50	1,750	3,113	30	33	1,711.62
EX J-100	1,550.00	1,750	3,318	30	36	1,711.66
EX J-90	1,547.00	1,750	3,576	30	36	1,711.81
EX J-80	1,542.85	1,750	3,569	30	35	1,711.80
EX J-70	1,542.85	1,750	3,306	30	30	1,711.78
EX J-54	1,555.20	1,750	2,433	30	31	1,711.37
EX J-50	1,552.03	1,750	2,531	30	30	1,711.35
EX J-40	1,552.55	1,750	2,659	30	30	1,711.35
EX J-34	1,553.36	1,750	2,945	30	31	1,711.36
EX J-30	1,553.00	1,750	3,063	30	31	1,711.45
EX J-20	1,553.00	1,750	3,157	30	32	1,711.51
EX J-10	1,552.00	1,750	3,240	30	35	1,711.62
EX FH-12	1,552.10	1,750	2,392	30	30	1,711.35
EX FH-11	1,557.90	1,750	2,718	30	30	1,711.62
EX FH-10	1,563.50	1,750	2,291	30	30	1,711.62
EX FH-7 (FLOW 2)	1,556.86	1,750	2,789	30	30	1,711.62
EX FH-6 (TEST 2)	1,559.33	1,750	2,780	30	31	1,711.62
EX FH-5	1,558.03	1,750	2,901	30	32	1,711.62
EX FH-4	1,557.29	1,750	2,944	30	32	1,711.62
EX FH-3 (FLOW 1)	1,550.00	1,750	3,312	30	36	1,711.66
EX FH-2	1,542.85	1,750	3,167	30	30	1,711.77

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: The Italian (Model 1)

Label	Elevation (ft)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
EX FH-1 (TEST 1)	1,547.30	1,750	3,581	30	37	1,711.81
Domestic (Villas and Bungalows)	1,553.30	1,803	2,999	30	30	1,711.35
Domestic (Roasterie)	1,560.25	1,788	2,235	30	30	1,711.38
Domestic (Italian)	1,556.30	1,810	3,110	30	33	1,711.62
Domestic (Guest Room Addition)	1,550.00	1,942	3,705	30	36	1,711.75
Domestic (Conference Center)	1,553.33	1,971	3,166	30	30	1,711.35

See Water Demand Exhibit recommendations int he Water Master Plan

APPENDIX D – SCOTTSDALE WATER DEMAND EXHIBIT

INSTRUCTIONS

INPUT DEVELOPMENT NAME, CASE NUMBER, AND QUANTITY VALUES TO DETERMINE TOTAL AVERAGE DAILY WATER USE PER THE 2018 DESIGN STANDARDS AND POLICY MANUAL (DS7PM) CHAPTER 6 USING GALLONS PER DAY (GPD) VALUES FROM FIGURE 6-1.2

TABLE 1: QUANTITY INPUT TABLE FOR THE DEVELOPMENT

FAIRMONT SCOTTSDALE PRINCESS

WATER USE DEVELOPMENT TYPE/CATEGORY	AVERAGE UNIT WATER USE PER DS&PM CH. 6 (GPD/UNIT)	INPUT APPLICABLE QUANTITY FOR DEVELOPMENT IN THIS COLUMN	NUMERICAL UNIT	TOTAL AVERAGE WATER USE (GPD)	NOTES
Category: Residential/ Commerical Residential/ Hotel					
< 2 DU/ac	485.6	-	DU	-	Community pool demands not included here. Refer to separate category.
2 – 2.9 DU/ac	470.4	-	DU	-	
3 – 7.9 DU/ac	248.2	-	DU	-	
8 – 11.9 DU/ac	227.6	-	DU	-	
12 – 22 DU/ac	227.6	-	DU	-	
High Density Condominium (condo)	185.3	-	DU	-	
Resort Hotel	446.3	**198**	ROOM	88,367	Includes site amenities such as 1 "standard" restaurant w/ associated dedicated kitchen, laundry service, landscaping, fountains, and 1 medium capacity pool. Large event venues/kitchens or multiple/large pools and multiple restaurants are not included.
Category: Commerical/ Other					
Restaurant	1.3	**29,719**	FT2	38,635	
Commercial/Retail	0.80	**94,357**	FT2	75,486	
Commerical High Rise	0.60	-	FT2	-	per IBC highrise is at or over 75 feet to highest finished floor
Office	0.60	-	FT2	-	
Institutional	1,340	-	ACRE	-	
Industrial	1,027	-	ACRE	-	
Research and Development	1,284	-	ACRE	-	
Category: Special Use Areas					
Natural Area Open Space	-		ACRE	-	Zero water demand
Developed Open Space - Parks	1,786	-	ACRE	-	
Developed Open Space- Golf Course	4,285	-	ACRE	-	
Category: Evaporation from Swimming Pools/Spas, Cooling, Turf Area Irrigation, Other Outdoor Consumptive Uses					
Extra large pool (60k to 100k gallons)	274	-	EA	-	Annual mean ETo = 74.75 in as collected by AZ Met. Kc = 1.1. Average pool size of 400 sq. ft. loses 20,490 gallons per year, or 51.23 gallons per sq ft, not including backwashing or leaks, per AMWUA calculator.
Large pool (above 30k to 60k gallons)	154	-	EA	-	
Medium pool (15k to 30k gallons)	75	-	EA	-	
Small pool or spa (under 15k gallons)	51	**3**	EA	154	
Total Bermuda Turf Area	0.10	**4,885**	FT2	468	1 sq ft of non-overseeded turf at 60% efficiency with increased Kc is 35 gallons per sq ft per year, per AMWUA calculator.
Total Overseeded Turf Area	0.02	-	FT2	-	1 sq ft of overseeded turf at 60% efficiency with increased Kc is 9 gallons per sq ft per year, per AMWUA calculator.
Evaporative Cooling/ Cooling Towers	-	-	TOTAL COOLING TONNAGE	-	Baed on 1.50 cycles of concentration and average annual daily utilization of 68%. Water use is linear with respect to total cooling capacity tonnage. Based on US Dept of Energy Efficiency and Renewable Energy data.
Category: Filter Backwash Flows & Make-up Water from Pools & Spas (rapid sand filters)					
Extra large pool (60k to 100k gallons)	229	-	EA	-	Based on once per 7 day backwash @ 50,100, and 150gpm, respectively for each size pool category for 8 minute duration. Quantity values used from pool input values above.
Large pool (above 30k to 60k gallons)	171	-	EA	-	
Medium pool (15k to 30k gallons)	114	-	EA	-	
Small pool or spa (under 15k gallons)	57	**3**	EA	171	
A. TOTAL AVERAGE DAILY WATER USE FOR THIS DEVELOPMENT				**203,282**	GPD

NOTES:

GPD=GALLONS PER DAY, DU=DWELLING UNITS, FT2=SQUARE FEET, AC=ACRE, EA=EACH UNIT, ETo=EVAPOTRANSPIRATION, Kc=CROP COEFFICIENT, AZMET=ARIZONA METEOROLOGICAL NETWORK, AMWUA=ARIZONA MUNICIPAL WATER USERS ASSOCIATION

NONE OF THE VALUES OR CALCULATIONS HEREIN ARE INTENDED TO BE USED FOR INFRASTRUCTURE DESIGN, PEAK FLOW DETERMINATION, OR SYSTEM CAPACITY ANALYSIS. FOR THESE PURPOSES REFER TO CH.6 & 7 OF THE CITY'S DESIGN STANDARDS AND POLICY MANUAL FOR THE RESPECTIVE DESIGN VALUES AND PEAKING FACTORS.

TABLE INPUT VALUES LAST UPDATED: 11/29/2023

INSTRUCTIONS

IDENTIFY WATER CONSERVATION MEASURES ABOVE THOSE REQUIRED BY CITY CODE THAT THE DEVELOPMENT(S) PROPOSE TO IMPLEMENT. ENTER AN "X" FOR EACH PROPOSED MEASURE.

TABLE 2: APPROVED SUPPLEMENTAL WATER CONSERVATION MEASURES

FAIRMONT SCOTTSDALE PRINCESS

PROPOSED FOR THIS DEVELOPMENT (ENTER "X")	MEASURE	DESCRIPTION
	1. Submetering	Multi-family and mixed-use developments SUBMETER UNITS for leak detection and for occupants ability to manage their own water use
	2. No outdoor water features	Decorative water features outdoors can be a source of water use that is not functional
	3. Indoor water features submetered	Water features have proven to be a source of leaks. Submetering that is capable of alerts to the building monitoring system greatly reduce water waste
x	4. Limitation on functional turf grass	Functional grass turf are areas used for congregation of large number of people and should be limited to up to 10% of the landscapable area
	5. Limitations on artificial turf	Artificial turf is a large source of heat especially during summer months.
	6. Landscaped Rainwater harvesting	Earthworks, such as berms and basins, are encouraged to promote passive rainwater harvesting for planned plants and trees
	7. Cooling tower controllers with monitoring technology	Arizona high evapotranspiration rates, cooling towers use significantly more water here than in other states. Monitory systems can optimize this water use.
	8. Pools and splashpads submeters with monitoring technology	Pools and splashpad can be a source of leaks. Submetering that is capable of alerts to the building monitoring system greatly reduce water waste. Timers on Splash pads

NOTES:

Greywater systems and large areas of artificial turf are not recommended by water conservation.

This list represents water conservation measures that the conservation office has approved and has shown to provide proven water savings.

TABLE INPUT VALUES LAST UPDATED: 11/29/2023

Water Demand Exhibit Summary

FAIRMONT SCOTTSDALE PRINCESS

1. Total Estimated Water Use per Day on a Sustainable Basis (gallons per day, gpd)

203,282 gpd

2. Net Water (NW) / Consumptive Use (gallons per day, gpd)

41,698 gpd

3. Proposed Water Conservation Measures Above Those Required By City Code

	1. Submetering	NOT PROPOSED
	2. No outdoor water features	NOT PROPOSED
	3. Indoor water features submetered	NOT PROPOSED
X	4. Limitation on functional turf grass	Functional grass turf are areas used for congregation of large number of people and should be limited to up to 10% of the landscapable area
	5. Limitations on artificial turf	NOT PROPOSED
	6. Landscaped Rainwater harvesting	NOT PROPOSED
	7. Cooling tower controllers with monitoring technology	NOT PROPOSED
	8. Pools and splashpads submeters with monitoring technology	NOT PROPOSED

4. Annual Economic Value of the Development on a per Gallon of Use Basis (Applies to Commercial or Mixed Use, To be Completed by City)

1. Major City Revenues $/1,000 gallons
2. Total Annual Output Impact $/1,000 gallons

TABLE INPUT VALUES LAST UPDATED: 11/29/2023

TABLE 4: WATER USE SUMMARY

FAIRMONT SCOTTSDALE PRINCESS

WATER USE SUMMARY FOR THE DEVELOPMENT

USE CATEGORY	AMOUNT	UNITS	% OF TOTAL USE	CALCULATION NOTES
A. TOTAL DAILY AVERAGE WATER USE	**203,282**	**GPD**	**100.0%**	A=B+C, C=D+E, F=B+D
B. OUTDOOR CONSUMPTIVE USE	21,861	GPD	10.8%	
C. TOTAL INDOOR USE	181,421	GPD	89.2%	
D. INDOOR CONSUMPTIVE USE	19,837	GPD	9.8%	
E. WASTEWATER TO SEWER	161,584	GPD	79.5%	
F. TOTAL CONSUMPTIVE USE (NET USE)	41,698	GPD	20.5%	

NOTES:
GPD=GALLONS PER DAY
ALL VALUES ARE FOR AVERAGE WATER USE ANALYSIS ONLY. THIS CALCULATION IS NOT INTENDED TO BE USED FOR INFRASTRUCTURE DESIGN, PEAK FLOW DETERMINATION, OR SYSTEM CAPACITY ANALYSIS. FOR THESE PURPOSES REFER TO CH.6 & 7 OF THE CITY'S DESIGN STANDARDS AND POLICY MANUAL FOR THE RESPECTIVE DESIGN VALUES, PEAKING FACTORS, AND DESIGN REQUIREMENTS.

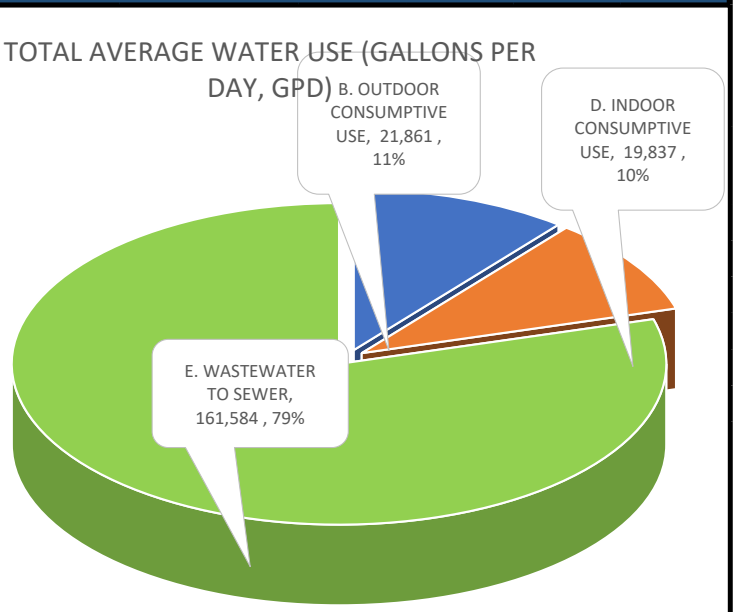


TABLE INPUT VALUES LAST UPDATED: 11/29/2023

TABLE 5: DETAILED WATER USE BREAKDOWN FOR THE DEVELOPMENT

FAIRMONT SCOTTSDALE PRINCESS

TO RIGHT:WATER USE ALLOCATION--->	A. TOTAL AVERAGE WATER USE (GPD)	B. AVERAGE OUTDOOR CONSUMPTIVE WATER USE[1]			C. AVERAGE INDOOR TOTAL WATER USE[1]			D. AVERAGE INDOOR CONSUMPTIVE WATER USE[2]			E. AVERAGE WASTEWATER FLOWS TO SEWER[3]		
BELOW: WATER USE DEVELOPMENT TYPE/CATEGORY		UNIT OUTDOOR CONSUMPTIVE WATER USE (GPD/UNIT)	OUTDOOR CONSUMPTIVE USE (GPD)	OUTDOOR CONSUMPTIVE USE (% OF TOTAL USE)	UNIT TOTAL INDOOR WATER USE (GPD/UNIT)	INDOOR TOTAL USE (GPD)	INDOOR TOTAL USE (% OF TOTAL USE)	UNIT CONSUMPTIVE INDOOR WATER USE (GPD/UNIT)	INDOOR CONSUMPTIVE USE (GPD)	INDOOR CONSUMPTIVE USE (% OF TOTAL USE)	WASTEWATER FLOW (GPD/UNIT)	WASTEWATER FLOW (GPD)	WASTEWATER (% OF TOTAL USE)
Category: Residential/ Commerical Residential/ Hotel													
< 2 DU/ac)	-	276.7	-	0.0%	208.9	-	0.0%	20.9	-	0.0%	188	-	0.0%
2 – 2.9 DU/ac	-	276.7	-	0.0%	193.7	-	0.0%	19.4	-	0.0%	174	-	0.0%
3 – 7.9 DU/ac	-	72.3	-	0.0%	175.9	-	0.0%	17.6	-	0.0%	158	-	0.0%
8 – 11.9 DU/ac	-	72.3	-	0.0%	155.3	-	0.0%	15.5	-	0.0%	140	-	0.0%
12 – 22 DU/ac	-	72.3	-	0.0%	155.3	-	0.0%	15.5	-	0.0%	140	-	0.0%
High Density Condominium (condo)	-	30.0	-	0.0%	155.3	-	0.0%	15.5	-	0.0%	140	-	0.0%
Resort Hotel	88,367	44.6	8,831	4.3%	401.7	79,536.6	39.1%	32.1	6,362.9	3.1%	370	73,174	36.0%
Category: Commerical/ Other													
Restaurant	38,635	0.10	2,972	1.5%	1.20	35,662.8	17.5%	0.12	3,566.3	1.8%	1.08	32,097	15.8%
Commercial/Retail	75,486	0.10	9,436	4.6%	0.70	66,049.9	32.5%	0.11	9,907.5	4.9%	0.60	56,142	27.6%
Commerical High Rise	-	0.10	-	0.0%	0.50	-	0.0%	0.05	-	0.0%	0.45	-	0.0%
Office	-	0.10	-	0.0%	0.50	-	0.0%	0.05	-	0.0%	0.45	-	0.0%
Institutional	-	670	-	0.0%	670.0	-	0.0%	100.50	-	0.0%	569.50	-	0.0%
Industrial	-	154	-	0.0%	873.0	-	0.0%	130.95	-	0.0%	742.05	-	0.0%
Research and Development	-	192	-	0.0%	1,092.0	-	0.0%	163.80	-	0.0%	928.20	-	0.0%
Category: Special Use Areas													
Natural Area Open Space	-	-	-	0.0%							-	-	0.0%
Developed Open Space - Parks	-	1,786	-	0.0%							-	-	0.0%
Developed Open Space- Golf Course	-	4,285	-	0.0%							-	-	0.0%
Category: Evaporation from Swimming Pools/Spas, Cooling, Turf Area Irrigation, Other Outdoor Consumptive Uses													
Extra large pool (60k to 100k gallons)	-	274	-	0.0%							-	-	0.0%
Large pool (above 30k to 60k gallons)	-	154	-	0.0%							-	-	0.0%
Medium pool (15k to 30k gallons)	-	75	-	0.0%							-	-	0.0%
Small pool or spa (under 15k gallons)	154	51	154	0.1%							-	-	0.0%
Total Bermuda Turf Area	468	0.10	468	0.2%							-	-	0.0%
Total Overseeded Turf Area	-	0.02	-	0.0%							-	-	0.0%
Evaporative Cooling/ Cooling Towers	-	-	-	0.0%							-	-	0.0%
Category: Filter Backwash Flows & Make-up Water from Pools & Spas (rapid sand filters)													
Extra large pool (60k to 100k gallons)	-				228.6	-	0.0%				229	-	0.0%
Large pool (above 30k to 60k gallons)	-				171.4	-	0.0%				171	-	0.0%
Medium pool (15k to 30k gallons)	-				114.3	-	0.0%				114	-	0.0%
Small pool or spa (under 15k gallons)	171				57.1	171.4	0.1%				57	171	0.1%
TOTALS	**203,282**		**21,861**	**10.8%**		**181,421**	**89.2%**		**19,837**	**9.8%**		**161,584**	**79.5%**

F. TOTAL CONSUMPTIVE/NET WATER USE FOR THIS DEVELOPMENT (B. + D.) **41,698 GPD** **20.5% OF TOTAL USE**

NOTES:

(1) PER 2018 DS&PM CHAPTER 6, FIGURE 6-1.2

(2) VARIES FROM 8% TO 15%, TYPICALLY 10%

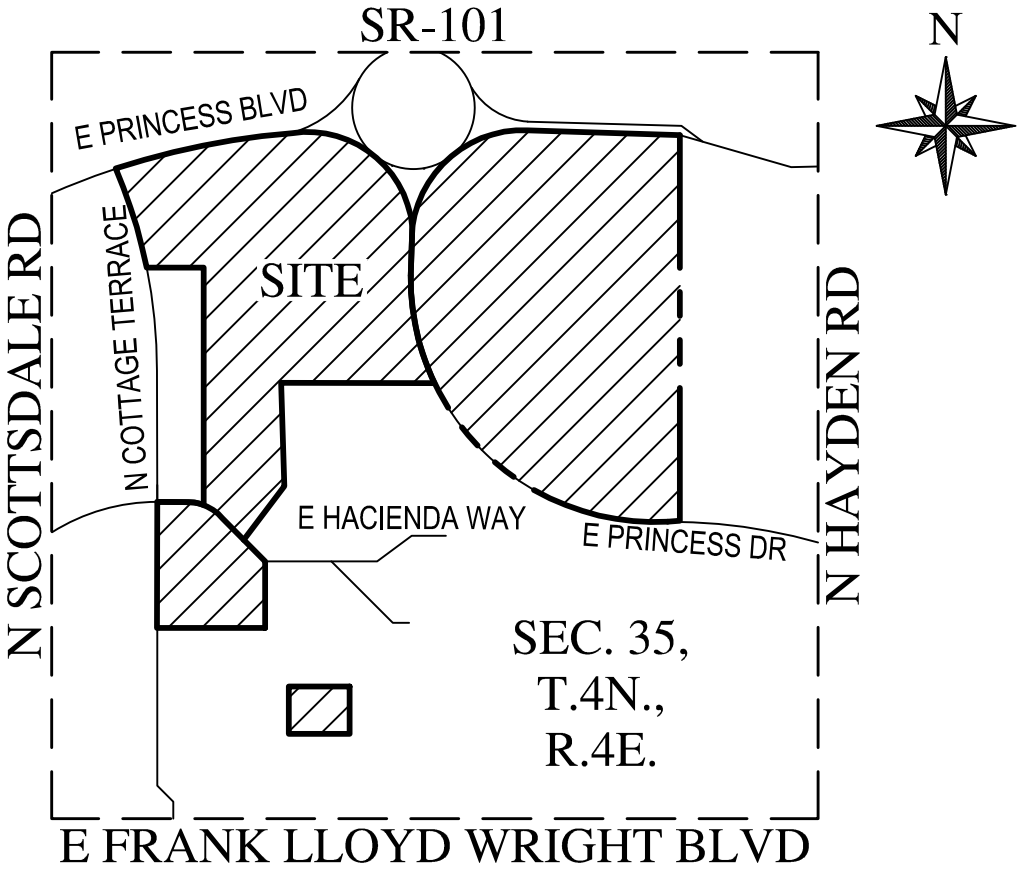
(3) WASTEWATER FLOWS TO SEWER ARE CALCULATED AS C. MINUS D.

GPD=GALLONS PER DAY, DU=DWELLING UNIT, FT2=SQUARE FEET, AC=ACRE, EA=EACH UNIT

NONE OF THE VALUES OR CALCULATIONS HEREIN ARE INTENDED TO BE USED FOR INFRASTRUCTURE DESIGN, PEAK FLOW DETERMINATION, OR SYSTEM CAPACITY ANALYSIS. FOR THESE PURPOSES REFER TO CH.6 & 7 OF THE CITY'S DESIGN STANDARDS AND POLICY MANUAL FOR THE RESPECTIVE DESIGN VALUES AND PEAKING FACTORS.

TABLE INPUT VALUES LAST UPDATED: 11/29/2023

EXHIBIT 1 – VICINITY MAP



VICINITY MAP

N.T.S.

NOT
FOR
CONSTRUCTION
OR RECORDING

WOOD PATEL

FAIRMONT SCOTTSDALE PRINCESS

VICINITY MAP EXHIBIT

DATE	11/22/2023	SCALE	N.T.S	SHEET	1 OF 1
JOB NO.	215319	DESIGN	AJS	CHECK	RS
		DRAWN	AJS	RFI #	

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EXHIBIT 2 – CONCEPT MASTER WATER LAYOUT

Distinguish City from Private Water Main

E PRINCESS BOULEVARD

EX 12" WATER LINE

EX. S.D.E.

PROPOSED ITALIAN RESTAURANT

EX. 47' I.E.E. & U.E.

EX. 16' P.N.M.A.E.

EX. 50' B.E.A.

PROPOSED 12" D.I.P. WATER LINE

PROPOSED FIRE HYDRANT

PROPOSED 20' W.E.

PROPOSED EVENT LAWN

EX. 20' W.E.

PROPOSED CONFERENCE CENTER

PROPOSED PARKING GARAGE

EX. 71' P.U.E., E.V.A.E. & S.V.A.E.

EX. 111' B.E.A. EX. 71' W.S.E.

EX 12" WATER LINE

N COTTAGE TERRACE

EX. 47' I.E.E. & U.E.

EX. 70' I.E.E., U.E. & E.V.A.E.

PROPOSED FIRE HYDRANT

PROPOSED 6" D.I.P. WATER LINE

EX 8" WATER LINE

EX. 20' W.E.

EXISTING PALOMINO BALLROOM

E PRINCESS DRIVE

EX. 8' U.E.

EX. 8' G.E.

30' I.E.E. & U.E. DOC 2006-0523599

EX 15' CASITA R.E. AREA DOC 2006-523599, MCR

EX. 8' E.E.

PROPOSED 12' W.E.

PROPOSED ROOMS EXPANSION

PROPOSED VILLA

EX. C.A.E. & E.V.A.E.

EX. 8' E.E.

EX. 20' W.E.

EX. 8' G.E.

E HACIENDA WAY

EX 8" WATER LINE

PROPOSED FIRE HYDRANT

PROPOSED 3" WATER LINE

EX W.E. DOC 2009-952326, MCR

PROPOSED 8" D.I.P. WATER LINE

PROPOSED BUNGALOW

EX. 12' W.S.E. DOC 2015-0524453

EXISTING SPA BUILDING

EX 15' CASITA R.E. AREA DOC 2006-523599, MCR

EX. 8' W.E.

EX. 30' I.E.E. & U.E. DOC 2006-0523599

EX. 12' W.S.E. DOC 2015-0524453

PROPOSED FIRE HYDRANT

PROPOSED ROASTERIE RESTAURANT

EX 12" WATER LINE

EX. 8' E.E.

EX. FIRE LINE EASEMENT DOC 2015-0515643

EX. 30' I.E.E., & U.E. DOC 2006-0523599

EX. W.E. DOC 2051-0524453

EX 6" WATER LINE

EX. 12' W.E. DOC 87-367632

EX. 12' W.E. DOC 87-367632

EX 6" WATER LINE

EX. 30' I.E.E. & U.E. DOC 2006-0523599

EX. 30' I.E.E. & U.E. DOC 2006-0523599

PROP. 12' WE

EX. 12' W.E. DOC 87-367632

PROPOSED FIRE HYDRANT

EX. 30' I.E.E. & U.E. DOC 2006-0523599

18"S (PVC)

N

0 80 160

Horz. 1 in. = 80 ft.

LEGEND

- WATER REMOVAL
- EXISTING WATER LINE
- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- EXISTING FIRE HYDRANT

WOOD PATEL

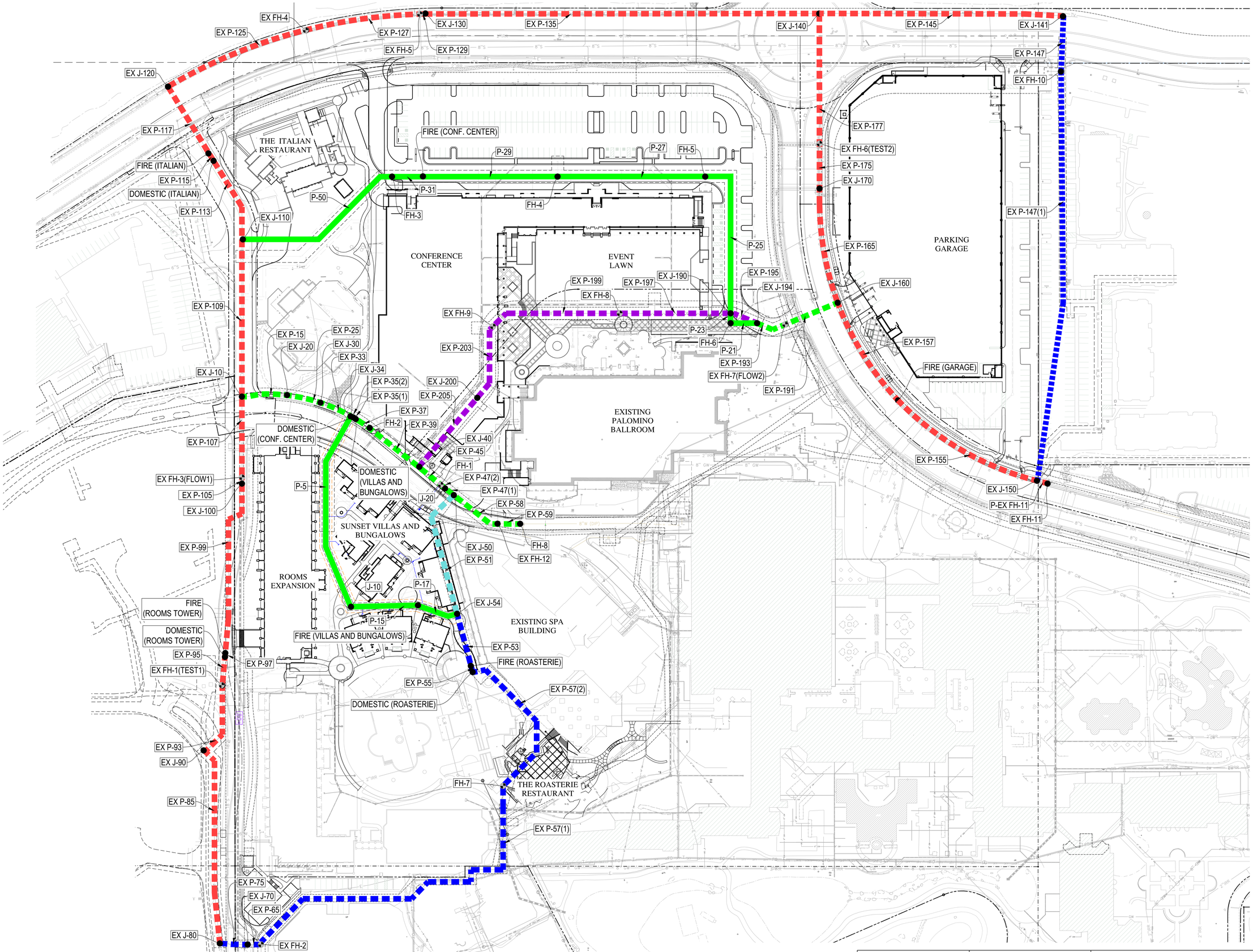
FAIRMONT SCOTTSDALE PRINCESS

EXHIBIT 2 - CONCEPT MASTER WATER LAYOUT

DATE	11/22/2023	SCALE	1" = 80'	SHEET	1 OF 1
JOB NO	215319	DESIGN	RS	DRAWN	JRS

Z:\2021\215319\Project Support\Reports\Master Reports\Sewer BOD\Exhibits\5319-EXH 5 - MASTER WATER & SEWER.dwg

EXHIBIT 3 – WATERCAD LAYOUT



Distinguish City from Private Water Main

N

0 50 100

Horz. 1 in. = 50 ft.

LEGEND

- PROPOSED 8" WATER PIPE
- EXISTING 6" WATER PIPE
- EXISTING 8" WATER PIPE
- EXISTING 12" WATER PIPE
- EXISTING 6" WATER PIPE TO BE REMOVED
- EXISTING 8" WATER PIPE TO BE REMOVED

J-XX JUNCTION NODE AND LABEL

P-XX PIPE LABEL

FH-XX FIRE HYDRANT LABEL

NOT FOR CONSTRUCTION OR RECORDING

WOOD PATEL

FAIRMONT SCOTTSDALE PRINCESS

EXHIBIT 3 - WATERCAD MODELING MAP

DATE	11/22/2023	SCALE	1" = 50'
JOB NO	215319	DESIGN	RS
		DRAWN	DLH / JRS
		CHECK	AJS
		SHEET	1 OF 1

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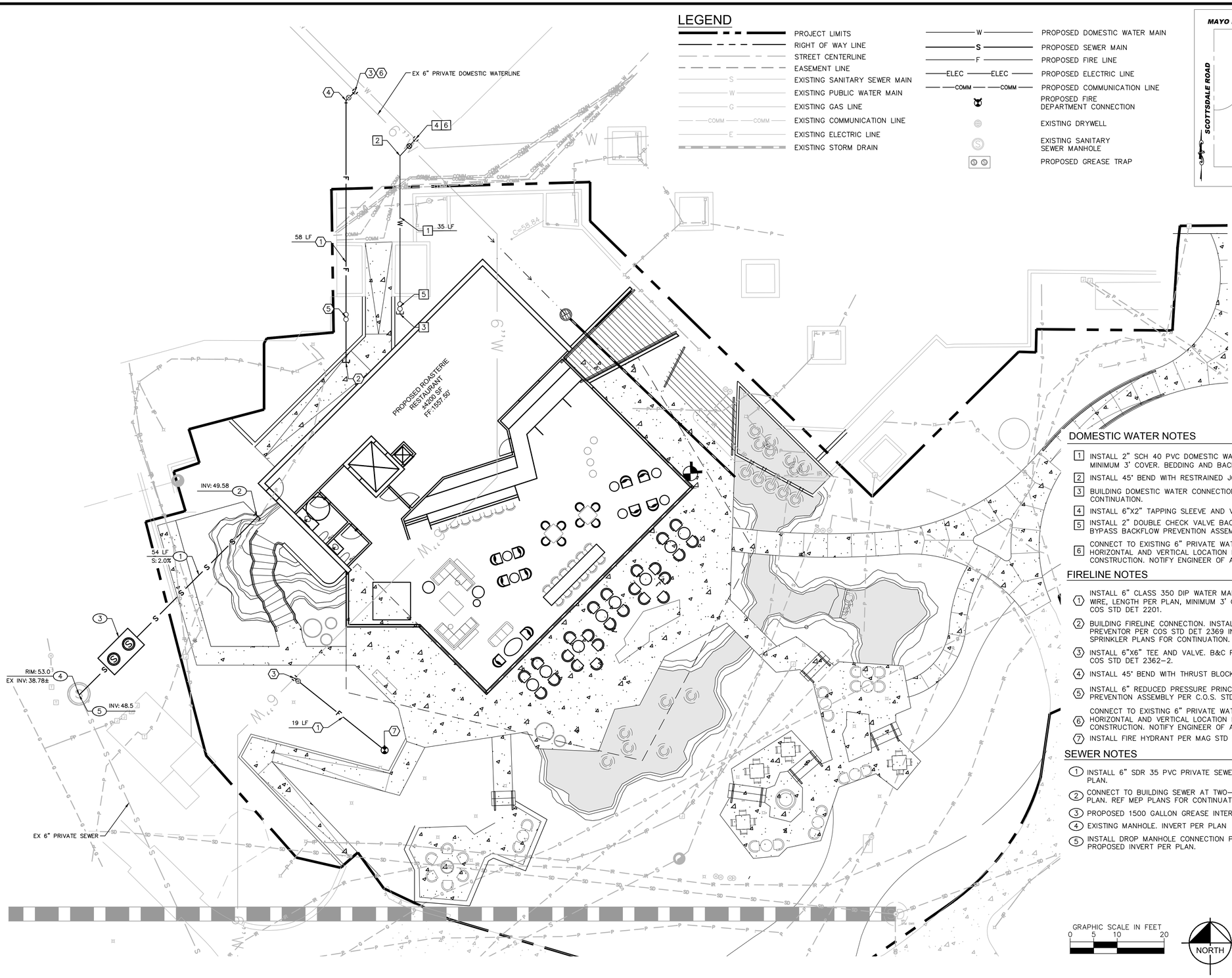
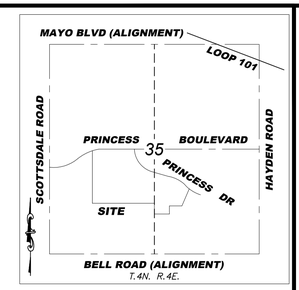
Appendix F – Roasterie Utility Plan

REV	DESCRIPTION	BY	DATE	APPR



LEGEND

- PROJECT LIMITS
- RIGHT OF WAY LINE
- STREET CENTERLINE
- EASEMENT LINE
- EXISTING SANITARY SEWER MAIN
- EXISTING PUBLIC WATER MAIN
- EXISTING GAS LINE
- EXISTING COMMUNICATION LINE
- EXISTING ELECTRIC LINE
- EXISTING STORM DRAIN
- PROPOSED DOMESTIC WATER MAIN
- PROPOSED SEWER MAIN
- PROPOSED FIRE LINE
- PROPOSED ELECTRIC LINE
- PROPOSED COMMUNICATION LINE
- PROPOSED FIRE DEPARTMENT CONNECTION
- EXISTING DRYWELL
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED GREASE TRAP



VICINITY MAP
N.T.S.

DOMESTIC WATER NOTES

1. INSTALL 2" SCH 40 PVC DOMESTIC WATER SERVICE, LENGTH PER PLAN. MINIMUM 3' COVER. BEDDING AND BACKFILL PER COS STD DET 2201.
2. INSTALL 45° BEND WITH RESTRAINED JOINTS PER MAG STD DET 303,
3. BUILDING DOMESTIC WATER CONNECTION, REF MEP PLANS FOR CONTINUATION.
4. INSTALL 6"X2" TAPPING SLEEVE AND VALVE PER MAG STD DET 340.
5. INSTALL 2" DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY WITH BYPASS BACKFLOW PREVENTION ASSEMBLY PER COS STD DET 2352.
6. CONNECT TO EXISTING 6" PRIVATE WATER LINE. CONTRACTOR TO VERIFY HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.

FIRELINE NOTES

1. INSTALL 6" CLASS 350 DIP WATER MAIN POLYWRAPPED WITH TRACER WIRE, LENGTH PER PLAN, MINIMUM 3' COVER. BEDDING AND BACKFILL PER COS STD DET 2201.
2. BUILDING FIRELINE CONNECTION. INSTALL FIRELINE RISER AND BACKFLOW PREVENTOR PER COS STD DET 2369 IN FIRE RISER ROOM. REF FIRE SPRINKLER PLANS FOR CONTINUATION.
3. INSTALL 6"X6" TEE AND VALVE. B&C PER MAG STD 391-1 TYPE 'C' AND COS STD DET 2362-2.
4. INSTALL 45° BEND WITH THRUST BLOCKS PER MAG STD DET 380.
5. INSTALL 6" REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY PER C.O.S. STD. DTL. 2351.
6. CONNECT TO EXISTING 6" PRIVATE WATER LINE. CONTRACTOR TO VERIFY HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
7. INSTALL FIRE HYDRANT PER MAG STD DET 360.

SEWER NOTES

1. INSTALL 6" SDR 35 PVC PRIVATE SEWER MAIN, LENGTH AND SLOPE PER PLAN.
2. CONNECT TO BUILDING SEWER AT TWO-WAY CLEANOUT, INVERT PER PLAN. REF MEP PLANS FOR CONTINUATION.
3. PROPOSED 1500 GALLON GREASE INTERCEPTOR
4. EXISTING MANHOLE. INVERT PER PLAN
5. INSTALL DROP MANHOLE CONNECTION PER MAG STD DET 426, TYPE 'B'. PROPOSED INVERT PER PLAN.

GRAPHIC SCALE IN FEET
0 5 10 20

NORTH

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

Kimley»Horn
1001 W Southern Ave, Suite 131
Mesa, Arizona 85210 (480) 207-2666

THE ROASTERIE-PHASE 4D
PRELIMINARY UTILITY PLAN
FAIRMONT PRINCESS
SCOTTSDALE, AZ 85255

PROJECT No.

SCALE (H): 1"=10'
SCALE (V):
DRAWN BY: SSR
DESIGN BY: SSR
CHECK BY: HDR
DATE: 3/31/23

Registered Professional Engineer (Civil)
CERTIFICATE NO. 47693
HEATHER ROBERTS
Date Signed 11/22/23
ARIZONA
Exp.Date 03/31/26

UT.dwg

D-UT1.01
03 OF 03 SHEETS