



Abbreviated Water and Sewer Needs



**WASTEWATER COLLECTION SYSTEM
BASIS OF DESIGN REPORT
FOR
7th DAY ADVENTIST – SCOTTSDALE & SUTTON**

May 20, 2020
WP# 194966



EXPIRES 06-30-22

14-ZN-2019

6/03/2020



May 20, 2020

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Re: **7th Day Adventist – Scottsdale & Sutton**
Wastewater Collection System Basis of Design Report
WP# 194966

To Whom It May Concern:

This Wastewater Collection System Basis of Design Report is prepared for the Arizona Conference of Seventh-day Adventists and submitted to the City of Scottsdale (City). The 7th Day Adventist – Scottsdale & Sutton project (Site) consists of portions of two (2) adjacent parcels totaling an area of approximately 2,148,604 square-feet, or 49.3± acres, located at the northeast corner of North Scottsdale Road and Sutton Road in Scottsdale, Arizona. More specifically, the Site is located in a portion of Section 11, Township 3 North, Range 4 East and a portion of the north half of Section 14, Township 3 North, Range 4 East of the Gila and Salt River Meridian. The Site is located within Assessor Parcel Number 215-56-333A and a portion of 175-04-002A. Refer to the *Vicinity Map* at the back of this report. The Site is bound by existing Thunderbird Road/Redfield Road to the north, East Sutton Drive on the south, North Miller Road on the east and North Scottsdale Road on the west.

The project will include the potential construction of airport hangars, industrial buildings, office buildings, residential townhomes, and single family homes. Proposed improvements include associated landscape, hardscape, paving and utility services. The airport hangars will include 76,250 square-feet of hangar space. The industrial will include 184,450 square-feet. The office buildings will include 508,000 square-feet. The residential townhomes will include 12 multi-family dwelling units and 6 single family dwelling units. We understand the City may allow up to 240 additional residential units in the future.

Wastewater flowing from the proposed Site will discharge at two (2) locations to the existing 8-inch VCP sewer line on Sutton Drive and at one (1) location to the existing 12-inch VCP sewer line in Thunderbird Road/Redfield Road. Both offsite sewer lines slope to the west to discharge to the 24-inch VCP sewer line in Scottsdale Road. Refer to the attached Wastewater Exhibit for a depiction of the proposed sewerline.

The design criteria used to estimate wastewater flows and evaluate system hydraulics are based on Wood, Patel & Associates, Inc.'s (WOODPATEL) understanding of the requirements listed in the City of Scottsdale's *Design Standards and Policies Manual*, 2018. The following is a summary of the primary design criteria utilized:

- Average Day Wastewater Demand, Office: 0.4 gpd/sf
- Average Day Wastewater Demand, Commercial (Industrial, Airport) 0.5 gpd/sf
- Average Day Wastewater Demand, Multi-Family Residential 140 gpd/DU
- Average Day Wastewater Demand, Single Family Residential 100 gpd/DU
- Peaking Factor $[1+12/(4+P^{1/2})] \times \text{ADD}$
- Maximum d/D Ratio at Peak Flow (12" dia. or less): 0.65
- Minimum Mean Full Flow Velocity 2.50 fps
- Maximum Peak Full Flow Velocity 10.0 fps
- Minimum Pipe Diameter, Public Wastewater Line 8 inches

Abbreviations: gpd = gallons per day; sf = square feet; ADD = average day demand; fps = feet per second; DU = dwelling unit; P = population

It is assumed the infiltration and inflow from wet weather has been accounted for in the published design flow rates for the development and the maximum d/D. Therefore, those flows have not been added into the calculations.

Based on the above design criteria, the projected average day demand for the proposed Site is approximately 335,830 gallons per day (gpd) and the total peak flow is projected to be 1,010,610 gpd. The anticipated discharge to the existing 12-inch sewer on Redfield Road is 125,550 gpd with the remaining 210,280 gpd discharging to the existing 6-inch sewer on Sutton Drive.

This analysis of the proposed sanitary sewer collection system confirms adequate capacity to convey the developed peak flow of 1,010,610 gpd. Refer to Table 1, 2, and 3 for detailed calculations and results regarding projected flows and pipe flow capacities.

Thank you for your review of the Wastewater Collection System Basis of Design Report provided for 7th Day Adventist - Scottsdale & Sutton. Please contact our office if you have any further comments.

Sincerely,

Wood, Patel & Associates, Inc.

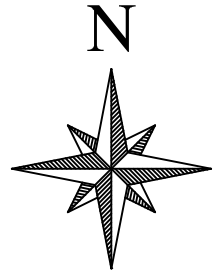


Darin L. Moore, PE
Vice President

EXPIRES 06-30-22

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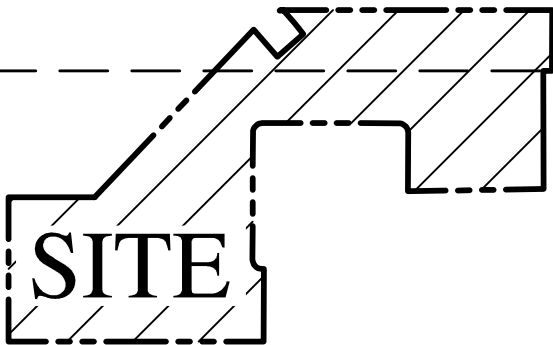
VICINITY MAP



S. 1/2 SECTION 11,
T.3N., R.4E.

SCOTTSDALE ROAD

HAYDEN ROAD



SITE

N. 1/2 SECTION 14,
T.3N., R.4E.

CACTUS ROAD

VICINITY MAP

N.T.S.

**NOT
FOR
CONSTRUCTION
OR RECORDING**



**7th DAY ADVENTIST -
SCOTTSDALE & SUTTON**

VICINITY MAP EXHIBIT

DATE	05/20/2020	SCALE	N.T.S.	SHEET	## OF ##
JOB NO.	194966	DESIGN	TB	CHECK	LB
		DRAWN	JO	RFI #	

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14-ZN-2019

6/03/2020

HYDRAULIC CALCULATIONS

TABLE 1 - WASTEWATER DESIGN CRITERIA

Project: 7th Day Adventist
Location: Scottsdale , Arizona
References: City of Scottsdale Design Standards and Policies Manual
 Arizona Administrative Code, Title 18, Chapter 9

Project Number: 194966
Project Engineer: D Moore

RESIDENTIAL WASTEWATER DEMANDS		
LAND USE	AVERAGE DAY DEMAND (ADD)	
	VALUE	UNITS
Single Family Residential	100	gpd/DU
Multi-Family Residential	140	gpd/DU
NON-RESIDENTIAL WASTEWATER DEMANDS		
LAND USE	AVERAGE DAY DEMAND (ADD)	
	VALUE	UNITS
Industrial/Airport	0.50	gpd/sf
Office	0.40	gpd/sf

HYDRAULIC MODELING CRITERIA	
DESCRIPTION	VALUE ²
PEAK FLOW	
Peak Flow = Peaking Factor (PF) x ADD (PF is based on upstream population, P = Population/1,000)	$[1+14/(4+P^{1/2})] \times ADD$
HYDRAULICS	
Minimum Pipe Diameter (in)	8
Manning's "n" value	0.013
Maximum d/D ratio at peak flow	0.65

PIPE SIZE (in)	MEAN VELOCITY ¹		DESIGN SLOPE ¹	
	Minimum (ft/sec)	Maximum (ft/sec)	Minimum (%)	Maximum (%)
8	2.1	10.0	0.380	6.980
10	2.2	10.0	0.306	5.121
12	2.3	10.0	0.256	3.919
15	2.4	10.0	0.205	2.880

Notes:

1. Per Arizona Administrative Code, Title 18, Chapter 9
2. Per City of Scottsdale Design Standards and Policies Manual

TABLE 2 - WASTEWATER DEMANDS

Project: 7th Day
Location: Scottsdale , Arizona
References: City of Scottsdale Design Standards and Policies Manual
 Arizona Administrative Code, Title 18, Chapter 9

Project Number: 194966
Project Engineer: Darin L Moore PE

UPSTREAM NODE	DOWNSTREAM NODE	BUILDING USE	SQUARE FEET	ADF PER SQUARE FOOT	ADD PER BUILDING USE (GPD)	PEAKING FACTOR	TOTAL PEAK FLOW (GPD)
PROP MH 1	PROP MH 2	Industrial	174,850	0.50	87,425	3.00	262,275
PROP MH 1	PROP MH 2	Airport	76,250	0.50	38,125	3.00	114,375
PROP MH 1	PROP MH 2	Office	--	0.40	--	3.00	--
Total Outfall #1					125,550		376,650
PROP MH 3	PROP MH 4	Office	488000	0.40	195,200	3.00	585,600
Total Outfall #2							585,600
PROP MH 5	PROP MH 6	High Density	12	140.00	1,680	4.50	7,560
PROP MH 5	PROP MH 6	Single Family	6	100.00	600	4.00	2,400
PROP MH 5	PROP MH 6	Office	20000	0.40	8,000	3.00	24,000
PROP MH 5	PROP MH 6	Industrial	9600	0.50	4,800	3.00	14,400
Total Outfall #3					15,080		48,360
Total:					335,830	Total:	1,010,610

Notes:

1. Square footage per building and building use based on Preliminary Site Plan provided by client.

TABLE3 - CALCULATED PIPE CAPACITIES






Project: 7th Day Adventist
Location: Scottsdale , Arizona
References: City of Scottsdale Design Standards and Policies Manual
 ADEQ Bulletin No. 11

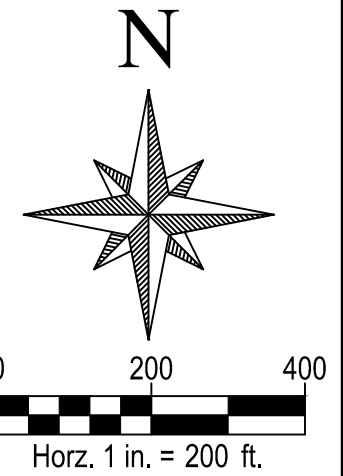
Project Number: 194966
Project Engineer: D Moore

FROM NODE	TO NODE	PIPE SIZE	MODELED PIPE SLOPE	PIPE CAPACITY		PEAK FLOW RESULTS					
						PEAK FLOW	PEAK FLOW	d/D	VELOCITY	SURPLUS CAPACITY	PERCENT OF CAPACITY
						(gpd)	(gpm)		(ft/sec)	(gpd)	(%)
		(in)	(ft/ft)	(gpd)	(gpm)	(gpd)	(gpm)		(ft/sec)	(gpd)	(%)
PROP MH 1	PROP MH 2	12	0.0073	1,979,877	1,375	376,650.00	261.56	.30	3.10	1,603,227	19.0%
Outfall #2 - South											
PROP MH 3	PROP MH 4	8	0.0152	970,260	674	585,600.00	406.67	.56	4.50	384,660	60.4%
Outfall #3 - East											
PROP MH 5	PROP MH 6	8	0.0205	1,128,210	783	48,360.00	33.58	.14	2.50	1,079,850	4.3%

WASTEWATER EXHIBIT

LEGEND

- EXISTING SEWER PIPE 
- PROPOSED SEWER PIPE 
- EXISTING SEWER MANHOLE 
- PROPOSED SEWER MANHOLE 
- PROPERTY LINE 



N. SCOTTSDALE RD

12" W (DIP)

8" W (DIP)

6" W (ACCP)

E. REDFIELD RD

E. THUNDERBIRD RD

PROP. MH 2
INV 12.60

PROP. MH
INV 18.00

PROP. 12" SEWER
S=0.70%

PROP. MH 1
INV 23.08

AVIATION

PROP. MH
INV 14.33

PROP. MH
INV 21.54

EX. 12" SEWER

PROP. 12" SEWER
S=0.73%

PROP. 8" SEWER
S=0.50%

EXISTING
PARK & RIDE
(NOT A PART)

INDUSTRIAL

EXISTING SEVENTH
DAY ADVENTIST
CAMPUS
(NOT A PART)

PROP. MH
INV 23.60

PROPERTY LINE

PROP. MH
INV 18.18

PROP. MH 3
INV 21.50

PROP. MH
INV 21.15

PROP. MH 5
INV 22.90

PROP. MH
INV 18.53

PROPERTY LINE

OFFICE

PROP. 8" SEWER
S=1.52%

OFFICE/
PARKING

PROP. 8" SEWER
S=2.05%

PROP. MH
INV 12.19

PROP. MH
INV 12.92

EX. 24" SEWER

PROP. MH
INV 7.70

PROP. MH
INV 9.97

PROP. MH 4
INV 6.06

E. SUTTON DR

PROP. MH 6
INV 8.26

EX. 8" SEWER

EX. 8" SEWER

N. MILLER RD

**NOT
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CONSTRUCTION
OR RECORDING**



**7th DAY ADVENTIST -
SCOTTSDALE & SUTTON**

WASTEWATER EXHIBIT

DATE	05/20/2020	SCALE	1" = 200'	SHEET	1 OF 1
JOB NO.	194966	DESIGN	DM	DRAWN	JRS

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14-ZN-2019

6/03/2020



**WATER DISTRIBUTION SYSTEM
BASIS OF DESIGN REPORT
FOR
7th DAY ADVENTIST – SCOTTSDALE & SUTTON**

May 20, 2020
WP# 194966



EXPIRES 06-30-22

**14-ZN-2019
6/03/2020**

May 20, 2020

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City of Scottsdale
Planning and Development
7447 East Indian School Road
Scottsdale, Arizona 85257

480.312.5319

Re: **7th Day Adventist – Scottsdale & Sutton**
Water Distribution System Basis of Design Report
WP# 194966

To Whom It May Concern:

This Water Distribution System Basis of Design Report is prepared for the Arizona Conference of Seventh-day Adventists and submitted to the City of Scottsdale (City). The 7th Day Adventist – Scottsdale & Sutton project (Site) consists of portions of two (2) adjacent parcels totaling an area of approximately 2,148,604 square-feet, or 49.3± acres, located at the northeast corner of North Scottsdale Road and Sutton Road in Scottsdale, Arizona. More specifically, the Site is located in a portion of Section 11, Township 3 North, Range 4 East and a portion of the north half of Section 14, Township 3 North, Range 4 East of the Gila and Salt River Base and Meridian. The Site is located within Assessor Parcel Number 215-56-333A and a portion of 175-04-002A. Refer to the *Vicinity Map* at the back of this report. The Site is bound by Thunderbird Road/Redfield Road to the north, East Sutton Drive on the south, North Miller Road on the east and North Scottsdale Road on the west.

The project will include the potential construction of airport hangars, industrial buildings, office buildings, residential townhomes, and single family homes. Proposed improvements include associated landscape, hardscape, paving and utility services. The airport hangars will include 76,250 square-feet of hangar space. The industrial will include 184,450 square-feet. The office buildings will include 508,000 square-feet. The residential townhomes will include 12 multi-family dwelling units and 6 single family dwelling units. We understand the City may allow up to 240 additional residential units in the future.

The project proposes an 8-inch DIP public waterline contained within a 20 foot wide water facilities easement through the Site to provide water services and fire flow. The proposed waterline will connect to the existing water infrastructure at four (4) locations. One connection to the 12-inch waterline north of the site in Redfield Road will require a Pressure Reducing Valve (PRV) since it resides within the City's Pressure Zone 3. The other three connections are within the City's Pressure Zone 2. Two (2) connections to the 6-inch waterline south of the Site in Sutton Drive will require an upsize to 8-inch diameter. The fourth connection will be to the 8-inch waterline east of the Site in Miller Road. A total of 18 proposed fire hydrants will be installed onsite for fire protection. Refer to the attached *Water Exhibit* for a depiction of the proposed waterline.

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

- Average Day Water Demand, Office8.33E-04 gpm/sf
- Average Day Water Demand, Industrial 1.88 gpm/acre
- Average Day Water Demand, Multi-Family Residential 0.27 gpm/DU
- Fire Flow Requirements..... 2,875 gpm (with 50% sprinkler reduction)
- Maximum Day Demand 2.0 x ADD
- Peak Hour Demand 3.5 x ADD
- Minimum Residual Pressure, Peak Hour..... 50 psi
- Minimum Residual Pressure, Maximum Day + Fire Flow 30 psi
- Maximum System Pressure 120 psi
- Maximum Pipe Head Loss, Maximum day Demand 8ft/1000ft
- Maximum Pipe Head Loss, Peak Hour Demand..... 10ft/1000ft
- Minimum Pipe Diameter, Public Water Line 8 inches

Abbreviations: gpd = gallons per day; sf = square feet; ADD = average day demand; psi = pounds per square inch; gpm = gallons per minute

WaterCAD V8i, by Haestad Methods, was utilized to analyze the existing City water distribution system and proposed onsite improvements. Proposed onsite water service and fire flow will be provided by a looped 8-inch DIP waterline with multiple hydrants spaced throughout the Site. As a result of this analysis, the existing 6-inch Sutton Drive public waterline must also be upsized to an 8-inch waterline between Scottsdale Road and 74th Street. Please refer to the attached summary Table 1 and Table 2, complete hydraulic modeling results and exhibit for detailed information.

Flow test results provided by Arizona Flow Testing LLC (refer to attached) were reduced and utilized to simulate the City of Scottsdale’s water supply for Pressure Zone 2 and 3 within the model. Separate pressure head sources were modeled for Pressure Zone 2 (low) and Pressure Zone 3 (high). Per the City’s attached “Pressure Zone Schematic of Southern Service Zones 2008”, it was determined Site 32 and Pump 32 provide pressure to Zone 2. Similarly, Tank-55, Pump 83A and Tank-114 provide pressure to Zone 3. Pressure reduction valves were set to 60 psi according to the lowest quoted value provided by the City (refer to May 18, 2020 email attached). Static and Residual modeling results from this calibration are representative of the existing system. Maximum flow modeling results differed slightly from the actual flow test. It is assumed this is due to additional pump capacity for high flow scenarios within the existing system that did not trigger during the actual flow test.

The average day water demand for the proposed Site is projected to be 433 gpm. Maximum day demands and peak hour demands are projected to be 866 gpm and 1515.6 gpm, respectively. The hydraulic modeling results indicate the proposed system is capable of delivering peak hour demands totaling 1515.6 gpm to the proposed Site with pressures ranging from 56 to 74 psi.

The greatest minimum fire flow for this analysis is 2,875 gpm based on a proposed 100,000 square foot (sf) commercial building. This assumes a Building Type IV or V-A with no fire walls and a 50% reduction due to fire sprinklers. Various fire flow scenarios were modeled for the hydrant(s) adjacent to a proposed 100,000 square-foot building, including flow to a single hydrant as well as split between multiple hydrants. The maximum allowable velocity of 10 feet per second (fps) was only slightly exceeded in the system when the entire flow was modeled at one hydrant. Residual pressures exceeded 30 psi during in all modeled scenarios.

Thank you for your review of the Water Distribution System Basis of Design Report provided for 7th Day Adventist - Scottsdale & Sutton project. Please contact our office if you have any further comments.

Sincerely,

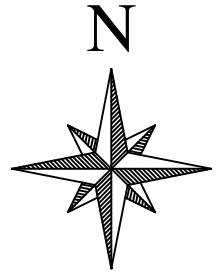
Wood, Patel & Associates, Inc.



Darin L. Moore, PE
Vice President

EXPIRES 06-30-22

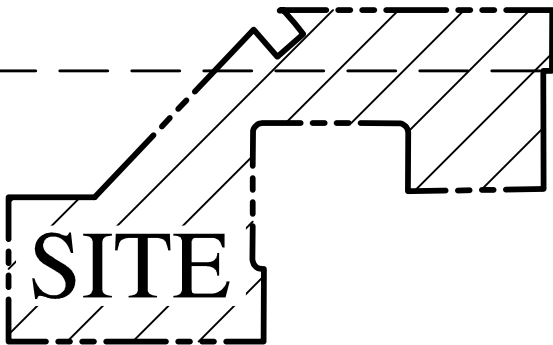
VICINITY MAP



S. 1/2 SECTION 11,
T.3N., R.4E.

SCOTTSDALE ROAD

HAYDEN ROAD



SITE

N. 1/2 SECTION 14,
T.3N., R.4E.

CACTUS ROAD

VICINITY MAP

N.T.S.

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**7th DAY ADVENTIST -
SCOTTSDALE & SUTTON**

VICINITY MAP EXHIBIT

DATE	05/20/2020	SCALE	N.T.S.	SHEET	## OF ##
JOB NO.	194966	DESIGN	TB	CHECK	LB
		DRAWN	JO	RFI #	

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**14-ZN-2019
6/03/2020**

HYDRAULIC CALCULATIONS

TABLE 1 - WATER DESIGN CRITERIA

Project: Seventh-Day Adventists
Location: Scottsdale, Arizona
References: City of Scottsdale Design Standards & Policies Manual (2018)

Project Number: 194966
Project Engineer: Darin L. Moore, P.E.

RESIDENTIAL WATER DEMANDS			
LAND USE	AVERAGE DAILY DEMAND (ADD)		NOTES
	VALUE	UNITS	
< 2 dwelling DU/ac	0.69	gpm/unit	Note 1
2-2.9 dwelling DU/ac	0.66	gpm/unit	Note 1
3-7.9 dwelling DU/ac	0.36	gpm/unit	Note 1
8-11.9 dwelling DU/ac	0.33	gpm/unit	Note 1
12-22 2 dwelling DU/ac	0.33	gpm/unit	Note 1
High Density Condominium (condo)	0.27	gpm/unit	Note 1
Resort Hotel (includes site amenities)	0.63	gpm/room	Note 1

NON-RESIDENTIAL WATER DEMANDS			
LAND USE	AVERAGE DAILY DEMAND (ADD)		NOTES
	VALUE	UNITS	
Restaurant	0.00181	gpm/sf	Note 1
Commercial/Retail	0.00111	gpm/sf	Note 1
Commercial High Rise	0.000834	gpm/sf	Note 1
Office	0.000834	gpm/sf	Note 1
Institutional	1.88	gpm/acre	Note 1
Industrial	1.44	gpm/acre	Note 1
Research and Development	1.79	gpm/acre	Note 1

LANDSCAPE WATER DEMANDS			
LAND USE	AVERAGE DAILY DEMAND (ADD)		NOTES
	VALUE	UNITS	
Natural Area Open Space	0.00	gpm/acre	Note 1
Developed Open Space - Parks	2.49	gpm/acre	Note 1
Developed Open Space - Golf Course	5.96	gpm/acre	Note 1

HYDRAULIC MODELING CRITERIA			
DESCRIPTION	VALUE	UNITS	NOTES
MAX DAY FLOW			
Max Day Flow = Peaking Factor (PF) x ADD	2 x ADD	gpm	Note 1
PEAK HOUR FLOW			
Peak Hour Flow = Peaking Factor (PF) x ADD	3.5 x ADD	gpm	Note 1
MODELED FIRE HYDRANT FLOW (MINIMUM)			
<input type="checkbox"/> Residential, 0 - 3,600 sf fire-flow calculation area	1,000	gpm	Note 3
<input type="checkbox"/> Residential, 3,601 - 4,800 sf fire-flow calculation area	1,750	gpm	Note 4
<input type="checkbox"/> Residential, 4,801 - 6,200 sf fire-flow calculation area	2,000	gpm	Note 4
<input type="checkbox"/> Residential, 6,201 - 7,700 sf fire-flow calculation area	2,250	gpm	Note 4
<input type="checkbox"/> Residential, 7,701 - 9,400 sf fire-flow calculation area	2,500	gpm	Note 4
<input type="checkbox"/> Residential, 9,401 - 11,300 sf fire-flow calculation area	2,750	gpm	Note 4
<input type="checkbox"/> Multi-Family Residential	-	gpm	Note 2
<input checked="" type="checkbox"/> Commercial	2,875	gpm	Note 2
HYDRAULICS			
Residual Pressure Range, Peak Hour	50-150	psi	Note 1
Minimum Residual Pressure, Max Day + Fire Flow (Hydrant TEE)	30	psi	Note 1
Minimum Residual Pressure, Max Day + Fire Flow (Domestic Service)	15	psi	Note 1
Minimum Pipe Diameter, Looped System	6	in	Note 1
Hazen-Williams C-value	120	-	Note 1

Notes:

- Per City of Scottsdale Design Standards & Policies Manual (2018)
- Per 2015 International Fire Code as adopted by the City of Scottsdale. Utilizes construction type IV or V-A, 100,000 sf area (largest office building), 50% reduction applied.
- Residential limited to one- and two-family dwellings, assumes Type V-B construction, and has a 1-hour fire duration
- Residential limited to one- and two-family dwellings, assumes Type V-B construction, and has a 2-hour fire duration

TABLE 2 - WATER DEMAND DESIGN FLOWS

Project: Seventh-Day Adventists
Location: Scottsdale, Arizona
References: City of Scottsdale Design Standards & Policies Manual (2018)

Project Number: 194966
Project Engineer: Darin L. Moore, P.E.

Water Demand Calculations

HYDRAULIC MODEL NODE	ELEVATION (ft)	PRESSURE ZONE	LAND USE	APPLICABLE UNIT	NUMBER OF UNITS	ADD/APPLICABLE UNIT	GPM/APPLICABLE UNIT ¹	AVERAGE DAILY DEMAND			MAX DAY DEMAND		PEAK HOUR DEMAND		Fire Flow (gpm)
								(gpd)	(gpm)	Total (gpm)	(gpm)	Total (gpm)	(gpm)	Total (gpm)	
EX J-15	1,430.6	2	Office	gpd/sf	508,100	0.6	0.00083	304,860	421.7	421.7	843.4	843.4	1,476.0	1,476.0	2875
EX J-5	1,430.6	2	Industrial	gpd/ac	3.38	1,353.6	1.88	4,575	6.4	428.1	12.8	856.2	22.4	1,498.4	
EX J-41	1,430.6	2	Multi-Family Residential	gpd/DU	18.00	194.4	0.27	3,499	4.9	433.0	9.8	866.0	17.2	1,515.6	
								312934.0	433.0	433.0	866.0	866.0	1515.6	1515.6	2875.0

Notes:

1. GPM values are based on a 12-hour active water used period per 24-hour day per the City of Scottsdale Design Standards and Policy Manual.

194966 Seventh-Day Adventists

FlexTable: Junction Table

Active Scenario: Calibration - Static

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
EX FH-1	Zone - 2	1,426.18	0.0	64	1,574.73
EX FH-2	Zone - 2	1,416.00	0.0	69	1,574.73
EX FH-3	Zone - 2	1,417.00	0.0	68	1,574.73
EX FH-5	Zone - 2	1,420.00	0.0	67	1,574.73
EX FH-FLOW A-1	Zone - 2	1,418.00	0.0	68	1,574.73
EX FH-FLOW A-2	Zone - 3	1,432.00	0.0	73	1,600.52
EX FH-FLOW B-1	Zone - 2	1,422.00	0.0	66	1,574.73
EX FH-FLOW B-2	Zone - 3	1,437.00	0.0	71	1,600.52
EX FH-TEST-1	Zone - 2	1,418.00	0.0	68	1,574.73
EX FH-TEST-2	Zone - 3	1,434.00	0.0	72	1,600.52
EX J-5	Zone - 2	1,425.67	0.0	64	1,574.73
EX J-7	Zone - 2	1,418.00	0.0	68	1,574.73
EX J-10	Zone - 2	1,417.00	0.0	68	1,574.73
EX J-15	Zone - 2	1,416.00	0.0	69	1,574.73
EX J-20	Zone - 2	1,417.00	0.0	68	1,574.73
EX J-30	Zone - 3	1,430.55	0.0	74	1,600.52
EX J-41	Zone - 2	1,417.00	0.0	68	1,574.73
EX J-65	Zone - 3	1,425.89	0.0	76	1,600.52
EX J-205	Zone - 2	1,409.00	0.0	72	1,574.73
EX J-215	Zone - 2	1,409.00	0.0	72	1,574.73
EX J-225	Zone - 2	1,409.00	0.0	72	1,574.73
EX J-235	Zone - 2	1,409.00	0.0	72	1,574.73
EX J-245	Zone - 2	1,418.00	0.0	68	1,574.73
EX J-255	Zone - 2	1,428.00	0.0	63	1,574.73
EX J-265	Zone - 2	1,432.00	0.0	62	1,574.73

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FlexTable: Junction Table

Active Scenario: Calibration - Residual

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
EX FH-1	Zone - 2	1,426.18	0.0	57	1,557.62
EX FH-2	Zone - 2	1,416.00	0.0	58	1,549.38
EX FH-3	Zone - 2	1,417.00	0.0	57	1,548.90
EX FH-5	Zone - 2	1,420.00	0.0	58	1,553.78
EX FH-FLOW A-1	Zone - 2	1,418.00	1,303.0	56	1,548.50
EX FH-FLOW A-2	Zone - 3	1,432.00	0.0	68	1,588.67
EX FH-FLOW B-1	Zone - 2	1,422.00	1,969.0	44	1,524.47
EX FH-FLOW B-2	Zone - 3	1,437.00	0.0	66	1,588.47
EX FH-TEST-1	Zone - 2	1,418.00	0.0	58	1,552.09
EX FH-TEST-2	Zone - 3	1,434.00	0.0	67	1,589.44
EX J-5	Zone - 2	1,425.67	0.0	57	1,557.17
EX J-7	Zone - 2	1,418.00	0.0	58	1,551.45
EX J-10	Zone - 2	1,417.00	0.0	58	1,551.46
EX J-15	Zone - 2	1,416.00	0.0	58	1,549.43
EX J-20	Zone - 2	1,417.00	0.0	57	1,548.81
EX J-30	Zone - 3	1,430.55	0.0	68	1,587.74
EX J-41	Zone - 2	1,417.00	0.0	58	1,551.22
EX J-65	Zone - 3	1,425.89	0.0	69	1,585.04
EX J-205	Zone - 2	1,409.00	0.0	61	1,549.05
EX J-215	Zone - 2	1,409.00	0.0	61	1,549.28
EX J-225	Zone - 2	1,409.00	0.0	61	1,549.28
EX J-235	Zone - 2	1,409.00	0.0	61	1,549.32
EX J-245	Zone - 2	1,418.00	0.0	57	1,549.56
EX J-255	Zone - 2	1,428.00	0.0	57	1,558.66
EX J-265	Zone - 2	1,432.00	0.0	61	1,574.02

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FlexTable: Junction Table

Active Scenario: Calibration - Max

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
EX FH-1	Zone - 2	1,426.18	0.0	50	1,541.82
EX FH-2	Zone - 2	1,416.00	0.0	47	1,525.76
EX FH-3	Zone - 2	1,417.00	0.0	47	1,524.53
EX FH-5	Zone - 2	1,420.00	0.0	50	1,535.70
EX FH-FLOW A-1	Zone - 2	1,418.00	2,086.0	46	1,523.45
EX FH-FLOW A-2	Zone - 3	1,432.00	0.0	62	1,575.38
EX FH-FLOW B-1	Zone - 2	1,422.00	3,151.0	19	1,466.56
EX FH-FLOW B-2	Zone - 3	1,437.00	0.0	60	1,575.48
EX FH-TEST-1	Zone - 2	1,418.00	0.0	50	1,532.78
EX FH-TEST-2	Zone - 3	1,434.00	0.0	62	1,577.16
EX J-5	Zone - 2	1,425.67	0.0	50	1,541.04
EX J-7	Zone - 2	1,418.00	0.0	49	1,531.05
EX J-10	Zone - 2	1,417.00	0.0	49	1,531.16
EX J-15	Zone - 2	1,416.00	0.0	48	1,525.90
EX J-20	Zone - 2	1,417.00	0.0	46	1,524.30
EX J-30	Zone - 3	1,430.55	0.0	62	1,573.23
EX J-41	Zone - 2	1,417.00	0.0	49	1,530.52
EX J-65	Zone - 3	1,425.89	0.0	61	1,566.97
EX J-205	Zone - 2	1,409.00	0.0	50	1,525.00
EX J-215	Zone - 2	1,409.00	0.0	50	1,525.68
EX J-225	Zone - 2	1,409.00	0.0	50	1,525.68
EX J-235	Zone - 2	1,409.00	0.0	51	1,525.78
EX J-245	Zone - 2	1,418.00	0.0	47	1,526.49
EX J-255	Zone - 2	1,428.00	0.0	50	1,543.65
EX J-265	Zone - 2	1,432.00	0.0	60	1,570.48

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FlexTable: Junction Table

Active Scenario: Average Day Demand

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
EX FH-1	Zone - 2	1,426.18	0.0	60	1,564.84
EX FH-2	Zone - 2	1,416.00	0.0	63	1,562.47
EX FH-3	Zone - 2	1,417.00	0.0	63	1,562.53
EX FH-5	Zone - 2	1,420.00	0.0	62	1,562.54
EX FH-FLOW A-1	Zone - 2	1,418.00	0.0	63	1,562.54
EX FH-FLOW A-2	Zone - 3	1,432.00	0.0	73	1,599.69
EX FH-FLOW B-1	Zone - 2	1,422.00	0.0	61	1,563.52
EX FH-FLOW B-2	Zone - 3	1,437.00	0.0	70	1,599.20
EX FH-TEST-1	Zone - 2	1,418.00	0.0	63	1,563.52
EX FH-TEST-2	Zone - 3	1,434.00	0.0	72	1,599.69
EX J-5	Zone - 2	1,425.67	6.4	60	1,564.61
EX J-7	Zone - 2	1,418.00	0.0	63	1,563.53
EX J-10	Zone - 2	1,417.00	0.0	63	1,562.95
EX J-15	Zone - 2	1,416.00	421.7	63	1,562.46
EX J-20	Zone - 2	1,417.00	0.0	63	1,562.54
EX J-30	Zone - 3	1,430.55	0.0	73	1,599.69
EX J-41	Zone - 2	1,417.00	4.9	63	1,562.89
EX J-65	Zone - 3	1,425.89	0.0	75	1,599.69
EX J-205	Zone - 2	1,409.00	0.0	67	1,562.85
EX J-215	Zone - 2	1,409.00	0.0	67	1,563.16
EX J-225	Zone - 2	1,409.00	0.0	67	1,563.16
EX J-235	Zone - 2	1,409.00	0.0	67	1,563.20
EX J-245	Zone - 2	1,418.00	0.0	63	1,563.52
EX J-255	Zone - 2	1,428.00	0.0	59	1,565.37
EX J-265	Zone - 2	1,432.00	0.0	62	1,574.37
FH-1	Zone - 2	1,417.74	0.0	63	1,562.56
FH-2	Zone - 2	1,420.79	0.0	61	1,562.61
FH-3	Zone - 2	1,419.33	0.0	62	1,562.68
FH-4	Zone - 2	1,422.56	0.0	61	1,562.76
FH-5	Zone - 2	1,422.90	0.0	61	1,562.79
FH-6	Zone - 2	1,421.53	0.0	61	1,562.74
FH-7	Zone - 2	1,419.13	0.0	62	1,562.67
FH-9	Zone - 2	1,422.12	0.0	61	1,562.74
FH-10	Zone - 2	1,416.88	0.0	63	1,562.57
FH-12	Zone - 2	1,427.09	0.0	59	1,563.16
FH-13	Zone - 2	1,428.34	0.0	58	1,563.38
FH-14	Zone - 2	1,428.77	0.0	58	1,563.53
FH-15	Zone - 2	1,427.51	0.0	59	1,563.76
FH-16	Zone - 2	1,428.92	0.0	58	1,563.95
FH-17	Zone - 2	1,429.43	0.0	58	1,564.22
FH-18	Zone - 2	1,426.57	0.0	60	1,564.52
J-3	Zone - 2	1,416.56	0.0	63	1,562.52
J-8	Zone - 2	1,423.28	0.0	60	1,562.80
J-35	Zone - 2	1,428.39	0.0	58	1,563.40
J-42	Zone - 2	1,422.00	0.0	61	1,562.89
J-45	Zone - 2	1,423.09	0.0	60	1,562.83

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FlexTable: Junction Table

Active Scenario: Average Day Demand

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-46	Zone - 2	1,426.00	0.0	59	1,563.05
J-47	Zone - 2	1,426.59	0.0	59	1,563.12

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FlexTable: Pipe Table

Active Scenario: Average Day Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-5	EX FH-TEST-2	EX FH-FLOW B-2	1,194	12.0	Asbestos Cement	140.0	404.2	1.15
EX P-10	EX FH-FLOW A-2	EX FH-TEST-2	311	12.0	Asbestos Cement	140.0	0.0	0.00
EX P-15	EX J-30	EX FH-FLOW A-2	377	12.0	Asbestos Cement	140.0	0.0	0.00
EX P-20	EX J-65	EX J-30	1,094	12.0	Asbestos Cement	140.0	0.0	0.00
EX P-25	EX PRV-1	EX FH-5	335	8.0	Asbestos Cement	140.0	0.0	0.00
EX P-27	EX J-65	EX PRV-1	423	8.0	Asbestos Cement	140.0	0.0	0.00
EX P-30	EX FH-FLOW A-1	EX FH-5	297	8.0	Asbestos Cement	140.0	0.0	0.00
EX P-35	EX J-20	EX FH-FLOW A-1	274	8.0	Asbestos Cement	140.0	0.0	0.00
EX P-40	EX FH-3	EX J-20	44	8.0	Ductile Iron	130.0	-102.7	0.66
EX P-45	EX FH-2	EX FH-3	238	8.0	Ductile Iron	130.0	-102.7	0.66
EX P-50	EX J-15	EX FH-2	27	8.0	Ductile Iron	130.0	-102.7	0.66
EX P-50	EX J-41	EX J-15	891	8.0	Ductile Iron	130.0	140.7	0.90
EX P-55	EX J-10	EX J-41	123	8.0	Ductile Iron	130.0	145.6	0.93
EX P-60	EX FH-TEST-1	EX J-10	1,268	8.0	Asbestos Cement	140.0	145.6	0.93
EX P-62	EX J-7	EX FH-TEST-1	20	8.0	Asbestos Cement	140.0	116.8	0.75
EX P-64	EX J-5	EX J-7	981	8.0	Ductile Iron	130.0	219.4	1.40
EX P-65	EX FH-1	EX J-5	77	8.0	Asbestos Cement	140.0	404.2	2.58
EX P-67	EX J-7	EX J-245	31	8.0	Asbestos Cement	140.0	102.7	0.66
EX P-69	EX J-245	EX FH-FLOW B-1	449	8.0	Asbestos Cement	140.0	0.0	0.00
EX P-200	EX J-20	EX J-205	1,322	8.0	Asbestos Cement	140.0	-102.7	0.66
EX P-210	EX J-205	EX J-215	1,300	8.0	Asbestos Cement	140.0	-102.7	0.66
EX P-220	EX J-215	EX J-225	47	12.0	Asbestos Cement	140.0	-102.7	0.29
EX P-230	EX J-225	EX J-235	1,341	12.0	Asbestos Cement	140.0	-102.7	0.29
EX P-240	EX J-235	EX J-245	1,349	8.0	Asbestos Cement	140.0	-102.7	0.66
EX P-250	EX FH-1	EX J-255	179	8.0	Asbestos Cement	140.0	-404.2	2.58
EX P-260	EX J-255	EX J-265	2,637	8.0	Ductile Iron	130.0	-404.2	2.58
EX P-270	EX PRV-2	EX J-265	872	12.0	Asbestos Cement	140.0	404.2	1.15
EX P-280	EX FH-FLOW B-2	EX PRV-2	2,664	12.0	Asbestos Cement	140.0	404.2	1.15
P-5	EX J-15	J-3	84	8.0	Ductile Iron	130.0	-178.3	1.14
P-10	J-3	FH-1	168	8.0	Ductile Iron	130.0	-86.9	0.55

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FlexTable: Pipe Table

Active Scenario: Average Day Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-15	FH-1	FH-2	263	8.0	Ductile Iron	130.0	-86.9	0.55
P-20	FH-2	FH-3	346	8.0	Ductile Iron	130.0	-86.9	0.55
P-25	FH-3	FH-9	315	8.0	Ductile Iron	130.0	-86.9	0.55
P-27	FH-9	FH-4	96	8.0	Ductile Iron	130.0	-86.9	0.55
P-30	FH-4	J-45	340	8.0	Ductile Iron	130.0	-86.9	0.55
P-32	J-45	J-8	120	8.0	Ductile Iron	130.0	91.5	0.58
P-35	J-8	FH-5	29	8.0	Ductile Iron	130.0	91.5	0.58
P-40	FH-5	FH-6	240	8.0	Ductile Iron	130.0	91.5	0.58
P-45	FH-6	FH-7	342	8.0	Ductile Iron	130.0	91.5	0.58
P-53	J-47	FH-12	52	8.0	Ductile Iron	130.0	-178.3	1.14
P-55	FH-10	FH-7	436	8.0	Ductile Iron	130.0	-91.5	0.58
P-57	J-45	J-46	299	8.0	Ductile Iron	130.0	-178.3	1.14
P-58	J-46	J-47	93	8.0	Ductile Iron	130.0	-178.3	1.14
P-62	EX J-30	PRV-16	102	8.0	Ductile Iron	130.0	0.0	0.00
P-63	PRV-16	J-35	222	8.0	Ductile Iron	130.0	0.0	0.00
P-65	FH-10	J-3	221	8.0	Ductile Iron	130.0	91.5	0.58
P-80	FH-12	FH-13	297	8.0	Ductile Iron	130.0	-178.3	1.14
P-85	FH-13	J-35	23	8.0	Ductile Iron	130.0	-178.3	1.14
P-90	J-35	FH-14	182	8.0	Ductile Iron	130.0	-178.3	1.14
P-95	FH-14	FH-15	304	8.0	Ductile Iron	130.0	-178.3	1.14
P-100	FH-15	FH-16	254	8.0	Ductile Iron	130.0	-178.3	1.14
P-105	FH-16	FH-17	362	8.0	Ductile Iron	130.0	-178.3	1.14
P-110	FH-17	FH-18	393	8.0	Ductile Iron	130.0	-178.3	1.14
P-115	FH-18	EX J-5	120	8.0	Ductile Iron	130.0	-178.3	1.14
P-120	EX J-41	J-42	719	8.0	Ductile Iron	130.0	0.0	0.00
P-PMP-1	PMP-1	EX FH-TEST-1	1	48.0	Ductile Iron	130.0	28.8	0.01
P-PMP-2	PMP-2	EX FH-TEST-2	1	48.0	Ductile Iron	130.0	404.2	0.07
P-R-1	R-1	PMP-1	1	48.0	Ductile Iron	130.0	28.8	0.01
P-R-2	R-2	PMP-2	1	48.0	Ductile Iron	130.0	404.2	0.07

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FlexTable: Junction Table
Active Scenario: Max Day Demand

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
EX FH-1	Zone - 2	1,426.18	0.0	59	1,563.69
EX FH-2	Zone - 2	1,416.00	0.0	62	1,559.01
EX FH-3	Zone - 2	1,417.00	0.0	62	1,559.46
EX FH-5	Zone - 2	1,420.00	0.0	60	1,559.66
EX FH-FLOW A-1	Zone - 2	1,418.00	0.0	61	1,559.60
EX FH-FLOW A-2	Zone - 3	1,432.00	0.0	72	1,599.17
EX FH-FLOW B-1	Zone - 2	1,422.00	0.0	61	1,562.87
EX FH-FLOW B-2	Zone - 3	1,437.00	0.0	70	1,598.63
EX FH-TEST-1	Zone - 2	1,418.00	0.0	63	1,562.89
EX FH-TEST-2	Zone - 3	1,434.00	0.0	71	1,599.18
EX J-5	Zone - 2	1,425.67	12.8	60	1,563.43
EX J-7	Zone - 2	1,418.00	0.0	63	1,562.89
EX J-10	Zone - 2	1,417.00	0.0	62	1,560.79
EX J-15	Zone - 2	1,416.00	843.4	62	1,558.96
EX J-20	Zone - 2	1,417.00	0.0	62	1,559.55
EX J-30	Zone - 3	1,430.55	0.0	73	1,599.16
EX J-41	Zone - 2	1,417.00	9.8	62	1,560.56
EX J-65	Zone - 3	1,425.89	0.0	75	1,599.13
EX J-205	Zone - 2	1,409.00	0.0	66	1,560.60
EX J-215	Zone - 2	1,409.00	0.0	66	1,561.64
EX J-225	Zone - 2	1,409.00	0.0	66	1,561.64
EX J-235	Zone - 2	1,409.00	0.0	66	1,561.79
EX J-245	Zone - 2	1,418.00	0.0	63	1,562.87
EX J-255	Zone - 2	1,428.00	0.0	59	1,564.29
EX J-265	Zone - 2	1,432.00	0.0	62	1,574.33
FH-1	Zone - 2	1,417.74	0.0	61	1,559.16
FH-2	Zone - 2	1,420.79	0.0	60	1,559.27
FH-3	Zone - 2	1,419.33	0.0	61	1,559.41
FH-4	Zone - 2	1,422.56	0.0	59	1,559.58
FH-5	Zone - 2	1,422.90	0.0	59	1,559.66
FH-6	Zone - 2	1,421.53	0.0	60	1,559.55
FH-7	Zone - 2	1,419.13	0.0	61	1,559.39
FH-9	Zone - 2	1,422.12	0.0	59	1,559.54
FH-10	Zone - 2	1,416.88	0.0	62	1,559.19
FH-12	Zone - 2	1,427.09	0.0	58	1,560.42
FH-13	Zone - 2	1,428.34	0.0	57	1,560.88
FH-14	Zone - 2	1,428.77	0.0	57	1,561.20
FH-15	Zone - 2	1,427.51	0.0	58	1,561.67
FH-16	Zone - 2	1,428.92	0.0	58	1,562.07
FH-17	Zone - 2	1,429.43	0.0	58	1,562.63
FH-18	Zone - 2	1,426.57	0.0	59	1,563.25
J-3	Zone - 2	1,416.56	0.0	62	1,559.09
J-8	Zone - 2	1,423.28	0.0	59	1,559.67
J-35	Zone - 2	1,428.39	0.0	57	1,560.92
J-42	Zone - 2	1,422.00	0.0	60	1,560.56
J-45	Zone - 2	1,423.09	0.0	59	1,559.72

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FlexTable: Junction Table
Active Scenario: Max Day Demand

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-46	Zone - 2	1,426.00	0.0	58	1,560.19
J-47	Zone - 2	1,426.59	0.0	58	1,560.33

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FlexTable: Pipe Table

Active Scenario: Max Day Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-5	EX FH-TEST-2	EX FH-FLOW B-2	1,194	12.0	Asbestos Cement	140.0	428.9	1.22
EX P-10	EX FH-FLOW A-2	EX FH-TEST-2	311	12.0	Asbestos Cement	140.0	-94.8	0.27
EX P-15	EX J-30	EX FH-FLOW A-2	377	12.0	Asbestos Cement	140.0	-94.8	0.27
EX P-20	EX J-65	EX J-30	1,094	12.0	Asbestos Cement	140.0	-94.8	0.27
EX P-25	EX PRV-1	EX FH-5	335	8.0	Asbestos Cement	140.0	94.8	0.61
EX P-27	EX J-65	EX PRV-1	423	8.0	Asbestos Cement	140.0	94.8	0.61
EX P-30	EX FH-FLOW A-1	EX FH-5	297	8.0	Asbestos Cement	140.0	-94.8	0.61
EX P-35	EX J-20	EX FH-FLOW A-1	274	8.0	Asbestos Cement	140.0	-94.8	0.61
EX P-40	EX FH-3	EX J-20	44	8.0	Ductile Iron	130.0	-293.5	1.87
EX P-45	EX FH-2	EX FH-3	238	8.0	Ductile Iron	130.0	-293.5	1.87
EX P-50	EX J-15	EX FH-2	27	8.0	Ductile Iron	130.0	-293.5	1.87
EX P-50	EX J-41	EX J-15	891	8.0	Ductile Iron	130.0	285.1	1.82
EX P-55	EX J-10	EX J-41	123	8.0	Ductile Iron	130.0	294.9	1.88
EX P-60	EX FH-TEST-1	EX J-10	1,268	8.0	Asbestos Cement	140.0	294.9	1.88
EX P-62	EX J-7	EX FH-TEST-1	20	8.0	Asbestos Cement	140.0	-47.4	0.30
EX P-64	EX J-5	EX J-7	981	8.0	Ductile Iron	130.0	151.2	0.97
EX P-65	EX FH-1	EX J-5	77	8.0	Asbestos Cement	140.0	428.9	2.74
EX P-67	EX J-7	EX J-245	31	8.0	Asbestos Cement	140.0	198.6	1.27
EX P-69	EX J-245	EX FH-FLOW B-1	449	8.0	Asbestos Cement	140.0	0.0	0.00
EX P-200	EX J-20	EX J-205	1,322	8.0	Asbestos Cement	140.0	-198.6	1.27
EX P-210	EX J-205	EX J-215	1,300	8.0	Asbestos Cement	140.0	-198.6	1.27
EX P-220	EX J-215	EX J-225	47	12.0	Asbestos Cement	140.0	-198.6	0.56
EX P-230	EX J-225	EX J-235	1,341	12.0	Asbestos Cement	140.0	-198.6	0.56
EX P-240	EX J-235	EX J-245	1,349	8.0	Asbestos Cement	140.0	-198.6	1.27
EX P-250	EX FH-1	EX J-255	179	8.0	Asbestos Cement	140.0	-428.9	2.74
EX P-260	EX J-255	EX J-265	2,637	8.0	Ductile Iron	130.0	-428.9	2.74
EX P-270	EX PRV-2	EX J-265	872	12.0	Asbestos Cement	140.0	428.9	1.22
EX P-280	EX FH-FLOW B-2	EX PRV-2	2,664	12.0	Asbestos Cement	140.0	428.9	1.22
P-5	EX J-15	J-3	84	8.0	Ductile Iron	130.0	-264.9	1.69
P-10	J-3	FH-1	168	8.0	Ductile Iron	130.0	-129.0	0.82

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FlexTable: Pipe Table

Active Scenario: Max Day Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-15	FH-1	FH-2	263	8.0	Ductile Iron	130.0	-129.0	0.82
P-20	FH-2	FH-3	346	8.0	Ductile Iron	130.0	-129.0	0.82
P-25	FH-3	FH-9	315	8.0	Ductile Iron	130.0	-129.0	0.82
P-27	FH-9	FH-4	96	8.0	Ductile Iron	130.0	-129.0	0.82
P-30	FH-4	J-45	340	8.0	Ductile Iron	130.0	-129.0	0.82
P-32	J-45	J-8	120	8.0	Ductile Iron	130.0	135.9	0.87
P-35	J-8	FH-5	29	8.0	Ductile Iron	130.0	135.9	0.87
P-40	FH-5	FH-6	240	8.0	Ductile Iron	130.0	135.9	0.87
P-45	FH-6	FH-7	342	8.0	Ductile Iron	130.0	135.9	0.87
P-53	J-47	FH-12	52	8.0	Ductile Iron	130.0	-264.9	1.69
P-55	FH-10	FH-7	436	8.0	Ductile Iron	130.0	-135.9	0.87
P-57	J-45	J-46	299	8.0	Ductile Iron	130.0	-264.9	1.69
P-58	J-46	J-47	93	8.0	Ductile Iron	130.0	-264.9	1.69
P-62	EX J-30	PRV-16	102	8.0	Ductile Iron	130.0	0.0	0.00
P-63	PRV-16	J-35	222	8.0	Ductile Iron	130.0	0.0	0.00
P-65	FH-10	J-3	221	8.0	Ductile Iron	130.0	135.9	0.87
P-80	FH-12	FH-13	297	8.0	Ductile Iron	130.0	-264.9	1.69
P-85	FH-13	J-35	23	8.0	Ductile Iron	130.0	-264.9	1.69
P-90	J-35	FH-14	182	8.0	Ductile Iron	130.0	-264.9	1.69
P-95	FH-14	FH-15	304	8.0	Ductile Iron	130.0	-264.9	1.69
P-100	FH-15	FH-16	254	8.0	Ductile Iron	130.0	-264.9	1.69
P-105	FH-16	FH-17	362	8.0	Ductile Iron	130.0	-264.9	1.69
P-110	FH-17	FH-18	393	8.0	Ductile Iron	130.0	-264.9	1.69
P-115	FH-18	EX J-5	120	8.0	Ductile Iron	130.0	-264.9	1.69
P-120	EX J-41	J-42	719	8.0	Ductile Iron	130.0	0.0	0.00
P-PMP-1	PMP-1	EX FH-TEST-1	1	48.0	Ductile Iron	130.0	342.3	0.06
P-PMP-2	PMP-2	EX FH-TEST-2	1	48.0	Ductile Iron	130.0	523.7	0.09
P-R-1	R-1	PMP-1	1	48.0	Ductile Iron	130.0	342.3	0.06
P-R-2	R-2	PMP-2	1	48.0	Ductile Iron	130.0	523.7	0.09

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FlexTable: Junction Table

Active Scenario: Peak Hour Demand

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
EX FH-1	1,426.18	0.0	59	1,562.09
EX FH-2	1,416.00	0.0	60	1,553.92
EX FH-3	1,417.00	0.0	60	1,556.12
EX FH-5	1,420.00	0.0	60	1,558.55
EX FH-FLOW A-1	1,418.00	0.0	60	1,557.50
EX FH-FLOW A-2	1,432.00	0.0	71	1,596.69
EX FH-FLOW B-1	1,422.00	0.0	60	1,561.62
EX FH-FLOW B-2	1,437.00	0.0	69	1,596.21
EX FH-TEST-1	1,418.00	0.0	62	1,561.67
EX FH-TEST-2	1,434.00	0.0	70	1,596.84
EX J-5	1,425.67	22.4	59	1,561.80
EX J-7	1,418.00	0.0	62	1,561.66
EX J-10	1,417.00	0.0	61	1,557.37
EX J-15	1,416.00	1,475.9	60	1,553.67
EX J-20	1,417.00	0.0	60	1,556.53
EX J-30	1,430.55	0.0	72	1,596.51
EX J-41	1,417.00	17.1	61	1,556.89
EX J-65	1,425.89	0.0	74	1,595.97
EX J-205	1,409.00	0.0	65	1,558.15
EX J-215	1,409.00	0.0	65	1,559.74
EX J-225	1,409.00	0.0	65	1,559.74
EX J-235	1,409.00	0.0	65	1,559.97
EX J-245	1,418.00	0.0	62	1,561.62
EX J-255	1,428.00	0.0	58	1,562.77
EX J-265	1,432.00	0.0	62	1,574.27
FH-1	1,417.74	0.0	59	1,554.03
FH-2	1,420.79	0.0	58	1,554.23
FH-3	1,419.33	0.0	58	1,554.49
FH-4	1,422.56	0.0	57	1,554.80
FH-5	1,422.90	0.0	57	1,554.93
FH-6	1,421.53	0.0	58	1,554.73
FH-7	1,419.13	0.0	59	1,554.45
FH-9	1,422.12	0.0	57	1,554.73
FH-10	1,416.88	0.0	59	1,554.09
FH-12	1,427.09	0.0	56	1,556.31
FH-13	1,428.34	0.0	56	1,557.15
FH-14	1,428.77	0.0	56	1,557.73
FH-15	1,427.51	0.0	57	1,558.60
FH-16	1,428.92	0.0	56	1,559.32
FH-17	1,429.43	0.0	57	1,560.35
FH-18	1,426.57	0.0	58	1,561.46
J-3	1,416.56	0.0	59	1,553.91
J-8	1,423.28	0.0	57	1,554.95
J-35	1,428.39	0.0	56	1,557.22
J-42	1,422.00	0.0	58	1,556.89
J-45	1,423.09	0.0	57	1,555.05

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FlexTable: Junction Table

Active Scenario: Peak Hour Demand

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-46	1,426.00	0.0	56	1,555.90
J-47	1,426.59	0.0	56	1,556.16

194966 Seventh-Day Adventists
FlexTable: Pipe Table
Active Scenario: Peak Hour Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-5	EX FH-TEST-2	EX FH-FLOW B-2	1,194	12.0	Asbestos Cement	140.0	461.4	1.31
EX P-10	EX FH-FLOW A-2	EX FH-TEST-2	311	12.0	Asbestos Cement	140.0	-443.3	1.26
EX P-15	EX J-30	EX FH-FLOW A-2	377	12.0	Asbestos Cement	140.0	-443.3	1.26
EX P-20	EX J-65	EX J-30	1,094	12.0	Asbestos Cement	140.0	-443.3	1.26
EX P-25	EX PRV-1	EX FH-5	335	8.0	Asbestos Cement	140.0	443.3	2.83
EX P-27	EX J-65	EX PRV-1	423	8.0	Asbestos Cement	140.0	443.3	2.83
EX P-30	EX FH-FLOW A-1	EX FH-5	297	8.0	Asbestos Cement	140.0	-443.3	2.83
EX P-35	EX J-20	EX FH-FLOW A-1	274	8.0	Asbestos Cement	140.0	-443.3	2.83
EX P-40	EX FH-3	EX J-20	44	8.0	Ductile Iron	130.0	-693.3	4.43
EX P-45	EX FH-2	EX FH-3	238	8.0	Ductile Iron	130.0	-693.3	4.43
EX P-50	EX J-15	EX FH-2	27	8.0	Ductile Iron	130.0	-693.3	4.43
EX P-50	EX J-41	EX J-15	891	8.0	Ductile Iron	130.0	416.8	2.66
EX P-55	EX J-10	EX J-41	123	8.0	Ductile Iron	130.0	434.0	2.77
EX P-60	EX FH-TEST-1	EX J-10	1,268	8.0	Asbestos Cement	140.0	434.0	2.77
EX P-62	EX J-7	EX FH-TEST-1	20	8.0	Asbestos Cement	140.0	-176.9	1.13
EX P-64	EX J-5	EX J-7	981	8.0	Ductile Iron	130.0	73.2	0.47
EX P-65	EX FH-1	EX J-5	77	8.0	Asbestos Cement	140.0	461.4	2.94
EX P-67	EX J-7	EX J-245	31	8.0	Asbestos Cement	140.0	250.0	1.60
EX P-69	EX J-245	EX FH-FLOW B-1	449	8.0	Asbestos Cement	140.0	0.0	0.00
EX P-200	EX J-20	EX J-205	1,322	8.0	Asbestos Cement	140.0	-250.0	1.60
EX P-210	EX J-205	EX J-215	1,300	8.0	Asbestos Cement	140.0	-250.0	1.60
EX P-220	EX J-215	EX J-225	47	12.0	Asbestos Cement	140.0	-250.0	0.71
EX P-230	EX J-225	EX J-235	1,341	12.0	Asbestos Cement	140.0	-250.0	0.71
EX P-240	EX J-235	EX J-245	1,349	8.0	Asbestos Cement	140.0	-250.0	1.60
EX P-250	EX FH-1	EX J-255	179	8.0	Asbestos Cement	140.0	-461.4	2.94
EX P-260	EX J-255	EX J-265	2,637	8.0	Ductile Iron	130.0	-461.4	2.94
EX P-270	EX PRV-2	EX J-265	872	12.0	Asbestos Cement	140.0	461.4	1.31
EX P-280	EX FH-FLOW B-2	EX PRV-2	2,664	12.0	Asbestos Cement	140.0	461.4	1.31
P-5	EX J-15	J-3	84	8.0	Ductile Iron	130.0	-365.8	2.33
P-10	J-3	FH-1	168	8.0	Ductile Iron	130.0	-178.2	1.14

194966 Seventh-Day Adventists
FlexTable: Pipe Table
Active Scenario: Peak Hour Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-15	FH-1	FH-2	263	8.0	Ductile Iron	130.0	-178.2	1.14
P-20	FH-2	FH-3	346	8.0	Ductile Iron	130.0	-178.2	1.14
P-25	FH-3	FH-9	315	8.0	Ductile Iron	130.0	-178.2	1.14
P-27	FH-9	FH-4	96	8.0	Ductile Iron	130.0	-178.2	1.14
P-30	FH-4	J-45	340	8.0	Ductile Iron	130.0	-178.2	1.14
P-32	J-45	J-8	120	8.0	Ductile Iron	130.0	187.6	1.20
P-35	J-8	FH-5	29	8.0	Ductile Iron	130.0	187.6	1.20
P-40	FH-5	FH-6	240	8.0	Ductile Iron	130.0	187.6	1.20
P-45	FH-6	FH-7	342	8.0	Ductile Iron	130.0	187.6	1.20
P-53	J-47	FH-12	52	8.0	Ductile Iron	130.0	-365.8	2.33
P-55	FH-10	FH-7	436	8.0	Ductile Iron	130.0	-187.6	1.20
P-57	J-45	J-46	299	8.0	Ductile Iron	130.0	-365.8	2.33
P-58	J-46	J-47	93	8.0	Ductile Iron	130.0	-365.8	2.33
P-62	EX J-30	PRV-16	102	8.0	Ductile Iron	130.0	0.0	0.00
P-63	PRV-16	J-35	222	8.0	Ductile Iron	130.0	0.0	0.00
P-65	FH-10	J-3	221	8.0	Ductile Iron	130.0	187.6	1.20
P-80	FH-12	FH-13	297	8.0	Ductile Iron	130.0	-365.8	2.33
P-85	FH-13	J-35	23	8.0	Ductile Iron	130.0	-365.8	2.33
P-90	J-35	FH-14	182	8.0	Ductile Iron	130.0	-365.8	2.33
P-95	FH-14	FH-15	304	8.0	Ductile Iron	130.0	-365.8	2.33
P-100	FH-15	FH-16	254	8.0	Ductile Iron	130.0	-365.8	2.33
P-105	FH-16	FH-17	362	8.0	Ductile Iron	130.0	-365.8	2.33
P-110	FH-17	FH-18	393	8.0	Ductile Iron	130.0	-365.8	2.33
P-115	FH-18	EX J-5	120	8.0	Ductile Iron	130.0	-365.8	2.33
P-120	EX J-41	J-42	719	8.0	Ductile Iron	130.0	0.0	0.00
P-PMP-1	PMP-1	EX FH-TEST-1	1	48.0	Ductile Iron	130.0	610.8	0.11
P-PMP-2	PMP-2	EX FH-TEST-2	1	48.0	Ductile Iron	130.0	904.7	0.16
P-R-1	R-1	PMP-1	1	48.0	Ductile Iron	130.0	610.8	0.11
P-R-2	R-2	PMP-2	1	48.0	Ductile Iron	130.0	904.7	0.16
P-R-3	R-3	EX FH-TEST-2	1	48.0	Ductile Iron	130.0	(N/A)	(N/A)

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FlexTable: Junction Table

Active Scenario: Max Day + Fire Flow FH-4

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
EX FH-1	Zone - 2	1,426.18	0.0	57	1,557.99
EX FH-2	Zone - 2	1,416.00	0.0	51	1,532.84
EX FH-3	Zone - 2	1,417.00	0.0	54	1,541.74
EX FH-5	Zone - 2	1,420.00	0.0	58	1,553.20
EX FH-FLOW A-1	Zone - 2	1,418.00	0.0	56	1,548.09
EX FH-FLOW A-2	Zone - 3	1,432.00	0.0	61	1,572.10
EX FH-FLOW B-1	Zone - 2	1,422.00	0.0	59	1,557.36
EX FH-FLOW B-2	Zone - 3	1,437.00	0.0	59	1,574.08
EX FH-TEST-1	Zone - 2	1,418.00	0.0	60	1,557.51
EX FH-TEST-2	Zone - 3	1,434.00	0.0	61	1,574.80
EX J-5	Zone - 2	1,425.67	12.8	57	1,557.65
EX J-7	Zone - 2	1,418.00	0.0	60	1,557.47
EX J-10	Zone - 2	1,417.00	0.0	55	1,543.99
EX J-15	Zone - 2	1,416.00	843.4	50	1,531.82
EX J-20	Zone - 2	1,417.00	0.0	55	1,543.38
EX J-30	Zone - 3	1,430.55	0.0	60	1,568.84
EX J-41	Zone - 2	1,417.00	9.8	54	1,542.48
EX J-65	Zone - 3	1,425.89	0.0	61	1,566.23
EX J-205	Zone - 2	1,409.00	0.0	60	1,547.82
EX J-215	Zone - 2	1,409.00	0.0	62	1,552.18
EX J-225	Zone - 2	1,409.00	0.0	62	1,552.21
EX J-235	Zone - 2	1,409.00	0.0	62	1,552.83
EX J-245	Zone - 2	1,418.00	0.0	60	1,557.36
EX J-255	Zone - 2	1,428.00	0.0	57	1,558.77
EX J-265	Zone - 2	1,432.00	0.0	61	1,571.94
FH-1	Zone - 2	1,417.74	0.0	47	1,525.54
FH-2	Zone - 2	1,420.79	0.0	43	1,520.37
FH-3	Zone - 2	1,419.33	0.0	41	1,513.54
FH-4	Zone - 2	1,422.56	2,875.0	36	1,505.45
FH-5	Zone - 2	1,422.90	0.0	44	1,525.01
FH-6	Zone - 2	1,421.53	0.0	45	1,525.75
FH-7	Zone - 2	1,419.13	0.0	47	1,526.81
FH-9	Zone - 2	1,422.12	0.0	37	1,507.34
FH-10	Zone - 2	1,416.88	0.0	48	1,528.16
FH-12	Zone - 2	1,427.09	0.0	49	1,540.66
FH-13	Zone - 2	1,428.34	0.0	53	1,551.44
FH-14	Zone - 2	1,428.77	0.0	54	1,552.89
FH-15	Zone - 2	1,427.51	0.0	55	1,553.90
FH-16	Zone - 2	1,428.92	0.0	54	1,554.74
FH-17	Zone - 2	1,429.43	0.0	55	1,555.95
FH-18	Zone - 2	1,426.57	0.0	57	1,557.26
J-3	Zone - 2	1,416.56	0.0	49	1,528.85
J-8	Zone - 2	1,423.28	0.0	44	1,524.92
J-35	Zone - 2	1,428.39	0.0	54	1,552.28
J-42	Zone - 2	1,422.00	0.0	52	1,542.48
J-45	Zone - 2	1,423.09	0.0	44	1,524.54

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FlexTable: Junction Table

Active Scenario: Max Day + Fire Flow FH-4

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-46	Zone - 2	1,426.00	0.0	47	1,535.38
J-47	Zone - 2	1,426.59	0.0	49	1,538.77

194966 Seventh-Day Adventists

FlexTable: Pipe Table

Active Scenario: Max Day + Fire Flow FH-4

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-5	EX FH-TEST-2	EX FH-FLOW B-2	1,194	12.0	Asbestos Cement	140.0	496.5	1.41
EX P-10	EX FH-FLOW A-2	EX FH-TEST-2	311	12.0	Asbestos Cement	140.0	-2,091.8	5.93
EX P-15	EX J-30	EX FH-FLOW A-2	377	12.0	Asbestos Cement	140.0	-2,091.8	5.93
EX P-20	EX J-65	EX J-30	1,094	12.0	Asbestos Cement	140.0	-1,042.1	2.96
EX P-25	EX PRV-1	EX FH-5	335	8.0	Asbestos Cement	140.0	1,042.1	6.65
EX P-27	EX J-65	EX PRV-1	423	8.0	Asbestos Cement	140.0	1,042.1	6.65
EX P-30	EX FH-FLOW A-1	EX FH-5	297	8.0	Asbestos Cement	140.0	-1,042.1	6.65
EX P-35	EX J-20	EX FH-FLOW A-1	274	8.0	Asbestos Cement	140.0	-1,042.1	6.65
EX P-40	EX FH-3	EX J-20	44	8.0	Ductile Iron	130.0	-1,473.6	9.41
EX P-45	EX FH-2	EX FH-3	238	8.0	Ductile Iron	130.0	-1,473.6	9.41
EX P-50	EX J-15	EX FH-2	27	8.0	Ductile Iron	130.0	-1,473.6	9.41
EX P-50	EX J-41	EX J-15	891	8.0	Ductile Iron	130.0	795.6	5.08
EX P-55	EX J-10	EX J-41	123	8.0	Ductile Iron	130.0	805.4	5.14
EX P-60	EX FH-TEST-1	EX J-10	1,268	8.0	Asbestos Cement	140.0	805.4	5.14
EX P-62	EX J-7	EX FH-TEST-1	20	8.0	Asbestos Cement	140.0	-346.5	2.21
EX P-64	EX J-5	EX J-7	981	8.0	Ductile Iron	130.0	85.0	0.54
EX P-65	EX FH-1	EX J-5	77	8.0	Asbestos Cement	140.0	496.5	3.17
EX P-67	EX J-7	EX J-245	31	8.0	Asbestos Cement	140.0	431.6	2.75
EX P-69	EX J-245	EX FH-FLOW B-1	449	8.0	Asbestos Cement	140.0	0.0	0.00
EX P-200	EX J-20	EX J-205	1,322	8.0	Asbestos Cement	140.0	-431.6	2.75
EX P-210	EX J-205	EX J-215	1,300	8.0	Asbestos Cement	140.0	-431.6	2.75
EX P-220	EX J-215	EX J-225	47	12.0	Asbestos Cement	140.0	-431.6	1.22
EX P-230	EX J-225	EX J-235	1,341	12.0	Asbestos Cement	140.0	-431.6	1.22
EX P-240	EX J-235	EX J-245	1,349	8.0	Asbestos Cement	140.0	-431.6	2.75
EX P-250	EX FH-1	EX J-255	179	8.0	Asbestos Cement	140.0	-496.5	3.17
EX P-260	EX J-255	EX J-265	2,637	8.0	Ductile Iron	130.0	-496.5	3.17
EX P-270	EX PRV-2	EX J-265	872	12.0	Asbestos Cement	140.0	496.5	1.41
EX P-280	EX FH-FLOW B-2	EX PRV-2	2,664	12.0	Asbestos Cement	140.0	496.5	1.41
P-5	EX J-15	J-3	84	8.0	Ductile Iron	130.0	1,425.9	9.10
P-10	J-3	FH-1	168	8.0	Ductile Iron	130.0	1,041.9	6.65

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FlexTable: Pipe Table

Active Scenario: Max Day + Fire Flow FH-4

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-15	FH-1	FH-2	263	8.0	Ductile Iron	130.0	1,041.9	6.65
P-20	FH-2	FH-3	346	8.0	Ductile Iron	130.0	1,041.9	6.65
P-25	FH-3	FH-9	315	8.0	Ductile Iron	130.0	1,041.9	6.65
P-27	FH-9	FH-4	96	8.0	Ductile Iron	130.0	1,041.9	6.65
P-30	FH-4	J-45	340	8.0	Ductile Iron	130.0	-1,833.1	11.70
P-32	J-45	J-8	120	8.0	Ductile Iron	130.0	-383.9	2.45
P-35	J-8	FH-5	29	8.0	Ductile Iron	130.0	-383.9	2.45
P-40	FH-5	FH-6	240	8.0	Ductile Iron	130.0	-383.9	2.45
P-45	FH-6	FH-7	342	8.0	Ductile Iron	130.0	-383.9	2.45
P-53	J-47	FH-12	52	8.0	Ductile Iron	130.0	-1,449.1	9.25
P-55	FH-10	FH-7	436	8.0	Ductile Iron	130.0	383.9	2.45
P-57	J-45	J-46	299	8.0	Ductile Iron	130.0	-1,449.1	9.25
P-58	J-46	J-47	93	8.0	Ductile Iron	130.0	-1,449.1	9.25
P-62	EX J-30	PRV-16	102	8.0	Ductile Iron	130.0	1,049.7	6.70
P-63	PRV-16	J-35	222	8.0	Ductile Iron	130.0	1,050.4	6.70
P-65	FH-10	J-3	221	8.0	Ductile Iron	130.0	-383.9	2.45
P-80	FH-12	FH-13	297	8.0	Ductile Iron	130.0	-1,449.1	9.25
P-85	FH-13	J-35	23	8.0	Ductile Iron	130.0	-1,449.1	9.25
P-90	J-35	FH-14	182	8.0	Ductile Iron	130.0	-398.7	2.54
P-95	FH-14	FH-15	304	8.0	Ductile Iron	130.0	-398.7	2.54
P-100	FH-15	FH-16	254	8.0	Ductile Iron	130.0	-398.7	2.54
P-105	FH-16	FH-17	362	8.0	Ductile Iron	130.0	-398.7	2.54
P-110	FH-17	FH-18	393	8.0	Ductile Iron	130.0	-398.7	2.54
P-115	FH-18	EX J-5	120	8.0	Ductile Iron	130.0	-398.7	2.54
P-120	EX J-41	J-42	719	8.0	Ductile Iron	130.0	0.0	0.00
P-PMP-1	PMP-1	EX FH-TEST-1	1	48.0	Ductile Iron	130.0	1,152.0	0.20
P-PMP-2	PMP-2	EX FH-TEST-2	1	48.0	Ductile Iron	130.0	2,588.4	0.46
P-R-1	R-1	PMP-1	1	48.0	Ductile Iron	130.0	1,152.0	0.20
P-R-2	R-2	PMP-2	1	48.0	Ductile Iron	130.0	2,588.4	0.46

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FlexTable: Junction Table

Active Scenario: Max Day + Fire Flow FH-5

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
EX FH-1	Zone - 2	1,426.18	0.0	57	1,558.03
EX FH-2	Zone - 2	1,416.00	0.0	51	1,533.97
EX FH-3	Zone - 2	1,417.00	0.0	54	1,542.51
EX FH-5	Zone - 2	1,420.00	0.0	58	1,553.52
EX FH-FLOW A-1	Zone - 2	1,418.00	0.0	57	1,548.62
EX FH-FLOW A-2	Zone - 3	1,432.00	0.0	61	1,571.86
EX FH-FLOW B-1	Zone - 2	1,422.00	0.0	59	1,557.47
EX FH-FLOW B-2	Zone - 3	1,437.00	0.0	59	1,573.88
EX FH-TEST-1	Zone - 2	1,418.00	0.0	60	1,557.62
EX FH-TEST-2	Zone - 3	1,434.00	0.0	61	1,574.60
EX J-5	Zone - 2	1,425.67	12.8	57	1,557.70
EX J-7	Zone - 2	1,418.00	0.0	60	1,557.57
EX J-10	Zone - 2	1,417.00	0.0	55	1,544.65
EX J-15	Zone - 2	1,416.00	843.4	51	1,532.99
EX J-20	Zone - 2	1,417.00	0.0	55	1,544.09
EX J-30	Zone - 3	1,430.55	0.0	60	1,568.55
EX J-41	Zone - 2	1,417.00	9.8	55	1,543.20
EX J-65	Zone - 3	1,425.89	0.0	61	1,566.05
EX J-205	Zone - 2	1,409.00	0.0	60	1,548.34
EX J-215	Zone - 2	1,409.00	0.0	62	1,552.51
EX J-225	Zone - 2	1,409.00	0.0	62	1,552.54
EX J-235	Zone - 2	1,409.00	0.0	62	1,553.13
EX J-245	Zone - 2	1,418.00	0.0	60	1,557.47
EX J-255	Zone - 2	1,428.00	0.0	57	1,558.80
EX J-265	Zone - 2	1,432.00	0.0	60	1,571.78
FH-1	Zone - 2	1,417.74	0.0	48	1,529.36
FH-2	Zone - 2	1,420.79	0.0	46	1,528.02
FH-3	Zone - 2	1,419.33	0.0	46	1,526.26
FH-4	Zone - 2	1,422.56	0.0	44	1,524.17
FH-5	Zone - 2	1,422.90	2,875.0	39	1,512.57
FH-6	Zone - 2	1,421.53	0.0	41	1,515.99
FH-7	Zone - 2	1,419.13	0.0	44	1,520.86
FH-9	Zone - 2	1,422.12	0.0	44	1,524.66
FH-10	Zone - 2	1,416.88	0.0	48	1,527.06
FH-12	Zone - 2	1,427.09	0.0	49	1,539.61
FH-13	Zone - 2	1,428.34	0.0	53	1,551.09
FH-14	Zone - 2	1,428.77	0.0	54	1,552.63
FH-15	Zone - 2	1,427.51	0.0	55	1,553.71
FH-16	Zone - 2	1,428.92	0.0	54	1,554.60
FH-17	Zone - 2	1,429.43	0.0	55	1,555.88
FH-18	Zone - 2	1,426.57	0.0	57	1,557.27
J-3	Zone - 2	1,416.56	0.0	49	1,530.21
J-8	Zone - 2	1,423.28	0.0	39	1,514.50
J-35	Zone - 2	1,428.39	0.0	53	1,551.99
J-42	Zone - 2	1,422.00	0.0	52	1,543.20
J-45	Zone - 2	1,423.09	0.0	43	1,522.44

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FlexTable: Junction Table

Active Scenario: Max Day + Fire Flow FH-5

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-46	Zone - 2	1,426.00	0.0	47	1,533.99
J-47	Zone - 2	1,426.59	0.0	48	1,537.60

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FlexTable: Pipe Table

Active Scenario: Max Day + Fire Flow FH-5

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-5	EX FH-TEST-2	EX FH-FLOW B-2	1,194	12.0	Asbestos Cement	140.0	492.7	1.40
EX P-10	EX FH-FLOW A-2	EX FH-TEST-2	311	12.0	Asbestos Cement	140.0	-2,106.8	5.98
EX P-15	EX J-30	EX FH-FLOW A-2	377	12.0	Asbestos Cement	140.0	-2,106.8	5.98
EX P-20	EX J-65	EX J-30	1,094	12.0	Asbestos Cement	140.0	-1,020.0	2.89
EX P-25	EX PRV-1	EX FH-5	335	8.0	Asbestos Cement	140.0	1,020.0	6.51
EX P-27	EX J-65	EX PRV-1	423	8.0	Asbestos Cement	140.0	1,020.0	6.51
EX P-30	EX FH-FLOW A-1	EX FH-5	297	8.0	Asbestos Cement	140.0	-1,020.0	6.51
EX P-35	EX J-20	EX FH-FLOW A-1	274	8.0	Asbestos Cement	140.0	-1,020.0	6.51
EX P-40	EX FH-3	EX J-20	44	8.0	Ductile Iron	130.0	-1,441.5	9.20
EX P-45	EX FH-2	EX FH-3	238	8.0	Ductile Iron	130.0	-1,441.5	9.20
EX P-50	EX J-15	EX FH-2	27	8.0	Ductile Iron	130.0	-1,441.5	9.20
EX P-50	EX J-41	EX J-15	891	8.0	Ductile Iron	130.0	777.6	4.96
EX P-55	EX J-10	EX J-41	123	8.0	Ductile Iron	130.0	787.4	5.03
EX P-60	EX FH-TEST-1	EX J-10	1,268	8.0	Asbestos Cement	140.0	787.4	5.03
EX P-62	EX J-7	EX FH-TEST-1	20	8.0	Asbestos Cement	140.0	-353.6	2.26
EX P-64	EX J-5	EX J-7	981	8.0	Ductile Iron	130.0	67.9	0.43
EX P-65	EX FH-1	EX J-5	77	8.0	Asbestos Cement	140.0	492.7	3.14
EX P-67	EX J-7	EX J-245	31	8.0	Asbestos Cement	140.0	421.5	2.69
EX P-69	EX J-245	EX FH-FLOW B-1	449	8.0	Asbestos Cement	140.0	0.0	0.00
EX P-200	EX J-20	EX J-205	1,322	8.0	Asbestos Cement	140.0	-421.5	2.69
EX P-210	EX J-205	EX J-215	1,300	8.0	Asbestos Cement	140.0	-421.5	2.69
EX P-220	EX J-215	EX J-225	47	12.0	Asbestos Cement	140.0	-421.5	1.20
EX P-230	EX J-225	EX J-235	1,341	12.0	Asbestos Cement	140.0	-421.5	1.20
EX P-240	EX J-235	EX J-245	1,349	8.0	Asbestos Cement	140.0	-421.5	2.69
EX P-250	EX FH-1	EX J-255	179	8.0	Asbestos Cement	140.0	-492.7	3.14
EX P-260	EX J-255	EX J-265	2,637	8.0	Ductile Iron	130.0	-492.7	3.14
EX P-270	EX PRV-2	EX J-265	872	12.0	Asbestos Cement	140.0	492.7	1.40
EX P-280	EX FH-FLOW B-2	EX PRV-2	2,664	12.0	Asbestos Cement	140.0	492.7	1.40
P-5	EX J-15	J-3	84	8.0	Ductile Iron	130.0	1,375.7	8.78
P-10	J-3	FH-1	168	8.0	Ductile Iron	130.0	501.4	3.20

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FlexTable: Pipe Table

Active Scenario: Max Day + Fire Flow FH-5

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-15	FH-1	FH-2	263	8.0	Ductile Iron	130.0	501.4	3.20
P-20	FH-2	FH-3	346	8.0	Ductile Iron	130.0	501.4	3.20
P-25	FH-3	FH-9	315	8.0	Ductile Iron	130.0	501.4	3.20
P-27	FH-9	FH-4	96	8.0	Ductile Iron	130.0	501.4	3.20
P-30	FH-4	J-45	340	8.0	Ductile Iron	130.0	501.4	3.20
P-32	J-45	J-8	120	8.0	Ductile Iron	130.0	2,000.8	12.77
P-35	J-8	FH-5	29	8.0	Ductile Iron	130.0	2,000.8	12.77
P-40	FH-5	FH-6	240	8.0	Ductile Iron	130.0	-874.2	5.58
P-45	FH-6	FH-7	342	8.0	Ductile Iron	130.0	-874.2	5.58
P-53	J-47	FH-12	52	8.0	Ductile Iron	130.0	-1,499.3	9.57
P-55	FH-10	FH-7	436	8.0	Ductile Iron	130.0	874.2	5.58
P-57	J-45	J-46	299	8.0	Ductile Iron	130.0	-1,499.3	9.57
P-58	J-46	J-47	93	8.0	Ductile Iron	130.0	-1,499.3	9.57
P-62	EX J-30	PRV-16	102	8.0	Ductile Iron	130.0	1,086.8	6.94
P-63	PRV-16	J-35	222	8.0	Ductile Iron	130.0	1,087.4	6.94
P-65	FH-10	J-3	221	8.0	Ductile Iron	130.0	-874.2	5.58
P-80	FH-12	FH-13	297	8.0	Ductile Iron	130.0	-1,499.3	9.57
P-85	FH-13	J-35	23	8.0	Ductile Iron	130.0	-1,499.3	9.57
P-90	J-35	FH-14	182	8.0	Ductile Iron	130.0	-412.0	2.63
P-95	FH-14	FH-15	304	8.0	Ductile Iron	130.0	-412.0	2.63
P-100	FH-15	FH-16	254	8.0	Ductile Iron	130.0	-412.0	2.63
P-105	FH-16	FH-17	362	8.0	Ductile Iron	130.0	-412.0	2.63
P-110	FH-17	FH-18	393	8.0	Ductile Iron	130.0	-412.0	2.63
P-115	FH-18	EX J-5	120	8.0	Ductile Iron	130.0	-412.0	2.63
P-120	EX J-41	J-42	719	8.0	Ductile Iron	130.0	0.0	0.00
P-PMP-1	PMP-1	EX FH-TEST-1	1	48.0	Ductile Iron	130.0	1,140.9	0.20
P-PMP-2	PMP-2	EX FH-TEST-2	1	48.0	Ductile Iron	130.0	2,599.5	0.46
P-R-1	R-1	PMP-1	1	48.0	Ductile Iron	130.0	1,140.9	0.20
P-R-2	R-2	PMP-2	1	48.0	Ductile Iron	130.0	2,599.5	0.46

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FlexTable: Junction Table

Active Scenario: Max Day + Fire Flow FH-6

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
EX FH-1	Zone - 2	1,426.18	0.0	57	1,557.98
EX FH-2	Zone - 2	1,416.00	0.0	50	1,532.46
EX FH-3	Zone - 2	1,417.00	0.0	54	1,541.48
EX FH-5	Zone - 2	1,420.00	0.0	58	1,553.09
EX FH-FLOW A-1	Zone - 2	1,418.00	0.0	56	1,547.92
EX FH-FLOW A-2	Zone - 3	1,432.00	0.0	61	1,572.18
EX FH-FLOW B-1	Zone - 2	1,422.00	0.0	59	1,557.33
EX FH-FLOW B-2	Zone - 3	1,437.00	0.0	59	1,574.14
EX FH-TEST-1	Zone - 2	1,418.00	0.0	60	1,557.48
EX FH-TEST-2	Zone - 3	1,434.00	0.0	61	1,574.87
EX J-5	Zone - 2	1,425.67	12.8	57	1,557.64
EX J-7	Zone - 2	1,418.00	0.0	60	1,557.43
EX J-10	Zone - 2	1,417.00	0.0	55	1,543.76
EX J-15	Zone - 2	1,416.00	843.4	50	1,531.42
EX J-20	Zone - 2	1,417.00	0.0	55	1,543.14
EX J-30	Zone - 3	1,430.55	0.0	60	1,568.93
EX J-41	Zone - 2	1,417.00	9.8	54	1,542.23
EX J-65	Zone - 3	1,425.89	0.0	61	1,566.29
EX J-205	Zone - 2	1,409.00	0.0	60	1,547.64
EX J-215	Zone - 2	1,409.00	0.0	62	1,552.07
EX J-225	Zone - 2	1,409.00	0.0	62	1,552.10
EX J-235	Zone - 2	1,409.00	0.0	62	1,552.73
EX J-245	Zone - 2	1,418.00	0.0	60	1,557.33
EX J-255	Zone - 2	1,428.00	0.0	57	1,558.76
EX J-265	Zone - 2	1,432.00	0.0	61	1,572.00
FH-1	Zone - 2	1,417.74	0.0	48	1,528.04
FH-2	Zone - 2	1,420.79	0.0	46	1,527.50
FH-3	Zone - 2	1,419.33	0.0	46	1,526.78
FH-4	Zone - 2	1,422.56	0.0	45	1,525.93
FH-5	Zone - 2	1,422.90	0.0	41	1,517.60
FH-6	Zone - 2	1,421.53	2,875.0	36	1,505.36
FH-7	Zone - 2	1,419.13	0.0	41	1,513.24
FH-9	Zone - 2	1,422.12	0.0	45	1,526.13
FH-10	Zone - 2	1,416.88	0.0	46	1,523.30
FH-12	Zone - 2	1,427.09	0.0	49	1,541.00
FH-13	Zone - 2	1,428.34	0.0	53	1,551.55
FH-14	Zone - 2	1,428.77	0.0	54	1,552.97
FH-15	Zone - 2	1,427.51	0.0	55	1,553.96
FH-16	Zone - 2	1,428.92	0.0	54	1,554.79
FH-17	Zone - 2	1,429.43	0.0	55	1,555.97
FH-18	Zone - 2	1,426.57	0.0	57	1,557.25
J-3	Zone - 2	1,416.56	0.0	48	1,528.39
J-8	Zone - 2	1,423.28	0.0	41	1,519.09
J-35	Zone - 2	1,428.39	0.0	54	1,552.38
J-42	Zone - 2	1,422.00	0.0	52	1,542.23
J-45	Zone - 2	1,423.09	0.0	44	1,525.23

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FlexTable: Junction Table

Active Scenario: Max Day + Fire Flow FH-6

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-46	Zone - 2	1,426.00	0.0	48	1,535.84
J-47	Zone - 2	1,426.59	0.0	49	1,539.16

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FlexTable: Pipe Table

Active Scenario: Max Day + Fire Flow FH-6

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-5	EX FH-TEST-2	EX FH-FLOW B-2	1,194	12.0	Asbestos Cement	140.0	497.8	1.41
EX P-10	EX FH-FLOW A-2	EX FH-TEST-2	311	12.0	Asbestos Cement	140.0	-2,086.8	5.92
EX P-15	EX J-30	EX FH-FLOW A-2	377	12.0	Asbestos Cement	140.0	-2,086.8	5.92
EX P-20	EX J-65	EX J-30	1,094	12.0	Asbestos Cement	140.0	-1,049.5	2.98
EX P-25	EX PRV-1	EX FH-5	335	8.0	Asbestos Cement	140.0	1,049.5	6.70
EX P-27	EX J-65	EX PRV-1	423	8.0	Asbestos Cement	140.0	1,049.5	6.70
EX P-30	EX FH-FLOW A-1	EX FH-5	297	8.0	Asbestos Cement	140.0	-1,049.5	6.70
EX P-35	EX J-20	EX FH-FLOW A-1	274	8.0	Asbestos Cement	140.0	-1,049.5	6.70
EX P-40	EX FH-3	EX J-20	44	8.0	Ductile Iron	130.0	-1,484.4	9.47
EX P-45	EX FH-2	EX FH-3	238	8.0	Ductile Iron	130.0	-1,484.4	9.47
EX P-50	EX J-15	EX FH-2	27	8.0	Ductile Iron	130.0	-1,484.4	9.47
EX P-50	EX J-41	EX J-15	891	8.0	Ductile Iron	130.0	801.7	5.12
EX P-55	EX J-10	EX J-41	123	8.0	Ductile Iron	130.0	811.5	5.18
EX P-60	EX FH-TEST-1	EX J-10	1,268	8.0	Asbestos Cement	140.0	811.5	5.18
EX P-62	EX J-7	EX FH-TEST-1	20	8.0	Asbestos Cement	140.0	-344.2	2.20
EX P-64	EX J-5	EX J-7	981	8.0	Ductile Iron	130.0	90.7	0.58
EX P-65	EX FH-1	EX J-5	77	8.0	Asbestos Cement	140.0	497.8	3.18
EX P-67	EX J-7	EX J-245	31	8.0	Asbestos Cement	140.0	434.9	2.78
EX P-69	EX J-245	EX FH-FLOW B-1	449	8.0	Asbestos Cement	140.0	0.0	0.00
EX P-200	EX J-20	EX J-205	1,322	8.0	Asbestos Cement	140.0	-434.9	2.78
EX P-210	EX J-205	EX J-215	1,300	8.0	Asbestos Cement	140.0	-434.9	2.78
EX P-220	EX J-215	EX J-225	47	12.0	Asbestos Cement	140.0	-434.9	1.23
EX P-230	EX J-225	EX J-235	1,341	12.0	Asbestos Cement	140.0	-434.9	1.23
EX P-240	EX J-235	EX J-245	1,349	8.0	Asbestos Cement	140.0	-434.9	2.78
EX P-250	EX FH-1	EX J-255	179	8.0	Asbestos Cement	140.0	-497.8	3.18
EX P-260	EX J-255	EX J-265	2,637	8.0	Ductile Iron	130.0	-497.8	3.18
EX P-270	EX PRV-2	EX J-265	872	12.0	Asbestos Cement	140.0	497.8	1.41
EX P-280	EX FH-FLOW B-2	EX PRV-2	2,664	12.0	Asbestos Cement	140.0	497.8	1.41
P-5	EX J-15	J-3	84	8.0	Ductile Iron	130.0	1,442.6	9.21
P-10	J-3	FH-1	168	8.0	Ductile Iron	130.0	308.5	1.97

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FlexTable: Pipe Table

Active Scenario: Max Day + Fire Flow FH-6

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-15	FH-1	FH-2	263	8.0	Ductile Iron	130.0	308.5	1.97
P-20	FH-2	FH-3	346	8.0	Ductile Iron	130.0	308.5	1.97
P-25	FH-3	FH-9	315	8.0	Ductile Iron	130.0	308.5	1.97
P-27	FH-9	FH-4	96	8.0	Ductile Iron	130.0	308.5	1.97
P-30	FH-4	J-45	340	8.0	Ductile Iron	130.0	308.5	1.97
P-32	J-45	J-8	120	8.0	Ductile Iron	130.0	1,740.9	11.11
P-35	J-8	FH-5	29	8.0	Ductile Iron	130.0	1,740.9	11.11
P-40	FH-5	FH-6	240	8.0	Ductile Iron	130.0	1,740.9	11.11
P-45	FH-6	FH-7	342	8.0	Ductile Iron	130.0	-1,134.1	7.24
P-53	J-47	FH-12	52	8.0	Ductile Iron	130.0	-1,432.4	9.14
P-55	FH-10	FH-7	436	8.0	Ductile Iron	130.0	1,134.1	7.24
P-57	J-45	J-46	299	8.0	Ductile Iron	130.0	-1,432.4	9.14
P-58	J-46	J-47	93	8.0	Ductile Iron	130.0	-1,432.4	9.14
P-62	EX J-30	PRV-16	102	8.0	Ductile Iron	130.0	1,037.3	6.62
P-63	PRV-16	J-35	222	8.0	Ductile Iron	130.0	1,038.0	6.63
P-65	FH-10	J-3	221	8.0	Ductile Iron	130.0	-1,134.1	7.24
P-80	FH-12	FH-13	297	8.0	Ductile Iron	130.0	-1,432.4	9.14
P-85	FH-13	J-35	23	8.0	Ductile Iron	130.0	-1,432.4	9.14
P-90	J-35	FH-14	182	8.0	Ductile Iron	130.0	-394.3	2.52
P-95	FH-14	FH-15	304	8.0	Ductile Iron	130.0	-394.3	2.52
P-100	FH-15	FH-16	254	8.0	Ductile Iron	130.0	-394.3	2.52
P-105	FH-16	FH-17	362	8.0	Ductile Iron	130.0	-394.3	2.52
P-110	FH-17	FH-18	393	8.0	Ductile Iron	130.0	-394.3	2.52
P-115	FH-18	EX J-5	120	8.0	Ductile Iron	130.0	-394.3	2.52
P-120	EX J-41	J-42	719	8.0	Ductile Iron	130.0	0.0	0.00
P-PMP-1	PMP-1	EX FH-TEST-1	1	48.0	Ductile Iron	130.0	1,155.7	0.20
P-PMP-2	PMP-2	EX FH-TEST-2	1	48.0	Ductile Iron	130.0	2,584.6	0.46
P-R-1	R-1	PMP-1	1	48.0	Ductile Iron	130.0	1,155.7	0.20
P-R-2	R-2	PMP-2	1	48.0	Ductile Iron	130.0	2,584.6	0.46

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FlexTable: Junction Table

Active Scenario: Max Day + Fire Flow FH-4+5

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
EX FH-1	Zone - 2	1,426.18	0.0	57	1,558.03
EX FH-2	Zone - 2	1,416.00	0.0	51	1,534.16
EX FH-3	Zone - 2	1,417.00	0.0	54	1,542.64
EX FH-5	Zone - 2	1,420.00	0.0	58	1,553.58
EX FH-FLOW A-1	Zone - 2	1,418.00	0.0	57	1,548.71
EX FH-FLOW A-2	Zone - 3	1,432.00	0.0	60	1,571.82
EX FH-FLOW B-1	Zone - 2	1,422.00	0.0	59	1,557.49
EX FH-FLOW B-2	Zone - 3	1,437.00	0.0	59	1,573.85
EX FH-TEST-1	Zone - 2	1,418.00	0.0	60	1,557.64
EX FH-TEST-2	Zone - 3	1,434.00	0.0	61	1,574.56
EX J-5	Zone - 2	1,425.67	12.8	57	1,557.70
EX J-7	Zone - 2	1,418.00	0.0	60	1,557.59
EX J-10	Zone - 2	1,417.00	0.0	55	1,544.76
EX J-15	Zone - 2	1,416.00	843.4	51	1,533.19
EX J-20	Zone - 2	1,417.00	0.0	55	1,544.21
EX J-30	Zone - 3	1,430.55	0.0	60	1,568.50
EX J-41	Zone - 2	1,417.00	9.8	55	1,543.33
EX J-65	Zone - 3	1,425.89	0.0	61	1,566.01
EX J-205	Zone - 2	1,409.00	0.0	60	1,548.43
EX J-215	Zone - 2	1,409.00	0.0	62	1,552.57
EX J-225	Zone - 2	1,409.00	0.0	62	1,552.59
EX J-235	Zone - 2	1,409.00	0.0	62	1,553.19
EX J-245	Zone - 2	1,418.00	0.0	60	1,557.49
EX J-255	Zone - 2	1,428.00	0.0	57	1,558.80
EX J-265	Zone - 2	1,432.00	0.0	60	1,571.75
FH-1	Zone - 2	1,417.74	0.0	48	1,528.78
FH-2	Zone - 2	1,420.79	0.0	46	1,526.18
FH-3	Zone - 2	1,419.33	0.0	45	1,522.75
FH-4	Zone - 2	1,422.56	1,437.5	42	1,518.69
FH-5	Zone - 2	1,422.90	1,437.5	42	1,520.30
FH-6	Zone - 2	1,421.53	0.0	44	1,522.27
FH-7	Zone - 2	1,419.13	0.0	46	1,525.07
FH-9	Zone - 2	1,422.12	0.0	42	1,519.64
FH-10	Zone - 2	1,416.88	0.0	48	1,528.64
FH-12	Zone - 2	1,427.09	0.0	49	1,539.42
FH-13	Zone - 2	1,428.34	0.0	53	1,551.03
FH-14	Zone - 2	1,428.77	0.0	54	1,552.58
FH-15	Zone - 2	1,427.51	0.0	55	1,553.67
FH-16	Zone - 2	1,428.92	0.0	54	1,554.58
FH-17	Zone - 2	1,429.43	0.0	55	1,555.87
FH-18	Zone - 2	1,426.57	0.0	57	1,557.28
J-3	Zone - 2	1,416.56	0.0	49	1,530.44
J-8	Zone - 2	1,423.28	0.0	42	1,520.65
J-35	Zone - 2	1,428.39	0.0	53	1,551.94
J-42	Zone - 2	1,422.00	0.0	52	1,543.33
J-45	Zone - 2	1,423.09	0.0	43	1,522.07

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FlexTable: Junction Table

Active Scenario: Max Day + Fire Flow FH-4+5

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-46	Zone - 2	1,426.00	0.0	47	1,533.74
J-47	Zone - 2	1,426.59	0.0	48	1,537.39

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FlexTable: Pipe Table

Active Scenario: Max Day + Fire Flow FH-4+5

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-5	EX FH-TEST-2	EX FH-FLOW B-2	1,194	12.0	Asbestos Cement	140.0	492.0	1.40
EX P-10	EX FH-FLOW A-2	EX FH-TEST-2	311	12.0	Asbestos Cement	140.0	-2,109.4	5.98
EX P-15	EX J-30	EX FH-FLOW A-2	377	12.0	Asbestos Cement	140.0	-2,109.4	5.98
EX P-20	EX J-65	EX J-30	1,094	12.0	Asbestos Cement	140.0	-1,016.1	2.88
EX P-25	EX PRV-1	EX FH-5	335	8.0	Asbestos Cement	140.0	1,016.1	6.49
EX P-27	EX J-65	EX PRV-1	423	8.0	Asbestos Cement	140.0	1,016.1	6.49
EX P-30	EX FH-FLOW A-1	EX FH-5	297	8.0	Asbestos Cement	140.0	-1,016.1	6.49
EX P-35	EX J-20	EX FH-FLOW A-1	274	8.0	Asbestos Cement	140.0	-1,016.1	6.49
EX P-40	EX FH-3	EX J-20	44	8.0	Ductile Iron	130.0	-1,435.9	9.16
EX P-45	EX FH-2	EX FH-3	238	8.0	Ductile Iron	130.0	-1,435.9	9.16
EX P-50	EX J-15	EX FH-2	27	8.0	Ductile Iron	130.0	-1,435.9	9.16
EX P-50	EX J-41	EX J-15	891	8.0	Ductile Iron	130.0	774.4	4.94
EX P-55	EX J-10	EX J-41	123	8.0	Ductile Iron	130.0	784.2	5.01
EX P-60	EX FH-TEST-1	EX J-10	1,268	8.0	Asbestos Cement	140.0	784.2	5.01
EX P-62	EX J-7	EX FH-TEST-1	20	8.0	Asbestos Cement	140.0	-354.9	2.26
EX P-64	EX J-5	EX J-7	981	8.0	Ductile Iron	130.0	64.9	0.41
EX P-65	EX FH-1	EX J-5	77	8.0	Asbestos Cement	140.0	492.0	3.14
EX P-67	EX J-7	EX J-245	31	8.0	Asbestos Cement	140.0	419.7	2.68
EX P-69	EX J-245	EX FH-FLOW B-1	449	8.0	Asbestos Cement	140.0	0.0	0.00
EX P-200	EX J-20	EX J-205	1,322	8.0	Asbestos Cement	140.0	-419.7	2.68
EX P-210	EX J-205	EX J-215	1,300	8.0	Asbestos Cement	140.0	-419.7	2.68
EX P-220	EX J-215	EX J-225	47	12.0	Asbestos Cement	140.0	-419.7	1.19
EX P-230	EX J-225	EX J-235	1,341	12.0	Asbestos Cement	140.0	-419.7	1.19
EX P-240	EX J-235	EX J-245	1,349	8.0	Asbestos Cement	140.0	-419.7	2.68
EX P-250	EX FH-1	EX J-255	179	8.0	Asbestos Cement	140.0	-492.0	3.14
EX P-260	EX J-255	EX J-265	2,637	8.0	Ductile Iron	130.0	-492.0	3.14
EX P-270	EX PRV-2	EX J-265	872	12.0	Asbestos Cement	140.0	492.0	1.40
EX P-280	EX FH-FLOW B-2	EX PRV-2	2,664	12.0	Asbestos Cement	140.0	492.0	1.40
P-5	EX J-15	J-3	84	8.0	Ductile Iron	130.0	1,366.8	8.72
P-10	J-3	FH-1	168	8.0	Ductile Iron	130.0	718.5	4.59

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FlexTable: Pipe Table

Active Scenario: Max Day + Fire Flow FH-4+5

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-15	FH-1	FH-2	263	8.0	Ductile Iron	130.0	718.5	4.59
P-20	FH-2	FH-3	346	8.0	Ductile Iron	130.0	718.5	4.59
P-25	FH-3	FH-9	315	8.0	Ductile Iron	130.0	718.5	4.59
P-27	FH-9	FH-4	96	8.0	Ductile Iron	130.0	718.5	4.59
P-30	FH-4	J-45	340	8.0	Ductile Iron	130.0	-719.0	4.59
P-32	J-45	J-8	120	8.0	Ductile Iron	130.0	789.1	5.04
P-35	J-8	FH-5	29	8.0	Ductile Iron	130.0	789.1	5.04
P-40	FH-5	FH-6	240	8.0	Ductile Iron	130.0	-648.4	4.14
P-45	FH-6	FH-7	342	8.0	Ductile Iron	130.0	-648.4	4.14
P-53	J-47	FH-12	52	8.0	Ductile Iron	130.0	-1,508.2	9.63
P-55	FH-10	FH-7	436	8.0	Ductile Iron	130.0	648.4	4.14
P-57	J-45	J-46	299	8.0	Ductile Iron	130.0	-1,508.2	9.63
P-58	J-46	J-47	93	8.0	Ductile Iron	130.0	-1,508.2	9.63
P-62	EX J-30	PRV-16	102	8.0	Ductile Iron	130.0	1,093.3	6.98
P-63	PRV-16	J-35	222	8.0	Ductile Iron	130.0	1,093.9	6.98
P-65	FH-10	J-3	221	8.0	Ductile Iron	130.0	-648.4	4.14
P-80	FH-12	FH-13	297	8.0	Ductile Iron	130.0	-1,508.2	9.63
P-85	FH-13	J-35	23	8.0	Ductile Iron	130.0	-1,508.2	9.63
P-90	J-35	FH-14	182	8.0	Ductile Iron	130.0	-414.3	2.64
P-95	FH-14	FH-15	304	8.0	Ductile Iron	130.0	-414.3	2.64
P-100	FH-15	FH-16	254	8.0	Ductile Iron	130.0	-414.3	2.64
P-105	FH-16	FH-17	362	8.0	Ductile Iron	130.0	-414.3	2.64
P-110	FH-17	FH-18	393	8.0	Ductile Iron	130.0	-414.3	2.64
P-115	FH-18	EX J-5	120	8.0	Ductile Iron	130.0	-414.3	2.64
P-120	EX J-41	J-42	719	8.0	Ductile Iron	130.0	0.0	0.00
P-PMP-1	PMP-1	EX FH-TEST-1	1	48.0	Ductile Iron	130.0	1,139.0	0.20
P-PMP-2	PMP-2	EX FH-TEST-2	1	48.0	Ductile Iron	130.0	2,601.4	0.46
P-R-1	R-1	PMP-1	1	48.0	Ductile Iron	130.0	1,139.0	0.20
P-R-2	R-2	PMP-2	1	48.0	Ductile Iron	130.0	2,601.4	0.46

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FlexTable: Junction Table

Active Scenario: Max Day + Fire Flow FH-4+6

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
EX FH-1	Zone - 2	1,426.18	0.0	57	1,558.01
EX FH-2	Zone - 2	1,416.00	0.0	51	1,533.52
EX FH-3	Zone - 2	1,417.00	0.0	54	1,542.21
EX FH-5	Zone - 2	1,420.00	0.0	58	1,553.40
EX FH-FLOW A-1	Zone - 2	1,418.00	0.0	56	1,548.41
EX FH-FLOW A-2	Zone - 3	1,432.00	0.0	61	1,571.96
EX FH-FLOW B-1	Zone - 2	1,422.00	0.0	59	1,557.43
EX FH-FLOW B-2	Zone - 3	1,437.00	0.0	59	1,573.96
EX FH-TEST-1	Zone - 2	1,418.00	0.0	60	1,557.58
EX FH-TEST-2	Zone - 3	1,434.00	0.0	61	1,574.68
EX J-5	Zone - 2	1,425.67	12.8	57	1,557.68
EX J-7	Zone - 2	1,418.00	0.0	60	1,557.53
EX J-10	Zone - 2	1,417.00	0.0	55	1,544.39
EX J-15	Zone - 2	1,416.00	843.4	50	1,532.53
EX J-20	Zone - 2	1,417.00	0.0	55	1,543.81
EX J-30	Zone - 3	1,430.55	0.0	60	1,568.67
EX J-41	Zone - 2	1,417.00	9.8	54	1,542.92
EX J-65	Zone - 3	1,425.89	0.0	61	1,566.12
EX J-205	Zone - 2	1,409.00	0.0	60	1,548.13
EX J-215	Zone - 2	1,409.00	0.0	62	1,552.39
EX J-225	Zone - 2	1,409.00	0.0	62	1,552.41
EX J-235	Zone - 2	1,409.00	0.0	62	1,553.02
EX J-245	Zone - 2	1,418.00	0.0	60	1,557.43
EX J-255	Zone - 2	1,428.00	0.0	57	1,558.79
EX J-265	Zone - 2	1,432.00	0.0	61	1,571.84
FH-1	Zone - 2	1,417.74	0.0	48	1,528.23
FH-2	Zone - 2	1,420.79	0.0	46	1,525.96
FH-3	Zone - 2	1,419.33	0.0	45	1,522.98
FH-4	Zone - 2	1,422.56	1,437.5	42	1,519.44
FH-5	Zone - 2	1,422.90	0.0	43	1,521.84
FH-6	Zone - 2	1,421.53	1,437.5	42	1,519.52
FH-7	Zone - 2	1,419.13	0.0	45	1,522.99
FH-9	Zone - 2	1,422.12	0.0	42	1,520.27
FH-10	Zone - 2	1,416.88	0.0	48	1,527.43
FH-12	Zone - 2	1,427.09	0.0	49	1,540.03
FH-13	Zone - 2	1,428.34	0.0	53	1,551.23
FH-14	Zone - 2	1,428.77	0.0	54	1,552.73
FH-15	Zone - 2	1,427.51	0.0	55	1,553.78
FH-16	Zone - 2	1,428.92	0.0	54	1,554.66
FH-17	Zone - 2	1,429.43	0.0	55	1,555.91
FH-18	Zone - 2	1,426.57	0.0	57	1,557.27
J-3	Zone - 2	1,416.56	0.0	49	1,529.67
J-8	Zone - 2	1,423.28	0.0	43	1,522.12
J-35	Zone - 2	1,428.39	0.0	54	1,552.11
J-42	Zone - 2	1,422.00	0.0	52	1,542.92
J-45	Zone - 2	1,423.09	0.0	43	1,523.28

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FlexTable: Junction Table

Active Scenario: Max Day + Fire Flow FH-4+6

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-46	Zone - 2	1,426.00	0.0	47	1,534.54
J-47	Zone - 2	1,426.59	0.0	48	1,538.07

194966 Seventh-Day Adventists

FlexTable: Pipe Table

Active Scenario: Max Day + Fire Flow FH-4+6

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-5	EX FH-TEST-2	EX FH-FLOW B-2	1,194	12.0	Asbestos Cement	140.0	494.2	1.40
EX P-10	EX FH-FLOW A-2	EX FH-TEST-2	311	12.0	Asbestos Cement	140.0	-2,100.9	5.96
EX P-15	EX J-30	EX FH-FLOW A-2	377	12.0	Asbestos Cement	140.0	-2,100.9	5.96
EX P-20	EX J-65	EX J-30	1,094	12.0	Asbestos Cement	140.0	-1,028.7	2.92
EX P-25	EX PRV-1	EX FH-5	335	8.0	Asbestos Cement	140.0	1,028.7	6.57
EX P-27	EX J-65	EX PRV-1	423	8.0	Asbestos Cement	140.0	1,028.7	6.57
EX P-30	EX FH-FLOW A-1	EX FH-5	297	8.0	Asbestos Cement	140.0	-1,028.7	6.57
EX P-35	EX J-20	EX FH-FLOW A-1	274	8.0	Asbestos Cement	140.0	-1,028.7	6.57
EX P-40	EX FH-3	EX J-20	44	8.0	Ductile Iron	130.0	-1,454.2	9.28
EX P-45	EX FH-2	EX FH-3	238	8.0	Ductile Iron	130.0	-1,454.2	9.28
EX P-50	EX J-15	EX FH-2	27	8.0	Ductile Iron	130.0	-1,454.2	9.28
EX P-50	EX J-41	EX J-15	891	8.0	Ductile Iron	130.0	784.7	5.01
EX P-55	EX J-10	EX J-41	123	8.0	Ductile Iron	130.0	794.5	5.07
EX P-60	EX FH-TEST-1	EX J-10	1,268	8.0	Asbestos Cement	140.0	794.5	5.07
EX P-62	EX J-7	EX FH-TEST-1	20	8.0	Asbestos Cement	140.0	-350.8	2.24
EX P-64	EX J-5	EX J-7	981	8.0	Ductile Iron	130.0	74.7	0.48
EX P-65	EX FH-1	EX J-5	77	8.0	Asbestos Cement	140.0	494.2	3.15
EX P-67	EX J-7	EX J-245	31	8.0	Asbestos Cement	140.0	425.5	2.72
EX P-69	EX J-245	EX FH-FLOW B-1	449	8.0	Asbestos Cement	140.0	0.0	0.00
EX P-200	EX J-20	EX J-205	1,322	8.0	Asbestos Cement	140.0	-425.5	2.72
EX P-210	EX J-205	EX J-215	1,300	8.0	Asbestos Cement	140.0	-425.5	2.72
EX P-220	EX J-215	EX J-225	47	12.0	Asbestos Cement	140.0	-425.5	1.21
EX P-230	EX J-225	EX J-235	1,341	12.0	Asbestos Cement	140.0	-425.5	1.21
EX P-240	EX J-235	EX J-245	1,349	8.0	Asbestos Cement	140.0	-425.5	2.72
EX P-250	EX FH-1	EX J-255	179	8.0	Asbestos Cement	140.0	-494.2	3.15
EX P-260	EX J-255	EX J-265	2,637	8.0	Ductile Iron	130.0	-494.2	3.15
EX P-270	EX PRV-2	EX J-265	872	12.0	Asbestos Cement	140.0	494.2	1.40
EX P-280	EX FH-FLOW B-2	EX PRV-2	2,664	12.0	Asbestos Cement	140.0	494.2	1.40
P-5	EX J-15	J-3	84	8.0	Ductile Iron	130.0	1,395.5	8.91
P-10	J-3	FH-1	168	8.0	Ductile Iron	130.0	666.7	4.26

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FlexTable: Pipe Table

Active Scenario: Max Day + Fire Flow FH-4+6

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-15	FH-1	FH-2	263	8.0	Ductile Iron	130.0	666.7	4.26
P-20	FH-2	FH-3	346	8.0	Ductile Iron	130.0	666.7	4.26
P-25	FH-3	FH-9	315	8.0	Ductile Iron	130.0	666.7	4.26
P-27	FH-9	FH-4	96	8.0	Ductile Iron	130.0	666.7	4.26
P-30	FH-4	J-45	340	8.0	Ductile Iron	130.0	-770.8	4.92
P-32	J-45	J-8	120	8.0	Ductile Iron	130.0	708.6	4.52
P-35	J-8	FH-5	29	8.0	Ductile Iron	130.0	708.6	4.52
P-40	FH-5	FH-6	240	8.0	Ductile Iron	130.0	708.6	4.52
P-45	FH-6	FH-7	342	8.0	Ductile Iron	130.0	-728.9	4.65
P-53	J-47	FH-12	52	8.0	Ductile Iron	130.0	-1,479.5	9.44
P-55	FH-10	FH-7	436	8.0	Ductile Iron	130.0	728.9	4.65
P-57	J-45	J-46	299	8.0	Ductile Iron	130.0	-1,479.5	9.44
P-58	J-46	J-47	93	8.0	Ductile Iron	130.0	-1,479.5	9.44
P-62	EX J-30	PRV-16	102	8.0	Ductile Iron	130.0	1,072.2	6.84
P-63	PRV-16	J-35	222	8.0	Ductile Iron	130.0	1,072.8	6.85
P-65	FH-10	J-3	221	8.0	Ductile Iron	130.0	-728.9	4.65
P-80	FH-12	FH-13	297	8.0	Ductile Iron	130.0	-1,479.5	9.44
P-85	FH-13	J-35	23	8.0	Ductile Iron	130.0	-1,479.5	9.44
P-90	J-35	FH-14	182	8.0	Ductile Iron	130.0	-406.7	2.60
P-95	FH-14	FH-15	304	8.0	Ductile Iron	130.0	-406.7	2.60
P-100	FH-15	FH-16	254	8.0	Ductile Iron	130.0	-406.7	2.60
P-105	FH-16	FH-17	362	8.0	Ductile Iron	130.0	-406.7	2.60
P-110	FH-17	FH-18	393	8.0	Ductile Iron	130.0	-406.7	2.60
P-115	FH-18	EX J-5	120	8.0	Ductile Iron	130.0	-406.7	2.60
P-120	EX J-41	J-42	719	8.0	Ductile Iron	130.0	0.0	0.00
P-PMP-1	PMP-1	EX FH-TEST-1	1	48.0	Ductile Iron	130.0	1,145.3	0.20
P-PMP-2	PMP-2	EX FH-TEST-2	1	48.0	Ductile Iron	130.0	2,595.1	0.46
P-R-1	R-1	PMP-1	1	48.0	Ductile Iron	130.0	1,145.3	0.20
P-R-2	R-2	PMP-2	1	48.0	Ductile Iron	130.0	2,595.1	0.46

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FlexTable: Junction Table

Active Scenario: Max Day + Fire Flow FH-5+6

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
EX FH-1	Zone - 2	1,426.18	0.0	57	1,558.01
EX FH-2	Zone - 2	1,416.00	0.0	51	1,533.48
EX FH-3	Zone - 2	1,417.00	0.0	54	1,542.18
EX FH-5	Zone - 2	1,420.00	0.0	58	1,553.38
EX FH-FLOW A-1	Zone - 2	1,418.00	0.0	56	1,548.39
EX FH-FLOW A-2	Zone - 3	1,432.00	0.0	61	1,571.96
EX FH-FLOW B-1	Zone - 2	1,422.00	0.0	59	1,557.43
EX FH-FLOW B-2	Zone - 3	1,437.00	0.0	59	1,573.97
EX FH-TEST-1	Zone - 2	1,418.00	0.0	60	1,557.57
EX FH-TEST-2	Zone - 3	1,434.00	0.0	61	1,574.68
EX J-5	Zone - 2	1,425.67	12.8	57	1,557.68
EX J-7	Zone - 2	1,418.00	0.0	60	1,557.53
EX J-10	Zone - 2	1,417.00	0.0	55	1,544.36
EX J-15	Zone - 2	1,416.00	843.4	50	1,532.49
EX J-20	Zone - 2	1,417.00	0.0	55	1,543.78
EX J-30	Zone - 3	1,430.55	0.0	60	1,568.68
EX J-41	Zone - 2	1,417.00	9.8	54	1,542.89
EX J-65	Zone - 3	1,425.89	0.0	61	1,566.12
EX J-205	Zone - 2	1,409.00	0.0	60	1,548.11
EX J-215	Zone - 2	1,409.00	0.0	62	1,552.37
EX J-225	Zone - 2	1,409.00	0.0	62	1,552.39
EX J-235	Zone - 2	1,409.00	0.0	62	1,553.00
EX J-245	Zone - 2	1,418.00	0.0	60	1,557.43
EX J-255	Zone - 2	1,428.00	0.0	57	1,558.78
EX J-265	Zone - 2	1,432.00	0.0	61	1,571.85
FH-1	Zone - 2	1,417.74	0.0	48	1,528.94
FH-2	Zone - 2	1,420.79	0.0	46	1,527.86
FH-3	Zone - 2	1,419.33	0.0	46	1,526.44
FH-4	Zone - 2	1,422.56	0.0	44	1,524.75
FH-5	Zone - 2	1,422.90	1,437.5	39	1,514.17
FH-6	Zone - 2	1,421.53	1,437.5	40	1,513.02
FH-7	Zone - 2	1,419.13	0.0	43	1,518.70
FH-9	Zone - 2	1,422.12	0.0	45	1,525.14
FH-10	Zone - 2	1,416.88	0.0	47	1,525.95
FH-12	Zone - 2	1,427.09	0.0	49	1,540.06
FH-13	Zone - 2	1,428.34	0.0	53	1,551.24
FH-14	Zone - 2	1,428.77	0.0	54	1,552.74
FH-15	Zone - 2	1,427.51	0.0	55	1,553.79
FH-16	Zone - 2	1,428.92	0.0	54	1,554.66
FH-17	Zone - 2	1,429.43	0.0	55	1,555.91
FH-18	Zone - 2	1,426.57	0.0	57	1,557.27
J-3	Zone - 2	1,416.56	0.0	49	1,529.62
J-8	Zone - 2	1,423.28	0.0	40	1,515.97
J-35	Zone - 2	1,428.39	0.0	54	1,552.12
J-42	Zone - 2	1,422.00	0.0	52	1,542.89
J-45	Zone - 2	1,423.09	0.0	43	1,523.35

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FlexTable: Junction Table

Active Scenario: Max Day + Fire Flow FH-5+6

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-46	Zone - 2	1,426.00	0.0	47	1,534.59
J-47	Zone - 2	1,426.59	0.0	48	1,538.11

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FlexTable: Pipe Table

Active Scenario: Max Day + Fire Flow FH-5+6

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-5	EX FH-TEST-2	EX FH-FLOW B-2	1,194	12.0	Asbestos Cement	140.0	494.4	1.40
EX P-10	EX FH-FLOW A-2	EX FH-TEST-2	311	12.0	Asbestos Cement	140.0	-2,100.4	5.96
EX P-15	EX J-30	EX FH-FLOW A-2	377	12.0	Asbestos Cement	140.0	-2,100.4	5.96
EX P-20	EX J-65	EX J-30	1,094	12.0	Asbestos Cement	140.0	-1,029.5	2.92
EX P-25	EX PRV-1	EX FH-5	335	8.0	Asbestos Cement	140.0	1,029.5	6.57
EX P-27	EX J-65	EX PRV-1	423	8.0	Asbestos Cement	140.0	1,029.5	6.57
EX P-30	EX FH-FLOW A-1	EX FH-5	297	8.0	Asbestos Cement	140.0	-1,029.5	6.57
EX P-35	EX J-20	EX FH-FLOW A-1	274	8.0	Asbestos Cement	140.0	-1,029.5	6.57
EX P-40	EX FH-3	EX J-20	44	8.0	Ductile Iron	130.0	-1,455.4	9.29
EX P-45	EX FH-2	EX FH-3	238	8.0	Ductile Iron	130.0	-1,455.4	9.29
EX P-50	EX J-15	EX FH-2	27	8.0	Ductile Iron	130.0	-1,455.4	9.29
EX P-50	EX J-41	EX J-15	891	8.0	Ductile Iron	130.0	785.4	5.01
EX P-55	EX J-10	EX J-41	123	8.0	Ductile Iron	130.0	795.2	5.08
EX P-60	EX FH-TEST-1	EX J-10	1,268	8.0	Asbestos Cement	140.0	795.2	5.08
EX P-62	EX J-7	EX FH-TEST-1	20	8.0	Asbestos Cement	140.0	-350.5	2.24
EX P-64	EX J-5	EX J-7	981	8.0	Ductile Iron	130.0	75.3	0.48
EX P-65	EX FH-1	EX J-5	77	8.0	Asbestos Cement	140.0	494.4	3.16
EX P-67	EX J-7	EX J-245	31	8.0	Asbestos Cement	140.0	425.8	2.72
EX P-69	EX J-245	EX FH-FLOW B-1	449	8.0	Asbestos Cement	140.0	0.0	0.00
EX P-200	EX J-20	EX J-205	1,322	8.0	Asbestos Cement	140.0	-425.8	2.72
EX P-210	EX J-205	EX J-215	1,300	8.0	Asbestos Cement	140.0	-425.8	2.72
EX P-220	EX J-215	EX J-225	47	12.0	Asbestos Cement	140.0	-425.8	1.21
EX P-230	EX J-225	EX J-235	1,341	12.0	Asbestos Cement	140.0	-425.8	1.21
EX P-240	EX J-235	EX J-245	1,349	8.0	Asbestos Cement	140.0	-425.8	2.72
EX P-250	EX FH-1	EX J-255	179	8.0	Asbestos Cement	140.0	-494.4	3.16
EX P-260	EX J-255	EX J-265	2,637	8.0	Ductile Iron	130.0	-494.4	3.16
EX P-270	EX PRV-2	EX J-265	872	12.0	Asbestos Cement	140.0	494.4	1.40
EX P-280	EX FH-FLOW B-2	EX PRV-2	2,664	12.0	Asbestos Cement	140.0	494.4	1.40
P-5	EX J-15	J-3	84	8.0	Ductile Iron	130.0	1,397.3	8.92
P-10	J-3	FH-1	168	8.0	Ductile Iron	130.0	446.7	2.85

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FlexTable: Pipe Table

Active Scenario: Max Day + Fire Flow FH-5+6

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-15	FH-1	FH-2	263	8.0	Ductile Iron	130.0	446.7	2.85
P-20	FH-2	FH-3	346	8.0	Ductile Iron	130.0	446.7	2.85
P-25	FH-3	FH-9	315	8.0	Ductile Iron	130.0	446.7	2.85
P-27	FH-9	FH-4	96	8.0	Ductile Iron	130.0	446.7	2.85
P-30	FH-4	J-45	340	8.0	Ductile Iron	130.0	446.7	2.85
P-32	J-45	J-8	120	8.0	Ductile Iron	130.0	1,924.3	12.28
P-35	J-8	FH-5	29	8.0	Ductile Iron	130.0	1,924.3	12.28
P-40	FH-5	FH-6	240	8.0	Ductile Iron	130.0	486.8	3.11
P-45	FH-6	FH-7	342	8.0	Ductile Iron	130.0	-950.7	6.07
P-53	J-47	FH-12	52	8.0	Ductile Iron	130.0	-1,477.7	9.43
P-55	FH-10	FH-7	436	8.0	Ductile Iron	130.0	950.7	6.07
P-57	J-45	J-46	299	8.0	Ductile Iron	130.0	-1,477.7	9.43
P-58	J-46	J-47	93	8.0	Ductile Iron	130.0	-1,477.7	9.43
P-62	EX J-30	PRV-16	102	8.0	Ductile Iron	130.0	1,070.8	6.83
P-63	PRV-16	J-35	222	8.0	Ductile Iron	130.0	1,071.5	6.84
P-65	FH-10	J-3	221	8.0	Ductile Iron	130.0	-950.7	6.07
P-80	FH-12	FH-13	297	8.0	Ductile Iron	130.0	-1,477.7	9.43
P-85	FH-13	J-35	23	8.0	Ductile Iron	130.0	-1,477.7	9.43
P-90	J-35	FH-14	182	8.0	Ductile Iron	130.0	-406.2	2.59
P-95	FH-14	FH-15	304	8.0	Ductile Iron	130.0	-406.2	2.59
P-100	FH-15	FH-16	254	8.0	Ductile Iron	130.0	-406.2	2.59
P-105	FH-16	FH-17	362	8.0	Ductile Iron	130.0	-406.2	2.59
P-110	FH-17	FH-18	393	8.0	Ductile Iron	130.0	-406.2	2.59
P-115	FH-18	EX J-5	120	8.0	Ductile Iron	130.0	-406.2	2.59
P-120	EX J-41	J-42	719	8.0	Ductile Iron	130.0	0.0	0.00
P-PMP-1	PMP-1	EX FH-TEST-1	1	48.0	Ductile Iron	130.0	1,145.7	0.20
P-PMP-2	PMP-2	EX FH-TEST-2	1	48.0	Ductile Iron	130.0	2,594.7	0.46
P-R-1	R-1	PMP-1	1	48.0	Ductile Iron	130.0	1,145.7	0.20
P-R-2	R-2	PMP-2	1	48.0	Ductile Iron	130.0	2,594.7	0.46

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FlexTable: Junction Table

Active Scenario: Max Day + Fire Flow FH-4,5+6

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
EX FH-1	Zone - 2	1,426.18	0.0	57	1,558.03
EX FH-2	Zone - 2	1,416.00	0.0	51	1,533.91
EX FH-3	Zone - 2	1,417.00	0.0	54	1,542.47
EX FH-5	Zone - 2	1,420.00	0.0	58	1,553.51
EX FH-FLOW A-1	Zone - 2	1,418.00	0.0	56	1,548.59
EX FH-FLOW A-2	Zone - 3	1,432.00	0.0	61	1,571.87
EX FH-FLOW B-1	Zone - 2	1,422.00	0.0	59	1,557.47
EX FH-FLOW B-2	Zone - 3	1,437.00	0.0	59	1,573.89
EX FH-TEST-1	Zone - 2	1,418.00	0.0	60	1,557.61
EX FH-TEST-2	Zone - 3	1,434.00	0.0	61	1,574.61
EX J-5	Zone - 2	1,425.67	12.8	57	1,557.69
EX J-7	Zone - 2	1,418.00	0.0	60	1,557.57
EX J-10	Zone - 2	1,417.00	0.0	55	1,544.62
EX J-15	Zone - 2	1,416.00	843.4	51	1,532.93
EX J-20	Zone - 2	1,417.00	0.0	55	1,544.05
EX J-30	Zone - 3	1,430.55	0.0	60	1,568.57
EX J-41	Zone - 2	1,417.00	9.8	55	1,543.17
EX J-65	Zone - 3	1,425.89	0.0	61	1,566.05
EX J-205	Zone - 2	1,409.00	0.0	60	1,548.31
EX J-215	Zone - 2	1,409.00	0.0	62	1,552.50
EX J-225	Zone - 2	1,409.00	0.0	62	1,552.52
EX J-235	Zone - 2	1,409.00	0.0	62	1,553.12
EX J-245	Zone - 2	1,418.00	0.0	60	1,557.47
EX J-255	Zone - 2	1,428.00	0.0	57	1,558.79
EX J-265	Zone - 2	1,432.00	0.0	60	1,571.79
FH-1	Zone - 2	1,417.74	0.0	48	1,528.92
FH-2	Zone - 2	1,420.79	0.0	46	1,526.99
FH-3	Zone - 2	1,419.33	0.0	45	1,524.46
FH-4	Zone - 2	1,422.56	1,000.0	43	1,521.46
FH-5	Zone - 2	1,422.90	875.0	42	1,519.25
FH-6	Zone - 2	1,421.53	1,000.0	42	1,518.96
FH-7	Zone - 2	1,419.13	0.0	45	1,522.78
FH-9	Zone - 2	1,422.12	0.0	43	1,522.16
FH-10	Zone - 2	1,416.88	0.0	48	1,527.67
FH-12	Zone - 2	1,427.09	0.0	49	1,539.66
FH-13	Zone - 2	1,428.34	0.0	53	1,551.11
FH-14	Zone - 2	1,428.77	0.0	54	1,552.64
FH-15	Zone - 2	1,427.51	0.0	55	1,553.72
FH-16	Zone - 2	1,428.92	0.0	54	1,554.61
FH-17	Zone - 2	1,429.43	0.0	55	1,555.89
FH-18	Zone - 2	1,426.57	0.0	57	1,557.27
J-3	Zone - 2	1,416.56	0.0	49	1,530.14
J-8	Zone - 2	1,423.28	0.0	42	1,519.89
J-35	Zone - 2	1,428.39	0.0	53	1,552.00
J-42	Zone - 2	1,422.00	0.0	52	1,543.17
J-45	Zone - 2	1,423.09	0.0	43	1,522.55

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FlexTable: Junction Table

Active Scenario: Max Day + Fire Flow FH-4,5+6

Label	Zone	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-46	Zone - 2	1,426.00	0.0	47	1,534.06
J-47	Zone - 2	1,426.59	0.0	48	1,537.66

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FlexTable: Pipe Table

Active Scenario: Max Day + Fire Flow FH-4,5+6

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-5	EX FH-TEST-2	EX FH-FLOW B-2	1,194	12.0	Asbestos Cement	140.0	492.9	1.40
EX P-10	EX FH-FLOW A-2	EX FH-TEST-2	311	12.0	Asbestos Cement	140.0	-2,106.1	5.97
EX P-15	EX J-30	EX FH-FLOW A-2	377	12.0	Asbestos Cement	140.0	-2,106.1	5.97
EX P-20	EX J-65	EX J-30	1,094	12.0	Asbestos Cement	140.0	-1,021.1	2.90
EX P-25	EX PRV-1	EX FH-5	335	8.0	Asbestos Cement	140.0	1,021.1	6.52
EX P-27	EX J-65	EX PRV-1	423	8.0	Asbestos Cement	140.0	1,021.1	6.52
EX P-30	EX FH-FLOW A-1	EX FH-5	297	8.0	Asbestos Cement	140.0	-1,021.1	6.52
EX P-35	EX J-20	EX FH-FLOW A-1	274	8.0	Asbestos Cement	140.0	-1,021.1	6.52
EX P-40	EX FH-3	EX J-20	44	8.0	Ductile Iron	130.0	-1,443.1	9.21
EX P-45	EX FH-2	EX FH-3	238	8.0	Ductile Iron	130.0	-1,443.1	9.21
EX P-50	EX J-15	EX FH-2	27	8.0	Ductile Iron	130.0	-1,443.1	9.21
EX P-50	EX J-41	EX J-15	891	8.0	Ductile Iron	130.0	778.5	4.97
EX P-55	EX J-10	EX J-41	123	8.0	Ductile Iron	130.0	788.3	5.03
EX P-60	EX FH-TEST-1	EX J-10	1,268	8.0	Asbestos Cement	140.0	788.3	5.03
EX P-62	EX J-7	EX FH-TEST-1	20	8.0	Asbestos Cement	140.0	-353.2	2.25
EX P-64	EX J-5	EX J-7	981	8.0	Ductile Iron	130.0	68.8	0.44
EX P-65	EX FH-1	EX J-5	77	8.0	Asbestos Cement	140.0	492.9	3.15
EX P-67	EX J-7	EX J-245	31	8.0	Asbestos Cement	140.0	422.0	2.69
EX P-69	EX J-245	EX FH-FLOW B-1	449	8.0	Asbestos Cement	140.0	0.0	0.00
EX P-200	EX J-20	EX J-205	1,322	8.0	Asbestos Cement	140.0	-422.0	2.69
EX P-210	EX J-205	EX J-215	1,300	8.0	Asbestos Cement	140.0	-422.0	2.69
EX P-220	EX J-215	EX J-225	47	12.0	Asbestos Cement	140.0	-422.0	1.20
EX P-230	EX J-225	EX J-235	1,341	12.0	Asbestos Cement	140.0	-422.0	1.20
EX P-240	EX J-235	EX J-245	1,349	8.0	Asbestos Cement	140.0	-422.0	2.69
EX P-250	EX FH-1	EX J-255	179	8.0	Asbestos Cement	140.0	-492.9	3.15
EX P-260	EX J-255	EX J-265	2,637	8.0	Ductile Iron	130.0	-492.9	3.15
EX P-270	EX PRV-2	EX J-265	872	12.0	Asbestos Cement	140.0	492.9	1.40
EX P-280	EX FH-FLOW B-2	EX PRV-2	2,664	12.0	Asbestos Cement	140.0	492.9	1.40
P-5	EX J-15	J-3	84	8.0	Ductile Iron	130.0	1,378.1	8.80
P-10	J-3	FH-1	168	8.0	Ductile Iron	130.0	610.1	3.89

194966 Seventh-Day Adventists

FlexTable: Pipe Table

Active Scenario: Max Day + Fire Flow FH-4,5+6

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-15	FH-1	FH-2	263	8.0	Ductile Iron	130.0	610.1	3.89
P-20	FH-2	FH-3	346	8.0	Ductile Iron	130.0	610.1	3.89
P-25	FH-3	FH-9	315	8.0	Ductile Iron	130.0	610.1	3.89
P-27	FH-9	FH-4	96	8.0	Ductile Iron	130.0	610.1	3.89
P-30	FH-4	J-45	340	8.0	Ductile Iron	130.0	-389.9	2.49
P-32	J-45	J-8	120	8.0	Ductile Iron	130.0	1,107.0	7.07
P-35	J-8	FH-5	29	8.0	Ductile Iron	130.0	1,107.0	7.07
P-40	FH-5	FH-6	240	8.0	Ductile Iron	130.0	232.0	1.48
P-45	FH-6	FH-7	342	8.0	Ductile Iron	130.0	-768.0	4.90
P-53	J-47	FH-12	52	8.0	Ductile Iron	130.0	-1,496.9	9.55
P-55	FH-10	FH-7	436	8.0	Ductile Iron	130.0	768.0	4.90
P-57	J-45	J-46	299	8.0	Ductile Iron	130.0	-1,496.9	9.55
P-58	J-46	J-47	93	8.0	Ductile Iron	130.0	-1,496.9	9.55
P-62	EX J-30	PRV-16	102	8.0	Ductile Iron	130.0	1,085.0	6.93
P-63	PRV-16	J-35	222	8.0	Ductile Iron	130.0	1,085.6	6.93
P-65	FH-10	J-3	221	8.0	Ductile Iron	130.0	-768.0	4.90
P-80	FH-12	FH-13	297	8.0	Ductile Iron	130.0	-1,496.9	9.55
P-85	FH-13	J-35	23	8.0	Ductile Iron	130.0	-1,496.9	9.55
P-90	J-35	FH-14	182	8.0	Ductile Iron	130.0	-411.3	2.63
P-95	FH-14	FH-15	304	8.0	Ductile Iron	130.0	-411.3	2.63
P-100	FH-15	FH-16	254	8.0	Ductile Iron	130.0	-411.3	2.63
P-105	FH-16	FH-17	362	8.0	Ductile Iron	130.0	-411.3	2.63
P-110	FH-17	FH-18	393	8.0	Ductile Iron	130.0	-411.3	2.63
P-115	FH-18	EX J-5	120	8.0	Ductile Iron	130.0	-411.3	2.63
P-120	EX J-41	J-42	719	8.0	Ductile Iron	130.0	0.0	0.00
P-PMP-1	PMP-1	EX FH-TEST-1	1	48.0	Ductile Iron	130.0	1,141.5	0.20
P-PMP-2	PMP-2	EX FH-TEST-2	1	48.0	Ductile Iron	130.0	2,598.9	0.46
P-R-1	R-1	PMP-1	1	48.0	Ductile Iron	130.0	1,141.5	0.20
P-R-2	R-2	PMP-2	1	48.0	Ductile Iron	130.0	2,598.9	0.46

FIRE FLOW TEST RESULTS

Arizona Flow Testing LLC

HYDRANT FLOW TEST REPORT

Project Name:	7th Day Adventist
Project Address:	Scottsdale Road and Sutton Drive, Scottsdale, Arizona, 85254
Client Project No.:	194966
Arizona Flow Testing Project No.:	20167
Flow Test Permit No.:	C62100
Date and time flow test conducted:	May 8, 2020 at 9:35 AM
Data is current and reliable until:	November 8, 2020
Conducted by:	F. Vaughan & L. Hirlermann-Az Flow Testing, LLC (480-250-8154)
Witnessed by:	Henry Hursky -City of Scottsdale-Inspector (602-757-2607)

Raw Test Data

Static Pressure: **70.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **52.0 PSI**
(Measured in pounds per square inch)

Pitot Pressure: **12.0 PSI Hyd A**
21.0 PSI Hyd B
(Measured in pounds per square inch)
+

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

Coefficient of Diffuser: .7875 and 0.9

Flowing GPM: **3,272 GPM**
(Measured in gallons per minute)
1,303 GPM + 1,969 GPM = 3,272 GPM

GPM @ 20 PSI: **5,682 GPM**

Data with 10% Safety Factor

Static Pressure: **63.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **45.0 PSI**
(Measured in pounds per square inch)

Distance between hydrants: See Below

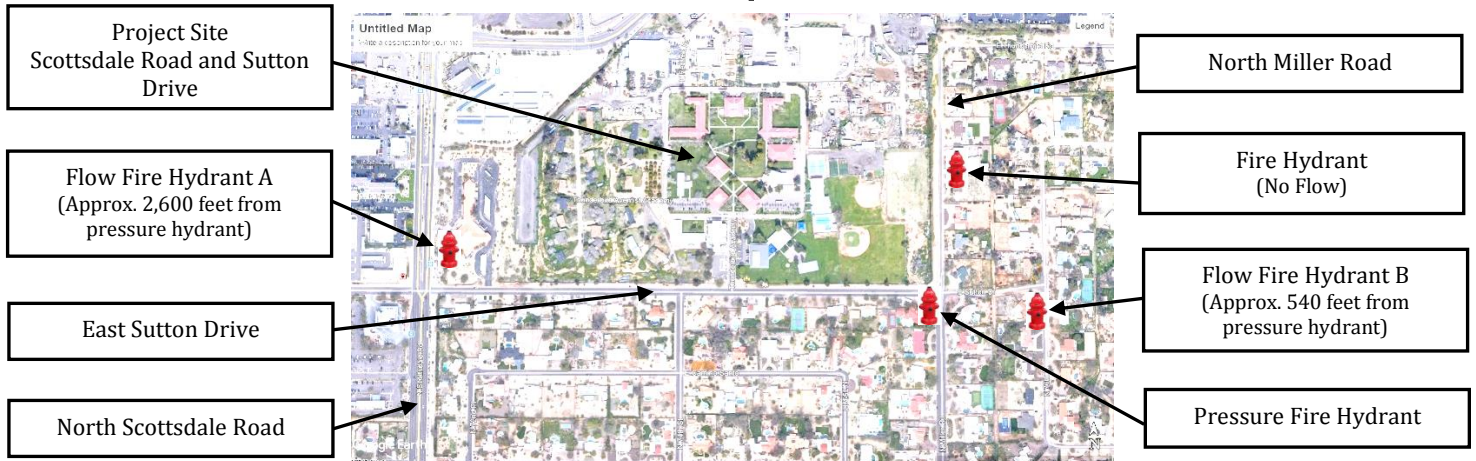
Main size: Not Provided

Flowing GPM: **3,272 GPM**

GPM @ 20 PSI: **5,237 GPM**

Flow Test Location

North ↑



Arizona Flow Testing LLC

HYDRANT FLOW TEST REPORT

Project Name:	7th Day Adventist
Project Address:	Scottsdale Road & Sutton Drive, Scottsdale, Arizona, 85254
Client Project No.:	194966
Arizona Flow Testing Project No.:	19272
Flow Test Permit No.:	C58918
Date and time flow test conducted:	July 18, 2019 at 7:00 AM
Data is current and reliable until:	January 18, 2020
Conducted by:	F. Vaughan & T. Atherton – Az. Flow Testing, LLC (480-250-8154)
Coordinated by:	Jared Berry – City of Scottsdale-Inspector (602-541-4942)

Raw Test Data

Static Pressure: **94.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **66.0 PSI**
(Measured in pounds per square inch)

Pitot Pressure: **36.0 PSI Hyd A**
20.0 PSI Hyd B
(Measured in pounds per square inch)

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

Coefficient of Diffuser: 0.7875/(B) and 0.9/(A)

Flowing GPM: **4,260 GPM**
(Measured in gallons per minute)
2,578 GPM + 1,682 GPM = 4,260 GPM

GPM @ 20 PSI: **7,201 GPM**

Data with 22 PSI Safety Factor

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

Residual Pressure: **44.0 PSI**
(Measured in pounds per square inch)

Distance between hydrants: See Below

Main size: Not Provided

Flowing GPM: **4,260 GPM**

GPM @ 20 PSI: **5,952 GPM**

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

Flow Test Location



CITY OF SCOTTSDALE REFERENCE DOCUMENTS

Darin Moore

From: Sacks, Richard [<mailto:RSacks@ScottsdaleAz.Gov>]
Sent: Monday, May 18, 2020 8:47 AM
To: Darin Moore
Cc: Kurt A. Jones
Subject: RE: Sewer Flow Monitoring along Thunderbird - water flow test

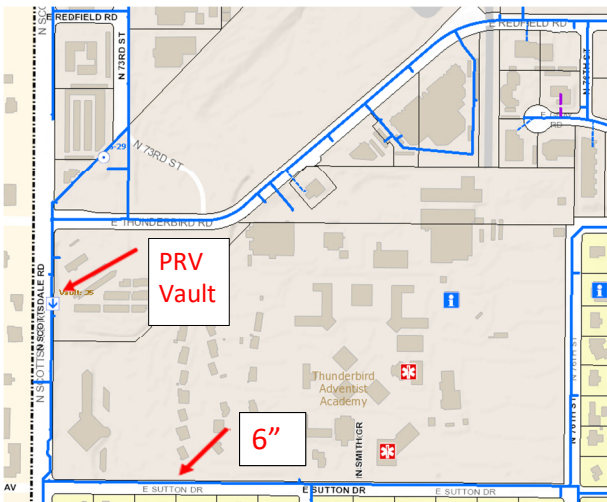
Darin

We'll set the PRV. The HGL for zone two ranges from 1263 to 1643.

The PRV south of Thunderbird on Scottsdale Rd. ranges from 90 psi to 60 psi. There is another PRV located at Sweetwater and the 101. It's range is from 90 to 70 psi.

The critical number is the required fire flow. Suggest verifying with Fire what is that flow.

The picture below show the system layout without valves except the PRV.

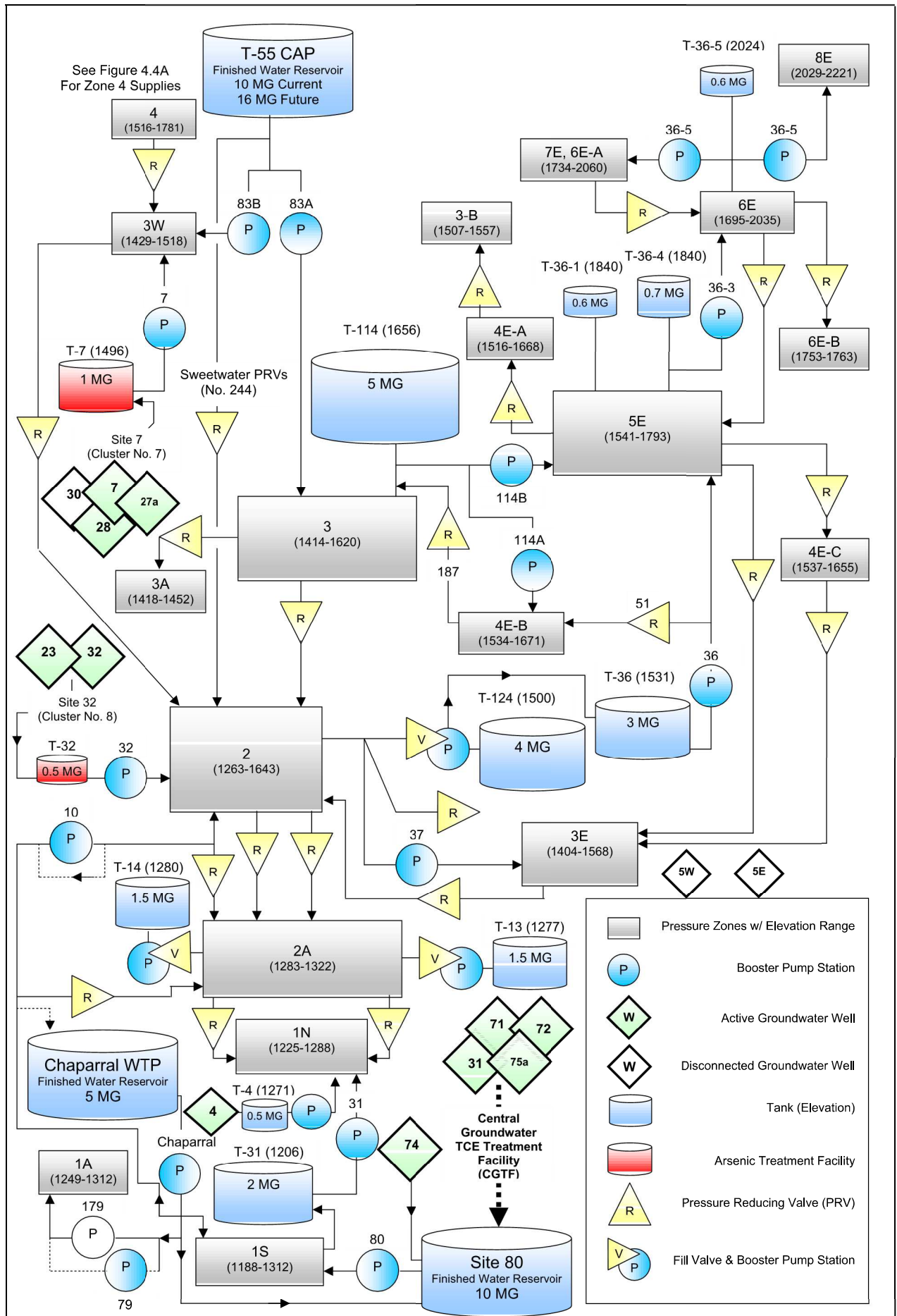


Richard Sacks, P.E.
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Sending me an attachment over 5MB? Please use the link below:
<https://securemail.scottsdaleaz.gov/filedrop/rsacks@scottsdaleaz.gov>

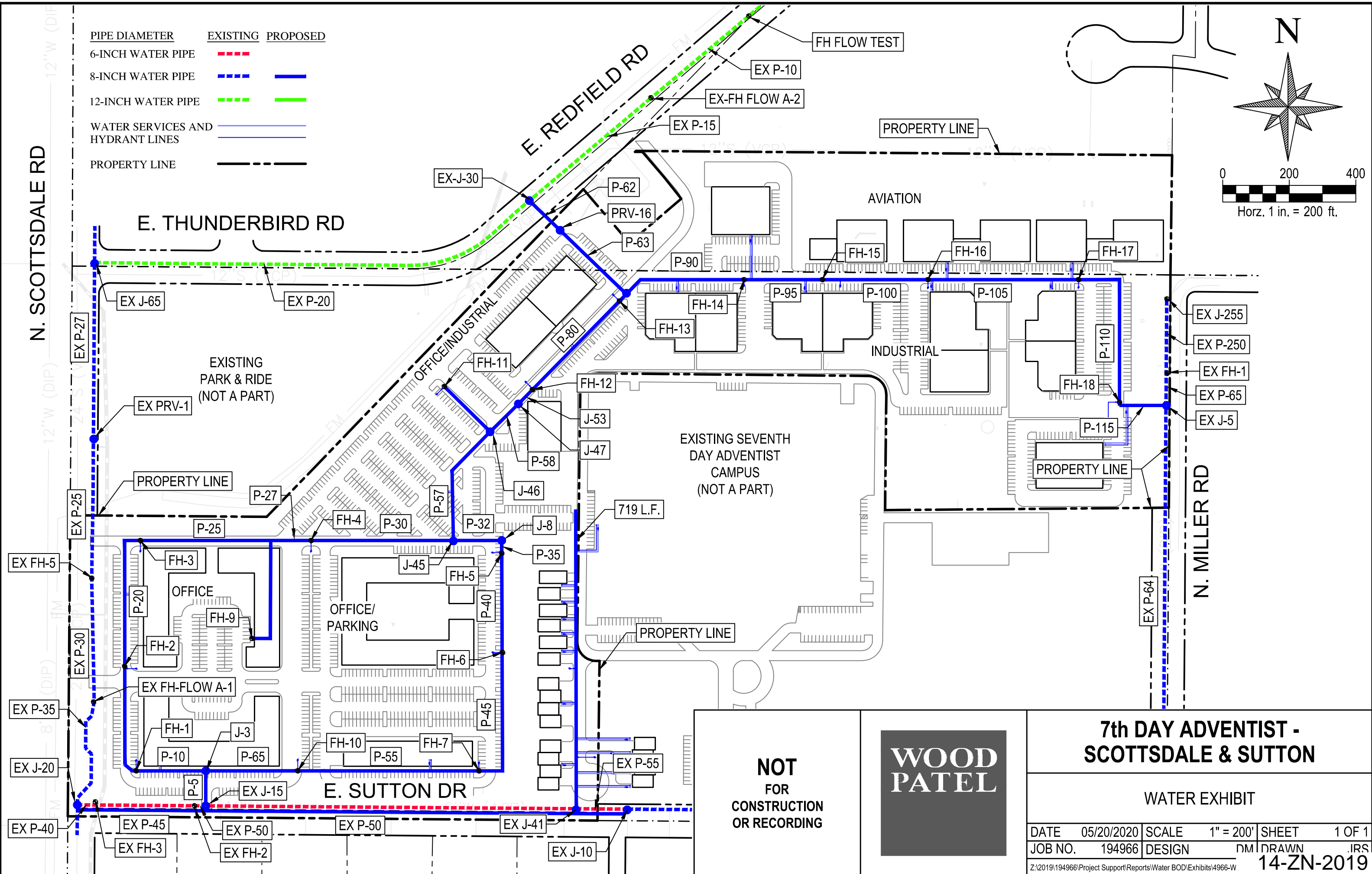
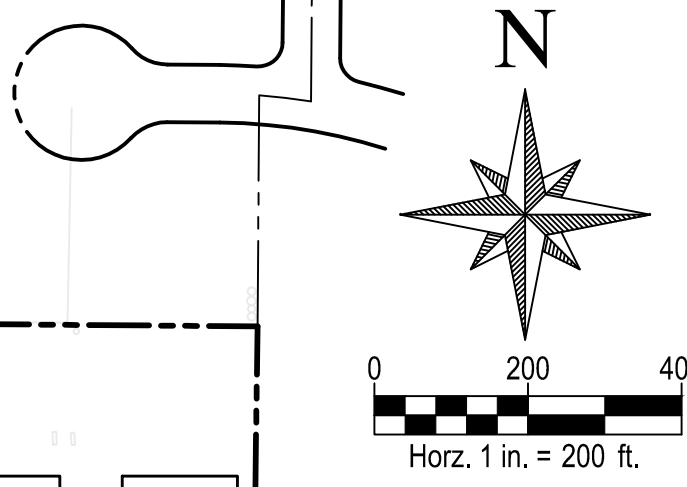


"Water Sustainability through Stewardship, Innovation and People"



WATER EXHIBIT

PIPE DIAMETER	EXISTING	PROPOSED
6-INCH WATER PIPE	---	---
8-INCH WATER PIPE	- - -	---
12-INCH WATER PIPE	- · - · -	---
WATER SERVICES AND HYDRANT LINES	---	---
PROPERTY LINE	- - -	- - -



NOT FOR CONSTRUCTION OR RECORDING



7th DAY ADVENTIST - SCOTTSDALE & SUTTON

WATER EXHIBIT

DATE	05/20/2020	SCALE	1" = 200'	SHEET	1 OF 1
JOB NO.	194966	DESIGN	DM	DRAWN	IRS
Z:\2019\194966\Project Support\Reports\Water BOD\Exhibits\4966-W					

14-ZN-2019
6/03/2020