

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

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
- E.

Head loss from the building control valve to the controlling fixture.  
(Elevation change, multiply by 0.434 psi/ft.)

Elevation change ft

25

10.9

psi
- F.

Pressure loss due to water treatment devices, instantaneous water heaters, backflow preventers, and other accessories which serve the controlling fixture.  
N/A

0.0

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.)

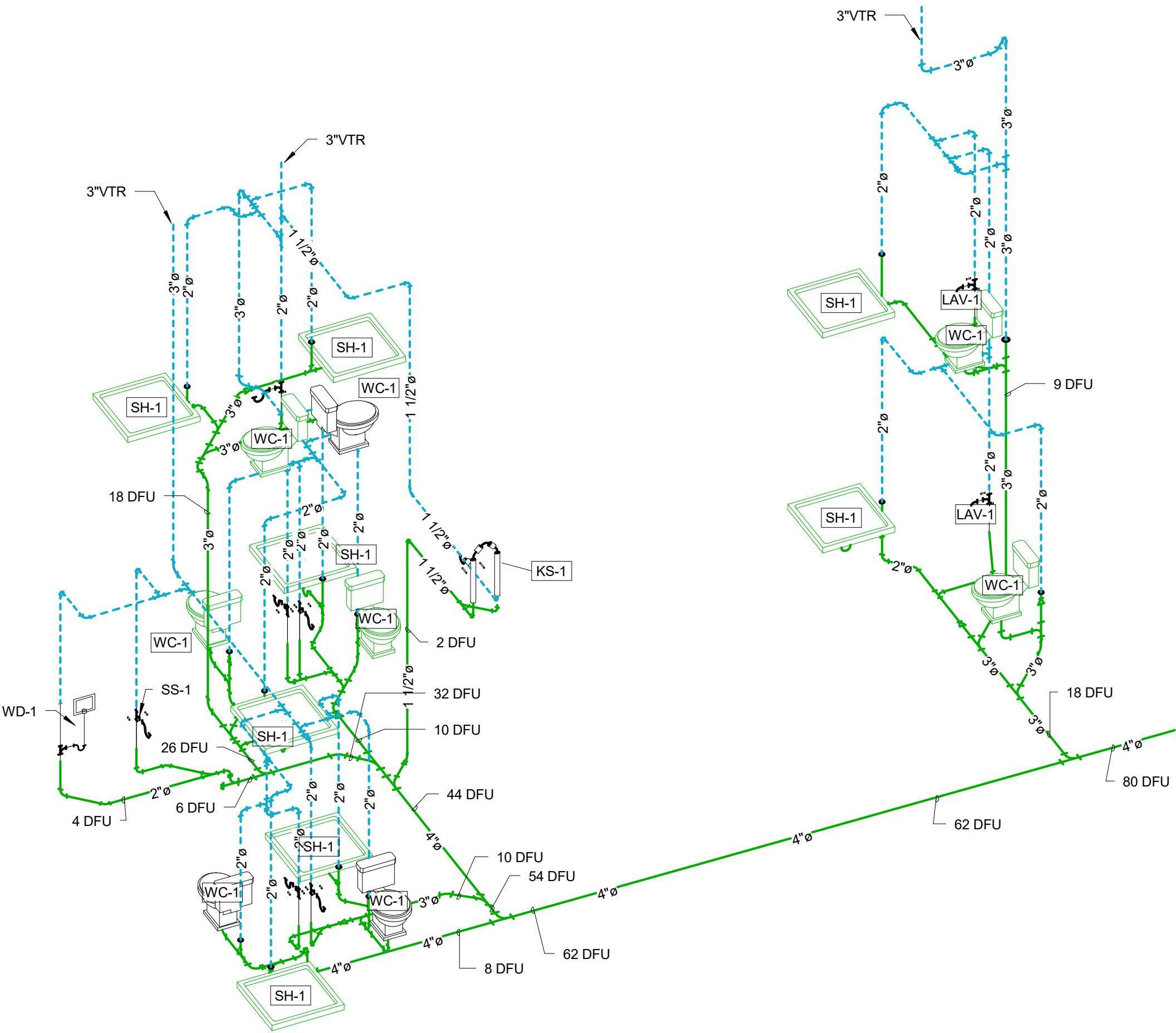
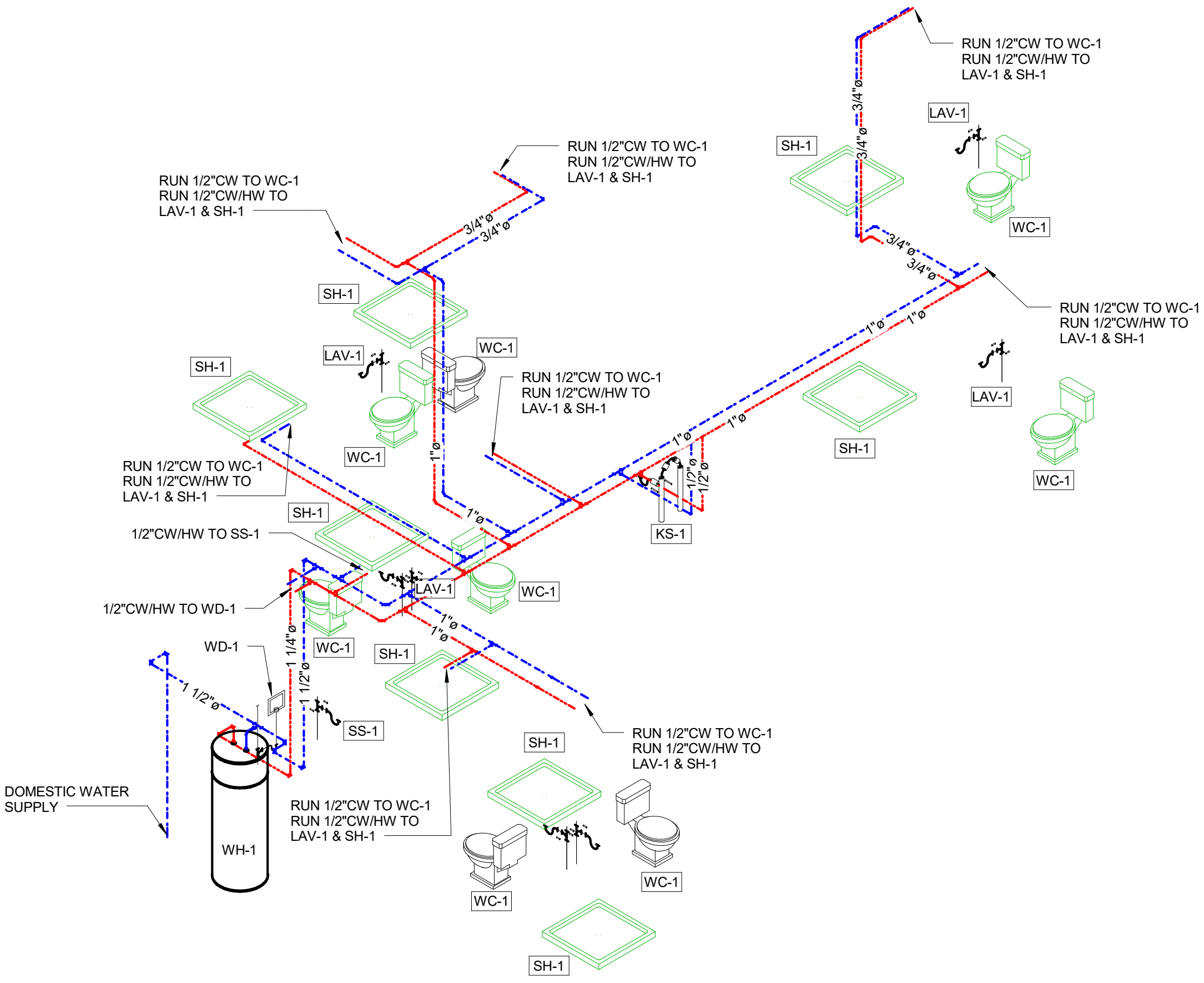
"A" =

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"



FYF LLC.

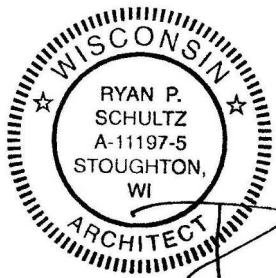
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Date	Description
05.03.2017	Issue for Permit
05.22.2017	Issue for Bid