

PLAN REVIEW APPROVAL STAMP

PLUMBING LEGEND

AFF	.....	ABOVE FINISHED FLOOR	---	---	(CW) COLD WATER (POTABLE)
ARCH	.....	ARCHITECTURAL	NPW	---	(NPW) NON-POTABLE WATER
B.G.	.....	BELOW GRADE	---	---	(HW) HOT WATER
BTU	.....	BRITISH THERMAL UNIT	---	---	(HWR) HOT WATER RECIRC
CAP.	.....	CAPACITY	---	---	(HT) HOT WATER HEAT TRACED
C.I.	.....	CAST IRON	SS	---	(SS) SOLAR SUPPLY
COMP.	.....	COMPARTMENT	SR	---	(SR) SOLAR RETURN
CONT.	.....	CONTINUATION	PW	---	(PW) PRESSURE WASH (HOT)
CU.	.....	CUBIC	---	---	(W) BELOW GRADE WASTE
DF	.....	DRINKING FOUNTAIN	---	---	(W) ABOVE GRADE WASTE
DI	.....	DIIONIZED (WATER)	V	---	(V) VENT
DIA.	.....	DIAMETER	RD	---	(RD) RAIN DRAIN
ELEV.	.....	ELEVATION	OD	---	(OD) OVERFLOW RAIN DRAIN
EW	.....	ELECTRIC WATER COOLER	FDC	---	(FDC) FIRE DEPARTMENT CONNECTION
FD	.....	FIRE DEPARTMENT CONNECTION	F	---	(F) FIRE WATER
F.F.	.....	FINISH FLOOR	O2	---	(O2) OXYGEN
FLG.	.....	FLANGE	WAGD	---	(WAGD) WASTE ANESTHESIA GAS DISPOSAL
FT	.....	FOOT / FEET	MV	---	(MV) MEDICAL VACUUM
G	.....	GAS	G	---	(G) NATURAL GAS
GA.	.....	GAUGE	---	---	(D) DEMOLISH, (R) RELOCATE
GALV.	.....	GALVANIZED	---	---	(E) EXISTING
GPM	.....	GALLONS PER MINUTE	---	---	---
G.V.	.....	GATE VALVE	---	---	---
HP	.....	HORSEPOWER	---	---	---
HR.	.....	HOUR	---	---	---
I.E.	.....	INVERT ELEVATION	---	---	---
KW	.....	KILOWATT	---	---	---
LAV	.....	LAVATORY	---	---	---
LBS	.....	POUNDS	---	---	---
MAX.	.....	MAXIMUM	---	---	---
MEH	.....	THOUSANDS OF BTUs PER HOUR	---	---	---
MIN.	.....	MINIMUM	---	---	---
M.J.	.....	MECHANICAL JOINT	---	---	---
N.I.M.	.....	NOT IN MECHANICAL	---	---	---
OS&Y	.....	OUTSIDE STEM & YOKE	---	---	---
PROT.	.....	PROTECTION	---	---	---
PRV	.....	PRESSURE REDUCING VALVE	---	---	---
PSI	.....	POUNDS PER SQUARE INCH	---	---	---
P/T	.....	PRESSURE / TEMPERATURE	---	---	---
REQ'D	.....	REQUIRED	---	---	---
RPBP	.....	REDUCED PRESSURE BACKFLOW PREVENTER	---	---	---
RPM	.....	REVOLUTIONS PER MINUTE	---	---	---
TYP.	.....	TYPICAL	---	---	---
UR	.....	URINAL	---	---	---
VTR	.....	VENT THROUGH ROOF	---	---	---
WC	.....	WATER CLOSET	---	---	---

XXXX EQUIPMENT MARK NUMBER

XXX FIXTURE MARK

(E) EXISTING

KEYED NOTE

CONNECT TO EXISTING

CAP

TEE

ELBOW

CLEANOUT

BACKWATER VALVE

PRESSURE/TEMP RELIEF VALVE

BUTTERFLY VALVE

GAS PRESSURE REGULATING VALVE

TOP CONNECTION

BOTTOM CONNECTION

PIPE TURNED UP, PIPE TURNED DOWN

GATE VALVE

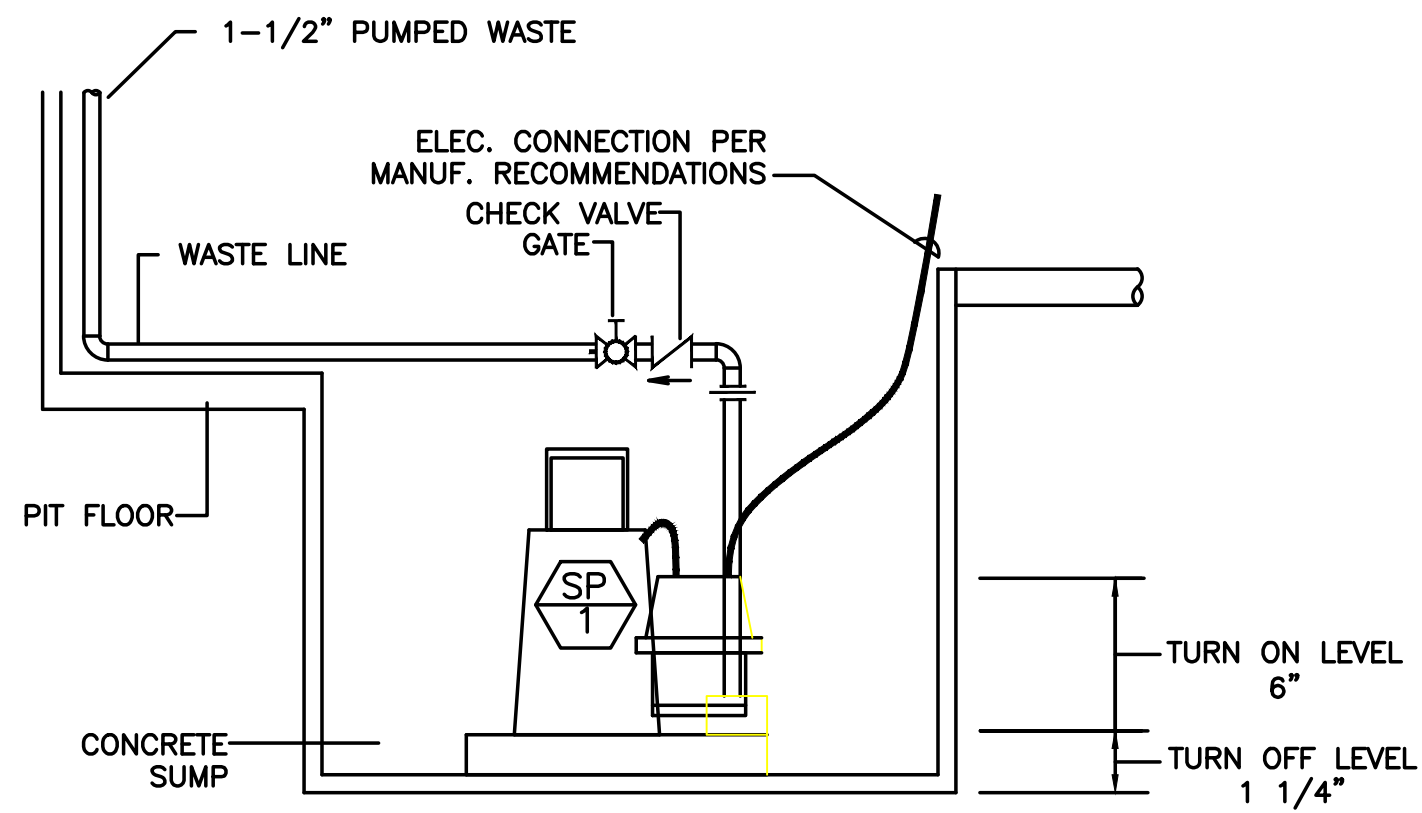
BALL VALVE

BALANCING VALVE

CHECK VALVE

UNION

DOUBLE CHECK ASSEMBLY



1 ELEVATOR SUMP PUMP DETAIL
P6.0 SCALE: NONE

PLUMBING CONNECTION SCHEDULE

MARK	FIXTURE	W	V	CW	HW	REMARKS
HB-1	HOSE BIB			3/4"		NON-FREEZE, SEE SPECS.
LV-1	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	COUNTERMOUNT, BATTERY OPERATED
SH-1	SHOWER	2"	1-1/2"	1/2"	1/2"	ADA, SEE SPECS.
SS-1	SERVICE SINK	3"	2"	1/2"	1/2"	24"X24" CORNER
WC-1	WATER CLOSET	3"	2"	1"		FLOOR MOUNT, FLUSH VALVE
WC-2	WATER CLOSET	3"	2"	1"		FLOOR MOUNT, FLUSH VALVE, ADA
UR-1	URINAL	2"	1-1/2"	3/4"		WALL MOUNT, BATTERY POWERED
FD-1	FLOOR DRAIN	3"	V.L.			J.R. SMITH 2005A (ROUND) OR EQUAL APPROVED.
ESH-1	EMERGENCY SHOWER	FD		1-1/4"	1-1/4"	NOTE 1
EW-1	EMERGENCY EYE WASH	1-1/2"	1-1/2"	1/2"	1/2"	NOTE 1
FS-1	FLOOR SINK	3"	1-1/2"			
PD-1	PROCESS DRAIN	2"	1-1/2"			ACORN 8200-LDR

NOTES:

1. PROVIDE WITH A THERMOSTATIC MIXING VALVE TO DELIVER TEPID WATER AS REQUIRED BY ANSI Z358.1-2014.

TD-1 - 5' LENGTH, 6" WIDE X 18" DEEP T304 STAINLESS STEEL TRENCH DRAIN WITH 3" END OUTLET CONNECTION.
PROVIDE WITH T304 S.S. STEEL BAR GRATE, 6" WIDE X 1.5" THICK.
DURA TRENCH - DTSS6-08G36SSE-INTEGRAL-GLSSE-3E WITH 08G36SSE GRATE.

Pressure drop calculations (PSI) per OPSC Appendix A

Initial pressure	60
2" service lap (30 ft @ 136gpm @12 psi/100 ft)	-3.6
Water meter (2" @ 136 gpm)	-5
2" Backflow preventer	-6
Interior piping (250 ft @ max. 3.5 psi/100 ft.)	-8.75
Elevation (15 ft @ .43 psi/ft)	-6.45
Minimum pressure at remote fixture	-25
Available pressure	5.2

PLUMBING CALCULATIONS- OFFICE BUILDING (new fixtures)

FIXTURE TYPE	NUMBER OF FIXTURES	DOMESTIC WATER SERVICE				SANITARY WASTE SERVICE	
		WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	DRAINAGE FIXTURE UNITS	TOTAL DFU
KITCHEN SINK (ONE 1-1/2" TRAP)	1	1.5	1.5	1.125	1.125	2	2
LAVATORY (SINGLE)	4	1	4	3	3	1	4
MOP BASIN	1	3	3	2.25	2.25	3	3
RECEPTOR (ELEVATOR WASTE)	1	0	0	0	0	100	100
SHOWERS, (STALL)	2	2	4	3	3	2	4
URINAL (1.0 GPF, GENERAL USE)	3	4	12	12	0	2	6
WATER CLOSET (1.6 GPF FLUSHOMETER TANK-GENERAL)	5	2.5	12.5	12.5	0	4	20
HOSE BIBB (FIRST ONE)	1	2.5	2.5	2.5	0	---	---
HOSE BIBB (EACH ADDITIONAL)	2	1	2	2	0	---	---
TOTAL	20		41.5	38.375	9.375		139
SUB TOTAL FOR OFFICE BUILDING	47 GPM					WASTE SIZE	4"
Emergency Shower	20 GPM						
Emergency Eye wash	0.4 GPM						
TOTAL DCW DEMAND (ADDITION)	67.4 GPM						

PLUMBING CALCULATIONS (existing office building)

FIXTURE TYPE	NUMBER OF FIXTURES	DOMESTIC WATER SERVICE				SANITARY WASTE SERVICE	
		WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	DRAINAGE FIXTURE UNITS	TOTAL DFU
KITCHEN SINK (ONE 1-1/2" TRAP)	8	1.5	12	9	9	2	16
LAVATORY (SINGLE)	5	1	5	3.75	3.75	1	5
MOP BASIN	1	3	3	2.25	2.25	3	3
RECEPTOR (ELEVATOR WASTE)	1	0	0	0	0	100	100
SHOWERS, (STALL)	2	2	4	3	3	2	4
URINAL (1.0 GPF, GENERAL USE)	1	4	4	4	0	2	2
WATER CLOSET (1.6 GPF FLUSHOMETER TANK-GENERAL)	5	2.5	12.5	12.5	0	4	20
HOSE BIBB (FIRST ONE)	1	2.5	2.5	2.5	0	---	---
HOSE BIBB (EACH ADDITIONAL)	2	1	2	2	0	---	---
	0		0				0
	0		0				0
TOTAL	26		45	39	18		150
	47 GPM					WASTE SIZE	4"

PLUMBING CALCULATIONS- NEW SUITES *

FIXTURE TYPE	NUMBER OF FIXTURES	DOMESTIC WATER SERVICE				SANITARY WASTE SERVICE	
		WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	DRAINAGE FIXTURE UNITS	TOTAL DFU
SINKS ON WHEELS	3	1.5	4.5	3.375	3.375	2	6
TRENCH DRAINS	3	0	0	0	0	6	18
SINKS ON WHEELS (FUTURE SUITES)	5	1.5	7.5	5.625	5.625	2	10
TRENCH DRAINS (FUTURE SUITES)	5	1.5	7.5	5.625	5.625	6	30
FLOOR SINKS	3	0	0			1	3
	0		0				0
TOTAL	19		19.5	14.625	14.625	4	67
	12 GPM					WASTE SIZE	4"

* NON-POTABLE WATER DEMAND AND PROCESS WASTE ONLY

TOTAL DOMESTIC WATER DEMAND SUMMARY

BUILDING	WATER DEMAND	
EXISTING OFFICE BUILDING	47	GPM
NEW OFFICE BUILDING	67.4	GPM
TOTAL PROCESS DEMAND (EXISTING + NEW)	22	GPM
	136.4	GPM
EXISTING CW RISER	2-1/2"	CW

CONDENSING GAS WATER HEATERS

MARK NUMBER	WH
FUEL	NAT. GAS
CAPACITY (GAL)	60 GALLON
INPUT RATE (MBH)	125 MBH
RECOVERY CAP. @ 100F TR (GPH)	145 GPH
EFFICIENCY (%)	96%
GAS VENT/COMBUSTIOIN AIR DIA.	3" PP
DESIGN WEIGHT (LBS)	1200
BASIS OF DESIGN: BRADFORD WHITE	EF-60T-125

SUMP PUMP

MARK NUMBER	SP
SYSTEM	ELEVATOR
TYPE	SUMP
FLOW RATE (GPM)	50
HEAD (FT H2O)	15
POWER (HP)	1/2 HP