PLUMBING LEGEND

AFF	ABOVE FINISHED FLOOR
ARCH	ARCHITECTURAL
B.G.	BELOW GRADE
BTU	BRITISH THERMAL UNIT
CAP.	CAPACITY
C.I.	CAST IRON
COMP.	COMPARTMENT
CONT.	CONTINUATION
CPVC	CHLORINATED POLYVINYL CHLORIDE (PIPE)
CU.	CUBIC
DIA.	DIAMETER
ELEV.	ELEVATION
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
F.F.	FINISH FLOOR
FLG.	FLANGE
FT	FOOT / FEET
G	GAS
GA.	GAUGE
GALV.	GALVANIZED
GPM	GALLONS PER MINUTE
G.V.	GATE VALVE
HP	HORSEPOWER
kW	KILOWATT
LAV	LAVATORY
LBS	POUNDS
MAX.	MAXIMUM
MBH	THOUSANDS OF BTUs PER HOUR
MIN.	MINIMUM
M.J.	MECHANICAL JOINT
N.I.M.	NOT IN MECHANICAL
PROT.	PROTECTION
PRV	PRESSURE REDUCING VALVE
PSI, PSIG	POUNDS PER SQUARE INCH
P/T	PRESSURE / TEMPERATURE
REQ'D	REQUIRED
TYP.	TYPICAL
VTR	VENT THROUGH ROOF
WC	WATER CLOSET

- (CW) COLD WATER
- (HW) HOT WATER
- (HWR) HOT WATER RECIRC
- (W) BELOW GRADE WASTE
- (W) ABOVE GRADE WASTE
- (V) VENT
- (RD) RAIN DRAIN
- (OD) OVERFLOW RAIN DRAIN
- (G) NATURAL GAS
- (F) FIRE WATER

- PRESSURE/TEMP RELIEF VALVE
- BUTTERFLY VALVE
- GAS PRESSURE REGULATING VALVE
- PIPE TURNED UP, PIPE TURNED DOWN
- GATE VALVE
- BALL VALVE
- BALANCING VALVE
- CHECK VALVE
- UNION
- DOUBLE CHECK ASSEMBLY
- CAP
- TEE
- ELBOW
- CLEANOUT

- X / XX — EQUIPMENT MARK NUMBER
- XXX — FIXTURE MARK
- (#) — NOTE
- (X) — RISER DIAGRAM

PLUMBING CONNECTION SCHEDULE

MARK	FIXTURE	W	V	CW	HW	REMARKS
BT–1	BATH TUB	1–1/2"	1–1/2"	1/2"	1/2"	
BT–2	BATH TUB, ADA	1–1/2"	1–1/2"	1/2"	1/2"	ADA GRAB BARS
CW–1	CLOTHES WASHER FITTING	2"	2"	1/2"	1/2"	W/ DRAIN PAN & DRAIN
DW–1	DISH WASHER	–	–	1/2"	1/2"	*
FD–1	FLOOR DRAIN	3"	VL			PRIME
FD–2	FLOOR DRAIN	3"	VL			HEAVY DUTY GRATE, SEDIMENT BASKET, PRIME
FS–1	FLOOR SINK	3"	1 1/2"			PRIME
HB–1	HOSE BIBB			3/4"		VACUUM/FREEZE PROTECTED
HB–2	HOSE BIBB (TRASH)			1/2"	1/2"	HOT & COLD, VACUUM PROTECTED
LV–1	LAVATORY	1–1/2"	1–1/2"	1/2"	1/2"	UNDER COUNTER MOUNT
LV–2	LAVATORY, ADA	1–1/2"	1–1/2"	1/2"	1/2"	PUBLIC COUNTER MOUNT
LV–3	LAVATORY	1–1/2"	1–1/2"	1/2"	1/2"	PUBLIC COUNTER MOUNT
RD–1	ROOF DRAIN	–	–	–	–	SIZED ON PLANS
OD–2	OVERFLOW ROOF DRAIN	–	–	–	–	SIZED ON PLANS
S–1	KITCHEN SINK	2"	1–1/2"	1/2"	1/2"	DOUBLE COMPARTMENT
S–2	KITCHEN SINK, ADA	2"	1–1/2"	1/2"	1/2"	DOUBLE COMPARTMENT
SP–1	SUMP PUMP	2"				100 GPM
SS–1	SERVICE SINK	3"	1–1/2"	1/2"	1/2"	FLOOR MOUNT, VACUUM PROTECTED
WC–1	WATER CLOSET	3"	2"	1/2"		FLOOR MOUNT, TANK TYPE, ELONGATED
WC–2	WATER CLOSET, ADA	3"	2"	1/2"		FLOOR MOUNT, TANK TYPE, ELONGATED ADA
WC–3	WATER CLOSET, ADA	3"	2"	1/2"		FLOOR MOUNT, TANK TYPE, ELONGATED, ADA

V.L. – VENTED LINE

* PROVIDE ALL PLUMBING CONNECTIONS REQUIRED FOR A COMPLETE INSTALLATION. COORDINATE ELECTRICAL CONNECTION(S) WITH ELECTRICAL CONTRACTOR.

GAS WATER HEATERS

MARK NUMBER	WH 1 TO WH 5
FUEL	GAS
CAPACITY (GAL)	100
INPUT RATE (MBH)	199
RECOVERY CAP. @ 100 TR (GPH)	239
EFFICIENCY (%)	98.5
COMBUSTION AIR/GAS VENT DIA.	4" CPVC
DESIGN WEIGHT (LBS)	1735
BASIS OF DESIGN (BRADFORD WHITE)	EF–100T–199E–3N(A)

DOMESTIC RECIRC PUMP

MARK NUMBER	RP 1
SERVICE	WH/1–5
TYPE	RECIRC.
FLOW RATE (GPM)	25
HEAD (FT)	20
MOTOR HP	1/6
RPM	1750
BASIS OF DESIGN: GRUNDFOS	UP43–75BF

MIXING VALVE

MARK NUMBER	MV–1
WATER HEATER	1–5
MAX FLOW RATE GPM *	138
MIN FLOW RATE GRM	1.0
CW (SIZE IN.)	2"
HW (SIZE IN.)	2"
TWW (SIZE IN.)	2"
BASIS OF DESIGN	LEONARD TM–186–20050–PRV

* – AT 15 PSI DROP MAX

SUMP PUMP

MARK NUMBER	SP 1
SYSTEM	ELEVATOR
TYPE	SUMP
FLOW RATE (GPM)	100
HEAD (FT H2O)	20
POWER (HP)	1HP/208/1

* – PROVIDE W/ PLUG IN CONNECTION FOR POWER

PLUMBING CALCULATIONS 1bd/1ba

FIXTURE TYPE	DOMESTIC WATER SERVICE: NUMBER OF FIXTURES	WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	SANITARY WASTE SERVICE: DRAINAGE FIXTURE UNITS	TOTAL DFU
BATHTUB or COMBO BATH/SHOWER	1	4	4	3	3	2	2
CLOTHES WASHER	0	0	0	0	0	0	0
KITCHEN SINK (GRINDER & DISHWASHER)	1	3	3	2.25	2.25	2	2
LAVATORY (SINGLE)	1	1	1	0.75	0.75	1	1
WATER CLOSET (1.6 GPF TANK–PRIVATE)	1	2.5	2.5	2.5	0	3	3
TOTAL PER UNIT	4	10.5	10.5	8.5	6	8	8
20 TYPICAL UNITS	80	210	210	170	120	160	160

PLUMBING CALCULATIONS 2bd/1ba

FIXTURE TYPE	DOMESTIC WATER SERVICE: NUMBER OF FIXTURES	WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	SANITARY WASTE SERVICE: DRAINAGE FIXTURE UNITS	TOTAL DFU
BATHTUB or COMBO BATH/SHOWER	1	4	4	3	3	2	2
CLOTHES WASHER	0	0	0	0	0	0	0
KITCHEN SINK (GRINDER & DISHWASHER)	1	3	3	2.25	2.25	2	2
LAVATORY (SINGLE)	1	1	1	0.75	0.75	1	1
WATER CLOSET (1.6 GPF TANK–PRIVATE)	1	2.5	2.5	2.5	0	3	3
TOTAL PER UNIT	4	10.5	10.5	8.5	6	8	8
37 TYPICAL UNITS	148	388.5	388.5	314.5	222	296	296

PLUMBING CALCULATIONS 3bd/1.5ba

FIXTURE TYPE	DOMESTIC WATER SERVICE: NUMBER OF FIXTURES	WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	SANITARY WASTE SERVICE: DRAINAGE FIXTURE UNITS	TOTAL DFU
BATHTUB or COMBO BATH/SHOWER	1	4	4	3	3	2	2
CLOTHES WASHER	0	0	0	0	0	0	0
KITCHEN SINK (GRINDER & DISHWASHER)	1	3	3	2.25	2.25	2	2
LAVATORY (SINGLE)	2	1	2	1.5	1.5	1	2
WATER CLOSET (1.6 GPF TANK–PRIVATE)	2	2.5	5	5	0	3	6
TOTAL PER UNIT	6	10.5	14	11.75	6.75	8	12
1 TYPICAL UNIT	6	10.5	14	11.75	6.75	8	12

PLUMBING CALCULATIONS 2bd/1.5ba TH

FIXTURE TYPE	DOMESTIC WATER SERVICE: NUMBER OF FIXTURES	WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	SANITARY WASTE SERVICE: DRAINAGE FIXTURE UNITS	TOTAL DFU
BATHTUB or COMBO BATH/SHOWER	1	4	4	3	3	2	2
CLOTHES WASHER	1	4	4	3	3	3	3
KITCHEN SINK (GRINDER & DISHWASHER)	1	3	3	2.25	2.25	2	2
LAVATORY (SINGLE)	2	1	2	1.5	1.5	1	2
WATER CLOSET (1.6 GPF TANK–PRIVATE)	2	2.5	5	5	0	3	6
TOTAL PER UNIT	7	14.5	18	14.75	9.75	11	15
1 TYPICAL UNIT	7	14.5	18	14.75	9.75	11	15

PLUMBING CALCULATIONS 3bd/1.5ba TH

FIXTURE TYPE	DOMESTIC WATER SERVICE: NUMBER OF FIXTURES	WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	SANITARY WASTE SERVICE: DRAINAGE FIXTURE UNITS	TOTAL DFU
BATHTUB or COMBO BATH/SHOWER	1	4	4	3	3	2	2
CLOTHES WASHER	1	4	4	3	3	3	3
KITCHEN SINK (GRINDER & DISHWASHER)	1	3	3	2.25	2.25	2	2
LAVATORY (SINGLE)	2	1	2	1.5	1.5	1	2
WATER CLOSET (1.6 GPF TANK–PRIVATE)	2	2.5	5	5	0	3	6
TOTAL PER UNIT	7	14.5	18	14.75	9.75	11	15
11 TYPICAL UNITS	77	159.5	198	162.25	107.25	121	165

COMMON SPACES

FIXTURE TYPE	DOMESTIC WATER SERVICE: NUMBER OF FIXTURES	WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	SANITARY WASTE SERVICE: DRAINAGE FIXTURE UNITS	TOTAL DFU
MOP BASIN	4	3	12	9	9	3	12
HOSE BIBB (FIRST ONE)	4	2.5	10	10	0	---	
RECEPTOR (ELEVATOR WASTE)	1	0	0	0	0	100	100
CLOTHES WASHER	22	4	88	66	66	3	66
RECEPTOR (INDIRECT WASTE)	9	---		---	---	1	9
LAVATORY (SINGLE)	3	1	3	2.25	2.25	1	3
WATER CLOSET (1.6 GPF TANK–PRIVATE)	3	2.5	7.5	7.5	0	3	9
TOTAL:	46	13	120.5	94.75	77.25	111	199

BUILDING TOTAL

UNIT TYPE	DOMESTIC WATER SERVICE: NUMBER FIXTURE UNITS	WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	SANITARY WASTE SERVICE: TOTAL DFU
2BD/1BA	80	210	210	170	120	160
2BD/1BA	148	388.5	388.5	314.5	222	296
3BD/1.5BA	6	10.5	14	11.75	6.75	12
2BD/1.5 TH	7	14.5	18	14.75	9.75	15
3BD/1.5 TH	77	159.5	198	162.25	107.25	165
COMMONS SPACES	46	13	120.5	94.75	77.25	199
ELEVATOR SUMP PUMP						100
TOTAL:	364	796	949	768	543	947

DOMESTIC WATER DEMAND	180	GPM
DOMESTIC WATER PIPE SIZE	4"	CW
SANITARY SEWER	8"	WASTE

MEI Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PHN: (503) 234-0548
FAX: (503) 234-0677
INC. WWW.MEIA-ENG.COM
CONTACT: Takako Baker

PRELIMINARY
NOT FOR
CONSTRUCTION

KING+PARKS MULTI-FAMILY RESIDENCES

PROJECT SITE: NE Martin Luther King Jr. Boulevard & N Rosa Parks Way
OWNER: Portland Community Reinvestment Initiatives Inc. (PCRI)
6329 NE Martin Luther King Jr. Blvd. Portland, Oregon 97211

MERRYMAN BARNES ARCHITECTS 4713 N ALBINA AVE SUITE 304 PORTLAND, OREGON 97217 p 503.222.3763 www.merrymanbarnesarchitects.com

PROJECT NO. 16-0602
ISSUE DATE 06.23.2017
REVISIONS

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