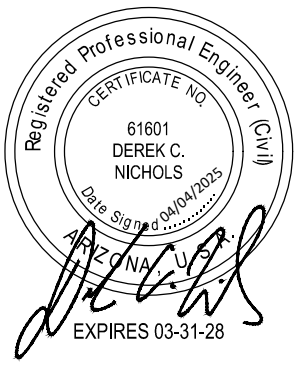
WATER DISTRIBUTION SYSTEM
BASIS OF DESIGN REPORT
FOR
5TH & GOLDWATER

April 4, 2025
WP# 245619

Prepared by
Bradon Schield, EIT



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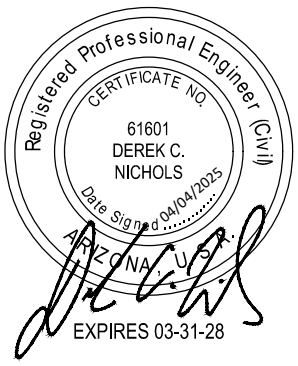

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1.0 INTRODUCTION

5th & Goldwater (Site) is a proposed mixed-use development located on five (5) parcels with an approximate net area of 4.8-acres within Scottsdale, Arizona (APN#173-48-047D, 173-48-047A, 173-48-056A, 173-48-055E, 173-48-050A). The Site is currently developed and will be demolished prior to the new development. The Site will include 232 dwelling units comprised of studio, one-bedroom, and two-bedroom apartments, as well as approximately 30,800 square feet of commercial space anticipated to be comprised of 18,800 square feet of restaurant space and 12,000 square feet of retail space. This project will include an onsite parking garage as well as associated landscape, hardscape, and utility services. The Site is located on the northwest corner of Indian School Road and Goldwater Boulevard within Section 22, Township 2 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona. Refer to Exhibit 1 – *Vicinity Map* for project location.

The 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, High Density Condominium: ..... 0.27 gpm / DU
Average Day Water Demand, Commercial/Retail: ..... 0.00111 gpm / sf
Average Day Water Demand, Restaurant: ..... 0.00181 gpd / sf
Maximum Day Demand: ..... 2.0 x ADD
Peak Hour Demand: ..... 3.5 x ADD
Peak Hour Demand, Restaurant: ..... 6.5 x ADD
Fire Flow Demand: ..... 3,000 gpm
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, Distribution Lines: ..... 10 ft / 1000 ft
Maximum Pipe Velocity: ..... 10.0 fps
Minimum Pipe Diameter, Public Water line: ..... 8 inches

Abbreviations: ADD = average day demand; DU = dwelling unit; gpd = gallons per day; gpm = gallons per minute; ft = feet; psi = pounds per square inch; sf = square foot, fps = feet per second

2.0 EXISTING WATER INFRASTRUCTURE

Existing water infrastructure adjacent to the Site includes City of Scottsdale public waterlines. A 12-inch asbestos cement pipe (ACP) waterline is located in Indian School Road along the southern edge of the Site. A 6-inch ACP waterline is in Goldwater Boulevard along the eastern edge of the Site. There is also a 6-inch ACP waterline which connects to the 12-inch ACP line in Indian School Road at the intersection of 5th Avenue and runs north along the northern edge of 5th Avenue, turns south to the southern edge of the roadway, and continues running north through 5th Avenue as a 12-inch ductile iron pipe (DIP) before connecting to a 20-inch DIP waterline in

Goldwater Boulevard which connects to the previously mentioned 6-inch ACP waterline in Goldwater Boulevard. There is a 6-inch ACP waterline which runs north from the 12-inch line in Indian School Road through Scottsdale Road. This waterline connects to the system via a waterline in 6th Avenue, which runs west to connect with the 20-inch DIP waterline which runs toward Goldwater Boulevard. There is also a 6-inch ACP waterline which runs north from the 12-inch line in Indian School Road through Marshall Way, which connects to the 20-inch DIP waterline. These waterlines make up the existing water infrastructure which supply the Site.

Existing public fire hydrants include two (2) hydrants along the northern side of Indian School Road, connected to the 12-inch ACP waterline, one (1) hydrant at the northeast corner of Indian School Road and Goldwater, connected to the 6-inch ACP line, one (1) hydrant adjacent to the northern edge of the Site along the southern side of 5th Avenue connected to the 12-inch DIP waterline, and one (1) hydrant along the northern edge of 5th Avenue near the northwest corner of the Site. The western most hydrant along the northern side of Indian School Road and the hydrant at the northeast corner of Indian School Road and Goldwater served as the fire flow hydrant locations A and B for the flow test, respectively, while the middle hydrant served as the pressure hydrant. Both flow hydrants were flowed, and pressures were gathered, simultaneously. Refer to Appendix B - *Fire Hydrant Flow Test Results* for results from the flow test.

3.0 PROPOSED WATER INFRASTRUCTURE

3.1 Proposed Water Infrastructure

The proposed water infrastructure for the project will include a 4-inch domestic water service for the residential building, a 1.5-inch domestic water service for the commercial flex building, and a 1.5-inch landscape water service for the northern portion of the Site extending from the existing 12-inch line in 5th Avenue. Additionally, a new 1.5-inch domestic water service and two (2) existing 1.5-inch services on the 6-inch waterline in Goldwater Boulevard will provide domestic water service to the proposed ground level retail and landscape water service for the southern portion of the Site. All service lines will include either water meters boxes or vaults located within public right-of-way or public water easements and will include backflow prevention devices matching the size of the service line diameter. Fire sprinkler service for the residential and flexible building areas will be provided by 8-inch and 6-inch fire lines, respectively. Both will extend into the Site from the existing 12-inch line in 5th Avenue. Fire sprinkler service for the retail buildings will be provided by two (2) 6-inch fire lines which will extend into the Site from the existing 6-inch line in Goldwater Boulevard. Proposed infrastructure will also include a fire hydrant along the eastern edge of the Site, connected to the 6-inch waterline in Goldwater Boulevard to provide adequate coverage for the Site. Fire hydrant spacing between existing and proposed hydrants around the perimeter of the development is consistent with the City's requirement of 600-feet hose-lay spacing. (Refer to Exhibit 2 – *Water System Layout*)

3.2 Water Demand Calculations

Water demands for the Site were calculated using methodology outlined in the *City of Scottsdale Design Standards & Policy Manual*, *2018*. The average day, maximum day, and peak hour demands for the Site were calculated to be 100.6 gallons per minute (gpm), 201.2 gpm, and 352.1 gpm, respectively. This

includes demands for both residential and commercial uses of the Site. The required fire flow for the Site was determined to be 3,000 gpm minimum per the 2021 *International Fire Code*. This was calculated using the largest building area separated by firewalls and a 50% reduction for fire sprinklers.

3.3 Hydraulic Modeling Results

Water modeling for the Site used WaterCAD for AutoCAD Civil 3D 2023 to represent the calculated demands through the proposed system. The water model was calibrated using the fire hydrant flow test conducted by Arizona Flow Testing with safety factor applied (static pressure reduced to 72 psi). Calibration results are included for reference showing the existing model performs consistent with the flow testing results. Modeling was conducted for the Average Day Demand, Max Day Demand, and Peak Hour Demand conditions through the proposed system. Modeling results indicate the proposed system can deliver these demands with pressures ranging from 70 to 76 psi for all three scenarios, and velocities under 0.36 ft/s, 0.72 ft/s, and 1.26 ft/s, respectively. These values meet City requirements for system pressures and velocity.

Modeling for the Max Day Demand and Fire Flow Condition shows that the system is capable of providing a total fire flow of 3,000 gpm in the system. The fire flow was modeled in two (2) scenarios, one with the three hydrants (FH-1, EX. FH-4 & EX. FH-5) on the north side of the Site and the other with the three hydrants (FH-1, EX. FH-1 & EX. FH-2) on the south side of the Site. Each hydrant was subjected to 1,000 gpm of flow for a total of 3,000 gpm fire flow. For the north fire flow scenario, pressures ranging from 50 to 64 psi and velocities of under 13.5 ft/s were observed in the system. For the south fire flow scenario, pressures ranging from 47 to 60 psi and velocities of under 8.00 ft/s were observed in the system. Refer to Appendix A – *Calculations and Hydraulic Modeling Results* for complete results of the above scenarios.

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 Average Day Demand of 100.0 gpm is met with the proposed water infrastructure with pressures between 70 to 76 psi and velocities under 0.36 ft/s.

3. The Max Day Demand of 220.0 gpm is met with the proposed water infrastructure with pressures between 70 and 76 psi and velocities under 0.72 ft/s.

4. The Peak Hour Demand of 470.5 gpm is met with the proposed water infrastructure with pressures between 70 and 76 psi and velocities under 1.26 ft/s.

5. The Max Day Demand and fire flow demand of 3,000 gpm at a combined three hydrants is met with the proposed water infrastructure with pressures ranging from 47 to 64 psi at all junctions, and velocities under 13.5 ft/s.

5.0 REFERENCES

1. *International Fire Code by the International Coad Council, Inc.,* 2021
2. *City of Scottsdale Design Standards and Policies Manual, 2018*

APPENDIX A – CALCULATIONS & HYDRAULIC MODELING RESULTS

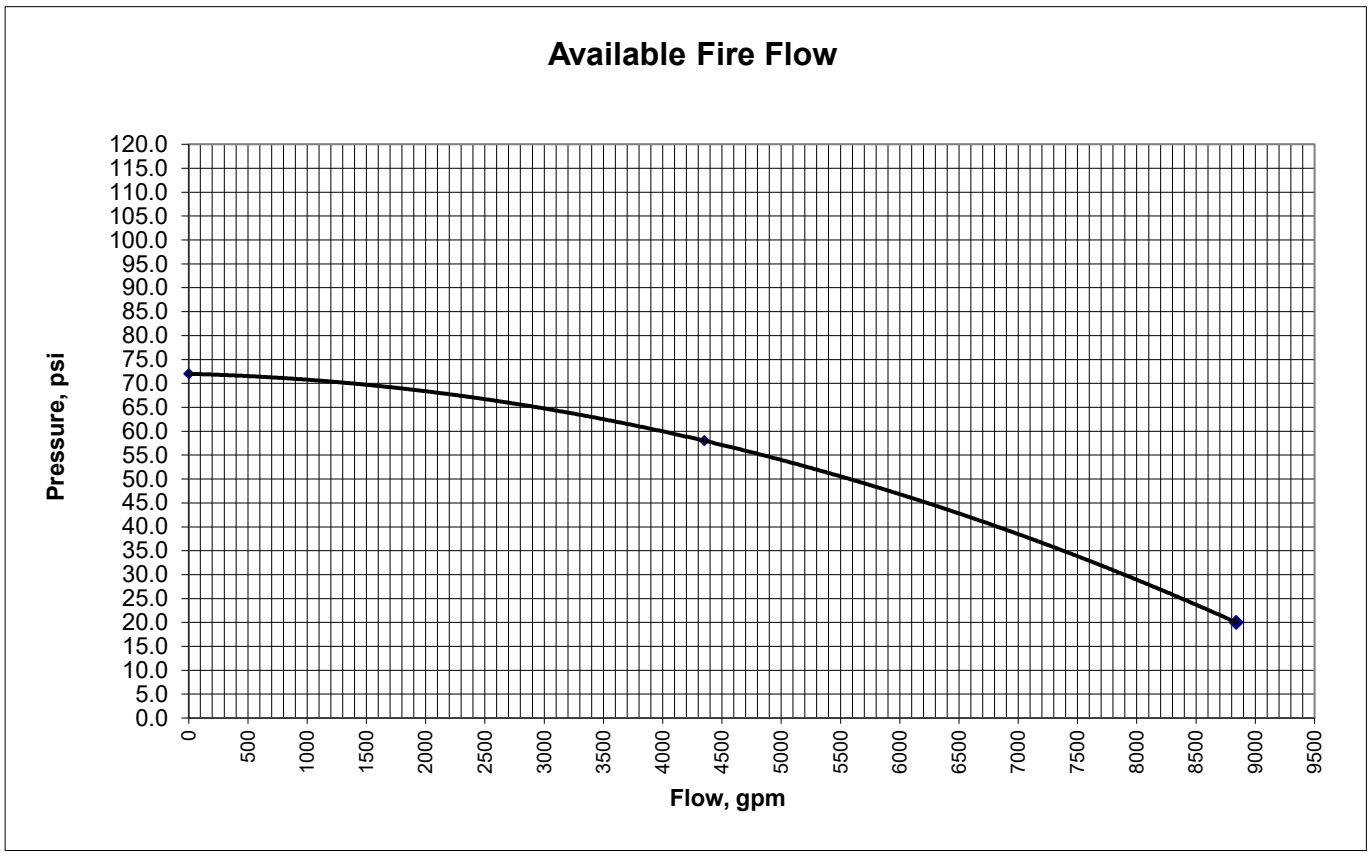
WOOD PATEL

EXISTING WATER SYSTEM PRESSURES

Project	Indian School & Goldwater
Location	Scottsdale
Project Number	245619
Project Engineer	Bradon Schield, E.I.T.

Flow Test Location
Date of Flow Test

Pressure Hydrant		**Flow Hydrant**	
Static Pressure (psi)	72.0		
Residual Pressure (psi)	58.0	Flow (gpm)	4352
Calculated Flow at 20 psi	8840 gpm	Calculated Flow at	20 psi



Discharge (gpm)	**Pressure (psi)**	**Head (ft)**
0	72.0	166.2
4352	58.0	133.9
8840	20	46.2

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

TABLE 1 – WATER DISTRIBUTION SYSTEM DESIGN CRITERIA

WOOD PATEL

TABLE 1
WATER DISTRIBUTION SYSTEM DESIGN CRITERIA

Project	Indian School & Goldwater
Location	Scottsdale
Project Number	245619
Project Engineer	Bradon Schield, E.I.T.
References	City of Scottsdale Design Standards & Policies Manual (2018)

RESIDENTIAL WATER DEMANDS			
LAND USE	**AVERAGE DAILY DEMAND (ADD)**		**NOTES**
	VALUE	**UNITS**	
< 2 dwelling DU/ac	0.69	gpm/unit	Note 1 & 5
2-2.9 dwelling DU/ac	0.66	gpm/unit	Note 1 & 5
3-7.9 dwelling DU/ac	0.36	gpm/unit	Note 1 & 5
8-11.9 dwelling DU/ac	0.33	gpm/unit	Note 1 & 5
12-22 dwelling DU/ac	0.33	gpm/unit	Note 1 & 5
High Density Condominium (condo)	0.27	gpm/unit	Note 1 & 5
Resort Hotel (includes site amenities)	0.63	gpm/unit	Note 1 & 5

NON-RESIDENTIAL WATER DEMANDS			
LAND USE	**AVERAGE DAILY DEMAND (ADD)**		**NOTES**
	VALUE	**UNITS**	
Restaurant	0.00181	gpm/sf	Note 1 & 5
Commercial/Retail	0.00111	gpm/sf	Note 1 & 5
Commercial High Rise	0.000834	gpm/sf	Note 1 & 5
Office	0.000834	gpm/sf	Note 1 & 5
Institutional	1.88	gpm/acre	Note 1 & 5
Industrial	1.44	gpm/acre	Note 1 & 5
Research and Development	1.79	gpm/acre	Note 1 & 5

LANDSCAPE WATER DEMANDS			
LAND USE	**AVERAGE DAILY DEMAND (ADD)**		**NOTES**
	VALUE	**UNITS**	
Natural Area Open Space	0.00	gpm/acre	Note 1 & 5
Developed Open Space - Parks	2.49	gpm/acre	Note 1 & 5
Developed Open Space - Golf Course	5.96	gpm/acre	Note 1 & 5

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
	Peak Hour Flow, Restaurant = Peaking Factor (PF) x ADD	6.0 x ADD	gpm	Note 1
MODELED FIRE HYDRANT FLOW (MINIMUM)				
☐	Residential, 0 - 3,600 sf fire-flow calculation area	1,000	gpm	Note 3
☐	Residential, 3,601 - 4,800 sf fire-flow calculation area	1,750	gpm	Note 4
☐	Residential, 4,801 - 6,200 sf fire-flow calculation area	2,000	gpm	Note 4
☐	Residential, 6,201 - 7,700 sf fire-flow calculation area	2,250	gpm	Note 4
☐	Residential, 7,701 - 9,400 sf fire-flow calculation area	2,500	gpm	Note 4
☐	Residential, 9,401 - 11,300 sf fire-flow calculation area	2,750	gpm	Note 4
☑	Multi-Family Residential	-	gpm	Note 2
☐	Commercial	2,125	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	130	-	-

Notes

1. Per City of Scottsdale Design Standards & Policies Manual (2018)
2. Per 2015 International Fire Code as adopted by the City of Scottsdale
3. Residential limited to one- and two-family dwellings, assumes Type V-B construction, and has a 1-hour fire duration
4. Residential limited to one- and two-family dwellings, assumes Type V-B construction, and has a 2-hour fire duration
5. City of Scottsdale assumes a 12-hour day for ADD values.

TABLE 2 – WATER DEMAND DESIGN FLOWS

WOOD PATEL

TABLE 2
WATER DEMAND DESIGN FLOWS

Project	Indian School & Goldwater
Location	Scottsdale
Project Number	245619
Project Engineer	Bradon Schield, E.I.T.
References	City of Scottsdale Design Standards & Policies Manual (2018)

		LAND USE								
HYDRAULIC MODEL NODE	**ELEVATION (ft)**	**High Density Condominium (condo)**	**Restaurant**	**Commercial/Retail**	**AVERAGE DAILY DEMAND**		**MAX DAY DEMAND**		**PEAK HOUR DEMAND**	
		(DU)	**(sf)**	**(sf)**	**(gpd)**	**(gpm)**	**(gpd)**	**(gpm)**	**(gpd)**	**(gpm)**
J-70	1,268.19	232	--	--	45,072	62.6	90,144	125.2	157,824	219.2
EX. J-80	1,270.36	--	2,573	--	3,384	4.7	6,768	9.4	20,088	27.9
J-140	1,270.95	--	6,159	--	7,992	11.1	15,984	22.2	48,168	66.9
EX. J-170	1,270.84	--	10,108	12,016	22,752	31.6	45,504	63.2	112,680	156.5
Total		**232**	**18,840**	**12,016**	**79,200**	**110.0**	**158,400**	**220.0**	**338,760**	**470.5**

TABLE 3 – HYDRAULIC MODELING RESULTS FOR CALIBRATION

FlexTable: Junction Table

Active Scenario: CALIBRATION STATIC

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
EX. FH-1 (PRESSURE)	1,267.24	0	1,434.56	72
EX. FH-2 (FLOW A)	1,267.19	0	1,434.56	72
EX. FH-3 (FLOW B)	1,265.19	0	1,434.56	73
EX. FH-4	1,270.41	0	1,434.56	71
EX. FH-5	1,270.91	0	1,434.56	71
EX. FH-6	1,270.19	0	1,434.56	71
EX. FH-7	1,269.19	0	1,434.56	72
EX. FH-8	1,271.19	0	1,434.56	71
EX. FH-9	1,271.24	0	1,434.56	71
EX. FH-10	1,268.24	0	1,434.56	72
EX. FH-11	1,263.24	0	1,434.56	74
EX. FH-12	1,264.24	0	1,434.56	74
EX. FH-13	1,261.24	0	1,434.56	75
EX. FH-14	1,264.24	0	1,434.56	74
EX. J-10	1,269.19	0	1,434.56	72
EX. J-20	1,269.19	0	1,434.56	72
EX. J-30	1,270.95	0	1,434.56	71
EX. J-40	1,271.09	0	1,434.56	71
EX. J-50	1,271.14	0	1,434.56	71
EX. J-80	1,270.57	0	1,434.56	71
EX. J-100	1,271.19	0	1,434.56	71
EX. J-110	1,272.19	0	1,434.56	70
EX. J-120	1,272.19	0	1,434.56	70
EX. J-130	1,272.19	0	1,434.56	70
EX. J-160	1,267.38	0	1,434.56	72
EX. J-170	1,266.78	0	1,434.56	73
EX. J-180	1,266.19	0	1,434.56	73
EX. J-190	1,265.19	0	1,434.56	73
EX. J-200	1,267.62	0	1,434.56	72
EX. J-210	1,267.55	0	1,434.56	72
EX. J-220	1,263.18	0	1,434.56	74
EX. J-230	1,259.24	0	1,434.56	76
EX. J-240	1,264.24	0	1,434.56	74
EX. J-250	1,266.24	0	1,434.56	73
EX. J-260	1,267.24	0	1,434.56	72
EX. J-270	1,267.24	0	1,434.56	72
EX. J-280	1,272.24	0	1,434.56	70
EX. J-290	1,271.86	0	1,434.56	70
EX. J-300	1,271.24	0	1,434.56	71
EX. J-310	1,269.24	0	1,434.56	72
EX. J-320	1,269.24	0	1,434.56	72
EX. J-330	1,270.24	0	1,434.56	71
FH-1	1,266.88	0	1,434.56	73
J-60	1,271.04	0	1,434.56	71
J-70	1,270.62	0	1,434.56	71
J-90	1,270.54	0	1,434.56	71
J-140	1,267.70	0	1,434.56	72
J-150	1,267.66	0	1,434.56	72

FlexTable: Pipe Table

Active Scenario: CALIBRATION STATIC

Label	Diameter (in)	Length (ft)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
EX. P-5	6.0	32	0	0.00	0.000
EX. P-10	6.0	106	0	0.00	0.000
EX. P-15	6.0	363	0	0.00	0.000
EX. P-20	6.0	60	0	0.00	0.000
EX. P-25	6.0	208	0	0.00	0.000
EX. P-30	6.0	42	0	0.00	0.000
EX. P-35	12.0	24	0	0.00	0.000
EX. P-40	12.0	34	0	0.00	0.000
EX. P-45	12.0	95	0	0.00	0.000
EX. P-50	12.0	15	0	0.00	0.000
EX. P-55	12.0	53	0	0.00	0.000
EX. P-60	12.0	249	0	0.00	0.000
EX. P-65	20.0	170	0	0.00	0.000
EX. P-70	6.0	11	0	0.00	0.000
EX. P-75	6.0	103	0	0.00	0.000
EX. P-80	6.0	169	0	0.00	0.000
EX. P-85	6.0	140	0	0.00	0.000
EX. P-90	6.0	50	0	0.00	0.000
EX. P-95	6.0	6	0	0.00	0.000
EX. P-100	6.0	51	0	0.00	0.000
EX. P-105	6.0	88	0	0.00	0.000
EX. P-110	6.0	15	0	0.00	0.000
EX. P-115	6.0	167	0	0.00	0.000
EX. P-120	6.0	25	0	0.00	0.000
EX. P-125	6.0	44	0	0.00	0.000
EX. P-130	12.0	351	0	0.00	0.000
EX. P-135	12.0	124	0	0.00	0.000
EX. P-140	12.0	20	0	0.00	0.000
EX. P-145	12.0	133	0	0.00	0.000
EX. P-150	12.0	353	0	0.00	0.000
EX. P-155	12.0	102	0	0.00	0.000
EX. P-160	12.0	353	0	0.00	0.000
EX. P-165	12.0	643	0	0.00	0.000
EX. P-170	12.0	165	0	0.00	0.000
EX. P-175	8.0	220	0	0.00	0.000
EX. P-180	8.0	9	0	0.00	0.000
EX. P-185	8.0	270	0	0.00	0.000
EX. P-190	8.0	776	0	0.00	0.000
EX. P-195	8.0	34	0	0.00	0.000
EX. P-200	8.0	92	0	0.00	0.000
EX. P-205	8.0	252	0	0.00	0.000
EX. P-210	8.0	319	0	0.00	0.000
EX. P-215	20.0	208	0	0.00	0.000
EX. P-220	20.0	338	0	0.00	0.000
EX. P-225	20.0	294	0	0.00	0.000
EX. P-230	20.0	13	0	0.00	0.000
EX. P-235	20.0	163	0	0.00	0.000

FlexTable: Pipe Table

Active Scenario: CALIBRATION STATIC

Label	Diameter (in)	Length (ft)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
EX. P-240	20.0	53	0	0.00	0.000
EX. P-245	6.0	288	0	0.00	0.000
EX. P-250	6.0	1,196	0	0.00	0.000
P-0	48.0	29	0	0.00	0.000
P-00	48.0	31	0	0.00	0.000

FlexTable: Junction Table

Active Scenario: CALIBRATION RESIDUAL

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
EX. FH-1 (PRESSURE)	1,267.24	0	1,402.22	58
EX. FH-2 (FLOW A)	1,267.19	2,160	1,399.40	57
EX. FH-3 (FLOW B)	1,265.19	2,192	1,390.33	54
EX. FH-4	1,270.41	0	1,398.21	55
EX. FH-5	1,270.91	0	1,398.67	55
EX. FH-6	1,270.19	0	1,399.34	56
EX. FH-7	1,269.19	0	1,394.17	54
EX. FH-8	1,271.19	0	1,397.15	54
EX. FH-9	1,271.24	0	1,398.20	55
EX. FH-10	1,268.24	0	1,398.35	56
EX. FH-11	1,263.24	0	1,398.87	59
EX. FH-12	1,264.24	0	1,398.99	58
EX. FH-13	1,261.24	0	1,399.10	60
EX. FH-14	1,264.24	0	1,399.20	58
EX. J-10	1,269.19	0	1,399.39	56
EX. J-20	1,269.19	0	1,399.19	56
EX. J-30	1,270.95	0	1,398.58	55
EX. J-40	1,271.09	0	1,398.28	55
EX. J-50	1,271.14	0	1,398.22	55
EX. J-80	1,270.57	0	1,398.21	55
EX. J-100	1,271.19	0	1,398.20	55
EX. J-110	1,272.19	0	1,398.20	55
EX. J-120	1,272.19	0	1,398.09	54
EX. J-130	1,272.19	0	1,395.62	53
EX. J-160	1,267.38	0	1,393.13	54
EX. J-170	1,266.78	0	1,392.06	54
EX. J-180	1,266.19	0	1,390.55	54
EX. J-190	1,265.19	0	1,399.22	58
EX. J-200	1,267.62	0	1,400.96	58
EX. J-210	1,267.55	0	1,400.75	58
EX. J-220	1,263.18	0	1,399.15	59
EX. J-230	1,259.24	0	1,399.09	61
EX. J-240	1,264.24	0	1,398.99	58
EX. J-250	1,266.24	0	1,398.52	57
EX. J-260	1,267.24	0	1,398.51	57
EX. J-270	1,267.24	0	1,398.46	57
EX. J-280	1,272.24	0	1,398.21	55
EX. J-290	1,271.86	0	1,398.21	55
EX. J-300	1,271.24	0	1,398.39	55
EX. J-310	1,269.24	0	1,398.20	56
EX. J-320	1,269.24	0	1,398.20	56
EX. J-330	1,270.24	0	1,398.20	55
FH-1	1,266.88	0	1,392.21	54
J-60	1,271.04	0	1,398.22	55
J-70	1,270.62	0	1,398.22	55
J-90	1,270.54	0	1,398.21	55
J-140	1,267.70	0	1,393.72	55
J-150	1,267.66	0	1,393.66	55

FlexTable: Pipe Table

Active Scenario: CALIBRATION RESIDUAL

Label	Diameter (in)	Length (ft)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
EX. P-5	6.0	32	119	1.35	1.436
EX. P-10	6.0	106	119	1.35	1.438
EX. P-15	6.0	363	119	1.35	1.437
EX. P-20	6.0	60	119	1.35	1.439
EX. P-25	6.0	208	-119	1.35	1.438
EX. P-30	6.0	42	-119	1.35	1.436
EX. P-35	12.0	24	119	0.34	0.051
EX. P-40	12.0	34	119	0.34	0.047
EX. P-45	12.0	95	-119	0.34	0.050
EX. P-50	12.0	15	-119	0.34	0.050
EX. P-55	12.0	53	119	0.34	0.048
EX. P-60	12.0	249	-119	0.34	0.049
EX. P-65	20.0	170	119	0.12	0.004
EX. P-70	6.0	11	-346	3.93	10.410
EX. P-75	6.0	103	-346	3.93	9.072
EX. P-80	6.0	169	-346	3.93	9.073
EX. P-85	6.0	140	346	3.93	10.407
EX. P-90	6.0	50	-346	3.93	9.075
EX. P-95	6.0	6	-346	3.93	9.067
EX. P-100	6.0	51	-346	3.93	10.407
EX. P-105	6.0	88	-346	3.93	10.408
EX. P-110	6.0	15	-346	3.93	10.406
EX. P-115	6.0	167	-346	3.93	9.073
EX. P-120	6.0	25	-346	3.93	9.070
EX. P-125	6.0	44	1,846	20.94	201.156
EX. P-130	12.0	351	-2,073	5.88	8.525
EX. P-135	12.0	124	2,279	6.46	10.158
EX. P-140	12.0	20	2,279	6.46	10.163
EX. P-145	12.0	133	-2,279	6.46	10.158
EX. P-150	12.0	353	-119	0.34	0.043
EX. P-155	12.0	102	227	0.65	0.163
EX. P-160	12.0	353	227	0.65	0.163
EX. P-165	12.0	643	145	0.41	0.071
EX. P-170	12.0	165	145	0.41	0.071
EX. P-175	8.0	220	145	0.93	0.446
EX. P-180	8.0	9	145	0.93	0.451
EX. P-185	8.0	270	145	0.93	0.446
EX. P-190	8.0	776	145	0.93	0.446
EX. P-195	8.0	34	145	0.93	0.444
EX. P-200	8.0	92	145	0.93	0.446
EX. P-205	8.0	252	145	0.93	0.446
EX. P-210	8.0	319	145	0.93	0.447
EX. P-215	20.0	208	145	0.15	0.006
EX. P-220	20.0	338	227	0.23	0.014
EX. P-225	20.0	294	227	0.23	0.013
EX. P-230	20.0	13	227	0.23	0.019
EX. P-235	20.0	163	227	0.23	0.013

FlexTable: Pipe Table

Active Scenario: CALIBRATION RESIDUAL

Label	Diameter (in)	Length (ft)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
EX. P-240	20.0	53	227	0.23	0.014
EX. P-245	6.0	288	82	0.93	0.633
EX. P-250	6.0	1,196	82	0.93	0.633
P-0	48.0	29	4,352	0.77	0.046
P-00	48.0	31	4,352	0.77	0.047

FlexTable: Junction Table

Active Scenario: CALIBRATION MAX

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
EX. FH-1 (PRESSURE)	1,267.24	0	1,314.43	20
EX. FH-2 (FLOW A)	1,267.19	4,420	1,303.87	16
EX. FH-3 (FLOW B)	1,265.19	4,420	1,270.82	2
EX. FH-4	1,270.41	0	1,299.65	13
EX. FH-5	1,270.91	0	1,301.27	13
EX. FH-6	1,270.19	0	1,303.65	14
EX. FH-7	1,269.19	0	1,284.87	7
EX. FH-8	1,271.19	0	1,295.79	11
EX. FH-9	1,271.24	0	1,299.63	12
EX. FH-10	1,268.24	0	1,300.18	14
EX. FH-11	1,263.24	0	1,302.10	17
EX. FH-12	1,264.24	0	1,302.55	17
EX. FH-13	1,261.24	0	1,302.98	18
EX. FH-14	1,264.24	0	1,303.36	17
EX. J-10	1,269.19	0	1,303.81	15
EX. J-20	1,269.19	0	1,303.11	15
EX. J-30	1,270.95	0	1,300.96	13
EX. J-40	1,271.09	0	1,299.90	12
EX. J-50	1,271.14	0	1,299.69	12
EX. J-80	1,270.57	0	1,299.66	13
EX. J-100	1,271.19	0	1,299.61	12
EX. J-110	1,272.19	0	1,299.61	12
EX. J-120	1,272.19	0	1,299.20	12
EX. J-130	1,272.19	0	1,290.19	8
EX. J-160	1,267.38	0	1,281.08	6
EX. J-170	1,266.78	0	1,277.16	4
EX. J-180	1,266.19	0	1,271.63	2
EX. J-190	1,265.19	0	1,303.43	17
EX. J-200	1,267.62	0	1,309.70	18
EX. J-210	1,267.55	0	1,308.93	18
EX. J-220	1,263.18	0	1,303.15	17
EX. J-230	1,259.24	0	1,302.94	19
EX. J-240	1,264.24	0	1,302.57	17
EX. J-250	1,266.24	0	1,300.81	15
EX. J-260	1,267.24	0	1,300.76	15
EX. J-270	1,267.24	0	1,300.60	14
EX. J-280	1,272.24	0	1,299.65	12
EX. J-290	1,271.86	0	1,299.65	12
EX. J-300	1,271.24	0	1,300.33	13
EX. J-310	1,269.24	0	1,299.62	13
EX. J-320	1,269.24	0	1,299.62	13
EX. J-330	1,270.24	0	1,299.61	13
FH-1	1,266.88	0	1,277.72	5
J-60	1,271.04	0	1,299.69	12
J-70	1,270.62	0	1,299.68	13
J-90	1,270.54	0	1,299.66	13
J-140	1,267.70	0	1,283.22	7
J-150	1,267.66	0	1,283.02	7

FlexTable: Pipe Table

Active Scenario: CALIBRATION MAX

Label	Diameter (in)	Length (ft)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
EX. P-5	6.0	32	235	2.67	5.075
EX. P-10	6.0	106	235	2.67	5.074
EX. P-15	6.0	363	235	2.67	5.075
EX. P-20	6.0	60	235	2.67	5.074
EX. P-25	6.0	208	-235	2.67	5.075
EX. P-30	6.0	42	-235	2.67	5.076
EX. P-35	12.0	24	235	0.67	0.173
EX. P-40	12.0	34	235	0.67	0.174
EX. P-45	12.0	95	-235	0.67	0.173
EX. P-50	12.0	15	-235	0.67	0.175
EX. P-55	12.0	53	235	0.67	0.174
EX. P-60	12.0	249	-235	0.67	0.173
EX. P-65	20.0	170	235	0.24	0.014
EX. P-70	6.0	11	-698	7.92	38.076
EX. P-75	6.0	103	-698	7.92	33.194
EX. P-80	6.0	169	-698	7.92	33.194
EX. P-85	6.0	140	698	7.92	38.077
EX. P-90	6.0	50	-698	7.92	33.192
EX. P-95	6.0	6	-698	7.92	33.190
EX. P-100	6.0	51	-698	7.92	38.077
EX. P-105	6.0	88	-698	7.92	38.077
EX. P-110	6.0	15	-698	7.92	38.072
EX. P-115	6.0	167	-698	7.92	33.194
EX. P-120	6.0	25	-698	7.92	33.192
EX. P-125	6.0	44	3,722	42.24	737.506
EX. P-130	12.0	351	-4,185	11.87	31.310
EX. P-135	12.0	124	4,655	13.21	38.132
EX. P-140	12.0	20	4,655	13.21	38.132
EX. P-145	12.0	133	-4,655	13.21	38.131
EX. P-150	12.0	353	-235	0.67	0.151
EX. P-155	12.0	102	463	1.31	0.608
EX. P-160	12.0	353	463	1.31	0.608
EX. P-165	12.0	643	295	0.84	0.265
EX. P-170	12.0	165	295	0.84	0.265
EX. P-175	8.0	220	295	1.89	1.664
EX. P-180	8.0	9	295	1.89	1.659
EX. P-185	8.0	270	295	1.89	1.664
EX. P-190	8.0	776	295	1.89	1.664
EX. P-195	8.0	34	295	1.89	1.665
EX. P-200	8.0	92	295	1.89	1.663
EX. P-205	8.0	252	295	1.89	1.664
EX. P-210	8.0	319	295	1.89	1.664
EX. P-215	20.0	208	295	0.30	0.022
EX. P-220	20.0	338	463	0.47	0.051
EX. P-225	20.0	294	463	0.47	0.050
EX. P-230	20.0	13	463	0.47	0.056
EX. P-235	20.0	163	463	0.47	0.050

FlexTable: Pipe Table

Active Scenario: CALIBRATION MAX

Label	Diameter (in)	Length (ft)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
EX. P-240	20.0	53	463	0.47	0.050
EX. P-245	6.0	288	167	1.90	2.359
EX. P-250	6.0	1,196	167	1.90	2.359
P-0	48.0	29	8,840	1.57	0.166
P-00	48.0	31	8,840	1.57	0.167

TABLE 4 – HYDRAULIC MODELING RESULTS

FlexTable: Junction Table

Active Scenario: AVERAGE DAY DEMAND

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
EX. FH-1 (PRESSURE)	1,267.24	0	1,434.52	72
EX. FH-2 (FLOW A)	1,267.19	0	1,434.52	72
EX. FH-3 (FLOW B)	1,265.19	0	1,434.51	73
EX. FH-4	1,270.41	0	1,434.47	71
EX. FH-5	1,270.91	0	1,434.49	71
EX. FH-6	1,270.19	0	1,434.52	71
EX. FH-7	1,269.19	0	1,434.47	72
EX. FH-8	1,271.19	0	1,434.47	71
EX. FH-9	1,271.24	0	1,434.47	71
EX. FH-10	1,268.24	0	1,434.48	72
EX. FH-11	1,263.24	0	1,434.50	74
EX. FH-12	1,264.24	0	1,434.51	74
EX. FH-13	1,261.24	0	1,434.51	75
EX. FH-14	1,264.24	0	1,434.52	74
EX. J-10	1,269.19	0	1,434.52	72
EX. J-20	1,269.19	0	1,434.51	72
EX. J-30	1,270.95	0	1,434.48	71
EX. J-40	1,271.09	0	1,434.47	71
EX. J-50	1,271.14	0	1,434.47	71
EX. J-80	1,270.57	5	1,434.47	71
EX. J-100	1,271.19	0	1,434.47	71
EX. J-110	1,272.19	0	1,434.47	70
EX. J-120	1,272.19	0	1,434.47	70
EX. J-130	1,272.19	0	1,434.47	70
EX. J-160	1,267.38	0	1,434.47	72
EX. J-170	1,266.78	32	1,434.47	73
EX. J-180	1,266.19	0	1,434.50	73
EX. J-190	1,265.19	0	1,434.52	73
EX. J-200	1,267.62	0	1,434.52	72
EX. J-210	1,267.55	0	1,434.52	72
EX. J-220	1,263.18	0	1,434.51	74
EX. J-230	1,259.24	0	1,434.51	76
EX. J-240	1,264.24	0	1,434.51	74
EX. J-250	1,266.24	0	1,434.48	73
EX. J-260	1,267.24	0	1,434.48	72
EX. J-270	1,267.24	0	1,434.48	72
EX. J-280	1,272.24	0	1,434.47	70
EX. J-290	1,271.86	0	1,434.47	70
EX. J-300	1,271.24	0	1,434.48	71
EX. J-310	1,269.24	0	1,434.47	71
EX. J-320	1,269.24	0	1,434.47	71
EX. J-330	1,270.24	0	1,434.47	71
FH-1	1,266.88	0	1,434.47	73
J-60	1,271.04	0	1,434.47	71
J-70	1,270.62	63	1,434.46	71
J-90	1,270.54	0	1,434.47	71
J-140	1,267.70	11	1,434.47	72
J-150	1,267.66	0	1,434.47	72

FlexTable: Pipe Table

Active Scenario: AVERAGE DAY DEMAND

Label	Diameter (in)	Length (ft)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
EX. P-5	6.0	32	23	0.27	0.071
EX. P-10	6.0	106	23	0.27	0.072
EX. P-15	6.0	363	23	0.27	0.071
EX. P-20	6.0	60	23	0.27	0.073
EX. P-25	6.0	208	-23	0.27	0.071
EX. P-30	6.0	42	-23	0.27	0.072
EX. P-35	12.0	24	23	0.07	0.000
EX. P-40	12.0	34	23	0.07	0.004
EX. P-45	12.0	95	39	0.11	0.006
EX. P-50	12.0	15	44	0.12	0.008
EX. P-55	12.0	53	-44	0.12	0.007
EX. P-60	12.0	249	44	0.12	0.008
EX. P-65	20.0	170	-44	0.04	0.001
EX. P-70	6.0	11	0	0.00	0.000
EX. P-75	6.0	103	0	0.00	0.000
EX. P-80	6.0	169	0	0.00	0.000
EX. P-85	6.0	140	0	0.00	0.000
EX. P-90	6.0	50	0	0.00	0.000
EX. P-95	6.0	6	11	0.13	0.021
EX. P-100	6.0	51	11	0.13	0.019
EX. P-105	6.0	88	11	0.13	0.018
EX. P-110	6.0	15	11	0.13	0.017
EX. P-115	6.0	167	43	0.49	0.191
EX. P-120	6.0	25	43	0.49	0.189
EX. P-125	6.0	44	43	0.49	0.190
EX. P-130	12.0	351	-87	0.25	0.024
EX. P-135	12.0	124	23	0.07	0.002
EX. P-140	12.0	20	23	0.07	0.000
EX. P-145	12.0	133	-23	0.07	0.002
EX. P-150	12.0	353	-23	0.07	0.002
EX. P-155	12.0	102	43	0.12	0.007
EX. P-160	12.0	353	43	0.12	0.008
EX. P-165	12.0	643	28	0.08	0.003
EX. P-170	12.0	165	28	0.08	0.003
EX. P-175	8.0	220	28	0.18	0.021
EX. P-180	8.0	9	28	0.18	0.013
EX. P-185	8.0	270	28	0.18	0.021
EX. P-190	8.0	776	28	0.18	0.021
EX. P-195	8.0	34	28	0.18	0.022
EX. P-200	8.0	92	28	0.18	0.021
EX. P-205	8.0	252	28	0.18	0.021
EX. P-210	8.0	319	28	0.18	0.021
EX. P-215	20.0	208	28	0.03	0.001
EX. P-220	20.0	338	43	0.04	0.000
EX. P-225	20.0	294	43	0.04	0.001
EX. P-230	20.0	13	43	0.04	0.000
EX. P-235	20.0	163	43	0.04	0.001

FlexTable: Pipe Table

Active Scenario: AVERAGE DAY DEMAND

Label	Diameter (in)	Length (ft)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
EX. P-240	20.0	53	43	0.04	0.000
EX. P-245	6.0	288	16	0.18	0.030
EX. P-250	6.0	1,196	16	0.18	0.030
P-0	48.0	29	110	0.02	0.004
P-00	48.0	31	110	0.02	0.000

FlexTable: Junction Table

Active Scenario: MAX DAY DEMAND

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
EX. FH-1 (PRESSURE)	1,267.24	0	1,434.43	72
EX. FH-2 (FLOW A)	1,267.19	0	1,434.43	72
EX. FH-3 (FLOW B)	1,265.19	0	1,434.37	73
EX. FH-4	1,270.41	0	1,434.22	71
EX. FH-5	1,270.91	0	1,434.30	71
EX. FH-6	1,270.19	0	1,434.42	71
EX. FH-7	1,269.19	0	1,434.23	71
EX. FH-8	1,271.19	0	1,434.23	71
EX. FH-9	1,271.24	0	1,434.23	71
EX. FH-10	1,268.24	0	1,434.25	72
EX. FH-11	1,263.24	0	1,434.34	74
EX. FH-12	1,264.24	0	1,434.36	74
EX. FH-13	1,261.24	0	1,434.38	75
EX. FH-14	1,264.24	0	1,434.40	74
EX. J-10	1,269.19	0	1,434.43	71
EX. J-20	1,269.19	0	1,434.39	71
EX. J-30	1,270.95	0	1,434.28	71
EX. J-40	1,271.09	0	1,434.23	71
EX. J-50	1,271.14	0	1,434.22	71
EX. J-80	1,270.57	9	1,434.22	71
EX. J-100	1,271.19	0	1,434.23	71
EX. J-110	1,272.19	0	1,434.23	70
EX. J-120	1,272.19	0	1,434.23	70
EX. J-130	1,272.19	0	1,434.23	70
EX. J-160	1,267.38	0	1,434.23	72
EX. J-170	1,266.78	63	1,434.24	72
EX. J-180	1,266.19	0	1,434.35	73
EX. J-190	1,265.19	0	1,434.40	73
EX. J-200	1,267.62	0	1,434.43	72
EX. J-210	1,267.55	0	1,434.43	72
EX. J-220	1,263.18	0	1,434.39	74
EX. J-230	1,259.24	0	1,434.38	76
EX. J-240	1,264.24	0	1,434.36	74
EX. J-250	1,266.24	0	1,434.28	73
EX. J-260	1,267.24	0	1,434.28	72
EX. J-270	1,267.24	0	1,434.27	72
EX. J-280	1,272.24	0	1,434.23	70
EX. J-290	1,271.86	0	1,434.23	70
EX. J-300	1,271.24	0	1,434.26	71
EX. J-310	1,269.24	0	1,434.23	71
EX. J-320	1,269.24	0	1,434.23	71
EX. J-330	1,270.24	0	1,434.23	71
FH-1	1,266.88	0	1,434.24	72
J-60	1,271.04	0	1,434.22	71
J-70	1,270.62	125	1,434.22	71
J-90	1,270.54	0	1,434.22	71
J-140	1,267.70	22	1,434.23	72
J-150	1,267.66	0	1,434.23	72

FlexTable: Pipe Table

Active Scenario: MAX DAY DEMAND

Label	Diameter (in)	Length (ft)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
EX. P-5	6.0	32	47	0.53	0.259
EX. P-10	6.0	106	47	0.53	0.257
EX. P-15	6.0	363	47	0.53	0.257
EX. P-20	6.0	60	47	0.53	0.259
EX. P-25	6.0	208	-47	0.53	0.257
EX. P-30	6.0	42	-47	0.53	0.258
EX. P-35	12.0	24	47	0.13	0.005
EX. P-40	12.0	34	47	0.13	0.011
EX. P-45	12.0	95	78	0.22	0.023
EX. P-50	12.0	15	88	0.25	0.025
EX. P-55	12.0	53	-88	0.25	0.027
EX. P-60	12.0	249	88	0.25	0.028
EX. P-65	20.0	170	-88	0.09	0.002
EX. P-70	6.0	11	1	0.01	0.000
EX. P-75	6.0	103	1	0.01	0.001
EX. P-80	6.0	169	1	0.01	0.000
EX. P-85	6.0	140	-1	0.01	0.000
EX. P-90	6.0	50	1	0.01	0.000
EX. P-95	6.0	6	23	0.26	0.062
EX. P-100	6.0	51	23	0.26	0.067
EX. P-105	6.0	88	23	0.26	0.068
EX. P-110	6.0	15	23	0.26	0.066
EX. P-115	6.0	167	86	0.98	0.688
EX. P-120	6.0	25	86	0.98	0.690
EX. P-125	6.0	44	86	0.98	0.687
EX. P-130	12.0	351	-173	0.49	0.086
EX. P-135	12.0	124	47	0.13	0.008
EX. P-140	12.0	20	47	0.13	0.006
EX. P-145	12.0	133	-47	0.13	0.007
EX. P-150	12.0	353	-47	0.13	0.008
EX. P-155	12.0	102	87	0.25	0.028
EX. P-160	12.0	353	87	0.25	0.027
EX. P-165	12.0	643	56	0.16	0.012
EX. P-170	12.0	165	56	0.16	0.012
EX. P-175	8.0	220	56	0.35	0.075
EX. P-180	8.0	9	56	0.35	0.080
EX. P-185	8.0	270	56	0.35	0.075
EX. P-190	8.0	776	56	0.35	0.075
EX. P-195	8.0	34	56	0.35	0.076
EX. P-200	8.0	92	56	0.35	0.075
EX. P-205	8.0	252	56	0.35	0.075
EX. P-210	8.0	319	56	0.35	0.075
EX. P-215	20.0	208	56	0.06	0.001
EX. P-220	20.0	338	87	0.09	0.003
EX. P-225	20.0	294	87	0.09	0.002
EX. P-230	20.0	13	87	0.09	0.009
EX. P-235	20.0	163	87	0.09	0.002

FlexTable: Pipe Table

Active Scenario: MAX DAY DEMAND

Label	Diameter (in)	Length (ft)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
EX. P-240	20.0	53	87	0.09	0.002
EX. P-245	6.0	288	31	0.36	0.106
EX. P-250	6.0	1,196	31	0.36	0.107
P-0	48.0	29	220	0.04	0.000
P-00	48.0	31	220	0.04	0.000

FlexTable: Junction Table

Active Scenario: PEAK HOUR DEMAND

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
EX. FH-1 (PRESSURE)	1,267.24	0	1,434.03	72
EX. FH-2 (FLOW A)	1,267.19	0	1,434.03	72
EX. FH-3 (FLOW B)	1,265.19	0	1,433.78	73
EX. FH-4	1,270.41	0	1,433.21	70
EX. FH-5	1,270.91	0	1,433.51	70
EX. FH-6	1,270.19	0	1,433.98	71
EX. FH-7	1,269.19	0	1,433.18	71
EX. FH-8	1,271.19	0	1,433.22	70
EX. FH-9	1,271.24	0	1,433.24	70
EX. FH-10	1,268.24	0	1,433.33	71
EX. FH-11	1,263.24	0	1,433.67	74
EX. FH-12	1,264.24	0	1,433.75	73
EX. FH-13	1,261.24	0	1,433.83	75
EX. FH-14	1,264.24	0	1,433.90	73
EX. J-10	1,269.19	0	1,434.02	71
EX. J-20	1,269.19	0	1,433.88	71
EX. J-30	1,270.95	0	1,433.45	70
EX. J-40	1,271.09	0	1,433.25	70
EX. J-50	1,271.14	0	1,433.20	70
EX. J-80	1,270.57	28	1,433.21	70
EX. J-100	1,271.19	0	1,433.23	70
EX. J-110	1,272.19	0	1,433.23	70
EX. J-120	1,272.19	0	1,433.23	70
EX. J-130	1,272.19	0	1,433.20	70
EX. J-160	1,267.38	0	1,433.18	72
EX. J-170	1,266.78	157	1,433.20	72
EX. J-180	1,266.19	0	1,433.70	72
EX. J-190	1,265.19	0	1,433.91	73
EX. J-200	1,267.62	0	1,434.03	72
EX. J-210	1,267.55	0	1,434.03	72
EX. J-220	1,263.18	0	1,433.86	74
EX. J-230	1,259.24	0	1,433.82	76
EX. J-240	1,264.24	0	1,433.76	73
EX. J-250	1,266.24	0	1,433.45	72
EX. J-260	1,267.24	0	1,433.44	72
EX. J-270	1,267.24	0	1,433.41	72
EX. J-280	1,272.24	0	1,433.24	70
EX. J-290	1,271.86	0	1,433.24	70
EX. J-300	1,271.24	0	1,433.36	70
EX. J-310	1,269.24	0	1,433.23	71
EX. J-320	1,269.24	0	1,433.23	71
EX. J-330	1,270.24	0	1,433.23	71
FH-1	1,266.88	0	1,433.20	72
J-60	1,271.04	0	1,433.20	70
J-70	1,270.62	219	1,433.20	70
J-90	1,270.54	0	1,433.21	70
J-140	1,267.70	67	1,433.18	72
J-150	1,267.66	0	1,433.18	72

FlexTable: Pipe Table

Active Scenario: PEAK HOUR DEMAND

Label	Diameter (in)	Length (ft)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
EX. P-5	6.0	32	98	1.11	0.996
EX. P-10	6.0	106	98	1.11	0.998
EX. P-15	6.0	363	98	1.11	0.999
EX. P-20	6.0	60	98	1.11	0.998
EX. P-25	6.0	208	-98	1.11	0.998
EX. P-30	6.0	42	-98	1.11	0.999
EX. P-35	12.0	24	98	0.28	0.036
EX. P-40	12.0	34	98	0.28	0.033
EX. P-45	12.0	95	122	0.34	0.051
EX. P-50	12.0	15	149	0.42	0.075
EX. P-55	12.0	53	-149	0.42	0.073
EX. P-60	12.0	249	149	0.42	0.075
EX. P-65	20.0	170	-149	0.15	0.006
EX. P-70	6.0	11	-32	0.37	0.127
EX. P-75	6.0	103	-32	0.37	0.113
EX. P-80	6.0	169	-32	0.37	0.113
EX. P-85	6.0	140	32	0.37	0.129
EX. P-90	6.0	50	-32	0.37	0.113
EX. P-95	6.0	6	35	0.39	0.125
EX. P-100	6.0	51	35	0.39	0.146
EX. P-105	6.0	88	35	0.39	0.145
EX. P-110	6.0	15	35	0.39	0.149
EX. P-115	6.0	167	191	2.17	3.014
EX. P-120	6.0	25	191	2.17	3.017
EX. P-125	6.0	44	191	2.17	3.015
EX. P-130	12.0	351	-373	1.06	0.355
EX. P-135	12.0	124	98	0.28	0.030
EX. P-140	12.0	20	98	0.28	0.030
EX. P-145	12.0	133	-98	0.28	0.029
EX. P-150	12.0	353	-98	0.28	0.030
EX. P-155	12.0	102	182	0.52	0.108
EX. P-160	12.0	353	182	0.52	0.108
EX. P-165	12.0	643	116	0.33	0.047
EX. P-170	12.0	165	116	0.33	0.047
EX. P-175	8.0	220	116	0.74	0.295
EX. P-180	8.0	9	116	0.74	0.305
EX. P-185	8.0	270	116	0.74	0.295
EX. P-190	8.0	776	116	0.74	0.295
EX. P-195	8.0	34	116	0.74	0.296
EX. P-200	8.0	92	116	0.74	0.294
EX. P-205	8.0	252	116	0.74	0.295
EX. P-210	8.0	319	116	0.74	0.295
EX. P-215	20.0	208	116	0.12	0.004
EX. P-220	20.0	338	182	0.19	0.009
EX. P-225	20.0	294	182	0.19	0.009
EX. P-230	20.0	13	182	0.19	0.009
EX. P-235	20.0	163	182	0.19	0.009

FlexTable: Pipe Table

Active Scenario: PEAK HOUR DEMAND

Label	Diameter (in)	Length (ft)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
EX. P-240	20.0	53	182	0.19	0.009
EX. P-245	6.0	288	66	0.75	0.418
EX. P-250	6.0	1,196	66	0.75	0.418
P-0	48.0	29	471	0.08	0.000
P-00	48.0	31	471	0.08	0.000

FlexTable: Junction Table

Active Scenario: Max Day + FF (North)

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
EX. FH-1 (PRESSURE)	1,267.24	0	1,416.05	64
EX. FH-2 (FLOW A)	1,267.19	0	1,415.60	64
EX. FH-3 (FLOW B)	1,265.19	0	1,408.33	62
EX. FH-4	1,270.41	1,000	1,388.72	51
EX. FH-5	1,270.91	1,000	1,387.93	51
EX. FH-6	1,270.19	0	1,413.27	62
EX. FH-7	1,269.19	0	1,390.12	52
EX. FH-8	1,271.19	0	1,389.88	51
EX. FH-9	1,271.24	0	1,389.95	51
EX. FH-10	1,268.24	0	1,393.19	54
EX. FH-11	1,263.24	0	1,404.44	61
EX. FH-12	1,264.24	0	1,407.07	62
EX. FH-13	1,261.24	0	1,409.57	64
EX. FH-14	1,264.24	0	1,411.82	64
EX. J-10	1,269.19	0	1,415.03	63
EX. J-20	1,269.19	0	1,407.56	60
EX. J-30	1,270.95	0	1,388.08	51
EX. J-40	1,271.09	0	1,388.58	51
EX. J-50	1,271.14	0	1,388.68	51
EX. J-80	1,270.57	9	1,388.71	51
EX. J-100	1,271.19	0	1,389.74	51
EX. J-110	1,272.19	0	1,389.80	51
EX. J-120	1,272.19	0	1,389.80	51
EX. J-130	1,272.19	0	1,390.01	51
EX. J-160	1,267.38	0	1,390.23	53
EX. J-170	1,266.78	63	1,391.68	54
EX. J-180	1,266.19	0	1,406.19	61
EX. J-190	1,265.19	0	1,412.19	64
EX. J-200	1,267.62	0	1,415.85	64
EX. J-210	1,267.55	0	1,415.81	64
EX. J-220	1,263.18	0	1,410.57	64
EX. J-230	1,259.24	0	1,409.31	65
EX. J-240	1,264.24	0	1,407.16	62
EX. J-250	1,266.24	0	1,396.87	57
EX. J-260	1,267.24	0	1,396.54	56
EX. J-270	1,267.24	0	1,395.64	56
EX. J-280	1,272.24	0	1,390.08	51
EX. J-290	1,271.86	0	1,390.05	51
EX. J-300	1,271.24	0	1,394.03	53
EX. J-310	1,269.24	0	1,389.86	52
EX. J-320	1,269.24	0	1,389.86	52
EX. J-330	1,270.24	0	1,389.81	52
FH-1	1,266.88	1,000	1,390.35	53
J-60	1,271.04	0	1,388.68	51
J-70	1,270.62	125	1,388.68	51
J-90	1,270.54	0	1,388.71	51
J-140	1,267.70	22	1,390.16	53
J-150	1,267.66	0	1,390.17	53

FlexTable: Pipe Table

Active Scenario: Max Day + FF (North)

Label	Diameter (in)	Length (ft)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
EX. P-5	6.0	32	843	9.57	54.059
EX. P-10	6.0	106	843	9.57	54.057
EX. P-15	6.0	363	843	9.57	54.058
EX. P-20	6.0	60	-157	1.78	2.405
EX. P-25	6.0	208	157	1.78	2.404
EX. P-30	6.0	42	157	1.78	2.403
EX. P-35	12.0	24	-157	0.45	0.081
EX. P-40	12.0	34	-157	0.45	0.083
EX. P-45	12.0	95	282	0.80	0.243
EX. P-50	12.0	15	292	0.83	0.258
EX. P-55	12.0	53	-292	0.83	0.259
EX. P-60	12.0	249	1,292	3.66	4.071
EX. P-65	20.0	170	-1,292	1.32	0.338
EX. P-70	6.0	11	89	1.02	0.856
EX. P-75	6.0	103	89	1.02	0.740
EX. P-80	6.0	169	89	1.02	0.740
EX. P-85	6.0	140	-89	1.02	0.848
EX. P-90	6.0	50	89	1.02	0.740
EX. P-95	6.0	6	112	1.27	1.123
EX. P-100	6.0	51	112	1.27	1.278
EX. P-105	6.0	88	112	1.27	1.280
EX. P-110	6.0	15	1,112	12.61	90.233
EX. P-115	6.0	167	1,175	13.33	87.143
EX. P-120	6.0	25	1,175	13.33	87.144
EX. P-125	6.0	44	1,175	13.33	87.143
EX. P-130	12.0	351	-2,377	6.74	10.983
EX. P-135	12.0	124	843	2.39	1.611
EX. P-140	12.0	20	843	2.39	1.607
EX. P-145	12.0	133	-843	2.39	1.610
EX. P-150	12.0	353	-843	2.39	1.610
EX. P-155	12.0	102	1,202	3.41	3.565
EX. P-160	12.0	353	1,202	3.41	3.564
EX. P-165	12.0	643	767	2.18	1.552
EX. P-170	12.0	165	767	2.18	1.552
EX. P-175	8.0	220	767	4.90	9.751
EX. P-180	8.0	9	767	4.90	9.752
EX. P-185	8.0	270	767	4.90	9.751
EX. P-190	8.0	776	767	4.90	9.751
EX. P-195	8.0	34	767	4.90	9.751
EX. P-200	8.0	92	767	4.90	9.751
EX. P-205	8.0	252	767	4.90	9.751
EX. P-210	8.0	319	767	4.90	9.751
EX. P-215	20.0	208	767	0.78	0.129
EX. P-220	20.0	338	1,202	1.23	0.296
EX. P-225	20.0	294	1,202	1.23	0.296
EX. P-230	20.0	13	1,202	1.23	0.299
EX. P-235	20.0	163	1,202	1.23	0.295

FlexTable: Pipe Table

Active Scenario: Max Day + FF (North)

Label	Diameter (in)	Length (ft)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
EX. P-240	20.0	53	1,202	1.23	0.298
EX. P-245	6.0	288	435	4.93	13.826
EX. P-250	6.0	1,196	435	4.93	13.826
P-0	48.0	29	3,220	0.57	0.025
P-00	48.0	31	3,220	0.57	0.027

FlexTable: Junction Table

Active Scenario: Max Day + FF (South)

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
EX. FH-1 (PRESSURE)	1,267.24	1,000	1,404.85	60
EX. FH-2 (FLOW A)	1,267.19	1,000	1,403.86	59
EX. FH-3 (FLOW B)	1,265.19	0	1,397.53	57
EX. FH-4	1,270.41	0	1,397.50	55
EX. FH-5	1,270.91	0	1,399.93	56
EX. FH-6	1,270.19	0	1,403.53	58
EX. FH-7	1,269.19	0	1,383.05	49
EX. FH-8	1,271.19	0	1,393.74	53
EX. FH-9	1,271.24	0	1,397.51	55
EX. FH-10	1,268.24	0	1,398.22	56
EX. FH-11	1,263.24	0	1,400.69	59
EX. FH-12	1,264.24	0	1,401.27	59
EX. FH-13	1,261.24	0	1,401.82	61
EX. FH-14	1,264.24	0	1,402.32	60
EX. J-10	1,269.19	0	1,403.78	58
EX. J-20	1,269.19	0	1,402.72	58
EX. J-30	1,270.95	0	1,399.46	56
EX. J-40	1,271.09	0	1,397.86	55
EX. J-50	1,271.14	0	1,397.53	55
EX. J-80	1,270.57	9	1,397.51	55
EX. J-100	1,271.19	0	1,397.48	55
EX. J-110	1,272.19	0	1,397.48	54
EX. J-120	1,272.19	0	1,397.09	54
EX. J-130	1,272.19	0	1,388.26	50
EX. J-160	1,267.38	0	1,379.46	48
EX. J-170	1,266.78	1,000	1,376.51	47
EX. J-180	1,266.19	0	1,394.82	56
EX. J-190	1,265.19	0	1,402.40	59
EX. J-200	1,267.62	0	1,404.41	59
EX. J-210	1,267.55	0	1,404.34	59
EX. J-220	1,263.18	0	1,402.04	60
EX. J-230	1,259.24	0	1,401.76	62
EX. J-240	1,264.24	0	1,401.29	59
EX. J-250	1,266.24	0	1,399.03	57
EX. J-260	1,267.24	0	1,398.96	57
EX. J-270	1,267.24	0	1,398.76	57
EX. J-280	1,272.24	0	1,397.54	54
EX. J-290	1,271.86	0	1,397.54	54
EX. J-300	1,271.24	0	1,398.41	55
EX. J-310	1,269.24	0	1,397.49	55
EX. J-320	1,269.24	0	1,397.49	55
EX. J-330	1,270.24	0	1,397.48	55
FH-1	1,266.88	1,000	1,376.36	47
J-60	1,271.04	0	1,397.53	55
J-70	1,270.62	125	1,397.52	55
J-90	1,270.54	0	1,397.51	55
J-140	1,267.70	22	1,381.43	49
J-150	1,267.66	0	1,381.25	49

FlexTable: Pipe Table

Active Scenario: Max Day + FF (South)

Label	Diameter (in)	Length (ft)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
EX. P-5	6.0	32	294	3.34	7.695
EX. P-10	6.0	106	294	3.34	7.698
EX. P-15	6.0	363	294	3.34	7.698
EX. P-20	6.0	60	294	3.34	7.697
EX. P-25	6.0	208	-294	3.34	7.698
EX. P-30	6.0	42	-294	3.34	7.697
EX. P-35	12.0	24	294	0.83	0.264
EX. P-40	12.0	34	294	0.83	0.264
EX. P-45	12.0	95	-169	0.48	0.093
EX. P-50	12.0	15	-160	0.45	0.083
EX. P-55	12.0	53	160	0.45	0.087
EX. P-60	12.0	249	-160	0.45	0.084
EX. P-65	20.0	170	160	0.16	0.007
EX. P-70	6.0	11	-690	7.83	37.289
EX. P-75	6.0	103	-690	7.83	32.509
EX. P-80	6.0	169	-690	7.83	32.507
EX. P-85	6.0	140	690	7.83	37.290
EX. P-90	6.0	50	-690	7.83	32.507
EX. P-95	6.0	6	-668	7.58	30.611
EX. P-100	6.0	51	-668	7.58	35.098
EX. P-105	6.0	88	-668	7.58	35.097
EX. P-110	6.0	15	332	3.77	9.644
EX. P-115	6.0	167	1,332	15.12	110.004
EX. P-120	6.0	25	1,332	15.12	110.006
EX. P-125	6.0	44	1,332	15.12	110.004
EX. P-130	12.0	351	-1,863	5.28	6.991
EX. P-135	12.0	124	1,294	3.67	3.562
EX. P-140	12.0	20	1,294	3.67	3.565
EX. P-145	12.0	133	-1,294	3.67	3.563
EX. P-150	12.0	353	-294	0.83	0.229
EX. P-155	12.0	102	530	1.50	0.782
EX. P-160	12.0	353	530	1.50	0.783
EX. P-165	12.0	643	338	0.96	0.341
EX. P-170	12.0	165	338	0.96	0.341
EX. P-175	8.0	220	338	2.16	2.141
EX. P-180	8.0	9	338	2.16	2.149
EX. P-185	8.0	270	338	2.16	2.141
EX. P-190	8.0	776	338	2.16	2.141
EX. P-195	8.0	34	338	2.16	2.142
EX. P-200	8.0	92	338	2.16	2.141
EX. P-205	8.0	252	338	2.16	2.141
EX. P-210	8.0	319	338	2.16	2.141
EX. P-215	20.0	208	338	0.35	0.028
EX. P-220	20.0	338	530	0.54	0.065
EX. P-225	20.0	294	530	0.54	0.065
EX. P-230	20.0	13	530	0.54	0.065
EX. P-235	20.0	163	530	0.54	0.065

FlexTable: Pipe Table

Active Scenario: Max Day + FF (South)

Label	Diameter (in)	Length (ft)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/1000ft)
EX. P-240	20.0	53	530	0.54	0.064
EX. P-245	6.0	288	192	2.18	3.035
EX. P-250	6.0	1,196	192	2.18	3.035
P-0	48.0	29	4,157	0.74	0.041
P-00	48.0	31	4,157	0.74	0.043

APPENDIX B – FIRE HYDRANT FLOW TEST RESULTS

Arizona Flow Testing LLC

HYDRANT FLOW TEST REPORT

Project Name:	Indian School and Goldwater
Project Address:	Indian School Rd. & Goldwater Blvd., Scottsdale, Arizona 85266
Client Project No:	Not Provided
Arizona Flow Testing Project No.:	24700
Flow Test Permit No:	C76191
Date flow test conducted:	August 27, 2024 at 7:30 AM
Data is current and reliable until:	February 27, 2025
Conducted by:	Floyd Vaughan–Arizona Flow Testing, LLC (480-250-8154)
Witnessed by:	Ray Padilla – City of Scottsdale-Inspector (602-541-0586)

Raw Test Data

Static Pressure: **104.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **90.0 PSI**
(Measured in pounds per square inch)

Pitot Pressure: **33.0 PSI-Hyd A**
34.0 PSI-Hyd B
(Measured in pounds per square inch)

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

Coefficient of Diffuser: 0.7875

Flowing GPM: **4,352 GPM**
(Measured in gallons per minute)
2,160 GPM + 2,192 GPM = 4,352 GPM

GPM @ 20 PSI: **11,453 GPM**

Data with 32 PSI Safety Factor

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

Residual Pressure: **58.0 PSI**
(Measured in pounds per square inch)

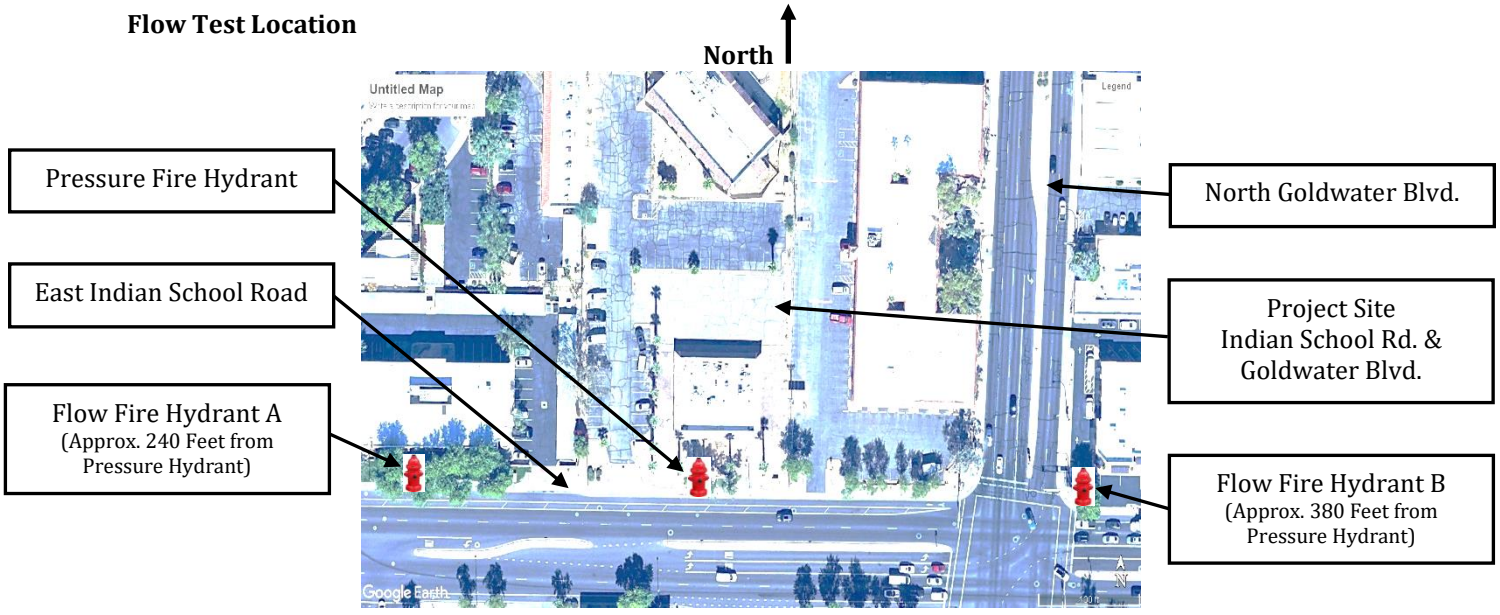
Approx. distance between hydrants: See Below

Main size: Not Provided

Flowing GPM: **4,352 GPM**

GPM @ 20 PSI: **8,840 GPM**

Flow Test Location



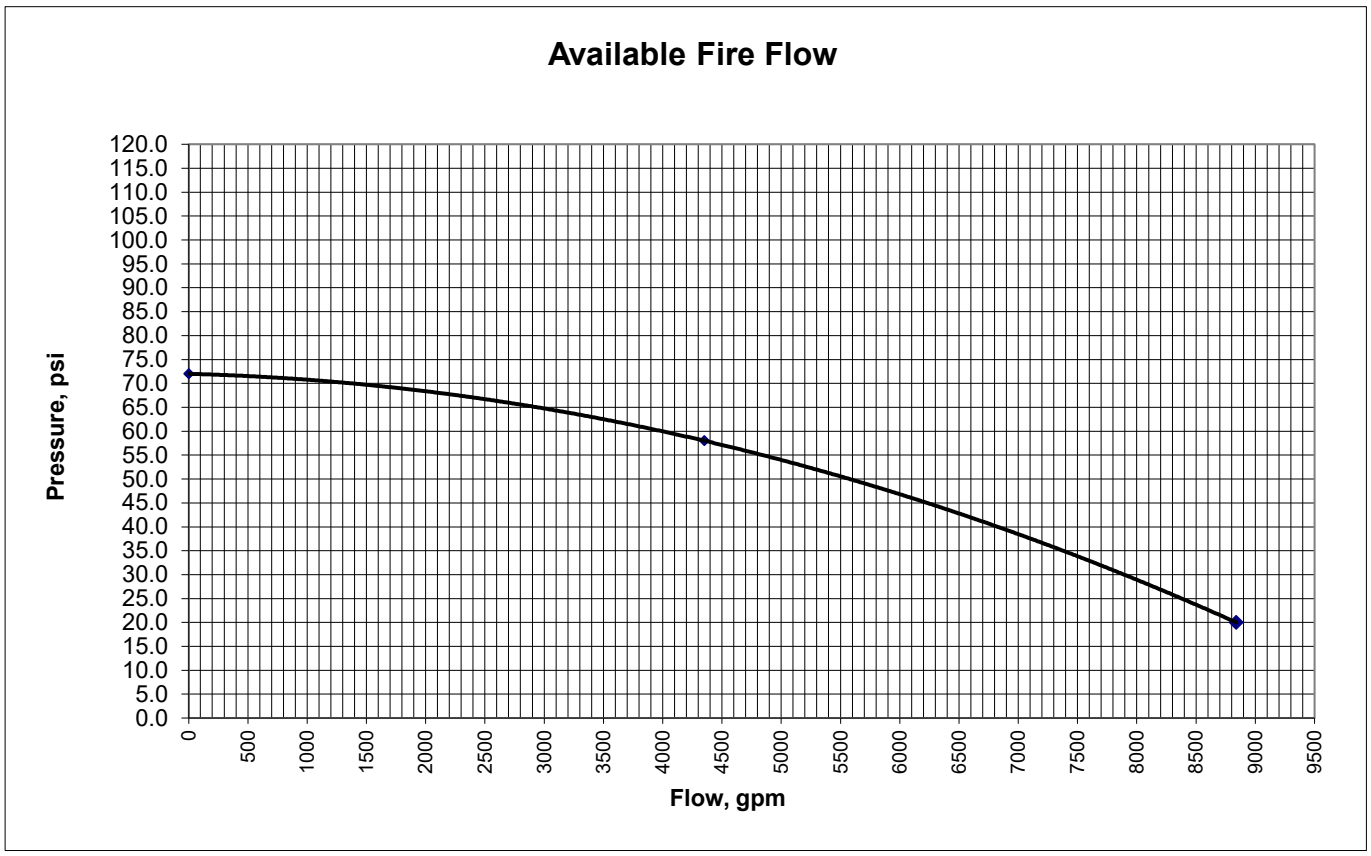
WOOD PATEL

EXISTING WATER SYSTEM PRESSURES

Project	Indian School & Goldwater
Location	Scottsdale
Project Number	245619
Project Engineer	Bradon Schield, E.I.T.

Flow Test Location
Date of Flow Test

Pressure Hydrant		**Flow Hydrant**	
Static Pressure (psi)	72.0		
Residual Pressure (psi)	58.0	Flow (gpm)	4352
Calculated Flow at 20 psi	8840 gpm	Calculated Flow at	20 psi



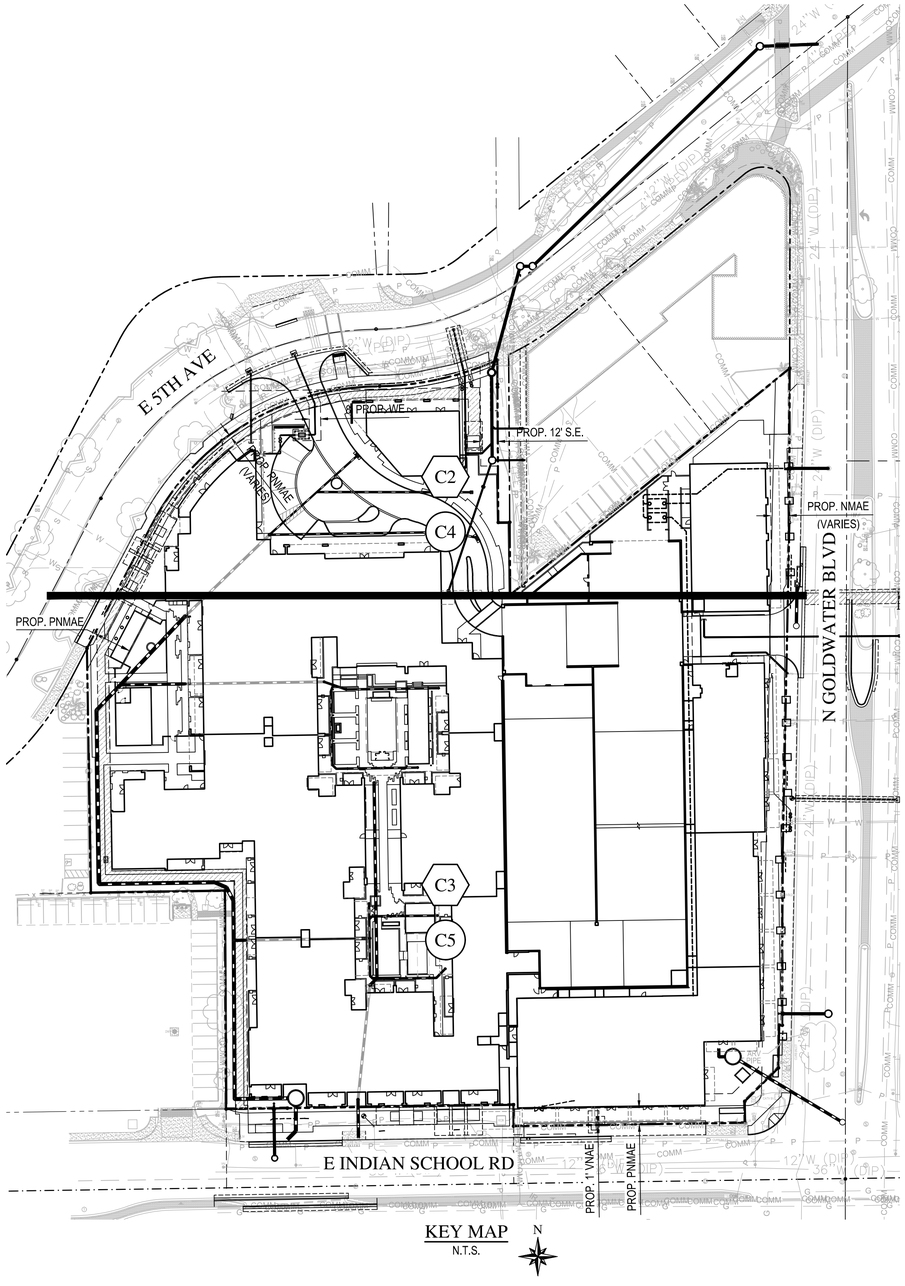
Discharge (gpm)	**Pressure (psi)**	**Head (ft)**
0	72.0	166.2
4352	58.0	133.9
8840	20	46.2

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

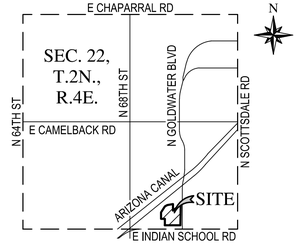
APPENDIX C – INDIAN SCHOOL & GOLDWATER PRELIMINARY IMPROVEMENT PLAN

5TH & GOLDWATER
PRELIMINARY IMPROVEMENT PLAN
SCOTTSDALE, ARIZONA

A PORTION OF SECTION 22, TOWNSHIP 2 NORTH, RANGE 4 EAST
OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA



KEY MAP
N.T.S.



VICINITY MAP
N.T.S.

OWNER / DEVELOPER
WOOD PARTNERS
8777 EAST VIA DE VENTURA, SUITE 201
SCOTTSDALE, ARIZONA 85258
CONTACT: TODD TAYLOR
PHONE: (480) 567-0069

ENGINEER
WOOD, PATEL & ASSOCIATES, INC.
2051 WEST NORTHERN AVENUE, SUITE 100
PHOENIX, ARIZONA 85021
CONTACT: DEREK C. NICHOLS, PE
PHONE: (602) 335-8500

ARCHITECT
NELSEN PARTNERS
15210 NORTH SCOTTSDALE ROAD
SUITE 300
SCOTTSDALE, ARIZONA 85254
CONTACT: JEFF BRAND
PHONE: (480) 949-6800

PROJECT SITE DATA
ASSESSOR PARCEL NUMBER(S):
173-48-055E, 173-48-056A, 173-48-047A, 173-48-047D, 173-48-050A
PROJECT SITE ADDRESS:
NWC INDIAN SCHOOL RD AND GOLDWATER BLVD
SCOTTSDALE, ARIZONA 85251
PROJECT SITE AREA(S):
NET AREA = 4.82 AC
DISTURBED AREA = 4.8± AC
ZONING:
D/OC-2 PBD DO (COS 12-ZN-2007)

PUBLIC UTILITIES

WATER	CITY OF SCOTTSDALE
SEWER	CITY OF SCOTTSDALE
ELECTRIC	ARIZONA PUBLIC SERVICE
TELEPHONE	LUMEN
NATURAL GAS	SOUTHWEST GAS
CABLE TV	COX COMMUNICATIONS

INDEX MAP LEGEND
CX GRADING & DRAINAGE
CX WATER & SEWER

BENCHMARK
THE VERTICAL DATUM FOR THIS SURVEY IS BASED ON A 3-INCH CITY OF SCOTTSDALE BRASS CAP IN HANDHOLE, LOCATED AT THE INTERSECTION OF SCOTTSDALE ROAD AND INDIAN SCHOOL ROAD, HAVING AN ELEVATION OF 1260.37, CITY OF SCOTTSDALE NAVD 88 DATUM.

BASIS OF BEARING
THE HORIZONTAL DATUM FOR THIS SURVEY IS BASED ON INFORMATION OBTAINED FROM OPUS (ON-LINE POSITIONING USER SERVICE) PROVIDED BY THE NATIONAL GEODETIC SURVEY (NGS) WEBSITE WWW.NGS.NOAA.GOV, FOR OPUS SOLUTION 05072240.24O OP1724779219506 ON AUGUST 27, 2024.

PROJECTION: (EPOCH 2010)	ARIZONA CENTRAL ZONE, NAD 83,
DATUM:	GRS-80
UNITS:	INTERNATIONAL FEET
GEOID MODEL:	GEOID 2018
LATITUDE:	33°29'43.83632"N
LONGITUDE:	111°55'52.97786"W
ELLIPSOID HEIGHT:	357.465 (METERS)
DESCRIPTION:	WOODPATEL CONTROL POINT 100 - SET1/2-INCH REBAR WITH TRAVERSE CAP

MODIFIED TO GROUND AT (GRID) N: 907816.965, E: 695513.817, USING A SCALE FACTOR OF 1.0001561118.

HORIZONTAL ADJUSTMENT:	NONE
HORIZONTAL ROTATION:	NONE

SHEET INDEX

DRAINAGE REPORT NOTE
PLEASE REFER TO THE PRELIMINARY DRAINAGE REPORT FOR 5TH & GOLDWATER PREPARED BY WOODPATEL DATED DECEMBER 24, 2024.

FEMA FIRM NOTE (ZONE X)
ACCORDING TO FEMA FLOOD INSURANCE RATE MAPPING, THE SUBJECT PROPERTY IS LOCATED IN 'OTHER FLOOD AREAS' "ZONE X" (ZONE X SHADED). ZONE X SHADED IS DESCRIBED AS: "AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD."

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

MAP NUMBER	COMMUNITY NUMBER	PANEL NUMBER	SUFFIX	DATE OF FIRM	FIRM ZONE	BASE FLOOD ELEVATION (IN AO ZONE, USE DEPTH)
04013C	045012	2235	M	09/18/2020	X	N/A

LEGEND

EXISTING SURVEY	PROPOSED GRADING, DRAINAGE & PAVING
SECTION LINE	1300 MAJOR CONTOUR
RIGHT OF WAY	1299 MINOR CONTOUR
PROPERTY LINE	C 0.00 P 0.00 SPOT ELEVATIONS
ROAD CENTERLINE	STORM DRAIN PIPE
EASEMENT	STORM DRAIN CATCH BASIN
SURVEY MARKER	1.0% SLOPE ARROW
E UG ELECTRIC (BURIED CABLE)	GB RIDGE GRADE BREAK/RIDGE
E (CONDUIT) UG ELECTRIC (CONDUIT)	RIP RAP
E (DUCT BANK) UG ELECTRIC (DUCT BANK)	ROOF DRAIN/DRAIN ARROW
OHE OVERHEAD ELECTRIC	DRYWELL
OHT OVERHEAD TELEPHONE	OUTFALL ELEVATION EL:XX.XX SITE ULTIMATE OUTFALL LOCATION & ELEVATION
T UG TELEPHONE	WALL
TV CABLE TELEVISION	STREET/PARKING LIGHT
OHTV OVERHEAD CABLE TELEVISION	
T (DUCT BANK) TELEPHONE DUCT BANK	
BARBED WIRE FENCE	
CHAIN LINK FENCE	
WOOD FENCE	
BLOCK WALL	
4"G (MATERIAL) GAS LINE	
8"S (MATERIAL) SEWER LINE	
STORM DRAIN PIPE	
4"IRR (MATERIAL) IRRIGATION LINE	
8"W (MATERIAL) WATER LINE	
CURB	
SIDEWALK	
1300 MAJOR CONTOUR	
1299 MINOR CONTOUR	
VEGETATION	
BUILDING	
S SEWER MANHOLE	
D STORM DRAIN MANHOLE	
T TELEPHONE MANHOLE	
P 0.00 SPOT ELEVATION	
SIGN	
JUNCTION BOX/RISER	
FIRE HYDRANT	
WATER VALVE	
STREET/PARKING LIGHT	
UTILITY POLE	
CATCH BASIN	

PROPOSED WATER & SEWER
WATER LINE
WATER LINE FITTINGS
BACKFLOW PREVENTION DEVICE
WATER VALVE
FIRE DEPARTMENT CONNECTION
FIRE HYDRANT
WATER METER
PLUG
REDUCER
TAPPING SLEEVE & VALVE
CURB STOP
PRESSURE RELEASE VALVE
AIR/VACUUM RELEASE VALVE
SEWER LINE
SEWER MANHOLE
CLEANOUT

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 100-YEAR STORM, AND ARE IN ACCORDANCE WITH SCOTTSDALE REVISED CODE, CHAPTER 37 - FLOODPLAIN AND STORMWATER REGULATIONS.

ABBREVIATIONS

AL	AREA LIGHT	MIN	MINIMUM
BB	BOTTOM OF BANK	N.T.S.	NOT TO SCALE
C	CONCRETE ELEVATION	NG	NATURAL GRADE
CB	CATCH BASIN	P	PAVEMENT ELEVATION
COS	CITY OF SCOTTSDALE	PL	PARKING LIGHT
CTR	CABLE TV RISER	PNMAE	PEDESTRIAN NON-MOTORIZED ACCESS EASEMENT
CTV	CABLE TV	RD	ROOF DRAIN
DW	DRYWELL	RIM	RIM ELEVATION
E.S.V.A.E.	EMERGENCY VEHICLE ACCESS EASEMENT	S	SLOPE
ECB	ELECTRICAL CABINET BOX	SCO	SEWER CLEANOUT
EJB	ELECTRICAL JUNCTION BOX	SD	STORM DRAIN
EO	ELECTRICAL OUTLET	SE	SEWER EASEMENT
EVT	ELECTRICAL VAULT	SL	STREET LIGHT
EX	EXISTING	SLM	STREET LIGHT MAST ARM
FF	FINISH FLOOR	SS	SANITERY SEWER
FG	FINISH GRADE	STD	STANDARD
FH	FIRE HYDRANT	TB	TOP OF BANK
FL	FLOWLINE	TC	TOP OF CURB
G	GUTTER ELEVATION	TF	TOP OF FOOTING
GB	GRADE BREAK	TW	TOP OF WALL
GR	GAS REGULATOR	U.E.	UTILITY EASEMENT
IJB	IRRIGATION JUNCTION BOX	UG	UNDERGROUND
INV	INVERT	VNAE	VEHICLE NON-ACCESS EASEMENT
IRR	IRRIGATION	W.I.	WROUGHT IRON
IV	IRRIGATION VALVE	WF	WIRE FENCE
IVB	IRRIGATION VALVE BOX	WM	WATER METER
LF	LENIER FEET	WV	WATER VALVE
LFF	LOWEST FINISH FLOOR		

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Land Survey
Construction Management
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5TH & GOLDWATER
PRELIMINARY IMPROVEMENT PLAN
SCOTTSDALE, ARIZONA
COVER SHEET

REV	DESCRIPTION	DATE

Registered Professional Engineer (Civil)
CERTIFICATE NO.
61801
DEREK C. NICHOLS
EXPIRES 03-31-28

SCALE (HORIZ.)	N/A
SCALE (VERT.)	N/A
DATE	05/16/2025
JOB NUMBER	245619
SHEET	C1 OF 7

Z:\2024\245619\Dwg\Conceptual\Imp\5619-CV-CON.dwg

CHECKED BY: DCN DESIGNED BY: APM DRAFTED BY: JRS

N

0 20 40

Horz. 1 in. = 20 ft.

CITY OF SCOTTSDALE
APN: 173-48-045

CITY OF SCOTTSDALE
APN: 173-48-046

CITY OF SCOTTSDALE
APN: 173-48-049K

CITY OF SCOTTSDALE
APN: 173-48-049F

CITY OF SCOTTSDALE
APN: 173-48-049G

NOTHING FOUND
NOTHING SET
POSITION BASED ON
RECORD DOCUMENTS

EX SMH
RIM=1270.18
INV (NE)=1253.18
INV (S)=1253.02
INV (N)=1252.98

EX SDMH
RIM=1269.92
INV(NW)=1264.92
INV(SE)=1263.67

EX SDMH
RIM=1269.79
INV(NW)=1263.55
INV(SE)=1263.54
INV(NE)=1263.24

16' R/W

8"S (VCP)

24"RCRCP

4"G (PE)

12"W (DIP)

16"S (VCP)

24"W (DIP)

6"W (ACP)

N51°02'06"E 285.35'

N00°06'51"E 811.64'

310.20'

FD COS BCH

PROP. SIDEWALK RAMP AND STAMPED ASPHALT CROSSWALK

L=116.48', R=175.25'
D=38°05'00"

PROP. RADIAL TYPE DRIVEWAY PER MAG STD DETAIL 251, RADII PER PLAN.

SAWCUT & MATCH EXISTING

E 5TH AVE

FD PKN W/ TAG
GOETZ 31020

REPLACE WING-TYPE DRIVEWAY FOR INSTALLATION OF PUBLIC SEWER RELOCATION.

FLOYD INVESTMENTS
LIMITED PARTNERSHIP
APN: 173-48-047B
DOC 1992-0747655, MCR

FD RB W/ CAP
RLS 38868

PROP. PNMAE (VARIES)

40' RW

PROP. 40' R/W

D=61°47'40"
L=231.10', R=216.84'

PROP. 10' WE

5' RWE

EX. 8' CITY R/W

4' WSE

PROP. 12' S.E.

8' PROP. WE

FLOYD INVESTMENTS
LIMITED PARTNERSHIP
APN: 173-48-047C
DOC 1992-0747655, MCR

EX. SSMH
RIM=1270.50
INV (NW)=1256.15
INV (S)=1256.10

EX. SSMH
RIM=1268.21
INV (N)=1252.26
INV(S)=1252.11

BUILDING
LF$_{88}$=1271.50

BUILDING
LF$_{88}$=1272.00

BUILDING
LF$_{88}$=1268.67

GARAGE LEVEL 1.0
LF$_{88}$=1267.00

PROP. CATCH BASIN
RIM 1270.60
INV 1267.30

PROP. CATCH BASIN
RIM 1271.00
INV 1268.00

PROP. CATCH BASIN
RIM 1270.77
INV 1267.93

PROP. CATCH BASIN
RIM 1268.29
INV 1262.50

PROP. DRAIN BASIN
RIM 1271.97
INV 1265.97

PROP. 12" STORM DRAIN
S=1.0%

PROP. 12" STORM DRAIN
S=1.0%

PROP. 18" STORM DRAIN
S=1.0%

PROP. 18" STORM DRAIN
S=1.7%

1 STEP
TOP 71.78
BOT 71.20

15' BUILDING SETBACK

20' BUILDING SETBACK

8' PUE

EXISTING WALL TO REMAIN

PROP. SCREEN WALL

PROP. DRY UTILITY CORRIDOR

PROP. PNMAE

PROP. NMAE (VARIES)

PROP. 1" VNAE

FIRE RISER
LF$_{88}$=1267.40

N GOLDWATER BLVD

N27°39'10"E 202.82'(M)

S00°06'51"W 107.88'(M)

N00°21'25"W 94.42'(M)

N00°21'25"W 50.68'

N00°58'37"E 251.38'(M)

MATCH SHEET C3

WOOD PATEL

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Civil Engineering
Water Resources
Land Survey
Construction Management

602.335.8500

www.woodpatel.com

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

5TH & GOLDWATER

PRELIMINARY IMPROVEMENT PLAN

SCOTTSDALE, ARIZONA

PRELIMINARY GRADING AND DRAINAGE PLAN

REV	DESCRIPTION	DATE

Registered Professional Engineer, Civil
CERTIFICATE NO.
61601
DEREK C.
NICHOLS
EXPIRES 03-31-28

SCALE (HORIZ.)	1" = 20'
SCALE (VERT.)	N/A
DATE	05/16/2025
JOB NUMBER	245619
SHEET	C2 OF 7

CHECKED BY: DCN DESIGNED BY: APM DRAFTED BY: JRS

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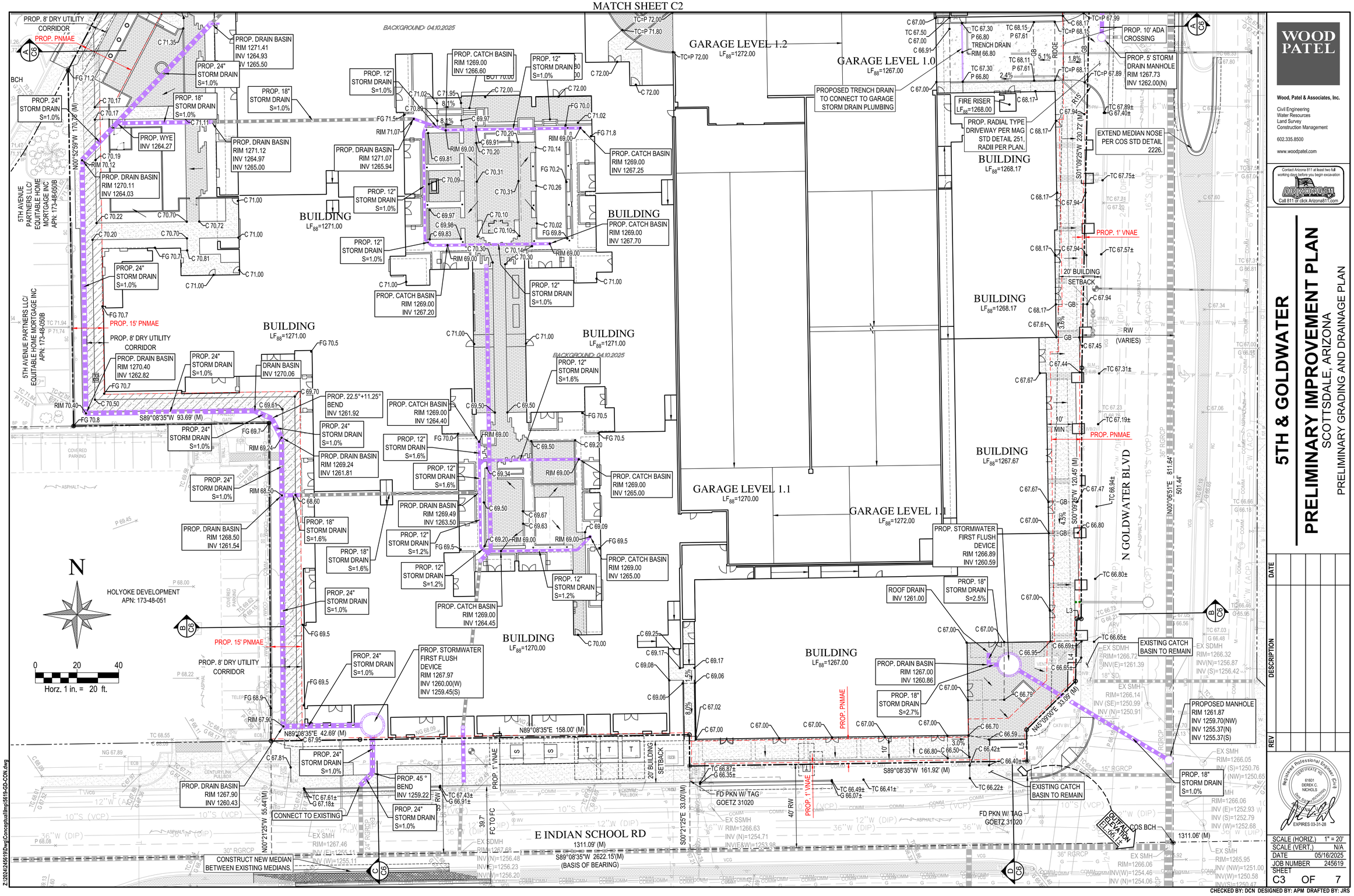
MATCH SHEET C2



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5TH & GOLDWATER

PRELIMINARY IMPROVEMENT PLAN

SCOTTSDALE, ARIZONA

PRELIMINARY GRADING AND DRAINAGE PLAN

REV	DESCRIPTION	DATE

Registered Professional Engineer (Civil)
CERTIFICATE NO.
61601
DEREK C. NICHOLS
EXPIRES 03-31-28

SCALE (HORIZ.)	1" = 20'
SCALE (VERT.)	N/A
DATE	05/16/2025
JOB NUMBER	245619
SHEET	C3 OF 7

CHECKED BY: DCN DESIGNED BY: APM DRAFTED BY: JRS

Z:\2024\245619\Dwg\Conceptual\Imp\5619-GD-CON.dwg

N

0 20 40

Horz. 1 in. = 20 ft.

CITY OF SCOTTSDALE APN: 173-48-049K

CITY OF SCOTTSDALE APN: 173-48-049F

CITY OF SCOTTSDALE APN: 173-48-049G

CITY OF SCOTTSDALE APN: 173-48-046

CITY OF SCOTTSDALE APN: 173-48-045

FLOYD INVESTMENTS LIMITED PARTNERSHIP APN: 173-48-047B DOC 1992-0747655, MCR

FLOYD INVESTMENTS LIMITED PARTNERSHIP APN: 173-48-047C DOC 1992-0747655, MCR

E 5TH AVE

N GOLDWATER BLVD

16' R/W

8' PUE

5' RWE

8' PROP. WE

PROP. 10' WE

PROP. 40' RW

40' RW

PROP. PNMAE (VARIES)

PROP. NMAE (VARIES)

PROP. 1' VNAE

PROP. 12' S.E.

15' BUILDING SETBACK

20' BUILDING SETBACK

PROP 6' OFFSET POLYMER CONCRETE SEWER MANHOLE RIM 1270.34 INV 1256.30 (N) INV 1255.27 (E) INV 1255.37 (S)

PROP. 6' SEWER MANHOLE RIM 1270.43 INV 1255.77 (N) INV 1255.87 (S)

PROP. 6' SEWER MANHOLE RIM 1270.35 INV 1255.22 (W) INV 1255.12 (NE)

PROP. 6' SEWER MANHOLE RIM 1270.09 INV 1253.97 (SW) INV 1253.87 (E)

PROP. 6' SEWER MANHOLE RIM 1270.09 INV 1253.97 (SW) INV 1253.87 (E)

PROP 5' POLYMER CONCRETE SEWER MANHOLE RIM 1270.50 INV 1256.19 (N) INV 1256.86 (E) INV 1260.75 (S)

PROPOSED LANDSCAPE METER AND BACKFLOW

12"X6" TAPPING SLEEVE AND VALVE

PROPOSED 1.5" WATER SERVICE FOR LANDSCAPE SERVICE

12"X4" TAPPING SLEEVE AND VALVE

EXISTING WATER SERVICE TO BE CUT AND CAPPED AT EXISTING WATER MAIN.

CONNECT TO EXISTING 12" WATERLINE

12"X8" TAPPING SLEEVE AND VALVE

PROPOSED 6" FIRELINE SERVICE FOR FLEX BUILDING

PROPOSED 8" FIRELINE SERVICE FOR RESIDENTIAL

PROPOSED 1.5" DOMESTIC WATER METER & PROPOSED BACKFLOW FOR FLEX BUILDING

PROPOSED 1.5" DOMESTIC WATER SERVICE FOR FLEX BUILDING

PROPOSED FIRE RISER ROOM & BUILDING MOUNTED FDC FOR RESIDENTIAL BUILDING

PROPOSED FIRE RISER ROOM & BUILDING MOUNTED FDC FOR FLEX BUILDING

PROPOSED 4" WATER SERVICE

PROP. 4" WATER METER AND BACKFLOW. METER TO BE PLACED IN VAULT PER COS DETAIL 2345.

EXISTING WATER SERVICES TO BE CUT AND CAPPED AT EXISTING WATER MAIN.

PROP. DRY UTILITY CORRIDOR

PROP. PNMAE

PROP. 8" PUBLIC SEWER LINE S=0.5%

PROP. 8" PUBLIC SEWER LINE S=0.6%

PROP. 8" PUBLIC SEWER LINE S=0.5%

PROP. 8" PUBLIC SEWER LINE S=0.5%

PROP. 8" PUBLIC SEWER LINE S=0.5%

PROP. 6" PRIVATE SEWER LINE S=1.0%

PROP. 8" PRIVATE SEWER LINE S=4.3%

PROP. 4" PRIVATE SEWER LINE S=5.5%

PROP. 6" PRIVATE SEWER LINE S=4.9%

PROP. 6" PRIVATE SEWER LINE S=4.9%

PROP. WYE INV 1256.07 EX. 8" CITY R/W

CONNECT TO EXISTING SERVICE INV 1271.36

CONECT TO EXISTING SERVICE INV 1258.11

OFFSITE SEWER CONNECTION INV 1261.73 (N)

BUILDING CONNECTION INV 1265.00 (E)

BUILDING CONNECTION INV 1265.50 (N)

BUILDING CONNECTION INV 1254.67 (E)

PROP. BUILDING SEWER BY OTHERS. SEE PLUMBING PLAN FOR DETAILS.

PROP. GREASE INTERCEPTORS (BY MPE)

CONNECT TO EXISTING MANHOLE RIM 1270.18 INV 1252.98 (N) INV 1253.02 (S) INV 1253.18 (NE) INV 1253.65 (W)

CONNECT TO EX. SSMH TYPE A DROP CONNECTION RIM 1268.20 INV 1252.26 (N) INV 1252.11 (S) INV 1253.51 (W)

EXISTING FIRE HYDRANT TO REMAIN

EXISTING FIRE HYDRANT TO REMAIN

EXISTING FIRE HYDRANT TO REMAIN

PROPOSED 1.5" DOMESTIC WATER METER & BACKFLOW FOR NORTH RETAIL

NOTHING FOUND NOTHING SET POSITION BASED ON RECORD DOCUMENTS

NOTHING FOUND NOTHING SET POSITION BASED ON RECORD DOCUMENTS

FD PKN W/ TAG GOETZ 31020

FD PKN W/ TAG GOETZ 31020

FD COS BCH

FD COS BCH

FD RB W/ CAP RLS 38868

EX SDMH RIM=1269.92 INV(NW)=1264.92 INV(SE)=1263.67

EX SDMH RIM=1269.79 INV(NE)=1263.55 INV(W)=1270.54 INV(S)=1263.04

EX SMH RIM=1270.18 INV (NE)=1253.18 INV (S)=1253.02 INV (N)=1252.98

EX SDMH RIM=1268.61 INV(E)=1261.66 INV(W)=1261.66 INV(N)=1261.21 INV (S)=1261.16

EX. SSMH RIM=1268.21 INV (N)=1252.26 INV(S)=1252.11

BUILDING LF$_{88}$=1271.50

BUILDING LF$_{88}$=1272.00

BUILDING LF$_{88}$=1268.67

GARAGE LEVEL 1.0 LF$_{88}$=1267.00

L=118.48', R=175.25 D=38°05'00"

D=61°47'40" L=237.10', R=219.84

N61°02'08"E 285.35'

N00°21'25"W 94.42' (M)

N00°21'25"W 50.68'

N50°58'37"E 251.38' (M)

S00°08'51"W 107.88' (M)

N00°08'51"E 811.64'

N00°38'16"E 302.82' (M)

310.20'

L1 L2 L3 L4 L5 L6 L7 L8 C1 C2 C3 C4

MATCH SHEET C5

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CHECKED BY: DCN DESIGNED BY: APM DRAFTED BY: JRS

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Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811 Call 811 or click Arizona811.com

5TH & GOLDWATER

PRELIMINARY IMPROVEMENT PLAN

SCOTTSDALE, ARIZONA

PRELIMINARY WATER AND SEWER PLAN

REV	DESCRIPTION	DATE

Registered Professional Engineer (Civil) CERTIFICATE NO. 81601 DEREK C. NICHOLS

EXPIRES 03-31-26

SCALE (HORIZ.)	1" = 20'
SCALE (VERT.)	N/A
DATE	05/16/2025
JOB NUMBER	245619
SHEET	C4 OF 7

MATCH SHEET C4

PROP. 8' DRY UTILITY CORRIDOR
PROP. PNMAE
BACKGROUND: 04.10.2025
PROPOSED FIRE RISER ROOM & BUILDING MOUNTED FDC FOR NORTH RETAIL AND PARKING GARAGE
6" FIRE SERVICE
PROPOSED 6" FIRELINE SERVICE FOR NORTH RETAIL AND PARKING GARAGE
GARAGE LEVEL 1.2
LF88=1272.00
GARAGE LEVEL 1.0
LF88=1267.00
FDC
GB
RIDGE
6" FIRE SERVICE
FDC
PROPOSED FIRE RISER ROOM & BUILDING MOUNTED FDC FOR SOUTH RETAIL
PROPOSED WATER SERVICE
BUILDING
LF88=1268.17
S01°09'25"W 230.72' (M)
EXTEND EXISTING 6" FIRELINE SERVICE FOR SOUTH RETAIL
PROP. 1" VNAE
EXISTING 1.5" WATER METER & PROPOSED BACKFLOW FOR SOUTH RETAIL DOMESTIC WATER SERVICE
PROPOSED 6" FIRE HYDRANT SERVICE LINE AND HYDRANT
20' BUILDING SETBACK
BUILDING
LF88=1268.17
GB
RW
(VARIES)
EXISTING 1.5" WATER METER & PROPOSED BACKFLOW FOR LANDSCAPE WATER SERVICE
PROP. BUILDING SEWER BY OTHERS. SEE PLUMBING PLAN FOR DETAILS.
BUILDING
LF88=1267.67
PROP. PNMAE
S00°09'26"W 120.45' (M)
N00°09'51"E 811.64' (M)
501.44'
N GOLDWATER BLVD
5TH AVENUE PARTNERS LLC/ EQUITABLE HOME MORTGAGE INC APN: 173-48-050B
N00°52'59"W 170.76' (M)
BUILDING
LF88=1271.00
BUILDING
LF88=1271.00
PROP. 15' PNMAE
PROP. 8' DRY UTILITY CORRIDOR
BUILDING
LF88=1271.00
BUILDING
LF88=1271.00
BACKGROUND: 04.10.2025
S89°08'35"W 93.69' (M)
GARAGE LEVEL 1.1
LF88=1270.00
GARAGE LEVEL 1.1
LF88=1272.00
PROP. 8" PRIVATE SEWER LINE S=3.1%
PROP. 6' POLYMER CONCRETE SEWER MANHOLE TYPE B DROP CONNECTION RIM 1266.45 INV 1251.12 (N) INV 1251.12 (S) INV 1257.00 (W)
BUILDING CONNECTION INV 1258.00 (E)
L3
ARV TO BE PROTECTED IN PLACE.
EX SDMH RIM=1266.32 INV(N)=1256.87 INV (S)=1256.42
INV(E)=1261.39
18" SD
EX SMH RIM=1266.14 INV (SE)=1250.99 INV (N)=1250.91
L4
S45°09'00"E 33.94' (M)
EXISTING FIRE HYDRANT TO REMAIN
L5
PROP. PNMAE
BUILDING
LF88=1270.00
BUILDING
LF88=1267.00
N
HOLYOKE DEVELOPMENT
APN: 173-48-051
0 20 40
Horz. 1 in. = 20 ft.
PROP. 15' PNMAE
PROP. 8' DRY UTILITY CORRIDOR
BUILDING CONNECTION INV 1258.00 (S)
PROP. 8" PRIVATE SEWER LINE S=6.2%
REMOVE EXISTING FIRE HYDRANT AND INSTALL NEW HYDRANT
PROP. 5' POLYMER CONCRETE SEWER MANHOLE TYPE A DROP CONNECTION RIM 1267.33 INV 1255.03 (E) INV 1255.86 (N) INV 1255.03 (W)
S08°35'E 42.69' (M)
N89°08'35"E 158.00' (M)
20' BUILDING SETBACK
PROP. 1' VNAE
S89°08'35"W 161.92' (M)
EXISTING WATER SERVICES TO BE CUT AND CAPPED AT EXISTING WATER MAIN.
FD PKN W/ TAG GOETZ 31020
40' RW
PROP. 1' VNAE
FD PKN W/ TAG GOETZ 31020
ARV TO BE PROTECTED IN PLACE.
FD COS BCH
1311.06' (M)
EXISTING FIRE HYDRANT TO REMAIN
PERMANENTLY CLOSE EXISTING FIRELINE SERVICE VALVE, REMOVE VALVE AND PATCH PAVEMENT. ABANDON FIRELINE SERVICE WITHIN ROADWAY.
55' RW
39.7'
FC TO FC
S00°21'25"E 33.00'(M)
E INDIAN SCHOOL RD
1311.09' (M)
EX SSMH RIM=1267.55 INV(S)=1257.21
EX SDMH RIM=1267.46
EX SSMH RIM=1266.63 INV (N)=1254.71 INV(E&W)=1253.98
EX SMH RIM=1266.05 INV (S)=1250.76 INV (NW)=1250.65
EX SMH RIM=1266.06 INV (E)=1252.93 INV (S)=1252.79 INV (W)=1252.68
15" RGRCP
48" RGRCP
36" RGRCP

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5TH & GOLDWATER

PRELIMINARY IMPROVEMENT PLAN

SCOTTSDALE, ARIZONA

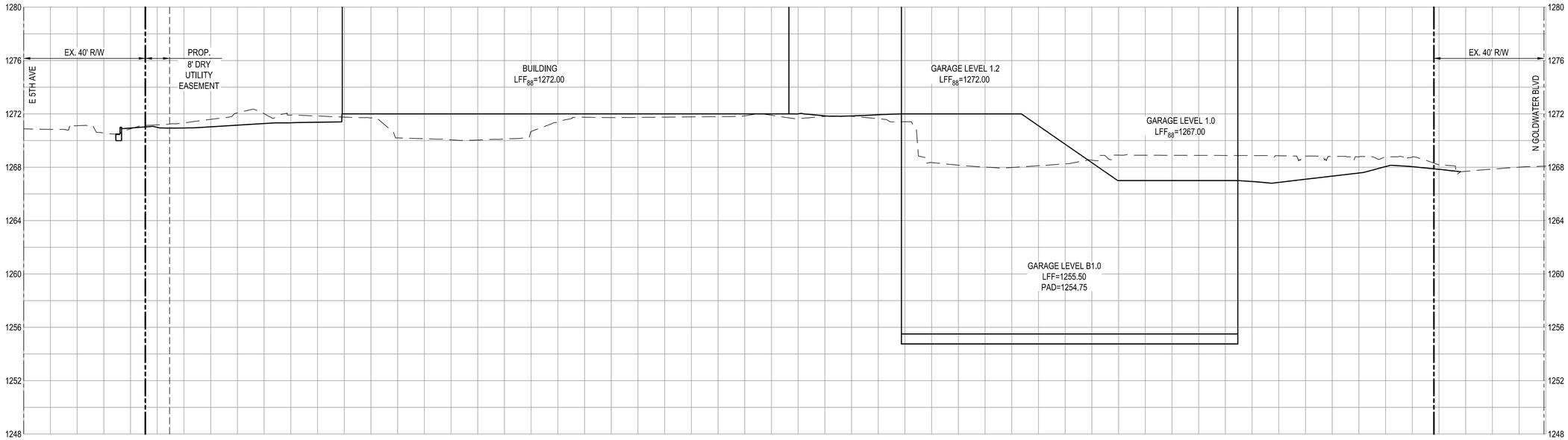
PRELIMINARY WATER AND SEWER PLAN

REV	DESCRIPTION	DATE

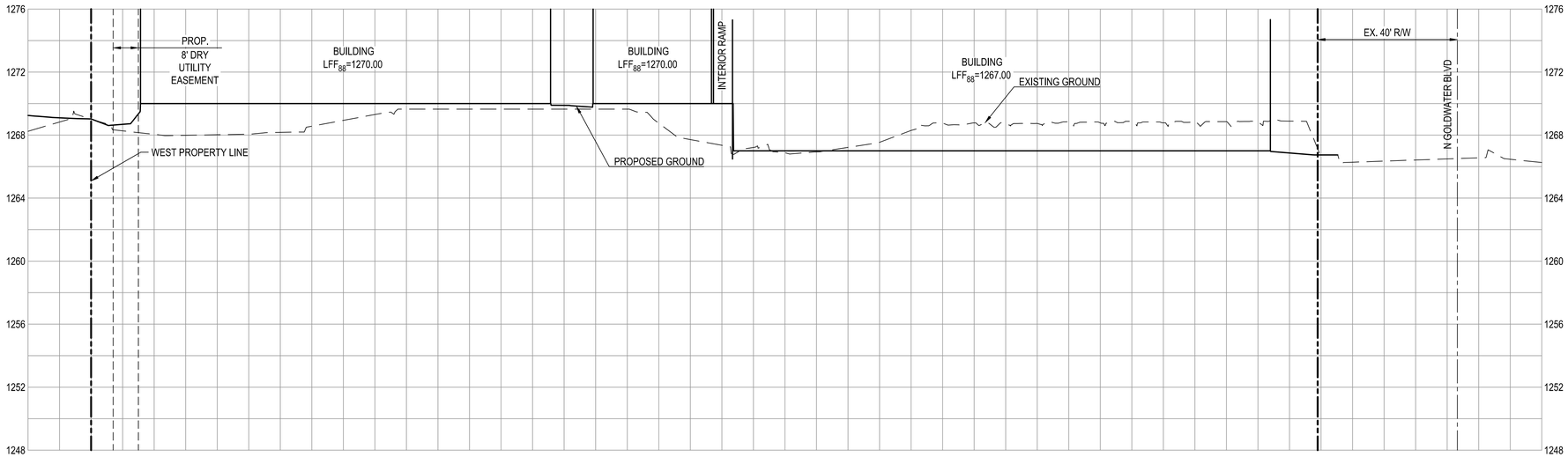
Registered Professional Engineer
CERTIFICATE NO.
61601
DEREK C. NICHOLS
EXPIRES 03-31-28

SCALE (HORIZ.)	1" = 20'
SCALE (VERT.)	N/A
DATE	05/16/2025
JOB NUMBER	245619
SHEET	C5 OF 7

CHECKED BY: DCN DESIGNED BY: APM DRAFTED BY: JRS



SECTION 'A'



SECTION 'B'

0 20 40

Horz. 1 in. = 20 ft.
Vert. 1 in. = 4 ft.

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PRELIMINARY IMPROVEMENT PLAN

SCOTTSDALE, ARIZONA

PRELIMINARY SECTIONS

REV	DESCRIPTION	DATE

Registered Professional Engineer (Civil)
CERTIFICATE NO.
61601
DEREK C.
NICHOLS
EXPIRES 03-31-26

SCALE (HORIZ.)	1" = 20'
SCALE (VERT.)	1" = 4'
DATE	05/16/2025
JOB NUMBER	245619
SHEET	C6 OF 7

CHECKED BY: DCN DESIGNED BY: APM DRAFTED BY: JRS

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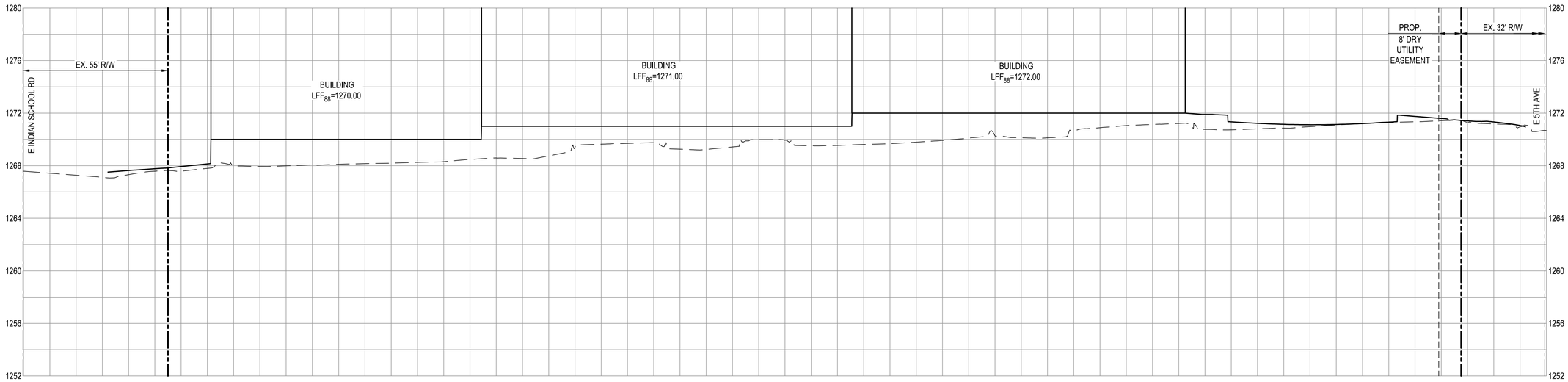
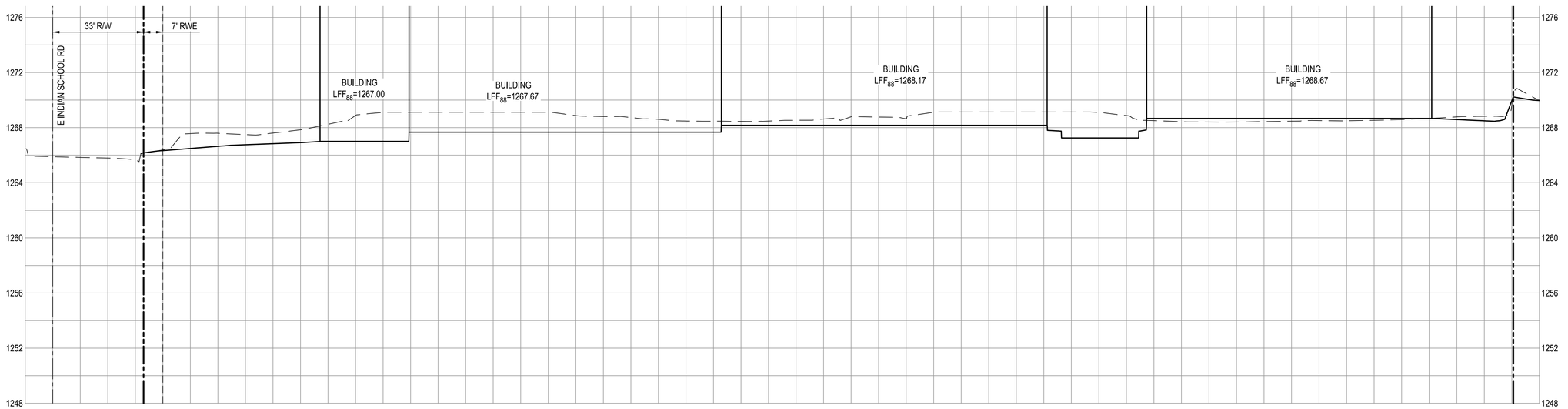


SECTION 'C'



SECTION 'D'

0 20 40

Horz. 1 in. = 20 ft.
Vert. 1 in. = 4 ft.

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PRELIMINARY IMPROVEMENT PLAN

SCOTTSDALE, ARIZONA

PRELIMINARY SECTIONS

REV	DESCRIPTION	DATE

Registered Professional Engineer (Civil)
CERTIFICATE NO.
61601
DEREK C.
NICHOLS
EXPIRES 03-31-26

SCALE (HORIZ.)	1" = 20'
SCALE (VERT.)	1" = 4'
DATE	05/16/2025
JOB NUMBER	245619
SHEET	C7 OF 7

CHECKED BY: DCN DESIGNED BY: APM DRAFTED BY: JRS

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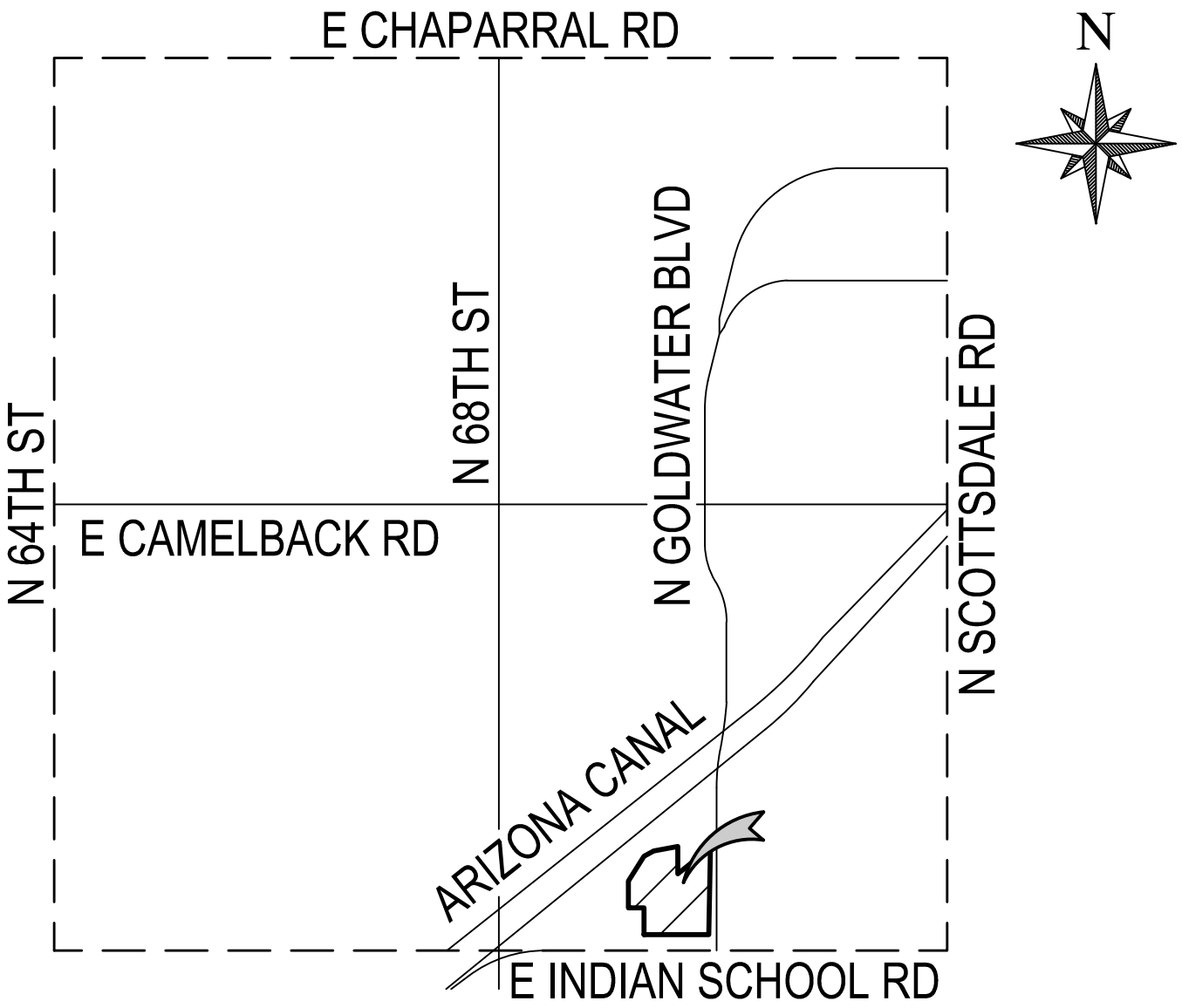
EXHIBIT 1 – VICINITY MAP



VICINITY MAP

N.T.S.

NOT
FOR CONSTRUCTION OR RECORDING

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5TH & GOLDWATER

VICINITY MAP

DATE	02-21-2025	SCALE	N/A	SHEET	1 OF 1
JOB NO	245619	DESIGN	BAS	CHECK	DCN
		DRAWN	BAS	RFI #	N/A

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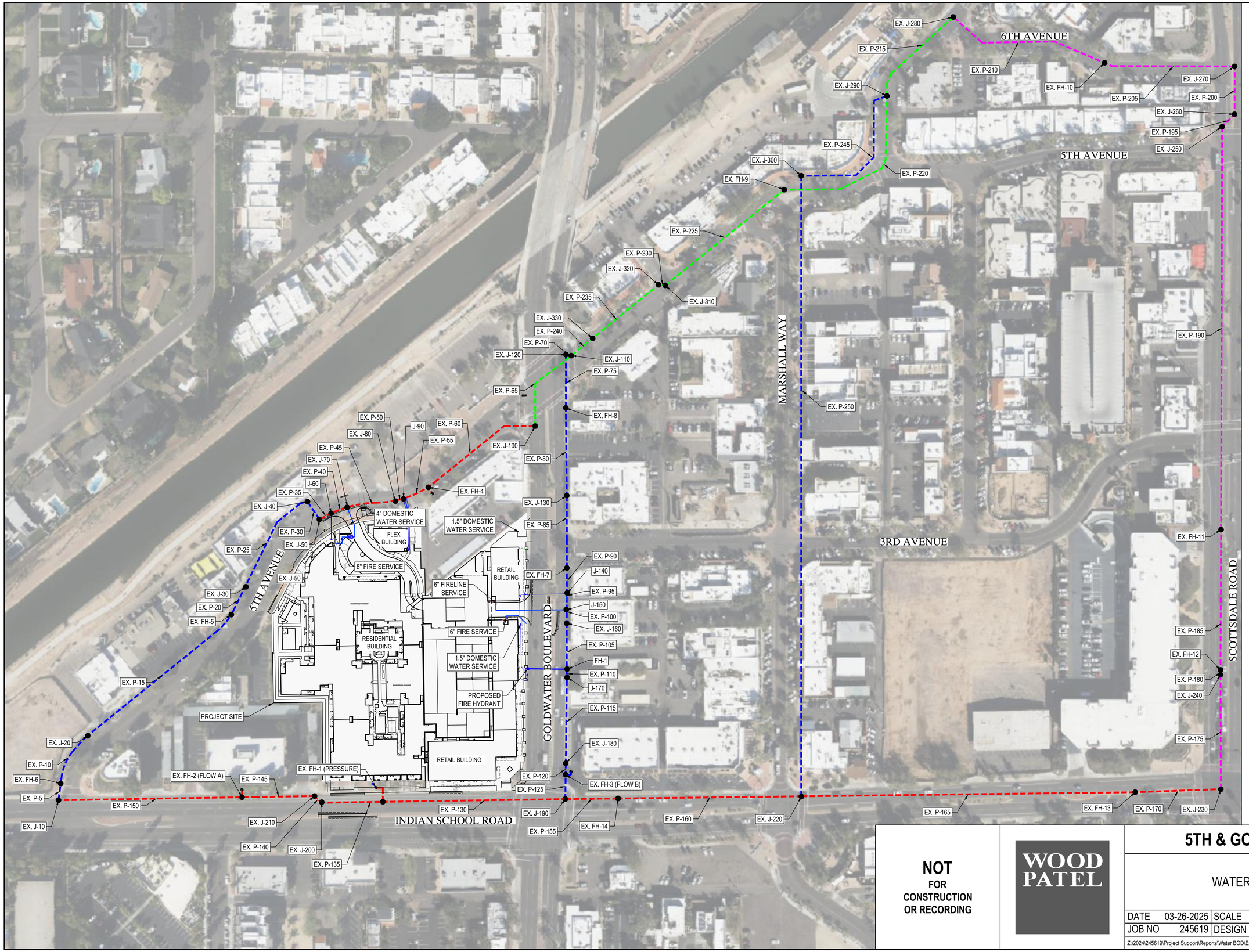
EXHIBIT 2 – WATER SYSTEM LAYOUT



N

0 50 100

Horz. 1 in. = 50 ft.

LEGEND

- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING 20" WATER
- EXISTING 12" WATER
- EXISTING 8" WATER
- PROPOSED 8" WATER
- EXISTING 6" WATER
- PROPOSED 6" WATER
- PROPERTY BOUNDARY
- J-XX JUNCTION NODE LABEL
- P-XX PIPE LABEL
- FH-XX FIRE HYDRANT LABEL

NOT FOR CONSTRUCTION OR RECORDING

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5TH & GOLDWATER

WATER LAYOUT

DATE	03-26-2025	SCALE	1" = 80'	SHEET	1 OF 1
JOB NO	245619	DESIGN	BAS	DRAWN	BAS

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