



**WATER DISTRIBUTION SYSTEM  
CONCEPT BASIS OF DESIGN REPORT FOR  
FAIRMONT SCOTTSDALE PRINCESS  
GUEST ROOM ADDITION**

November 22, 2023  
WP# 215319.50

<b>PRELIMINARY Basis of Design Report</b>	  <small>9379 E San Salvador Dr. Scottsdale, AZ 85258</small>
<input type="checkbox"/> ACCEPTED <input checked="" type="checkbox"/> ACCEPTED AS NOTED <input type="checkbox"/> REVISE AND RESUBMIT	
<p>Disclaimer: If accepted; the preliminary approval is granted under the condition that a final basis of design report will also be submitted for city review and approval (typically during the DR or PP case). The final report shall incorporate further water or sewer design and analysis requirements as defined in the city design standards and policy manual and address those items noted in the preliminary review comments (both separate and included herein). The final report shall be submitted and approved prior to the plan review submission.</p> <p>For questions or clarifications contact the Water Resources Planning and Engineering Department at 480-312-5685.</p>	
BY apritchard	DATE 1/29/2024

Show meter, backflow, preventer. DSPM 6-1-201

20' water easement required between Guest Rooms and Sunset Villas. DSPM 6-1.419.



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EXPIRES 06-30-25

## 1.0 INTRODUCTION

The Fairmont Scottsdale Princess Guest Room Addition (Site) is a proposed resort/hotel with underground parking on approximately 0.89 acres of the approximate 34-acre parcel of the Fairmont Scottsdale Princess in the City of Scottsdale (APN#215-08-695). The project will include 155 rooms plus underground parking encompassing 151,086sf, hardscape, landscape, and utility improvements to support the development. The Site is located approximately 1,300-feet to the east of Scottsdale Road and directly south of East Hacienda Way within Section 35, Township 4 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona. Refer to Exhibit 1 – *Vicinity Map* for the project location. The existing property, currently zoned C-2, is primarily developed with buildings, parking lots, pools, sidewalks, and a variety of landscaping (desert and grass).

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

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

Average Day Water Demand, Resort/Hotel: .....	446.3 gpd/DU
Maximum Day Flow Factor: .....	2 x ADD
Peak Hour Factor: .....	3.5 x ADD

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

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

## 2.0 EXISTING WATER INFRASTRUCTURE

Existing water infrastructure adjacent to the Site includes an existing 12-inch public water line within Cottage Terrace and an existing 8-inch private water line adjacent to East Hacienda Way. There are no existing services from either water main extending to the Site. There are two (2) existing fire hydrants along Cottage Terrace to serve the Site. Please refer to Exhibit 2 – *Water Pipe Layout* for a depiction of existing infrastructure.

## 3.0 PROPOSED WATER INFRASTRUCTURE

### **3.1 Onsite Water Infrastructure**

A proposed 2-inch domestic service with meter and backflow will connect to the existing 12-inch public water main within Cottage Terrace to serve the proposed building at the west side of the building. Refer to Exhibit 2 – *Water Pipe Layout* for the layout of proposed water infrastructure.

### **3.2 Water Demand Calculations**

The Average Day, Maximum Day, and Peak Hour demands for the proposed Site have been calculated to be 96.1 gallons per minute (gpm), 192.2 gpm, and 336.4 gpm, respectively (Refer to Appendix A - *Water Demand Calculations*). Based on this information, there is sufficient supply to meet the demands for the Site (Refer to Appendix B – *Fire Hydrant Flow Test Results and Calculations*). The fire flow required for the Site was determined to be 3,125 gpm at a minimum 30 psi for a building with 151,086 sf, a fire sprinkler system, and a building type of V-A. Based on this information, there is sufficient supply to meet the demands for the Site. Refer to Exhibit 2 – *Water Pipe Layout* for the layout of proposed water infrastructure.

## **4.0 CONCLUSIONS**

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

1. The design criteria used to estimate potable water demands and evaluate system hydraulics are based on the design criteria listed in the *City of Scottsdale Design Standards and Policies Manual, 2018*.
2. The proposed services are adequate to serve the domestic and fire flow requirements for the Site.
3. The average day demand of 69,177 gpd or 96.1 gpm are met with the proposed water infrastructure.
4. The max day demand of 138,354 gpd or 192.2 gpm are met with the proposed water infrastructure.
5. The peak hour demands of 242,120 gpd or 336.4 gpm are met with the proposed water infrastructure.
6. The required fire flow of 3,125 gpm is met with the proposed water infrastructure.

## **5.0 REFERENCES**

1. City of Scottsdale Design Standards and Policies Manual, 2018.
2. *Master Water Report for Fairmont Scottsdale Princess*, by Wood, Patel and Associates Inc., November 2023.
3. International Fire Code, 2021.

## **APPENDIX A – WATER DEMAND CALCULATIONS**

**TABLE 1**  
**WATER DISTRIBUTION SYSTEM DESIGN CRITERIA**

**Project** Fairmont Scottsdale Princess - Guest Room Addition  
**Location** Scottsdale AZ  
**Project Number** 215319.5  
**Project Engineer** Andrew J. Sanchez  
**References** City of Scottsdale Design and Policies Manual (2018)

<b>RESIDENTIAL WATER DEMANDS</b>			
<b>LAND USE</b>	<b>AVERAGE DAILY DEMAND (ADD)</b>		<b>NOTES</b>
	<b>VALUE</b>	<b>UNITS</b>	
High Density Condominium	185	gpd/DU	Note 1
Resort Hotel	446	gpd/DU	Note 1

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

<b>HYDRAULIC MODELING CRITERIA</b>			
<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNITS</b>	<b>NOTES</b>
<b>PEAKING FACTORS</b>			
Peak Flow = Peaking Factor (PF) x ADD	3.5 x ADD	gpd	Note 1
Max Flow = Peaking Factor (PF) x ADD	2.0 x ADD	gpd	Note 1
<b>MODELED FIRE HYDRANT FLOW WITH 50% FIRE SPRINKLER REDUCTION (MINIMUM)</b>			
<input type="checkbox"/> Residential, 0 - 3,600 sf fire-flow calculation area	1,000	gpm	Note 3
<input checked="" 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 type="checkbox"/> Commercial	-	gpm	Note 2
<b>HYDRAULICS</b>			
Residual Pressure Range, Peak Flow	50-120	psi	Note 1
Minimum Residual Pressure, Peak Flow + Fire Flow	30	psi	Note 1
Maximum Velocity, Peak Flow	5	ft/sec	Note 1
Maximum Velocity, Peak Day + Fire Flow	10	ft/sec	Note 1
Minimum Pipe Diameter, Looped System	8	in	Note 1
Hazen-Williams C-value	120	-	Note 1

**Notes**

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



WATER DEMAND DESIGN FLOWS

**Project** Fairmont Scottsdale Princess - Guest Room Addition  
**Location** Scottsdale AZ  
**Project Number** 215319.5  
**Project Engineer** Andrew J. Sanchez  
**References** City of Scottsdale Design and Policies Manual (2018)

LAND USE AND DWELLING UNIT BREAKDOWN BY JUNCTION											FIRE FLOW		
HYDRAULIC MODEL NODE	LAND USE	DWELLING UNITS	DEMAND VALUE	UNITS	AVERAGE DAILY DEMAND		MAX FLOW		PEAK FLOW		FIRE FLOW AREA (sf)	FIRE FLOW TYPE	FIRE-FLOW (gpm)
					(gpm)	(gpd)	(gpm)	(gpd)	(gpm)	(gpd)			
Guest Tower	Resort Hotel	155	446.3	gpd/DU	96.1	69,177	192.2	138,354	336.4	242,120	151,086	V-A	3,125
<b>Total</b>		<b>155</b>			<b>96.1</b>	<b>69,177</b>	<b>192.2</b>	<b>138,354</b>	<b>336.4</b>	<b>242,120</b>			

## **APPENDIX B – FIRE HYDRANT FLOW TEST AND CALCULATIONS**

# Arizona Flow Testing LLC

## HYDRANT FLOW TEST REPORT

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

### Raw Test Data

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

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

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

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

Coefficient of Diffuser: 0.9

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

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

### Data with 16PSI Safety Factor

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

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

Distance between hydrants: Approx. 810 Feet

Main size: Not Provided

Flowing GPM: **2,718 GPM**

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

### Flow Test Location

North ↑



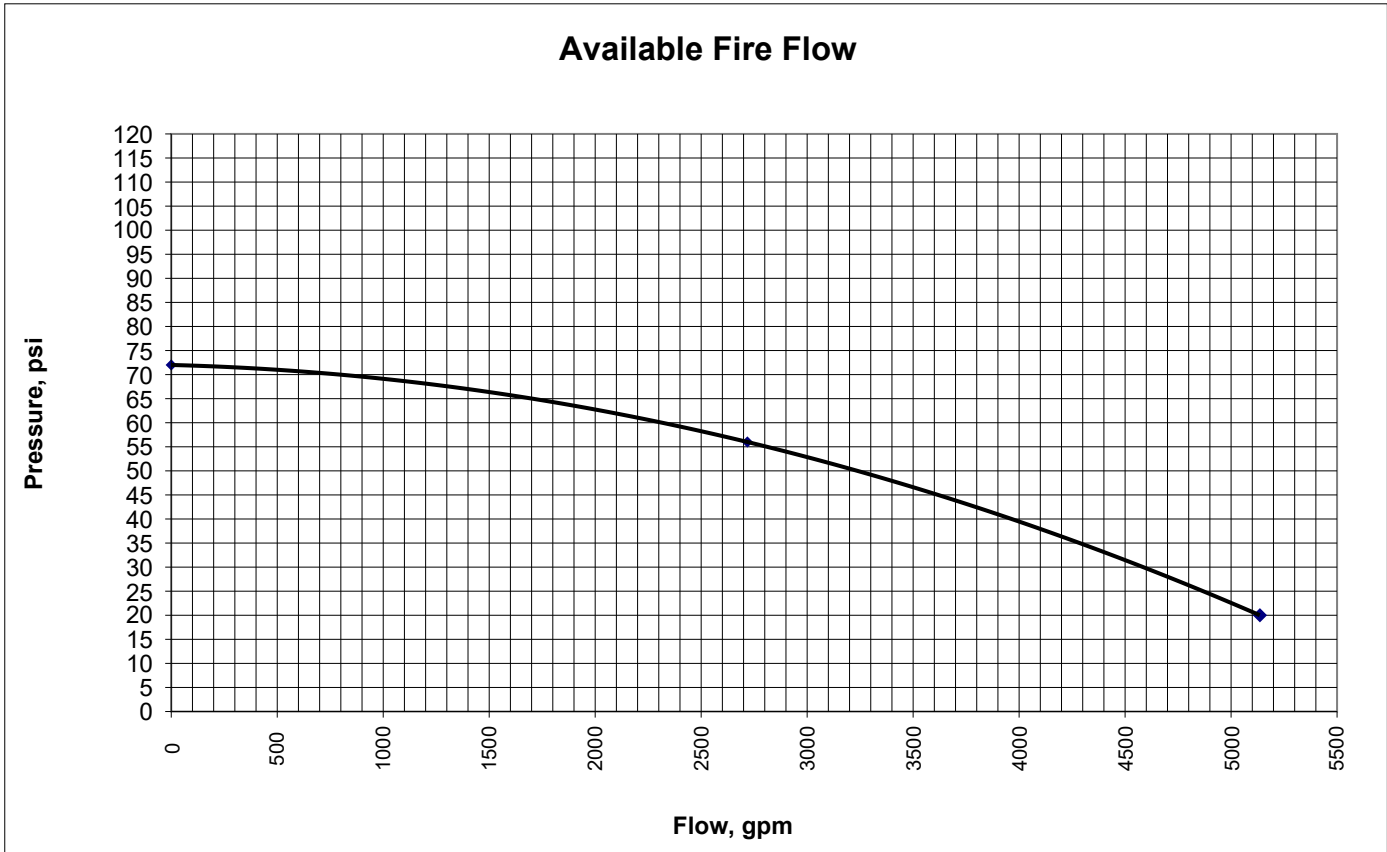


EXISTING WATER SYSTEM PRESSURES

**Project** Fairmont Scottsdale Princess - Guest Room Addition  
**Location** Scottsdale AZ  
**Project Number** 215319.5  
**Project Engineer** Andrew J. Sanchez

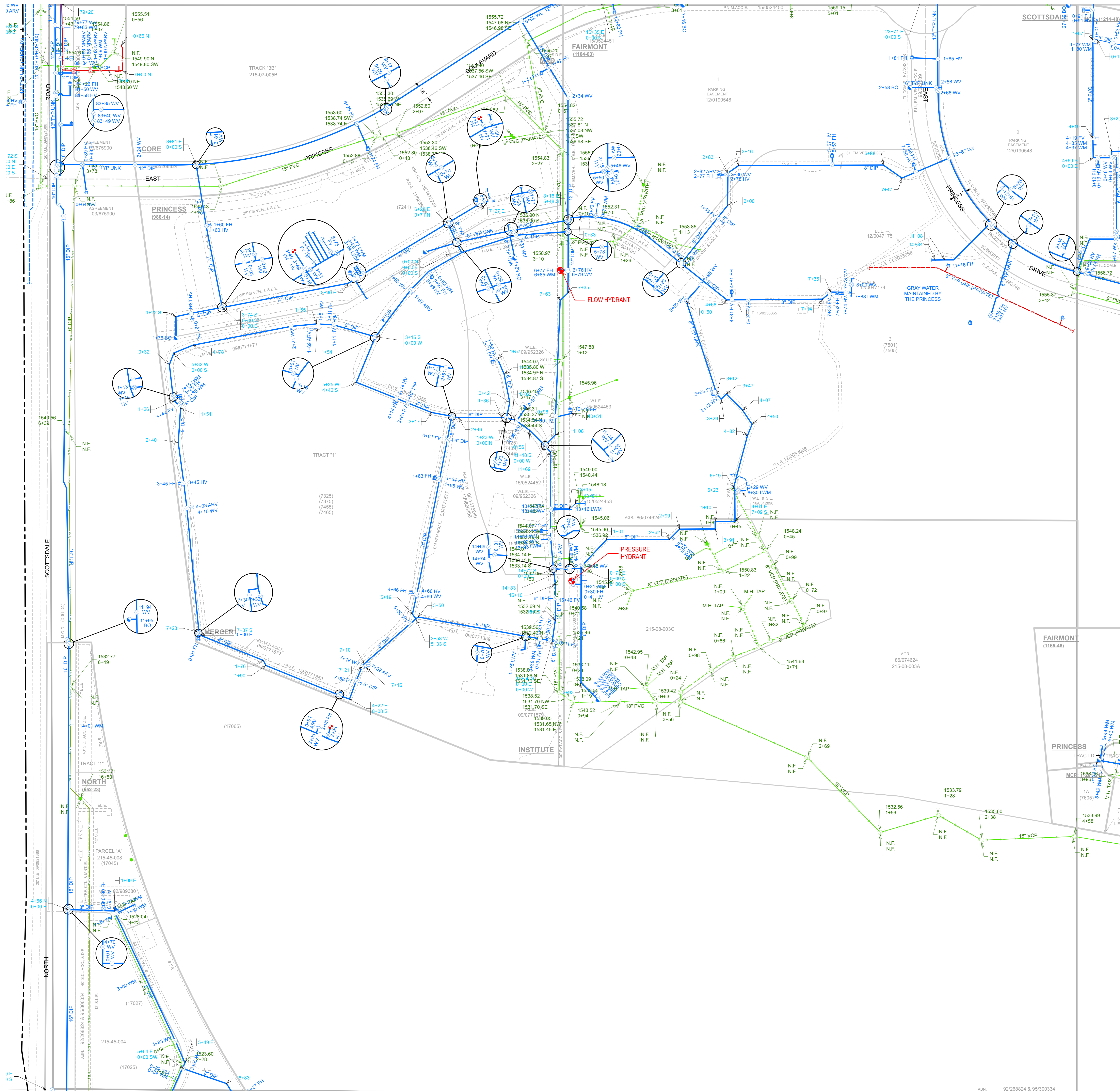
**Flow Test Location**  
**Date of Flow Test**

<u>Pressure Hydrant</u>		<u>Flow Hydrant</u>	
Static Pressure (psi)	72.0	Flow (gpm)	2718
Residual Pressure (psi)	56.0	Calculated Flow at	20 psi
Calculated Flow at 20 psi	5136 gpm		



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

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

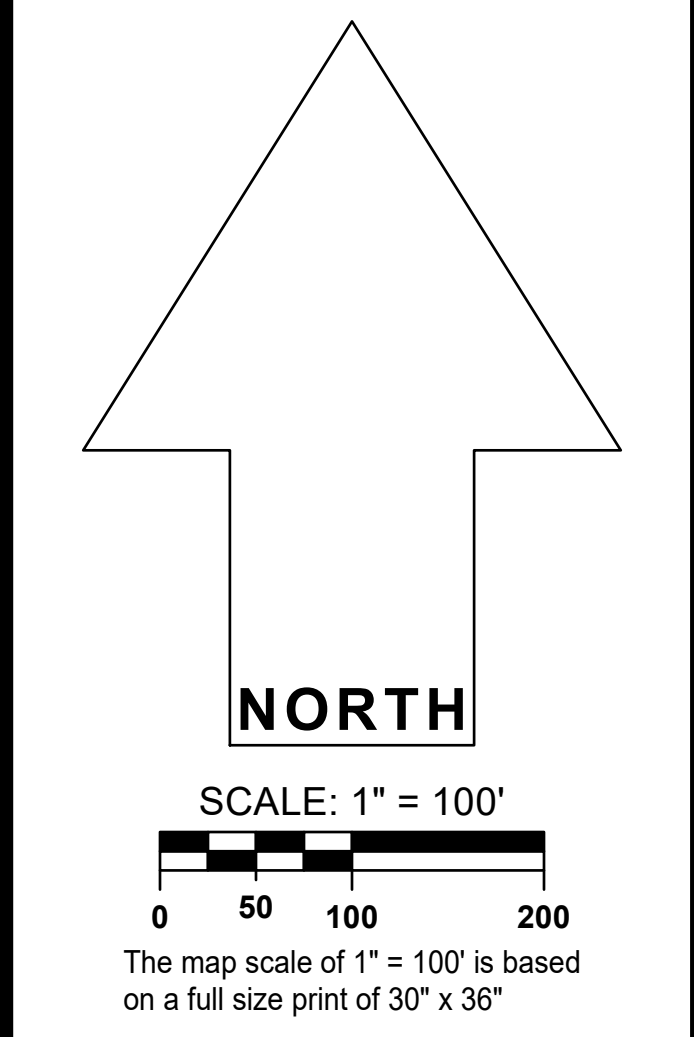
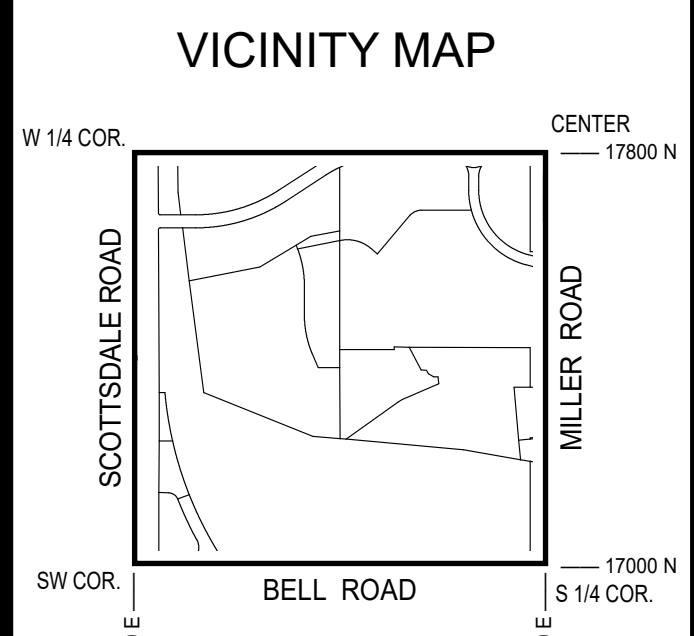


**GENERAL NOTES:**

- THIS IS A COMPUTER GENERATED DRAWING. FOR ANY REVISIONS PLEASE CONTACT THE CITY OF SCOTTSDALE GIS DEPARTMENT AT (480) 312-7792.
- THE SECTION LINE BEARING AND DISTANCES ARE BASED ON THE CITY OF SCOTTSDALE GPS SURVEY OF SEPTEMBER, 1991. BEARINGS ARE NAD 83 GRID AND DISTANCES ARE FLATTENED TO GROUND. WHERE NO CORNER WAS FOUND THE DIMENSIONS ARE GIVEN TO CALCULATED SECTION CORNERS AND ARE NOTED AS "CALCULATED" ON THE MAP.

**LEGEND:**

Water Valve	
Non-potable Water Valve	
Fire Hydrant	
Water Blowoff	
Water Main Reducer	
Water Sample Station	
Water Air Release Valve	
Non-potable Water Air Release Valve	
Water Pressure Reducing Valve	
Water Vault	
Water Manhole	
Non-Potable Water Manhole	
Water Pump	
Water Main	
Non-Potable Water Main	
Fire Line	
Water Service	
Non-Scottsdale Water Main	
Sewer Manhole	
Sewer Cleanout	
Sewer Lift Station	
Sewer Treatment Plant	
Sewer Main - Gravity	
Sewer Main - Force	
Non-Scottsdale Sewer Main	
Sewer Service	



**WATER & SEWER**  
 QUARTER SECTION MAP  
**37-45**  
 SW 1/4 SEC. 35 T4N R4E

**NOTICE**

THIS DOCUMENT IS PROVIDED FOR GENERAL INFORMATION PURPOSES ONLY. THE CITY OF SCOTTSDALE DOES NOT WARRANT ITS ACCURACY, COMPLETENESS OR SUITABILITY FOR ANY PARTICULAR PURPOSE. IT SHOULD NOT BE RELIED UPON WITHOUT FIELD VERIFICATION.

THE CITY OF SCOTTSDALE

37-44

37-46

22-MAY-22

**APPENDIX C – FAIRMONT SCOTTSDALE PRINCESS GUEST ROOM ADDITION GRADING,  
DRAINAGE, WATER & SEWER PLAN, PREPARED BY WOOD, PATEL &  
ASSOCIATES INC., DATED NOVEMBER 22, 2023**

**ENGINEER'S NOTES**

- MARICOPA ASSOCIATION OF GOVERNMENTS (M.A.G.) UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION INCLUDING LATEST REVISION AND CURRENT SUPPLEMENTALS THEREOF PER THE LOCAL TOWN OR CITY) ARE INCORPORATED INTO THIS PLAN IN THEIR ENTIRETY.
- ALL WORK REQUIRED TO COMPLETE THE CONSTRUCTION COVERED BY THIS PLAN SHALL BE IN ACCORDANCE WITH THE M.A.G. STANDARD SPECIFICATIONS AND DETAILS AND CURRENT SUPPLEMENTALS THEREOF PER THE LOCAL CITY OR TOWN UNLESS SPECIFIED OTHERWISE IN THESE PLANS OR ELSEWHERE IN THE CONTRACT DOCUMENTS. CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH ALL REQUIRED STANDARD SPECIFICATIONS, DETAILS AND SUPPLEMENTALS PRIOR TO BIDDING THE WORK FOR THE CONSTRUCTION COVERED BY THIS PLAN.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL METHODS, SEQUENCING, AND SAFETY CONCERNS ASSOCIATED WITH THIS PROJECT DURING CONSTRUCTION, UNLESS SPECIFICALLY ADDRESSED OTHERWISE IN THIS PLAN OR ELSEWHERE IN THE CONTRACT.
- THE CONTRACTOR IS TO COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS APPLICABLE TO THE CONSTRUCTION COVERED BY THIS PLAN.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND COMPLYING WITH ALL PERMITS REQUIRED TO COMPLETE ALL WORK COVERED BY THIS PLAN.
- THE QUANTITIES AND SITE CONDITIONS DEPICTED IN THESE PLANS ARE FOR GENERAL INFORMATIONAL PURPOSES ONLY AND MIGHT NOT REFLECT ACTUAL QUANTITIES AND SITE CONDITIONS. CONTRACTORS SHALL SATISFY THEMSELVES AS TO ACTUAL QUANTITIES AND SITE CONDITIONS PRIOR TO BIDDING THE WORK FOR THE CONSTRUCTION COVERED BY THIS PLAN.
- A REASONABLE EFFORT HAS BEEN MADE TO SHOW THE LOCATIONS OF EXISTING UNDERGROUND FACILITIES AND UTILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND/OR FACILITIES CAUSED DURING THEIR CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL CALL 48 HOURS IN ADVANCE FOR BLUE STAKE (1-800-STAKE-IT) PRIOR TO ANY EXCAVATION.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION OF CONSTRUCTION AFFECTING UTILITIES AND THE COORDINATION OF ANY NECESSARY UTILITY RELOCATION WORK.
- ALL PAVING, GRADING, EXCAVATION, TRENCHING, PIPE BEDDING, CUT FILL AND BACKFILL SHALL COMPLY WITH THE RECOMMENDATIONS SET FORTH IN THE SOILS (GEOTECHNICAL) REPORT FOR THIS PROJECT IN ADDITION TO THE REFERENCED REQUIRED SPECIFICATIONS AND DETAILS. THE CONTRACTOR SHALL BE AWARE THAT CERTAIN UTILITIES REQUIRE PROPER ATTENTION AND CAREFUL PLANNING DURING SITE CONSTRUCTION. PLEASE NOTE THAT UTILITIES ON THESE PLANS MAY NOT EXHIBIT THE FULL PROTECTIVE COVER REQUIRED DURING THE SUBGRADE PREPARATION PHASE OF THE CONSTRUCTION. IN SUCH INSTANCES, THE CONTRACTOR SHALL PROVIDE ADDITIONAL PROTECTION (SUCH AS RAMPING) OR INCREASED PIPE STRENGTH TO PROVIDE THE NECESSARY PROTECTION REQUIRED TO PREVENT DAMAGE DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL HOLD THE ENGINEER HARMLESS IN ALL CASES FOR DAMAGES TO UTILITIES WHERE INADEQUATE PROTECTIVE MEASURES OCCUR.
- THE CONTRACTOR IS TO VERIFY THE LOCATION AND THE ELEVATIONS OF ALL EXISTING UTILITIES AT POINTS OF TIE-IN PRIOR TO COMMENCING ANY NEW CONSTRUCTION. SHOULD ANY LOCATION OR ELEVATION DIFFER FROM THAT SHOWN ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE OWNER'S AGENT.
- CONTRACTOR TO VERIFY AND COORDINATE ALL DIMENSIONS AND SITE LAYOUT WITH ARCHITECT'S FINAL SITE PLAN AND FINAL BUILDING DIMENSIONS BEFORE STARTING WORK. REPORT DISCREPANCIES TO OWNER'S AGENT.
- COORDINATION BETWEEN ALL PARTIES IS ESSENTIAL PART OF CONTRACT.
- CONTRACTOR IS RESPONSIBLE FOR PROJECT AND SITE CONDITIONS, AND TO WORK WITH WEATHER CONDITIONS AS THE PROJECT SITE MAY BE LOCATED IN A FLOOD PRONE AREA AND SUBJECT TO FLOODING AND ITS HAZARDS.
- THE CONTRACTOR IS TO VERIFY THE LOCATION, ELEVATION, CONDITION, AND PAVEMENT CROSS-SLOPE OF ALL EXISTING SURFACES AT POINTS OF TIE-IN AND MATCHING, PRIOR TO COMMENCEMENT OF GRADING, PAVING, CURB AND GUTTER, OR OTHER SURFACE CONSTRUCTION. SHOULD EXISTING LOCATIONS, ELEVATIONS, CONDITION, OR PAVEMENT CROSS-SLOPE DIFFER FROM THAT SHOWN ON THESE PLANS, RESULTING IN THE DESIGN INTENT REFLECTED ON THESE PLANS NOT ABLE TO BE CONSTRUCTED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S AGENT IMMEDIATELY FOR DIRECTION ON HOW TO PROCEED PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL COSTS ASSOCIATED WITH CORRECTIVE ACTION IF THESE PROCEDURES ARE NOT FOLLOWED.
- CONTRACTOR IS RESPONSIBLE TO COORDINATE UTILITY CROSSINGS AT CULVERT CROSSINGS BEFORE STARTING WORK ON CULVERT. COORDINATE WITH OWNER REPRESENTATIVE. VERIFY UTILITY LINES AND/OR CONDUITS ARE IN PLACE BEFORE STARTING CULVERT WORK.
- CONSTRUCT RETENTION BASIN AS SHOWN. CONTRACTOR TO SCARIFY BOTTOM OF BASIN TWO FEET DEEP AND NOT ALLOW COMPACTION OVER 80%.
- THIS PROJECT REQUIRES A REGULAR ONGOING MAINTENANCE PROGRAM FOR THE DESIGNED DRAINAGE SYSTEM(S) TO PRESERVE THE DESIGN INTEGRITY AND THE ABILITY TO PERFORM ITS OPERATIONAL INTENT. FAILURE TO PROVIDE MAINTENANCE WILL JEOPARDIZE THE DRAINAGE SYSTEM(S) PERFORMANCE AND MAY LEAD TO ITS INABILITY TO PERFORM PROPERLY AND/OR CAUSE DAMAGE ELSEWHERE IN THE PROJECT.
- SEWER LINES DESIGNED IN PROFILE AND PUBLIC WATER LINES ARE REQUIRED TO BE ASBUILT AND THE INSTALLATION AND TESTING WITNESSED BY A PROFESSIONAL ENGINEER IN ACCORDANCE WITH ARIZONA ADMINISTRATIVE CODES R18-9-E301 "4.01 GENERAL PERMIT: SEWAGE COLLECTIONS SYSTEMS" AND R18-5-507 AND 508 "APPROVAL OF CONSTRUCTION" AND "RECORD DRAWINGS", RESPECTIVELY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY OWNER 72 HOURS IN ADVANCE WHEN THOSE SYSTEMS ARE READY TO BE WITNESSED.
- THE WORK PRODUCT PRESENTED IS BELIEVED TO BE COMPLIANT WITH THE INTENT OF THE CURRENT AMERICANS DISABILITIES ACT (ADA) REQUIREMENTS AS INTERPRETED BY THE REVIEWING AGENCY(S). IF CONSTRUCTION OF THE PROJECT IS DELAYED, THIS WORK PRODUCT SHOULD BE UPDATED TO ACCOUNT FOR ANY RELEVANT ADA UPDATES BEFORE CONSTRUCTION BEGINS.
- LOWEST FLOOR (LF) REFERS TO EITHER FLOOR/SLAB ELEVATION OR TOP OF BASEMENT SLAB. LF ELEVATIONS ON THE GRADING AND DRAINAGE PLANS FOR RESIDENTIAL UNITS REFLECT SLAB ON GRADE CONDITIONS AND CANNOT BE LOWERED WITHOUT AGENCY APPROVAL IN LOCATIONS WHERE SPECIAL FLOOD HAZARD AREAS EXIST. IN NON-FLOOD HAZARD LOCATIONS, TO ENSURE THAT ADEQUATE RESIDENTIAL LOT DRAINAGE CAN BE ACHIEVED, A PROFESSIONAL ENGINEER SHOULD BE CONSULTED IF THE LF FOR THE SLAB IS PROPOSED TO BE LOWERED, OR IF A BASEMENT IS TO BE CONSTRUCTED.

**PARCEL DESCRIPTION**

PARCEL NO. 1: (HOTEL PARCEL)  
 LOT 3 AND A PORTION OF LOT 2, OF FAIRMONT SCOTTSDALE PRINCESS, ACCORDING TO BOOK 1104 OF MAPS, PAGE 3, RECORDS OF MARICOPA COUNTY, ARIZONA, TOGETHER WITH A PART OF THE SOUTHWEST QUARTER OF SECTION 35, TOWNSHIP 4 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA, ALL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:  
 COMMENCING AT THE SOUTH ONE-QUARTER CORNER OF SECTION 35;  
 THENCE NORTH 00 DEGREES 08 MINUTES 41 SECONDS EAST ALONG THE NORTH-SOUTH MIDSECTION LINE OF SECTION 35, 1206.58 FEET TO THE POINT OF BEGINNING;  
 THENCE NORTH 89 DEGREES 51 MINUTES 19 SECONDS WEST, 111.62 FEET;  
 THENCE NORTH 05 DEGREES 04 MINUTES 10 SECONDS WEST, 34.51 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE EAST HAVING A RADIUS OF 75.00 FEET;  
 THENCE NORTHERLY ALONG THE CURVE THROUGH A CENTRAL ANGLE OF 60 DEGREES 29 MINUTES 58 SECONDS, 79.19 FEET TO A POINT OF REVERSE CURVATURE WITH A CURVE CONCAVE SOUTHWEST HAVING A RADIUS OF 75.00 FEET;  
 THENCE NORTHEASTERLY, NORTHERLY AND SOUTHWESTERLY ALONG THE CURVE THROUGH A CENTRAL ANGLE OF 168 DEGREES 47 MINUTES 48 SECONDS, 220.95 FEET;  
 THENCE SOUTH 66 DEGREES 38 MINUTES 00 SECONDS WEST, 521.45 FEET;  
 THENCE NORTH 07 DEGREES 07 MINUTES 02 SECONDS WEST, 47.49 FEET;  
 THENCE NORTH 88 DEGREES 18 MINUTES 25 SECONDS WEST, 29.86 FEET;  
 THENCE NORTH 58 DEGREES 07 MINUTES 53 SECONDS WEST, 43.04 FEET;  
 THENCE NORTH 26 DEGREES 47 MINUTES 27 SECONDS WEST, 26.35 FEET;  
 THENCE NORTH 83 DEGREES 46 MINUTES 19 SECONDS WEST, 39.13 FEET;  
 THENCE NORTH 27 DEGREES 44 MINUTES 13 SECONDS WEST, 177.75 FEET;  
 THENCE NORTH 89 DEGREES 49 MINUTES 06 SECONDS WEST, 103.52 FEET;  
 THENCE SOUTH 00 DEGREES 01 MINUTES 45 SECONDS WEST, 18.00 FEET;  
 THENCE NORTH 89 DEGREES 49 MINUTES 06 SECONDS WEST, 377.78 FEET;  
 THENCE NORTH 00 DEGREES 01 MINUTE 45 SECONDS EAST, 756.50 FEET;  
 THENCE NORTH 78 DEGREES 51 MINUTES 20 SECONDS EAST, 4.33 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTH HAVING A RADIUS OF 250.00 FEET;  
 THENCE EASTERLY ALONG THE CURVE THROUGH A CENTRAL ANGLE OF 51 DEGREES 43 MINUTES 26 SECONDS, 225.69 FEET;  
 THENCE SOUTH 49 DEGREES 25 MINUTES 14 SECONDS EAST, 59.77 FEET;  
 THENCE NORTH 40 DEGREES 34 MINUTES 36 SECONDS EAST, 352.13 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTHEAST HAVING A RADIUS OF 100.00 FEET;  
 THENCE NORTHEASTERLY ALONG THE CURVE THROUGH A CENTRAL ANGLE OF 49 DEGREES 35 MINUTES 38 SECONDS, 86.56 FEET;  
 THENCE SOUTH 89 DEGREES 49 MINUTES 46 SECONDS EAST, 385.35 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE EAST HAVING A RADIUS OF 500.00 FEET, AND A RADIAL BEARING TO THE BEGINNING OF SOUTH 73 DEGREES 52 MINUTES 17 SECONDS WEST;  
 THENCE NORTHERLY ALONG THE CURVE THROUGH A CENTRAL ANGLE OF 16 DEGREES 17 MINUTES 57 SECONDS, 142.24 FEET;  
 THENCE SOUTH 89 DEGREES 49 MINUTES 46 SECONDS EAST, 55.5 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE NORTHEAST HAVING A RADIUS OF 444.50 FEET AND A RADIAL BEARING TO THE BEGINNING OF NORTH 89 DEGREES 46 MINUTES 46 SECONDS WEST;  
 THENCE SOUTHEASTERLY ALONG THE CURVE THROUGH A CENTRAL ANGLE OF 75 DEGREES 09 MINUTES 12 SECONDS, 583.04 FEET;  
 THENCE SOUTH 74 DEGREES 58 MINUTES 57 SECONDS EAST, 6.41 FEET TO THE NORTH-SOUTH MIDSECTION LINE OF SECTION 35;  
 THENCE SOUTH 00 DEGREES 08 MINUTES 41 SECONDS WEST, ALONG THE MIDSECTION LINE, 57.42 FEET;  
 THENCE SOUTH 74 DEGREES 58 MINUTES 57 SECONDS EAST, 337.32 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTHWEST HAVING A RADIUS OF 300.00 FEET;  
 THENCE SOUTHEASTERLY ALONG THE CURVE THROUGH A CENTRAL ANGLE OF 35 DEGREES 25 MINUTES 14 SECONDS, 185.46 FEET;  
 THENCE SOUTH 39 DEGREES 33 MINUTES 43 SECONDS EAST, 125.23 FEET TO THE BEGINNING OF A CURVE CONCAVE NORTHEAST HAVING A RADIUS OF 1000.00 FEET;  
 THENCE SOUTHEASTERLY ALONG THE CURVE THROUGH A CENTRAL ANGLE OF 11 DEGREES 27 MINUTES 33 SECONDS, 200.00 FEET;  
 THENCE SOUTH 38 DEGREES 58 MINUTES 44 SECONDS WEST, 55.50 FEET;  
 THENCE SOUTH 16 DEGREES 17 MINUTES 23 SECONDS WEST, 211.79 FEET;  
 THENCE NORTH 89 DEGREES 51 MINUTES 19 SECONDS WEST, 270.00 FEET;  
 THENCE SOUTH 00 DEGREES 08 MINUTES 41 SECONDS WEST, 208.40 FEET;  
 THENCE NORTH 89 DEGREES 51 MINUTES 19 SECONDS WEST, 148.26 FEET;  
 THENCE SOUTH 00 DEGREES 08 MINUTES 41 SECONDS WEST, 14.66 FEET;  
 THENCE NORTH 89 DEGREES 51 MINUTES 19 SECONDS WEST, 67.83 FEET;  
 THENCE NORTH 00 DEGREES 08 MINUTES 41 SECONDS EAST, 10.06 FEET;  
 THENCE NORTH 89 DEGREES 51 MINUTES 19 SECONDS WEST, 122.29 FEET TO THE POINT OF BEGINNING; EXCEPT ONE-HALF OF ALL OIL AND MINERAL RIGHTS AS RESERVED IN DOCKET 124, PAGE 39, RECORDS OF MARICOPA COUNTY, ARIZONA; AND EXCEPT ALL OIL, GAS, OTHER HYDROCARBON SUBSTANCES, HELIUM OR OTHER SUBSTANCES OF A GASEOUS NATURE, COAL, METALS, MINERALS, FOSSILS, FERTILIZER OF EVERY NAME AND DESCRIPTION, AND EXCEPT ALL URANIUM, THORIUM OR ANY OTHER MATERIAL WHICH IS OR MAY BE DETERMINED TO BE PECULIARLY ESSENTIAL TO THE PRODUCTION OF FISSIONABLE MATERIALS WHETHER OR NOT OF COMMERCIAL VALUE, AS SET FORTH IN SECTION 37-231, ARIZONA REVISED STATUTES.

**FEMA FIRM NOTE (ZONE AO)**

ACCORDING TO FEMA FLOOD INSURANCE RATE MAPPING, THE SUBJECT PROPERTY IS LOCATED IN SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD "ZONE AO". ZONE AO IS DESCRIBED AS: "FLOOD DEPTHS OF 1 TO 3 FEET (USUALLY SHEET FLOW ON SLOPING TERRAIN); AVERAGE DEPTHS DETERMINED. FOR AREAS OF ALLUVIAL FAN FLOODING, VELOCITIES ALSO DETERMINED."

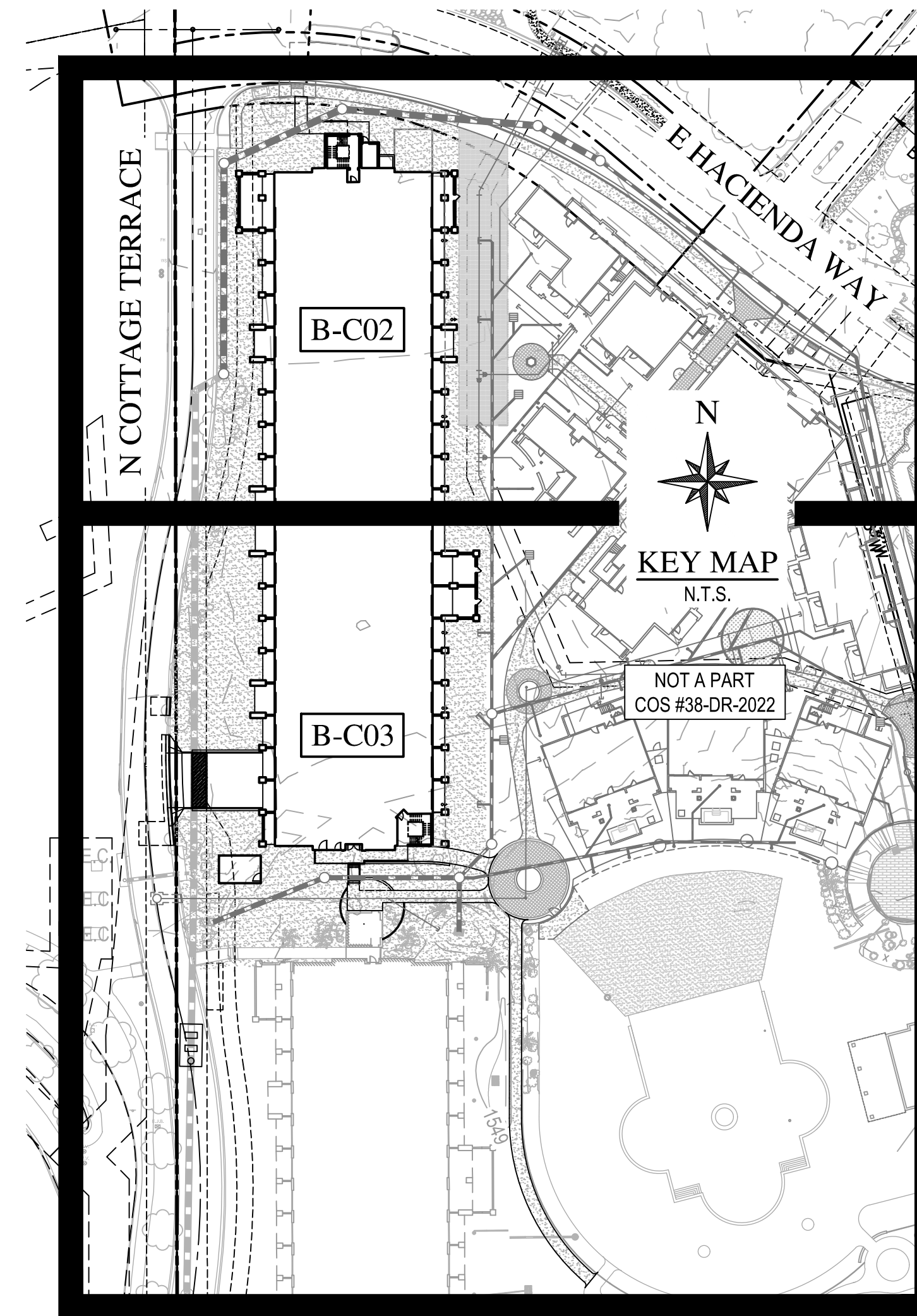
**FLOOD INSURANCE RATE MAP (FIRM) INFORMATION**

COMMUNITY NUMBER	PANEL NUMBER	SUFFIX	DATE OF FIRM	INDEX DATE	FIRM ZONE	BASE FLOOD ELEVATION (IN AO ZONE, USE DEPTH)
04013C	1320	L	10/16/2013	07/20/2021	AO	1

# FAIRMONT SCOTTSDALE PRINCESS GUEST ROOM ADDITION

## CONCEPT GRADING, DRAINAGE, WATER & SEWER SCOTTSDALE, ARIZONA

A PORTION OF SECTION 35, TOWNSHIP 4 NORTH, RANGE 4 EAST  
OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA



**BENCHMARK**

CITY OF SCOTTSDALE BRASS CAP FLUSH 450± NORTH OF PRINCESS DRIVE ON SCOTTSDALE ROAD, BEING THE WEST QUARTER CORNER OF SECTION 35, TOWNSHIP 4 NORTH, RANGE 4 EAST.  
 CITY OF SCOTTSDALE DATUM, NAVD88 DATUM  
 ELEVATION=1553.22'

I HEREBY CERTIFY THAT ALL ELEVATIONS REPRESENTED ON THIS PLAN ARE BASED ON NAVD 1988, MCDOT, AND MEET THE FEMA BENCHMARK MAINTENANCE (BMM) CRITERIA.

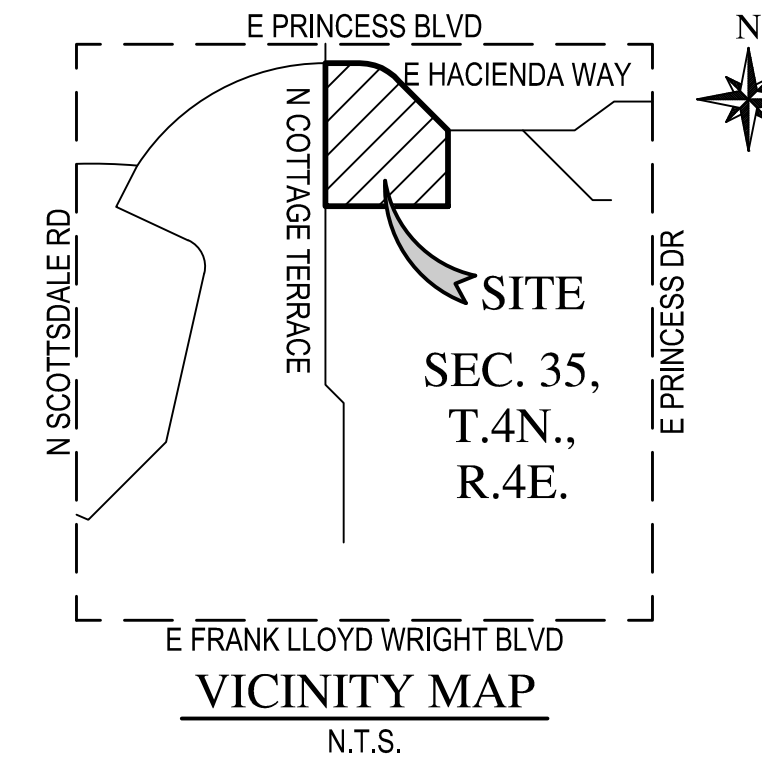
**ENGINEER'S CERTIFICATION**

ENGINEER'S CERTIFICATION: THE LOWEST FLOOR ELEVATION(S) AND/OR FLOOD PROOFING ELEVATION(S) ON THIS PLAN ARE SUFFICIENTLY HIGH TO PROVIDE PROTECTION FROM FLOODING CAUSED BY A ONE-HUNDRED YEAR STORM, AND ARE IN ACCORDANCE WITH CITY OF SCOTTSDALE REVISED CODE, CHAPTER 37-FLOODPLAIN AND STORMWATER REGULATIONS.

*Darrell L. Moore*  
 ENGINEER SIGNATURE

11/22/2023

DATE



**PAVING QUANTITIES (ESTIMATED)**

X" A.C. OVER X" A.B.C.	120 SY
6" SINGLE CURB	80 LF
CONCRETE SIDEWALK	2,523 SF
DRIVEWAY - (DETAIL #)	1 EA
SAWCUT, REMOVE & REPLACE EXISTING PAVEMENT	13 SY

**WATER QUANTITIES (ESTIMATED)**

6" VALVE, BOX & COVER	1 EA
12" X 6" TEE	1 EA
6" FIRE SPRINKLER SERVICE	44 LF
2" DOMESTIC WATER SERVICE & METER	1 EA
CONNECT TO EXISTING WATERLINE	2 EA
SAWCUT, REMOVE & REPLACE EXISTING PAVEMENT	8 SY

**SEWER QUANTITIES (ESTIMATED)**

X" SEWER	44 LF
MANHOLE	1 EA
8" SEWER PLUG	1 EA
CONNECT TO EXISTING SEWER LINE	1 EA
SAWCUT, REMOVE & REPLACE EXISTING PAVEMENT	6 SY

**FINISH FLOOR  
ELEVATION CALCULATION**

HAG = 1551.32  
 LAG = 1547.04  
 FF=1554.00  
 RFD=1553.32  
 ALL ELECTROMECHANICAL EQUIPMENT  
 SHALL BE ELEVATED TO RFD ELEVATION

EXISTING SURVEY		PROPOSED GRADING, DRAINAGE & PAVING		ABBREVIATIONS	
---	RIGHT OF WAY	▬	STORM DRAIN PIPE	A.E.	ACCESS EASEMENT
---	PROPERTY LINE	⊗	STORM DRAIN CATCH BASIN	PVT.	PRIVATE
---	ROAD CENTERLINE	⊗	DRYWELL	SMH	SEWER MANHOLE
---	EASEMENT	○		E.J.B.	ELECTRICAL JUNCTION BOX
○	SURVEY MARKER	— — —	PROPOSED FIRELINE, WATER & SEWER	S.L.	STREET LIGHT
○	GAS LINE	— — —	WATER LINE	INV	INVERT ELEVATION
— — —	SEWER LINE	— — —	WATER LINE FITTINGS	I.V.B.	IRRIGATION VALVE BOX
— — —	WATER LINE	⊗	BACKFLOW PREVENTION DEVICE	LFF	LOWEST FINISHED FLOOR ELEVATION
— — —	CURB	⊗	WATER VALVE	W.V.	WATER VALVE
— — —	SIDEWALK	⊗	FIRE HYDRANT		
⊗	VEGETATION	⊗	WATER METER		
⊗	SEWER MANHOLE	⊗	PLUG		
⊗	JUNCTION BOX/RISER	⊗	TAPPING SLEEVE & VALVE		
⊗	WATER VALVE	⊗	SEWER LINE		
⊗	STREET LIGHT	○	SEWER MANHOLE		
		●	CLEANOUT		

**OWNER / DEVELOPER**

STRATEGIC HOTELS & RESORTS  
 150 NORTH RIVERSIDE PLAZA, SUITE 4270  
 CHICAGO, IL 60606  
 CONTACT: TIMOTHY TAYLOR  
 PHONE: (312) 658-6038

**ENGINEER**

WOOD, PATEL & ASSOCIATES, INC.  
 2051 WEST NORTHERN AVENUE, SUITE 100  
 PHOENIX, ARIZONA 85021  
 CONTACT: DARIN MOORE, P.E.  
 PHONE: (602) 335-8500  
 FAX: (602) 335-8580

**ARCHITECT**

ALLEN + PHILP ARCHITECTS  
 7154 EAST STETSON DRIVE,  
 4TH FLOOR  
 SCOTTSDALE, AZ 85251  
 CONTACT: MATTHEW J. KOSEDNAR  
 PHONE: (480) 990-2800

**PROJECT SITE DATA**

ASSESSOR PARCEL NUMBER(S):  
 215-08-003C  
 PROJECT SITE ADDRESS:  
 7575 E PRINCESS BLVD  
 SCOTTSDALE, ARIZONA 85255  
 PROJECT SITE AREA(S):  
 NET AREA = 7.08 AC  
 DISTURBED AREA = 1.5± AC  
 ZONING:  
 C2

**SHEET INDEX**

- B-C01 - COVER SHEET
- B-C02 - CONCEPT GRADING, DRAINAGE, WATER & SEWER PLAN
- B-C03 - CONCEPT GRADING, DRAINAGE, WATER & SEWER PLAN
- B-C04 - DETAILS

**WOOD  
PATEL**

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 www.woodpatel.com

Call ahead for full working days before you begin excavation.  
**ARIZONA811**  
 Arizona Blue Stakes, Inc.  
 Dial 8-1-1 or 1-800-STAKE-IT (782-2841)  
 In Maricopa County: (602) 953-1100

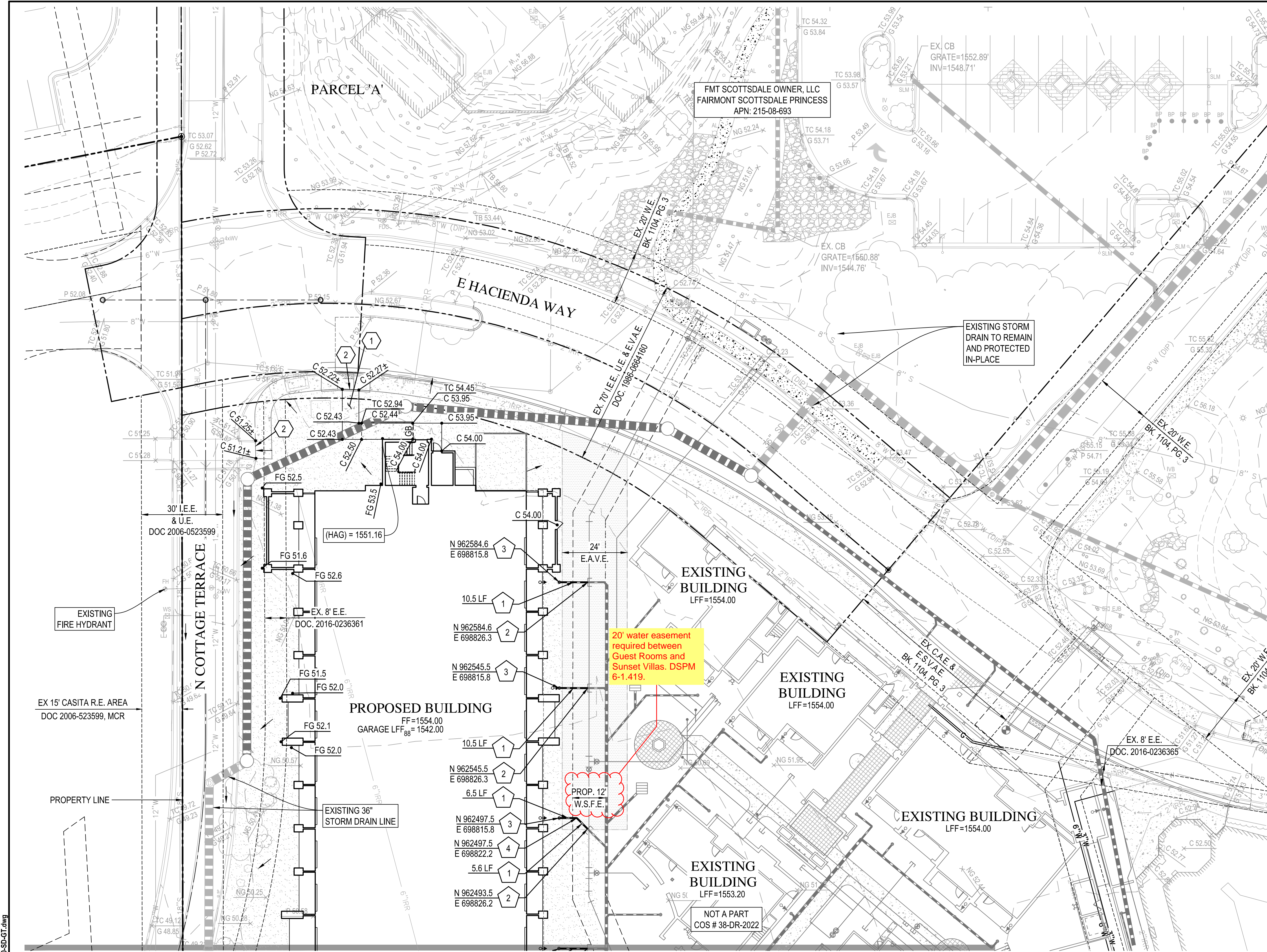
**FAIRMONT SCOTTSDALE PRINCESS  
GUEST ROOM ADDITION  
CONCEPT GRADING, DRAINAGE, WATER & SEWER  
SCOTTSDALE, ARIZONA  
COVER SHEET**

DATE	DESCRIPTION	REV

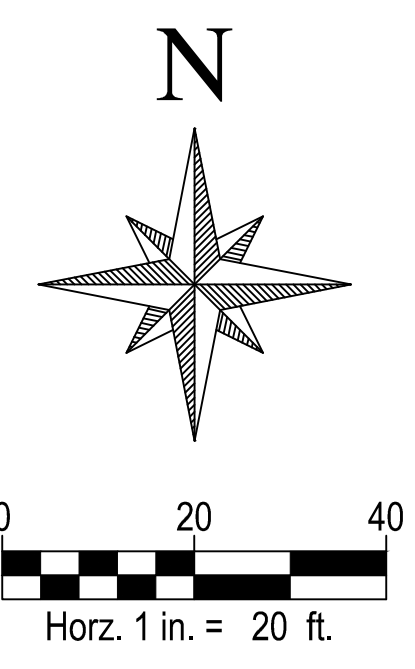


SCALE (HORIZ.)  
 SCALE (VERT.)  
 DATE 11/22/2023  
 JOB NUMBER 215319.50  
 SHEET  
**B-C01 OF 4**

Z:\2022\12145319\DWG\Conceptual\5319.50 - Guest Tower\5319.50-SD-GT.dwg



MATCH SHEET B-C03



**PAVING NOTES**

- 1 CONSTRUCT SIDEWALK PER M.A.G. STD. DET. 230. SEE LANDSCAPE PLANS FOR COLOR & FINISH.
- 2 MATCH EXISTING ELEVATIONS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES.

**STORM DRAIN NOTES**

- 1 INSTALL 6" ADS N-12 H.D.P.E. PIPE WITH WATER TIGHT JOINTS PER C.O.S. SPEC. 738 OR APPROVED EQUAL.
- 2 CONNECT TO EXISTING 6" STORM DRAIN PIPE. CONTRACTOR TO VERIFY HORIZONTAL LOCATION AND VERTICAL ELEVATION. NOTIFY ENGINEER OF ANY DISCREPANCY.
- 3 INSTALL DRAIN BASIN WITH STANDARD RATED GRATE (ADS NYLOPLAST OR APPROVED EQUAL). GRATE AND BASIN SIZE PER ADJOINING PIPE DIAMETER, UNLESS OTHERWISE NOTED ON PLAN. A PEDESTRIAN RATED GRATE MAY BE SUBSTITUTED IN AREAS NOT SUBJECT TO VEHICULAR TRAFFIC. INSTALL FLO-GARD STORMWATER TREATMENT INSERT OR APPROVED EQUAL.
- 4 INSTALL BEND. SIZE PER ADJOINING PIPE DIAMETER. ANGLE PER PLAN.

- NOTE:**
- 1. PROVIDE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
  - 2. CONTRACTOR TO VERIFY WITH THE GEOTECHNICAL ENGINEER THAT THE ROAD MEETS OR EXCEEDS THE 83,000 LB REQUIREMENT.
  - 3. REFER TO SHEET B-C01 FOR HAG, LAG, AND RFD ELEVATION INFORMATION.



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**FAIRMONT SCOTTSDALE PRINCESS  
 GUEST ROOM ADDITION**  
 CONCEPT GRADING, DRAINAGE, WATER & SEWER  
 SCOTTSDALE, ARIZONA  
 CONCEPT GRADING, DRAINAGE, WATER & SEWER PLAN

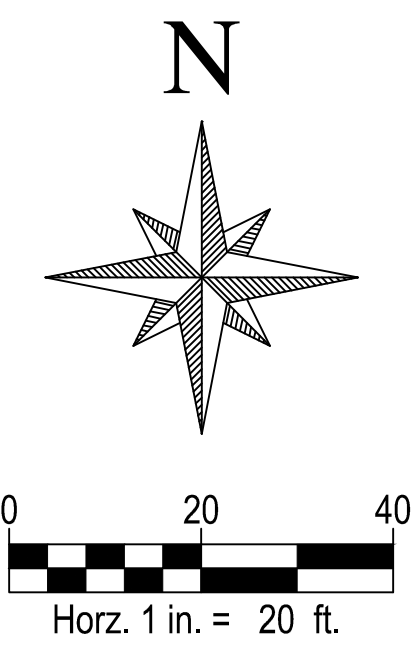
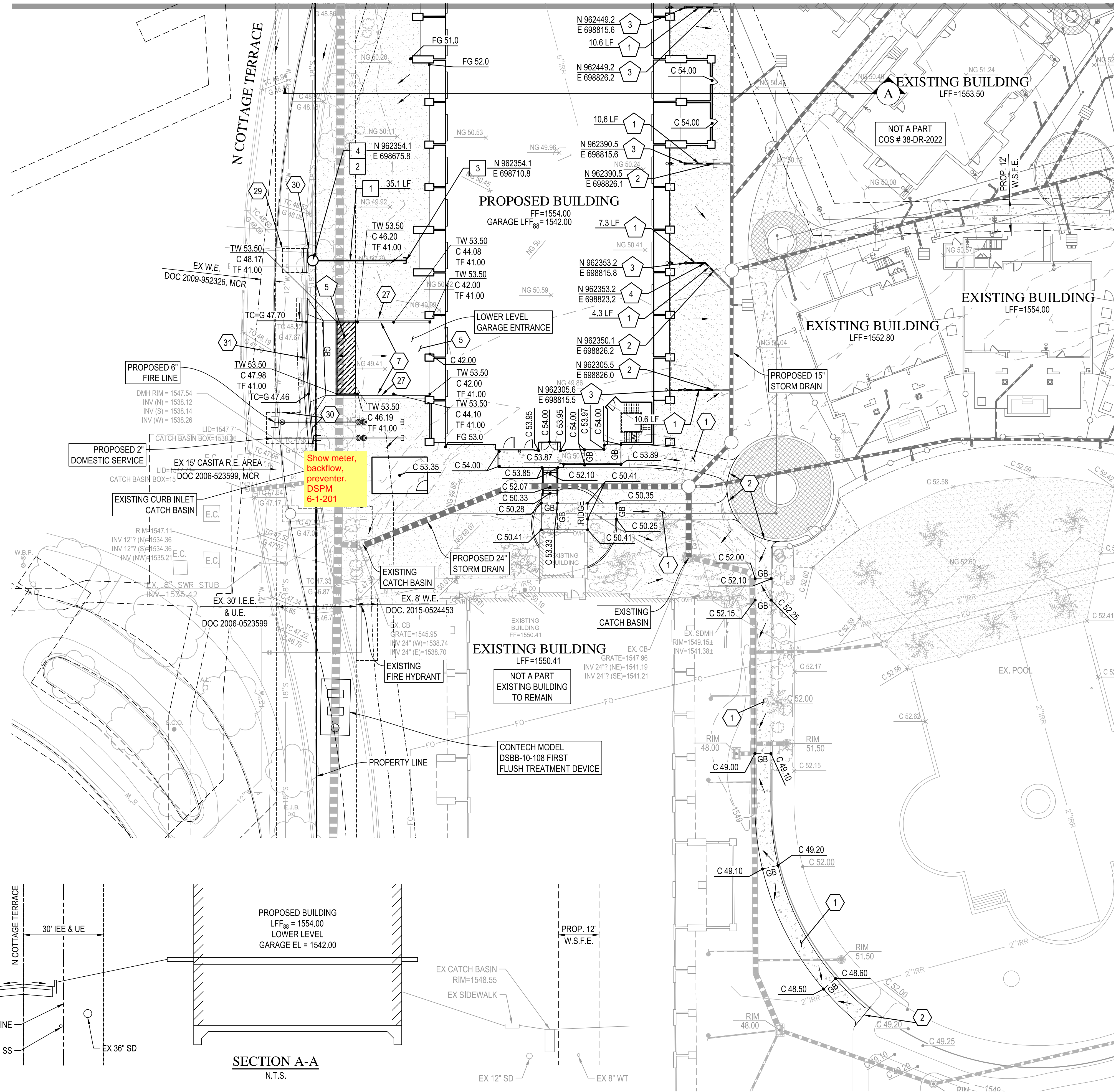
REV	DATE	DESCRIPTION



SCALE (HORIZ.) 1" = 20'  
 SCALE (VERT.) N/A  
 DATE 11/22/2023  
 JOB NUMBER 215319.50  
 SHEET B-C02 OF 4

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MATCH SHEET B-C02



PAVING NOTES

- 1 CONSTRUCT SIDEWALK PER M.A.G. STD. DET. 230. SEE LANDSCAPE PLANS FOR COLOR & FINISH.
- 2 MATCH EXISTING ELEVATIONS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES.
- 5 INSTALL HEAVY DUTY PAVEMENT, 3" A.C. PAVEMENT OVER 11" A.B.C. PER GEOTECHNICAL REPORT.
- 7 CONSTRUCT 6" SINGLE CURB PER MAG STD. DET. 222, TYPE A.
- 27 CONSTRUCT RETAINING WALL. SEE ARCHITECTURAL PLAN FOR DETAILS.
- 29 REMOVE & REPLACE EXISTING PAVEMENT FOR UTILITY CONSTRUCTION PER M.A.G. STD. DETAIL 200-1.
- 30 SAWCUT, REMOVE & REPLACE EXISTING SINGLE CURB, CURB & GUTTER, AND CONCRETE SIDEWALK FOR PROPOSED UTILITY CONSTRUCTION TO THE NEAREST JOINT OF THE LIMITS SHOWN.
- 31 CONSTRUCT DRIVEWAY PER C.O.S. STD. DETAIL 2251-2.

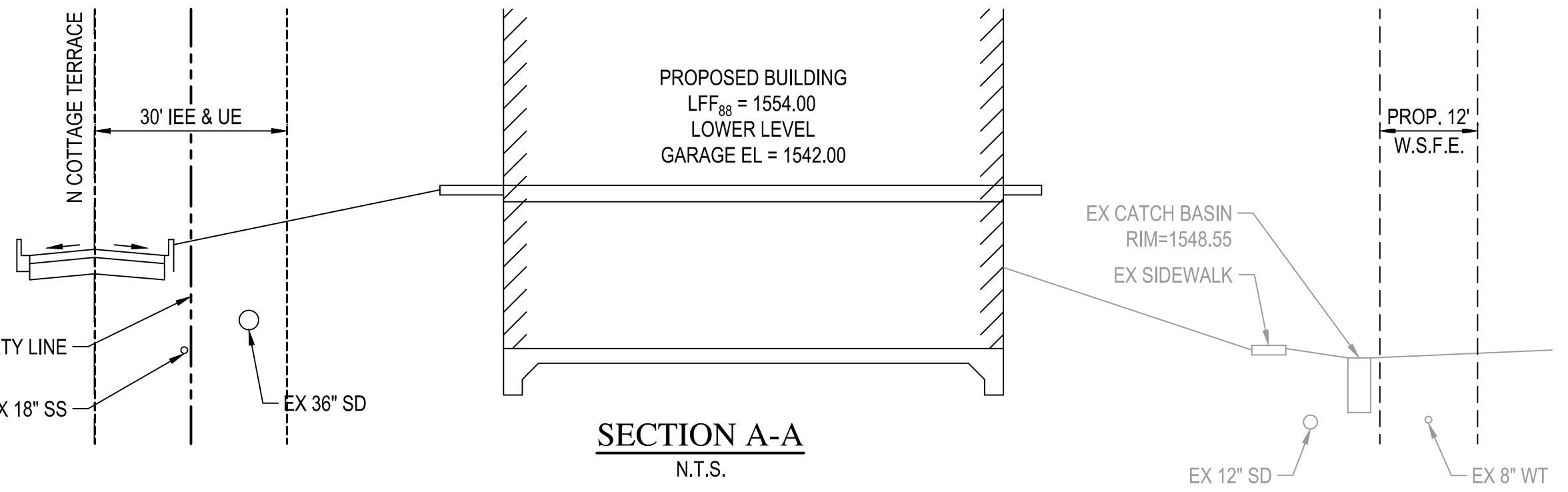
SEWER NOTES

- 1 INSTALL 8" POLYWRAPPED DIP PRESSURE CLASS 350 WITH EPOXY LINING FOR SANITARY SEWER PER MAG SPEC SECTION 615.
- 2 CONNECT TO EXISTING 18" SANITARY SEWER. CONTRACTOR TO VERIFY HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
- 3 SEE PLUMBING PLAN FOR CONTINUATION. CONTRACTOR TO VERIFY HORIZONTAL AND VERTICAL LOCATION WITH PLUMBING PLAN PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
- 4 INSTALL 48" SANITARY SEWER MANHOLE PER M.A.G. STD. DTL. 420-1. CONTRACTOR TO VERIFY HORIZONTAL AND VERTICAL LOCATION WITH PLUMBING PLAN PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.

STORM DRAIN NOTES

- 1 INSTALL 6" ADS N-12 H.D.P.E. PIPE WITH WATER TIGHT JOINTS PER C.O.S. SPEC. 738 OR APPROVED EQUAL.
- 2 CONNECT TO EXISTING 6" STORM DRAIN PIPE. CONTRACTOR TO VERIFY HORIZONTAL LOCATION AND VERTICAL ELEVATION. NOTIFY ENGINEER OF ANY DISCREPANCY.
- 3 INSTALL DRAIN BASIN WITH STANDARD RATED GRATE (ADS NYLOPLAST OR APPROVED EQUAL). GRATE AND BASIN SIZE PER ADJOINING PIPE DIAMETER, UNLESS OTHERWISE NOTED ON PLAN. A PEDESTRIAN RATED GRATE MAY BE SUBSTITUTED IN AREAS NOT SUBJECT TO VEHICULAR TRAFFIC. INSTALL FLO-GARD STORMWATER TREATMENT INSERT OR APPROVED EQUAL.
- 4 INSTALL BEND. SIZE PER ADJOINING PIPE DIAMETER. ANGLE PER PLAN.
- 5 INSTALL VEHICULAR FLOOD GATE BY FLOOD BREAK PER THE DETAILS ON SHEET B-C04.

- NOTE:**
- 1. PROVIDE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
  - 2. CONTRACTOR TO VERIFY WITH THE GEOTECHNICAL ENGINEER THAT THE ROAD MEETS OR EXCEEDS THE 83,000 LB REQUIREMENT.
  - 3. REFER TO SHEET B-C01 FOR HAG, LAG, AND RFD ELEVATION INFORMATION.



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 In Maricopa County (602) 953-1100

**FAIRMONT SCOTTSDALE PRINCESS GUEST ROOM ADDITION**  
 CONCEPT GRADING, DRAINAGE, WATER & SEWER SCOTTSDALE, ARIZONA  
 CONCEPT GRADING, DRAINAGE, WATER & SEWER PLAN

REV	DESCRIPTION	DATE

Professional Engineer (C.E.)  
 3638 DARIN L. MOORE  
 License No. 11722029  
 ARIZONA, U.S.A.  
 Expires 06-30-25

SCALE (HORIZ.) 1" = 20'  
 SCALE (VERT.) N/A  
 DATE 11/22/2023  
 JOB NUMBER 215319.50  
 SHEET B-C03 OF 4

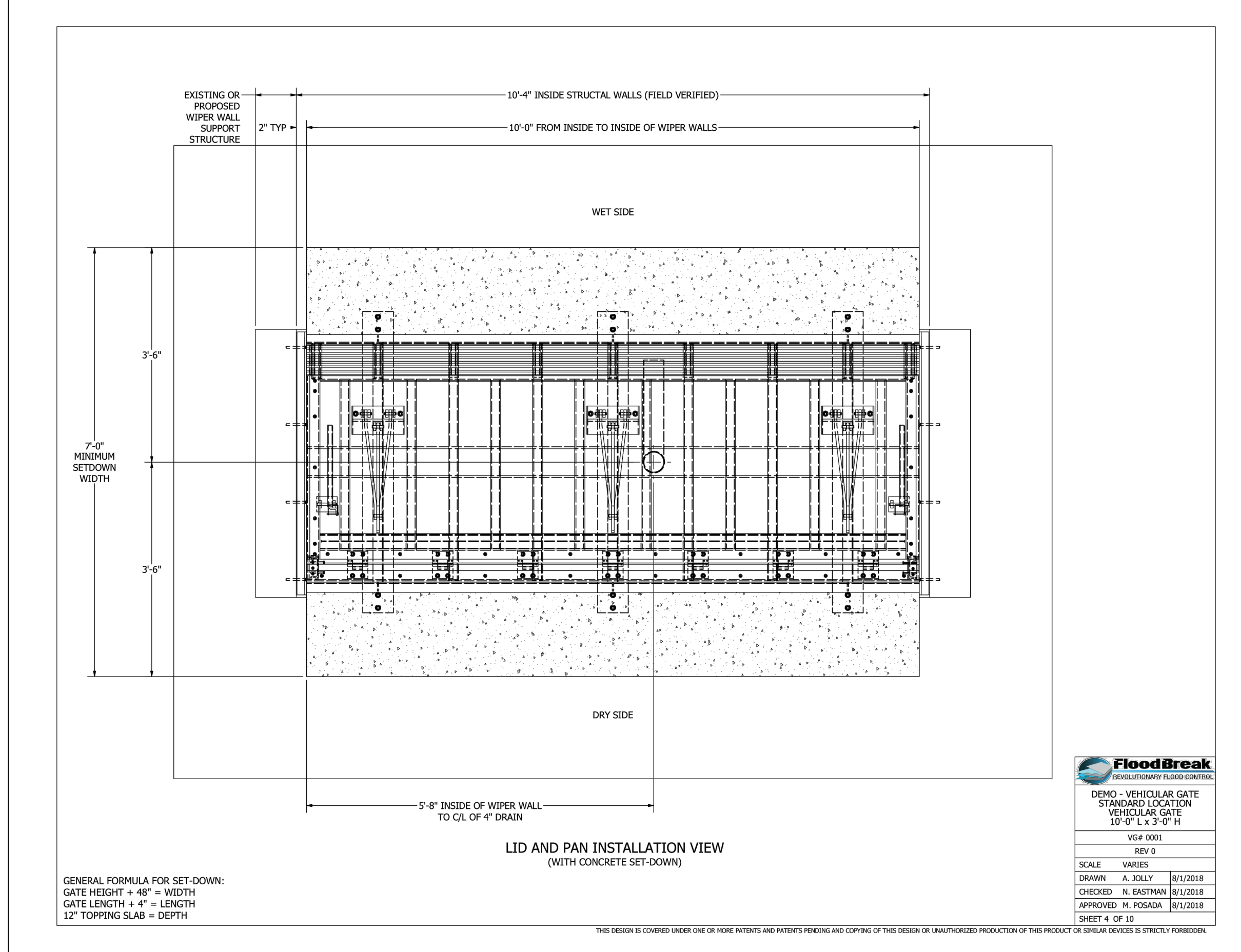
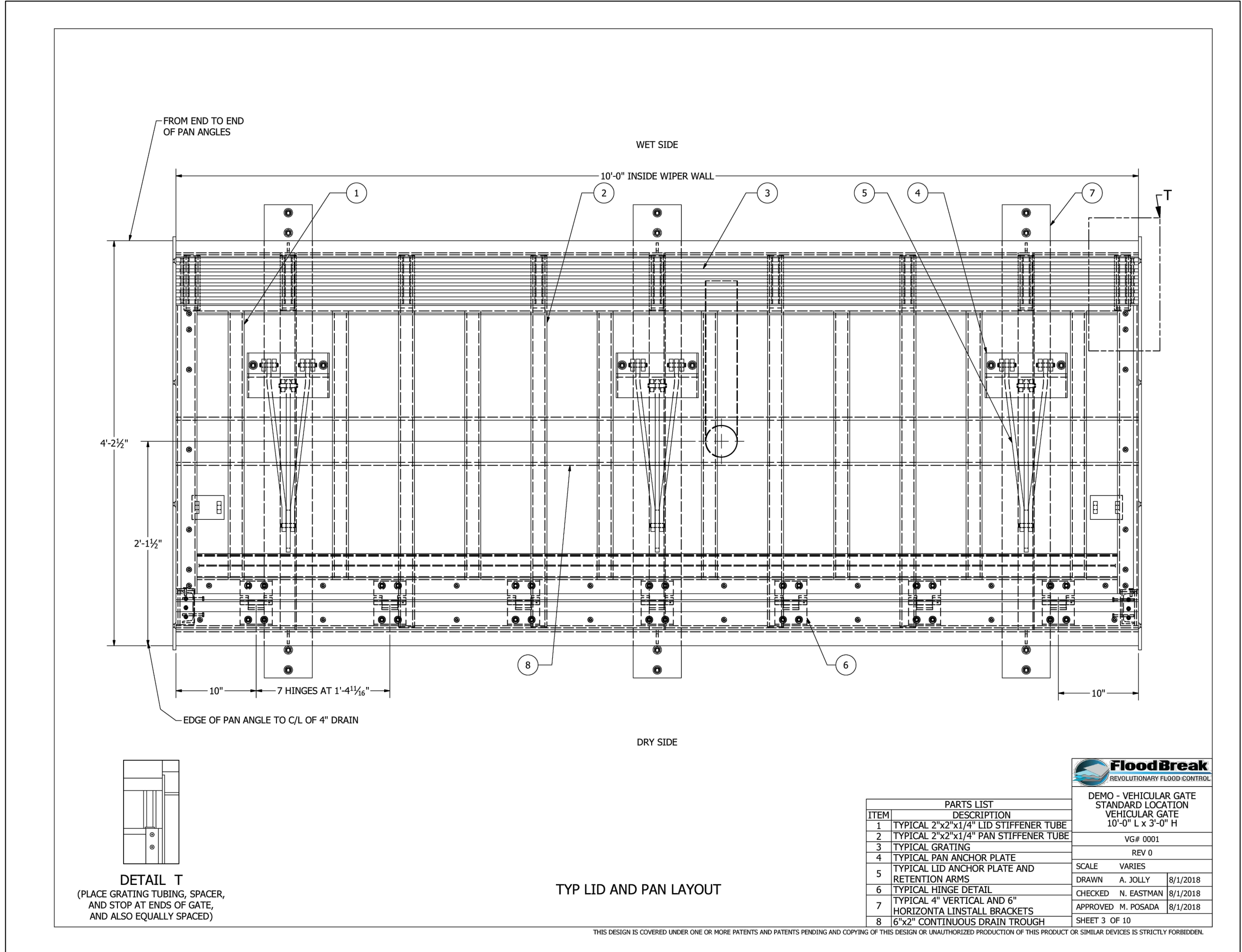
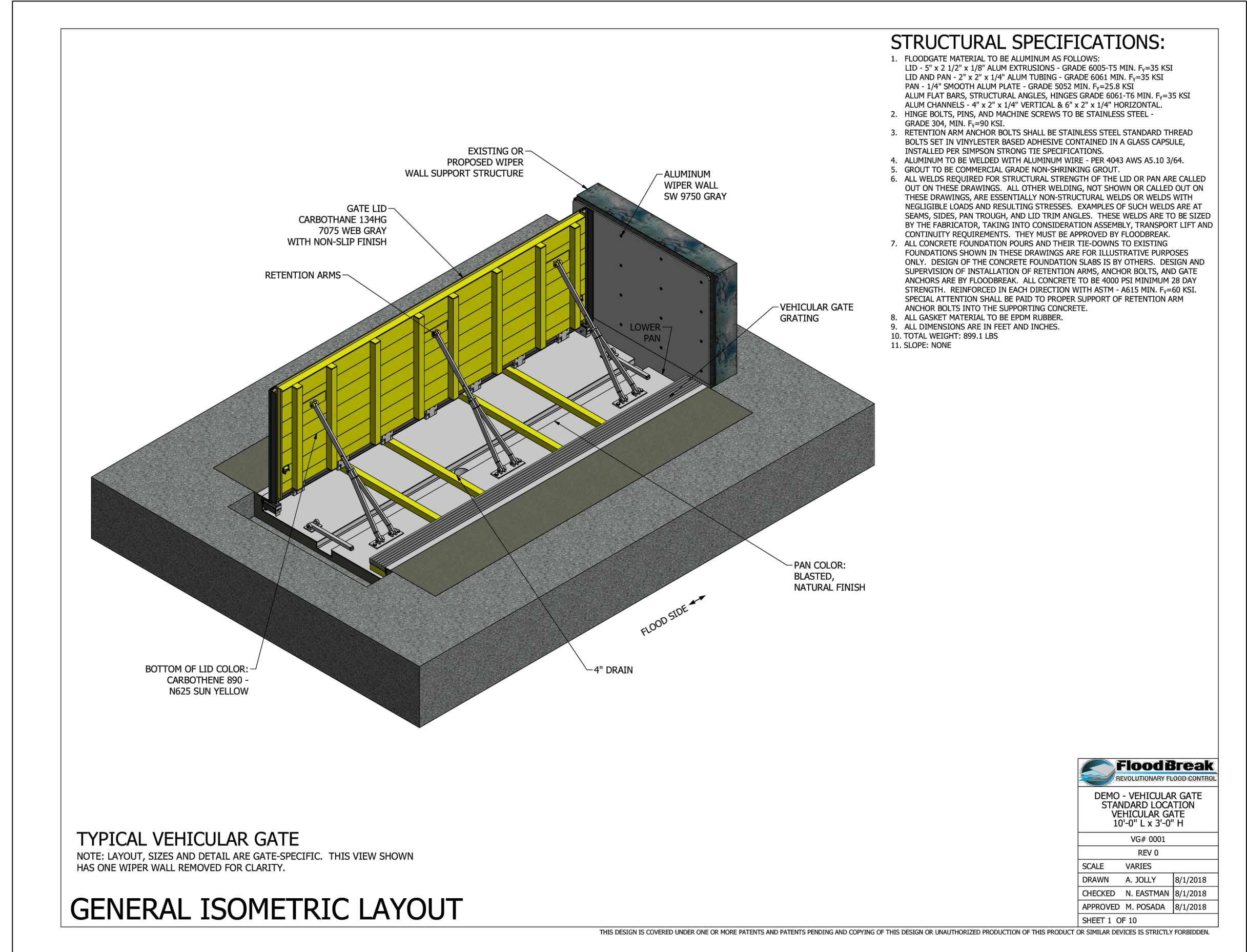
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**FAIRMONT SCOTTSDALE PRINCESS  
GUEST ROOM ADDITION**  
CONCEPT GRADING, DRAINAGE, WATER & SEWER  
SCOTTSDALE, ARIZONA  
DETAILS

REV	DESCRIPTION	DATE

SCALE (HORIZ.)	N/A
SCALE (VERT.)	N/A
DATE	11/22/2023
JOB NUMBER	215319.50
SHEET	B-C04 OF 4



## **APPENDIX D – WATER CAD MODELING**

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Junction Table

### Active Scenario: Calibration Static Model 1

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

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Junction Table

### Active Scenario: Calibration Static Model 2

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

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Junction Table

### Active Scenario: Calibration Residual Model 1

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

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Junction Table

### Active Scenario: Calibration Residual Model 2

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

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Junction Table

### Active Scenario: Calibration Flow@20 Model 1

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

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Junction Table

### Active Scenario: Calibration Flow@20 Model 2

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

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Junction Table

### Active Scenario: Average Daily Demand

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
Domestic (Conference Center)	1,553.33	111	69	1,713.14	159.81
Domestic (Guest Room)	1,550.00	96	71	1,713.25	163.25
Domestic (Italian)	1,556.30	29	68	1,713.21	156.91
Domestic (Roasterie)	1,560.25	19	66	1,713.15	152.90
Domestic (Villas and Bungalows)	1,553.30	27	69	1,713.14	159.84
EX FH-1 (TEST 1)	1,547.30	0	72	1,713.27	165.97
EX FH-2	1,542.85	0	74	1,713.26	170.41
EX FH-3 (FLOW 1)	1,550.00	0	71	1,713.23	163.23
EX FH-4	1,557.29	0	67	1,713.21	155.92
EX FH-5	1,558.03	0	67	1,713.21	155.18
EX FH-6 (TEST 2)	1,559.33	0	67	1,713.21	153.89
EX FH-7 (FLOW 2)	1,556.86	0	68	1,713.21	156.35
EX FH-10	1,563.50	0	65	1,713.21	149.71
EX FH-11	1,557.90	0	67	1,713.21	155.31
EX FH-12	1,552.10	0	70	1,713.14	161.04
EX J-10	1,552.00	0	70	1,713.22	161.22
EX J-20	1,553.00	0	69	1,713.18	160.18
EX J-30	1,553.00	0	69	1,713.17	160.17
EX J-34	1,553.36	0	69	1,713.14	159.78
EX J-40	1,552.55	0	69	1,713.14	160.59
EX J-50	1,552.03	0	70	1,713.14	161.11
EX J-54	1,555.20	0	68	1,713.15	157.95
EX J-70	1,542.85	0	74	1,713.26	170.41
EX J-80	1,542.85	0	74	1,713.26	170.41
EX J-90	1,547.00	0	72	1,713.27	166.27
EX J-100	1,550.00	0	71	1,713.23	163.23
EX J-110	1,556.50	0	68	1,713.21	156.71
EX J-120	1,556.34	0	68	1,713.21	156.87
EX J-130	1,558.03	0	67	1,713.21	155.18
EX J-140	1,560.63	0	66	1,713.21	152.58
EX J-141	1,563.47	0	65	1,713.21	149.74
EX J-150	1,557.41	0	67	1,713.21	155.80
EX J-160	1,554.89	0	68	1,713.21	158.32
EX J-170	1,558.93	0	67	1,713.21	154.28
EX J-190	1,556.35	0	68	1,713.21	156.86
EX J-194	1,556.60	0	68	1,713.21	156.62
FH-1	1,552.65	0	69	1,713.14	160.49
FH-2	1,553.15	0	69	1,713.14	159.99
FH-3	1,556.46	0	68	1,713.21	156.75
FH-4	1,556.42	0	68	1,713.21	156.79
FH-5	1,556.39	0	68	1,713.21	156.83
FH-6	1,556.95	0	68	1,713.21	156.26
FH-7	1,557.87	0	67	1,713.18	155.31
FH-8	1,552.10	0	70	1,713.14	161.04
Fire (Conf. Center)	1,556.46	0	68	1,713.21	156.75
Fire (Garage)	1,554.70	0	69	1,713.21	158.51
Fire (Guest Room)	1,550.00	0	71	1,713.25	163.25
Fire (Italian)	1,556.30	0	68	1,713.21	156.91
Fire (Roasterie)	1,559.64	0	66	1,713.15	153.51

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Junction Table

### Active Scenario: Average Daily Demand

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
Fire (Villas and Bungalows)	1,553.13	0	69	1,713.15	160.01
J-10	1,550.14	0	71	1,713.15	163.01
J-20	1,552.46	0	70	1,713.14	160.69
J-66	1,556.22	0	68	1,713.21	156.99

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Pipe Table

### Active Scenario: Average Daily Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-R-1	R-1	PMP-1	1	48.0	130.0	281	0.05
P-PMP-1	PMP-1	EX FH-1 (TEST 1)	1	48.0	130.0	281	0.05
P-EX FH-11	EX J-150	EX FH-11	23	12.0	130.0	0	0.00
P-55	FH-6	J-66	125	8.0	130.0	0	0.00
P-50	FH-3	EX J-110	302	8.0	130.0	-3	0.02
P-31	FH-3	Fire (Conf. Center)	51	8.0	130.0	3	0.02
P-29	Fire (Conf. Center)	FH-4	222	8.0	130.0	3	0.02
P-27	FH-4	FH-5	243	8.0	130.0	3	0.02
P-25	FH-5	EX J-190	267	8.0	130.0	3	0.02
P-23	J-66	EX J-190	16	8.0	130.0	-3	0.02
P-21	EX J-194	J-66	44	8.0	130.0	-3	0.02
P-17	EX J-54	Fire (Villas and Bungalows)	73	8.0	130.0	13	0.08
P-15	Fire (Villas and Bungalows)	J-10	106	8.0	130.0	13	0.08
P-5	J-10	EX J-34	333	8.0	130.0	13	0.08
EX P-193	EX FH-7 (FLOW 2)	EX J-194	50	8.0	130.0	-3	0.02
EX P-191	EX J-160	EX FH-7 (FLOW 2)	93	8.0	130.0	-3	0.02
EX P-177	EX FH-6 (TEST 2)	EX J-140	221	12.0	130.0	2	0.01
EX P-175	EX J-170	EX FH-6 (TEST 2)	67	12.0	130.0	2	0.01
EX P-165	EX J-160	EX J-170	191	12.0	130.0	2	0.01
EX P-157	EX J-160	Fire (Garage)	189	12.0	130.0	0	0.00
EX P-155	Fire (Garage)	EX J-150	268	12.0	130.0	0	0.00
EX P-147(1)	EX J-150	EX FH-10	802	6.0	130.0	0	0.00
EX P-147	EX FH-10	EX J-141	91	6.0	130.0	0	0.00
EX P-145	EX J-141	EX J-140	403	12.0	130.0	0	0.00
EX P-135	EX J-140	EX J-130	649	12.0	130.0	3	0.01
EX P-129	EX J-130	EX FH-5	9	12.0	130.0	3	0.01
EX P-127	EX FH-5	EX FH-4	190	12.0	130.0	3	0.01
EX P-125	EX FH-4	EX J-120	245	12.0	130.0	3	0.01
EX P-117	EX J-120	Fire (Italian)	130	12.0	130.0	3	0.01
EX P-115	Fire (Italian)	Domestic (Italian)	13	12.0	130.0	3	0.01
EX P-113	Domestic (Italian)	EX J-110	171	12.0	130.0	-26	0.07
EX P-109	EX J-110	EX J-10	231	12.0	130.0	-29	0.08
EX P-107	EX J-10	EX FH-3 (FLOW 1)	133	12.0	130.0	-154	0.44
EX P-105	EX FH-3 (FLOW 1)	EX J-100	10	12.0	130.0	-154	0.44
EX P-99	EX J-100	Fire (Guest Room)	294	12.0	130.0	-154	0.44
EX P-97	Fire (Guest Room)	Domestic (Guest Room)	6	12.0	130.0	-154	0.44
EX P-95	Domestic (Guest Room)	EX FH-1 (TEST 1)	81	12.0	130.0	-250	0.71
EX P-93	EX FH-1 (TEST 1)	EX J-90	87	12.0	130.0	32	0.09
EX P-85	EX J-90	EX J-80	323	12.0	130.0	32	0.09

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Pipe Table

### Active Scenario: Average Daily Demand

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

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Junction Table

### Active Scenario: Max Day

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
Domestic (Conference Center)	1,553.33	221	68	1,711.37	158.04
Domestic (Guest Room)	1,550.00	192	70	1,711.76	161.76
Domestic (Italian)	1,556.30	58	67	1,711.63	155.33
Domestic (Roasterie)	1,560.25	38	65	1,711.40	151.15
Domestic (Villas and Bungalows)	1,553.30	53	68	1,711.37	158.07
EX FH-1 (TEST 1)	1,547.30	0	71	1,711.82	164.52
EX FH-2	1,542.85	0	73	1,711.78	168.93
EX FH-3 (FLOW 1)	1,550.00	0	70	1,711.68	161.68
EX FH-4	1,557.29	0	67	1,711.63	154.34
EX FH-5	1,558.03	0	66	1,711.63	153.60
EX FH-6 (TEST 2)	1,559.33	0	66	1,711.63	152.31
EX FH-7 (FLOW 2)	1,556.86	0	67	1,711.63	154.77
EX FH-10	1,563.50	0	64	1,711.63	148.13
EX FH-11	1,557.90	0	67	1,711.63	153.73
EX FH-12	1,552.10	0	69	1,711.37	159.27
EX J-10	1,552.00	0	69	1,711.64	159.64
EX J-20	1,553.00	0	69	1,711.53	158.53
EX J-30	1,553.00	0	69	1,711.47	158.47
EX J-34	1,553.36	0	68	1,711.38	158.02
EX J-40	1,552.55	0	69	1,711.37	158.82
EX J-50	1,552.03	0	69	1,711.37	159.34
EX J-54	1,555.20	0	68	1,711.39	156.19
EX J-70	1,542.85	0	73	1,711.79	168.94
EX J-80	1,542.85	0	73	1,711.81	168.96
EX J-90	1,547.00	0	71	1,711.82	164.82
EX J-100	1,550.00	0	70	1,711.68	161.68
EX J-110	1,556.50	0	67	1,711.64	155.14
EX J-120	1,556.34	0	67	1,711.63	155.29
EX J-130	1,558.03	0	66	1,711.63	153.60
EX J-140	1,560.63	0	65	1,711.63	151.00
EX J-141	1,563.47	0	64	1,711.63	148.16
EX J-150	1,557.41	0	67	1,711.63	154.22
EX J-160	1,554.89	0	68	1,711.63	156.74
EX J-170	1,558.93	0	66	1,711.63	152.70
EX J-190	1,556.35	0	67	1,711.63	155.28
EX J-194	1,556.60	0	67	1,711.63	155.04
FH-1	1,552.65	0	69	1,711.37	158.72
FH-2	1,553.15	0	68	1,711.37	158.22
FH-3	1,556.46	0	67	1,711.63	155.17
FH-4	1,556.42	0	67	1,711.63	155.21
FH-5	1,556.39	0	67	1,711.63	155.25
FH-6	1,556.95	0	67	1,711.63	154.68
FH-7	1,557.87	0	66	1,711.52	153.65
FH-8	1,552.10	0	69	1,711.37	159.27
Fire (Conf. Center)	1,556.46	0	67	1,711.63	155.17
Fire (Garage)	1,554.70	0	68	1,711.63	156.93
Fire (Guest Room)	1,550.00	0	70	1,711.76	161.76
Fire (Italian)	1,556.30	0	67	1,711.63	155.33
Fire (Roasterie)	1,559.64	0	66	1,711.40	151.76

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Junction Table

### Active Scenario: Max Day

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
Fire (Villas and Bungalows)	1,553.13	0	68	1,711.39	158.25
J-10	1,550.14	0	70	1,711.39	161.25
J-20	1,552.46	0	69	1,711.37	158.91
J-66	1,556.22	0	67	1,711.63	155.41

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Pipe Table

### Active Scenario: Max Day

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-R-1	R-1	PMP-1	1	48.0	130.0	563	0.10
P-PMP-1	PMP-1	EX FH-1 (TEST 1)	1	48.0	130.0	563	0.10
P-EX FH-11	EX J-150	EX FH-11	23	12.0	130.0	0	0.00
P-55	FH-6	J-66	125	8.0	130.0	0	0.00
P-50	FH-3	EX J-110	302	8.0	130.0	-6	0.04
P-31	FH-3	Fire (Conf. Center)	51	8.0	130.0	6	0.04
P-29	Fire (Conf. Center)	FH-4	222	8.0	130.0	6	0.04
P-27	FH-4	FH-5	243	8.0	130.0	6	0.04
P-25	FH-5	EX J-190	267	8.0	130.0	6	0.04
P-23	J-66	EX J-190	16	8.0	130.0	-6	0.04
P-21	EX J-194	J-66	44	8.0	130.0	-6	0.04
P-17	EX J-54	Fire (Villas and Bungalows)	73	8.0	130.0	25	0.16
P-15	Fire (Villas and Bungalows)	J-10	106	8.0	130.0	25	0.16
P-5	J-10	EX J-34	333	8.0	130.0	25	0.16
EX P-193	EX FH-7 (FLOW 2)	EX J-194	50	8.0	130.0	-6	0.04
EX P-191	EX J-160	EX FH-7 (FLOW 2)	93	8.0	130.0	-6	0.04
EX P-177	EX FH-6 (TEST 2)	EX J-140	221	12.0	130.0	5	0.01
EX P-175	EX J-170	EX FH-6 (TEST 2)	67	12.0	130.0	5	0.01
EX P-165	EX J-160	EX J-170	191	12.0	130.0	5	0.01
EX P-157	EX J-160	Fire (Garage)	189	12.0	130.0	1	0.00
EX P-155	Fire (Garage)	EX J-150	268	12.0	130.0	1	0.00
EX P-147(1)	EX J-150	EX FH-10	802	6.0	130.0	1	0.01
EX P-147	EX FH-10	EX J-141	91	6.0	130.0	1	0.01
EX P-145	EX J-141	EX J-140	403	12.0	130.0	1	0.00
EX P-135	EX J-140	EX J-130	649	12.0	130.0	6	0.02
EX P-129	EX J-130	EX FH-5	9	12.0	130.0	6	0.02
EX P-127	EX FH-5	EX FH-4	190	12.0	130.0	6	0.02
EX P-125	EX FH-4	EX J-120	245	12.0	130.0	6	0.02
EX P-117	EX J-120	Fire (Italian)	130	12.0	130.0	6	0.02
EX P-115	Fire (Italian)	Domestic (Italian)	13	12.0	130.0	6	0.02
EX P-113	Domestic (Italian)	EX J-110	171	12.0	130.0	-52	0.15
EX P-109	EX J-110	EX J-10	231	12.0	130.0	-58	0.16
EX P-107	EX J-10	EX FH-3 (FLOW 1)	133	12.0	130.0	-307	0.87
EX P-105	EX FH-3 (FLOW 1)	EX J-100	10	12.0	130.0	-307	0.87
EX P-99	EX J-100	Fire (Guest Room)	294	12.0	130.0	-307	0.87
EX P-97	Fire (Guest Room)	Domestic (Guest Room)	6	12.0	130.0	-307	0.87
EX P-95	Domestic (Guest Room)	EX FH-1 (TEST 1)	81	12.0	130.0	-500	1.42
EX P-93	EX FH-1 (TEST 1)	EX J-90	87	12.0	130.0	63	0.18
EX P-85	EX J-90	EX J-80	323	12.0	130.0	63	0.18

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Pipe Table

### Active Scenario: Max Day

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

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Junction Table

### Active Scenario: Peak Hour Demand

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
Domestic (Conference Center)	1,553.33	402	66	1,705.07	151.73
Domestic (Guest Room)	1,550.00	336	68	1,706.48	156.48
Domestic (Italian)	1,556.30	173	65	1,705.93	149.63
Domestic (Roasterie)	1,560.25	114	63	1,705.10	144.85
Domestic (Villas and Bungalows)	1,553.30	94	66	1,705.07	151.76
EX FH-1 (TEST 1)	1,547.30	0	69	1,706.68	159.38
EX FH-2	1,542.85	0	71	1,706.54	163.69
EX FH-3 (FLOW 1)	1,550.00	0	68	1,706.12	156.12
EX FH-4	1,557.29	0	64	1,705.93	148.64
EX FH-5	1,558.03	0	64	1,705.93	147.90
EX FH-6 (TEST 2)	1,559.33	0	63	1,705.93	146.60
EX FH-7 (FLOW 2)	1,556.86	0	64	1,705.93	149.07
EX FH-10	1,563.50	0	62	1,705.93	142.43
EX FH-11	1,557.90	0	64	1,705.93	148.03
EX FH-12	1,552.10	0	66	1,705.07	152.97
EX J-10	1,552.00	0	67	1,705.97	153.97
EX J-20	1,553.00	0	66	1,705.59	152.59
EX J-30	1,553.00	0	66	1,705.39	152.39
EX J-34	1,553.36	0	66	1,705.09	151.73
EX J-40	1,552.55	0	66	1,705.07	152.52
EX J-50	1,552.03	0	66	1,705.07	153.04
EX J-54	1,555.20	0	65	1,705.09	149.89
EX J-70	1,542.85	0	71	1,706.58	163.73
EX J-80	1,542.85	0	71	1,706.65	163.80
EX J-90	1,547.00	0	69	1,706.67	159.67
EX J-100	1,550.00	0	68	1,706.13	156.13
EX J-110	1,556.50	0	65	1,705.94	149.44
EX J-120	1,556.34	0	65	1,705.93	149.59
EX J-130	1,558.03	0	64	1,705.93	147.90
EX J-140	1,560.63	0	63	1,705.93	145.30
EX J-141	1,563.47	0	62	1,705.93	142.46
EX J-150	1,557.41	0	64	1,705.93	148.52
EX J-160	1,554.89	0	65	1,705.93	151.04
EX J-170	1,558.93	0	64	1,705.93	147.00
EX J-190	1,556.35	0	65	1,705.93	149.58
EX J-194	1,556.60	0	65	1,705.93	149.34
FH-1	1,552.65	0	66	1,705.07	152.42
FH-2	1,553.15	0	66	1,705.07	151.92
FH-3	1,556.46	0	65	1,705.94	149.48
FH-4	1,556.42	0	65	1,705.94	149.51
FH-5	1,556.39	0	65	1,705.93	149.55
FH-6	1,556.95	0	64	1,705.93	148.98
FH-7	1,557.87	0	64	1,705.55	147.68
FH-8	1,552.10	0	66	1,705.07	152.97
Fire (Conf. Center)	1,556.46	0	65	1,705.94	149.48
Fire (Garage)	1,554.70	0	65	1,705.93	151.23

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Junction Table

### Active Scenario: Peak Hour Demand

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
Fire (Guest Room)	1,550.00	0	68	1,706.47	156.47
Fire (Italian)	1,556.30	0	65	1,705.93	149.62
Fire (Roasterie)	1,559.64	0	63	1,705.10	145.46
Fire (Villas and Bungalows)	1,553.13	0	66	1,705.09	151.96
J-10	1,550.14	0	67	1,705.09	154.95
J-20	1,552.46	0	66	1,705.07	152.61
J-66	1,556.22	0	65	1,705.93	149.71

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Pipe Table

### Active Scenario: Peak Hour Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-15	EX J-20	EX J-10	80	8.0	130.0	-481	3.07
EX P-25	EX J-30	EX J-20	43	8.0	130.0	-481	3.07
EX P-33	EX J-34	EX J-30	63	8.0	130.0	-481	3.07
EX P-35(1)	Domestic (Villas and Bungalows)	Domestic (Conference Center)	5	8.0	130.0	-94	0.60
EX P-35(2)	Domestic (Conference Center)	EX J-34	5	8.0	130.0	-495	3.16
EX P-37	FH-2	Domestic (Villas and Bungalows)	27	8.0	130.0	0	0.00
EX P-39	EX J-40	FH-2	103	8.0	130.0	0	0.00
EX P-45	FH-1	EX J-40	46	8.0	130.0	0	0.00
EX P-47(1)	EX J-50	J-20	19	8.0	130.0	0	0.00
EX P-47(2)	J-20	FH-1	9	8.0	130.0	0	0.00
EX P-51	EX J-54	EX J-50	217	6.0	130.0	(N/A)	(N/A)
EX P-53	Fire (Roasterie)	EX J-54	87	6.0	130.0	14	0.16
EX P-55	Domestic (Roasterie)	Fire (Roasterie)	12	6.0	130.0	14	0.16
EX P-57(1)	EX FH-2	FH-7	603	6.0	130.0	128	1.46
EX P-57(2)	FH-7	Domestic (Roasterie)	272	6.0	130.0	128	1.46
EX P-58	EX J-50	EX FH-12	89	8.0	130.0	0	0.00
EX P-59	EX FH-12	FH-8	37	8.0	130.0	0	0.00
EX P-65	EX J-70	EX FH-2	22	6.0	130.0	128	1.46
EX P-75	EX J-80	EX J-70	46	6.0	130.0	128	1.46
EX P-85	EX J-90	EX J-80	323	12.0	130.0	128	0.36
EX P-93	EX FH-1 (TEST 1)	EX J-90	87	12.0	130.0	128	0.36
EX P-95	Domestic (Guest Room)	EX FH-1 (TEST 1)	81	12.0	130.0	-991	2.81
EX P-97	Fire (Guest Room)	Domestic (Guest Room)	6	12.0	130.0	-654	1.86
EX P-99	EX J-100	Fire (Guest Room)	294	12.0	130.0	-654	1.86
EX P-105	EX FH-3 (FLOW 1)	EX J-100	10	12.0	130.0	-654	1.86
EX P-107	EX J-10	EX FH-3 (FLOW 1)	133	12.0	130.0	-654	1.86
EX P-109	EX J-110	EX J-10	231	12.0	130.0	-173	0.49
EX P-113	Domestic (Italian)	EX J-110	171	12.0	130.0	-157	0.44
EX P-115	Fire (Italian)	Domestic (Italian)	13	12.0	130.0	17	0.05
EX P-117	EX J-120	Fire (Italian)	130	12.0	130.0	17	0.05
EX P-125	EX FH-4	EX J-120	245	12.0	130.0	17	0.05
EX P-127	EX FH-5	EX FH-4	190	12.0	130.0	17	0.05
EX P-129	EX J-130	EX FH-5	9	12.0	130.0	17	0.05
EX P-135	EX J-140	EX J-130	649	12.0	130.0	17	0.05
EX P-145	EX J-141	EX J-140	403	12.0	130.0	2	0.01
EX P-147	EX FH-10	EX J-141	91	6.0	130.0	2	0.02
EX P-147(1)	EX J-150	EX FH-10	802	6.0	130.0	2	0.02
EX P-155	Fire (Garage)	EX J-150	268	12.0	130.0	2	0.01
EX P-157	EX J-160	Fire (Garage)	189	12.0	130.0	2	0.01
EX P-165	EX J-160	EX J-170	191	12.0	130.0	15	0.04

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Pipe Table

### Active Scenario: Peak Hour Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-175	EX J-170	EX FH-6 (TEST 2)	67	12.0	130.0	15	0.04
EX P-177	EX FH-6 (TEST 2)	EX J-140	221	12.0	130.0	15	0.04
EX P-191	EX J-160	EX FH-7 (FLOW 2)	93	8.0	130.0	-17	0.11
EX P-193	EX FH-7 (FLOW 2)	EX J-194	50	8.0	130.0	-17	0.11
EX P-195	EX J-194	EX J-190	47	8.0	130.0	(N/A)	(N/A)
EX P-197	EX FH-8	EX J-190	125	8.0	130.0	(N/A)	(N/A)
EX P-199	EX FH-9	EX FH-8	275	8.0	130.0	(N/A)	(N/A)
EX P-203	EX J-200	EX FH-9	127	8.0	130.0	(N/A)	(N/A)
EX P-205	EX J-40	EX J-200	149	8.0	130.0	(N/A)	(N/A)
P-5	J-10	EX J-34	333	8.0	130.0	14	0.09
P-15	Fire (Villas and Bungalows)	J-10	106	8.0	130.0	14	0.09
P-17	EX J-54	Fire (Villas and Bungalows)	73	8.0	130.0	14	0.09
P-21	EX J-194	J-66	44	8.0	130.0	-17	0.11
P-23	J-66	EX J-190	16	8.0	130.0	-17	0.11
P-25	FH-5	EX J-190	267	8.0	130.0	17	0.11
P-27	FH-4	FH-5	243	8.0	130.0	17	0.11
P-29	Fire (Conf. Center)	FH-4	222	8.0	130.0	17	0.11
P-31	FH-3	Fire (Conf. Center)	51	8.0	130.0	17	0.11
P-50	FH-3	EX J-110	302	8.0	130.0	-17	0.11
P-55	FH-6	J-66	125	8.0	130.0	0	0.00
P-EX FH-11	EX J-150	EX FH-11	23	12.0	130.0	0	0.00
P-PMP-1	PMP-1	EX FH-1 (TEST 1)	1	48.0	130.0	1,119	0.20
P-PMP-2	PMP-2	EX FH-6 (TEST 2)	1	48.0	130.0	(N/A)	(N/A)
P-R-1	R-1	PMP-1	1	48.0	130.0	1,119	0.20
P-R-2	R-2	PMP-2	1	48.0	130.0	(N/A)	(N/A)

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## Fire Flow Node FlexTable: Fire Flow Results Table

### Active Scenario: Guest Room Addition (Model 1)

Label	Elevation (ft)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
J-66	1,556.22	3,125	2,739	30	30	1,711.63
J-20	1,552.46	3,125	2,560	30	30	1,711.37
J-10	1,550.14	3,125	2,573	30	32	1,711.39
Fire (Villas and Bungalows)	1,553.13	3,125	2,488	30	31	1,711.39
Fire (Roasterie)	1,559.64	3,125	2,223	30	30	1,711.40
Fire (Italian)	1,556.30	3,125	3,048	30	33	1,711.63
Fire (Guest Room)	1,550.00	3,125	3,511	30	36	1,711.76
Fire (Garage)	1,554.70	3,125	2,781	30	32	1,711.63
Fire (Conf. Center)	1,556.46	3,125	2,793	30	30	1,711.63
FH-8	1,552.10	3,125	2,341	30	30	1,711.37
FH-7	1,557.87	3,125	2,075	30	30	1,711.52
FH-6	1,556.95	3,125	2,493	30	30	1,711.63
FH-5	1,556.39	3,125	2,682	30	30	1,711.63
FH-4	1,556.42	3,125	2,703	30	30	1,711.63
FH-3	1,556.46	3,125	2,827	30	30	1,711.63
FH-2	1,553.15	3,125	2,885	30	30	1,711.37
FH-1	1,552.65	3,125	2,573	30	30	1,711.37
EX J-194	1,556.60	3,125	2,766	30	30	1,711.63
EX J-190	1,556.35	3,125	2,743	30	30	1,711.63
EX J-170	1,558.93	3,125	2,784	30	31	1,711.63
EX J-160	1,554.89	3,125	2,788	30	32	1,711.63
EX J-150	1,557.41	3,125	2,726	30	30	1,711.63
EX J-141	1,563.47	3,125	2,665	30	30	1,711.63
EX J-140	1,560.63	3,125	2,776	30	31	1,711.63
EX J-130	1,558.03	3,125	2,901	30	32	1,711.63
EX J-120	1,556.34	3,125	3,010	30	33	1,711.63
EX J-110	1,556.50	3,125	3,115	30	33	1,711.64
EX J-100	1,550.00	3,125	3,320	30	36	1,711.68
EX J-90	1,547.00	3,125	3,578	30	36	1,711.82
EX J-80	1,542.85	3,125	3,571	30	35	1,711.81
EX J-70	1,542.85	3,125	3,308	30	30	1,711.79
EX J-54	1,555.20	3,125	2,434	30	31	1,711.39
EX J-50	1,552.03	3,125	2,533	30	30	1,711.37
EX J-40	1,552.55	3,125	2,661	30	30	1,711.37
EX J-34	1,553.36	3,125	2,947	30	31	1,711.38
EX J-30	1,553.00	3,125	3,065	30	31	1,711.47
EX J-20	1,553.00	3,125	3,159	30	32	1,711.53
EX J-10	1,552.00	3,125	3,242	30	35	1,711.64
EX FH-12	1,552.10	3,125	2,393	30	30	1,711.37
EX FH-11	1,557.90	3,125	2,719	30	30	1,711.63
EX FH-10	1,563.50	3,125	2,292	30	30	1,711.63
EX FH-7 (FLOW 2)	1,556.86	3,125	2,790	30	30	1,711.63
EX FH-6 (TEST 2)	1,559.33	3,125	2,782	30	31	1,711.63
EX FH-5	1,558.03	3,125	2,903	30	32	1,711.63
EX FH-4	1,557.29	3,125	2,946	30	32	1,711.63
EX FH-3 (FLOW 1)	1,550.00	3,125	3,314	30	36	1,711.68
EX FH-2	1,542.85	3,125	3,169	30	30	1,711.78

**Fairmont Scottsdale Princess Water Master Plan - WaterCAD**  
**Fire Flow Node FlexTable: Fire Flow Results Table**  
**Active Scenario: Guest Room Addition (Model 1)**

Label	Elevation (ft)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
EX FH-1 (TEST 1)	1,547.30	3,125	3,583	30	37	1,711.82
Domestic (Villas and Bungalows)	1,553.30	3,178	3,000	30	30	1,711.37
Domestic (Roasterie)	1,560.25	3,163	2,236	30	30	1,711.40
Domestic (Italian)	1,556.30	3,183	3,110	30	33	1,711.63
Domestic (Guest Room)	1,550.00	3,317	3,707	30	36	1,711.76
Domestic (Conference Center)	1,553.33	3,346	3,168	30	30	1,711.37

# Fairmont Scottsdale Princess Water Master Plan - WaterCAD

## FlexTable: Junction Table

### Active Scenario: Guest Room Addition+Fire Flow Split

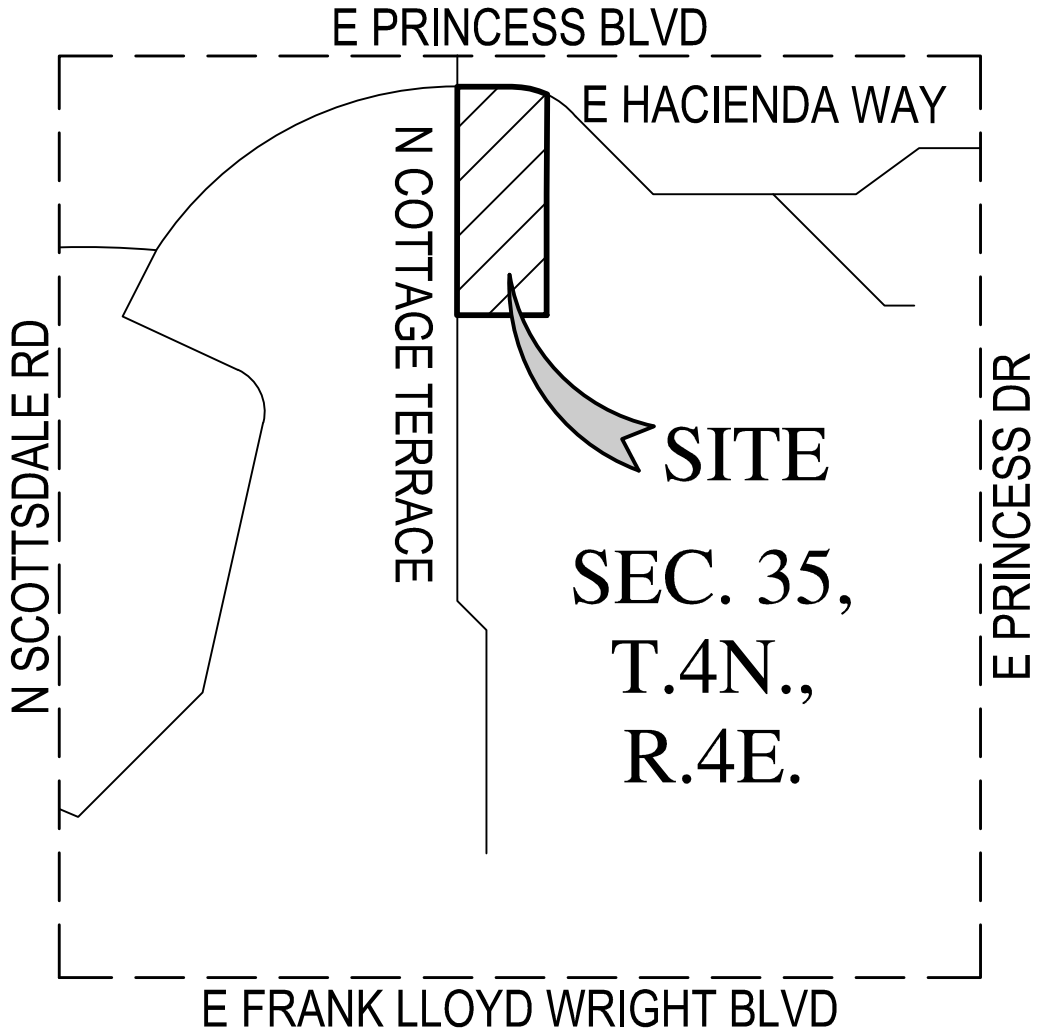
Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
Domestic (Conference Center)	1,553.33	221	38	1,640.17	86.84
Domestic (Guest Room)	1,550.00	192	42	1,647.82	97.82
Domestic (Italian)	1,556.30	58	38	1,644.12	87.82
Domestic (Roasterie)	1,560.25	38	35	1,641.62	81.37
Domestic (Villas and Bungalows)	1,553.30	53	38	1,640.06	86.76
EX FH-1 (TEST 1)	1,547.30	1,041	44	1,648.82	101.52
EX FH-2	1,542.85	0	46	1,648.20	105.35
EX FH-3 (FLOW 1)	1,550.00	1,041	41	1,644.54	94.54
EX FH-4	1,557.29	0	38	1,644.12	86.83
EX FH-5	1,558.03	0	37	1,644.12	86.09
EX FH-6 (TEST 2)	1,559.33	0	37	1,644.12	84.79
EX FH-7 (FLOW 2)	1,556.86	0	38	1,644.12	87.26
EX FH-10	1,563.50	0	35	1,644.12	80.62
EX FH-11	1,557.90	0	37	1,644.12	86.22
EX FH-12	1,552.10	0	38	1,639.53	87.43
EX J-10	1,552.00	0	40	1,644.12	92.12
EX J-20	1,553.00	0	39	1,642.49	89.49
EX J-30	1,553.00	0	38	1,641.60	88.60
EX J-34	1,553.36	0	38	1,640.32	86.96
EX J-40	1,552.55	0	38	1,639.53	86.98
EX J-50	1,552.03	0	38	1,639.53	87.50
EX J-54	1,555.20	0	37	1,641.05	85.85
EX J-70	1,542.85	0	46	1,648.37	105.52
EX J-80	1,542.85	0	46	1,648.71	105.86
EX J-90	1,547.00	0	44	1,648.80	101.80
EX J-100	1,550.00	0	41	1,644.65	94.65
EX J-110	1,556.50	0	38	1,644.12	87.62
EX J-120	1,556.34	0	38	1,644.12	87.78
EX J-130	1,558.03	0	37	1,644.12	86.09
EX J-140	1,560.63	0	36	1,644.12	83.49
EX J-141	1,563.47	0	35	1,644.12	80.65
EX J-150	1,557.41	0	38	1,644.12	86.71
EX J-160	1,554.89	0	39	1,644.12	89.23
EX J-170	1,558.93	0	37	1,644.12	85.19
EX J-190	1,556.35	0	38	1,644.12	87.77
EX J-194	1,556.60	0	38	1,644.12	87.52
FH-1	1,552.65	0	38	1,639.53	86.88
FH-2	1,553.15	1,042	37	1,639.53	86.39
FH-3	1,556.46	0	38	1,644.12	87.66
FH-4	1,556.42	0	38	1,644.12	87.69
FH-5	1,556.39	0	38	1,644.12	87.73
FH-6	1,556.95	0	38	1,644.12	87.17
FH-7	1,557.87	0	37	1,643.67	85.80
FH-8	1,552.10	0	38	1,639.53	87.43
Fire (Conf. Center)	1,556.46	0	38	1,644.12	87.66
Fire (Garage)	1,554.70	0	39	1,644.12	89.42
Fire (Guest Room)	1,550.00	0	42	1,647.76	97.76
Fire (Italian)	1,556.30	0	38	1,644.12	87.81
Fire (Roasterie)	1,559.64	0	35	1,641.55	81.92

**Fairmont Scottsdale Princess Water Master Plan - WaterCAD**  
**FlexTable: Junction Table**

**Active Scenario: Guest Room Addition+Fire Flow Split**

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)	Pressure Head (ft)
Fire (Villas and Bungalows)	1,553.13	0	38	1,640.94	87.81
J-10	1,550.14	0	39	1,640.79	90.65
J-20	1,552.46	0	38	1,639.53	87.08
J-66	1,556.22	0	38	1,644.12	87.90

**EXHIBIT 1 – VICINITY MAP**



**SITE**  
**SEC. 35,**  
**T.4N.,**  
**R.4E.**

**VICINITY MAP**  
 N.T.S.

**NOT  
 FOR  
 CONSTRUCTION  
 OR RECORDING**

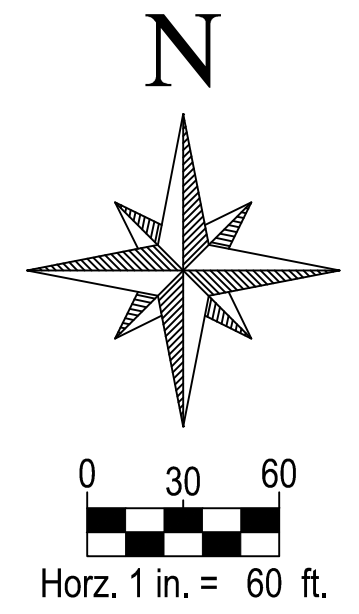
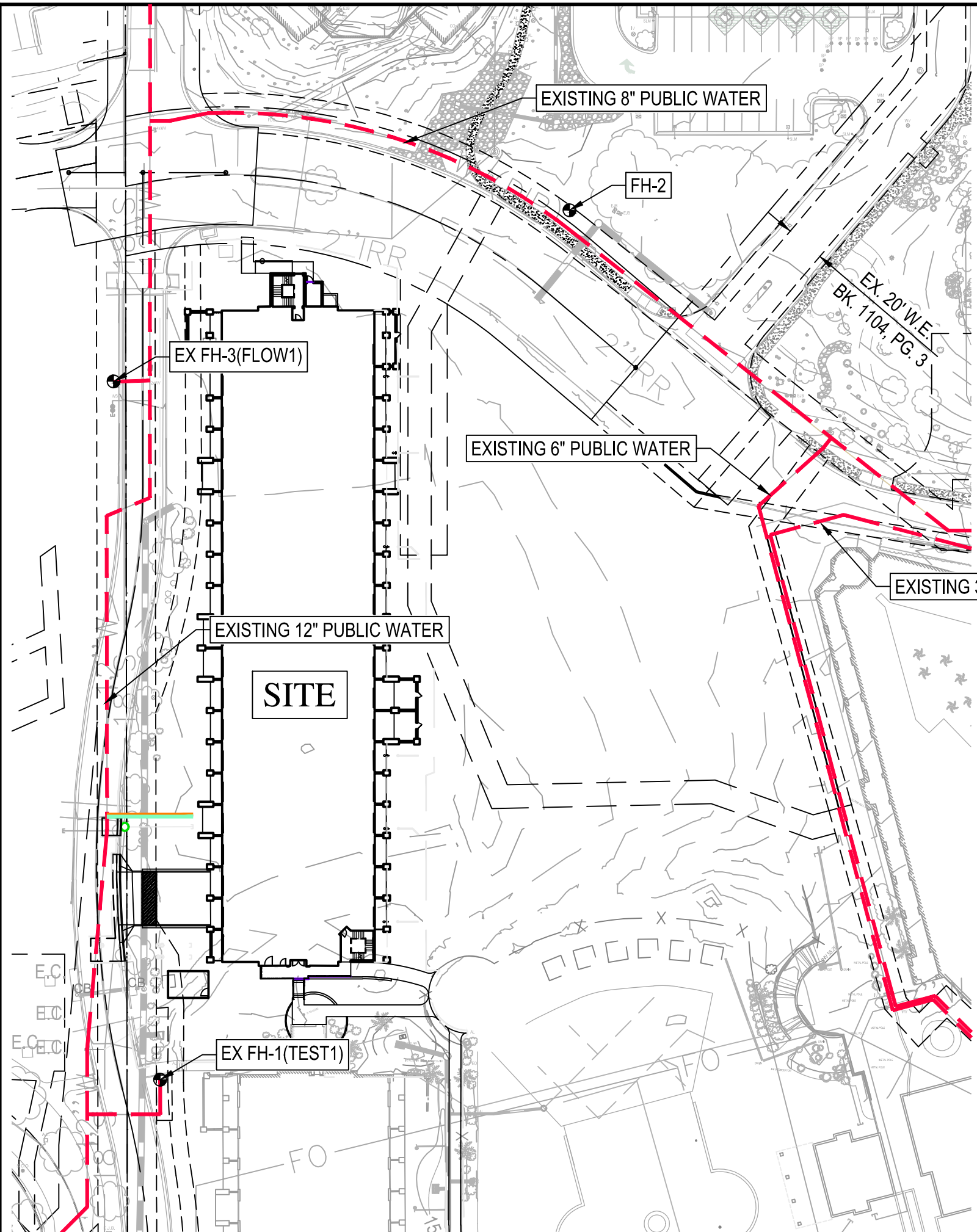


FAIRMONT SCOTTSDALE PRINCESS






**GUEST ROOM ADDITION  
 VICINITY MAP EXHIBIT**

DATE	11/22/2023	SCALE	N.T.S	SHEET	1 OF 1
JOB NO.	215319.50	DESIGN	AJS	CHECK	RS
		DRAWN	AJS	RFI #	

**EXHIBIT 2 – WATER EXHIBIT**



### LEGEND

-  EXISTING FIRE HYDRANT
-  EXISTING WATER
-  PROPOSED 2" DOMESTIC WATER SERVICE
-  PROPOSED 6" FIRE SERVICE
-  PROPERTY BOUNDARY

**NOT  
FOR  
CONSTRUCTION  
OR RECORDING**



FAIRMONT SCOTTSDALE PRINCESS			
GUEST ROOM ADDITION WATER - EXHIBIT 2			
DATE	11/22/2023	SCALE	1" = 60'
SHEET	1 OF 1	DESIGN	AJS
JOB NO.	215319.50	DRAWN	AJS