

- ## GENERAL NOTES

EQUIPMENT	BACKFLOW PREVENTER
ICE MACHINE	WATTS MODEL: SD3
BEVERAGE DISPENSER	WATTS MODEL: SD3
FRUITISTA MACHINE	WATTS MODEL: SD3
TEA BREWER	WATTS MODEL: SD3
CARBONATOR	WATTS MODEL: SD3 (NOTE 3)
BUNN POD BREWER	WATTS MODEL: SD3
REVERSE OSMOSIS SYSTEM	WATTS MODEL: SD2
HOT WATER MACHINE	WATTS MODEL: SD2
RETHEMALIZER	WATTS MODEL: SD2
MOP SINK	WATTS MODEL: LFH7C
CHEMICAL DISPENSER	WATTS MODEL: N388

3. P.C. SHALL USE PLASTIC TUBING DOWNSTREAM OF THE BACKFLOW PREVENTER FOR THE CARBONATOR.

BACKFLOW PREVENTER SCHEDULE

APPLICATION INFORMATION	
Application Type:	Food Service
Unit of Measure:	US
Fuel Type:	Natural Gas
Location:	Outdoor
Rack Option:	Wall
Vent Option:	PVC
Est. Vent Length (ft):	-----

HOT WATER FIXTURE LIST					
Fixtures	Qty.	WSFU	Total WSFU	GPH	Total GPH
Dishwasher 1	0	3	0	0	0
Dishwasher 2	0	0	0	0	0
Dishwasher 3	0	0	0	0	0
Hand sinks/tavs	4	0.5	2	5	20
Work tables/sinks	0	2	0	20	0
Well stream tables	0	0.5	0	5	0
Kettle stands	0	2	0	35	0
Hand operated pre-rinse	0	2.5	0	40	0
Prep sinks	0	2	0	45	0
1-Compartment sinks	0	2.5	0	30	0
2-Compartment sinks	0	3.5	0	60	0
3-Compartment sinks	1	5.5	5.5	90	90
Hot water machines	0	2	0	30	0
Bar sink/dump Sink	0	2.5	0	30	0
Mop sinks	1	2	2	30	30
Emergency eye wash	0	1.4	0	5	0
Cool wash those needs	0	3	0	45	0
Clothes washers	0	1.4	0	18.5	0
Private showers	0	1.5	0	30	0
		Total WSFU	9.5	Total GPH	140
Design Flow Rate (gpm)	3.8			Design GPH	140

P.C. SHALL VERIFY AVAILABLE WATER PRESSURE AT THE BUILDING. TANKLESS WATER HEATER PRESSURE REQUIRES 55 PSI (MIN). IF AVAILABLE PRESSURE IS LESS THAN 55 PSI AT EQUIPMENT, PROVIDE BOOSTER PUMP TO MAINTAIN ADEQUATE PRESSURE FOR WATER HEATER PRESSURE INCREASE TO 55 PSI (MIN.). CONTACT ENGINEER FOR PROPER SIZING OF BOOSTER PUMP SYSTEM DOWNSTREAM OF BACKFLOW PREVENTER, AS REQUIRED.























SIZING CONSTRAINTS	
Supply Temp:	140 °F
Ground Temp:	60 °F
Temperature Rise:	80 °F
Elevation:	Sea ft
Fixture Diversity:	40%

ITEM	#	IND. F.U.	TOT. F.U.
FLUSH TANK WATER CLOSET	2	5.00	10.00
LAV	2	2.00	4.00
HAND SINK	2	2.00	4.00
3-COMP SINK	1	4.00	4.00
PREP SINK	1	4.00	4.00
RETHEMALIZER	1	1.00	1.00
CHEESE MELTER	2	2.00	4.00
MOP SINK	1	3.00	3.00
HOT WATER MACHINE	2	1.00	2.00
BUNN POD BREWER	1	0.50	0.50
FRUITISTA MACHINE	1	0.50	0.50
ICE MACHINE	2	0.50	1.00
CARBONATOR	2	0.50	1.00
DRINK SYSTEM	2	0.50	1.00
TEA	1	0.50	0.50
HOSE BIBB	2	2.50	5.00

TOTAL C.W. F.U.	45.5
TOTAL DEMAND GPM -	28.0

C.W. MAIN SIZE -
(VEL. 6-8 FPM)

WATER CALCULATION'S

ITEM	FIXTURE	DESCRIPTION	MANUFACTURER / MODEL NUMBER
 1	EXTERIOR CLEANOUT	CAST IRON CLEANOUT WITH THREADED ADJUSTABLE HOUSING, ROUND SCORIATED HEAVY CAST IRON COVER.	JOSAM / MODEL: 56000 WADE / MODEL: 6000Z ZURN / MODEL: Z-1400
 1	FLOOR SINK	LIGHT DUTY-ACID RESISTANCE, WHITE PVC FLOOR SINK W/ 12" SQUARE WHITE PVC HALF GRATE AND STAINLESS STEEL DEBRIS BUCKET WITH LIFTING HANDLE. <div>Built in Sink</div>	SIOUX CHIEF / MODEL: 861-4PNDW --
 2	FLOOR SINK	PVC 12" SQUARE FLOOR SINK, 6" DEEP, WITH ALUMINUM DOME STRAINER AND NICKEL BRONZE HINGED TOP.	SIOUX / MODEL: 861-4-PND -- --
 1	FLOOR DRAIN (3')	LIGHT DUTY ADJUSTABLE PVC WITH THREADED ADAPTOR AND 5" DIAMETER NICKEL BRONZE RING AND FASTENED GRATE	ZURAM / MODEL: FD-2210 SIOUX CHIEF 842 OATEY 72000
 1	FLOOR CLEANOUT	CAST IRON CLEANOUT WITH THREADED ADJUSTABLE HOUSING, ROUND SCORIATED HEAVY CAST IRON COVER.	JOSAM / MODEL: 56000 WADE / MODEL: 6000Z ZURN / MODEL: Z-1400
 1	HOSE BIBB	NON-FREEZE WALL HYDRANT WITH INTEGRAL VACUUM BREAKER, BRONZE CASING AND NICKEL BRONZE BOX.	JOSAM / MODEL: 71000 WADE / MODEL: 8600L ZURN / MODEL: Z-1300
 1	WATER CLOSET	WHITE VITREOUS CHINA FLOOR MOUNTED TANK TYPE, ELONGATED BOWL, ADA COMPLIANT, 1.6 GPF, WITH OPEN FRONT SEAT LESS COVER, OLSENITE #95 OR EQUIVALENT. PROVIDE BOLT DOWN TANK LID. FLUSH LEVERS SHALL BE RIGHT HAND OR LEFT HAND AS REQUIRED TO CORRESPOND WITH ACCESS FROM WIDE SIDE OF STALL. VERIFY FLUSH SIDE REQUIREMENTS	TOTO/MODEL:CST744SLD -- -- --
 1	LAVATORY 	WHITE VITREOUS CHINA, WALL HUNG, WITH CONCEALED ARMS SUPPORT SEE 8/P6.0, 4" CENTERS WITH INTEGRAL BACKSPLASH, ADA ACCESSIBLE. FLAT GRID STRAINER, BRAIDED WATER LINES,FAUCET, FURNISHED BY OWNER-INSTALLED BY G.C. ELECTRONIC HANDWASHING FAUCET. SLOAN HARD WIRED FAUCET EAF-200 , ADA COMPLIANT, 1.5 GPM AERATOR. COORDINATE WITH EC.	A.S. COMRADE/ MODEL: 0124.131 SLOAN FAUCET EAF-200 --
 1	HAND SINK	S-1: STAINLESS STEEL HAND SINK, WALL HUNG, INCLUDES A 6" GOOSENECK STAINLESS FAUCET, W/SINGLE KNEE PEDAL. BRAIDED WATER LINES AND 0.5 GPM AERATOR	AERO MFG/MODEL: HSK-SKV -- --
 2	MOP SINK	MOP SINK; FURNISHED BY OWNER, INSTALLED NY GC. BACK-SPLASH, FURNISHED BY OWNER, INSTALLED BY GC. FAUCET: T&S #B2465, WITH VACUUM BREAKER, FURNISHED BY OWNER, INSTALLED BY GC.	FIAT MODEL: SB-2424 --
 3	3-COMP. SINK	SINK, FAUCET, 0.65 GPM NOZZLE, DRAIN, & GEN IV POWER SOAK STANDARD, GEN III IS AN OPTION FOR FRANCHISES * IF GEN POWER SOAK SINK USED THEN ADD A MIXING VALVE TO SINK ABOVE SUSPENDED CEILING.	-- -- --
 4	PREP SINK	SINK, FAUCET, 0.65 GPM NOZZLE, & DRAIN	-- -- --
 1	GREASE INTERCEPTOR	JENSEN PRECAST 1,500 GALLON GREASE INTERCEPTOR WITH SAMPLE BOX FINAL SIZE TO BE DETERMINED BY LOCAL BUILDING AUTHORITY CONTRACTOR CAN PROVIDE SIMILAR LOCALLY SOURCED GREASE TRAP. CONFIRM SPECIFICATIONS WITH ENGINEER.	-- -- --
 1	MIXING VALVE 	THERMOSTATIC, 125 P#16, 200VF BRONZE BODY, STAINLESS STEEL PISTON LINER, CHECK VALVES SIZE PER PIPE CONNECTIONS.	POWERS SERIES LF495 LAWLER SERIES 310 LEONARD SERIES 170 RINNAI/MODEL: CU-199e
 1	WATER HEATER	(2) RINNAI MODEL: CU199e W/ RIK-C KIT INCLUDED, TANKLESS (EXTERIOR RATED) WITH 4 GPM AT 80° RISE, 19,000 TO 199,000 BTU/HR NATURAL GAS INPUT (MODULATING). SET OPERATION AT 140°F. PROVIDE (1) REU-MSB-M CONTROL (2) REU-CSA-C1 CABLE CONNECT VA, VB, COND. EXCL V53/R63.	-- -- --
 1	EXPANSION TANK	EXPANSION TANK, STEEL, EXPANSION MEMBRANE 150 PSI, 160° F, 12 GALLON CAPACITY.	WATTS SERIES DET AMTROL SERIES ST WILKINS SERIES WXTPT
 1	SHOCK ARRESTOR	STAINLESS STEEL CASING WITH STAINLESS STEEL BELOW, PRECHARGED WITH NITROGEN. SIZED PER PDI-WH201	SEE SCHEDULE, THIS SHEET -- --
 1	REVERSE OSMOSIS	REVERSE OSMOSIS FILTER SYSTEM BY OWNER SEE TO DETAIL 7/P6.0	-- -- --
 1	HUB DRAIN	CAST IRON DEEP SEAL P-TRAP WITH FUNNEL, NO-HUB OUTLET AND BRASS GASKETED CLEANOUT PLUG.	JOSAM / MODEL: 88213 WADE / MODEL: 2453EF ZURN / MODEL: Z-1019
 1	WATER FILTER	OWNER SUPPLIED DUAL WATER FILTER SYSTEM	3M/MODEL: CONSULT MFG -- --
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PLUMBING SCHEDULE

ITEM	#	IND. F.U.	TOT. F.U.
GREASE DRAINAGE			
3-COMP SINK	1	5.0	5.0
(1) COMP. PREP SINK	1	3.0	3.0
MOP SINK	1	5.0	5.0
AREA FLOOR DRAIN	5	2.0	10.0
INDIRECT RECEPTOR	3	5.0	15.0
SUBTOTAL GREASE			38.0
SANITARY SEWER			
WATER CLOSET, 1.6 GPF	2	4.0	8.0
LAVATORY	2	2.0	4.0
AREA FLOOR DRAIN	2	2.0	4.0
SUBTOTAL S.S.			16.0
TOTALS			54.0

SANITARY SEWER

WATER CLOSET, 1.6 GPF	2	4.0	8.0
LAVATORY	2	2.0	4.0
AREA FLOOR DRAIN	2	2.0	4.0
SUBTOTAL S.S.			16.0
TOTALS			54.0

DRAINAGE CALCULATION'S

GREASE INTERCEPTOR SIZING PROCEDURE FOR KITCHEN FIXTURES					
FIXTURE TYPE	QUANTITY	PIPE DIA METER	GPM / FIXTURE	FIXTURE RATING	GPM
Pot sink	1	2	33	1.00	33
Meat & Vegetable prep sink	1	2	33	0.10	3.3
Dishwasher					7
Can wash / Mop sink					
Total					43.3

Grease Interceptor Size = flow rate x 30 minutes =

Please round up to the next available size to determine the required grease interceptor

SIZING PROCEDURE FOR FOOD SERVICE ESTABLISHMENTS (FSE'S)

VOLUME OF GREASE INTERCEPTOR (GALLONS) = [(A X B) + C + D] X F

A. GPM/FIXTURE – THESE VALUES ARE DERIVED FROM THE MANNING FORMULA. THE MANNING FORMULA TAKES INTO ACCOUNT THE SLOPE, ROUGHNESS OF THE PIPE, AND PIPE DIAMETER SIZE. LISTED BELOW ARE THE DRAINAGE RATES OF VARIOUS PIPE DIAMETERS USING THE MANNING FORMULA

0.5 INCH PIPE DIAMETER = 0.8 GPM/FIXTURE	1.0 INCH PIPE DIAMETER = 5.0 GPM/FIXTURE
1.5 INCH PIPE DIAMETER = 15 GPM/FIXTURE	2.0 INCH PIPE DIAMETER = 33 GPM/FIXTURE
2.5 INCH PIPE DIAMETER = 59 GPM/FIXTURE	3.0 INCH PIPE DIAMETER = 93 GPM/FIXTURE

B. FIXTURE RATINGS OF GREASY WASTE STREAMS – FIXTURES THAT HAVE MORE GREASE IN THEIR WASTE STREAM RECEIVED HIGHER VALUES WHILE LESS GREASE CORRESPONDS TO A LOWER RATING.

THE TABLE IS SHOWN BELOW:TABLE OF COMMON COMMERCIAL KITCHEN FIXTURES AND T

PRE-RINSE SINK = 0.75
TILT KETTLE = 0.00

C. DIRECT FLOW FROM DISH

MUST BE ADDED DIRECTLY TO
D. FLOW FROM CAN WASHERS

D. FLOW FROM CAN WASHES
SIZING, 7 GPM WILL BE

F. THIRTY (30) MINUTE RETEST
ASSUMED TO HAVE INTERVIEWED

EXISTING CB

EXISTING GREASE INTERCEPTOR CALCULATION	
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EXISTING GREASE INTERCEPTOR CALCULATION