

**WATER CALCULATION WORKSHEET FOR: The Downtowner, Lake Geneva, WI, 53147**

Date Designer

## BUILDING INFORMATION

- |    |  |      |      |
|----|--|------|------|
| 1. | Demand of building in gallons per minute (65 SFU).   | 33   | gpm  |
| 2. | Size of the water meter. (Proposed size for hydraulic calcs, subject to Water Utility review.) | 1.50 | inch |
| 3. | Low pressure at building entrance.   | 35.0 | psi  |

### CALCULATE PRESSURE AVAILABLE AFTER BUILDING CONTROL VALVE

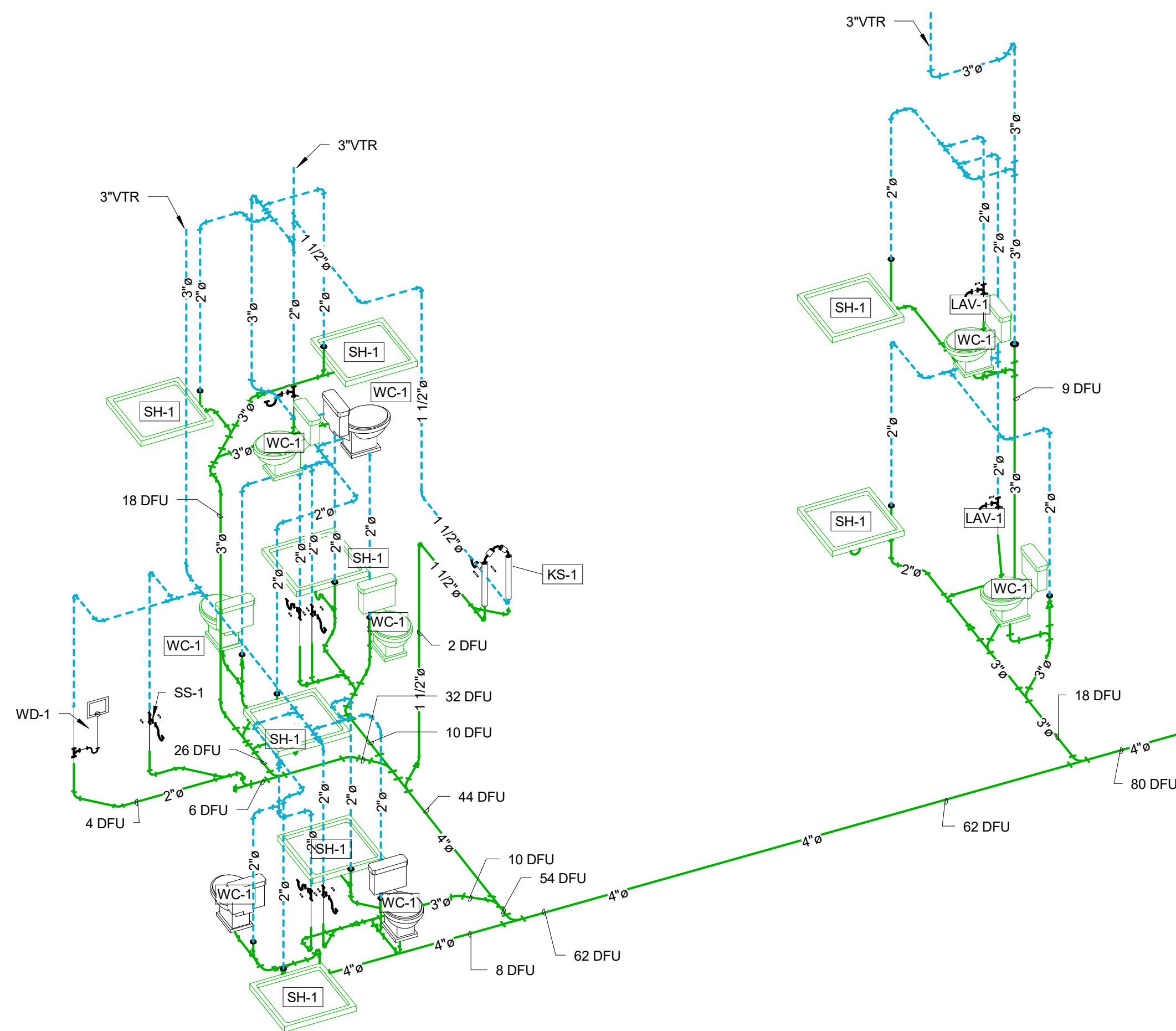
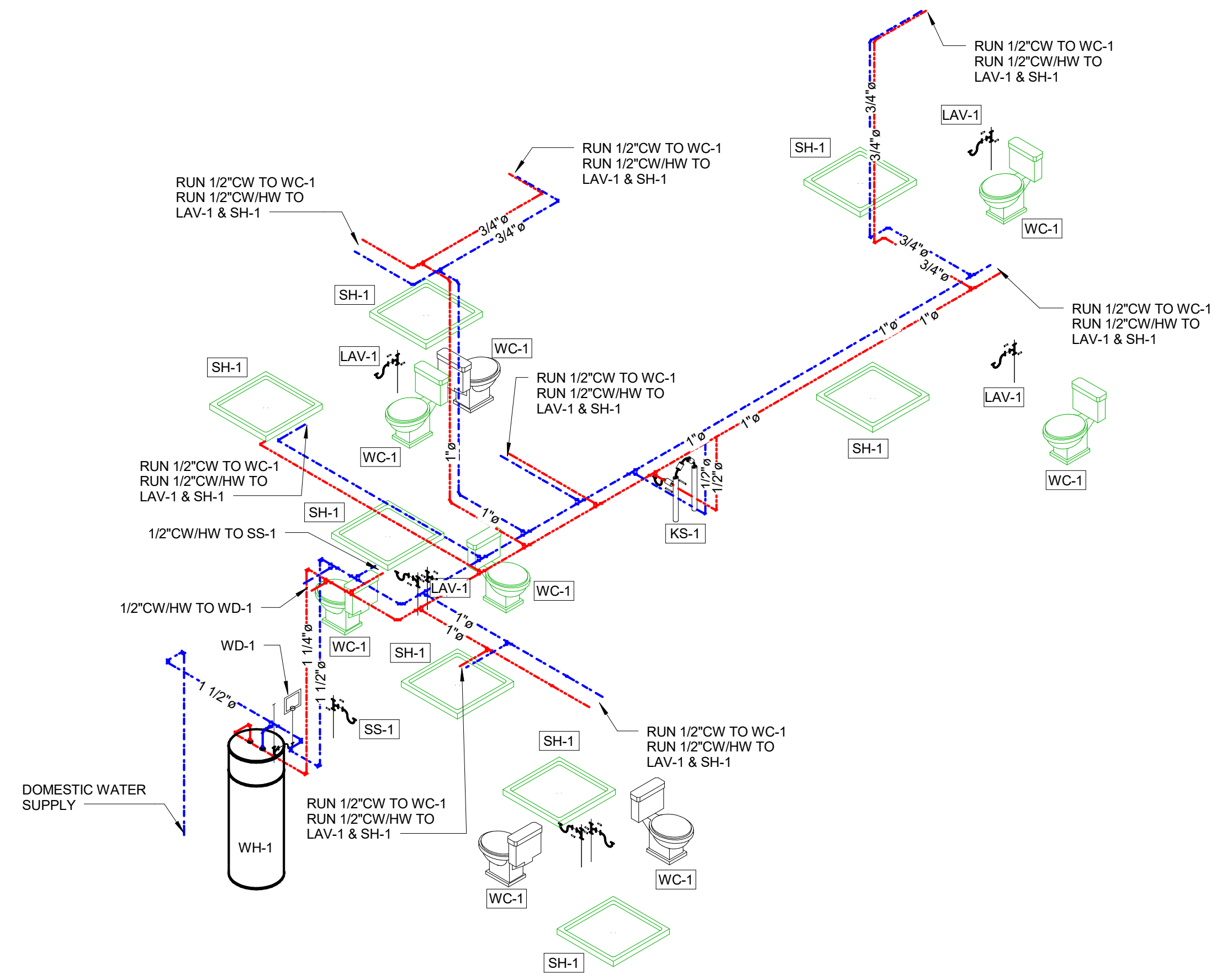
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|----|--|-----------------------------|-----|
| 4. | Low pressure at building entrance.             | 40.0                        | psi |
| 5. | Pressure loss due to water meter.              | 2.0                         | psi |
| 6. | Available pressure after building water meter. | (Line 6 - 7a - 7b - 8) 38.0 | psi |

**CALCULATE PRESSURE AVAILABLE FOR UNIFORM LOSS (VALUE OF "A")**

- |    |  |                          |       |            |
|----|--|--------------------------|-------|------------|
| B. | Available distribution pressure.   | (Line 9 + B1 - B2)       | 38.0  | psi        |
| D. | Pressure required at controlling fixture. (Shower in second floor bathroom.)   |                          | 20.0  | psi        |
|    |  | Subtotal                 | 18.0  | psi        |
| E. | Head loss from the building control valve to the controlling fixture.<br>(Elevation change, multiply by 0.434 psi/ft.)   | Elevation change ft      | 25    | 10.9 psi   |
|    |  | Subtotal                 | 7.2   | psi        |
| F. | Pressure loss due to water treatment devices, instantaneous water heaters,<br>backflow preventers, and other accessories which serve the controlling fixture.<br>N/A |                          | 0.0   | psi        |
|    |  | Total Available Pressure | 7.2   | psi        |
| G. | Actual pipe length from building control valve to controlling fixture ft   |                          | 80    |            |
|    | Developed length. (Actual length, multiply by fitting/loss factor.)  | fitting/loss factor      | 1.5   | 120.0 feet |
|    | Pressure available for uniform loss. (Total Available Pressure / Developed Length.)  |                          | 0.060 | psi/ft     |
|    | Pressure available for uniform loss per 100 ft. (Multiply by 100 / 100.)   |                          | 6.0   | psi/100 ft |
| A. | Pressure available for uniform loss per 100 ft. (Value rounded up to next integer.)  | "A" =                    | 6.0   | psi/100 ft |

Building Information:	Vacation Rental		
Drain fixture Unit Calculations			
FIXTURE	DFU/Unit	# of Units	Total DFU
Shower	2	8	16
Lavatory	1	8	8
Water Closet	6	8	48
Washing Machine	4	1	4
Service Sink	2	1	2
Kitchen sink	2	1	2
Total DFU's			80

ITEM	FIXTURE	DRAINAGE		WATER	
		WASTE	VENT	HOT	COLD
KS-1	KITCHEN SINK	1-1/2"	1-1/2"	1/2"	1/2"
LAV-1	LAVATORY	2"	2"	1/2"	1/2"
SH-1	SHOWER	2"	2"	1/2"	1/2"
SS-1	SERVICE SINK	2"	2"	1/2"	1/2"
WC-1	WATER CLOSET	3"	2"	-	1/2"
WD-1	WASHER BOX	2"	2"	1/2"	1/2"



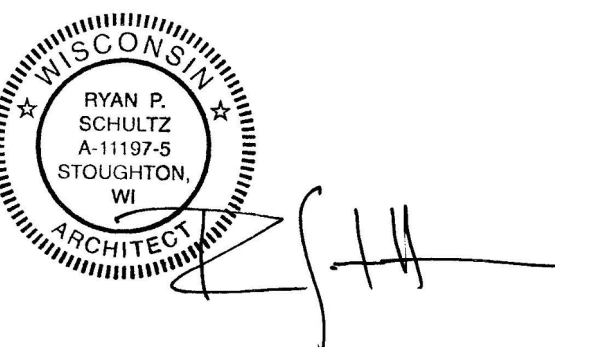
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**Zenteno  
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