PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
2. ~~SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 17-GA. BRASS~~ TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
3. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
4. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
5. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
6. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
7. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
8. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
9. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
10. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
11. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
12. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
13. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
14. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
15. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
192 Nickerson, Suite #300
Seattle, Washington 98109
Phone: 206.285.2966

SMR Architects
117 S. Main St., Suite 400
Seattle, WA 98104

PH: 206.623.1104
FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13228 NE 133rd St.,
Kirkland, WA 98034

BUILDING 1

BID SET

DANA AMBER COLE — STATE OF WASHINGTON — 22041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09849
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P1-001

10/7/2021 7:33:34 AM

GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ1	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-165-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE. ⚠1
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1	HEAT PUMP	SANCO2:	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE,
WH-2	WATER HEATER	GS4-45HPC-D	UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET. ⚠1
ST-1	DOMESTIC	SANCO2:	200 GALLON STORAGE TANK.
ST-2	STORAGE TANK	ECO-200GLBK	2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	⚠1 1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

kWh

***Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements**

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	PIPE SIZE H.W.	PIPE SIZE WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

⚠1

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE — **FIXTURE UNITS PER APPENDIX A**

FIXTURE	QTY	DOMESTIC WATER WSFU: PER FIXTURE	DOMESTIC WATER WSFU: TOTAL	HW PER FIXTURE	HW TOTAL	SEWER DFU: PER FIXTURE	SEWER DFU: TOTAL
Private Tank Water Closet	8	2.5	20	-	-	3	24
Lavatory (Public or Private)	8	1	8	0.75	6	1	8
Bathtub or Combo Bath/Shwr	8	4	32	3	24	2	16
Kitchen Sink	8	1.5	12	1.125	9.00	2	16
Clothes Washer	8	4	32	3	24	3	24
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**44**		**107.5**		**63.00**		**92**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 44 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 92. BUILDING SERVICE SIZE = (1X) 4".

10/7/2021 7:33:34 AM

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Phone: 206.285.2966

SMR Architects
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Seattle, WA 98104

PH: 206.623.1104
FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13228 NE 133rd St.,
Kirkland, WA 98034

BUILDING 1

BID SET

DIANE AMBER FORD — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

NOTES AND SCHEDULES

PERMIT #	BMF22-09849
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P1-002



BUILDING NUMBERS	TYPE	FLOORS
1	FLAT	2
2	FLAT	2
3	FLAT	2
4	FLAT	2
6	FLAT	2
7	FLAT	2
8	FLAT	2
24	FLAT	2
25	FLAT	2
5	FLAT	3
10	FLAT	3
11	FLAT	3
12	FLAT	3
13	FLAT	3
14	FLAT	3
16	FLAT	3
18	FLAT	3
20	FLAT	3
21	FLAT	3
22	FLAT	3
9	TOWNHOME	2
15	TOWNHOME	2
17	TOWNHOME	2
19	TOWNHOME	2
23	TOWNHOME	2

SITE PLAN
SCALE: 1"=30'-0"

10/7/2021 7:33:34 AM

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King County Housing Authority

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General Partner
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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13228 NE 133rd St.,
Kirkland, WA 98034

BUILDING 1

BID SET

DANA AMBER COLBRON
STATE OF WASHINGTON
20041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

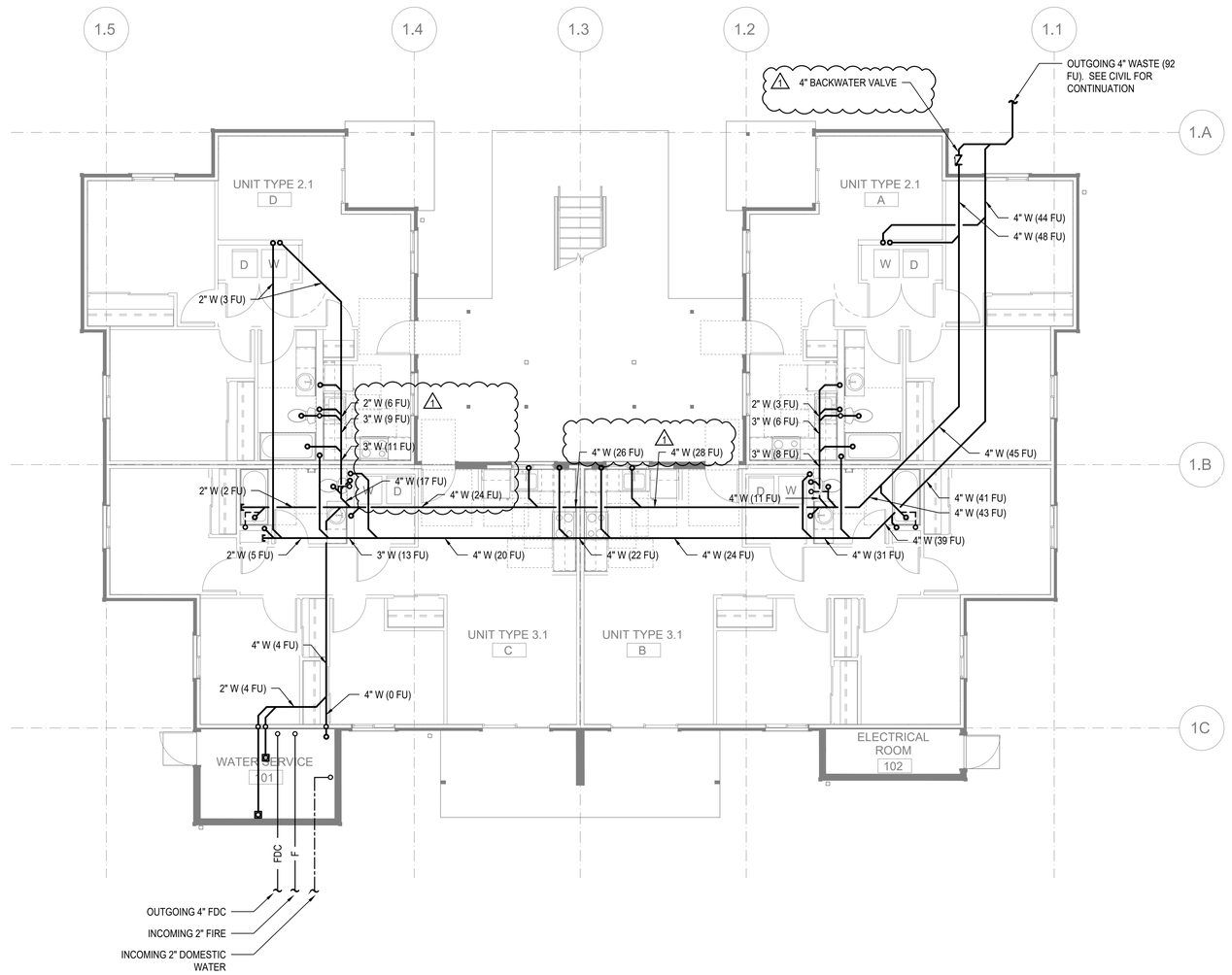
DPD STAMP

TITLE

SITE PLAN

PERMIT #	BMF22-09849
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P1-011



FLOOR PLAN - BUILDING 1 - FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. ALL FIRST FLOOR FIXTURES SHALL BE ROUTED THROUGH BACKWATER VALVE BEFORE CONNECTING TO OUTGOING WASTE.

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King County Housing Authority

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Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13228 NE 133rd St.,
Kirkland, WA 98034

BUILDING 1

BID SET

DANA AMBER COLVIN
STATE OF WASHINGTON
22041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

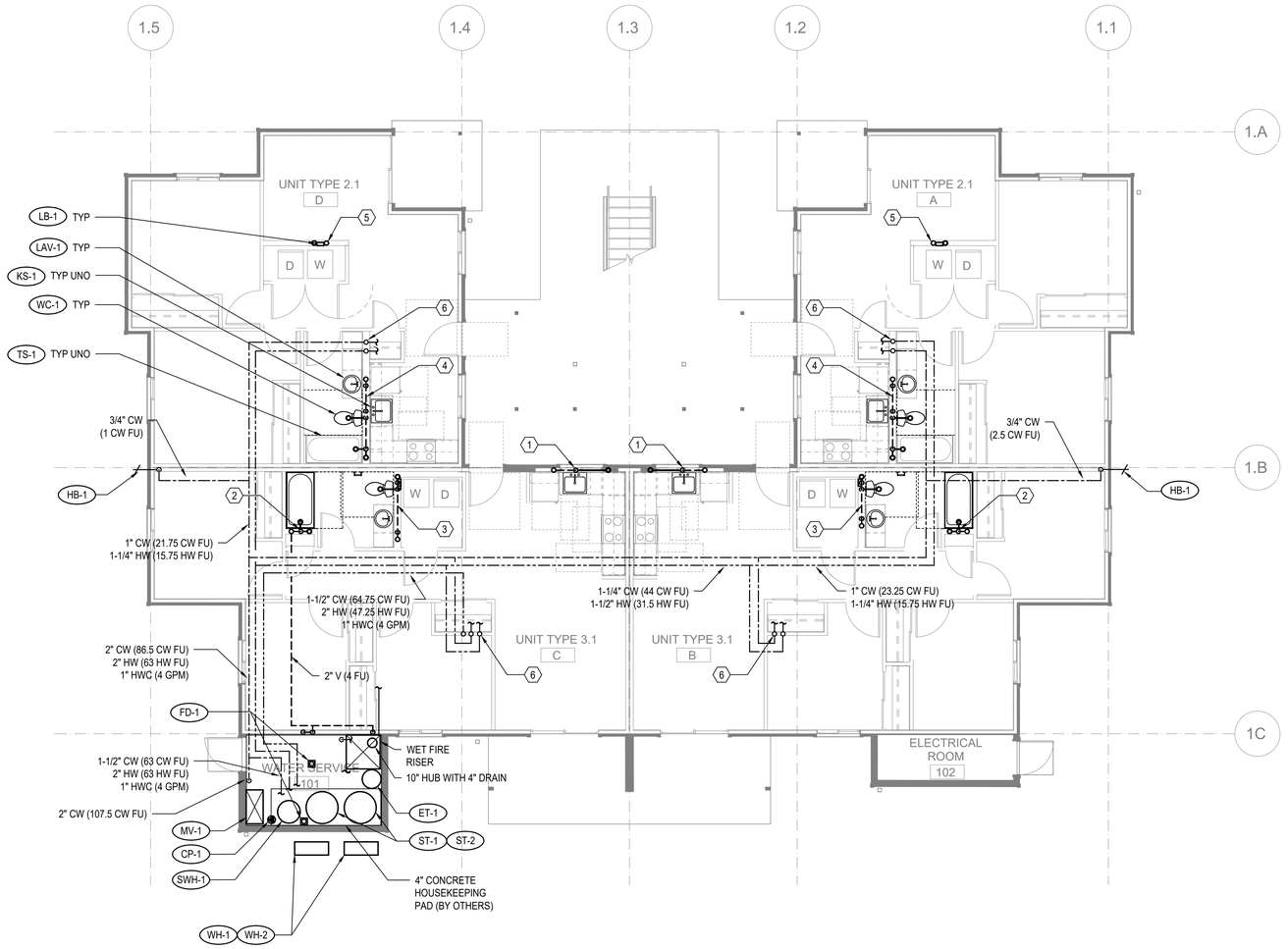
TITLE

PLAN - FOUNDATION

PERMIT #	BMF22-09849
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P1-100

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 1 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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King County Housing Authority

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c/o: King County Housing Authority,
General Partner
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Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13228 NE 133rd St.,
Kirkland, WA 98034

BUILDING 1

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
20041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

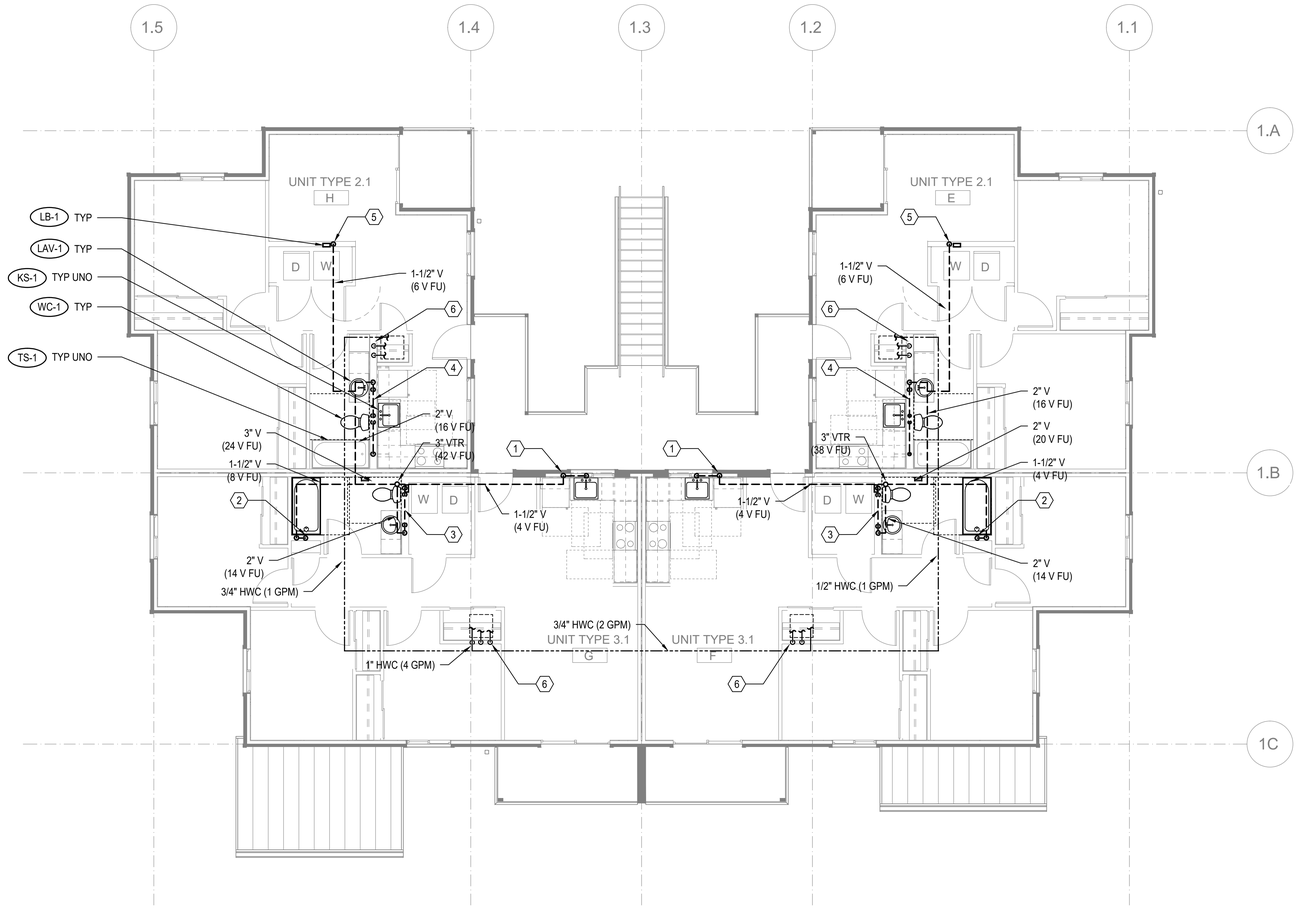
TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09849
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P1-101

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FLOOR PLAN - BUILDING 1 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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c/o: King County Housing Authority,
General Partner
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Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13228 NE 133rd St.,
Kirkland, WA 98034

BUILDING 1

BID SET

DANE AMBER FOLKESTAD
STATE OF WASHINGTON
22041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

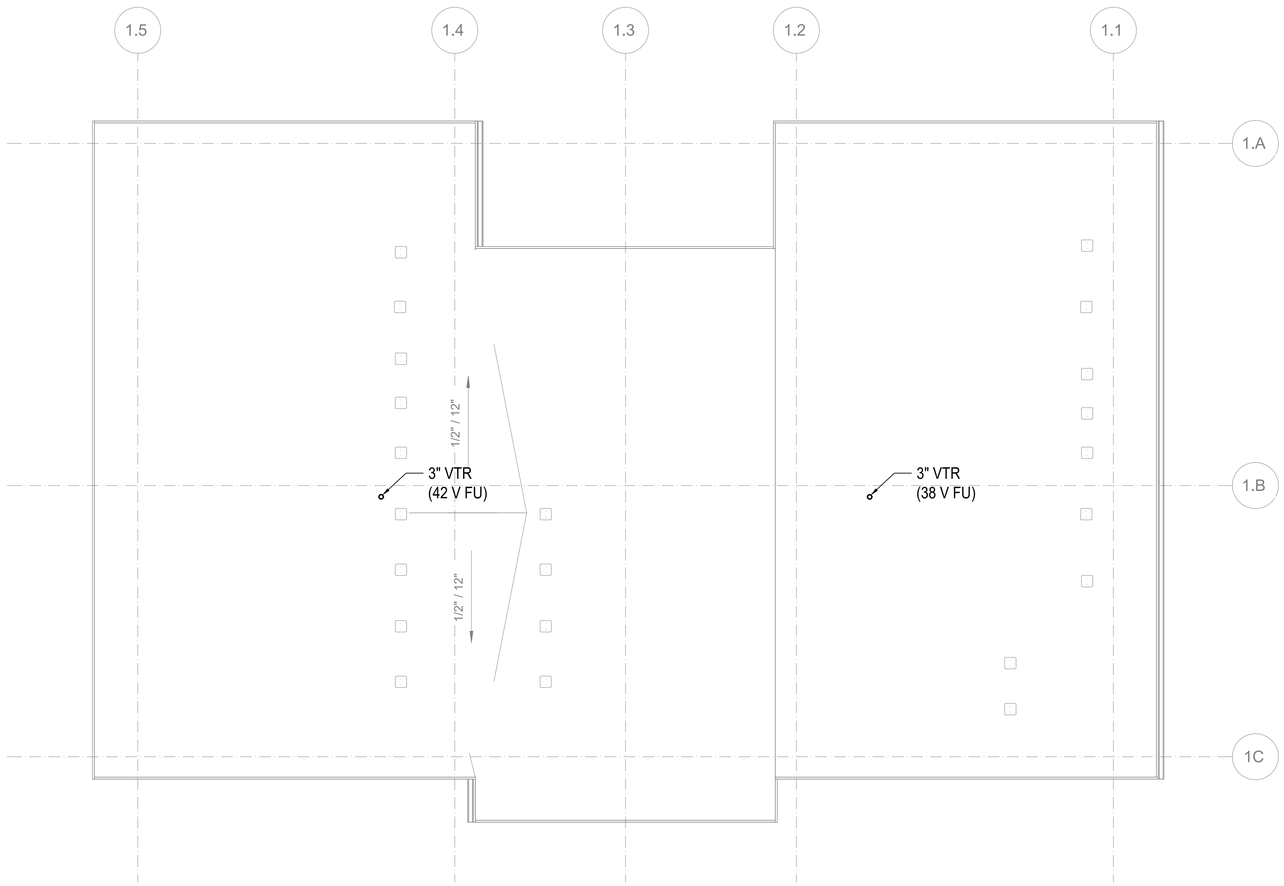
TITLE

PLAN - LEVEL 2

PERMIT #	BMF22-09849
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P1-102

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 1 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

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Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13228 NE 133rd St.,
Kirkland, WA 98034

BUILDING 1

BID SET

DANA AMBER COLVIN
STATE OF WASHINGTON
20041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

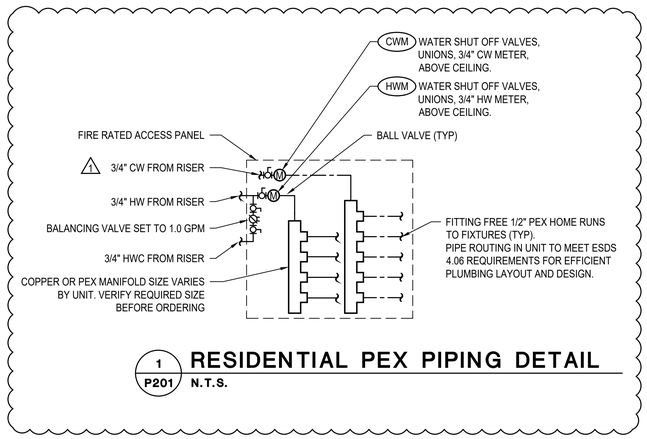
PLAN - ROOF

PERMIT #	BMF22-09849
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P1-103

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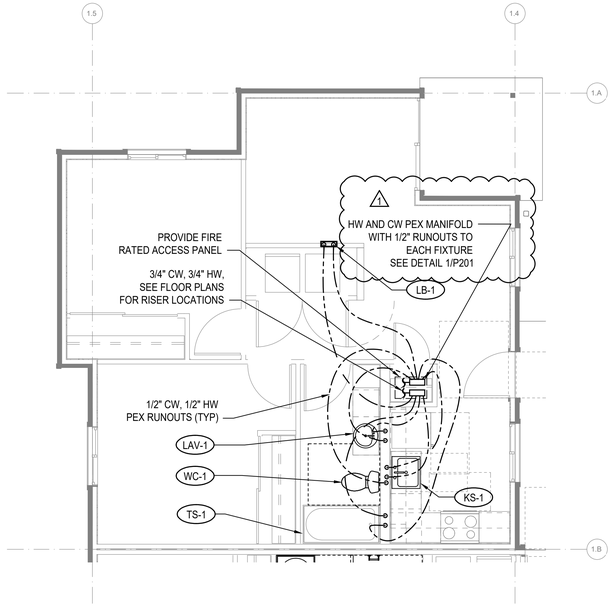
1 / P201 **RESIDENTIAL PEX PIPING DETAIL**

N.T.S.

GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

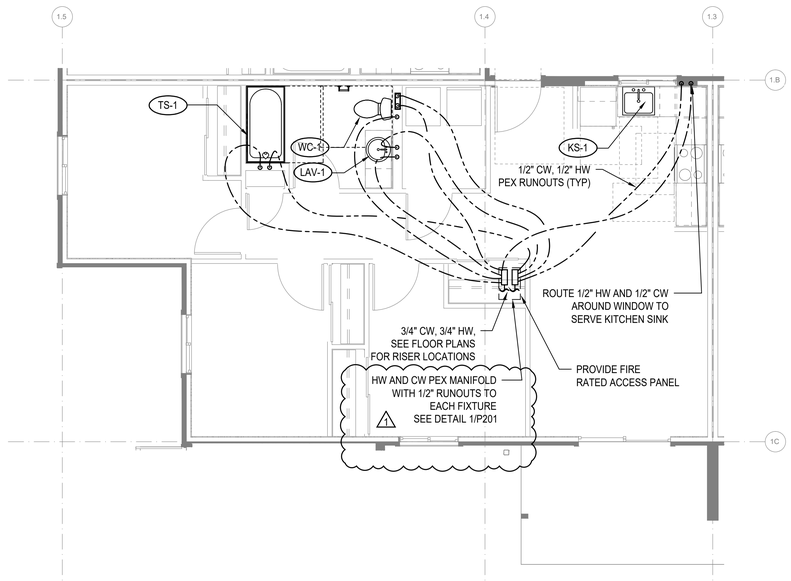
FLAG NOTES (X):



2 / P201 **ENLARGED PLAN - 2-BED**

1/4"=1'-0"

UNITS: A, D, E, H



3 / P201 **ENLARGED PLAN - 3-BED**

1/4"=1'-0"

UNITS: B, C, F, G

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King County Housing Authority

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c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13228 NE 133rd St.,
Kirkland, WA 98034

BUILDING 1

BID SET

DANA AMBER FOSTER STATE OF WASHINGTON 22041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

ENLARGED UNIT PLANS

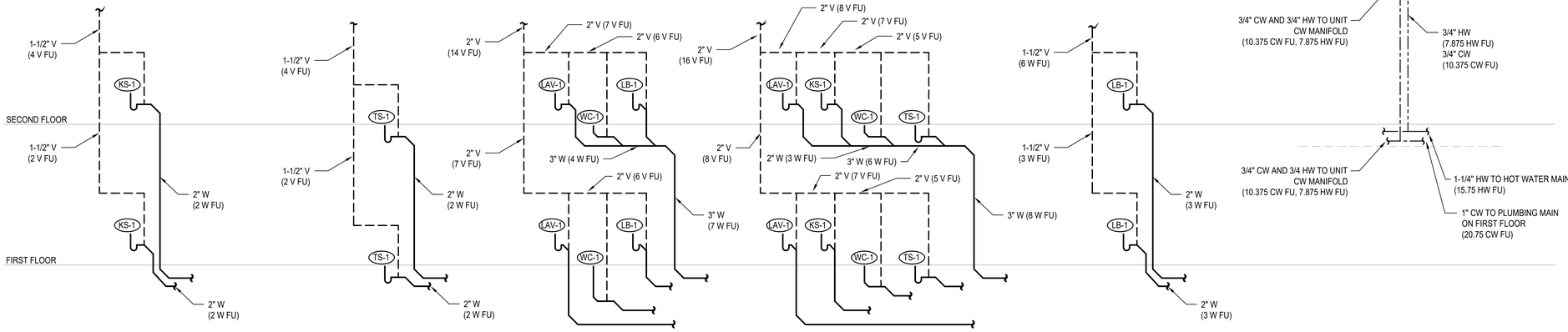
PERMIT #	BMF22-09849
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P1-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - KITCHEN SINK** N.T.S.

2 P202 **WASTE RISER - TUB/SHOWER** N.T.S.

3 P202 **WASTE RISER - LB, LAV, WC** N.T.S.

4 P202 **WASTE RISER - LAV, KS, WC, TS** N.T.S.

5 P202 **WASTE RISER - LAUNDRY BOX** N.T.S.

6 P202 **WATER RISER** N.T.S.

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KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 1

BID SET

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STATE OF WASHINGTON
041009
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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

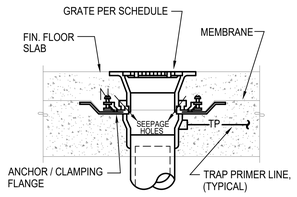
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RISERS

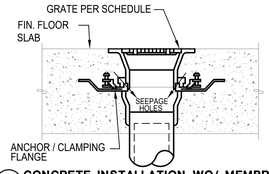
PERMIT #	BMF22-09849
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
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SHEET NO.:

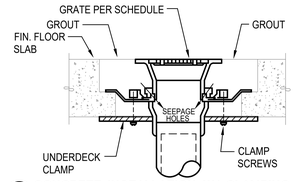
P1-202



A **CONCRETE INSTALLATION W/ MEMBRANE**

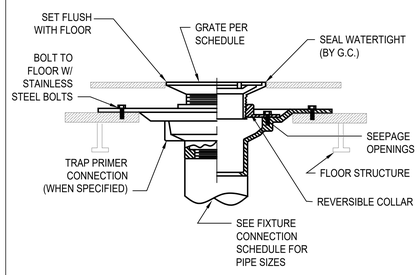


B **CONCRETE INSTALLATION WO/ MEMBRANE**



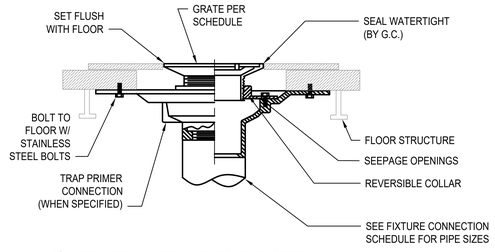
C **CONCRETE INSTALLATION W/ CLAMPING RING**

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



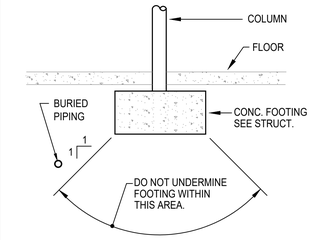
D **FOR USE W/ DOUBLE WOOD FLOORS**

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

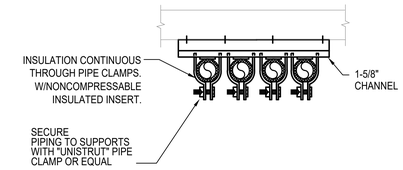


E **FOR USE W/ SINGLE WOOD FLOORS**

1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.

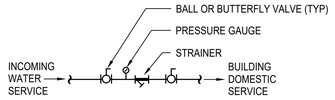


2 P301 BURIED PIPING DETAIL
N.T.S.

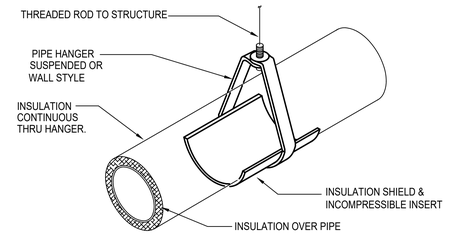


NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

3 P301 PIPE SUPPORT
N.T.S.



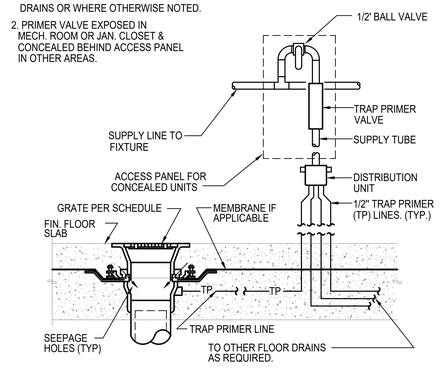
4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



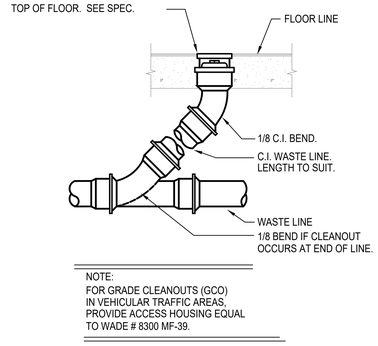
NOTE:
INSULATE & LABEL PIPING PER. SPEC.

5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.

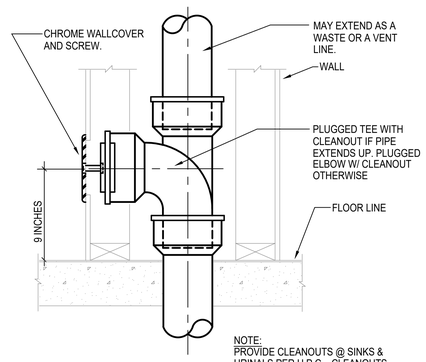


6 P301 TRAP PRIMER DETAIL
N.T.S.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

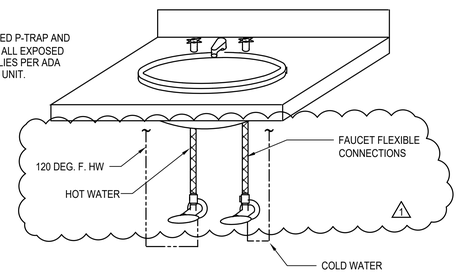
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



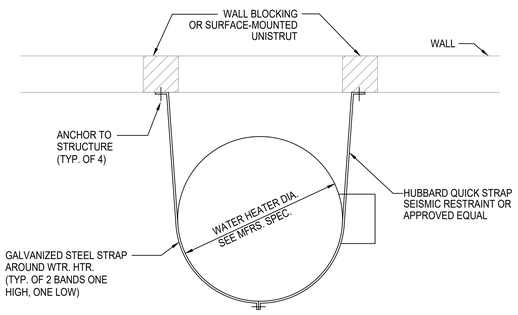
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

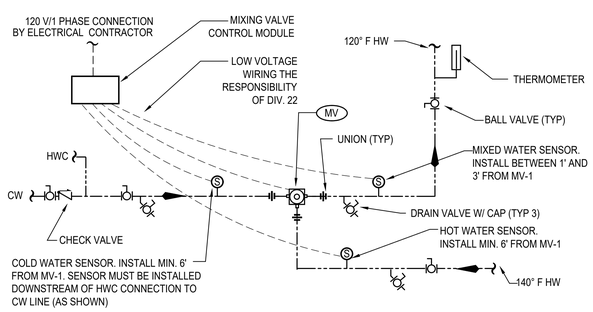
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



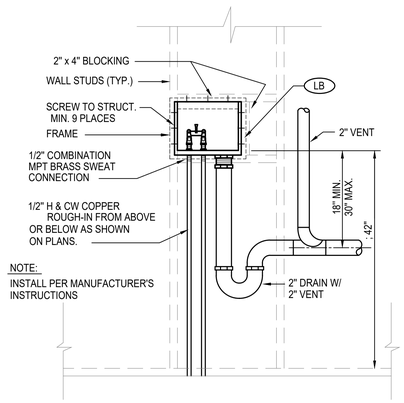
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



NOTE:
INSTALL PER MANUFACTURER'S INSTRUCTIONS

12 P301 LAUNDRY BOX DETAIL
N.T.S.

10/7/2021 7:33:34 AM

SIDER + BYERS
MECHANICAL + ELECTRICAL ENGINEERS
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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13228 NE 133rd St.,
Kirkland, WA 98034

BUILDING 1

BID SET

DANA AMBER LOVE — STATE OF WASHINGTON — 24410 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

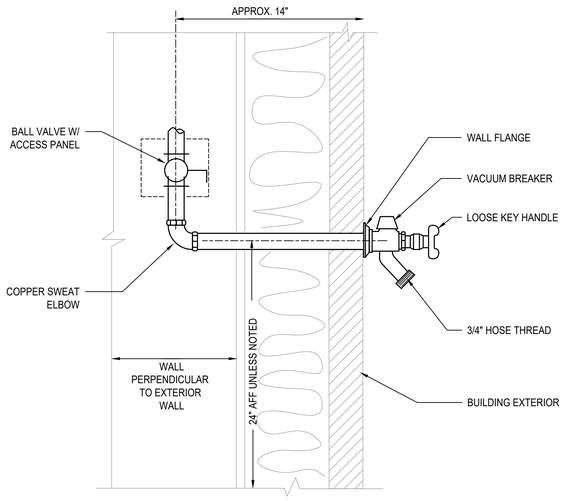
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DETAILS

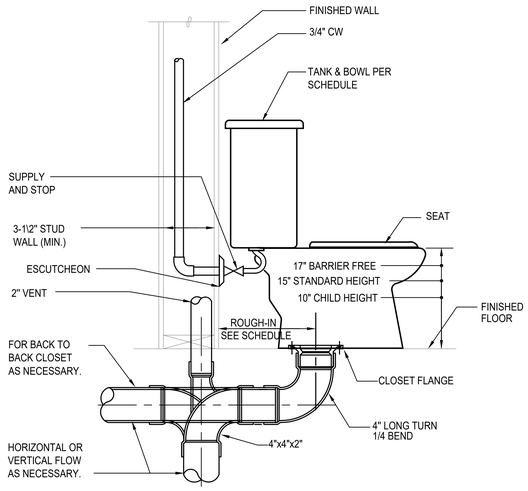
PERMIT #	BMF22-09849
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P1-301



1 P302 **FREEZE PROOF HOSE BIBB DETAIL**
N.T.S.



2 P302 **TANK WATER CLOSET DETAIL**
N.T.S.

3 P302 **NOT USED**
N.T.S.

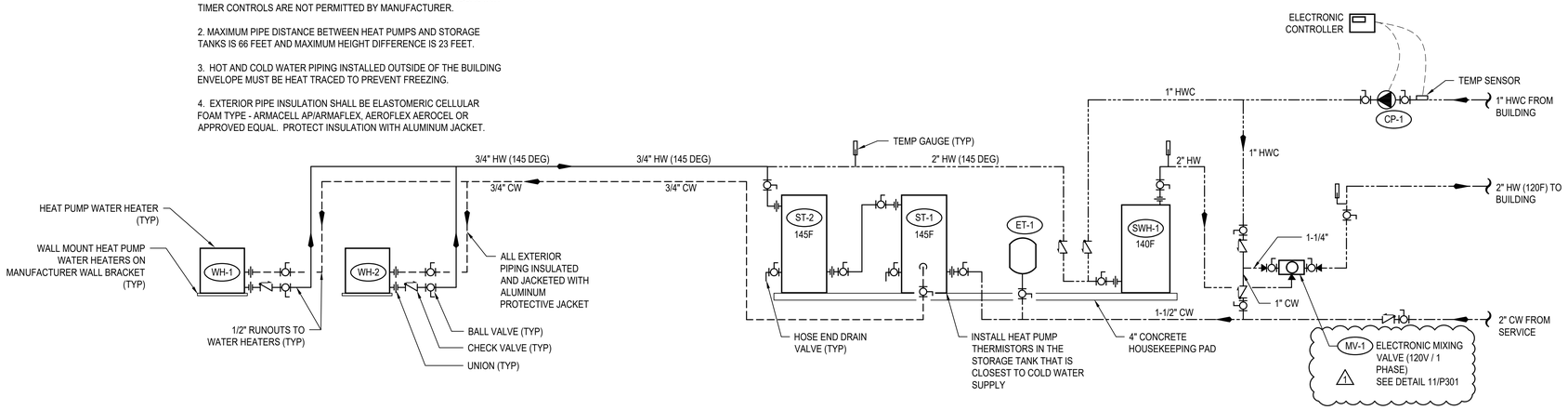
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 **HEAT PUMP WATER HEATER DETAIL**
N.T.S.

10/7/2021 7:33:34 AM

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

DETAILS

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P1-302

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
   ~~SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 1" DIA. BRASS~~ TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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BUILDING 2

BID SET

DANA AMBER COLLINS — STATE OF WASHINGTON — 5041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09850
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P2-001

10/7/2021 7:33:34 AM

GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.
NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.			
HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ1	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-165-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE. ⚠1
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1	HEAT PUMP	SANCO2:	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE,
WH-2	WATER HEATER	GS4-45HPC-D	UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET. ⚠1
ST-1	DOMESTIC	SANCO2:	200 GALLON STORAGE TANK.
ST-2	STORAGE TANK	ECO-200GLBK	2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	⚠1 1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	kWh
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

***Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements**

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	PIPE SIZE H.W.	PIPE SIZE WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

⚠1

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE — **FIXTURE UNITS PER APPENDIX A**

FIXTURE	QTY	DOMESTIC WATER WSFU: PER FIXTURE	DOMESTIC WATER WSFU: TOTAL	HW PER FIXTURE	HW TOTAL	SEWER DFU: PER FIXTURE	SEWER DFU: TOTAL
Private Tank Water Closet	8	2.5	20	-	-	3	24
Lavatory (Public or Private)	8	1	8	0.75	6	1	8
Bathtub or Combo Bath/Shwr	8	4	32	3	24	2	16
Kitchen Sink	8	1.5	12	1.125	9.00	2	16
Clothes Washer	8	4	32	3	24	3	24
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**44**		**107.5**		**63.00**		**92**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 44 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 92. BUILDING SERVICE SIZE = (1X) 4".

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King County Housing Authority

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c/o: King County Housing Authority,
General Partner
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Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13230 NE 133rd St.,
Kirkland, WA 98034

BUILDING 2

BID SET

DANA AMBER FOSTER — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

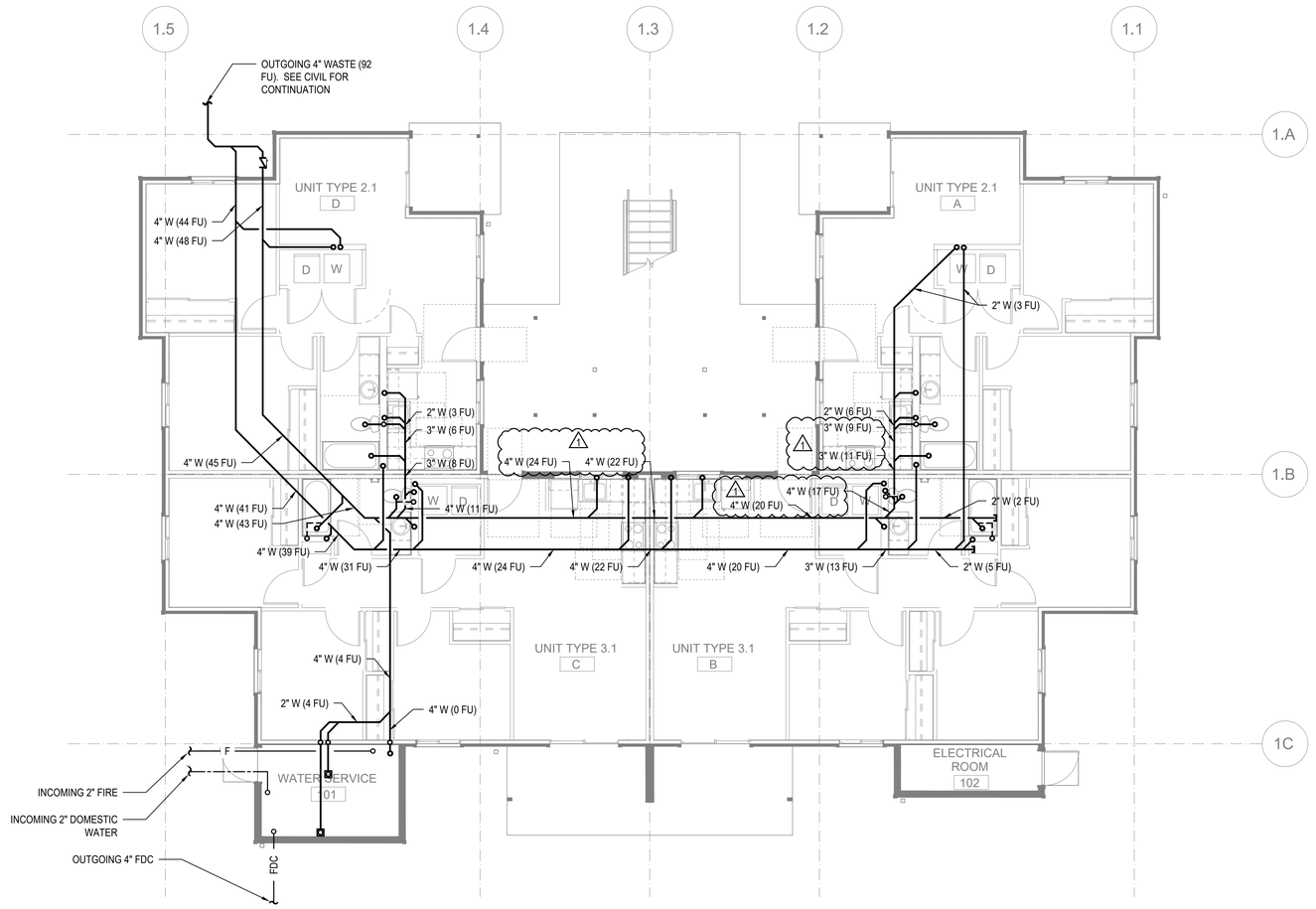
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DPD STAMP

TITLE

NOTES AND SCHEDULES

PERMIT #	BMF22-09850
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P2-002



FLOOR PLAN - BUILDING 2 - FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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BUILDING 2

BID SET

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STATE OF WASHINGTON
22041009
REGISTERED PROFESSIONAL ENGINEER
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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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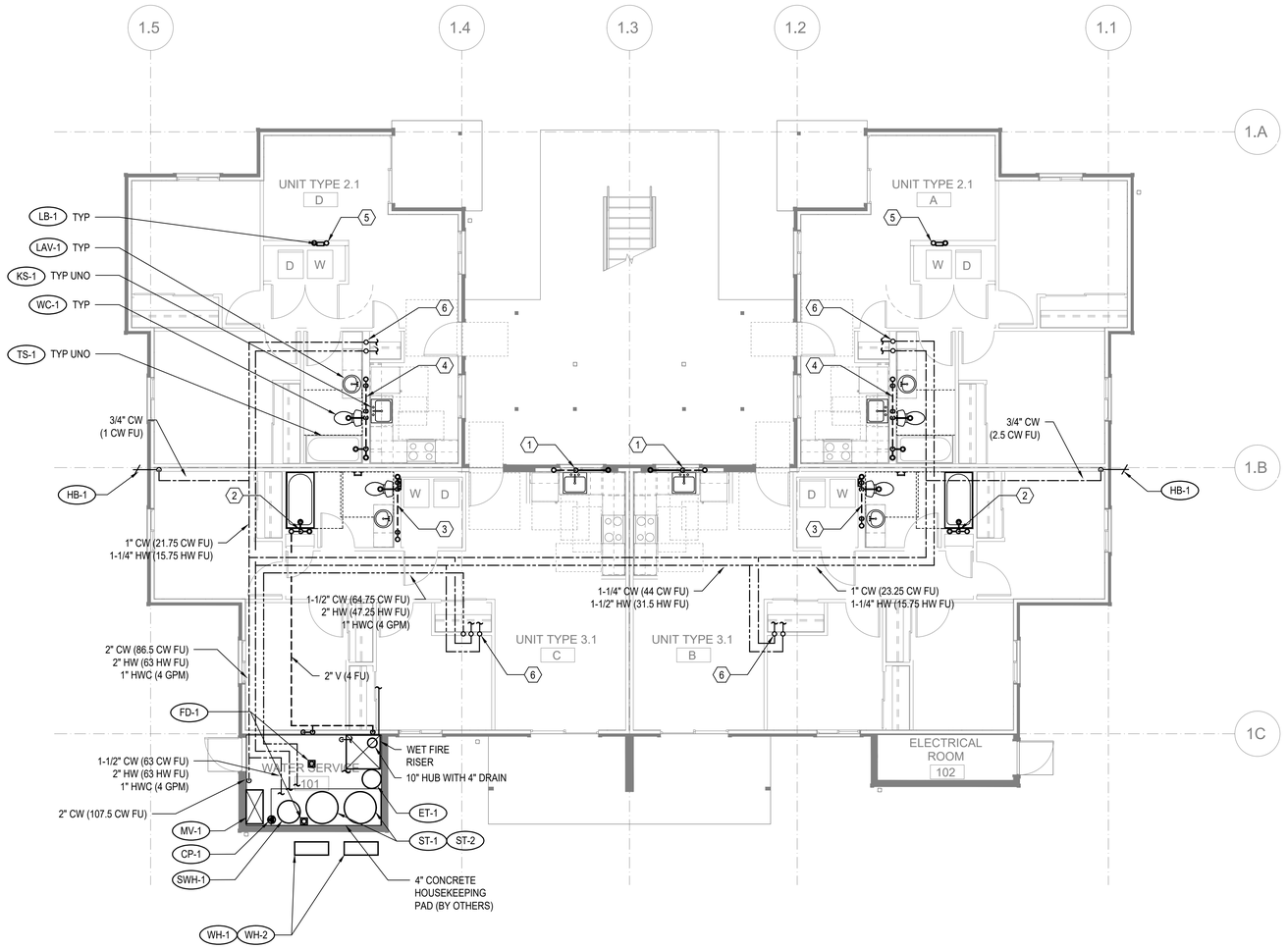
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PLAN - FOUNDATION

PERMIT #	BMF22-09850
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P2-100

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FLOOR PLAN - BUILDING 2 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 2

BID SET

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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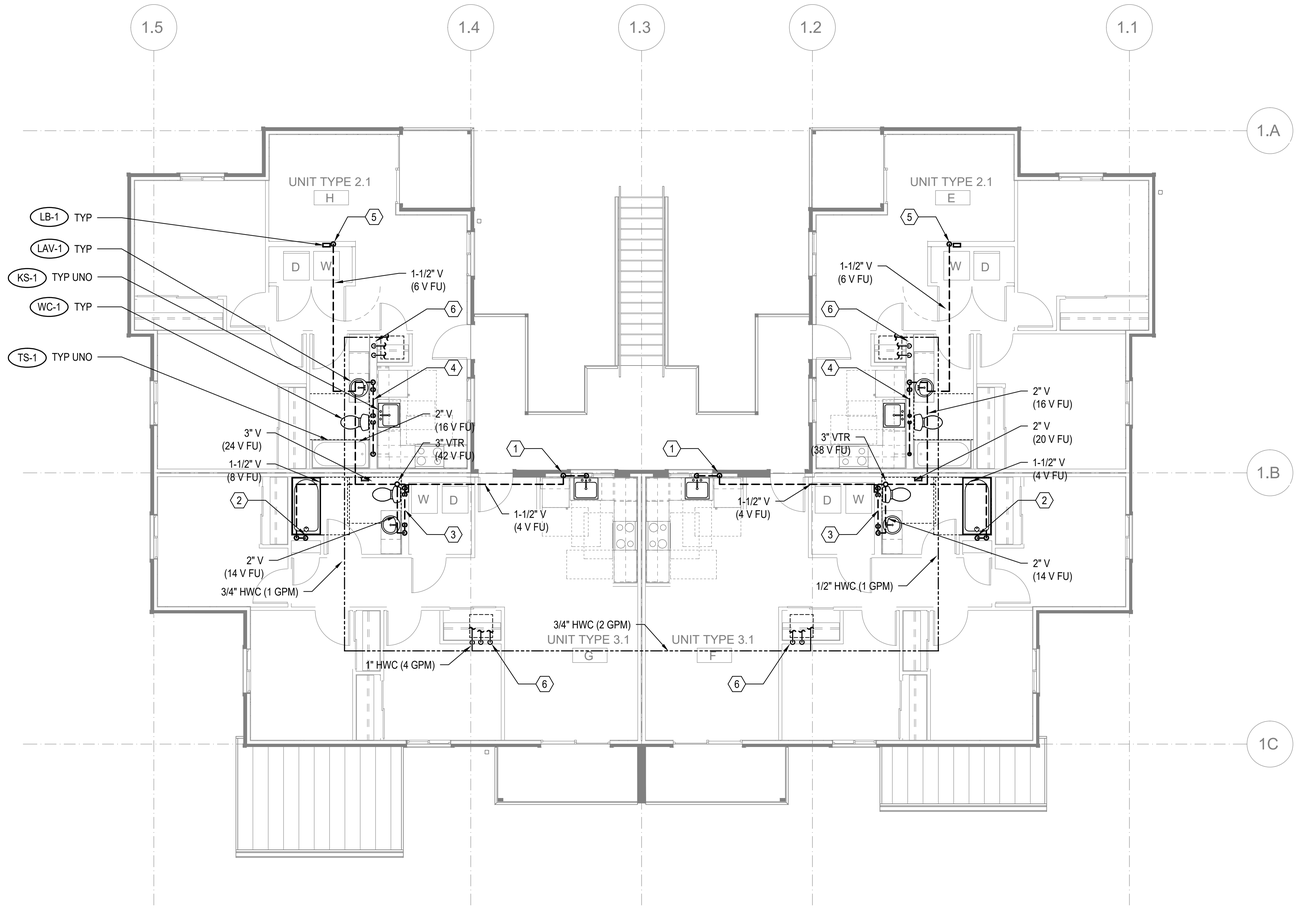
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PLAN - LEVEL 1

PERMIT #	BMF22-09850
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P2-101

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FLOOR PLAN - BUILDING 2 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 2

BID SET

DANE AMBER FORSMAN STATE OF WASHINGTON 24041009 REGISTERED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

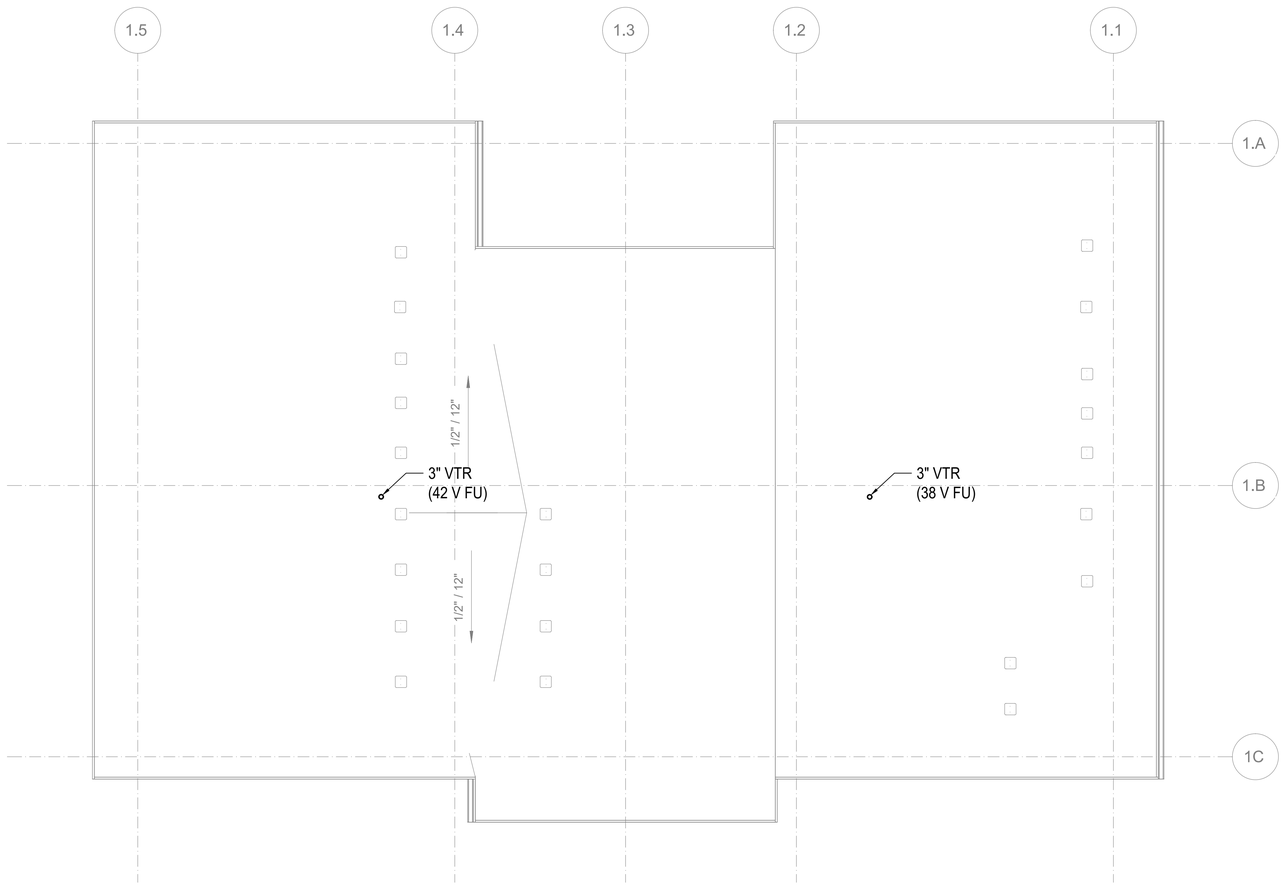
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TITLE

PLAN - LEVEL 2

PERMIT #	BMF22-09850
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P2-102

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FLOOR PLAN - BUILDING 2 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 2

BID SET

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STATE OF WASHINGTON
20041009
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PROFESSIONAL ENGINEER
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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

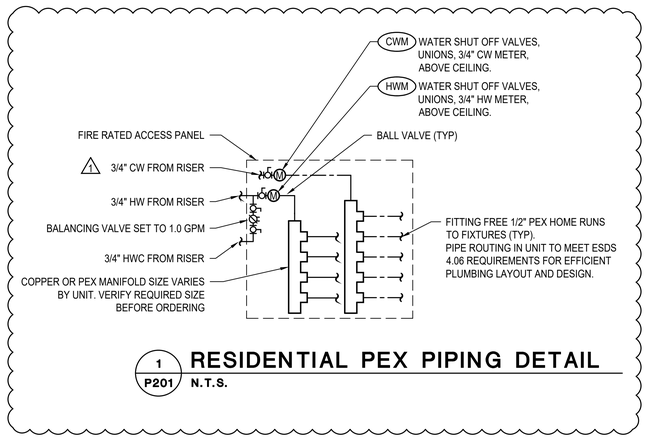
PLAN - ROOF

PERMIT #	BMF22-09850
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P2-103

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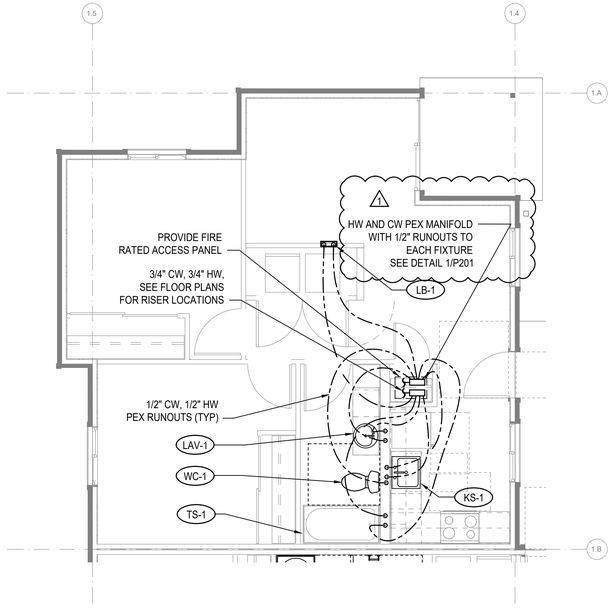
1 / P201 **RESIDENTIAL PEX PIPING DETAIL**

N.T.S.

GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

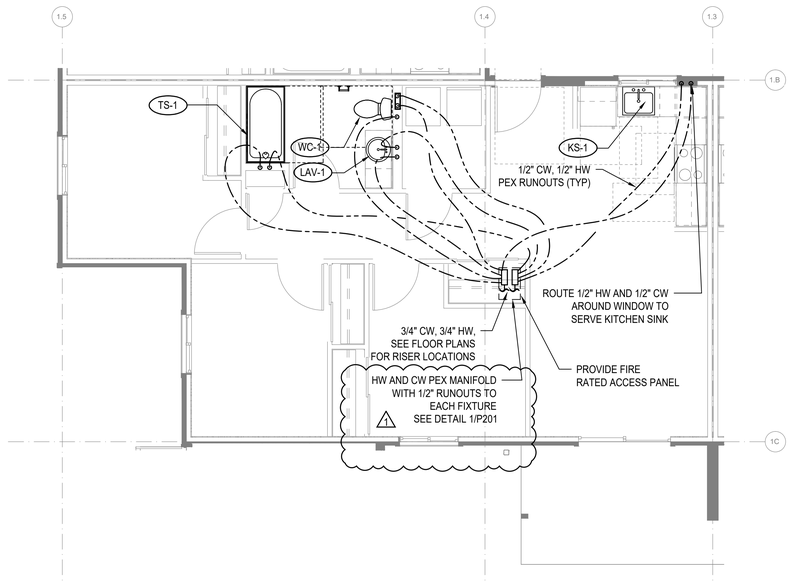
FLAG NOTES (X):



2 / P201 **ENLARGED PLAN - 2-BED**

1/4"=1'-0"

UNITS: A, D, E, H



3 / P201 **ENLARGED PLAN - 3-BED**

1/4"=1'-0"

UNITS: B, C, F, G

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KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 2

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REVISIONS / NOTES

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ENLARGED UNIT PLANS

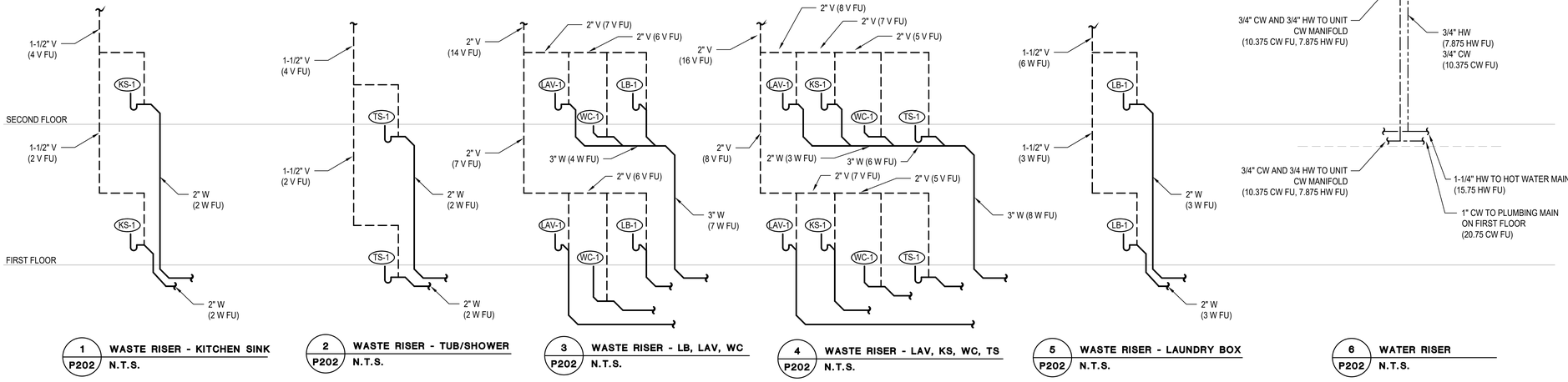
PERMIT #	BMF22-09850
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P2-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - KITCHEN SINK** N.T.S.

2 P202 **WASTE RISER - TUB/SHOWER** N.T.S.

3 P202 **WASTE RISER - LB, LAV, WC** N.T.S.

4 P202 **WASTE RISER - LAV, KS, WC, TS** N.T.S.

5 P202 **WASTE RISER - LAUNDRY BOX** N.T.S.

6 P202 **WATER RISER** N.T.S.

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 2

BID SET

DIANA M. BER FOR
STATE OF WASHINGTON
041009
REGISTERED
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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

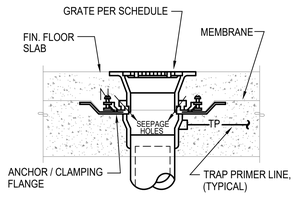
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RISERS

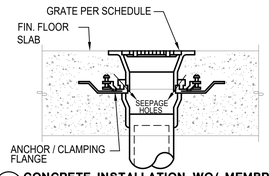
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DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
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SHEET NO.:

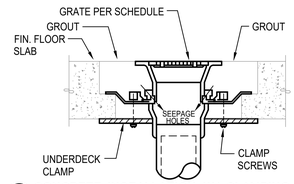
P2-202



A **CONCRETE INSTALLATION W/ MEMBRANE**

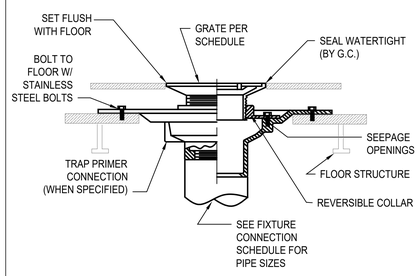


B **CONCRETE INSTALLATION WO/ MEMBRANE**



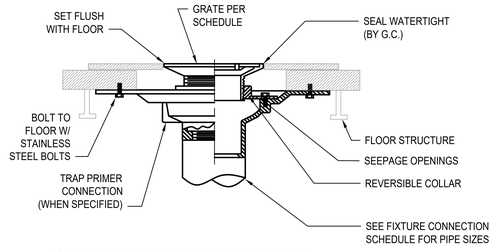
C **CONCRETE INSTALLATION W/ CLAMPING RING**

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



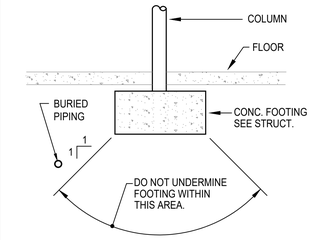
D **FOR USE W/ DOUBLE WOOD FLOORS**

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

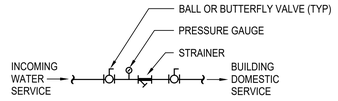


E **FOR USE W/ SINGLE WOOD FLOORS**

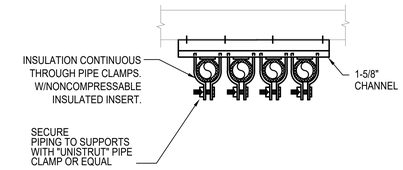
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



2 P301 BURIED PIPING DETAIL
N.T.S.

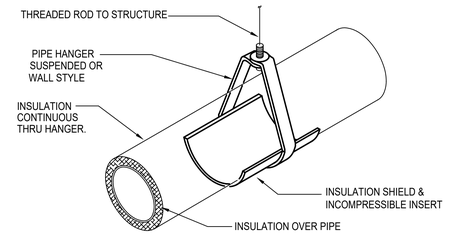


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

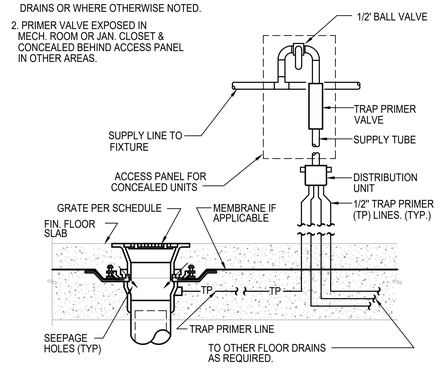
3 P301 PIPE SUPPORT
N.T.S.



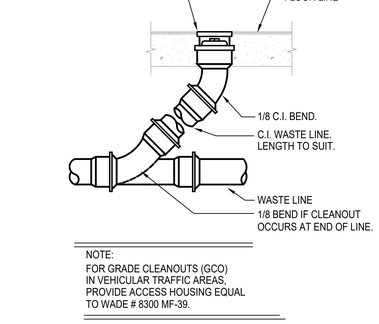
NOTE:
INSULATE & LABEL PIPING PER. SPEC.

5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.

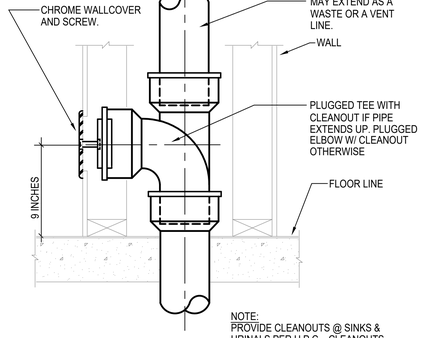


6 P301 TRAP PRIMER DETAIL
N.T.S.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

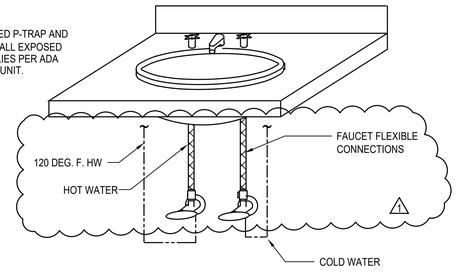
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



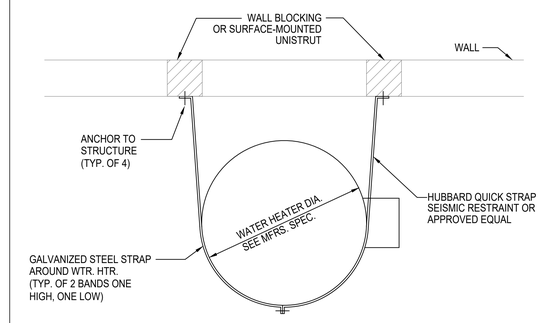
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

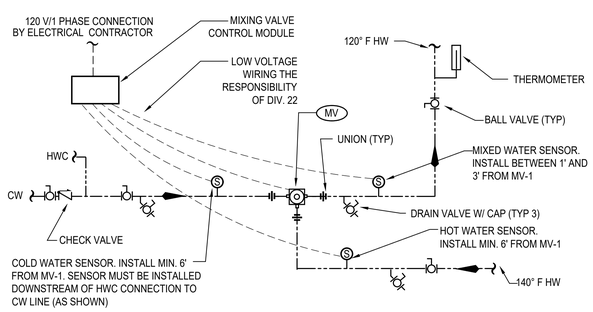
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



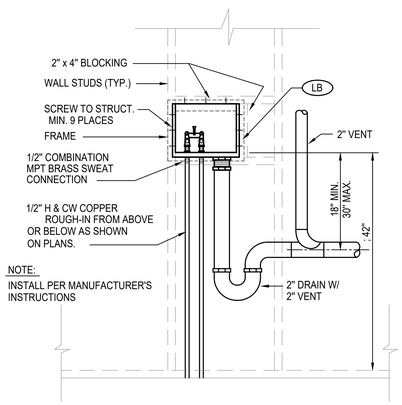
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



NOTE:
INSTALL PER MANUFACTURER'S INSTRUCTIONS

12 P301 LAUNDRY BOX DETAIL
N.T.S.

10/7/2021 7:33:34 AM

SIDER + BYERS
MECHANICAL + ELECTRICAL ENGINEERS
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Seattle, Washington 98109
Phone: 206.285.2966

SMR Architects
117 S. Main St., Suite 400
Seattle, WA 98104

PH: 206.623.1104
FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13230 NE 133rd St.,
Kirkland, WA 98034

BUILDING 2

BID SET

DIANE AMBER TOMLINSON — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

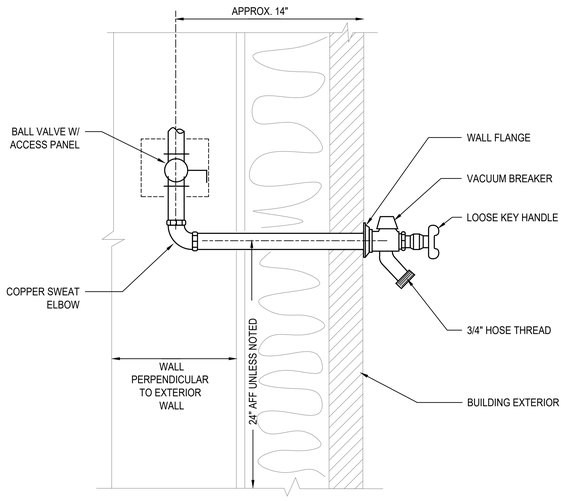
TITLE

DETAILS

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CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

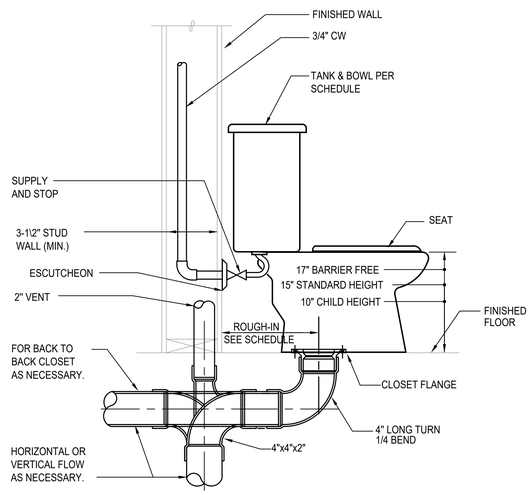
SHEET NO.:

P2-301



1 P302 FREEZE PROOF HOSE BIBB DETAIL

N.T.S.



2 P302 TANK WATER CLOSET DETAIL

N.T.S.

3 P302 NOT USED

N.T.S.

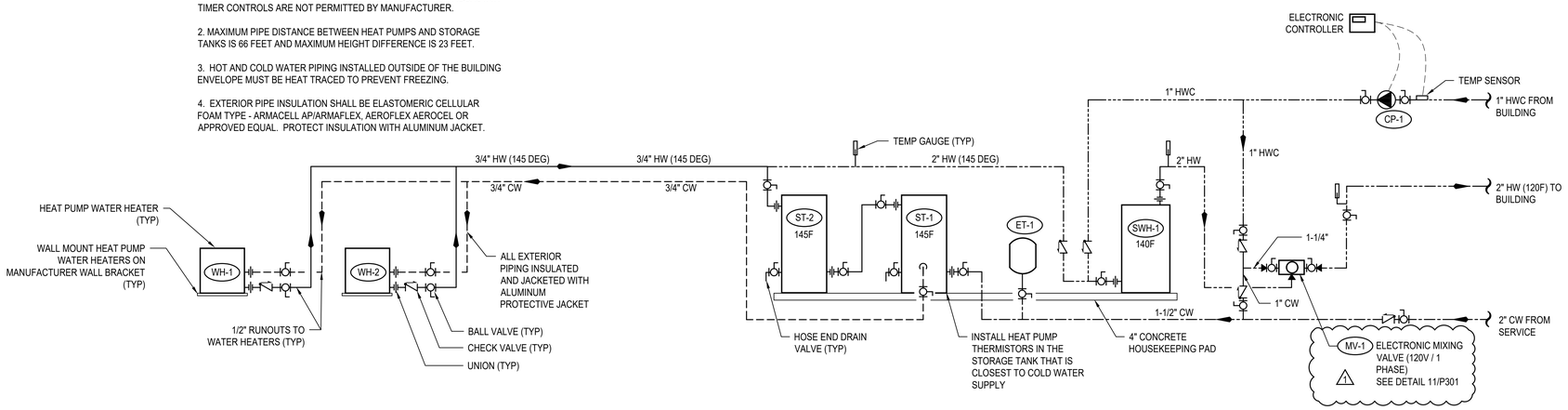
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL

N.T.S.

10/7/2021 7:33:34 AM

SIDER+BYERS
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192 Nickerson, Suite #300
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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 2

BID SET

DANA AMBER FOSTER STATE OF WASHINGTON 22041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

DETAILS

PERMIT #	BMF22-09850
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P2-302

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
2. ~~SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 17-GA. BRASS~~ TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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King County Housing Authority

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c/o: King County Housing Authority,
General Partner
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Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13232 NE 133rd St.,
Kirkland, WA 98034

BUILDING 3

BID SET

DANA AMBER COLLINS — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09851
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P3-001

10/7/2021 7:33:34 AM

GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.
NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.			
HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ1	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-165-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE. ⚠1
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1	HEAT PUMP	SANCO2:	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE,
WH-2	WATER HEATER	GS4-45HPC-D	UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET. ⚠1
ST-1	DOMESTIC	SANCO2:	200 GALLON STORAGE TANK.
ST-2	STORAGE TANK	ECO-200GLBK	2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	⚠1 1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

kWh

***Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements**

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	PIPE SIZE H.W.	PIPE SIZE WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

⚠1

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE — **FIXTURE UNITS PER APPENDIX A**

FIXTURE	QTY	DOMESTIC WATER WSFU: PER FIXTURE	DOMESTIC WATER WSFU: TOTAL	HW PER FIXTURE	HW TOTAL	SEWER DFU: PER FIXTURE	SEWER DFU: TOTAL
Private Tank Water Closet	8	2.5	20	-	-	3	24
Lavatory (Public or Private)	8	1	8	0.75	6	1	8
Bathtub or Combo Bath/Shwr	8	4	32	3	24	2	16
Kitchen Sink	8	1.5	12	1.125	9.00	2	16
Clothes Washer	8	4	32	3	24	3	24
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**44**		**107.5**		**63.00**		**92**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 44 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 92. BUILDING SERVICE SIZE = (1X) 4".

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REVISIONS / NOTES

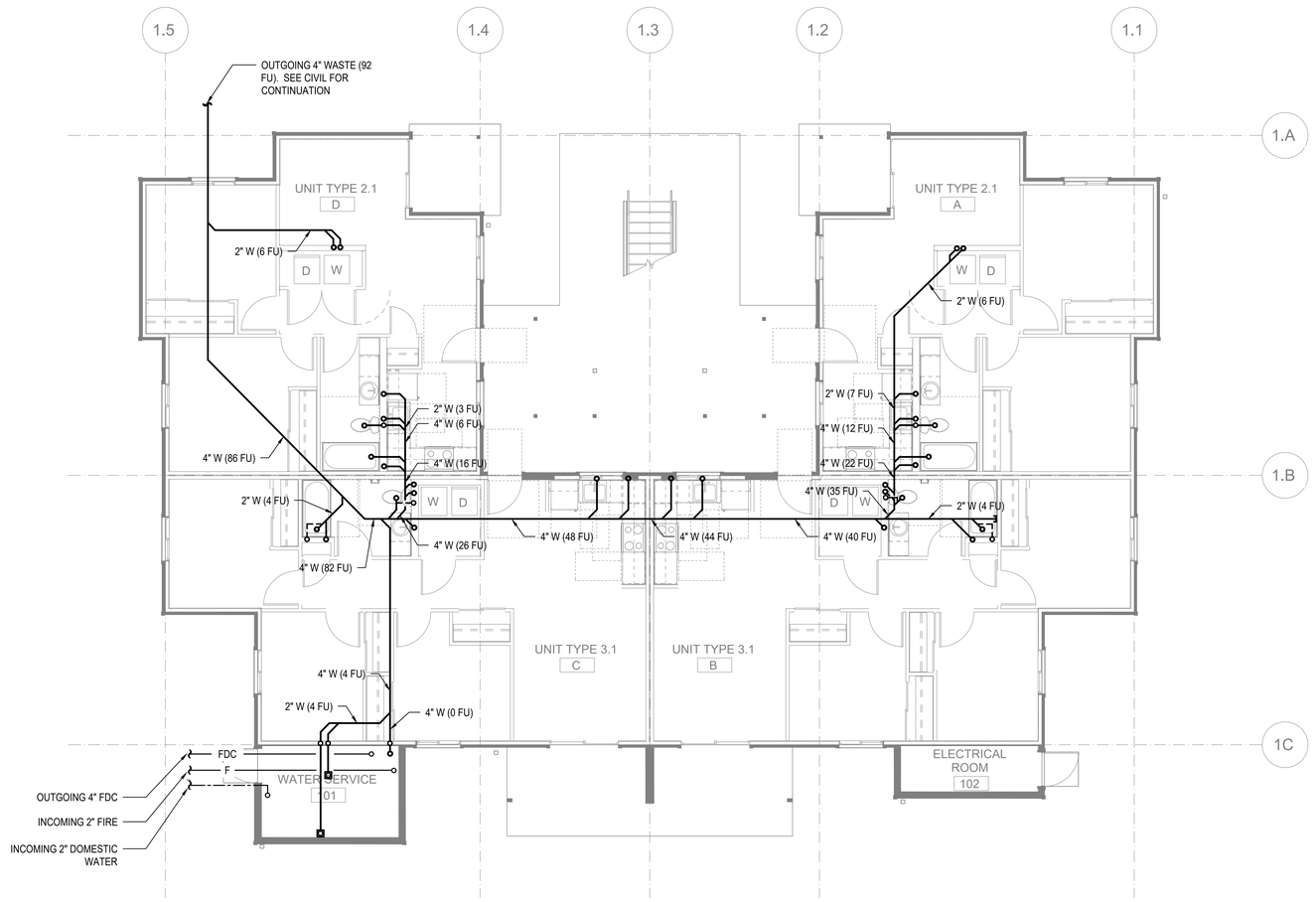
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1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

NOTES AND SCHEDULES

PERMIT #	BMF22-09851
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P3-002



FLOOR PLAN - BUILDING 3 - FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

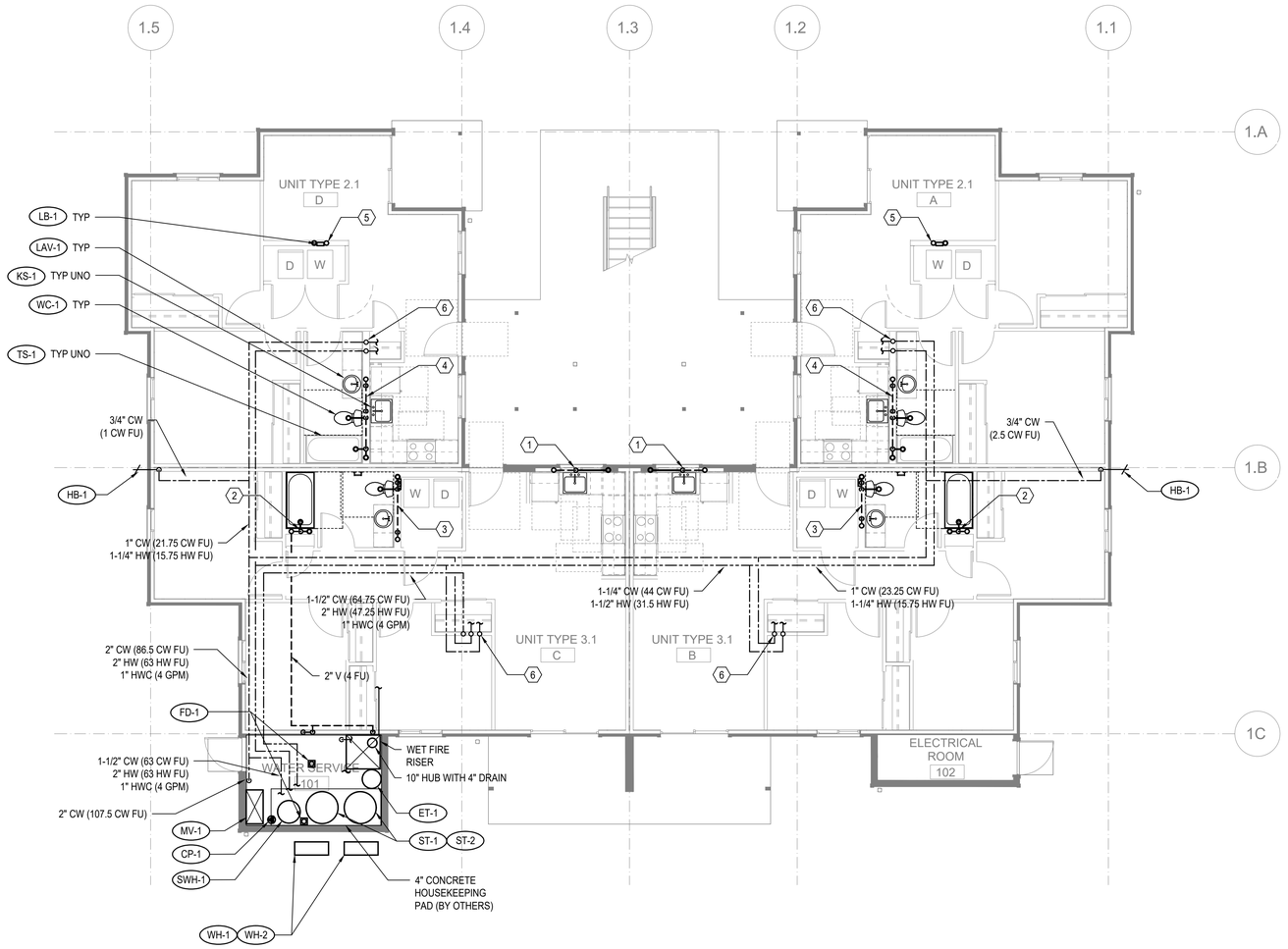
TITLE

PLAN - FOUNDATION

PERMIT #	BMF22-09851
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P3-100

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FLOOR PLAN - BUILDING 3 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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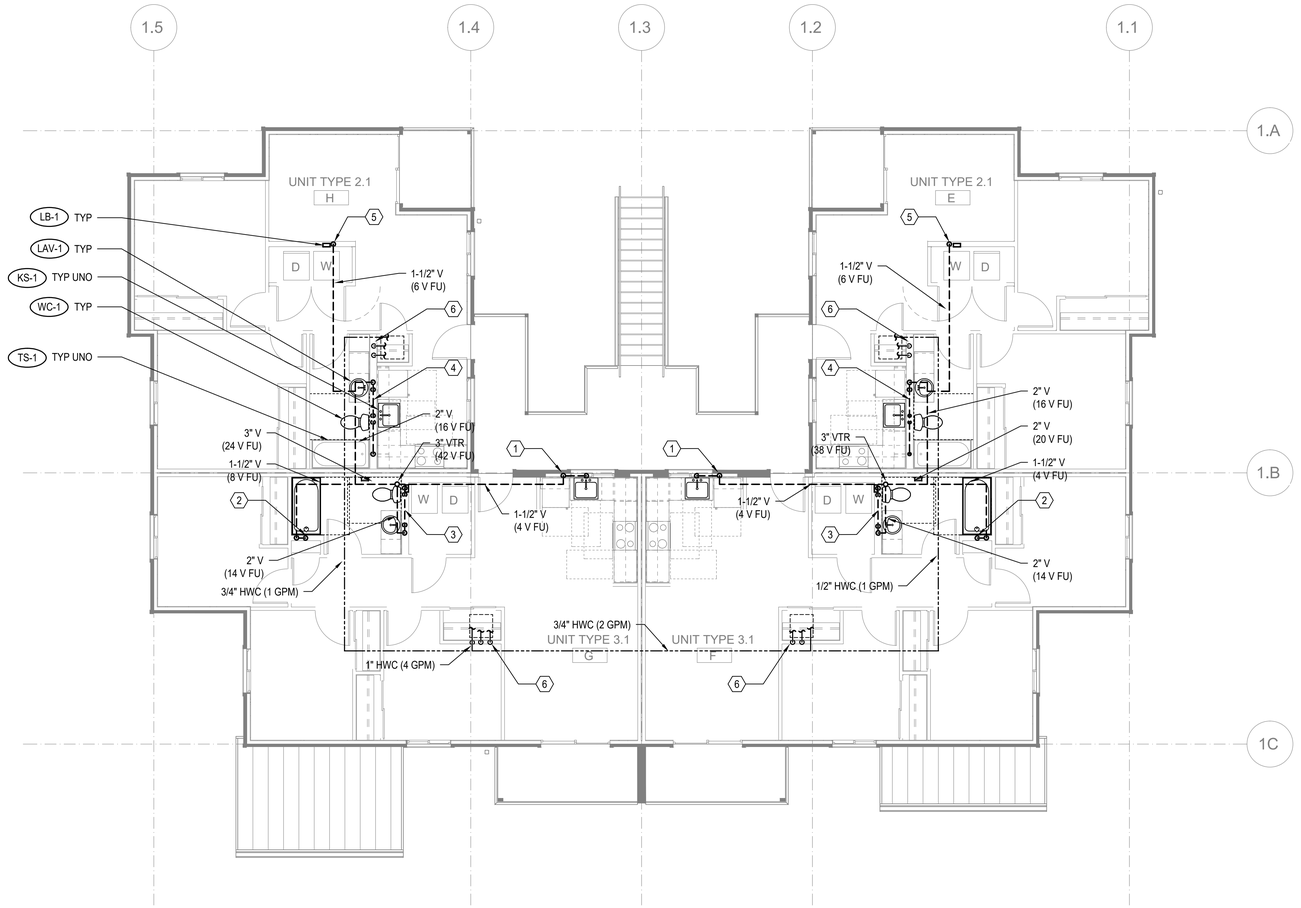
TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09851
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P3-101

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FLOOR PLAN - BUILDING 1 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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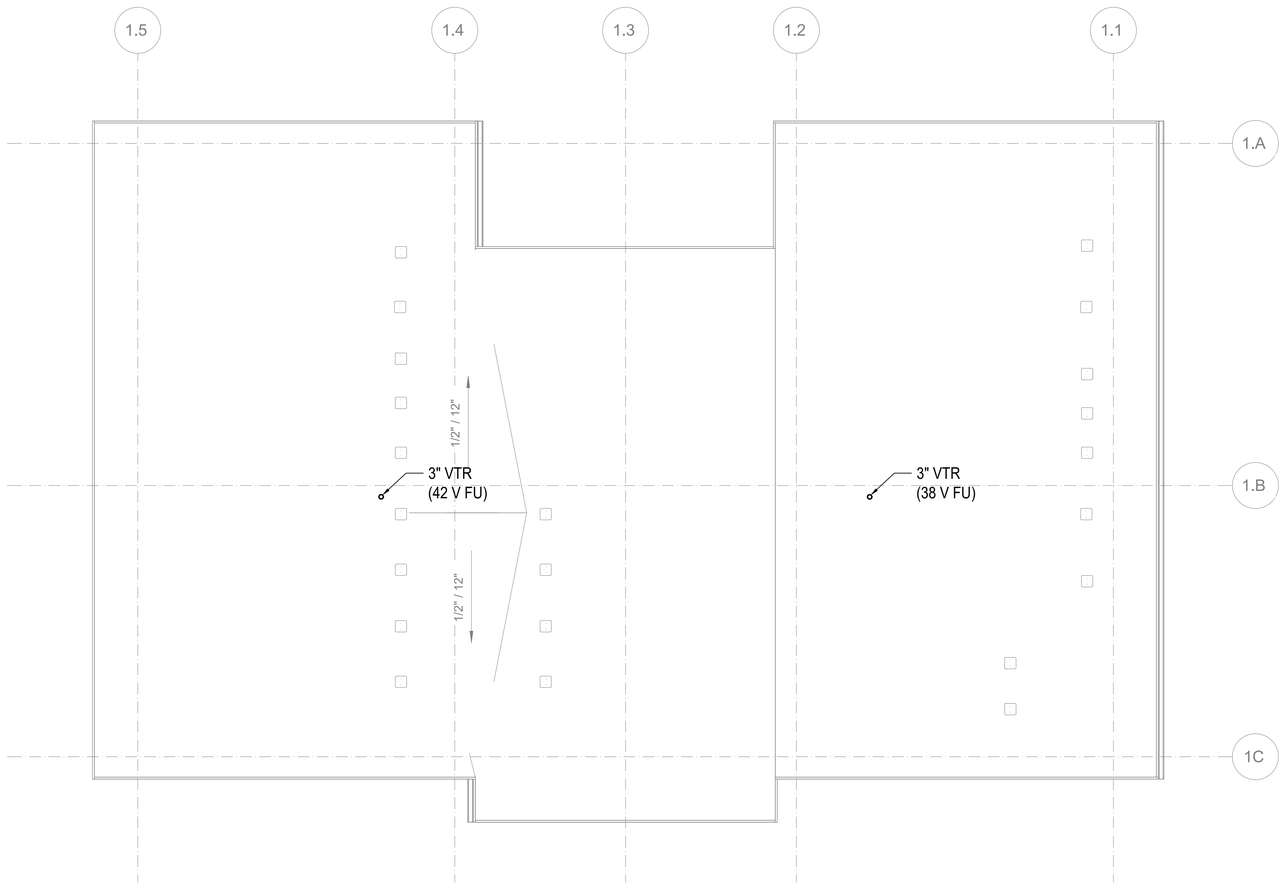
TITLE

PLAN - LEVEL 2

PERMIT #	BMF22-09851
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P3-102

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FLOOR PLAN - BUILDING 3 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

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1	5.19.23	BID ADDENDUM 2

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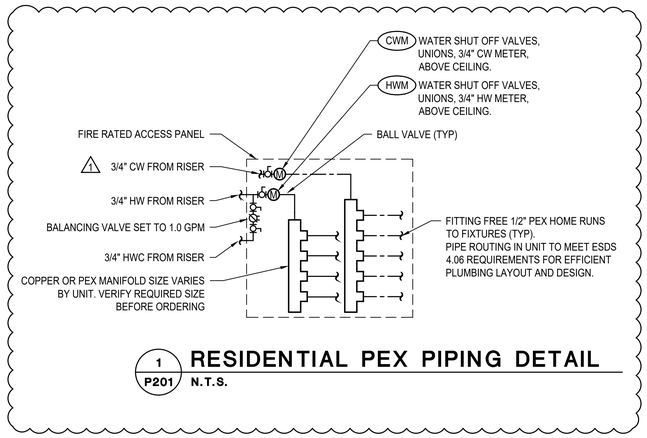
PLAN - ROOF

PERMIT #	BMF22-09851
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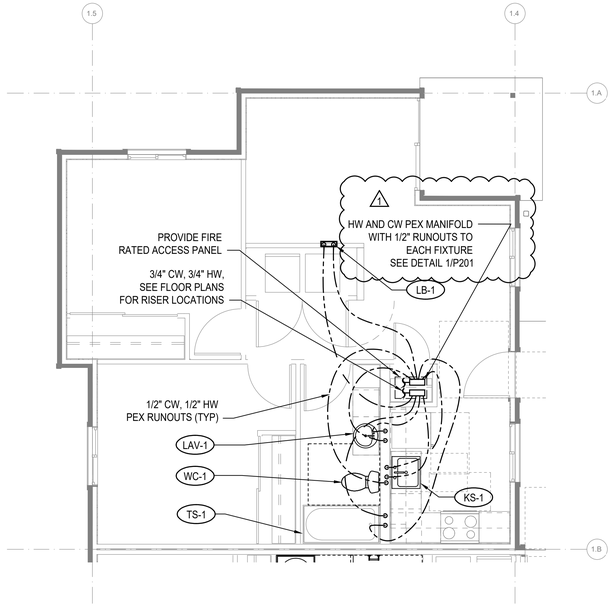
1 / P201 **RESIDENTIAL PEX PIPING DETAIL**

N.T.S.

GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

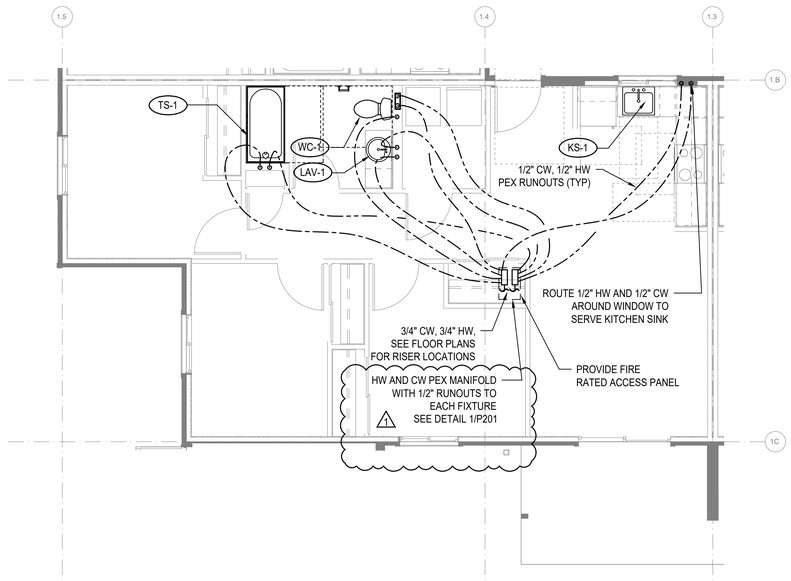
FLAG NOTES (X):



2 / P201 **ENLARGED PLAN - 2-BED**

1/4"=1'-0"

UNITS: A, D, E, H



3 / P201 **ENLARGED PLAN - 3-BED**

1/4"=1'-0"

UNITS: B, C, F, G

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ENLARGED UNIT PLANS

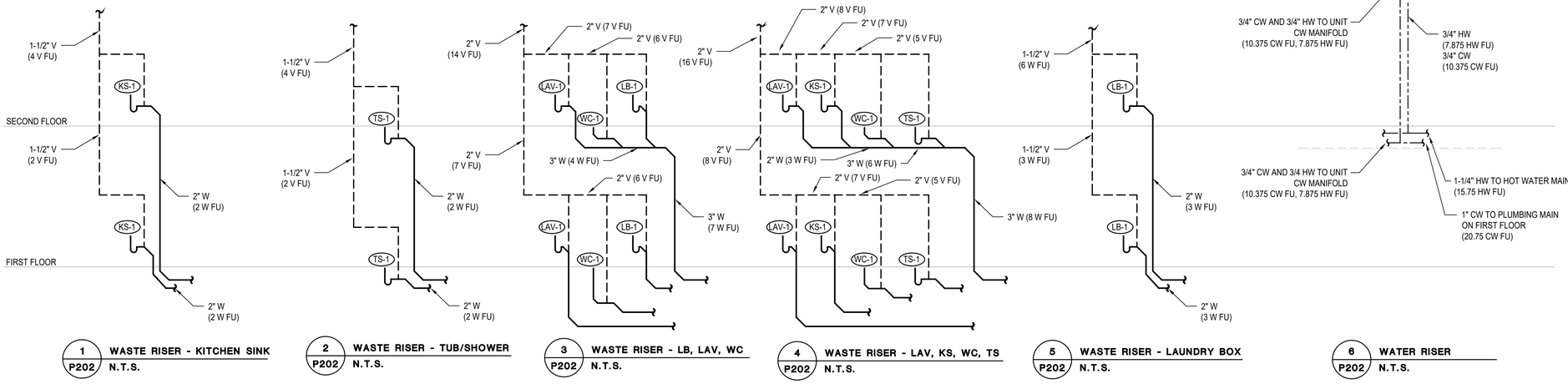
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SHEET NO.:

P3-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - KITCHEN SINK** N.T.S.

2 P202 **WASTE RISER - TUB/SHOWER** N.T.S.

3 P202 **WASTE RISER - LB, LAV, WC** N.T.S.

4 P202 **WASTE RISER - LAV, KS, WC, TS** N.T.S.

5 P202 **WASTE RISER - LAUNDRY BOX** N.T.S.

6 P202 **WATER RISER** N.T.S.

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

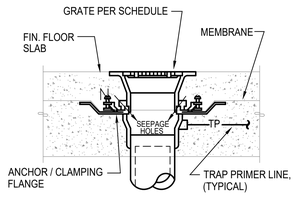
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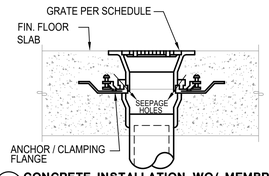
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DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

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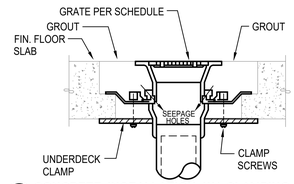
P3-202



A **CONCRETE INSTALLATION W/ MEMBRANE**

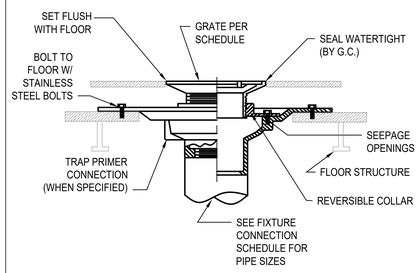


B **CONCRETE INSTALLATION WO/ MEMBRANE**



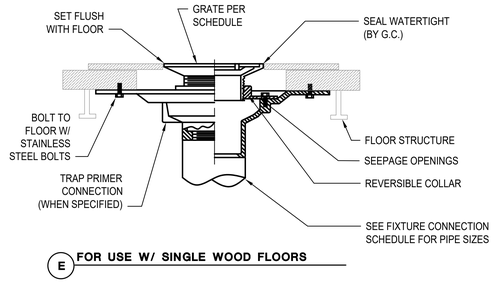
C **CONCRETE INSTALLATION W/ CLAMPING RING**

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



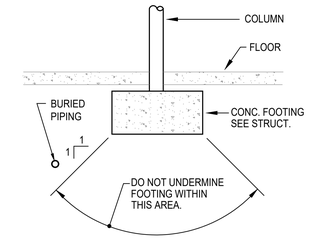
D **FOR USE W/ DOUBLE WOOD FLOORS**

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

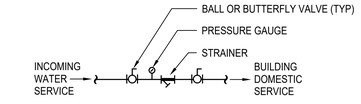


E **FOR USE W/ SINGLE WOOD FLOORS**

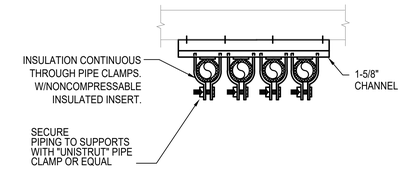
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



2 P301 BURIED PIPING DETAIL
N.T.S.

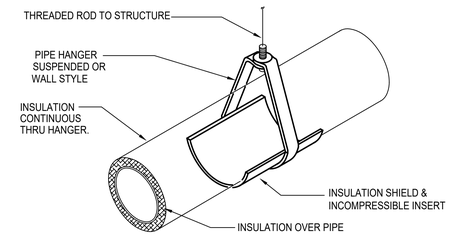


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

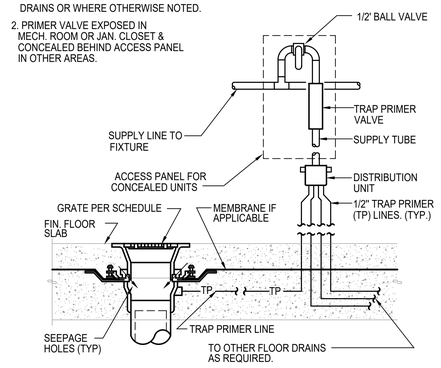
3 P301 PIPE SUPPORT
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

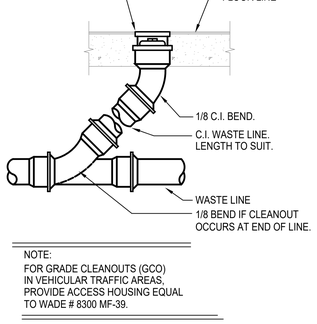
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



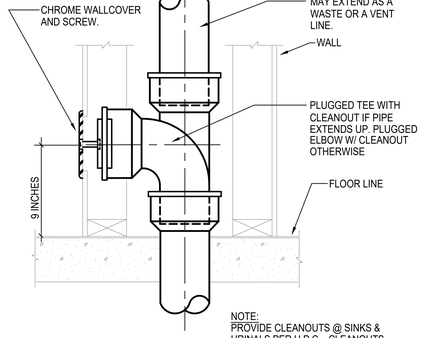
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

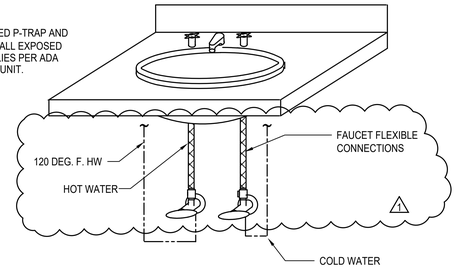
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



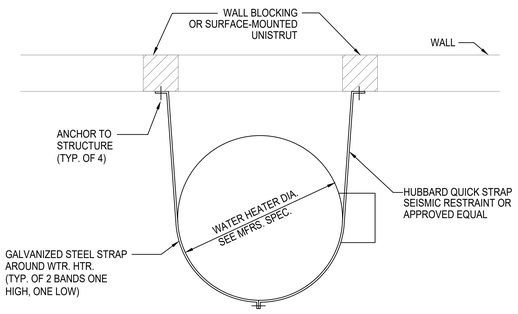
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

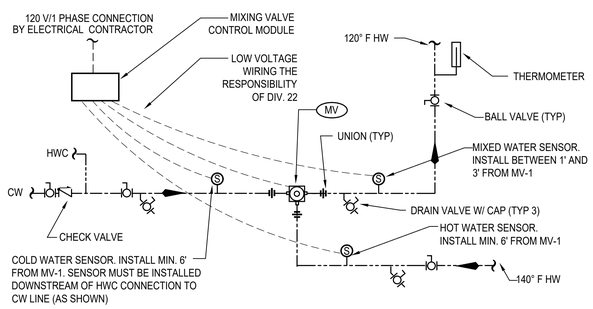
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



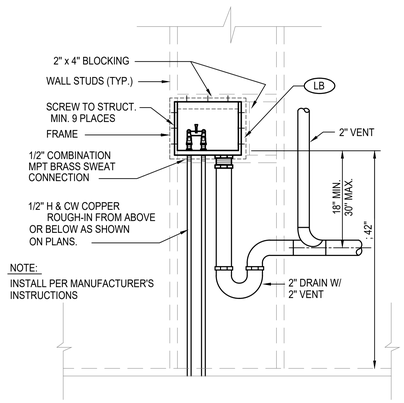
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



12 P301 LAUNDRY BOX DETAIL
N.T.S.

10/7/2021 7:33:34 AM

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
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Phone: 206.285.2966

SMR Architects
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Seattle, WA 98104

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FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13232 NE 133rd St.,
Kirkland, WA 98034

BUILDING 3

BID SET

DIANE AMBER TOMLINSON — STATE OF WASHINGTON — 24510 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

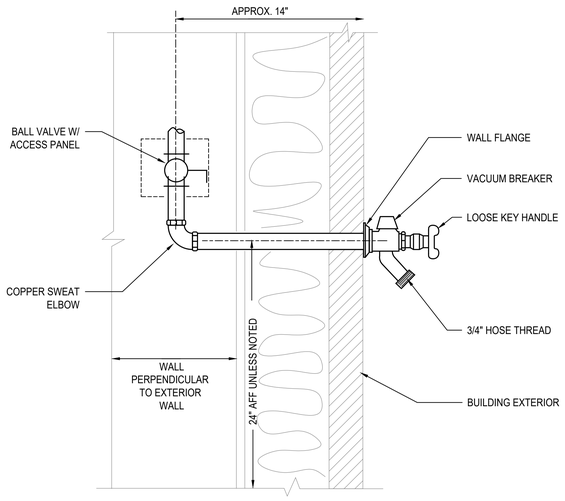
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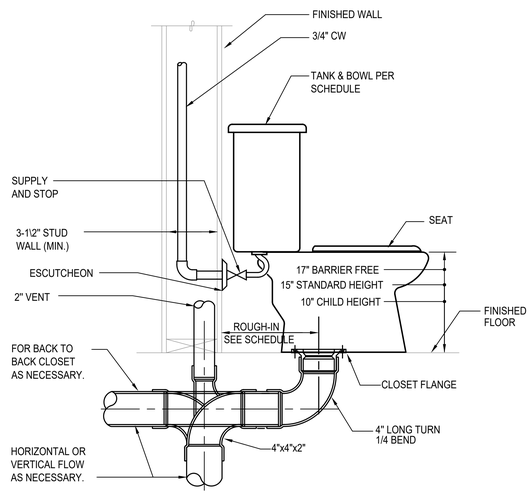
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SHEET NO.:

P3-301



1 P302 **FREEZE PROOF HOSE BIBB DETAIL**
N.T.S.



2 P302 **TANK WATER CLOSET DETAIL**
N.T.S.

3 P302 **NOT USED**
N.T.S.

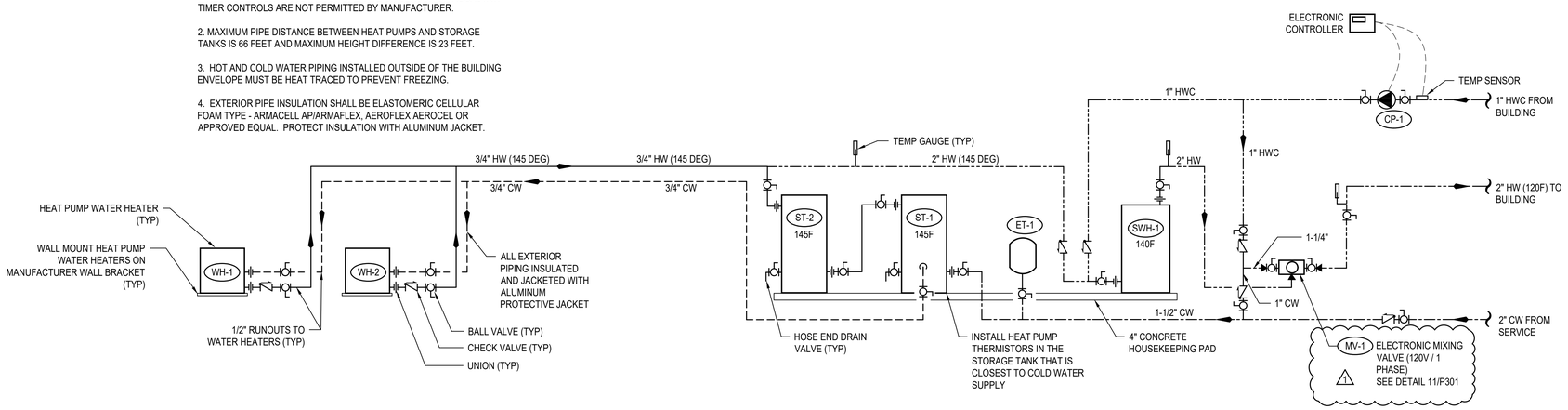
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 **HEAT PUMP WATER HEATER DETAIL**
N.T.S.

10/7/2021 7:33:34 AM

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
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BUILDING 3

BID SET

DANA AMBER FOSTER STATE OF WASHINGTON 22041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

DETAILS

PERMIT #	BMF22-09851
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P3-302

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
   ~~SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 17 GA. BRASS~~ TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ALT	ALTERNATE
AP	ACCESS PANEL
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL/ARCHITECT
AS	AIR SEPARATOR
AUX	AUXILIARY
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BHP	BRAKE HORSE POWER
BLDG	BUILDING
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CA	COMBUSTION AIR
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COND	CONDENSATE
CW	COLD WATER
CX	CONNECT TO EXISTING
dB	DECIBEL
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DDCV	DOUBLE DETECTOR CHECK VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT
DHW	DOMESTIC HOT WATER
DHWC	DOMESTIC HOT WATER RECIRCULATION
Ø OR DIA	DIAMETER
DN	DOWN
DWG(S)	DRAWING(S)
DWV	DRAIN, WASTE, VENT
EA	EACH
EEW	EMERGENCY EYEWASH
EFF	EFFICIENCY
ELEV	ELEVATION
EQUIP	EQUIPMENT
ES	EMERGENCY SHOWER
ET	EXPANSION TANK
EX	EXISTING/EXISTING TO REMAIN
EXP	EXPANSION
FC	FAIL CLOSED
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR
FLA	FULL LOAD AMPS
FM	FORCE MAIN
FO	FAIL OPEN
FP	FIRE PROTECTION
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOOR SINK
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY
FT	FEET/FOOT
FTG	FOOTING
FV	FLUSH VALVE
G	NATURAL GAS
GA	GAUGE
GAL	GALLON
G.C.	GENERAL CONTRACTOR
GCO	GRADE CLEANOUT
GD	GARAGE DRAIN
GPF	GALLONS PER FLUSH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
H	HEIGHT
HB	HOSE BIBB
HBVB	HOSE BIBB VACUUM BREAKER
HD	HEAD
HP	HORSEPOWER
HS	HAND SINK
HW	HOT WATER
HX	HEAT EXCHANGER
IE	INVERT ELEVATION
IN	INCH/INCHES
KW	KILOWATT/KILOWATTS
LAV	LAVATORY
LBS	POUNDS
LF	LINEAL FOOT
LTG	LIGHTING
LWT	LEAVING WATER TEMPERATURE
MBH	1000 BRITISH THERMAL UNITS PER HOUR
MED	MEDIUM
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MEZZ	MEZZANINE
MIN	MINIMUM
MISC	MISCELLANEOUS
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NOM	NOMINAL
NPC	NON-POTABLE COLD WATER
NPCW	NON POTABLE COLD WATER
NPH	NON-POTABLE HOT WATER
NPHR	NON-POTABLE HOT WATER RETURN
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OD	OUTSIDE DIAMTER/OVERLOW DRAIN
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
ORD	OVERFLOW ROOF DRAIN
ORL	OVERFLOW RAINWATER LEADER
ΔP	PRESSURE DIFFERENTIAL
PD	PLANTER DRAIN; PRESSURE DROP
PERF	PERFORATED
PH	PHASE
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER INCH GAUGE
QTY	QUANTITY
RD	ROOF DRAIN
REQD	REQUIRED
RL	RAIN WATER LEADER
RM	ROOM
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
RLX	RELOCATE EXISTING
RV	RELIEF VALVE
RX	REMOVE EXISTING
S	SINK
S	STORM
SCFM	STANDARD CUBIC FEET PER MINUT
SD	STORM DRAIN
SF	SQUARE FOOT
SFU	SUPPLY FIXTURE UNIT
SH	SHOWER
S.O.V.	SHUTOFF VALVE
SPEC	SPECIFICATION
S/S, OR SS	STAINLESS STEEL
STD	STANDARD
SYM	SYMBOL
T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
TBD	TO BE DETERMINED
TD	TRENCH DRAIN
TEMP	TEMPERATURE
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOD	TOP OF DECK
TOJ	TOP OF JOIST
TOS	TOP OF SLAB/TOP OF STEEL
TP	TRAP PRIMER
T&P	TEMPERATURE & PRESSURE
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
V	VENT(S)
V	VOLT
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VIB	VALVE-IN-BOX
VTR	VENT THROUGH ROOF
W	WASTE/WATER
W/	WITH
W/IN	WITHIN
W/O	WITHOUT
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER
WPD	WATER PRESSURE DROP
WT	WEIGHT
YCO	YARD CLEANOUT

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 4

BID SET

DANA AMBER COLVIN — STATE OF WASHINGTON — 5041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09853
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P4-001

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GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.
NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.			
HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ1	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-165-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE. ⚠1
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1	HEAT PUMP	SANCO2:	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE,
WH-2	WATER HEATER	GS4-45HPC-D	UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET. ⚠1
ST-1	DOMESTIC	SANCO2:	200 GALLON STORAGE TANK.
ST-2	STORAGE TANK	ECO-200GLBK	2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	⚠1 1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

kWh

***Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements**

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	PIPE SIZE H.W.	PIPE SIZE WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

⚠1

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE — **FIXTURE UNITS PER APPENDIX A**

FIXTURE	QTY	DOMESTIC WATER WSFU: PER FIXTURE	DOMESTIC WATER WSFU: TOTAL	HW PER FIXTURE	HW TOTAL	SEWER DFU: PER FIXTURE	SEWER DFU: TOTAL
Private Tank Water Closet	8	2.5	20	-	-	3	24
Lavatory (Public or Private)	8	1	8	0.75	6	1	8
Bathtub or Combo Bath/Shwr	8	4	32	3	24	2	16
Kitchen Sink	8	1.5	12	1.125	9.00	2	16
Clothes Washer	8	4	32	3	24	3	24
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**44**		**107.5**		**63.00**		**92**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 44 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 92. BUILDING SERVICE SIZE = (1X) 4".

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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13234 NE 133rd St.,
Kirkland, WA 98034

BUILDING 4

BID SET

DANA AMBER FOSTER — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

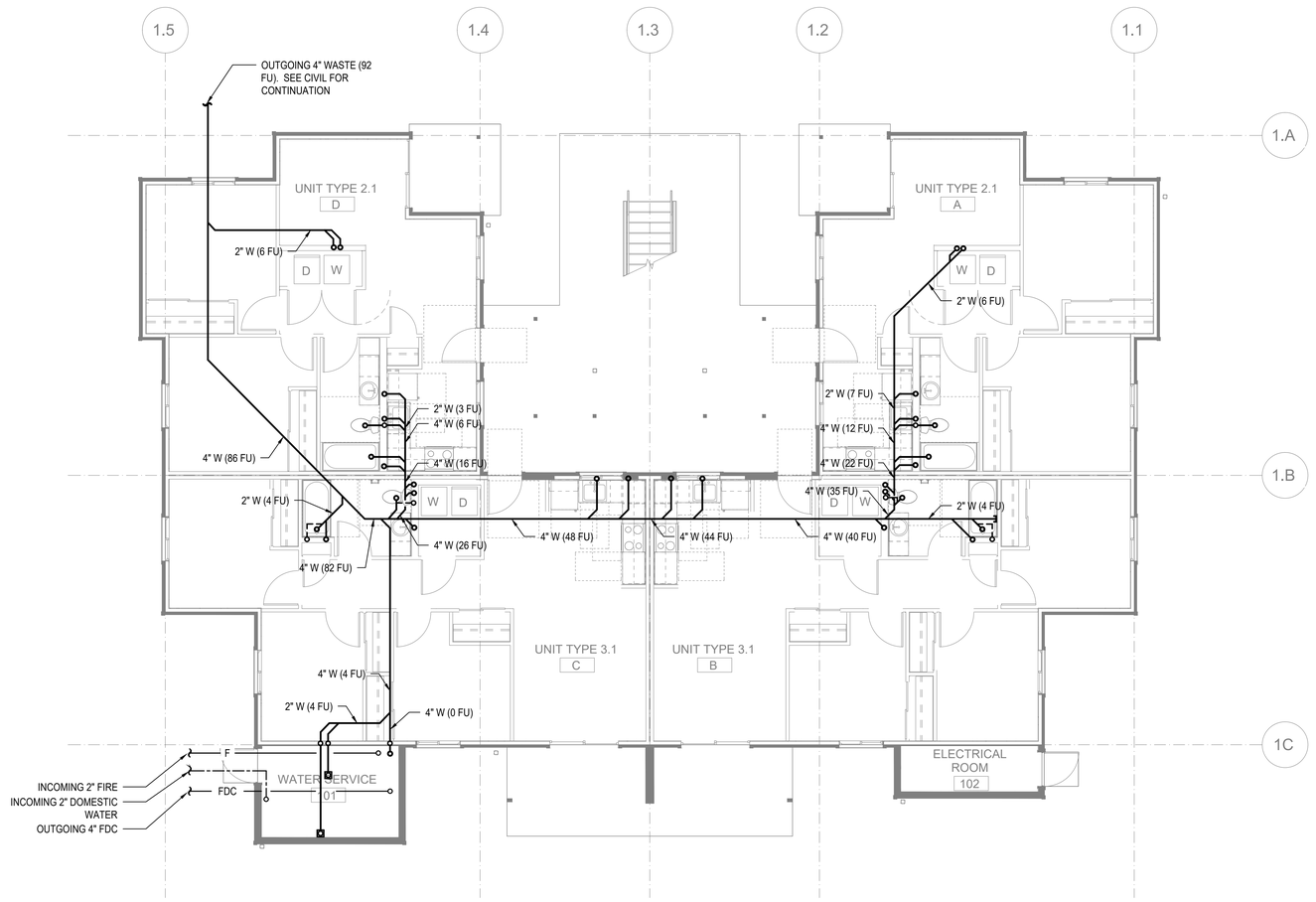
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DPD STAMP

TITLE

NOTES AND SCHEDULES

PERMIT #	BMF22-09853
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P4-002



FLOOR PLAN - BUILDING 4 - FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

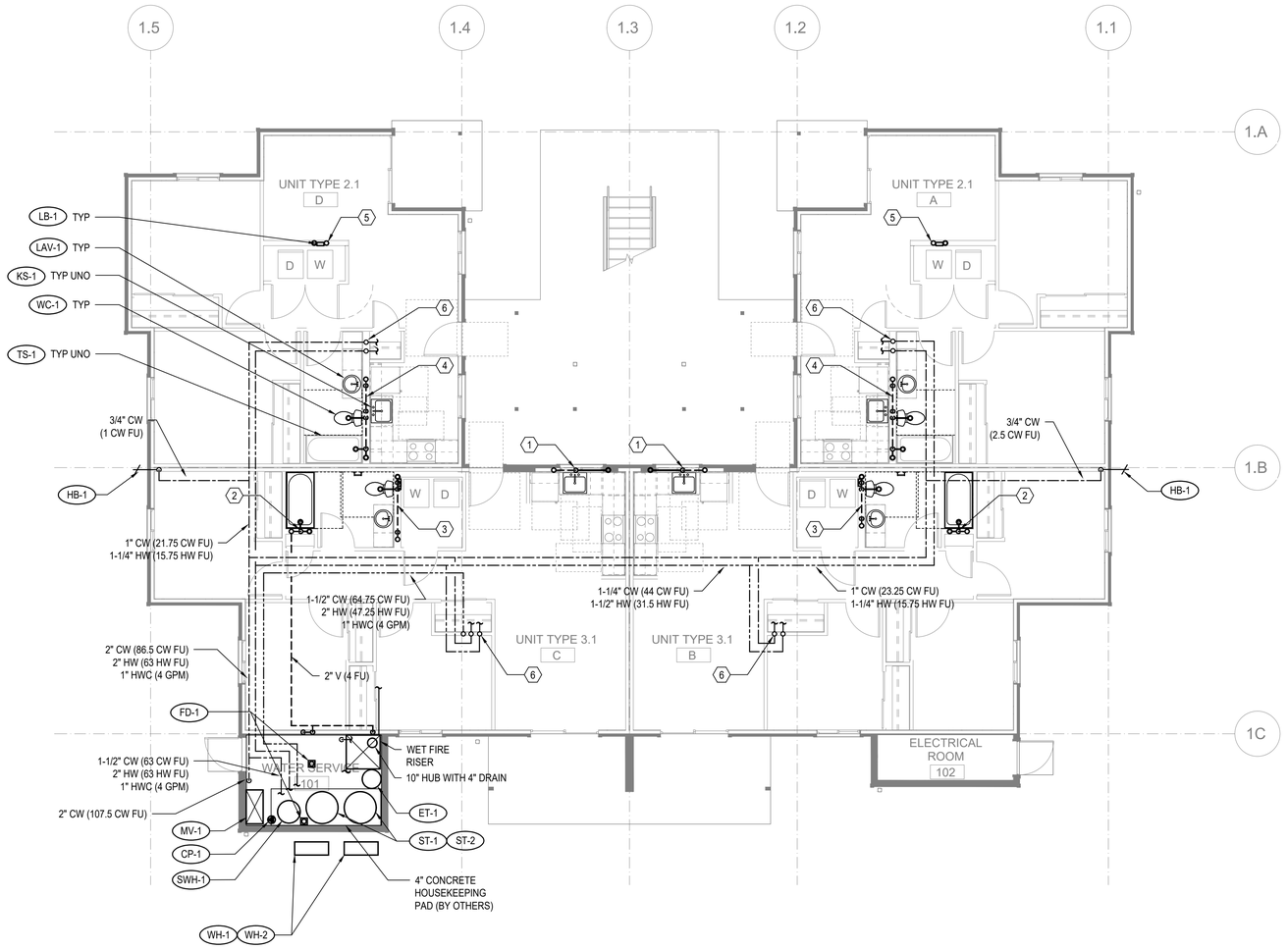
PLAN - FOUNDATION

PERMIT #	BMF22-09853
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P4-100

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FLOOR PLAN - BUILDING 4 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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BUILDING 4

BID SET

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

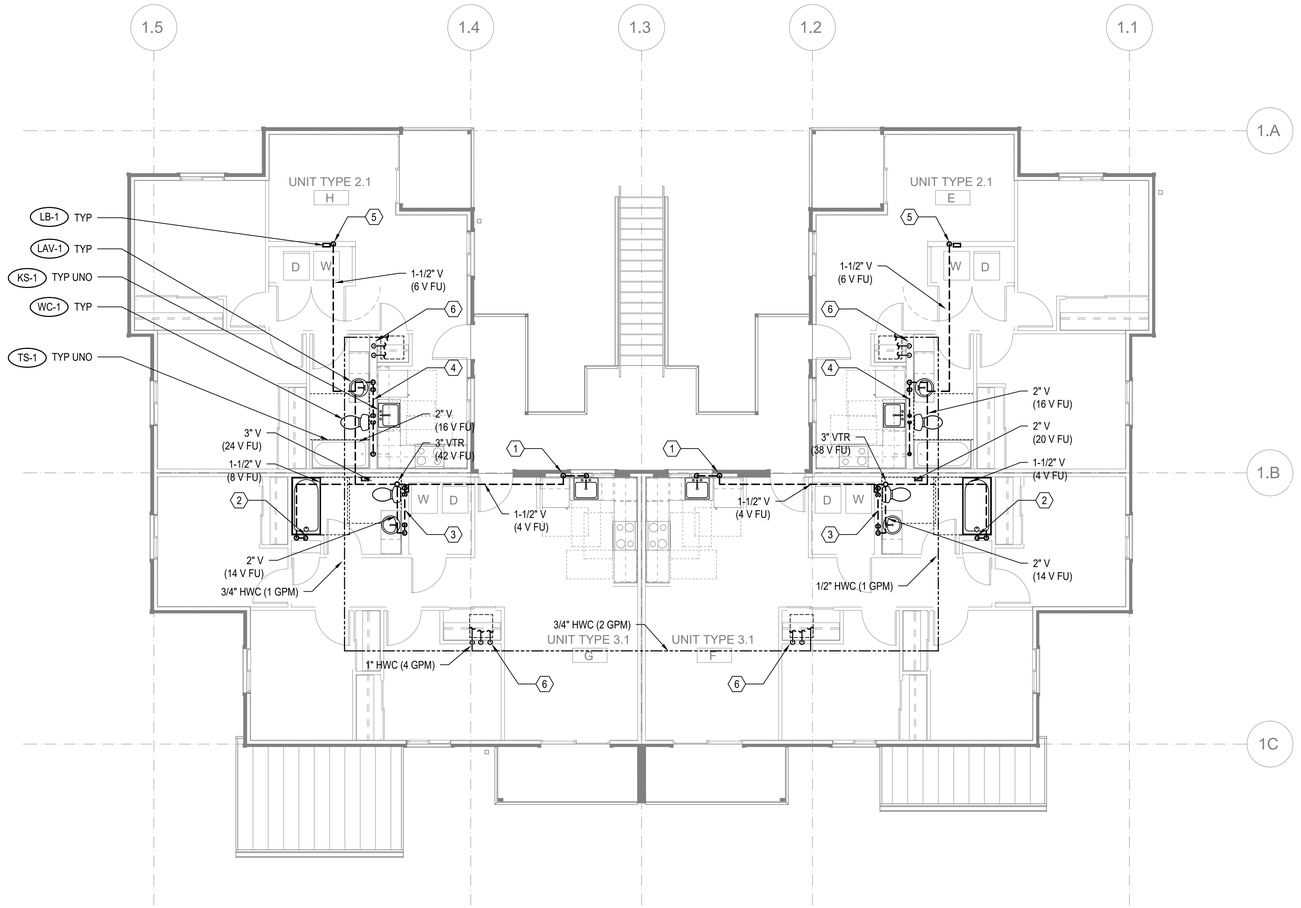
TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09853
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P4-101

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FLOOR PLAN - BUILDING 4 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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BUILDING 4

BID SET

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NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

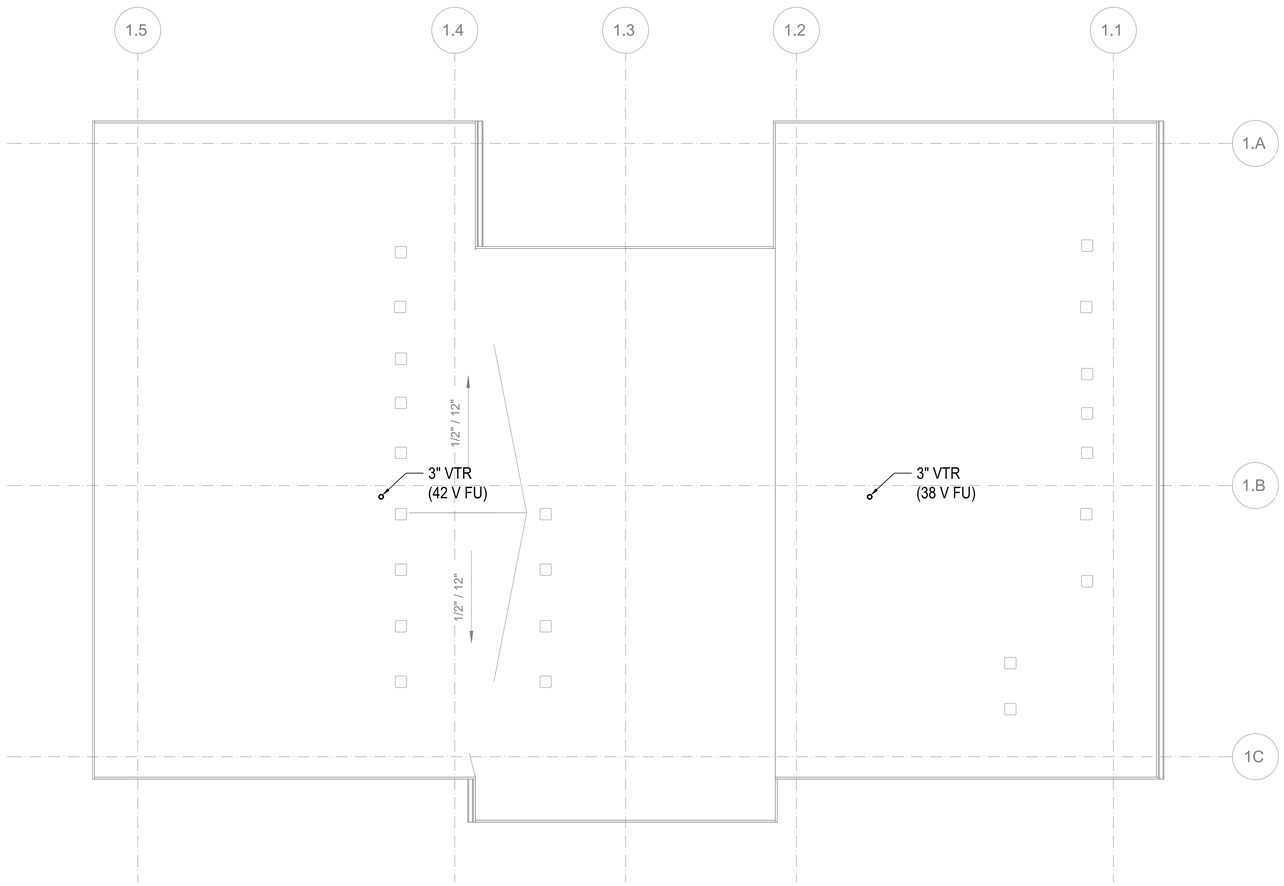
DPD STAMP

TITLE

PLAN - LEVEL 2

PERMIT #	BMF22-09853
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P4-102

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FLOOR PLAN - BUILDING 4 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

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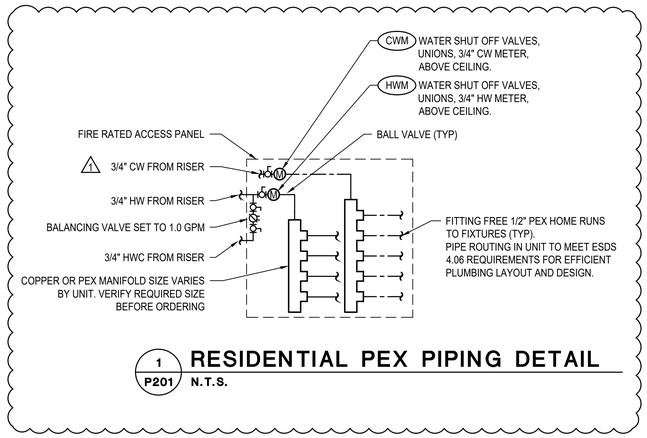
PLAN - ROOF

PERMIT #	BMF22-09853
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P4-103

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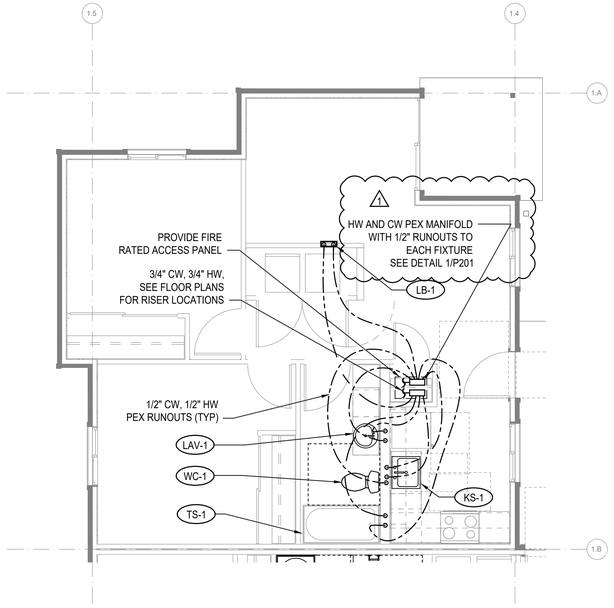
1 / P201 **RESIDENTIAL PEX PIPING DETAIL**

N.T.S.

GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

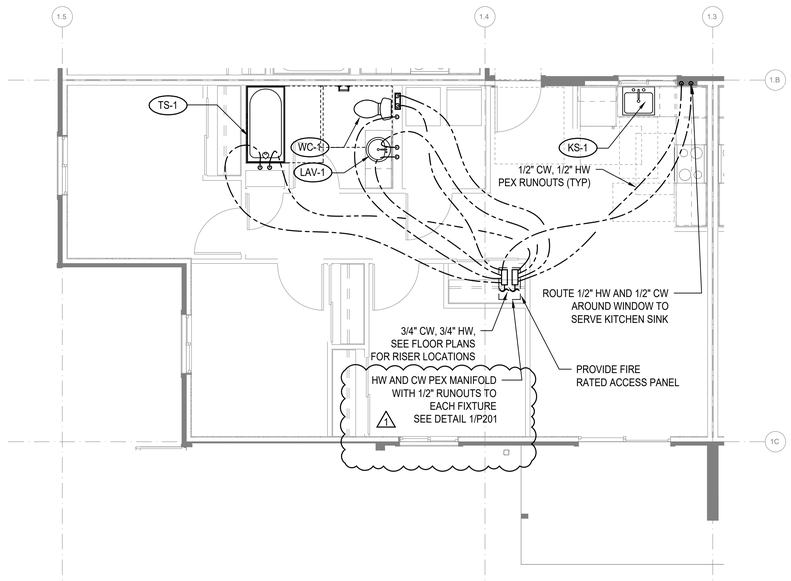
FLAG NOTES (X):



2 / P201 **ENLARGED PLAN - 2-BED**

1/4"=1'-0"

UNITS: A, D, E, H



3 / P201 **ENLARGED PLAN - 3-BED**

1/4"=1'-0"

UNITS: B, C, F, G

10/7/2021 7:33:34 AM

SIDER+BYERS
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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13234 NE 133rd St.,
Kirkland, WA 98034

BUILDING 4

BID SET

DANA AMBER FOSTER STATE OF WASHINGTON 22041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

ENLARGED UNIT PLANS

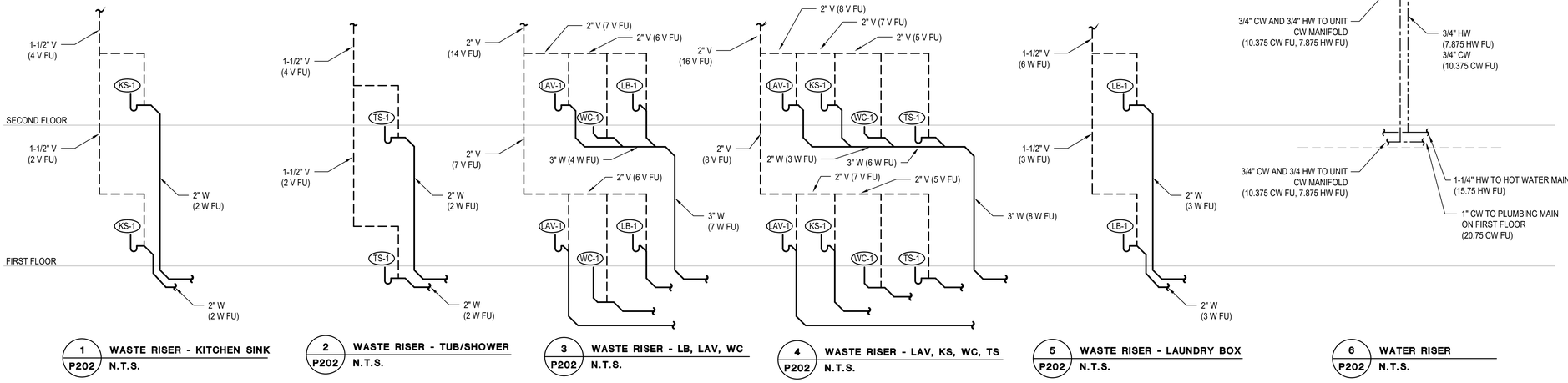
PERMIT #	BMF22-09853
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
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JOB NO.	22016

SHEET NO.:

P4-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - KITCHEN SINK** N.T.S.

2 P202 **WASTE RISER - TUB/SHOWER** N.T.S.

3 P202 **WASTE RISER - LB, LAV, WC** N.T.S.

4 P202 **WASTE RISER - LAV, KS, WC, TS** N.T.S.

5 P202 **WASTE RISER - LAUNDRY BOX** N.T.S.

6 P202 **WATER RISER** N.T.S.

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STATE OF WASHINGTON
041009
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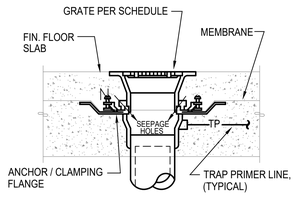
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RISERS

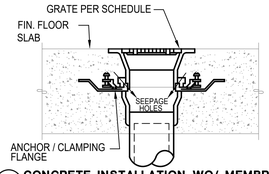
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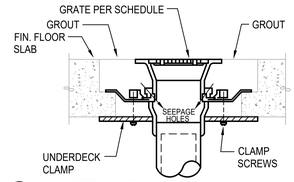
P4-202



A **CONCRETE INSTALLATION W/ MEMBRANE**

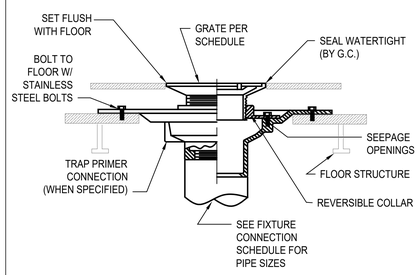


B **CONCRETE INSTALLATION WO/ MEMBRANE**



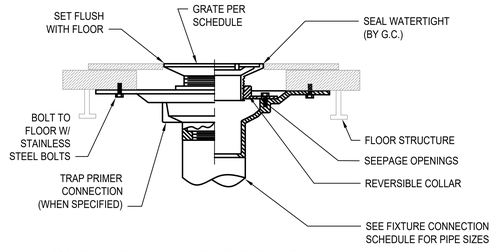
C **CONCRETE INSTALLATION W/ CLAMPING RING**

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



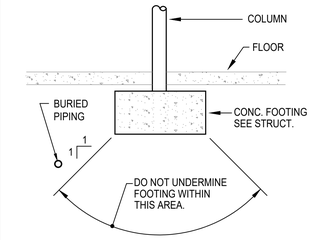
D **FOR USE W/ DOUBLE WOOD FLOORS**

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

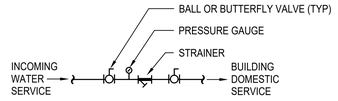


E **FOR USE W/ SINGLE WOOD FLOORS**

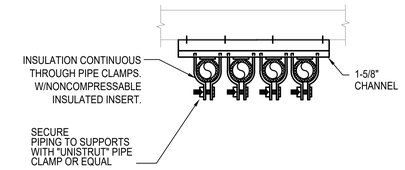
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



2 P301 BURIED PIPING DETAIL
N.T.S.

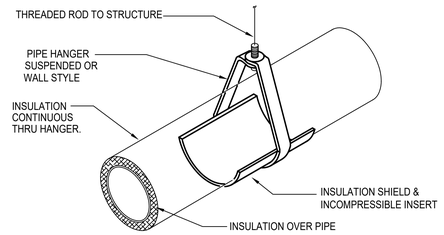


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

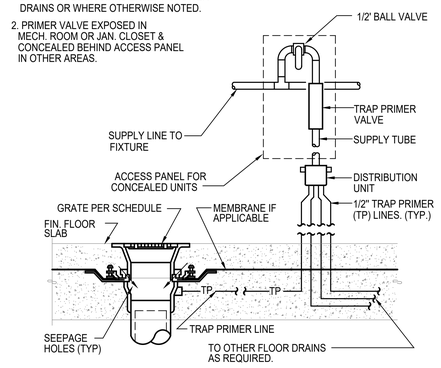
3 P301 PIPE SUPPORT
N.T.S.



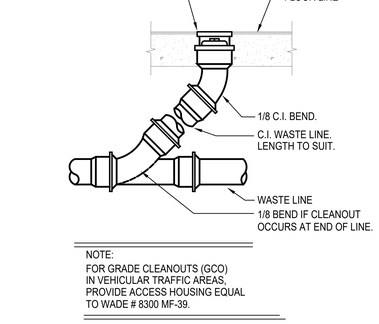
NOTE:
INSULATE & LABEL PIPING PER. SPEC.

5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.

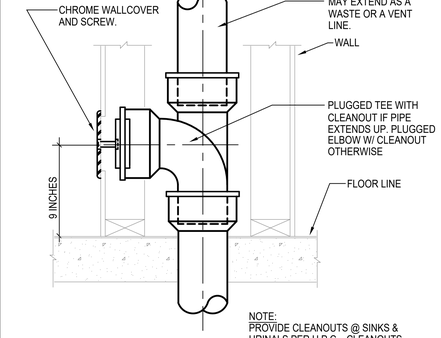


6 P301 TRAP PRIMER DETAIL
N.T.S.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

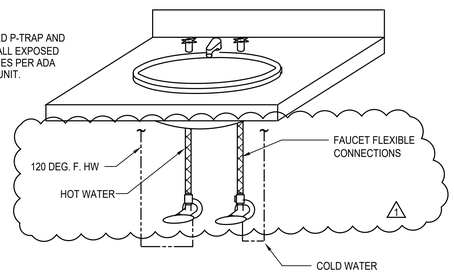
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



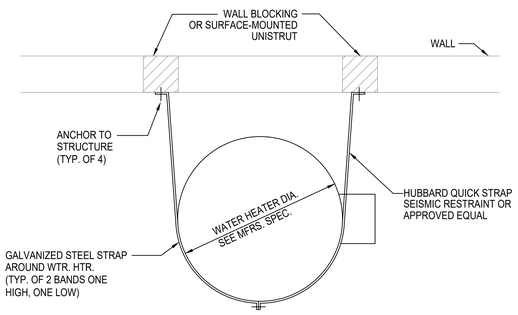
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

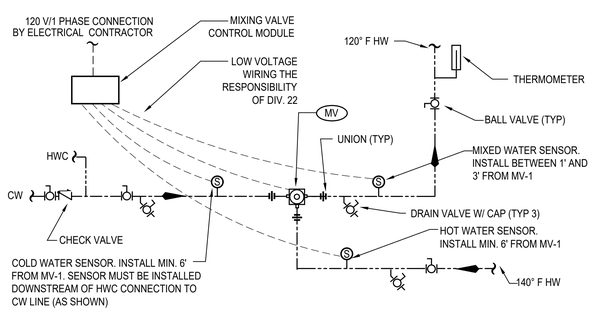
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



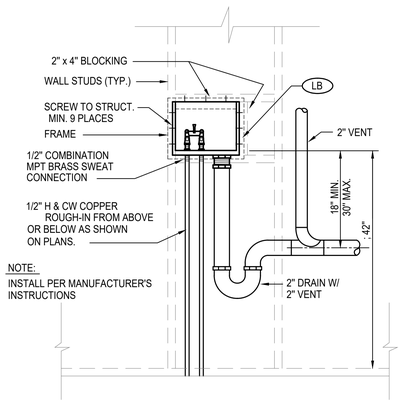
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



12 P301 LAUNDRY BOX DETAIL
N.T.S.

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CONTRACT #: TC2300131

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Kirkland, WA 98034

BUILDING 4

BID SET

DIANE AMBER TOMLINSON — STATE OF WASHINGTON — 24810 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

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1	5.19.23	BID ADDENDUM 2

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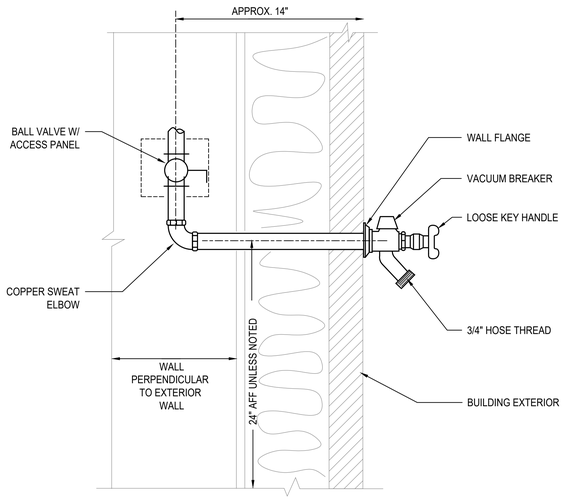
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DETAILS

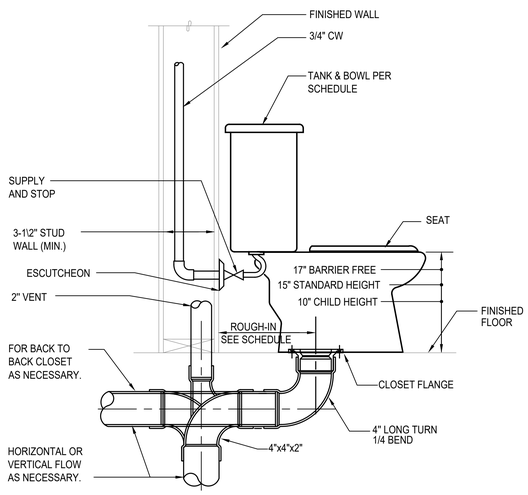
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SHEET NO.:

P4-301



1 P302 FREEZE PROOF HOSE BIBB DETAIL
N.T.S.



2 P302 TANK WATER CLOSET DETAIL
N.T.S.

3 P302 NOT USED
N.T.S.

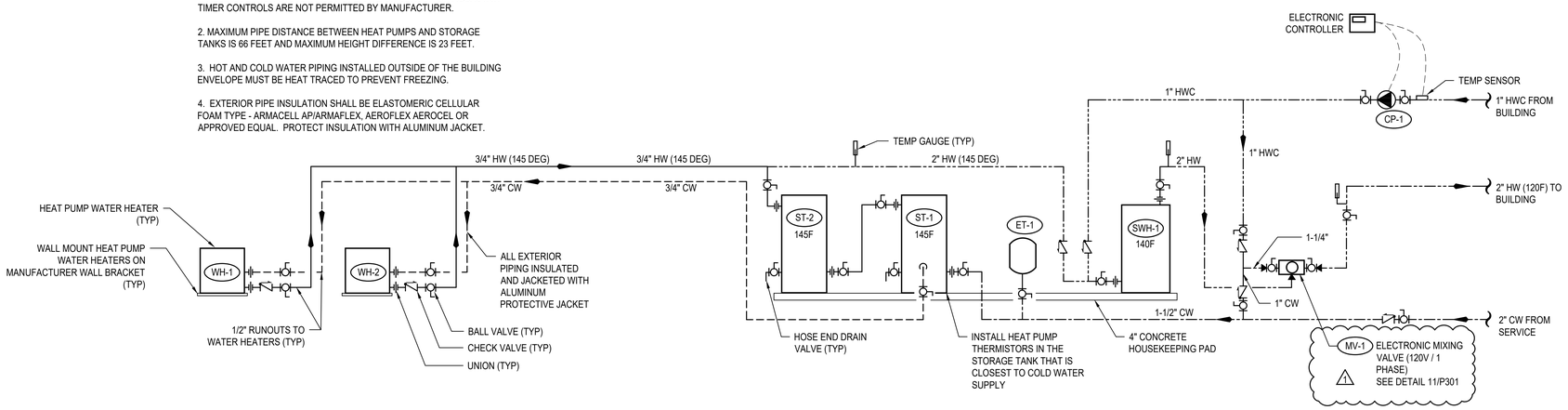
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL
N.T.S.

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P4-302

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	LEVEL 3 FLOOR PLAN
P-104	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
   SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED TUBULAR BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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King County Housing Authority

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13310 NE 133rd St.,
Kirkland, WA 98034

BUILDING 5

BID SET

JAMES AMBER CHRISTENSEN — STATE OF WASHINGTON — 5041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09854
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P5-001

10/7/2021 7:33:34 AM

GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-35-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE.
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (COLD WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1 **WH-2** **WH-3**	HEAT PUMP WATER HEATER	SANCO2: GS4-45HPC-D	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE, UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET.
ST-1 **ST-2**	DOMESTIC STORAGE TANK	SANCO2: ECO-200GLBK	200 GALLON STORAGE TANK. 2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy ____ kWh	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

*Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	H.W.	WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE		FIXTURE UNITS PER APPENDIX A					
		DOMESTIC WATER WSFU				SEWER DFU	
FIXTURE	QTY	PER FIXTURE	TOTAL	HW PER FIXTURE	TOTAL	PER FIXTURE	TOTAL
Private Tank Water Closet	12	2.5	30	-	-	3	36
Lavatory (Public or Private)	12	1	12	0.75	9	1	12
Bathtub or Combo Bath/Shwr	12	4	48	3	36	2	24
Kitchen Sink	12	1.5	18	1.125	13.50	2	24
Clothes Washer	12	4	48	3	36	3	36
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**64**		**159.5**		**94.50**		**136**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 58 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 136. BUILDING SERVICE SIZE = (1X) 4".

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King County Housing Authority

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c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13310 NE 133rd St.,
Kirkland, WA 98034

BUILDING 5

BID SET

DANA AMBER FORDYCE — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

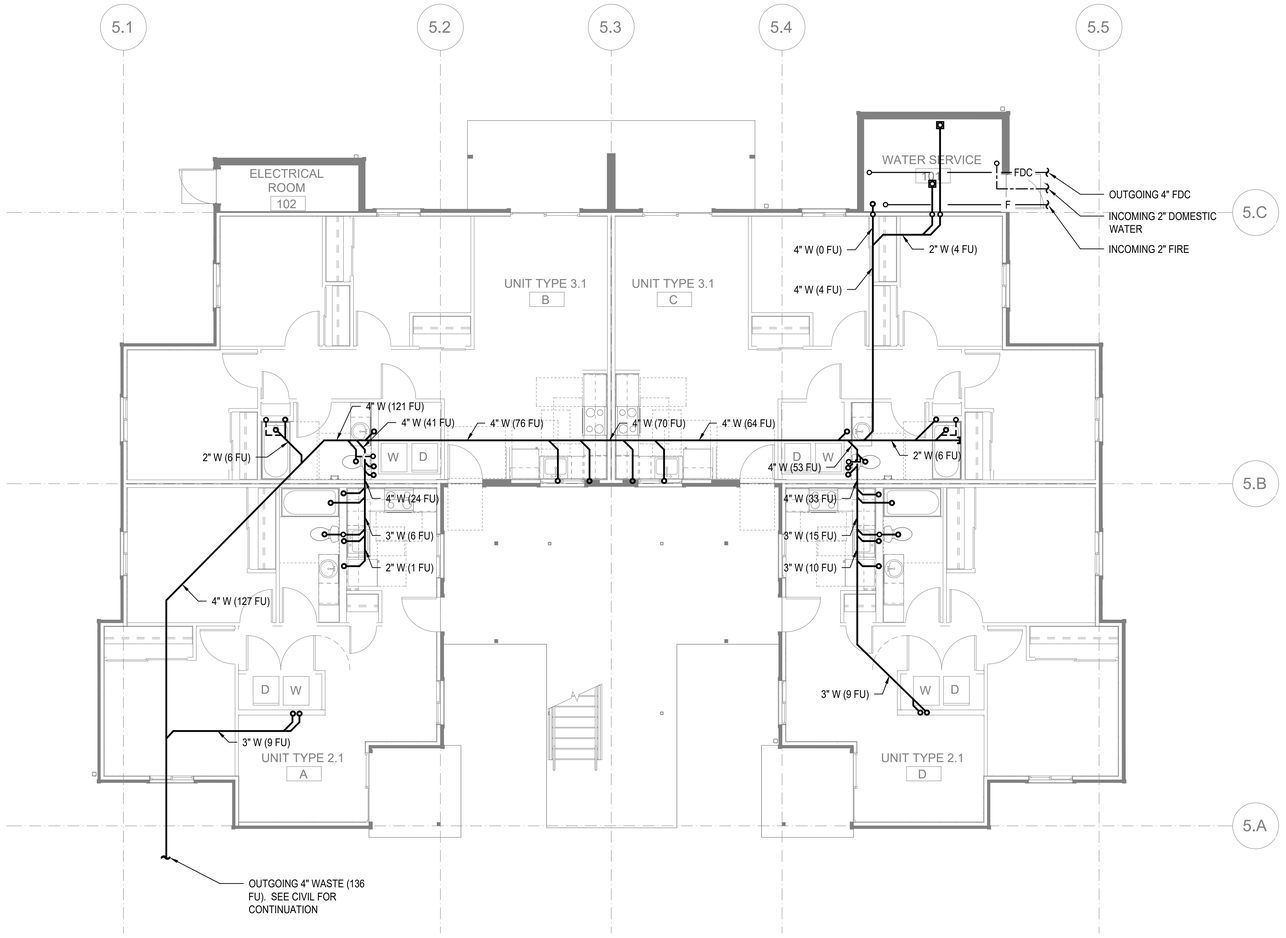
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NOTES AND SCHEDULES

PERMIT #	BMF22-09854
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P5-002

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FLOOR PLAN - BUILDING 5 - FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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REVISIONS / NOTES

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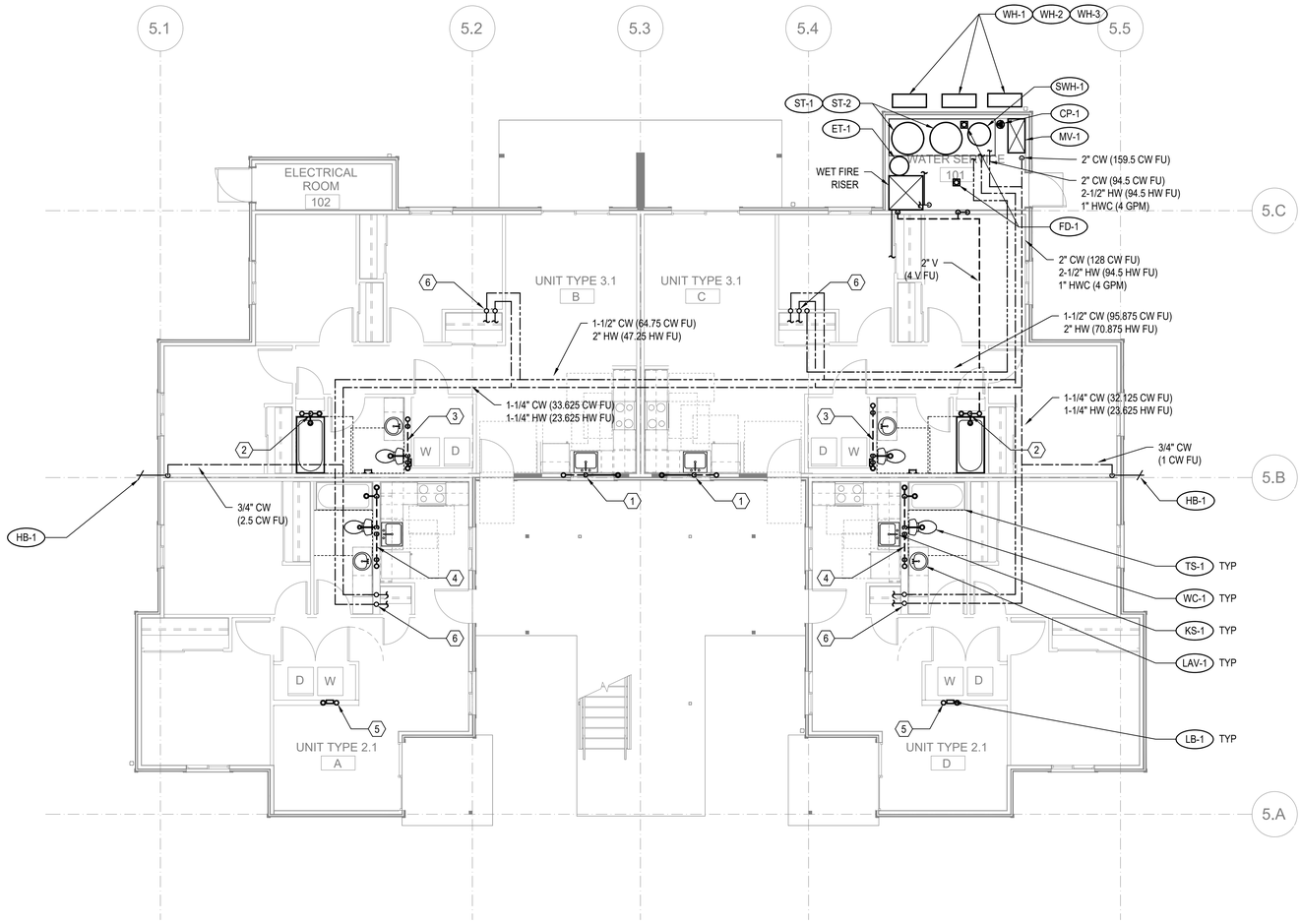
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TITLE

PLAN - FOUNDATION

PERMIT #	BMF22-09854
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P5-100

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FLOOR PLAN - BUILDING 5 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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REVISIONS / NOTES

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DPD STAMP

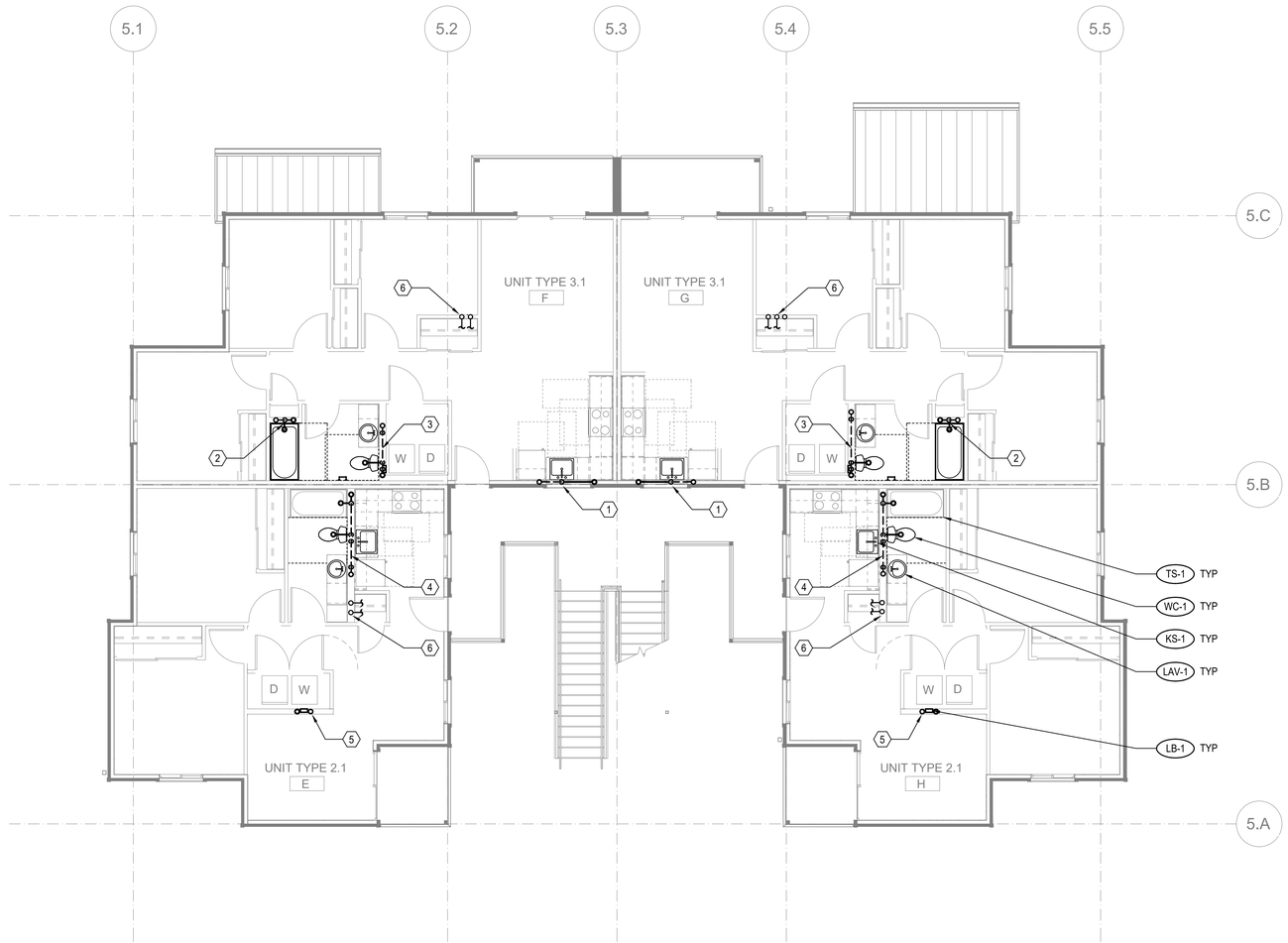
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PLAN - LEVEL 1

PERMIT #	BMF22-09854
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P5-101



FLOOR PLAN - BUILDING 5 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
192 Nickerson, Suite #300
Seattle, Washington 98109
Phone: 206.285.2966

SMR Architects
117 S. Main St., Suite 400
Seattle, WA 98104

PH: 206.623.1104
FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13310 NE 133rd St.,
Kirkland, WA 98034

BUILDING 5

BID SET

DANA AMBER COLLINSON
STATE OF WASHINGTON
22041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

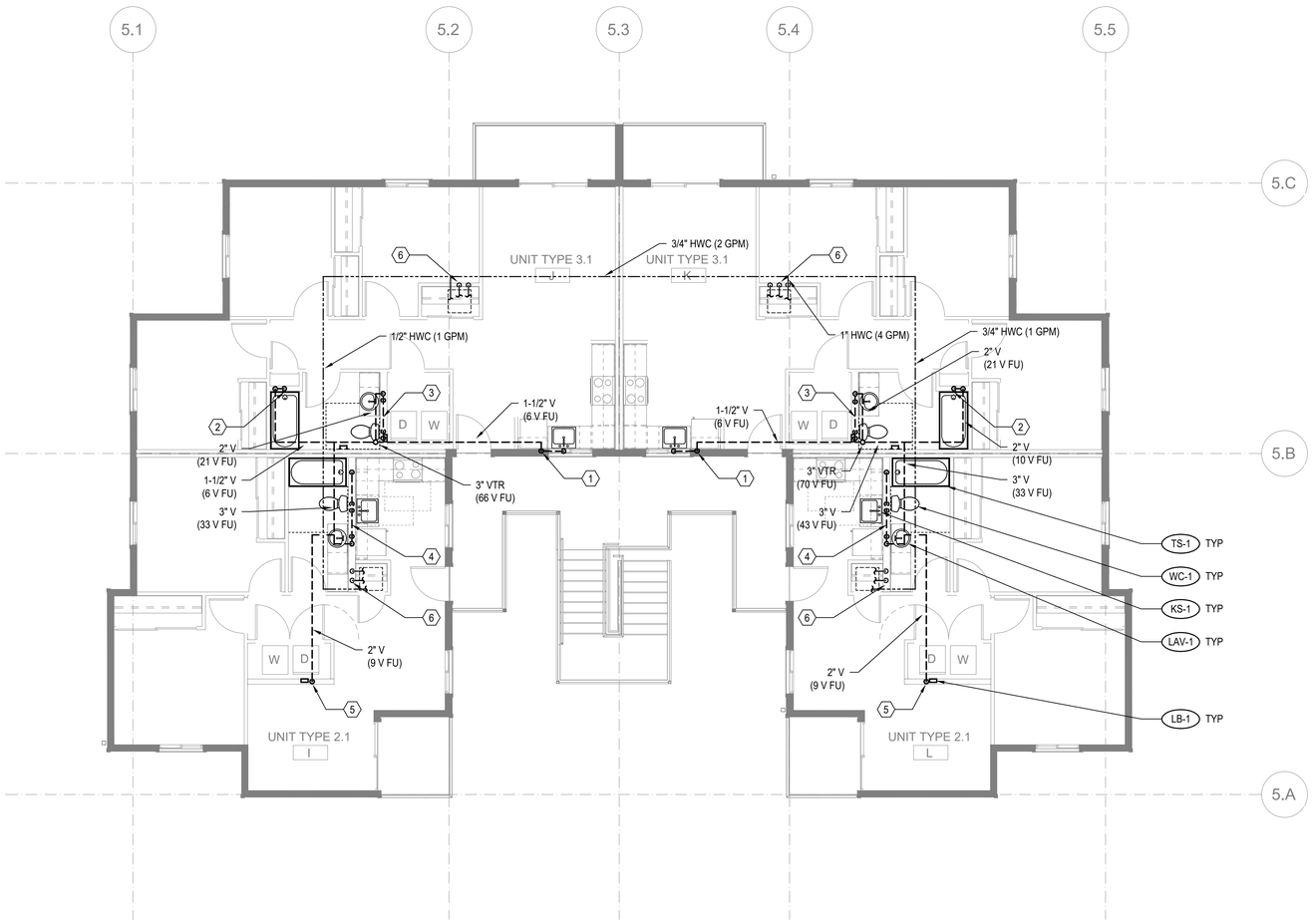
DPD STAMP

TITLE

PLAN - LEVEL 2

PERMIT #	BMF22-09854
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P5-102

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 5 - LEVEL 3

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 5

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
5041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

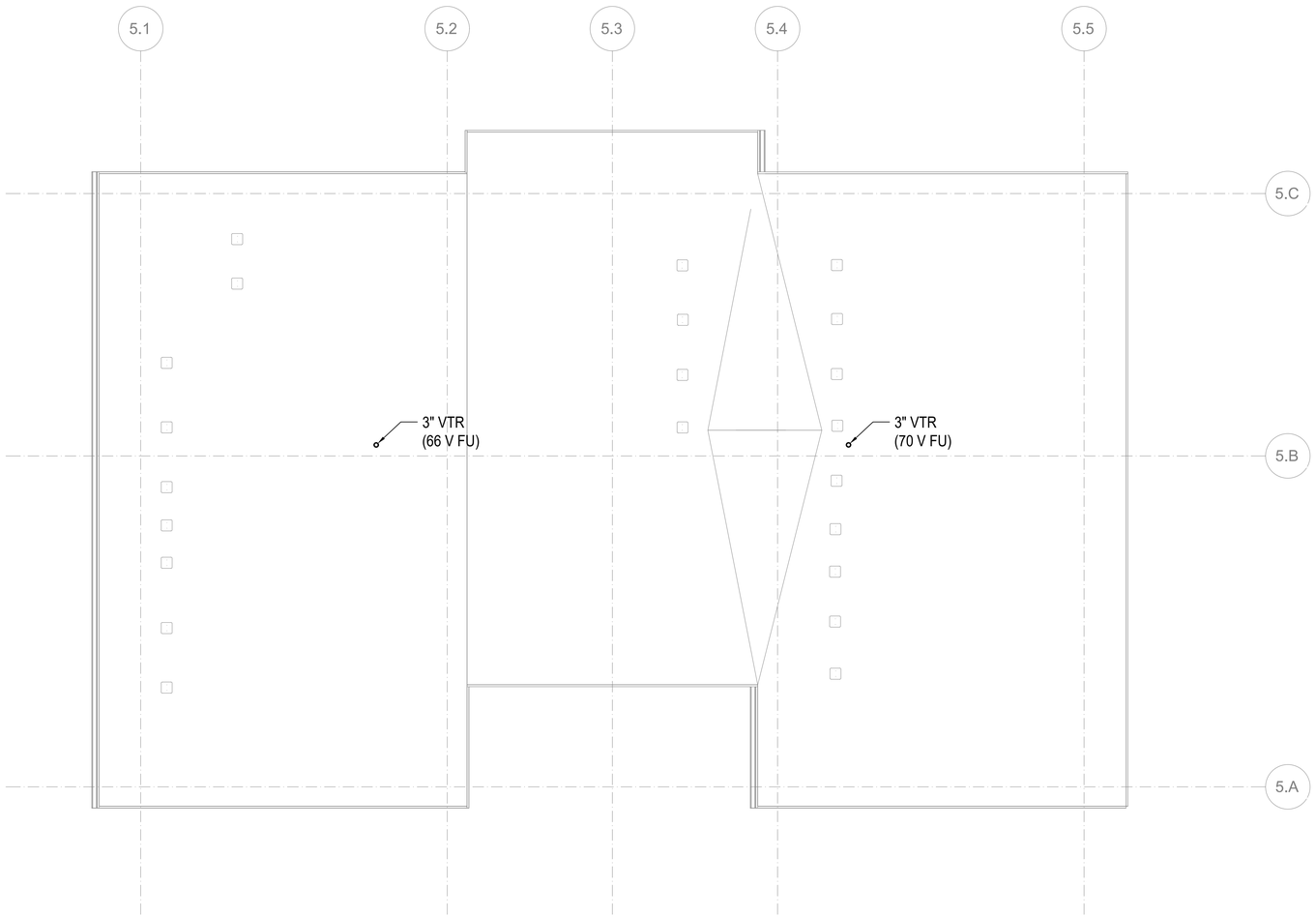
PLAN - LEVEL 3

PERMIT #	BMF22-09854
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P5-103

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 5 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

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KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 5

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
20041009
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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

PLAN - ROOF

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DRAWN	AJ, JL, PH, BF, KS
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SHEET NO.:	

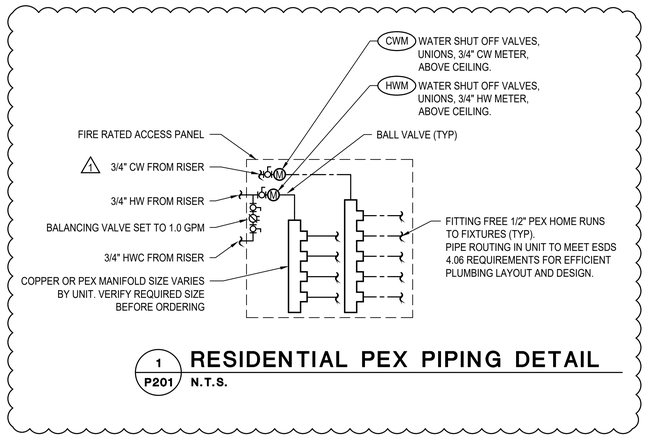
P5-104

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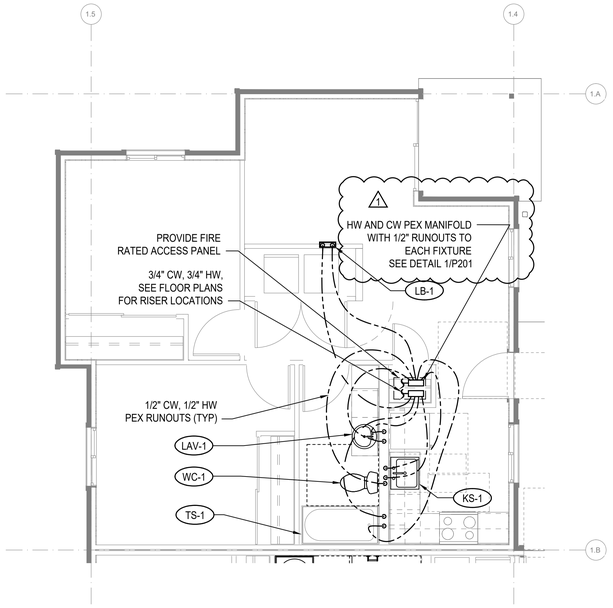
GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

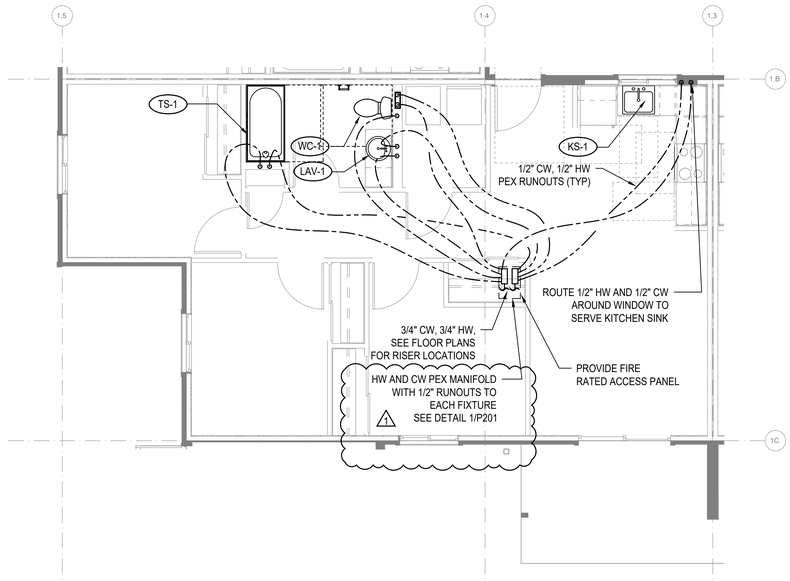
FLAG NOTES (X):



1 / P201 RESIDENTIAL PEX PIPING DETAIL
N.T.S.



2 / P201 ENLARGED PLAN - 2-BED
1/4"=1'-0"
UNITS: A, D, E, H, I, L



1 / P201 ENLARGED PLAN - 3-BED
1/4"=1'-0"
UNITS: B, C, F, G, J, K

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King County Housing Authority

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BUILDING 5

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DANA AMBER FOSTER — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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TITLE

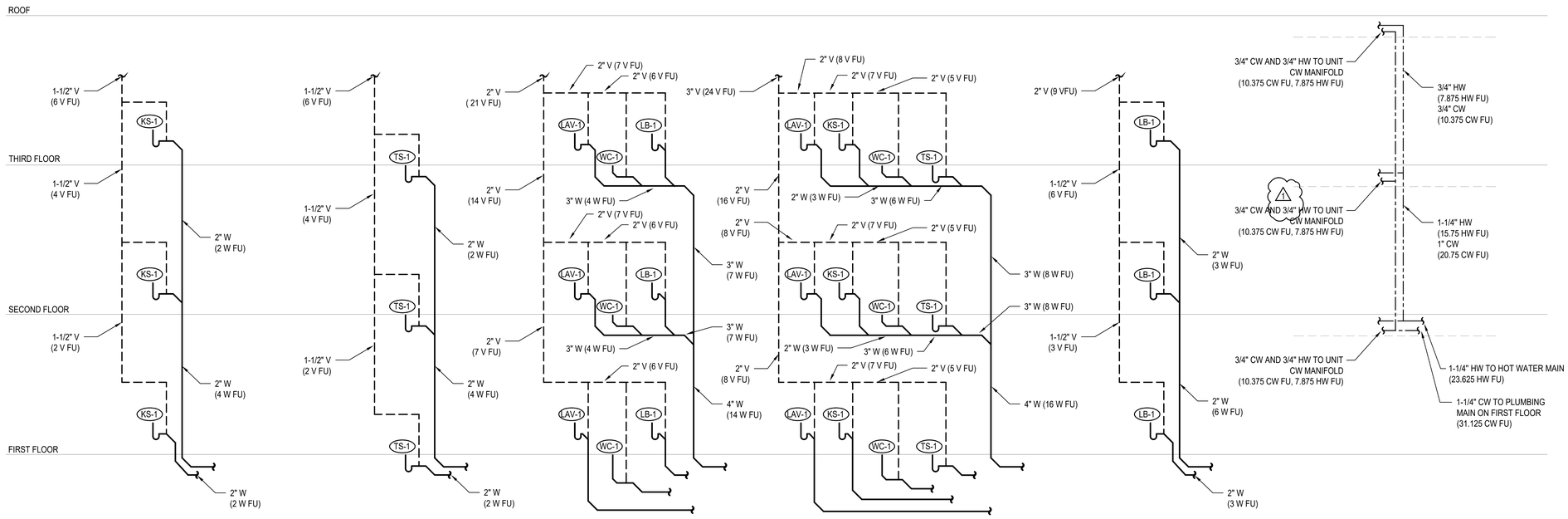
ENLARGED UNIT PLANS

PERMIT #	BMF22-09854
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ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P5-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - KITCHEN SINK** N.T.S.

2 P202 **WASTE RISER - TUB/SHOWER** N.T.S.

3 P202 **WASTE RISER - LB, LAV, WC** N.T.S.

4 P202 **WASTE RISER - LAV, KS, WC, TS** N.T.S.

5 P202 **WASTE RISER - LAUNDRY BOX** N.T.S.

6 P202 **WATER RISER** N.T.S.

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REVISIONS / NOTES

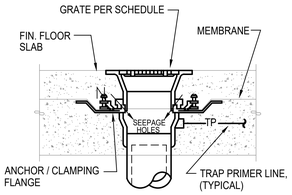
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1	5.19.23	BID ADDENDUM 2

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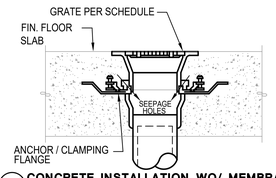
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RISERS

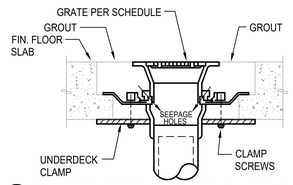
PERMIT #	BMF22-09854
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ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P5-202



A CONCRETE INSTALLATION W/ MEMBRANE

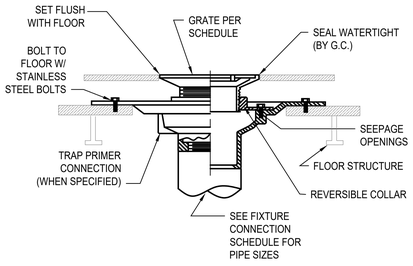


B CONCRETE INSTALLATION WO/ MEMBRANE



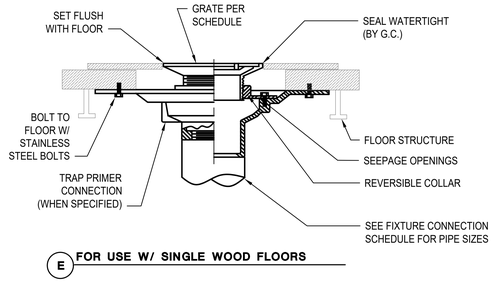
C CONCRETE INSTALLATION W/ CLAMPING RING

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



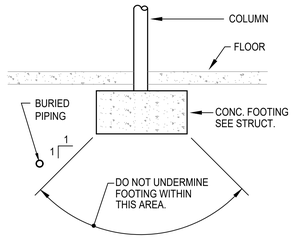
D FOR USE W/ DOUBLE WOOD FLOORS

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

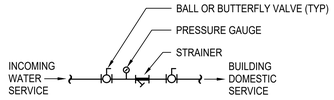


E FOR USE W/ SINGLE WOOD FLOORS

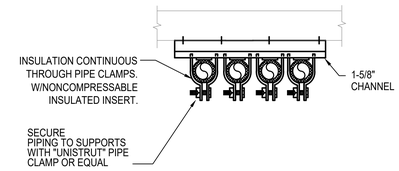
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



2 P301 BURIED PIPING DETAIL
N.T.S.

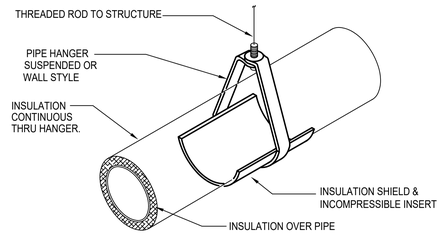


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

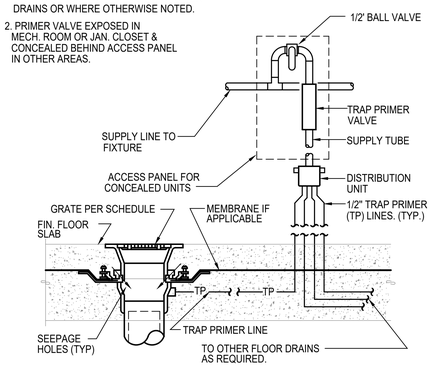
3 P301 PIPE SUPPORT
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

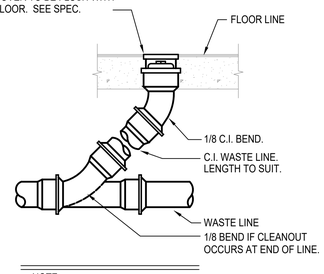
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



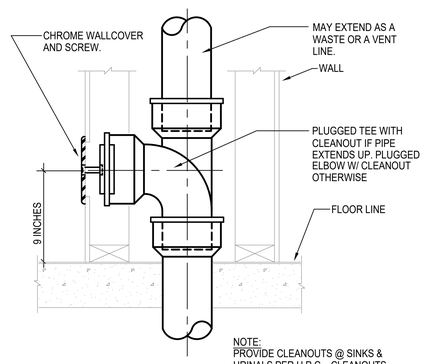
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

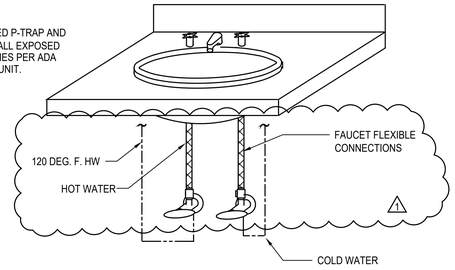
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



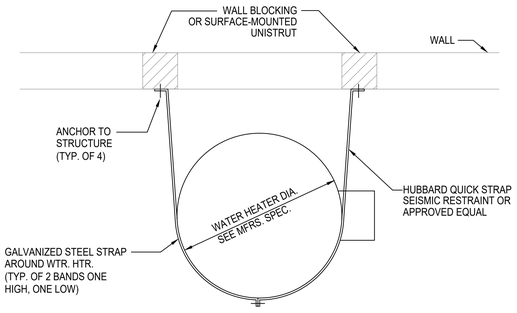
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

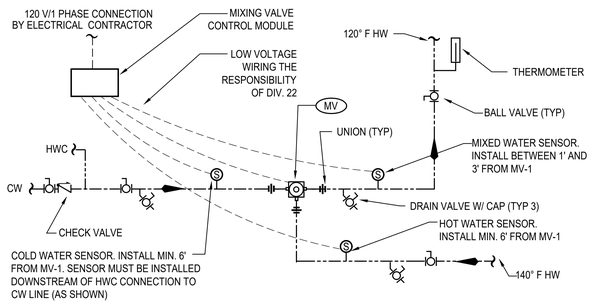
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



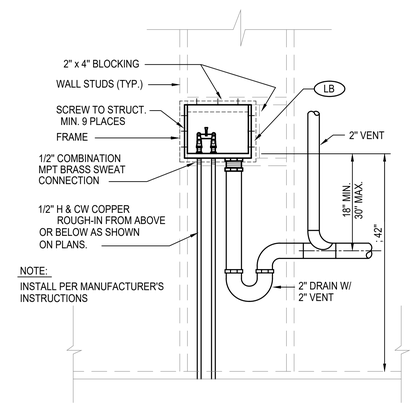
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



12 P301 LAUNDRY BOX DETAIL
N.T.S.

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BUILDING 5

BID SET

DIANE AMBER FORBES — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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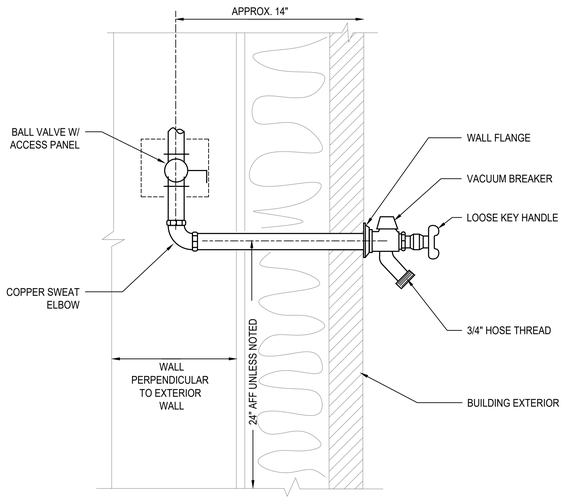
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DETAILS

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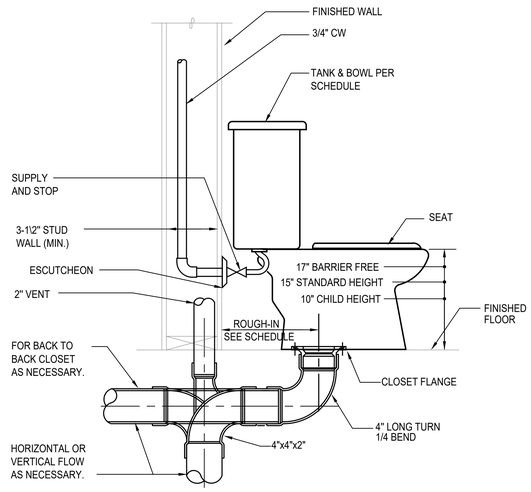
SHEET NO.:

P5-301



1 P302 FREEZE PROOF HOSE BIBB DETAIL

N.T.S.



2 P302 TANK WATER CLOSET DETAIL

N.T.S.

3 P302 NOT USED

N.T.S.

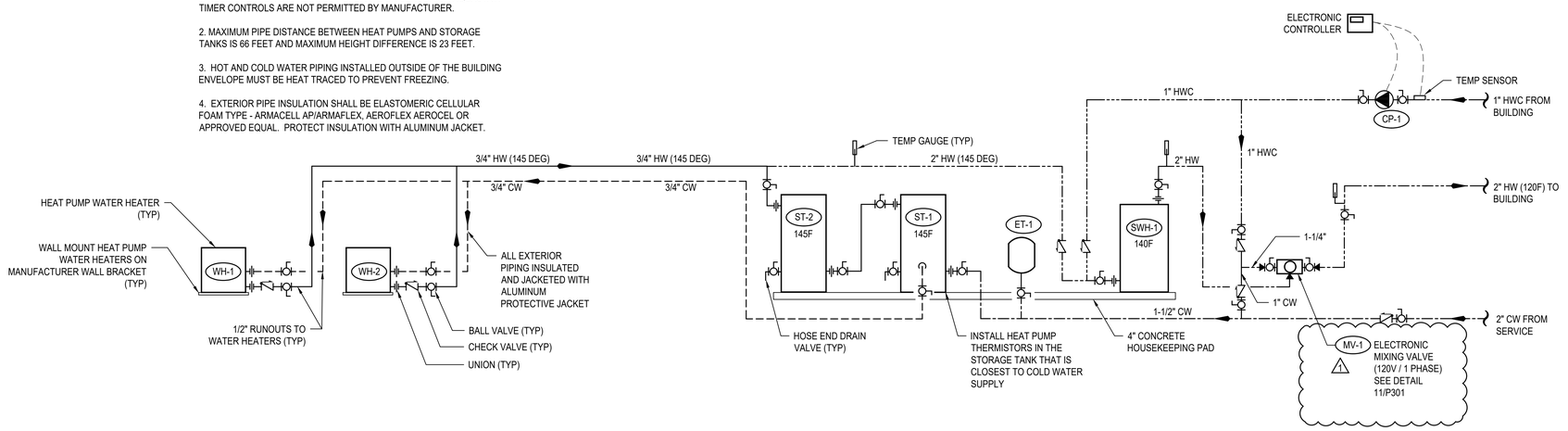
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL

N.T.S.

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BUILDING 5

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REVISIONS / NOTES

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SHEET NO.:	

P5-302

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PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
   ~~SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 1" DIA. BRASS~~ TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ALT	ALTERNATE
AP	ACCESS PANEL
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL/ARCHITECT
AS	AIR SEPARATOR
AUX	AUXILIARY
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BHP	BRAKE HORSE POWER
BLDG	BUILDING
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CA	COMBUSTION AIR
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COND	CONDENSATE
CW	COLD WATER
CX	CONNECT TO EXISTING
dB	DECIBEL
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DDCV	DOUBLE DETECTOR CHECK VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT
DHW	DOMESTIC HOT WATER
DHWC	DOMESTIC HOT WATER RECIRCULATION
Ø OR DIA	DIAMETER
DN	DOWN
DWG(S)	DRAWING(S)
DWV	DRAIN, WASTE, VENT
EA	EACH
EEW	EMERGENCY EYEWASH
EFF	EFFICIENCY
ELEV	ELEVATION
EQUIP	EQUIPMENT
ES	EMERGENCY SHOWER
ET	EXPANSION TANK
EX	EXISTING/EXISTING TO REMAIN
EXP	EXPANSION
FC	FAIL CLOSED
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR
FLA	FULL LOAD AMPS
FM	FORCE MAIN
FO	FAIL OPEN
FP	FIRE PROTECTION
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOOR SINK
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY
FT	FEET/FOOT
FTG	FOOTING
FV	FLUSH VALVE
G	NATURAL GAS
GA	GAUGE
GAL	GALLON
G.C.	GENERAL CONTRACTOR
GCO	GRADE CLEANOUT
GD	GARAGE DRAIN
GPF	GALLONS PER FLUSH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
H	HEIGHT
HB	HOSE BIBB
HBVB	HOSE BIBB VACUUM BREAKER
HD	HEAD
HP	HORSEPOWER
HS	HAND SINK
HW	HOT WATER
HX	HEAT EXCHANGER
IE	INVERT ELEVATION
IN	INCH/INCHES
KW	KILOWATT/KILOWATTS
LAV	LAVATORY
LBS	POUNDS
LF	LINEAL FOOT
LTG	LIGHTING
LWT	LEAVING WATER TEMPERATURE
MBH	1000 BRITISH THERMAL UNITS PER HOUR
MED	MEDIUM
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MEZZ	MEZZANINE
MIN	MINIMUM
MISC	MISCELLANEOUS
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NOM	NOMINAL
NPC	NON-POTABLE COLD WATER
NPCW	NON POTABLE COLD WATER
NPH	NON-POTABLE HOT WATER
NPHR	NON-POTABLE HOT WATER RETURN
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OD	OUTSIDE DIAMTER/OVERLOW DRAIN
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
ORD	OVERFLOW ROOF DRAIN
ORL	OVERFLOW RAINWATER LEADER
ΔP	PRESSURE DIFFERENTIAL
PD	PLANTER DRAIN; PRESSURE DROP
PERF	PERFORATED
PH	PHASE
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER INCH GAUGE
QTY	QUANTITY
RD	ROOF DRAIN
REQD	REQUIRED
RL	RAIN WATER LEADER
RM	ROOM
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
RLX	RELOCATE EXISTING
RV	RELIEF VALVE
RX	REMOVE EXISTING
S	SINK
S	STORM
SCFM	STANDARD CUBIC FEET PER MINUT
SD	STORM DRAIN
SF	SQUARE FOOT
SFU	SUPPLY FIXTURE UNIT
SH	SHOWER
S.O.V.	SHUTOFF VALVE
SPEC	SPECIFICATION
S/S, OR SS	STAINLESS STEEL
STD	STANDARD
SYM	SYMBOL
T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
TBD	TO BE DETERMINED
TD	TRENCH DRAIN
TEMP	TEMPERATURE
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOD	TOP OF DECK
TOJ	TOP OF JOIST
TOS	TOP OF SLAB/TOP OF STEEL
TP	TRAP PRIMER
T&P	TEMPERATURE & PRESSURE
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
V	VENT(S)
V	VOLT
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VIB	VALVE-IN-BOX
VTR	VENT THROUGH ROOF
W	WASTE/WATER
W/	WITH
W/IN	WITHIN
W/O	WITHOUT
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER
WPD	WATER PRESSURE DROP
WT	WEIGHT
YCO	YARD CLEANOUT

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
192 Nickerson, Suite #300
Seattle, Washington 98109
Phone: 206.285.2966

SMR Architects
117 S. Main St., Suite 400
Seattle, WA 98104

PH: 206.623.1104
FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13320 NE 133rd St.,
Kirkland, WA 98034

BUILDING 6

BID SET

DANA AMBER COLE — STATE OF WASHINGTON — 22041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09857
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P6-001

10/7/2021 7:33:34 AM

GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.
NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.			
HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ1	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-165-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE. ⚠1
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1	HEAT PUMP	SANCO2:	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE,
WH-2	WATER HEATER	GS4-45HPC-D	UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET. ⚠1
ST-1	DOMESTIC	SANCO2:	200 GALLON STORAGE TANK.
ST-2	STORAGE TANK	ECO-200GLBK	2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	⚠1 1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy kWh	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

***Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements**

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	PIPE SIZE H.W.	PIPE SIZE WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

⚠1

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE		FIXTURE UNITS PER APPENDIX A					
		DOMESTIC WATER WSFU				SEWER DFU	
FIXTURE	QTY	PER FIXTURE	TOTAL	HW PER FIXTURE	TOTAL	PER FIXTURE	TOTAL
Private Tank Water Closet	8	2.5	20	-	-	3	24
Lavatory (Public or Private)	8	1	8	0.75	6	1	8
Bathtub or Combo Bath/Shwr	8	4	32	3	24	2	16
Kitchen Sink	8	1.5	12	1.125	9.00	2	16
Clothes Washer	8	4	32	3	24	3	24
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**44**		**107.5**		**63.00**		**92**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 44 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 92. BUILDING SERVICE SIZE = (1X) 4".

10/7/2021 7:33:34 AM

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
192 Nickerson, Suite #300
Seattle, Washington 98109
Phone: 206.285.2966

SMR Architects
117 S. Main St., Suite 400
Seattle, WA 98104

PH: 206.623.1104
FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13320 NE 133rd St.,
Kirkland, WA 98034

BUILDING 6

BID SET

DIANA M. AMBER FORSMAN — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

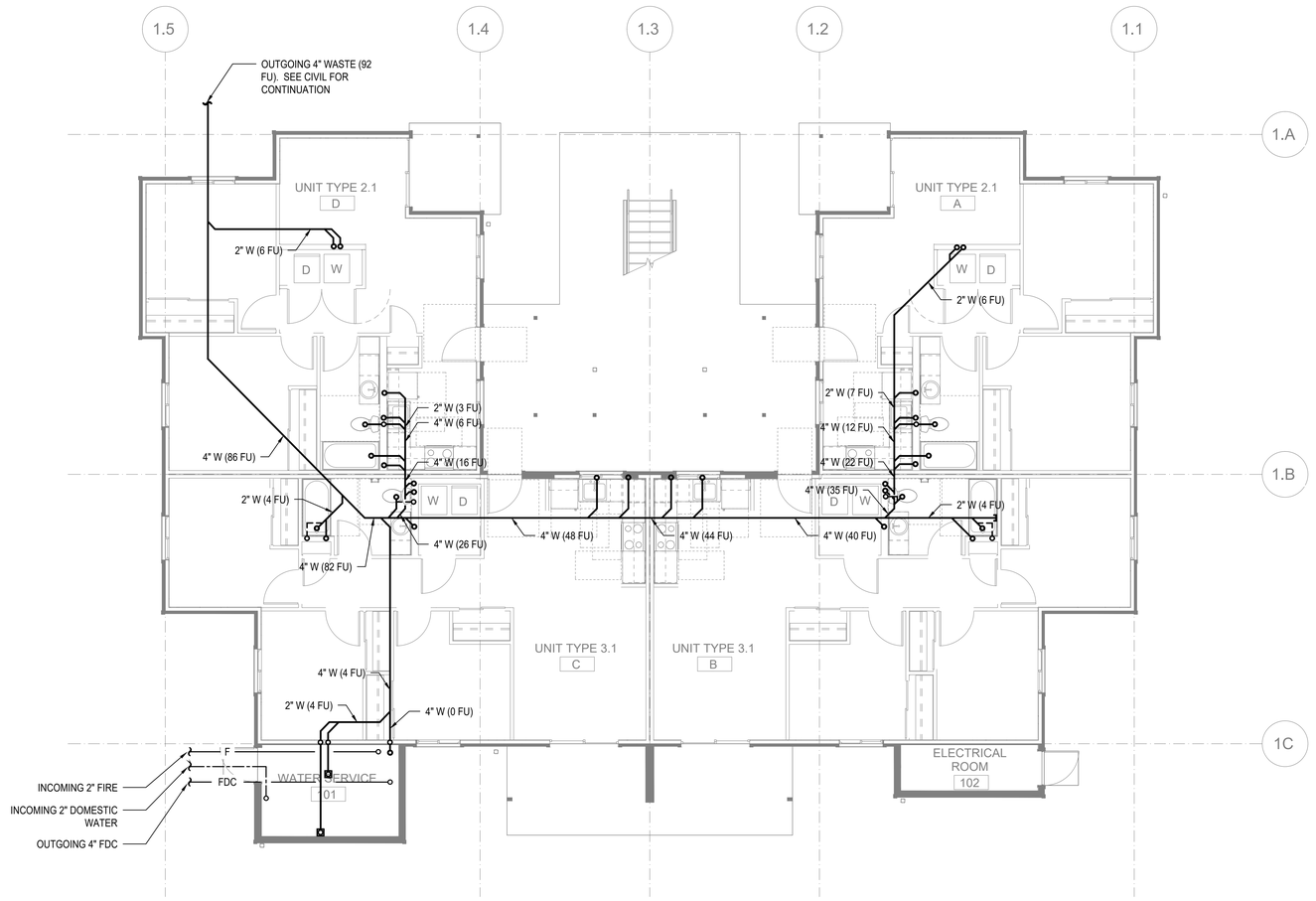
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1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

NOTES AND SCHEDULES

PERMIT #	BMF22-09857
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P6-002



FLOOR PLAN - BUILDING 6 - FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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MECHANICAL + ELECTRICAL ENGINEERS
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Seattle, WA 98104

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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13320 NE 133rd St.,
Kirkland, WA 98034

BUILDING 6

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
21041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

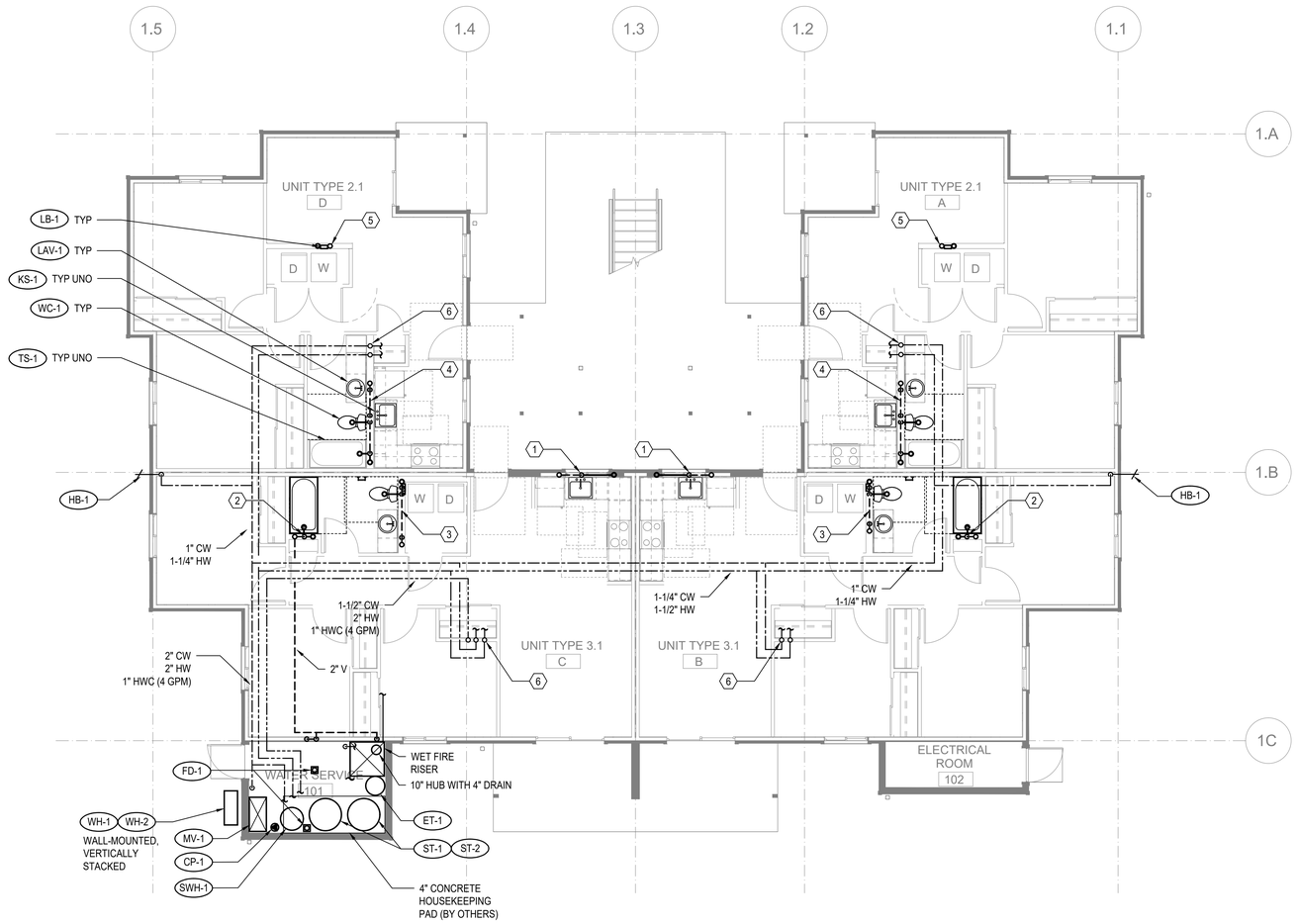
PLAN - FOUNDATION

PERMIT #	BMF22-09857
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P6-100

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 6 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13320 NE 133rd St.,
Kirkland, WA 98034

BUILDING 6

BID SET

DANA AMBER CRAWFORD
STATE OF WASHINGTON
20041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

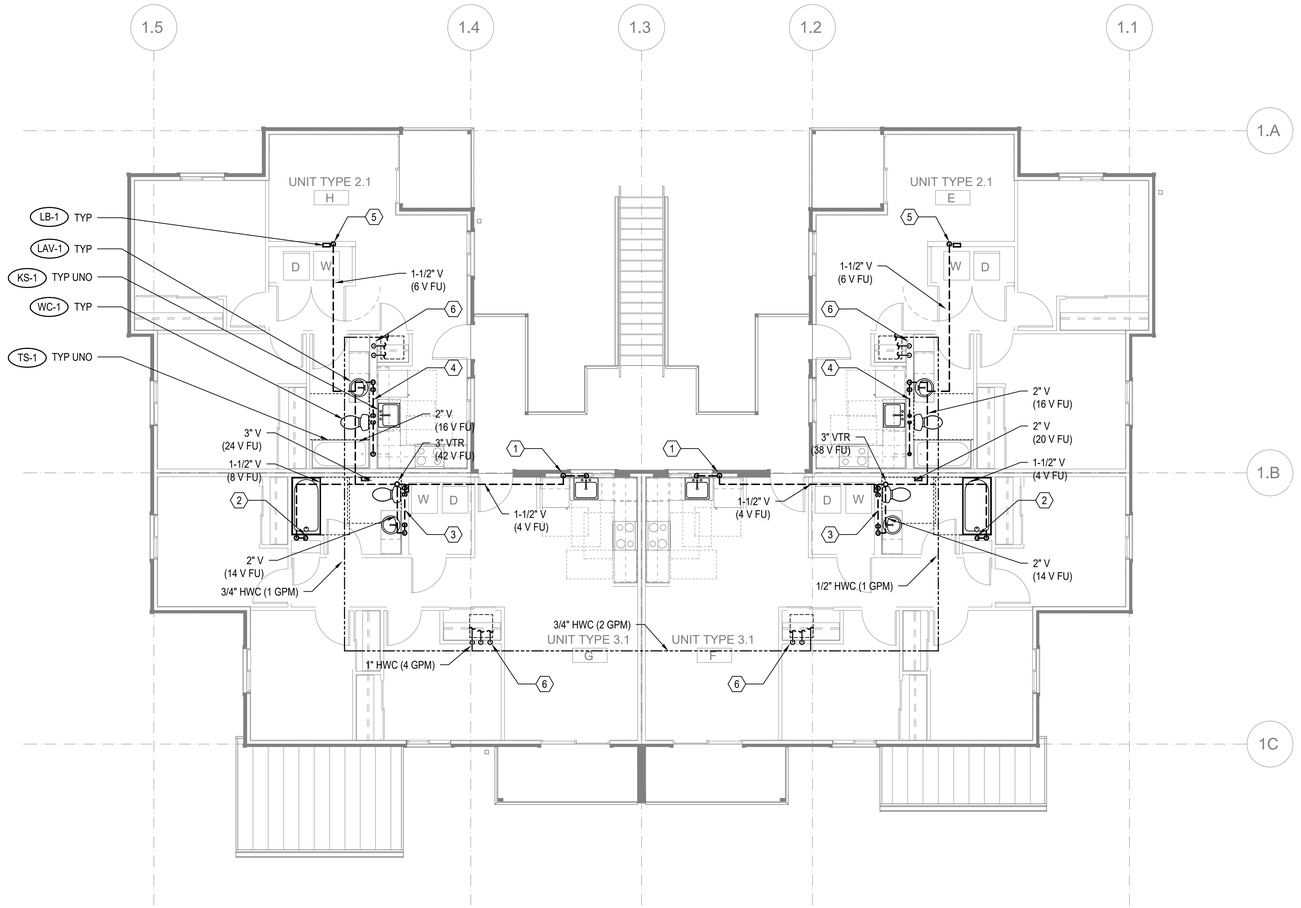
TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09857
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P6-101

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 6 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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Phone: 206.285.2966

SMR Architects
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Seattle, WA 98104

PH: 206.623.1104
FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13320 NE 133rd St.,
Kirkland, WA 98034

BUILDING 6

BID SET

DANE AMBER FOLKESTAD
STATE OF WASHINGTON
22041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

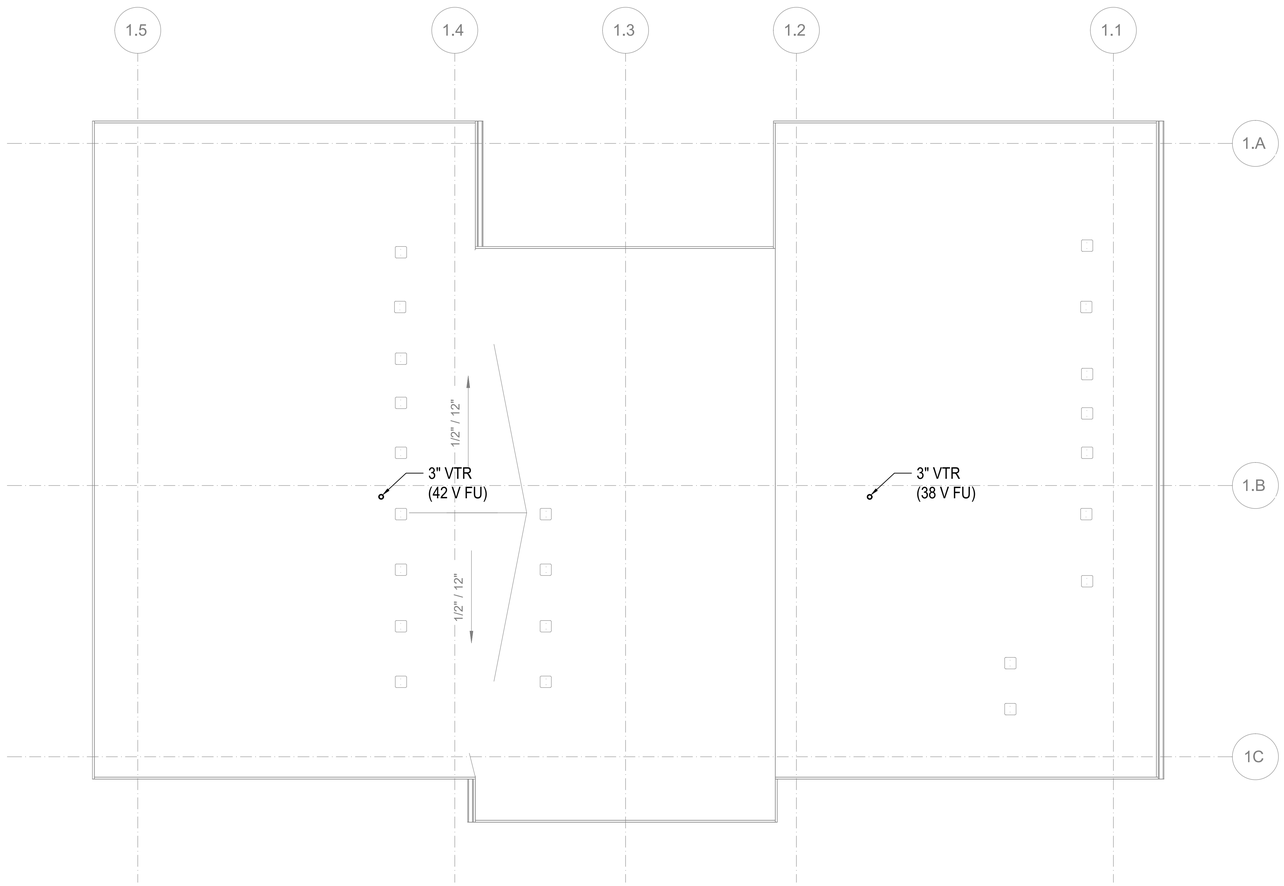
TITLE

PLAN - LEVEL 2

PERMIT #	BMF22-09857
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P6-102

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 6 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

SIDER+BYERS
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King County Housing Authority

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c/o: King County Housing Authority,
General Partner
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Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13320 NE 133rd St.,
Kirkland, WA 98034

BUILDING 6

BID SET

DANA AMBER COLVIN — STATE OF WASHINGTON — 5041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

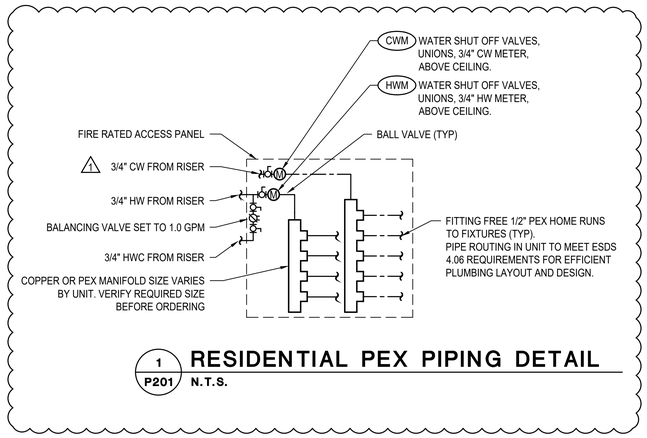
PLAN - ROOF

PERMIT #	BMF22-09857
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P6-103

10/7/2021 7:33:34 AM



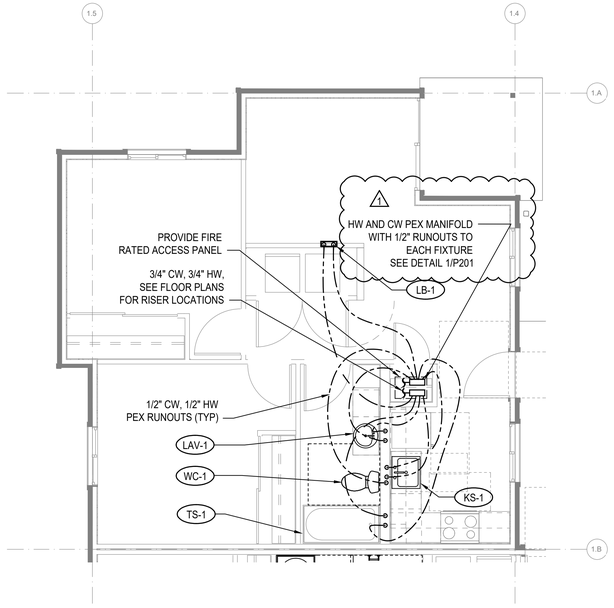
1 / P201 **RESIDENTIAL PEX PIPING DETAIL**

N.T.S.

GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

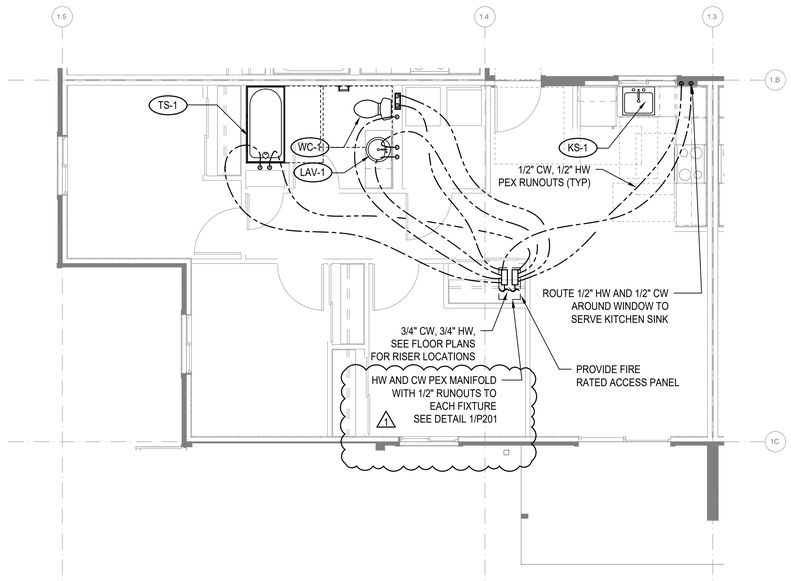
FLAG NOTES (X):



2 / P201 **ENLARGED PLAN - 2-BED**

1/4"=1'-0"

UNITS: A, D, E, H



3 / P201 **ENLARGED PLAN - 3-BED**

1/4"=1'-0"

UNITS: B, C, F, G

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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13320 NE 133rd St.,
Kirkland, WA 98034

BUILDING 6

BID SET

DANA AMBER FOSTER STATE OF WASHINGTON 22041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

ENLARGED UNIT PLANS

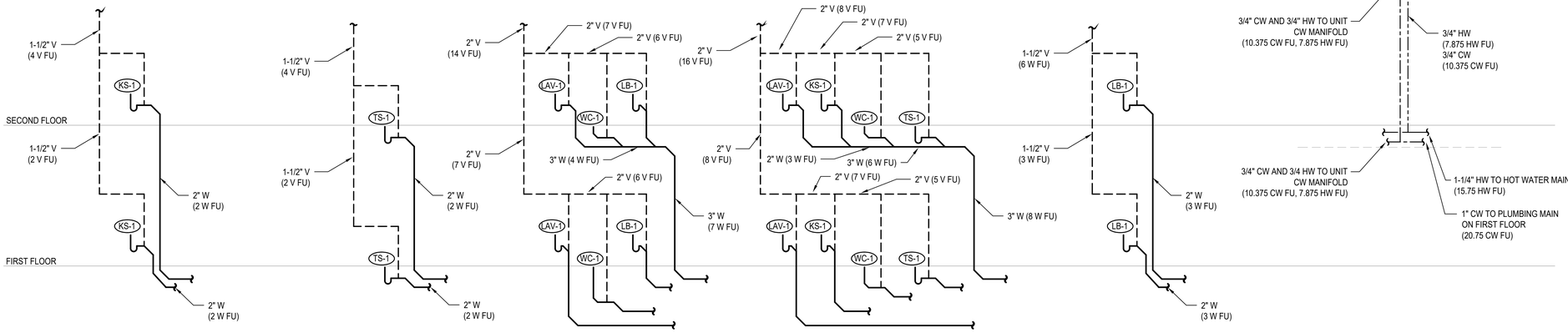
PERMIT #	BMF22-09857
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P6-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1/P202 WASTE RISER - KITCHEN SINK N.T.S.

2/P202 WASTE RISER - TUB/SHOWER N.T.S.

3/P202 WASTE RISER - LB, LAV, WC N.T.S.

4/P202 WASTE RISER - LAV, KS, WC, TS N.T.S.

5/P202 WASTE RISER - LAUNDRY BOX N.T.S.

6/P202 WATER RISER N.T.S.

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Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 6

BID SET

DIANA AMBER FORD STATE OF WASHINGTON 24041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

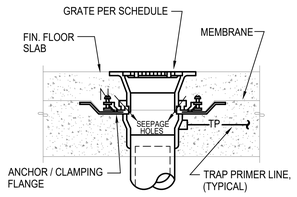
TITLE

RISERS

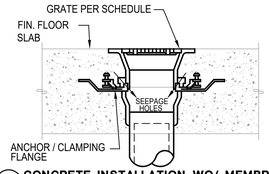
PERMIT #	BMF22-09857
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

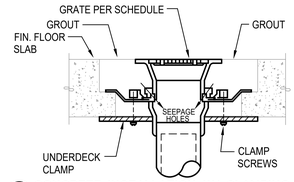
P6-202



A **CONCRETE INSTALLATION W/ MEMBRANE**

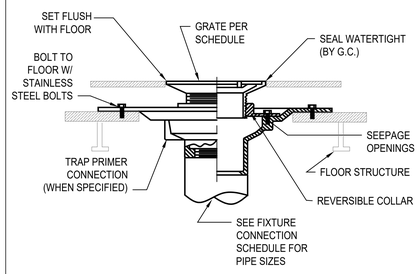


B **CONCRETE INSTALLATION WO/ MEMBRANE**



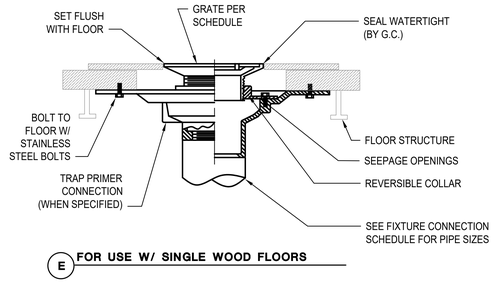
C **CONCRETE INSTALLATION W/ CLAMPING RING**

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



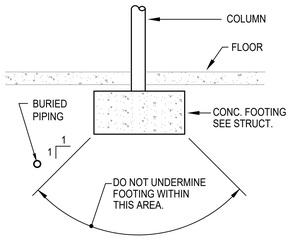
D **FOR USE W/ DOUBLE WOOD FLOORS**

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

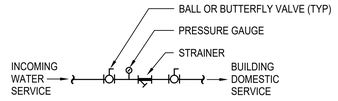


E **FOR USE W/ SINGLE WOOD FLOORS**

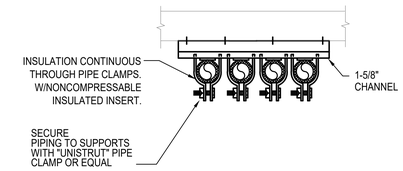
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



2 P301 BURIED PIPING DETAIL
N.T.S.

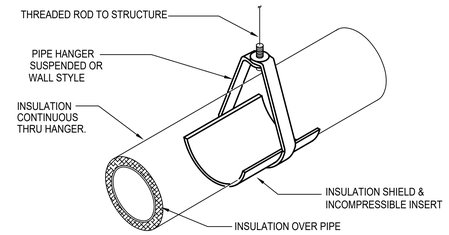


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

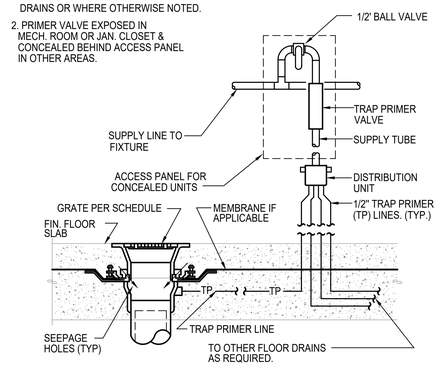
3 P301 PIPE SUPPORT
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

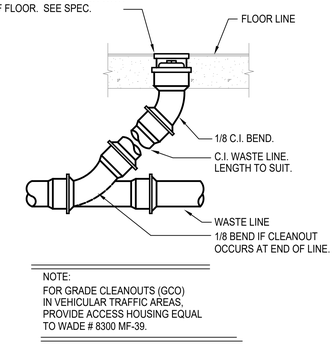
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



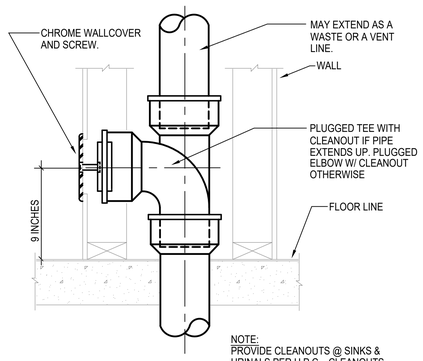
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

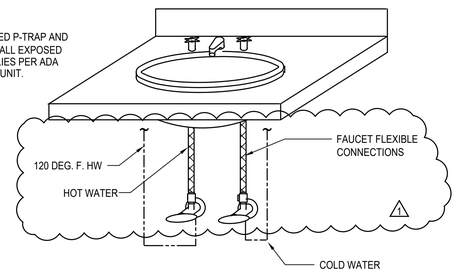
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



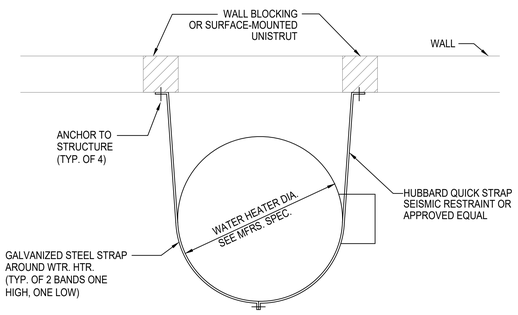
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

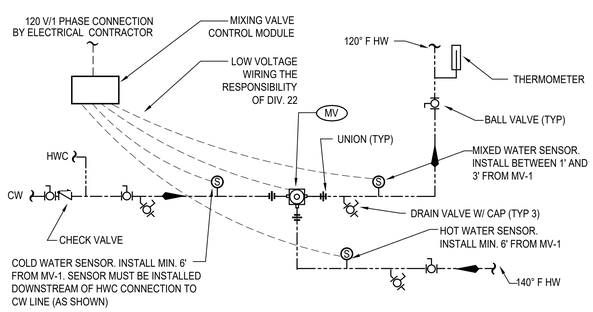
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



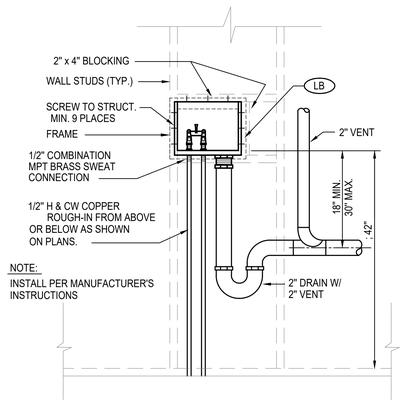
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



NOTE:
INSTALL PER MANUFACTURER'S INSTRUCTIONS

12 P301 LAUNDRY BOX DETAIL
N.T.S.

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13320 NE 133rd St.,
Kirkland, WA 98034

BUILDING 6

BID SET

DIANE AMBER TOMLINSON — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

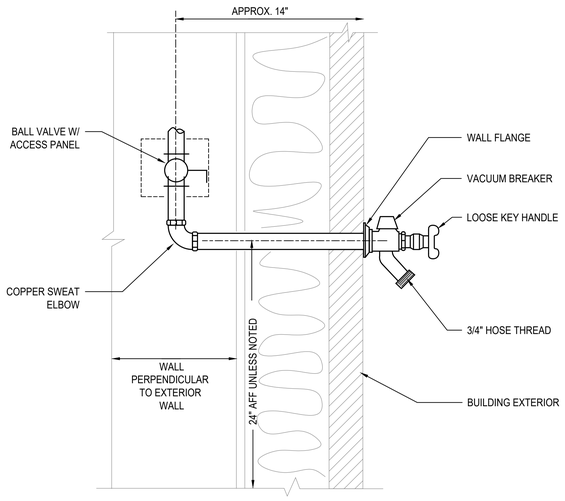
DETAILS

PERMIT #	BMF22-09857
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

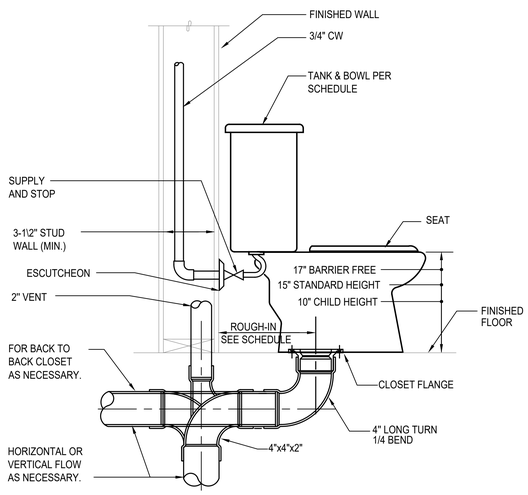
SHEET NO.:

P6-301

10/7/2021 7:33:34 AM



1 P302 FREEZE PROOF HOSE BIBB DETAIL
N.T.S.



2 P302 TANK WATER CLOSET DETAIL
N.T.S.

3 P302 NOT USED
N.T.S.

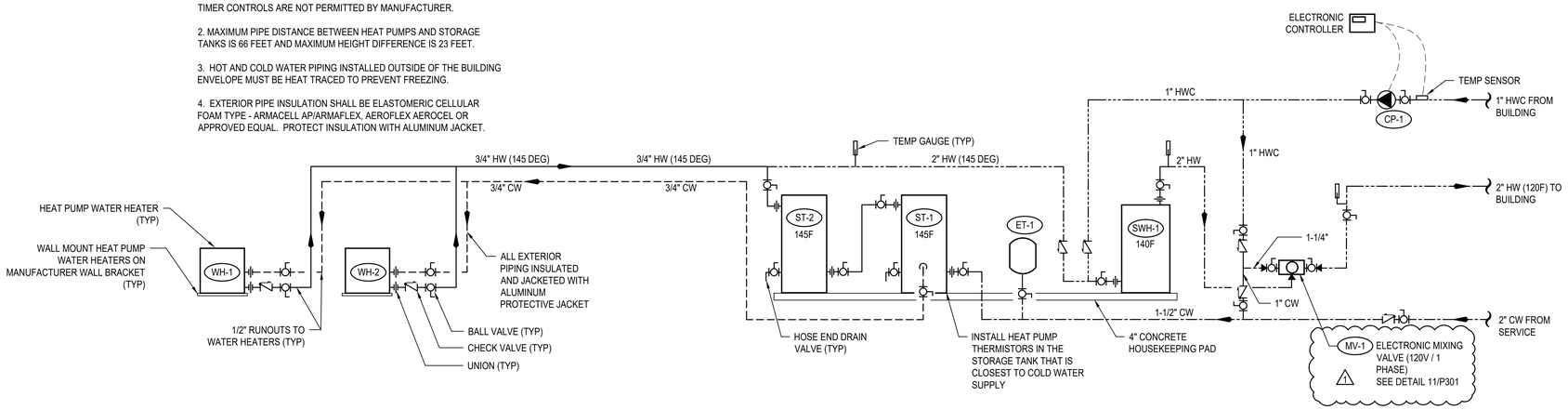
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL
N.T.S.

10/7/2021 7:33:34 AM

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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13320 NE 133rd St.,
Kirkland, WA 98034

BUILDING 6

BID SET

DANA AMBER COLLINS STATE OF WASHINGTON 25041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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P6-302

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
   ~~SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 17 GA. BRASS~~ TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

SIDER+BYERS
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c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13402 NE 133rd St.,
Kirkland, WA 98034

BUILDING 7

BID SET

DANA AMBER COLLIER — STATE OF WASHINGTON — 22041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
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DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09855
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
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P7-001

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GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.
NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.			
HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ1	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-165-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE. ⚠1
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1	HEAT PUMP	SANCO2:	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE,
WH-2	WATER HEATER	GS4-45HPC-D	UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET. ⚠1
ST-1	DOMESTIC	SANCO2:	200 GALLON STORAGE TANK.
ST-2	STORAGE TANK	ECO-200GLBK	2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	⚠1 1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

kWh

***Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements**

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	PIPE SIZE H.W.	PIPE SIZE WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

⚠1

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE — **FIXTURE UNITS PER APPENDIX A**

FIXTURE	QTY	DOMESTIC WATER WSFU: PER FIXTURE	DOMESTIC WATER WSFU: TOTAL	HW PER FIXTURE	HW TOTAL	SEWER DFU: PER FIXTURE	SEWER DFU: TOTAL
Private Tank Water Closet	8	2.5	20	-	-	3	24
Lavatory (Public or Private)	8	1	8	0.75	6	1	8
Bathtub or Combo Bath/Shwr	8	4	32	3	24	2	16
Kitchen Sink	8	1.5	12	1.125	9.00	2	16
Clothes Washer	8	4	32	3	24	3	24
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**44**		**107.5**		**63.00**		**92**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 44 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 92. BUILDING SERVICE SIZE = (1X) 4".

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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13402 NE 133rd St.,
Kirkland, WA 98034

BUILDING 7

BID SET

DANA AMBER FOSTER — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

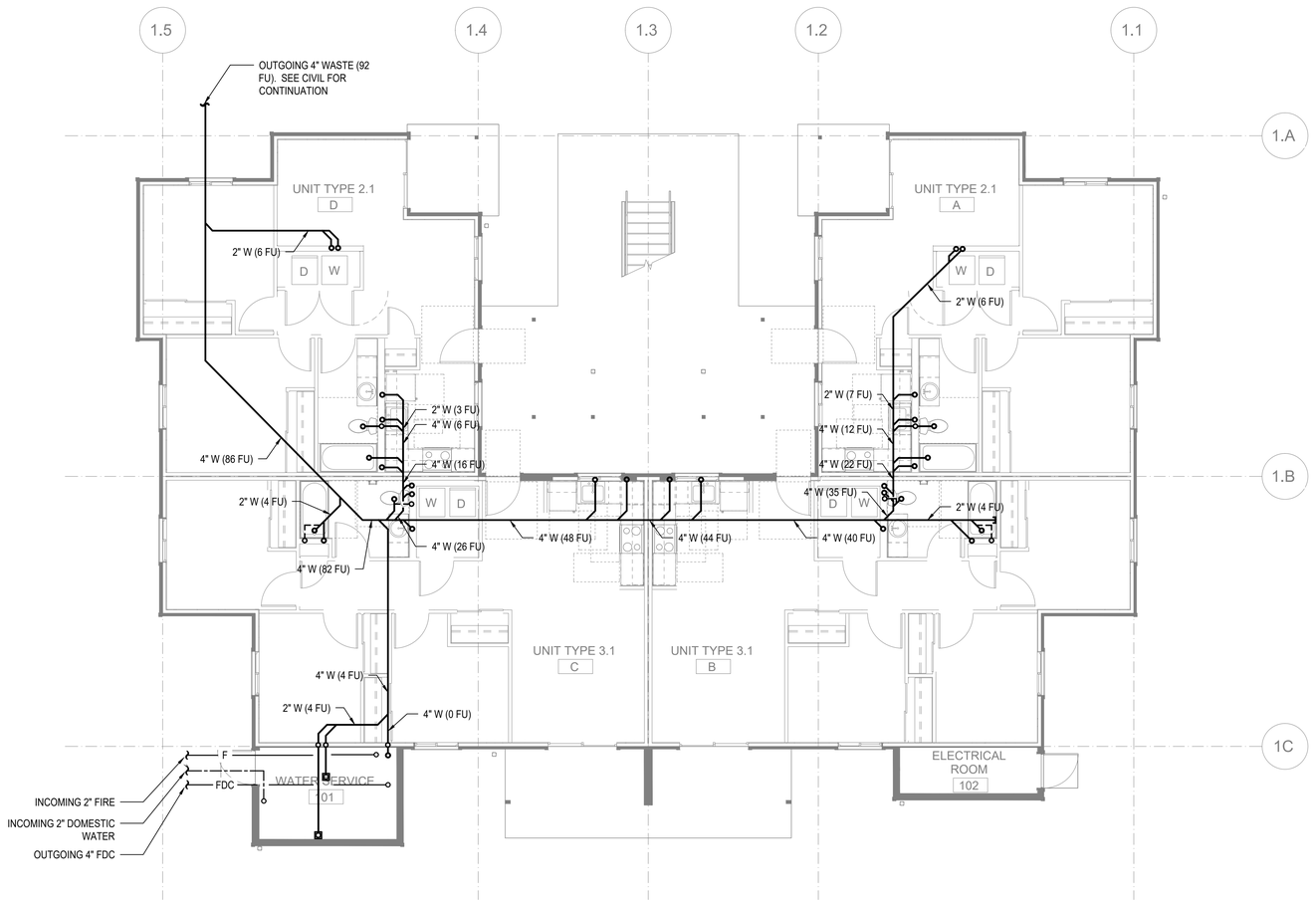
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DPD STAMP

TITLE

NOTES AND SCHEDULES

PERMIT #	BMF22-09855
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P7-002



FLOOR PLAN - BUILDING 7 - FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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BUILDING 7

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
22041009
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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

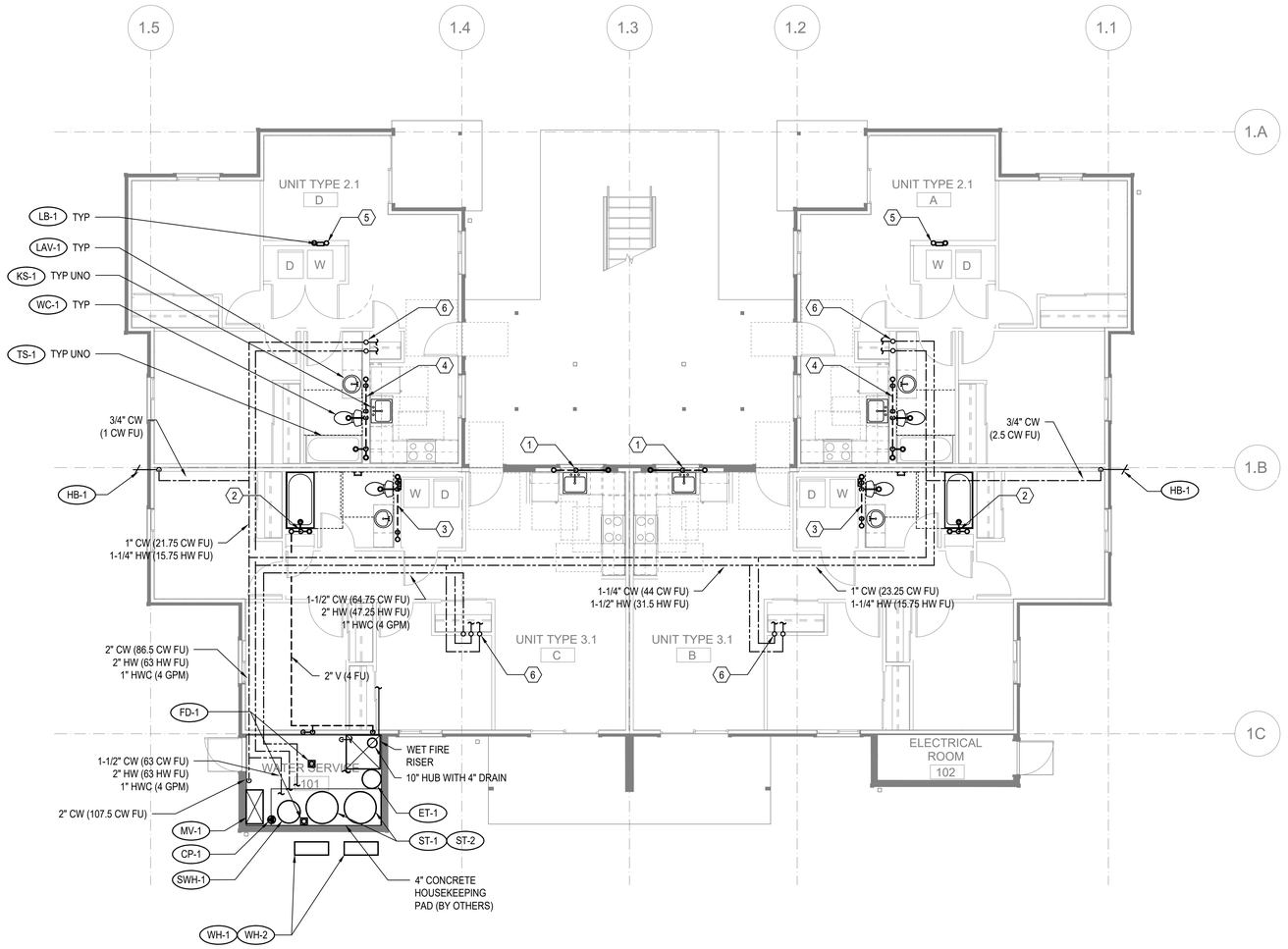
TITLE

PLAN - FOUNDATION

PERMIT #	BMF22-09855
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P7-100

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FLOOR PLAN - BUILDING 7 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

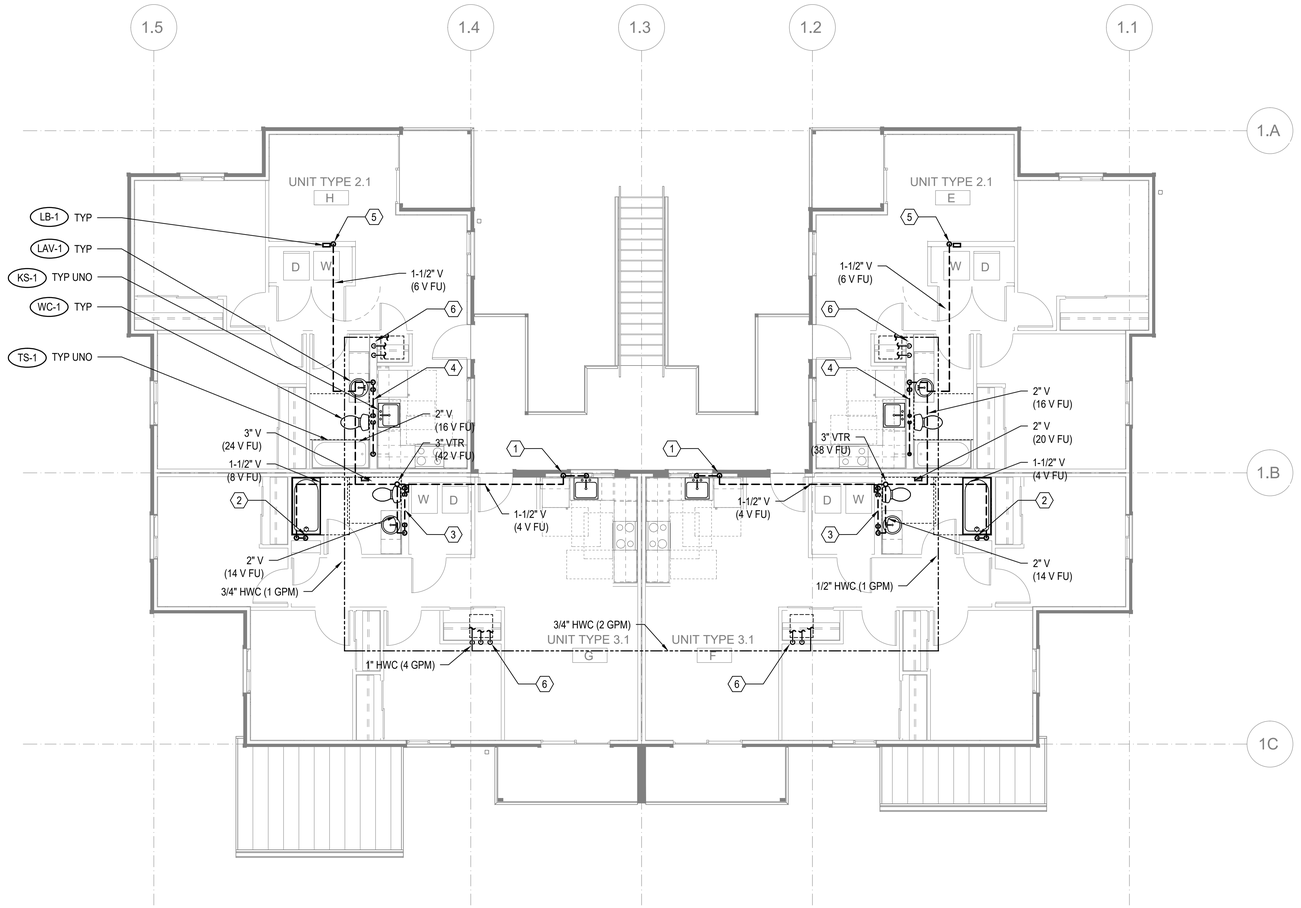
TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09855
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
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SHEET NO.:	

P7-101

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FLOOR PLAN - BUILDING 7 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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BUILDING 7

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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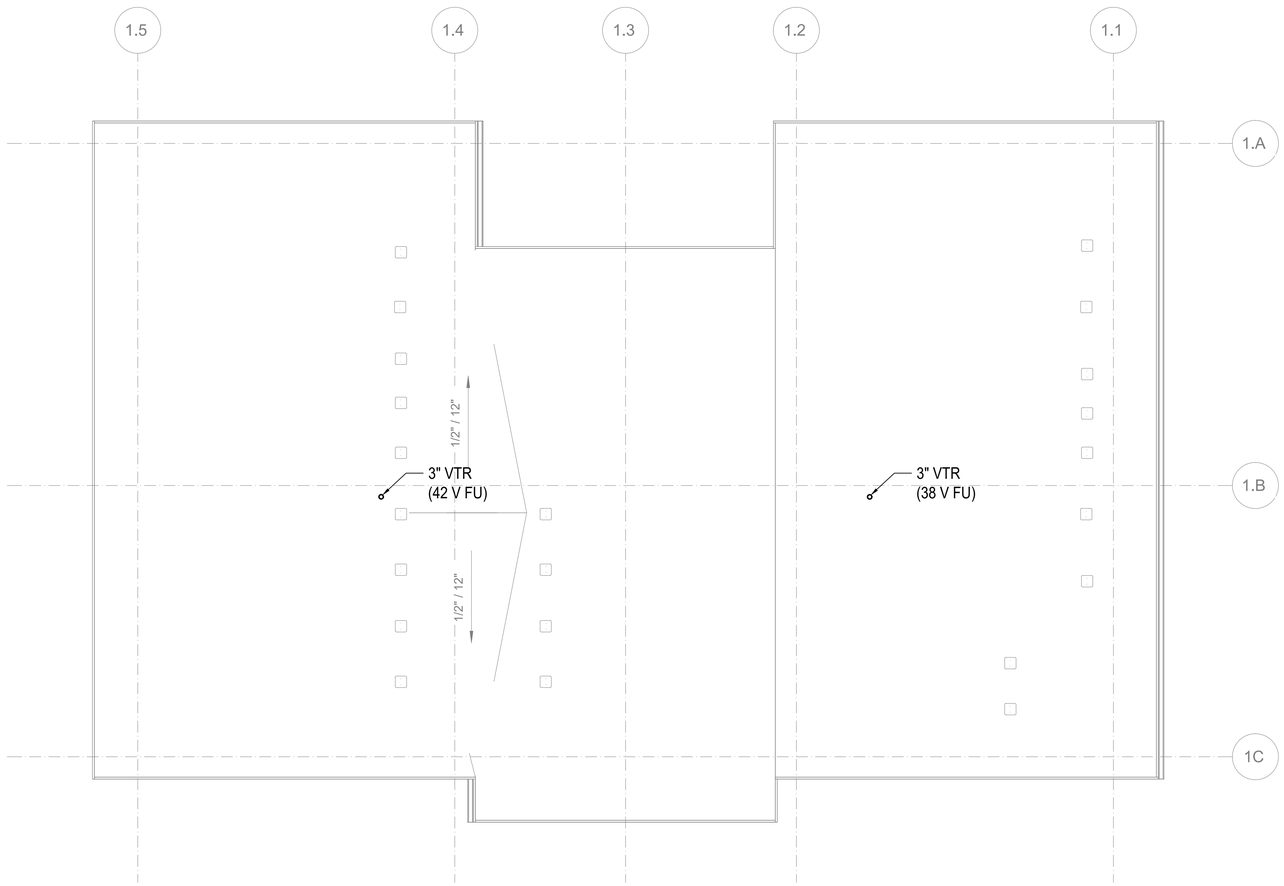
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PLAN - LEVEL 2

PERMIT #	BMF22-09855
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P7-102

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FLOOR PLAN - BUILDING 7 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 7

BID SET

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

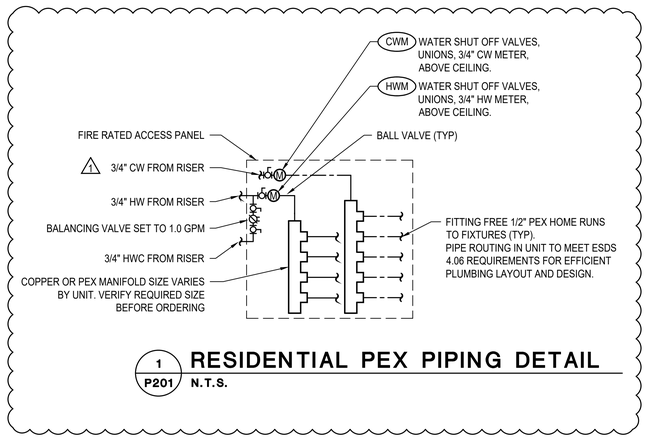
PLAN - ROOF

PERMIT #	BMF22-09855
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SHEET NO.:

P7-103

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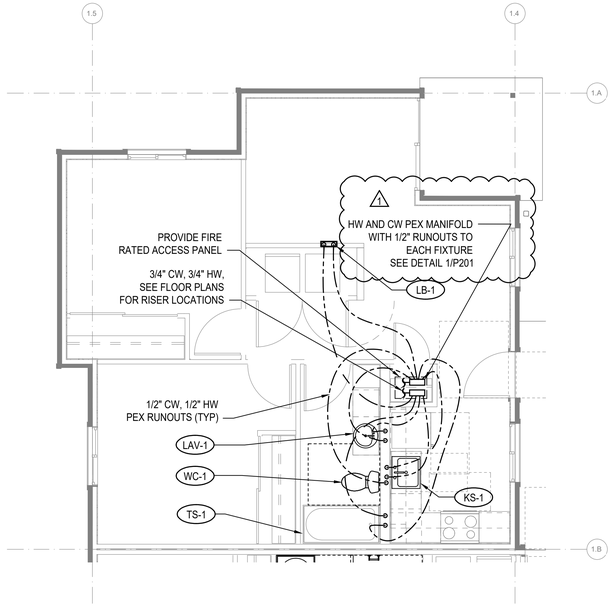
1 / P201 **RESIDENTIAL PEX PIPING DETAIL**

N.T.S.

GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

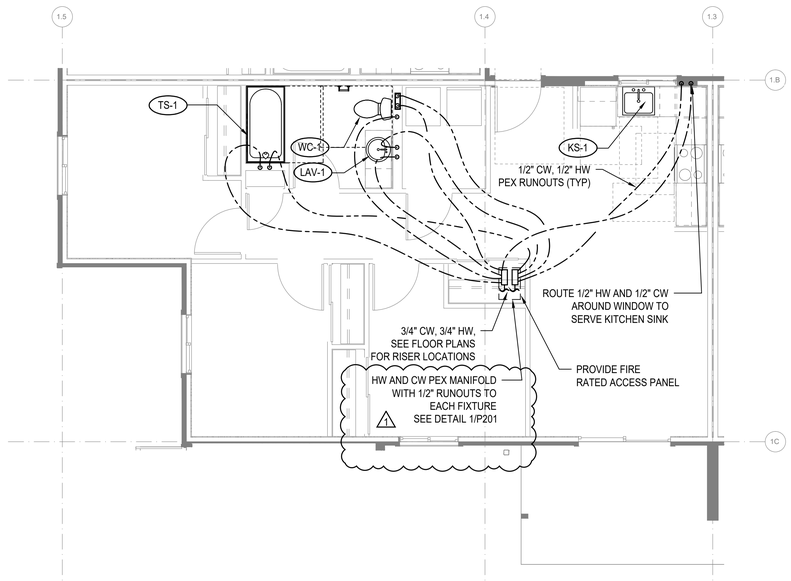
FLAG NOTES (X):



2 / P201 **ENLARGED PLAN - 2-BED**

1/4"=1'-0"

UNITS: A, D, E, H



3 / P201 **ENLARGED PLAN - 3-BED**

1/4"=1'-0"

UNITS: B, C, F, G

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BUILDING 7

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REVISIONS / NOTES

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ENLARGED UNIT PLANS

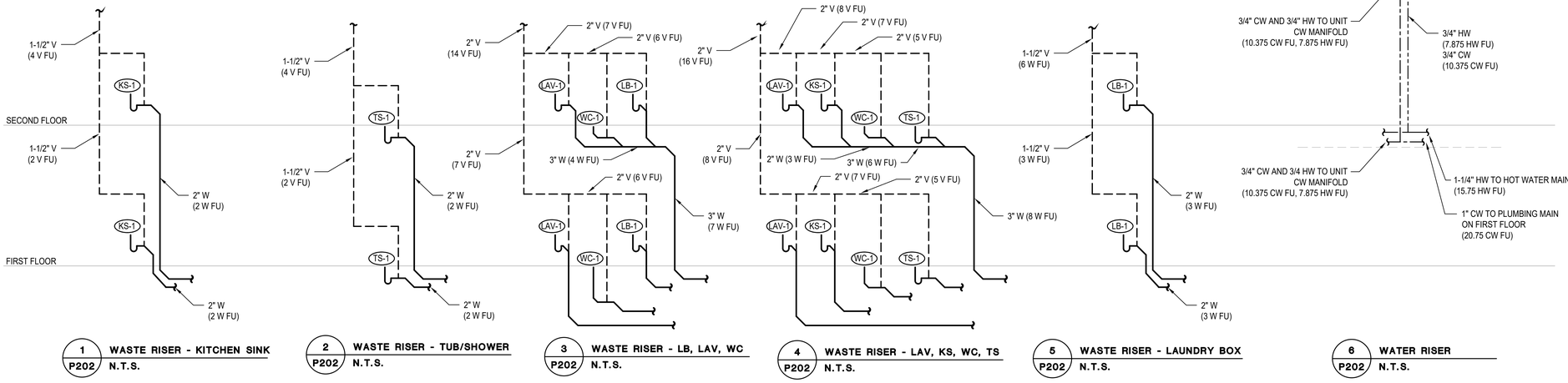
PERMIT #	BMF22-09855
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
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SHEET NO.:

P7-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - KITCHEN SINK** N.T.S.

2 P202 **WASTE RISER - TUB/SHOWER** N.T.S.

3 P202 **WASTE RISER - LB, LAV, WC** N.T.S.

4 P202 **WASTE RISER - LAV, KS, WC, TS** N.T.S.

5 P202 **WASTE RISER - LAUNDRY BOX** N.T.S.

6 P202 **WATER RISER** N.T.S.

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

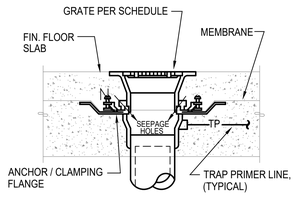
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RISERS

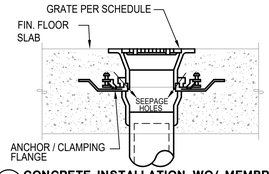
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DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

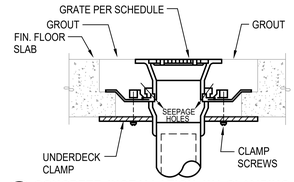
P7-202



A **CONCRETE INSTALLATION W/ MEMBRANE**

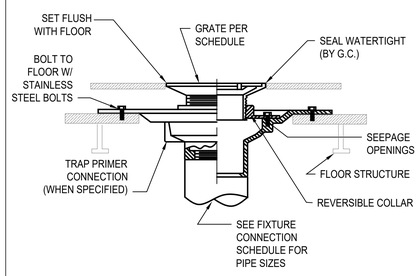


B **CONCRETE INSTALLATION WO/ MEMBRANE**



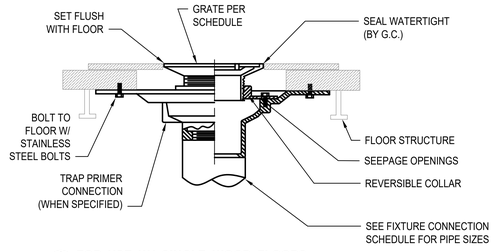
C **CONCRETE INSTALLATION W/ CLAMPING RING**

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



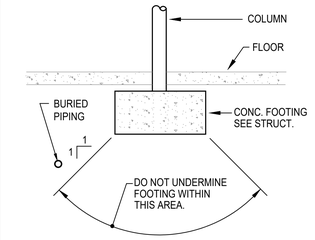
D **FOR USE W/ DOUBLE WOOD FLOORS**

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

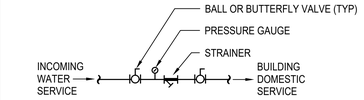


E **FOR USE W/ SINGLE WOOD FLOORS**

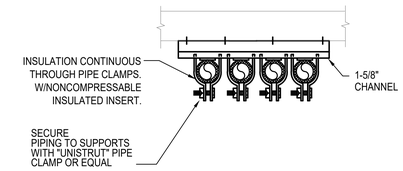
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



2 P301 BURIED PIPING DETAIL
N.T.S.

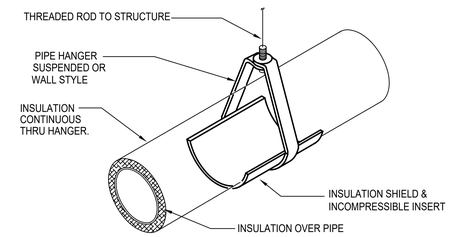


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

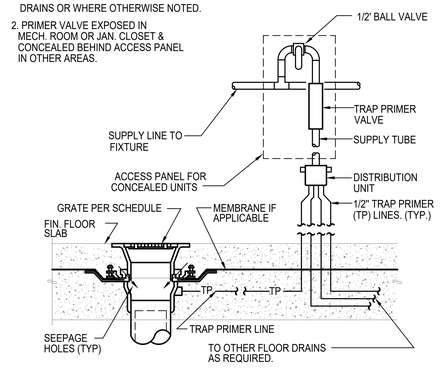
3 P301 PIPE SUPPORT
N.T.S.



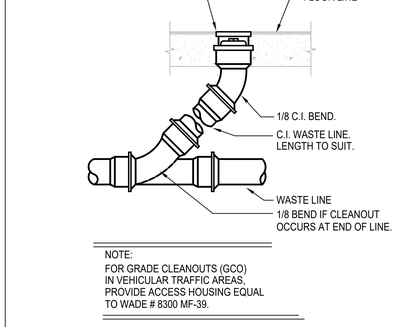
NOTE:
INSULATE & LABEL PIPING PER. SPEC.

5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.

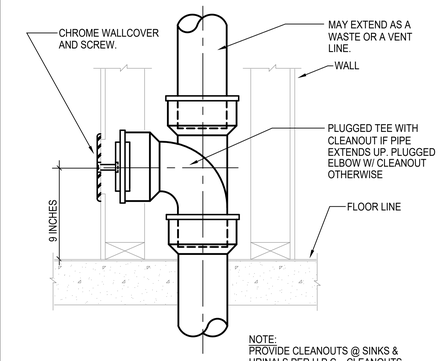


6 P301 TRAP PRIMER DETAIL
N.T.S.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

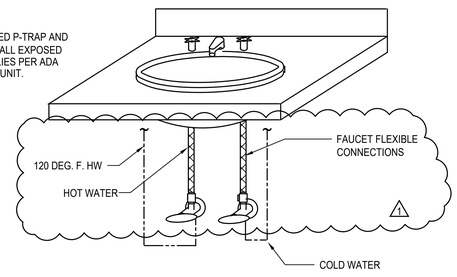
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



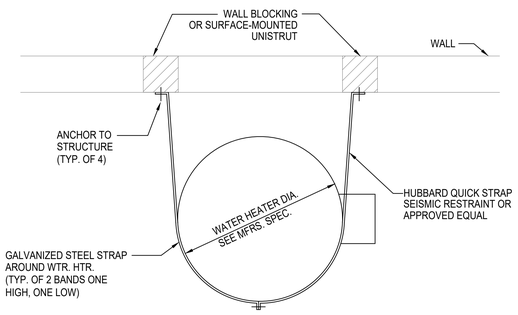
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

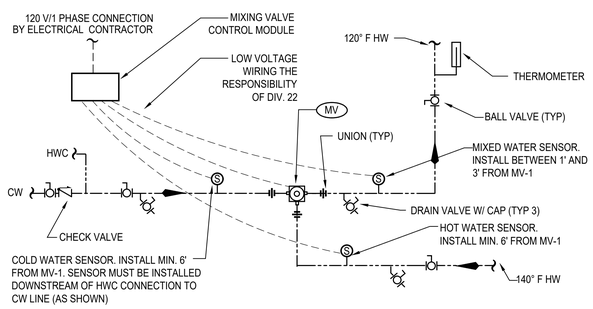
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



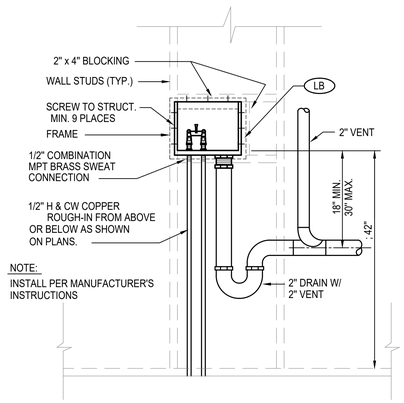
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



NOTE:
INSTALL PER MANUFACTURER'S INSTRUCTIONS

12 P301 LAUNDRY BOX DETAIL
N.T.S.

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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13402 NE 133rd St.,
Kirkland, WA 98034

BUILDING 7

BID SET

DIANE AMBER TOMLINSON — STATE OF WASHINGTON — 22870 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

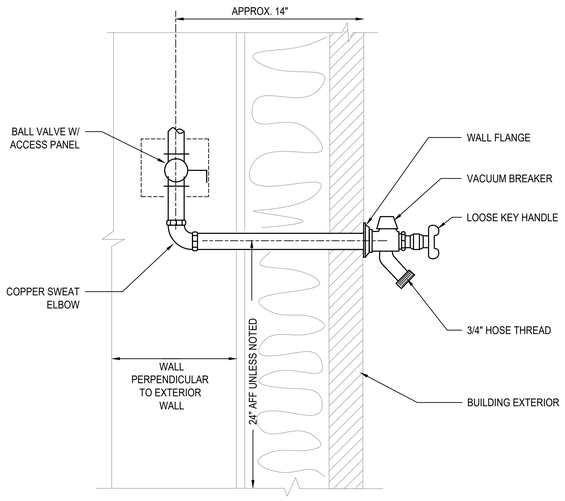
DETAILS

PERMIT #	BMF22-09855
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

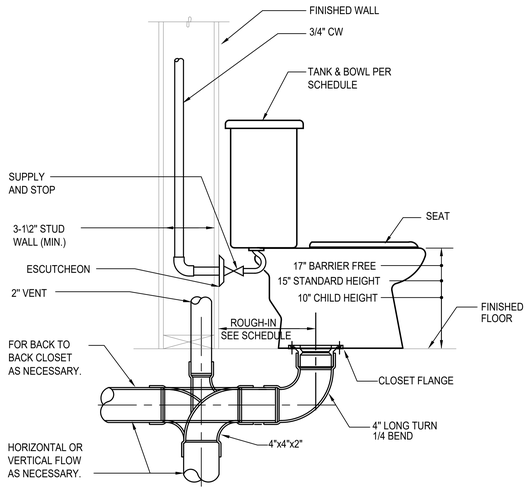
SHEET NO.:

P7-301

10/7/2021 7:33:34 AM



1 P302 FREEZE PROOF HOSE BIBB DETAIL
N.T.S.



2 P302 TANK WATER CLOSET DETAIL
N.T.S.

3 P302 NOT USED
N.T.S.

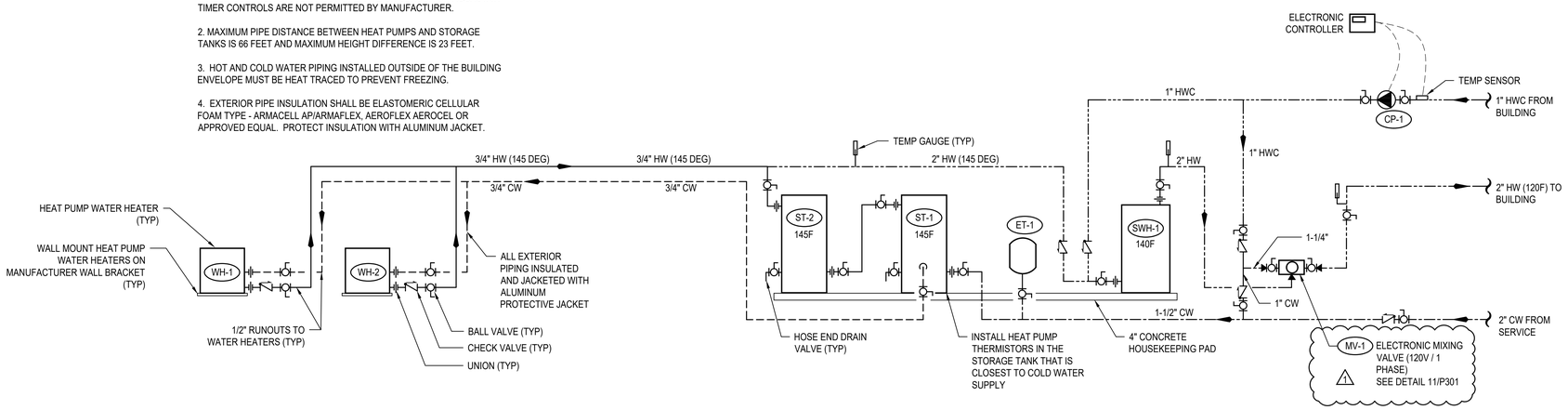
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL
N.T.S.

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DANA AMBER COLLINS STATE OF WASHINGTON 25041009 REGISTERED PROFESSIONAL ENGINEER
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REVISIONS / NOTES

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DPD STAMP

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DETAILS

PERMIT #	BMF22-09855
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P7-302

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
2. SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 17 GA. BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
3. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
4. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
5. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
6. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
7. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
8. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
9. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
10. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
11. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
12. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
13. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
14. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
15. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 9

BID SET

DAVID LAMBER COLBURN — STATE OF WASHINGTON — 5041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09856
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P9-001

GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA, **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA, **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.
HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ1	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-70VC	16" DIAMETER X 45" HIGH, FAB, STEEL, MAX 150 PSI, 3/4" NPT CONNECTION SIZE. (1)
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (COLD WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1	HEAT PUMP WATER HEATER	SANCO2: GS4-45HPC-D	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE, UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET. (1)
ST-1	DOMESTIC STORAGE TANK	SANCO2: SAN-119GLBK	119 GALLON STORAGE TANK. 1500 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	(1) 1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

kWh

***Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements**

PLUMBING FIXTURE CONNECTION SCHEDULE

		PIPE SIZE				WATER FIXTURE	WASTE FIXTURE	
MARK	FIXTURE	C.W.	H.W.	WASTE	VENT	UNITS	UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

(1)

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE		FIXTURE UNITS PER APPENDIX A					
		DOMESTIC WATER WSFU				SEWER DFU	
FIXTURE	QTY	PER FIXTURE	TOTAL	HW PER FIXTURE	TOTAL	PER FIXTURE	TOTAL
Private Tank Water Closet	8	2.5	20	-	-	3	24
Lavatory (Public or Private)	8	1	8	0.75	6	1	8
Bathtub or Combo Bath/Shwr	4	4	16	3	12	2	8
Kitchen Sink	4	1.5	6	1.125	4.50	2	8
Clothes Washer	4	4	16	3	12	3	12
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**32**		**69.5**		**34.50**		**64**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 33 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 1.5".
BUILDING WATER METER SIZE = 1"
TOTAL BUILDING WASTE FIXTURE UNITS IS 64. BUILDING SERVICE SIZE = (1X) 4".

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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13405 NE 133rd St.,
Kirkland, WA 98034

BUILDING 9

BID SET

DIANE M. AMBER FOLEY — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

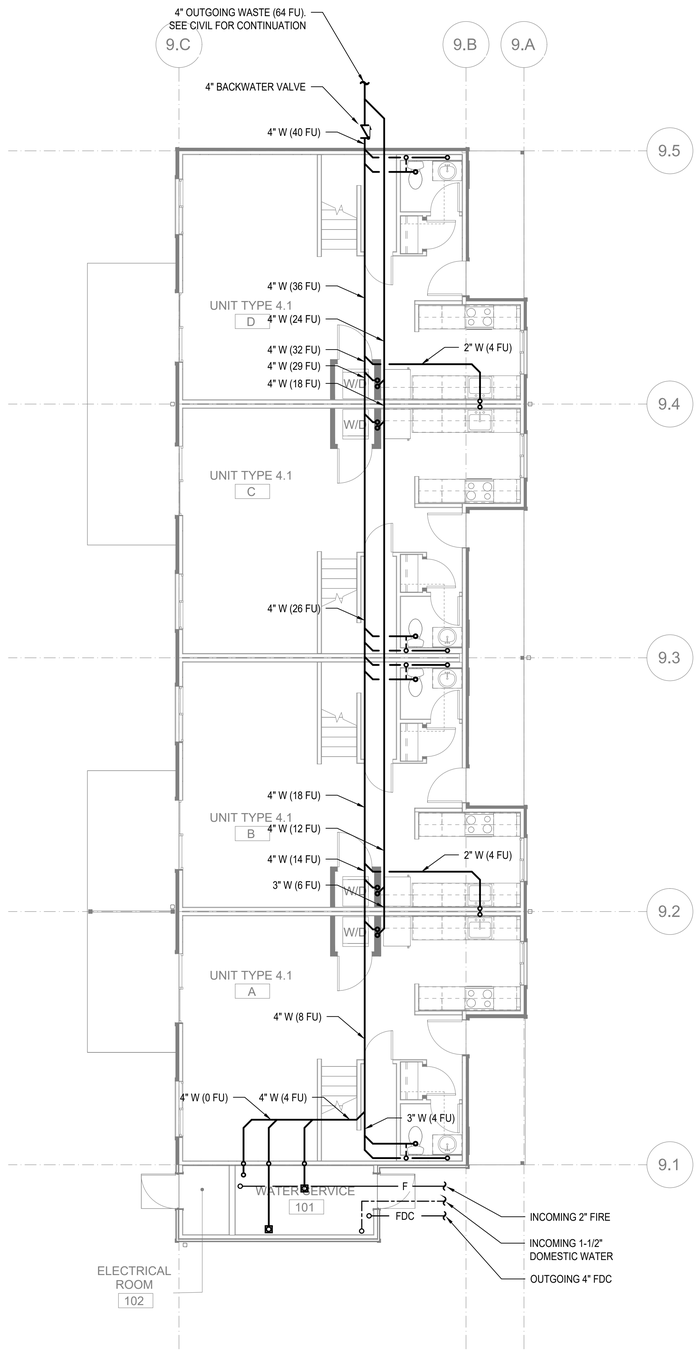
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NOTES AND SCHEDULES

PERMIT #	BMF22-09856
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P9-002

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 9 - FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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BUILDING 9

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
20041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

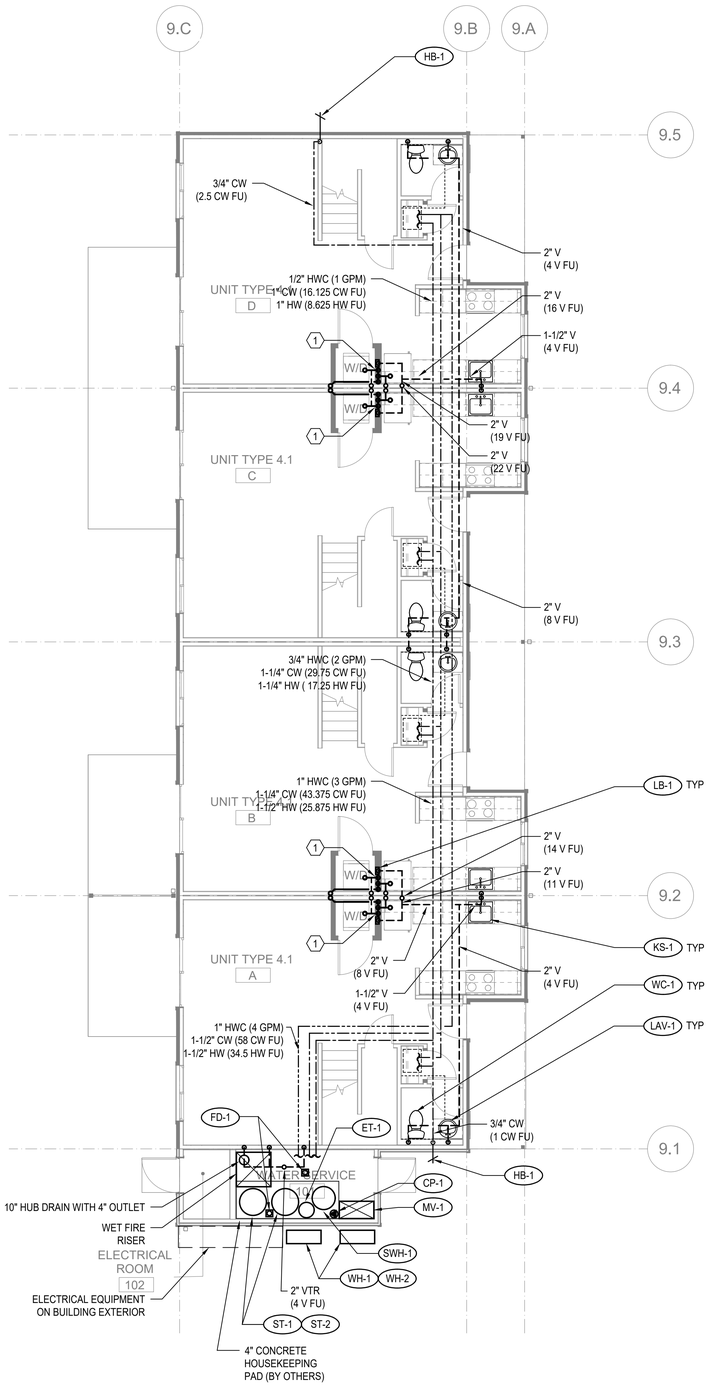
PLAN - FOUNDATION

PERMIT #	BMF22-09856
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P9-100

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FLOOR PLAN - BUILDING 9 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P-202 FOR WASTE AND VENT PIPE SIZING.

GENERAL NOTES:

1. PROVIDE HOT WATER, WASTE, AND AIR GAP CONNECTIONS FOR DISHWASHERS. (1)

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 9

BID SET

DANA AMBER COLBURN
STATE OF WASHINGTON
22041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

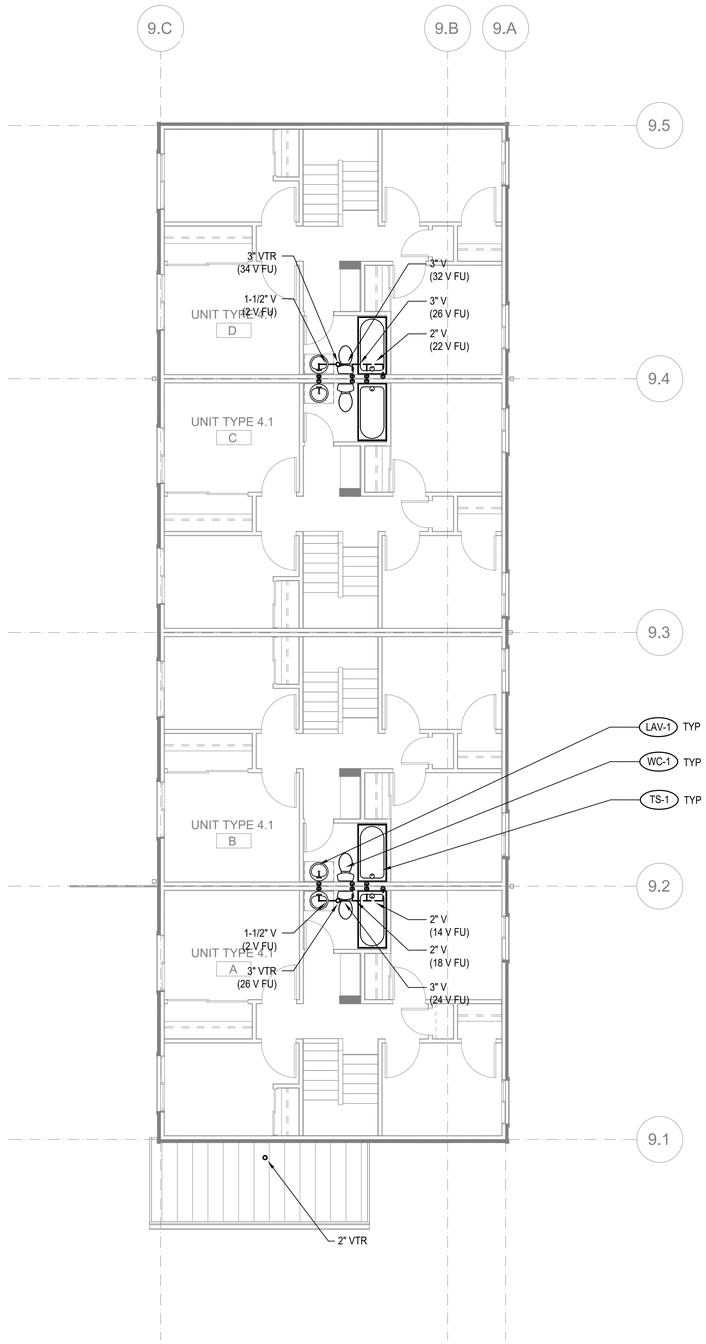
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PLAN - LEVEL 1

PERMIT #	BMF22-09856
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P9-101

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FLOOR PLAN - BUILDING 9 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 9

BID SET

DANA AMBER JOHNSON
STATE OF WASHINGTON
22041009
REGISTERED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

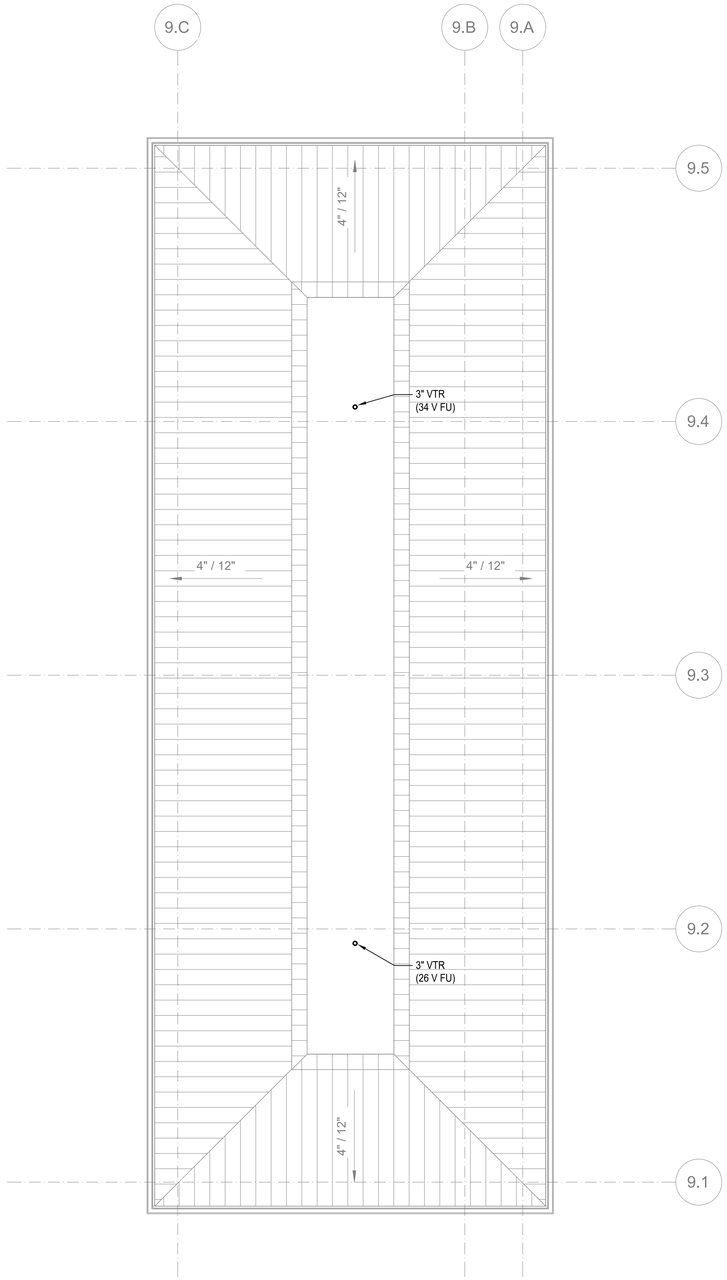
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PLAN - LEVEL 2

PERMIT #	BMF22-09856
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P9-102

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FLOOR PLAN - BUILDING 9 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES.

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KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 9

BID SET

DANA AMBER FORDYCE — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

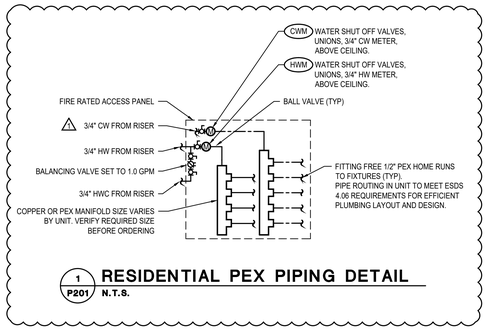
PLAN - ROOF

PERMIT #	BMF22-09856
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ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P9-103

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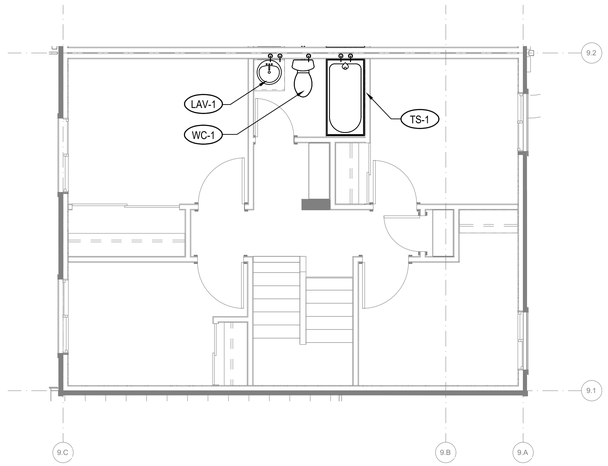


1 P201 **RESIDENTIAL PEX PIPING DETAIL**
N.T.S.

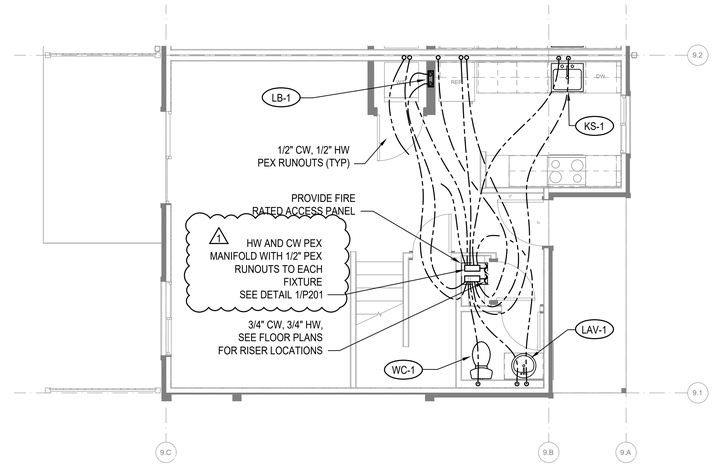
GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

FLAG NOTES (X):



2 P201 **ENLARGED PLAN - TH - LEVEL 2**
1/4"=1'-0"



1 P201 **ENLARGED PLAN - TH - LEVEL 1**
1/4"=1'-0"

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 9

BID SET

DANA AMBER COLBURN — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

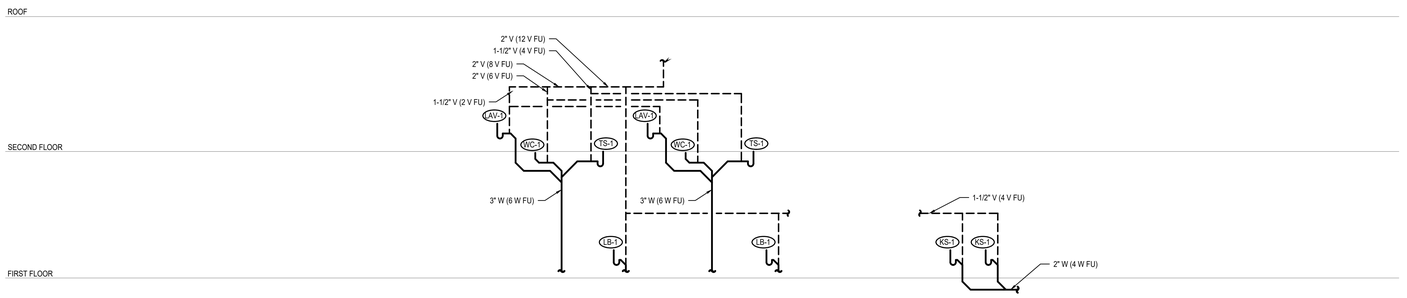
ENLARGED UNIT PLANS

PERMIT #	BMF22-09856
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P9-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - LB, LAV, WC, TS**
N.T.S.

1 P202 **WASTE RISER - KS**
N.T.S.

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 9

BID SET

DANA AMBER CAMERON
STATE OF WASHINGTON
5041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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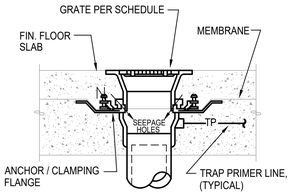
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RISERS

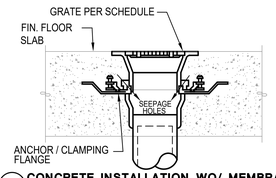
PERMIT #	BMF22-09856
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P9-202

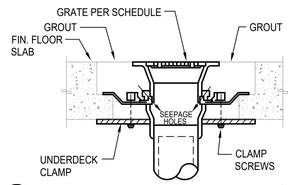
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A CONCRETE INSTALLATION W/ MEMBRANE

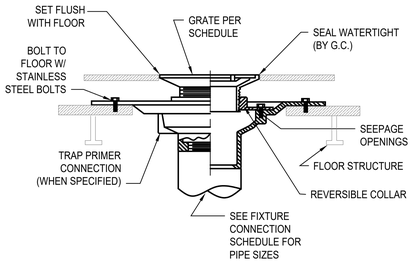


B CONCRETE INSTALLATION WO/ MEMBRANE



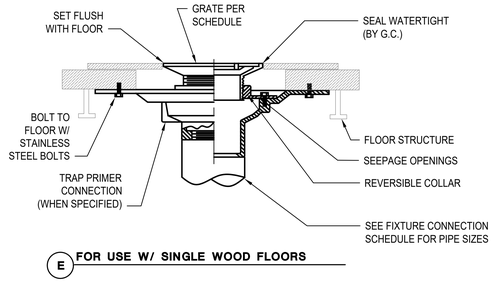
C CONCRETE INSTALLATION W/ CLAMPING RING

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



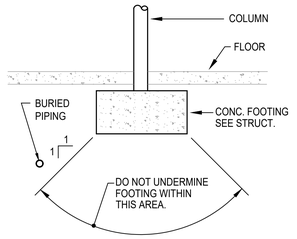
D FOR USE W/ DOUBLE WOOD FLOORS

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

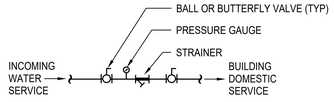


E FOR USE W/ SINGLE WOOD FLOORS

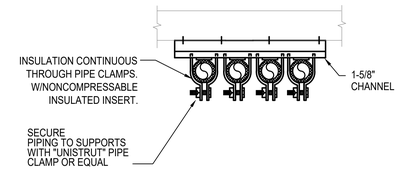
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



2 P301 BURIED PIPING DETAIL
N.T.S.

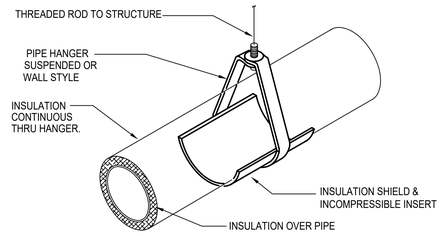


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

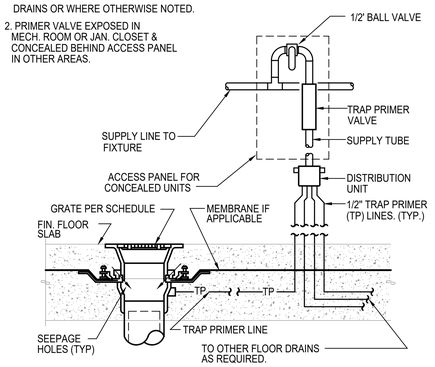
3 P301 PIPE SUPPORT
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

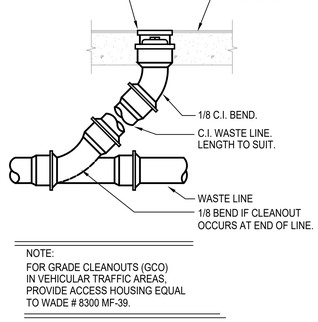
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



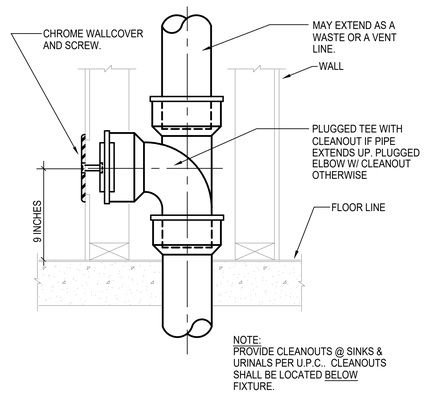
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

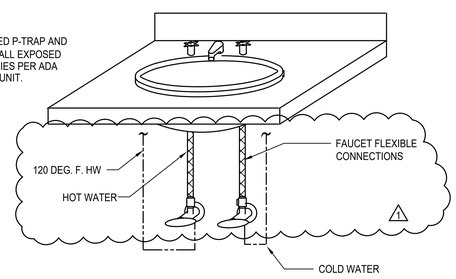
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



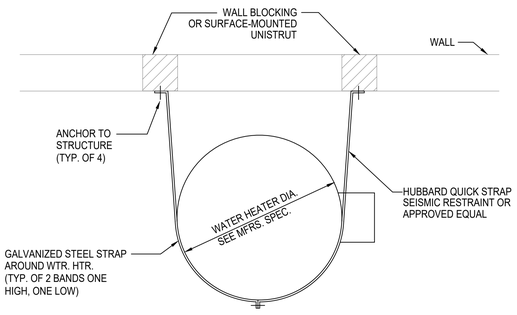
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

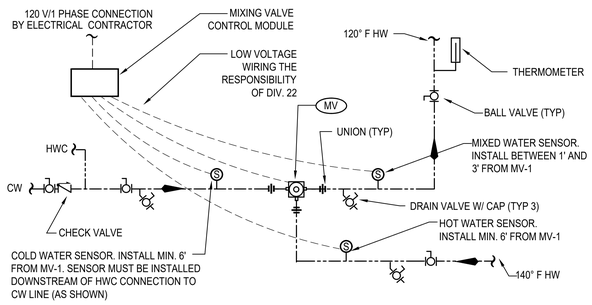
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



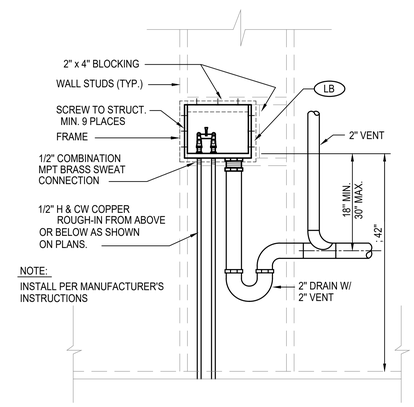
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



12 P301 LAUNDRY BOX DETAIL
N.T.S.

10/7/2021 7:33:34 AM

SIDER + BYERS
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Phone: 206.285.2966

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Seattle, WA 98104

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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13405 NE 133rd St.,
Kirkland, WA 98034

BUILDING 9

BID SET

DANA AMBER FORSMAN — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

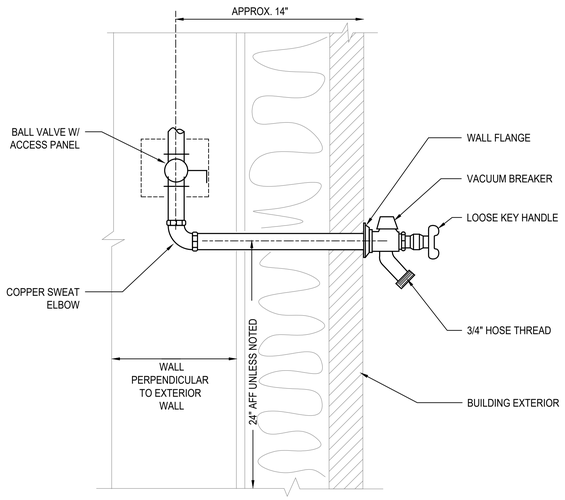
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1	5.19.23	BID ADDENDUM 2

DPD STAMP

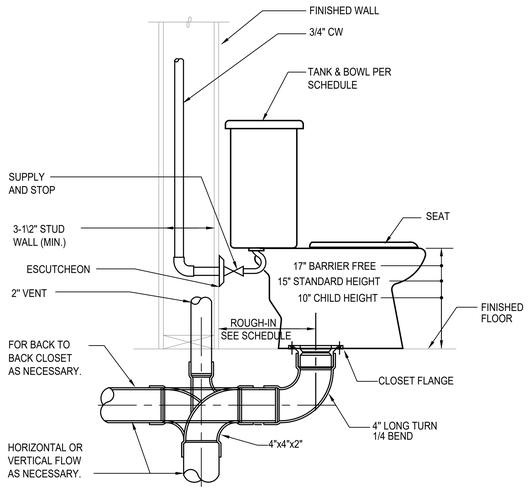
TITLE

DETAILS

PERMIT #	BMF22-09856
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P9-301



1 P302 **FREEZE PROOF HOSE BIBB DETAIL**
N.T.S.



2 P302 **TANK WATER CLOSET DETAIL**
N.T.S.

3 P302 **NOT USED**
N.T.S.

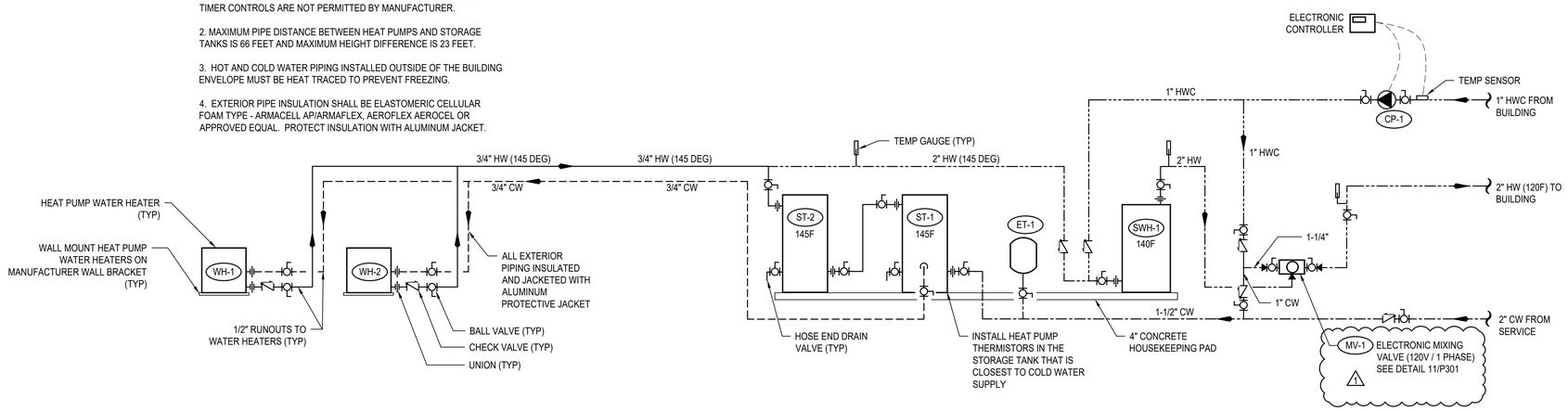
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 **HEAT PUMP WATER HEATER DETAIL**
N.T.S.

10/7/2021 7:33:34 AM

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DANA AMBER EDMONDSON STATE OF WASHINGTON 22041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

DETAILS

PERMIT #	BMF22-09856
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P9-302

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	LEVEL 3 FLOOR PLAN
P-104	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
   SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 17 GA BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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King County Housing Authority

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General Partner
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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13408 NE 133rd St.,
Kirkland, WA 98034

BUILDING 10

BID SET

DANA AMBER CHERON — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09927
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P10-001

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GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-35-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE.
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (COLD WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1 **WH-2** **WH-3**	HEAT PUMP WATER HEATER	SANCO2: GS4-45HPC-D	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE, UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET.
ST-1 **ST-2**	DOMESTIC STORAGE TANK	SANCO2: ECO-200GLBK	200 GALLON STORAGE TANK. 2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

*Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	H.W.	WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE		FIXTURE UNITS PER APPENDIX A					
		DOMESTIC WATER WSFU				SEWER DFU	
FIXTURE	QTY	PER FIXTURE	TOTAL	HW PER FIXTURE	TOTAL	PER FIXTURE	TOTAL
Private Tank Water Closet	12	2.5	30	-	-	3	36
Lavatory (Public or Private)	12	1	12	0.75	9	1	12
Bathtub or Combo Bath/Shwr	12	4	48	3	36	2	24
Kitchen Sink	12	1.5	18	1.125	13.50	2	24
Clothes Washer	12	4	48	3	36	3	36
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	64		159.5		94.50		136

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 58 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 136. BUILDING SERVICE SIZE = (1X) 4".

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CONTRACT #: TC2300131

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BUILDING 10

BID SET

DANA AMBER FORDYCE STATE OF WASHINGTON 21041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

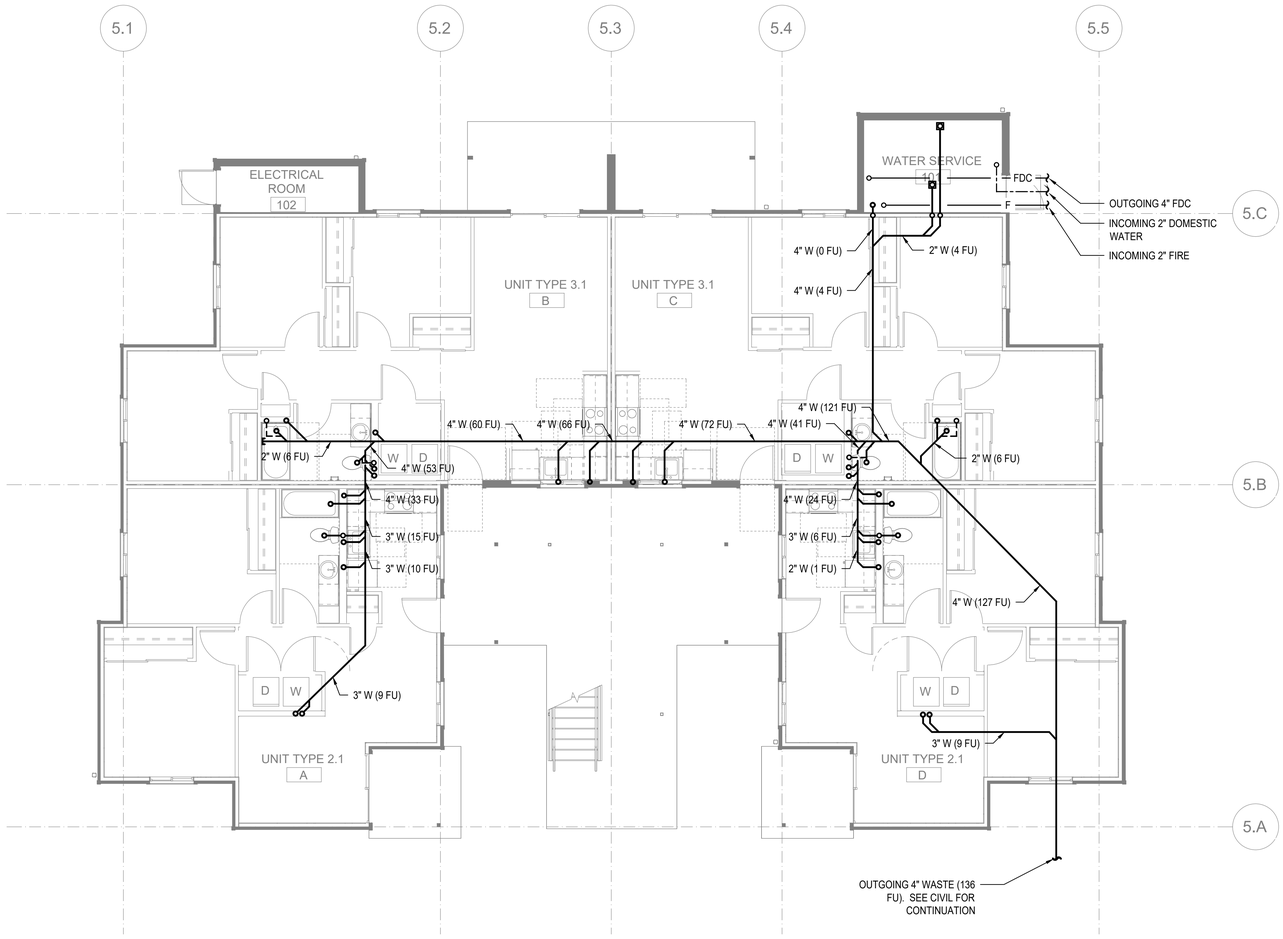
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NOTES AND SCHEDULES

PERMIT #	BMF22-09927
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P10-002

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FLOOR PLAN - BUILDING 10 FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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BUILDING 10

BID SET

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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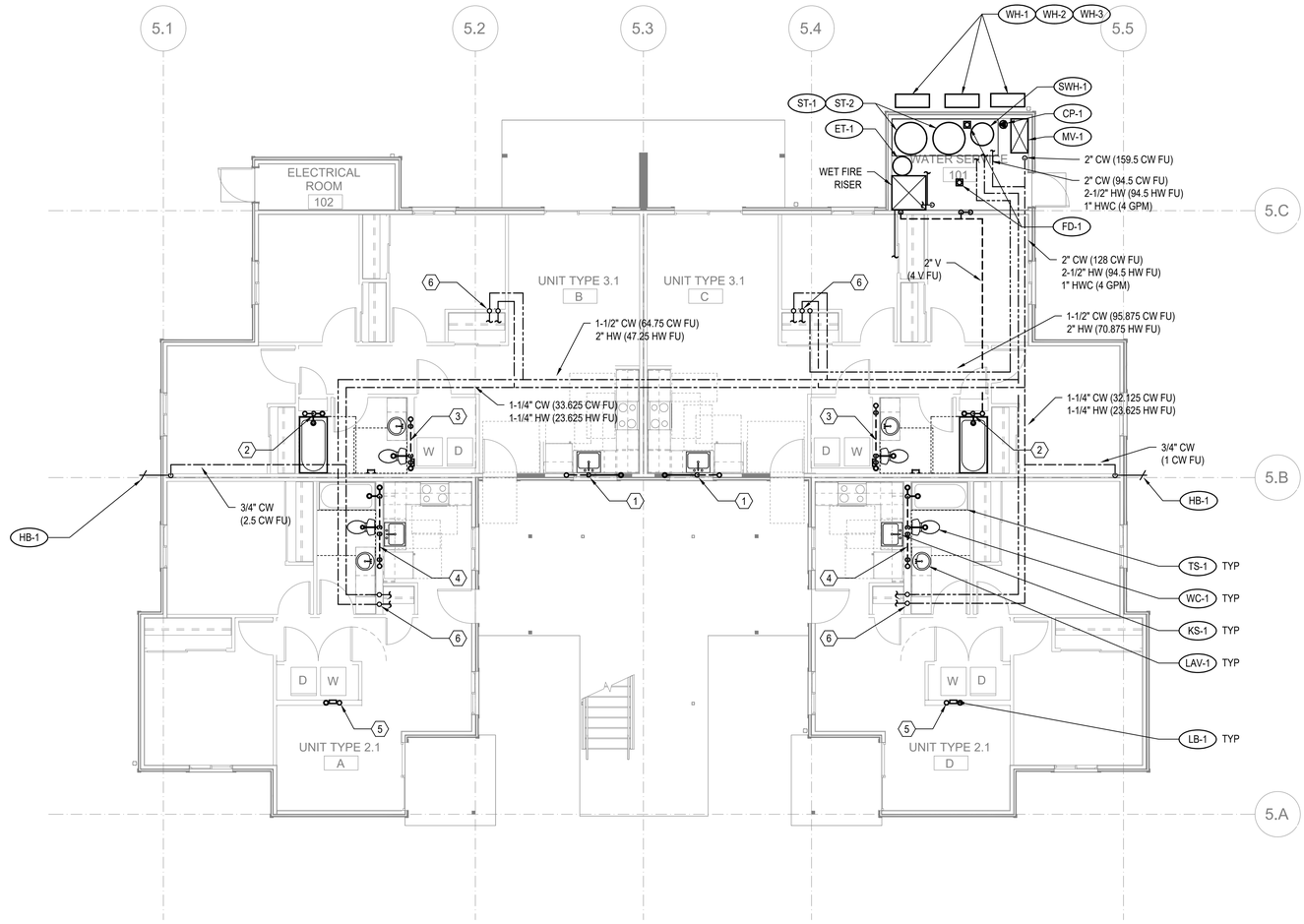
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PLAN - FOUNDATION

PERMIT #	BMF22-09927
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P10-100

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FLOOR PLAN - BUILDING 10 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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BUILDING 10

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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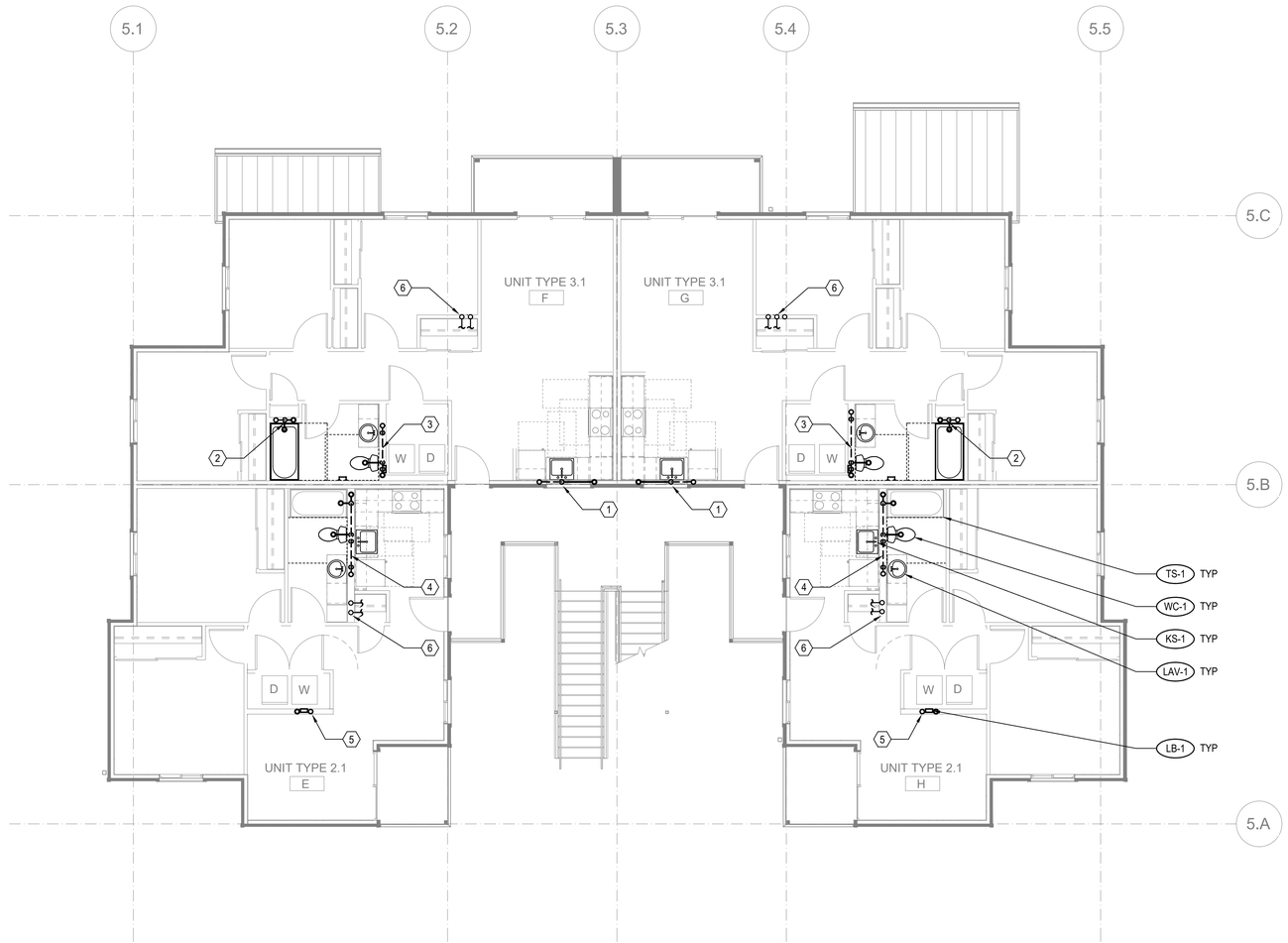
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PLAN - LEVEL 1

PERMIT #	BMF22-09927
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

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FLOOR PLAN - BUILDING 10 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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BUILDING 10

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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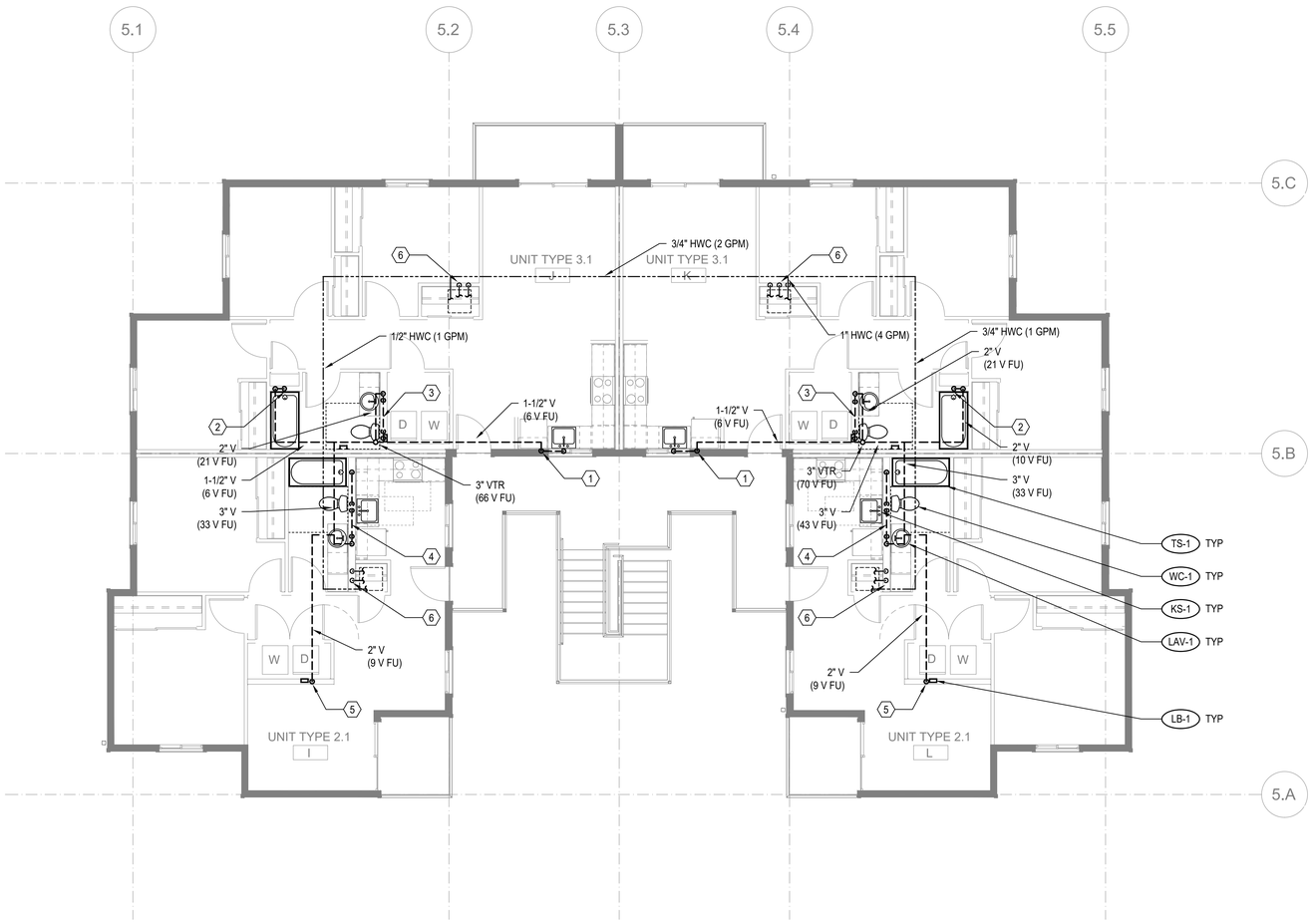
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PLAN - LEVEL 2

PERMIT #	BMF22-09927
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P10-102

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FLOOR PLAN - BUILDING 10 - LEVEL 3

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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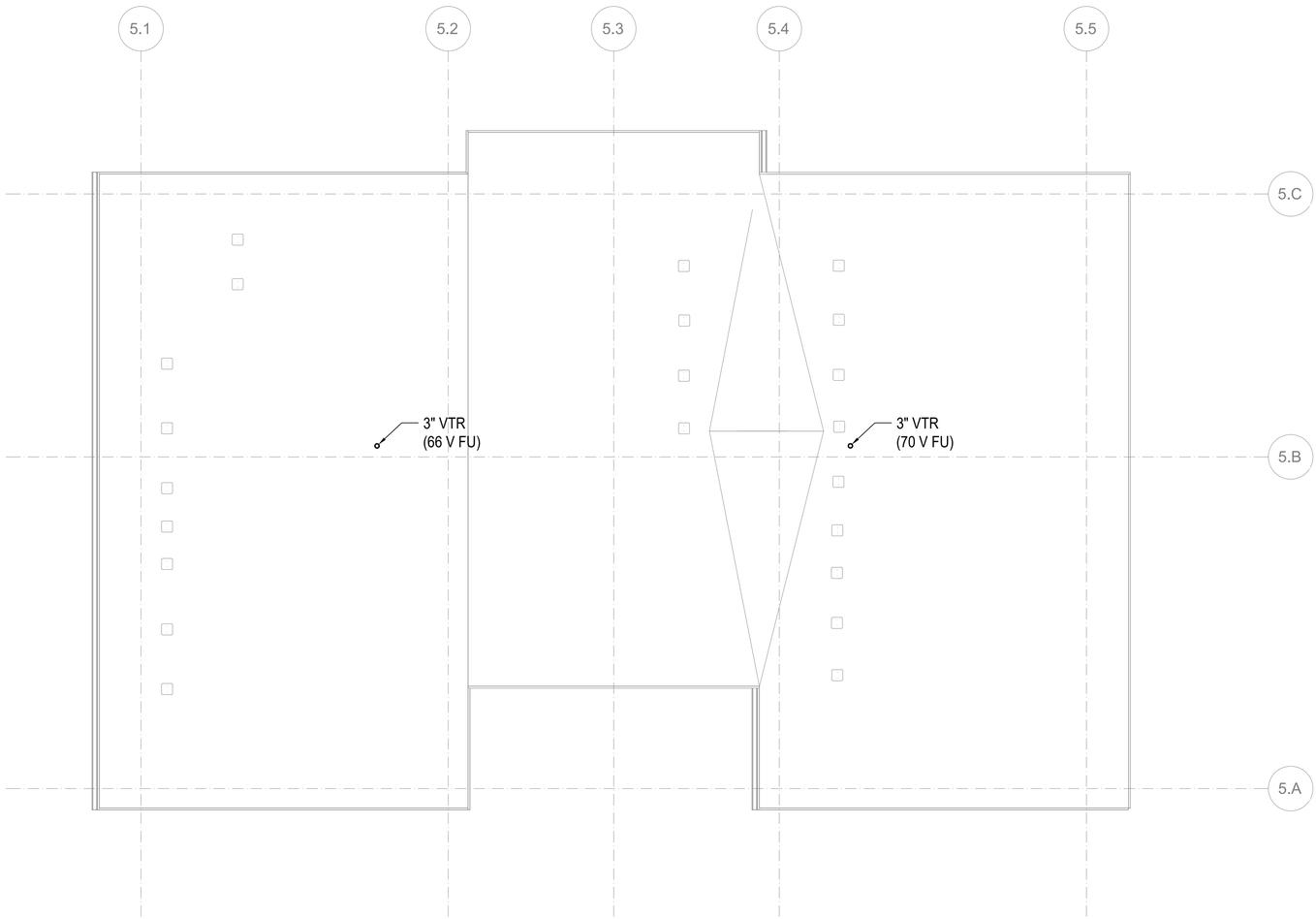
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PLAN - LEVEL 3

PERMIT #	BMF22-09927
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P10-103

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FLOOR PLAN - BUILDING 10 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

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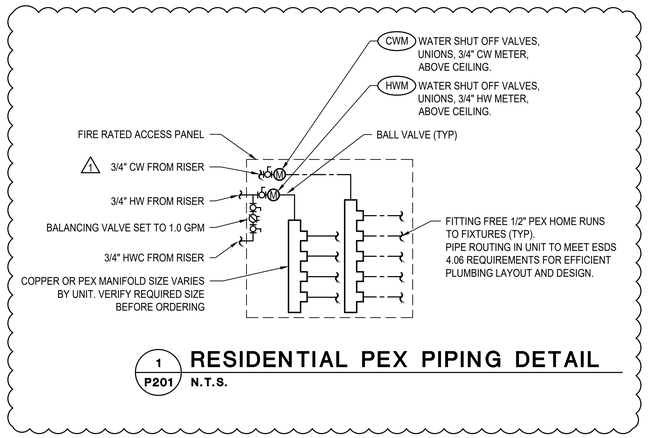
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PLAN - ROOF

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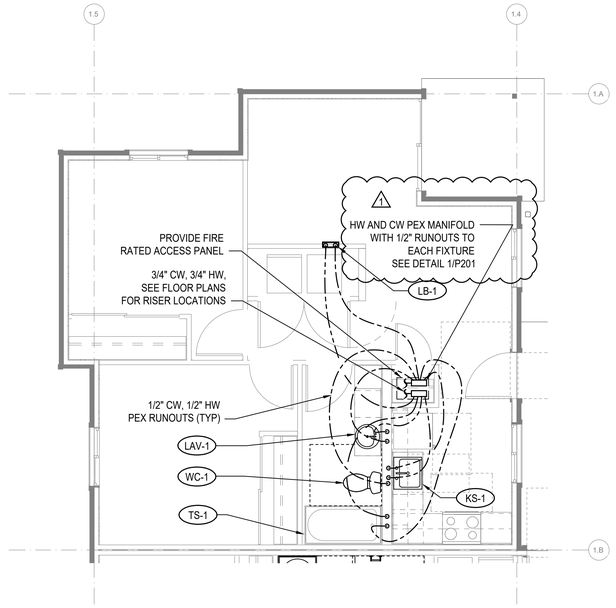
1 P201 **RESIDENTIAL PEX PIPING DETAIL**

N.T.S.

GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

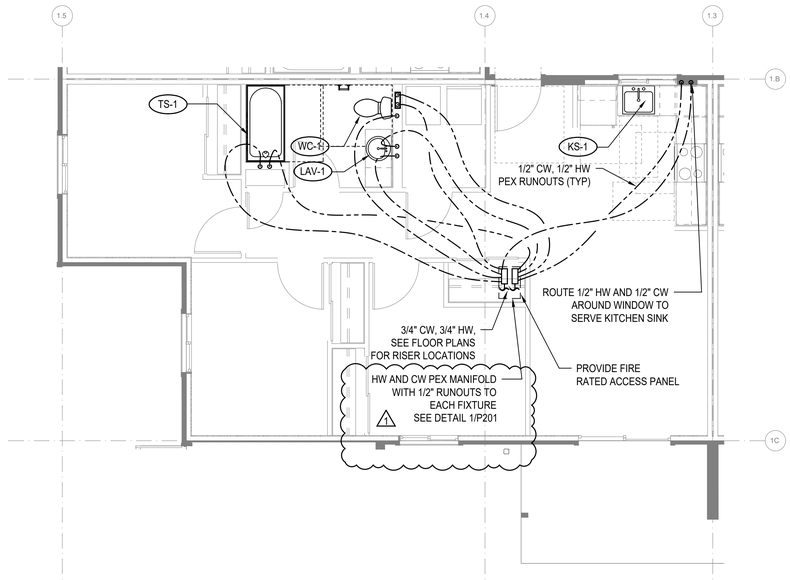
FLAG NOTES (X):



2 P201 **ENLARGED PLAN - 2-BED**

1/4"=1'-0"

UNITS: A, D, E, H, I, L



1 P201 **ENLARGED PLAN - 3-BED**

1/4"=1'-0"

UNITS: B, C, F, G, J, K

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Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13408 NE 133rd St.,
Kirkland, WA 98034

BUILDING 10

BID SET

DANA AMBER FOSTER STATE OF WASHINGTON 22041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

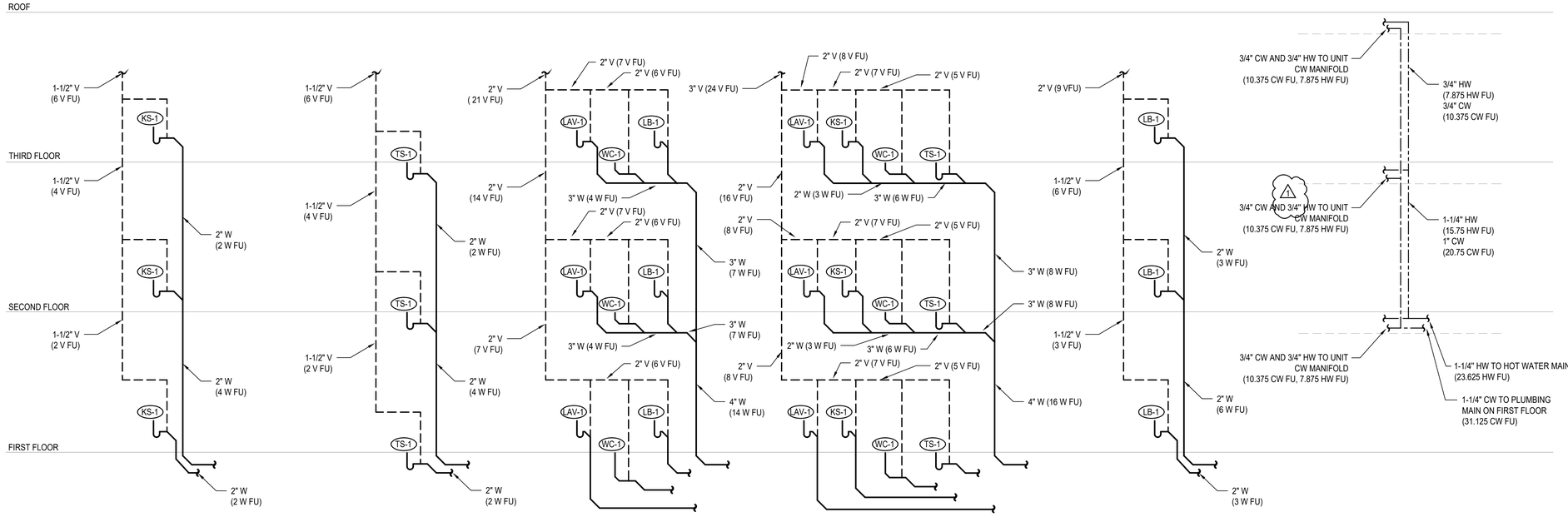
ENLARGED UNIT PLANS

PERMIT #	BMF22-09927
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P10-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - KITCHEN SINK** N.T.S.

2 P202 **WASTE RISER - TUB/SHOWER** N.T.S.

3 P202 **WASTE RISER - LB, LAV, WC** N.T.S.

4 P202 **WASTE RISER - LAV, KS, WC, TS** N.T.S.

5 P202 **WASTE RISER - LAUNDRY BOX** N.T.S.

6 P202 **WATER RISER** N.T.S.

10/7/2021 7:33:34 AM

SIDER + BYERS
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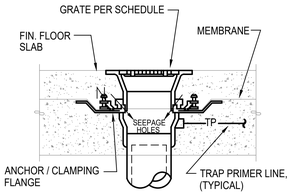
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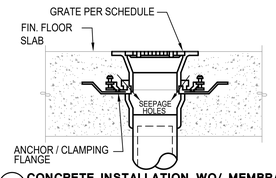
RISERS

PERMIT #	BMF22-09927
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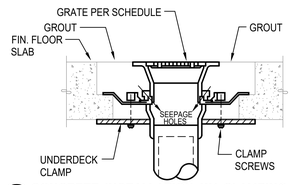
P10-202



A CONCRETE INSTALLATION W/ MEMBRANE

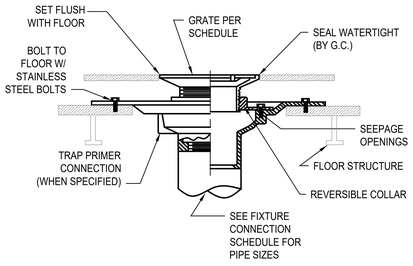


B CONCRETE INSTALLATION WO/ MEMBRANE



C CONCRETE INSTALLATION W/ CLAMPING RING

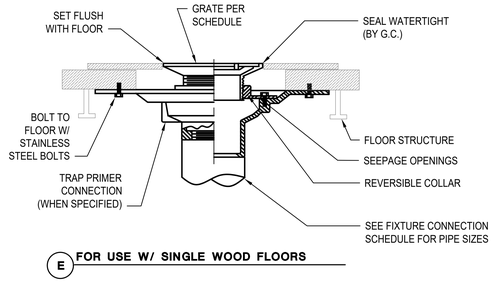
NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



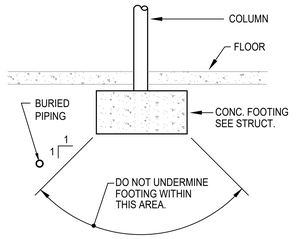
D FOR USE W/ DOUBLE WOOD FLOORS

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

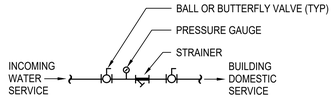
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



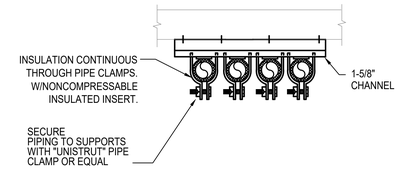
E FOR USE W/ SINGLE WOOD FLOORS



2 P301 BURIED PIPING DETAIL
N.T.S.

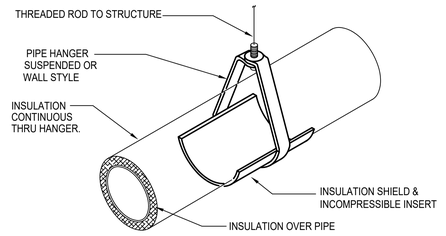


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

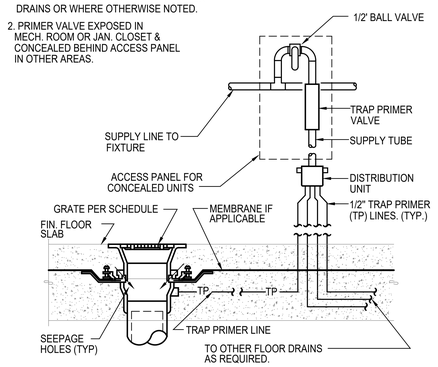
3 P301 PIPE SUPPORT
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

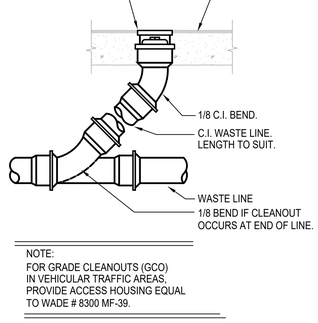
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



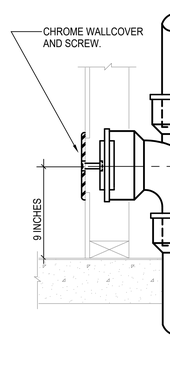
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

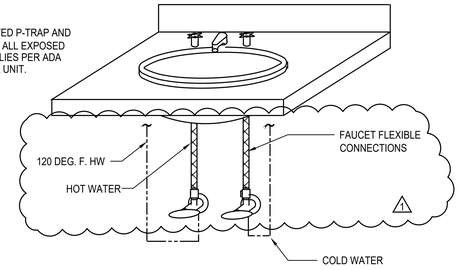
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



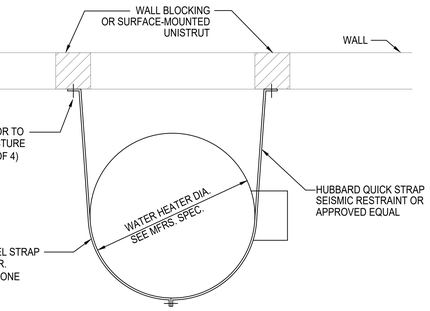
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

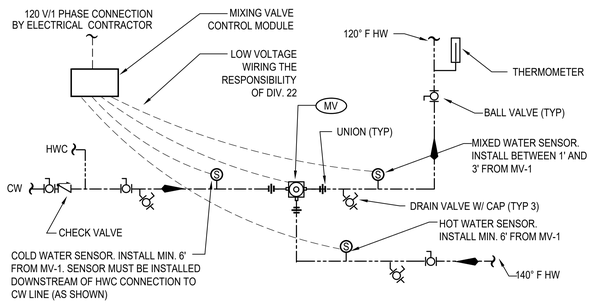
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



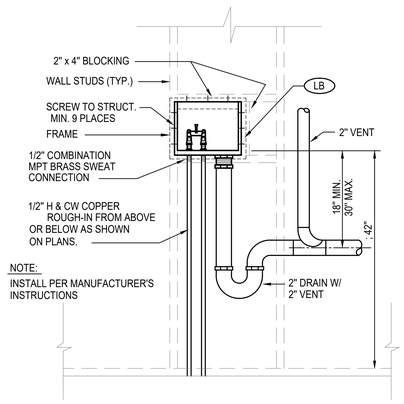
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



12 P301 LAUNDRY BOX DETAIL
N.T.S.

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DIANE AMBER FORBES — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
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REVISIONS / NOTES

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1	5.19.23	BID ADDENDUM 2

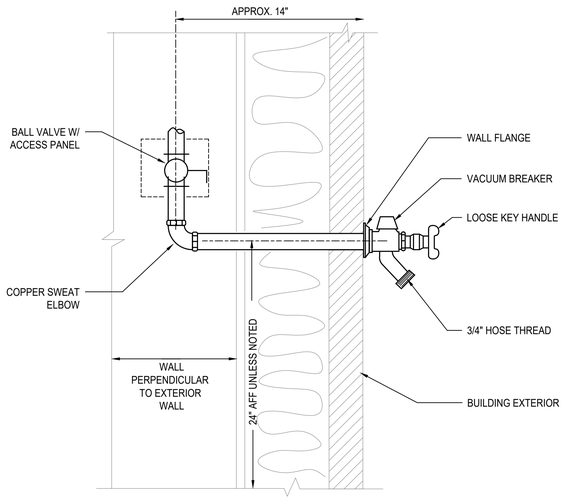
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DETAILS

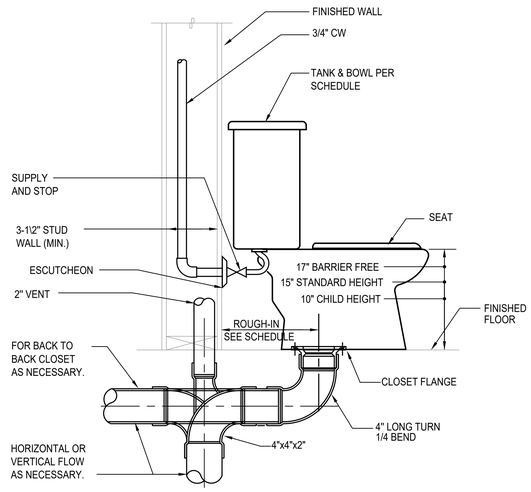
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10/7/2021 7:33:34 AM



1 P302 FREEZE PROOF HOSE BIBB DETAIL

N.T.S.



2 P302 TANK WATER CLOSET DETAIL

N.T.S.

3 P302 NOT USED

N.T.S.

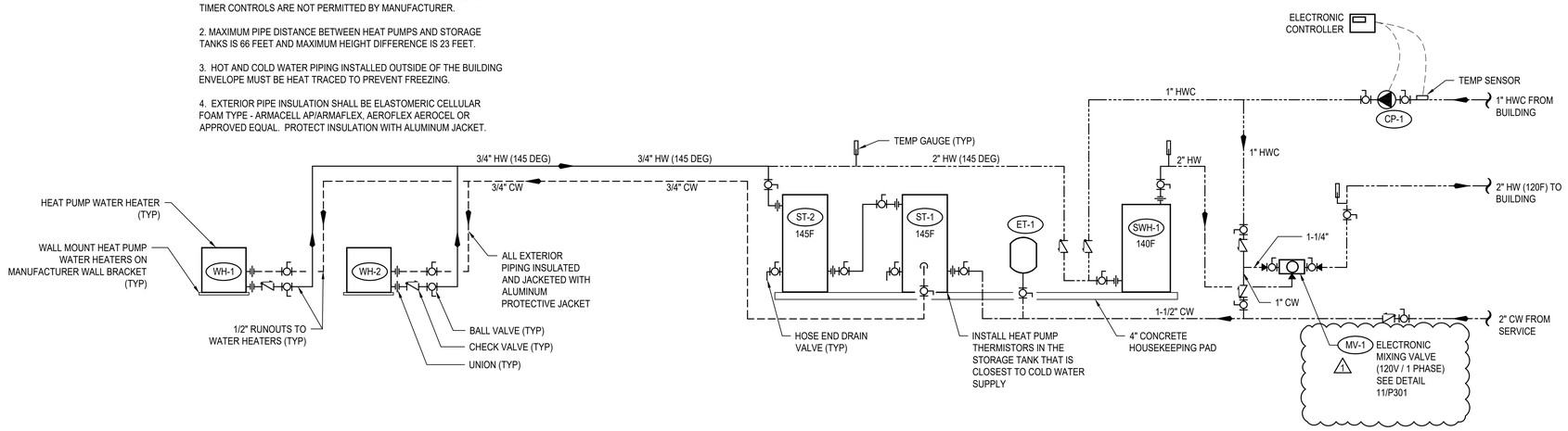
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL

N.T.S.

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P10-302

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	LEVEL 3 FLOOR PLAN
P-104	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
   SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED TUBULAR BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 11

BID SET

DANA AMBER CHERON — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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TITLE

COVER SHEET

PERMIT #	BMF22-09886
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P11-001

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GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-35-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE.
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (COLD WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1	HEAT PUMP WATER HEATER	SANCO2: GS4-45HPC-D	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE, UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
WH-2			
WH-3			
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET.
ST-1	DOMESTIC STORAGE TANK	SANCO2: ECO-200GLBK	200 GALLON STORAGE TANK.
ST-2			2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy ____ kWh	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

*Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	H.W.	WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE		FIXTURE UNITS PER APPENDIX A					
		DOMESTIC WATER WSFU				SEWER DFU	
FIXTURE	QTY	PER FIXTURE	TOTAL	HW PER FIXTURE	TOTAL	PER FIXTURE	TOTAL
Private Tank Water Closet	12	2.5	30	-	-	3	36
Lavatory (Public or Private)	12	1	12	0.75	9	1	12
Bathtub or Combo Bath/Shwr	12	4	48	3	36	2	24
Kitchen Sink	12	1.5	18	1.125	13.50	2	24
Clothes Washer	12	4	48	3	36	3	36
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	64		159.5		94.50		136

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 58 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 136. BUILDING SERVICE SIZE = (1X) 4".

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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BUILDING 11

BID SET

DANA AMBER FORDYCE — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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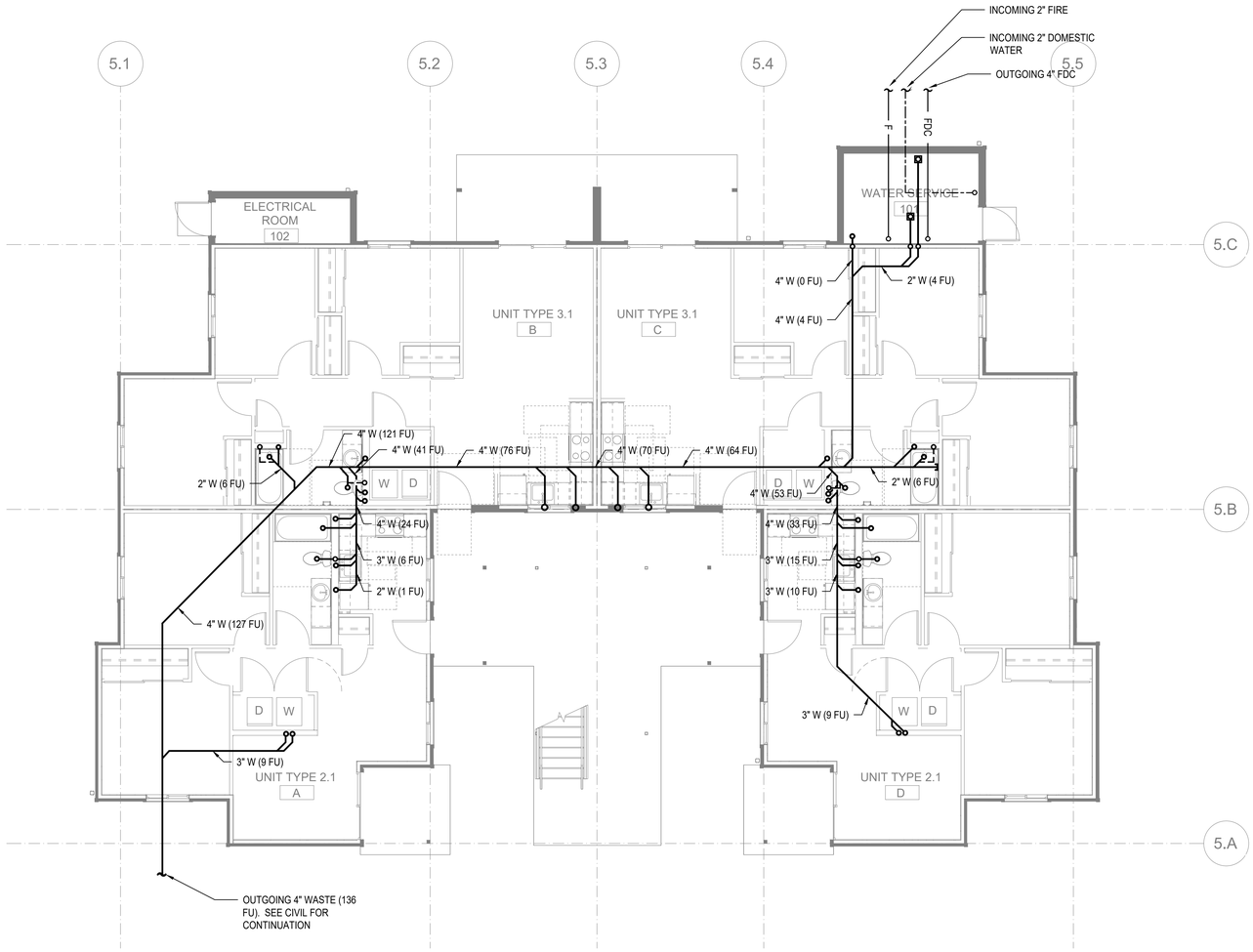
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NOTES AND SCHEDULES

PERMIT #	BMF22-09886
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P11-002

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FLOOR PLAN - BUILDING 11 FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
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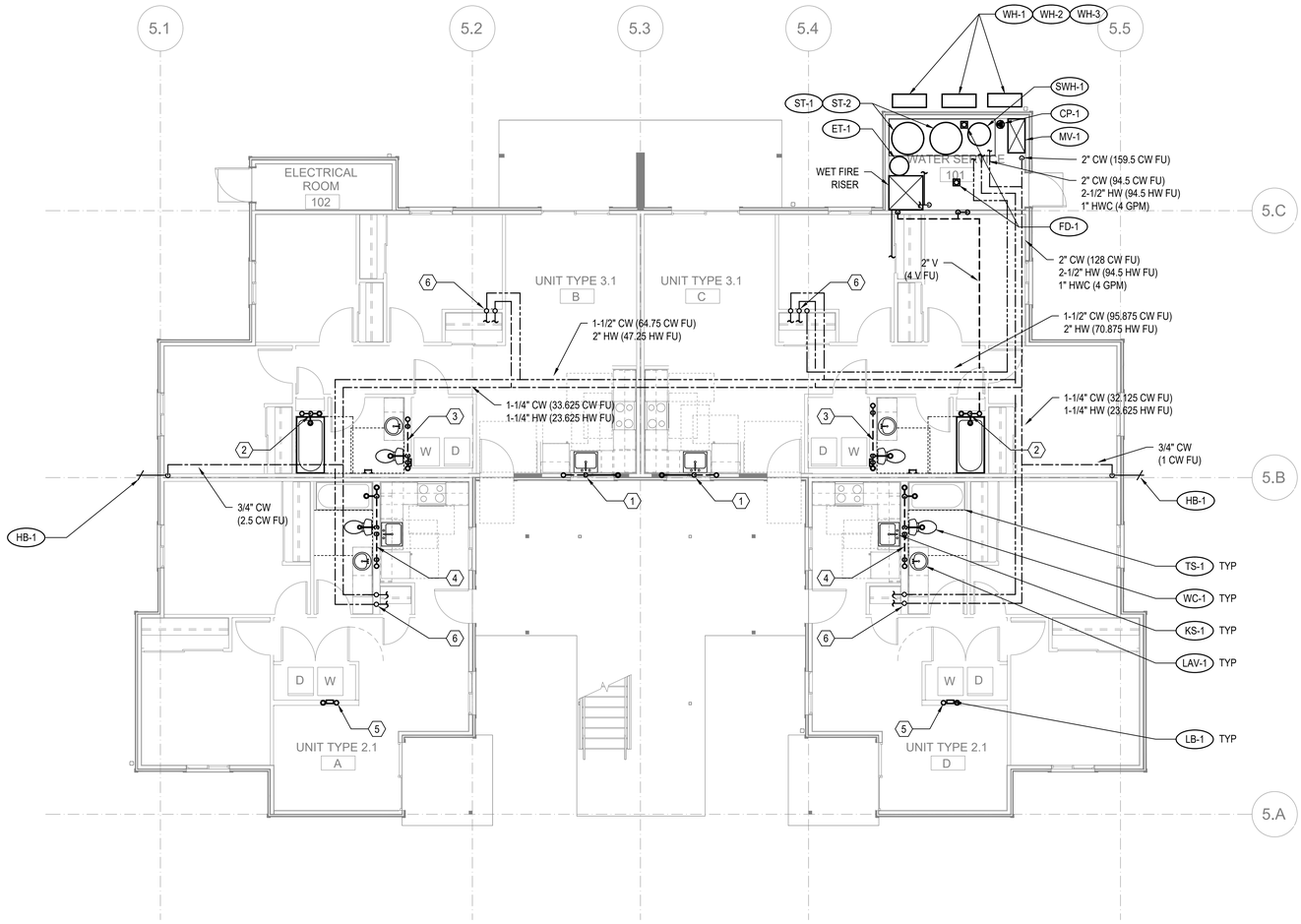
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PLAN - FOUNDATION

PERMIT #	BMF22-09886
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P11-100

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FLOOR PLAN - BUILDING 11 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
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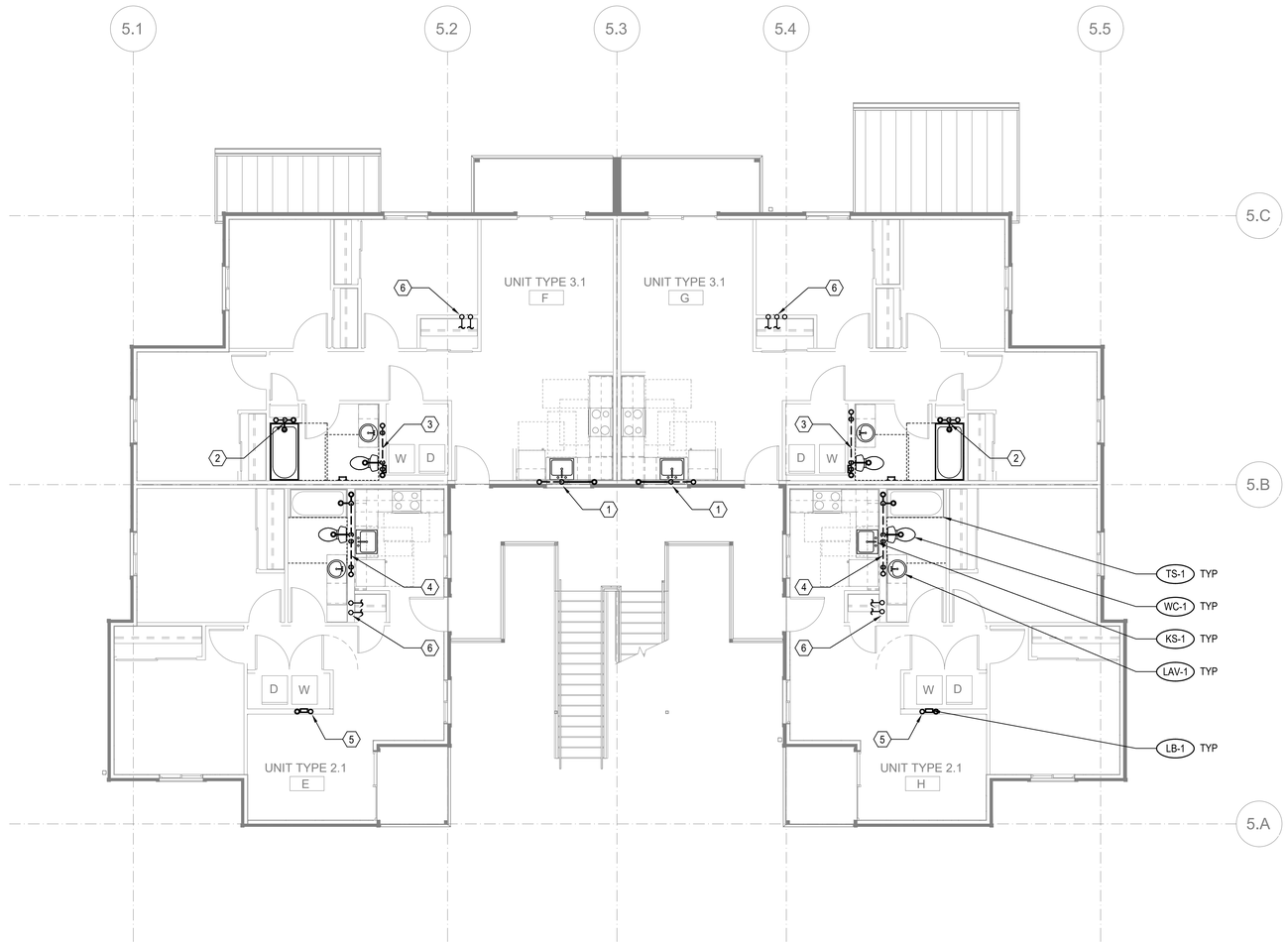
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TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09886
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P11-101



FLOOR PLAN - BUILDING 11 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13422 NE 133rd St.,
Kirkland, WA 98034

BUILDING 11

BID SET

DANA AMBER COLLINSON
STATE OF WASHINGTON
22041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

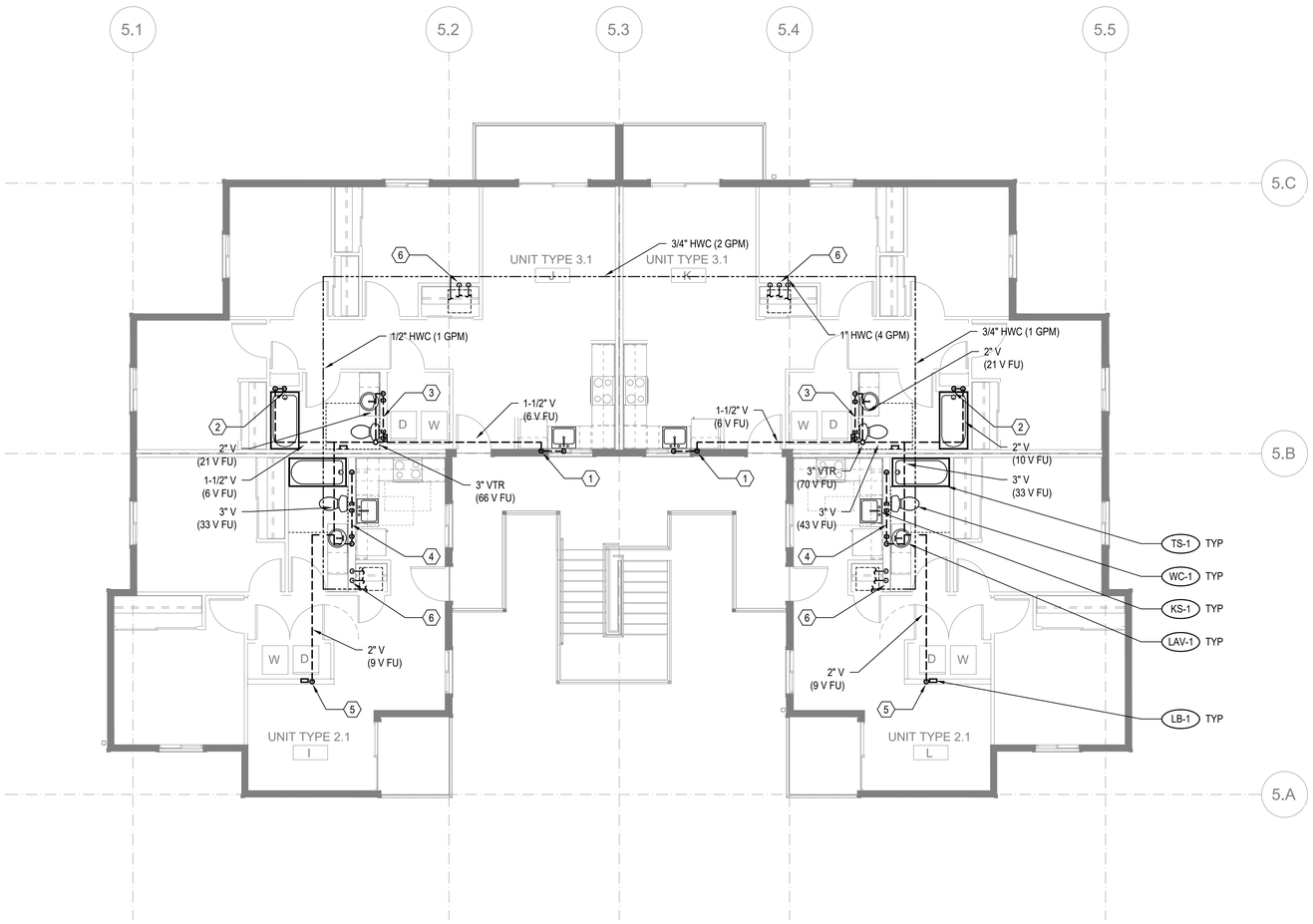
TITLE

PLAN - LEVEL 2

PERMIT #	BMF22-09886
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P11-102

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 11 - LEVEL 3

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
192 Nickerson, Suite #300
Seattle, Washington 98109
Phone: 206.285.2966

SMR Architects
117 S. Main St., Suite 400
Seattle, WA 98104

PH: 206.623.1104
FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 11

BID SET

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

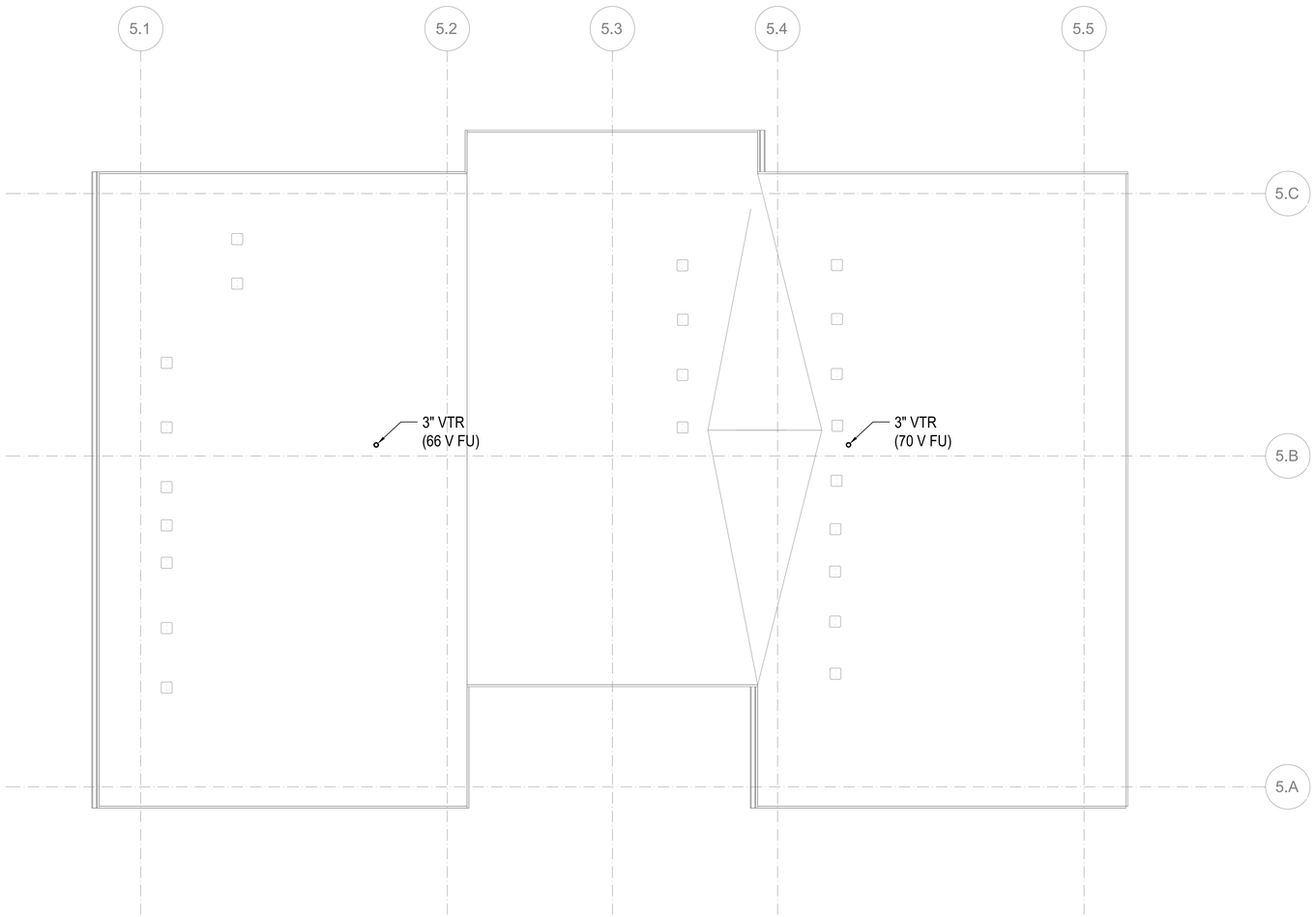
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PLAN - LEVEL 3

PERMIT #	BMF22-09886
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P11-103

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 11 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

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20041009
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REVISIONS / NOTES

NO	DATE	DESCRIPTION
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DPD STAMP

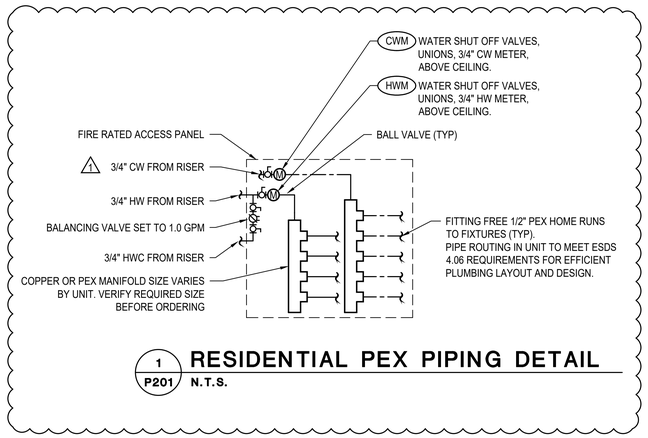
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PLAN - ROOF

PERMIT #	BMF22-09886
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P11-104

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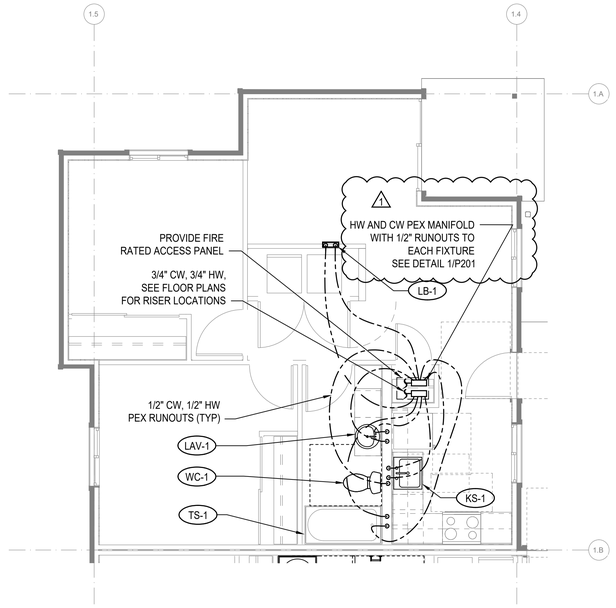
1 P201 **RESIDENTIAL PEX PIPING DETAIL**

N.T.S.

GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

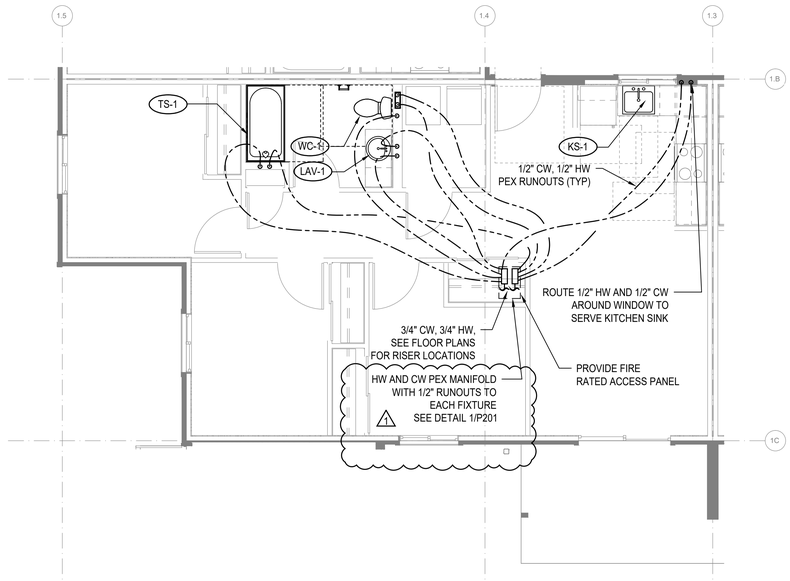
FLAG NOTES (X):



2 P201 **ENLARGED PLAN - 2-BED**

1/4"=1'-0"

UNITS: A, D, E, H, I, L



1 P201 **ENLARGED PLAN - 3-BED**

1/4"=1'-0"

UNITS: B, C, F, G, J, K

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DANA AMBER FOSTER STATE OF WASHINGTON 22041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
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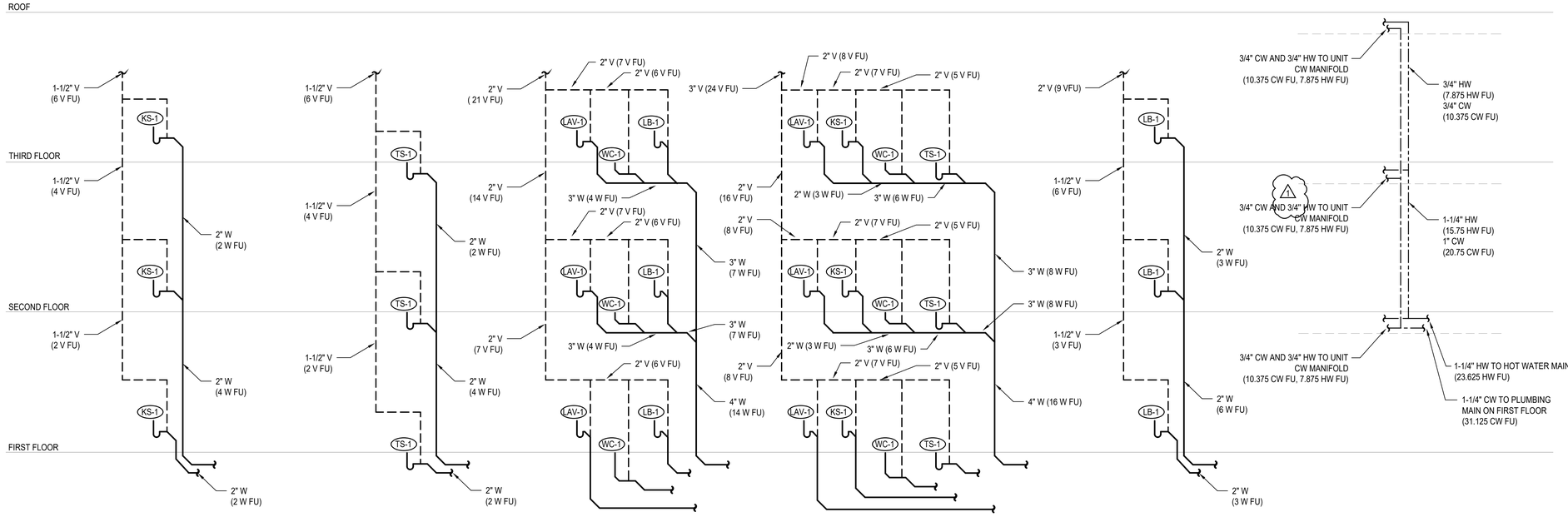
ENLARGED UNIT PLANS

PERMIT #	BMF22-09886
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ISSUE DATE	4/14/2023
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P11-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - KITCHEN SINK** N.T.S.

2 P202 **WASTE RISER - TUB/SHOWER** N.T.S.

3 P202 **WASTE RISER - LB, LAV, WC** N.T.S.

4 P202 **WASTE RISER - LAV, KS, WC, TS** N.T.S.

5 P202 **WASTE RISER - LAUNDRY BOX** N.T.S.

6 P202 **WATER RISER** N.T.S.

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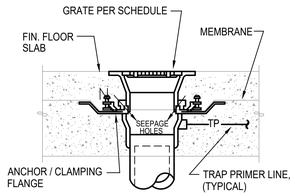
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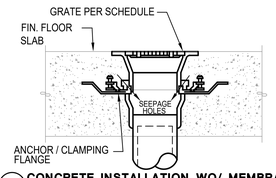
RISERS

PERMIT #	BMF22-09886
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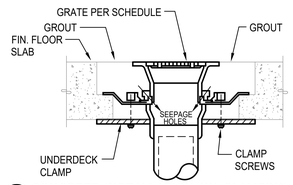
P11-202



A CONCRETE INSTALLATION W/ MEMBRANE

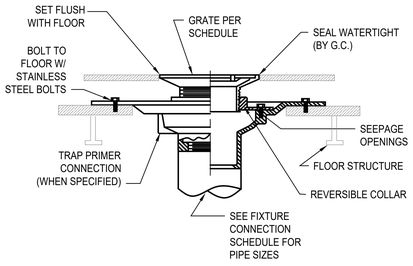


B CONCRETE INSTALLATION WO/ MEMBRANE



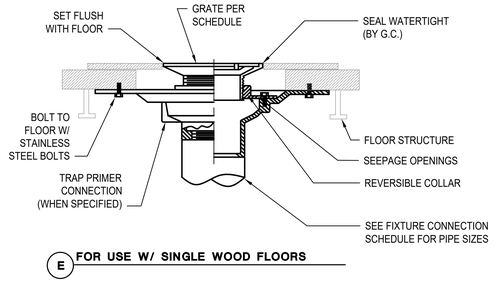
C CONCRETE INSTALLATION W/ CLAMPING RING

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



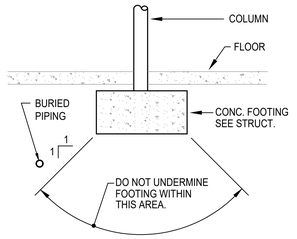
D FOR USE W/ DOUBLE WOOD FLOORS

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

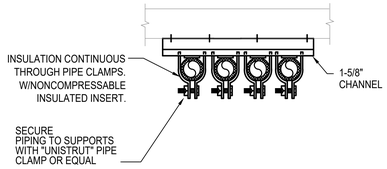


E FOR USE W/ SINGLE WOOD FLOORS

1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.

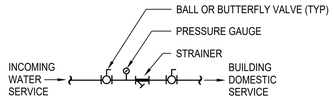


2 P301 BURIED PIPING DETAIL
N.T.S.

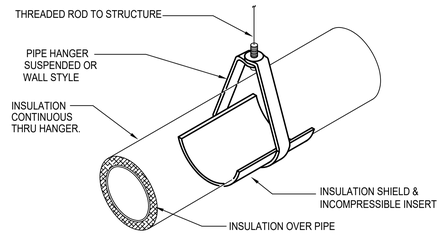


NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

3 P301 PIPE SUPPORT
N.T.S.



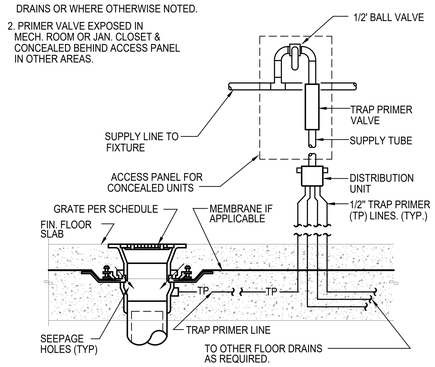
4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

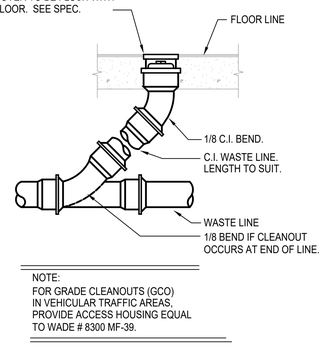
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



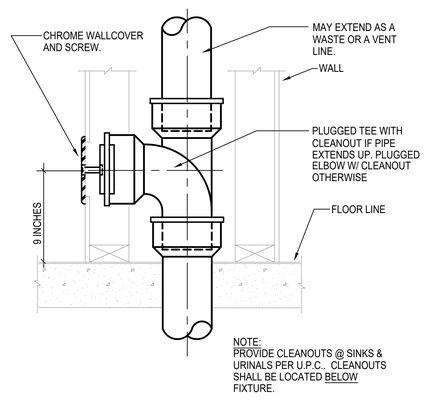
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

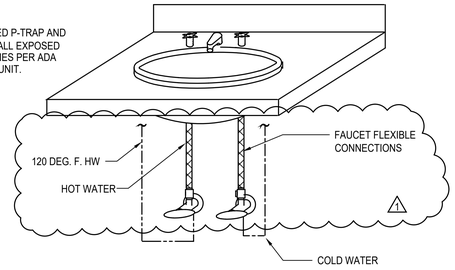
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



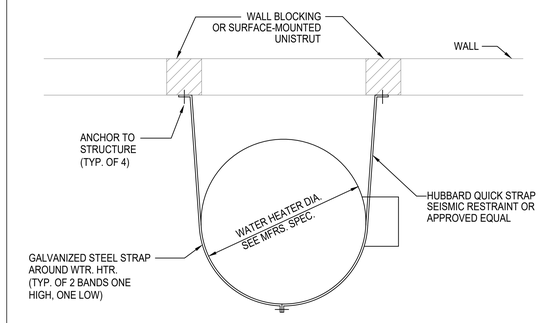
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

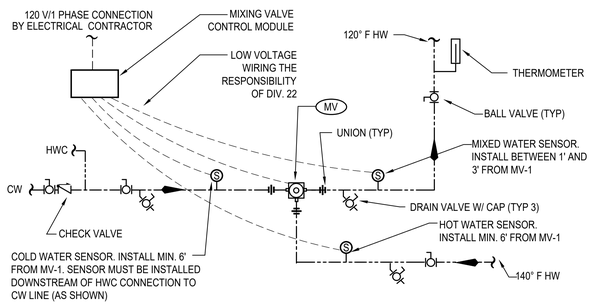
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



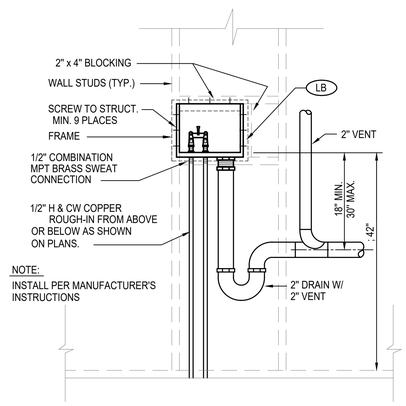
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



12 P301 LAUNDRY BOX DETAIL
N.T.S.

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BUILDING 11

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DIANE AMBER FORDON — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
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REVISIONS / NOTES

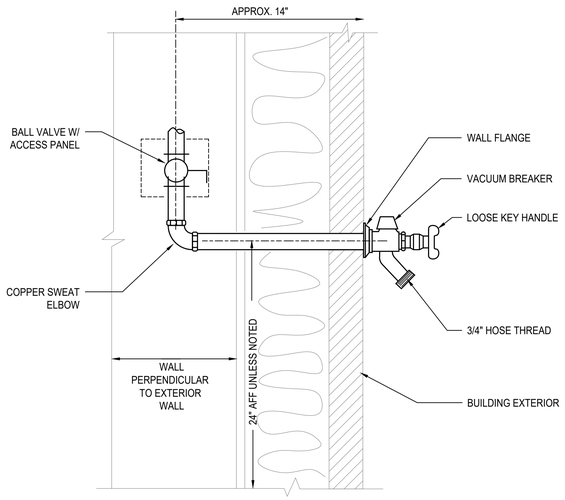
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1	5.19.23	BID ADDENDUM 2

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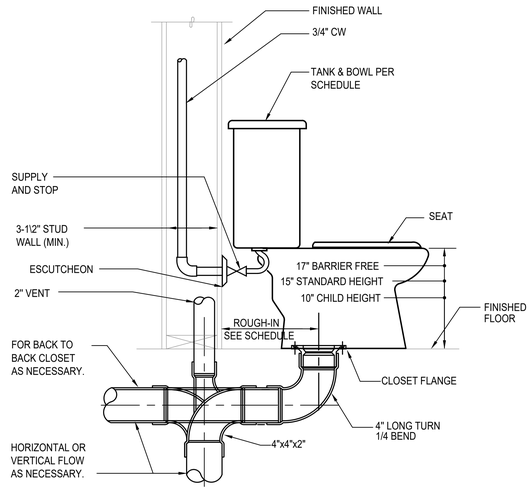
DETAILS

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SHEET NO.:	P11-301



1 P302 FREEZE PROOF HOSE BIBB DETAIL

N.T.S.



2 P302 TANK WATER CLOSET DETAIL

N.T.S.

3 P302 NOT USED

N.T.S.

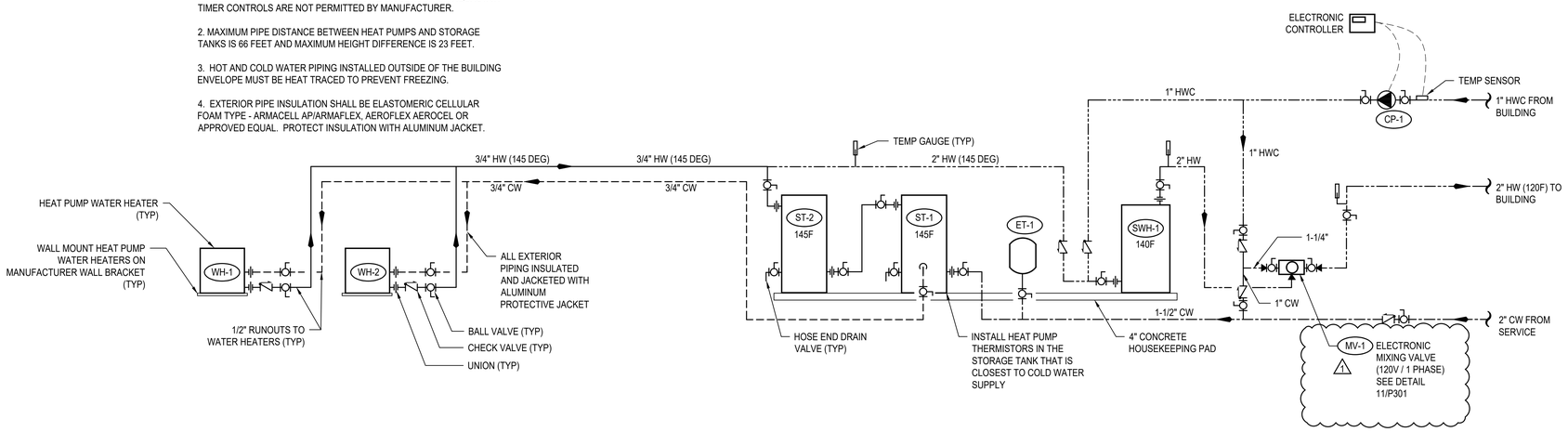
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL

N.T.S.

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DETAILS

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P11-302

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PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	LEVEL 3 FLOOR PLAN
P-104	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
   SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED TUBULAR BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13426 NE 133rd St.,
Kirkland, WA 98034

BUILDING 12

BID SET

DANA AMBER CHRISTENSEN — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09882
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P12-001

10/7/2021 7:33:34 AM

GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-35-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE.
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (COLD WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1	HEAT PUMP WATER HEATER	SANCO2: GS4-45HPC-D	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE, UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
WH-2			
WH-3			
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET.
ST-1	DOMESTIC STORAGE TANK	SANCO2: ECO-200GLBK	200 GALLON STORAGE TANK.
ST-2			2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy ____ kWh	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

*Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	H.W.	WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE — FIXTURE UNITS PER APPENDIX A

FIXTURE	QTY	DOMESTIC WATER WSFU: PER FIXTURE	TOTAL	HW PER FIXTURE	TOTAL	SEWER DFU: PER FIXTURE	TOTAL
Private Tank Water Closet	12	2.5	30	-	-	3	36
Lavatory (Public or Private)	12	1	12	0.75	9	1	12
Bathtub or Combo Bath/Shwr	12	4	48	3	36	2	24
Kitchen Sink	12	1.5	18	1.125	13.50	2	24
Clothes Washer	12	4	48	3	36	3	36
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**64**		**159.5**		**94.50**		**136**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 58 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 136. BUILDING SERVICE SIZE = (1X) 4".

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c/o: King County Housing Authority,
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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13426 NE 133rd St.,
Kirkland, WA 98034

BUILDING 12

BID SET

DANA AMBER FORDYCE — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

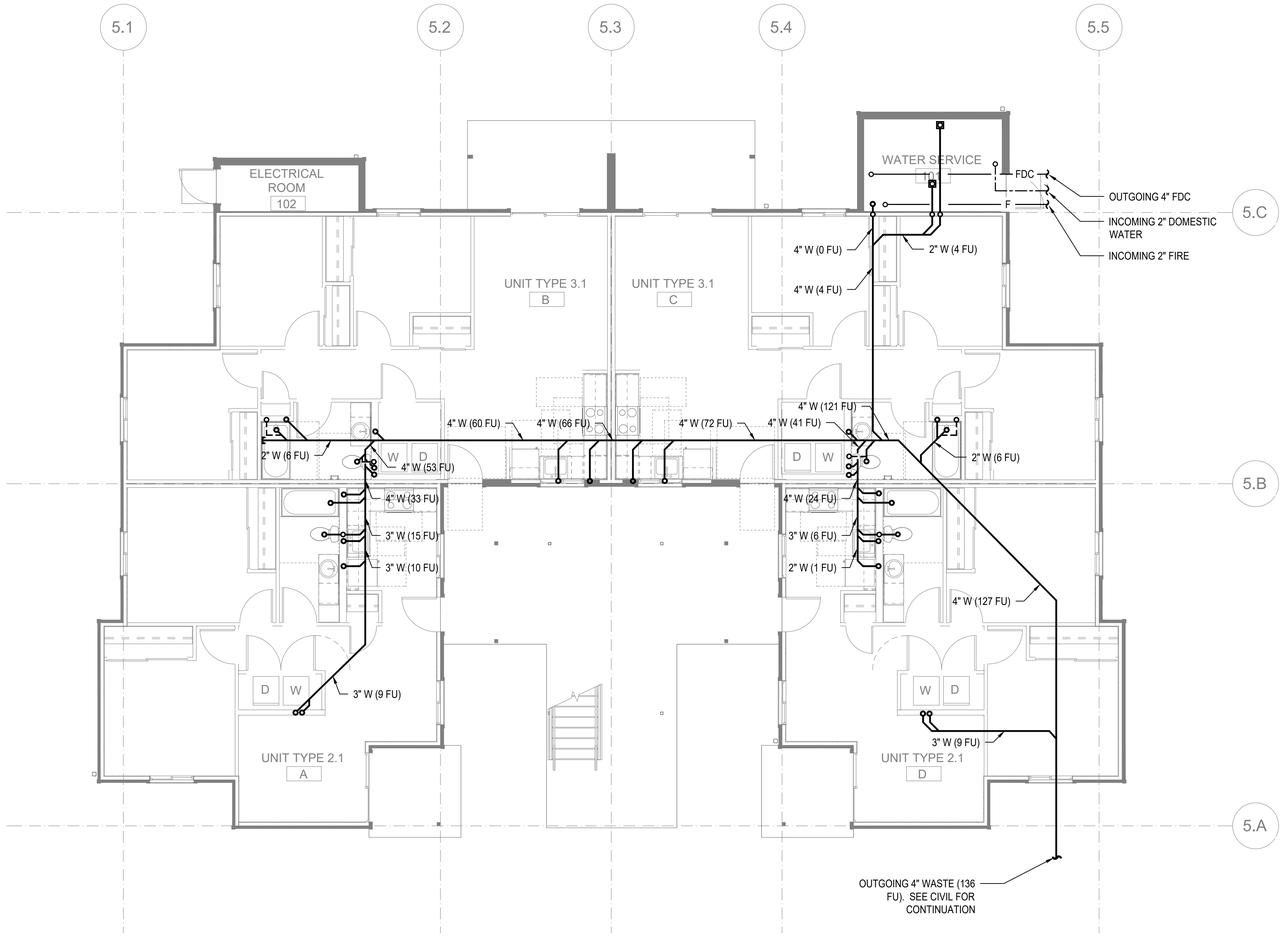
TITLE

NOTES AND SCHEDULES

PERMIT #	BMF22-09882
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P12-002

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 12 FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
192 Nickerson, Suite #300
Seattle, Washington 98109
Phone: 206.285.2966

SMR Architects
117 S. Main St., Suite 400
Seattle, WA 98104

PH: 206.623.1104
FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13426 NE 133rd St.,
Kirkland, WA 98034

BUILDING 12

BID SET

DANA AMBER COLLINS — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

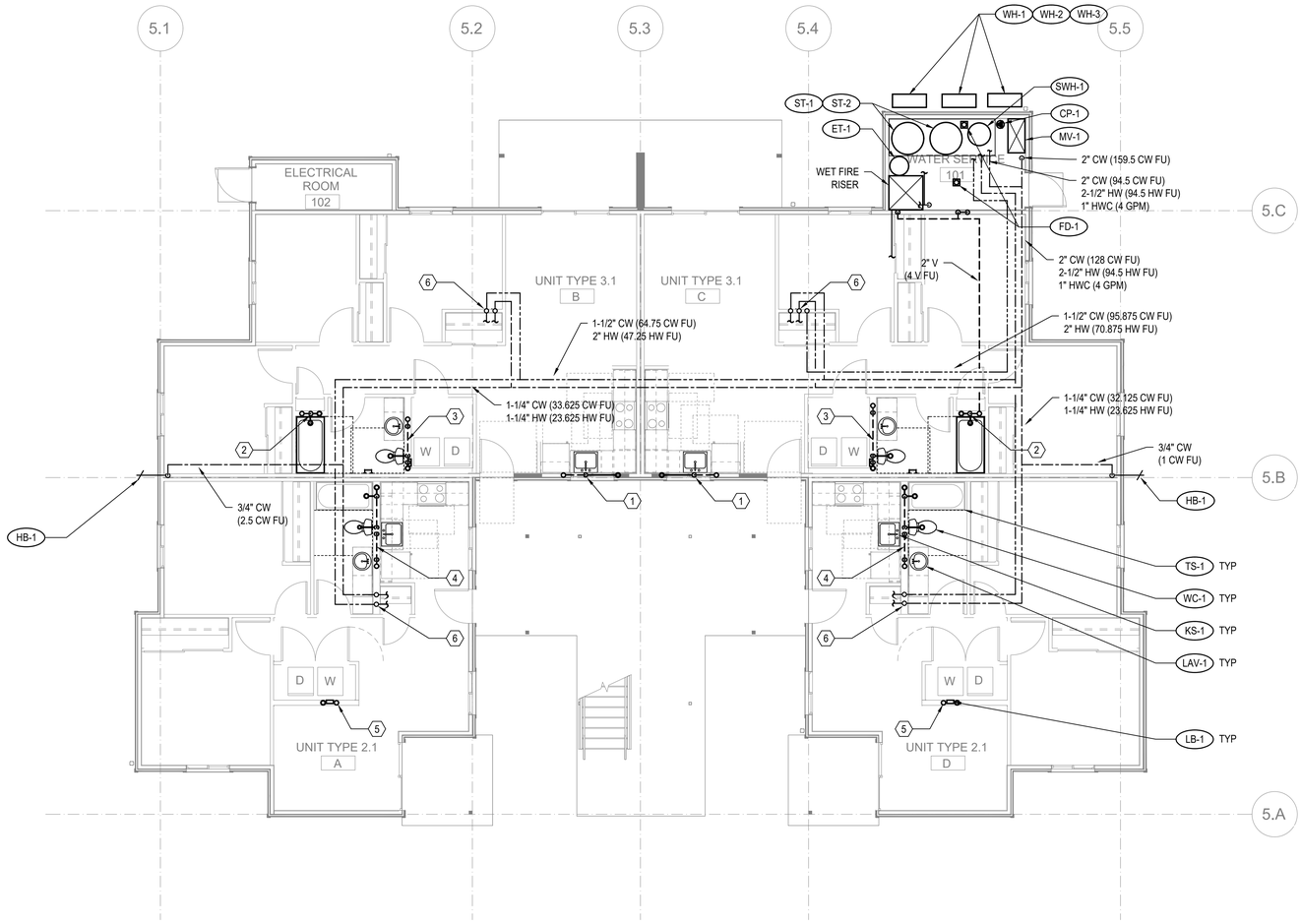
TITLE

PLAN - FOUNDATION

PERMIT #	BMF22-09882
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P12-100

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 12 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

10/7/2021 7:33:34 AM

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MECHANICAL + ELECTRICAL ENGINEERS
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Seattle, Washington 98109
Phone: 206.285.2966

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 12

BID SET

DANA AMBER FOLKERTSEN
STATE OF WASHINGTON
22041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

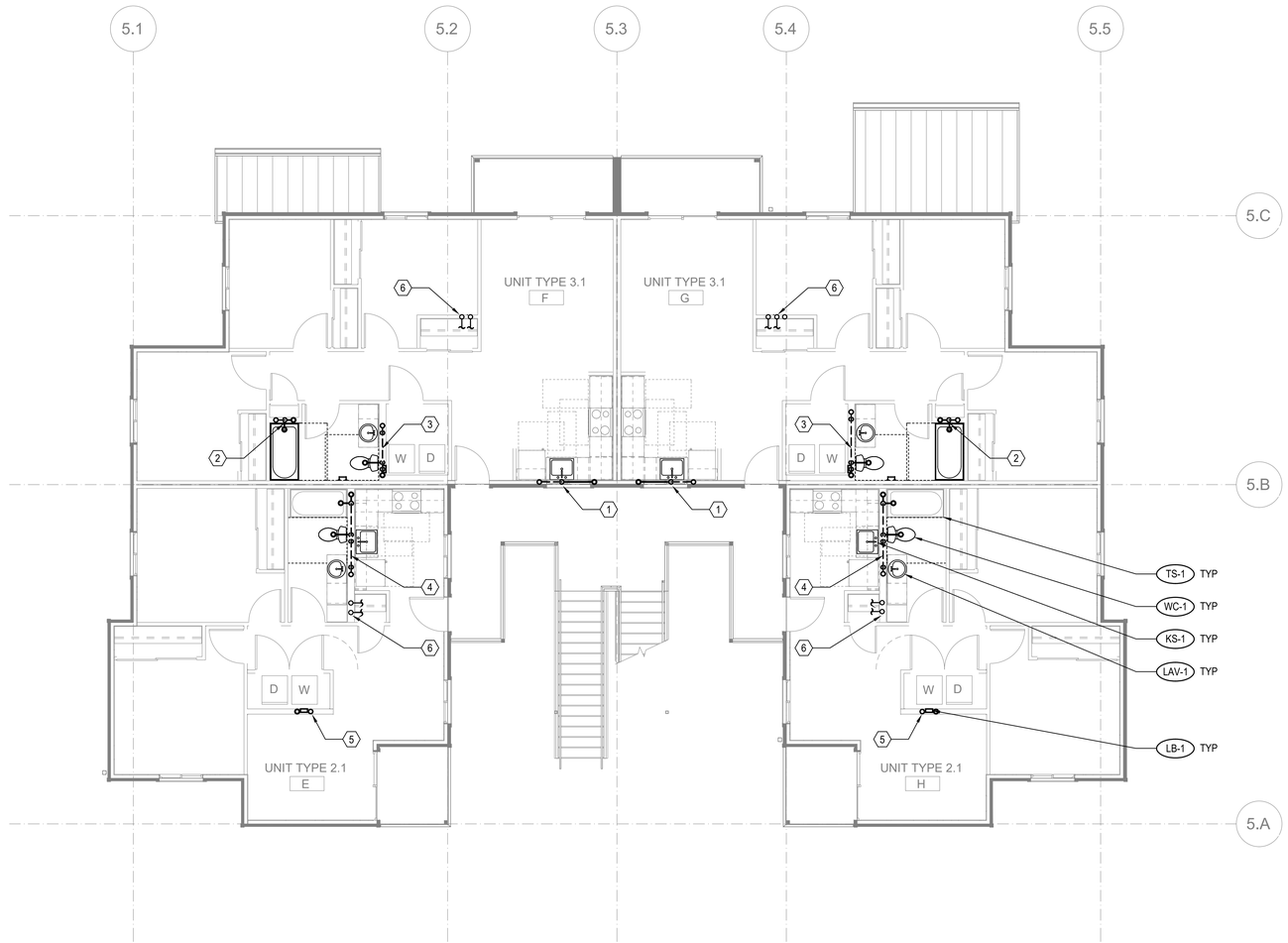
DPD STAMP

TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09882
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P12-101



FLOOR PLAN - BUILDING 12 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

SIDER + BYERS
MECHANICAL + ELECTRICAL ENGINEERS
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Seattle, WA 98104

PH: 206.623.1104
FX: 206.623.5285

King County Housing Authority

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General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 12

BID SET

DANA AMBER COLLINSON
STATE OF WASHINGTON
22041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

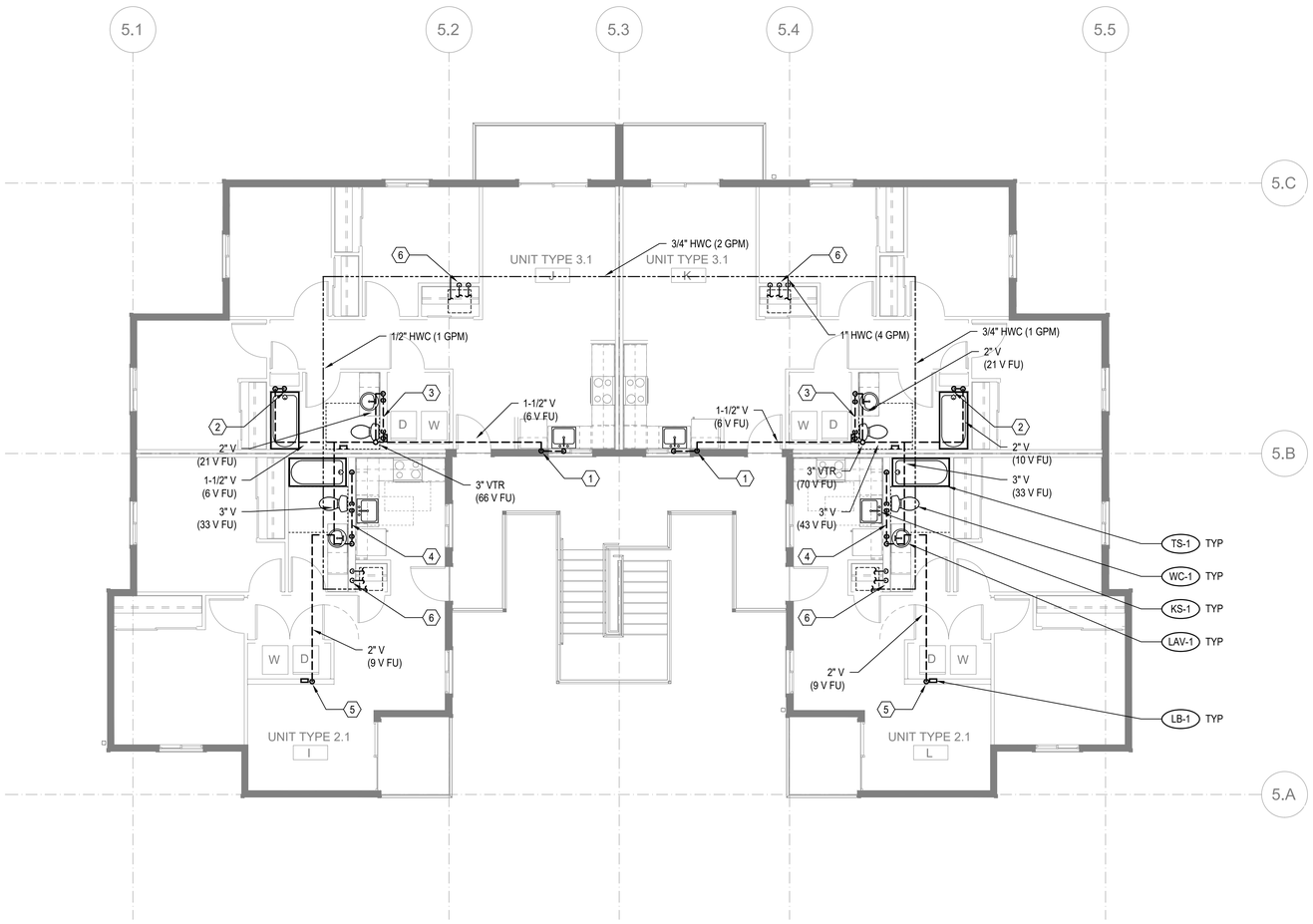
TITLE

PLAN - LEVEL 2

PERMIT #	BMF22-09882
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P12-102

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 12 - LEVEL 3

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
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King County Housing Authority

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 12

BID SET

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STATE OF WASHINGTON
22041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

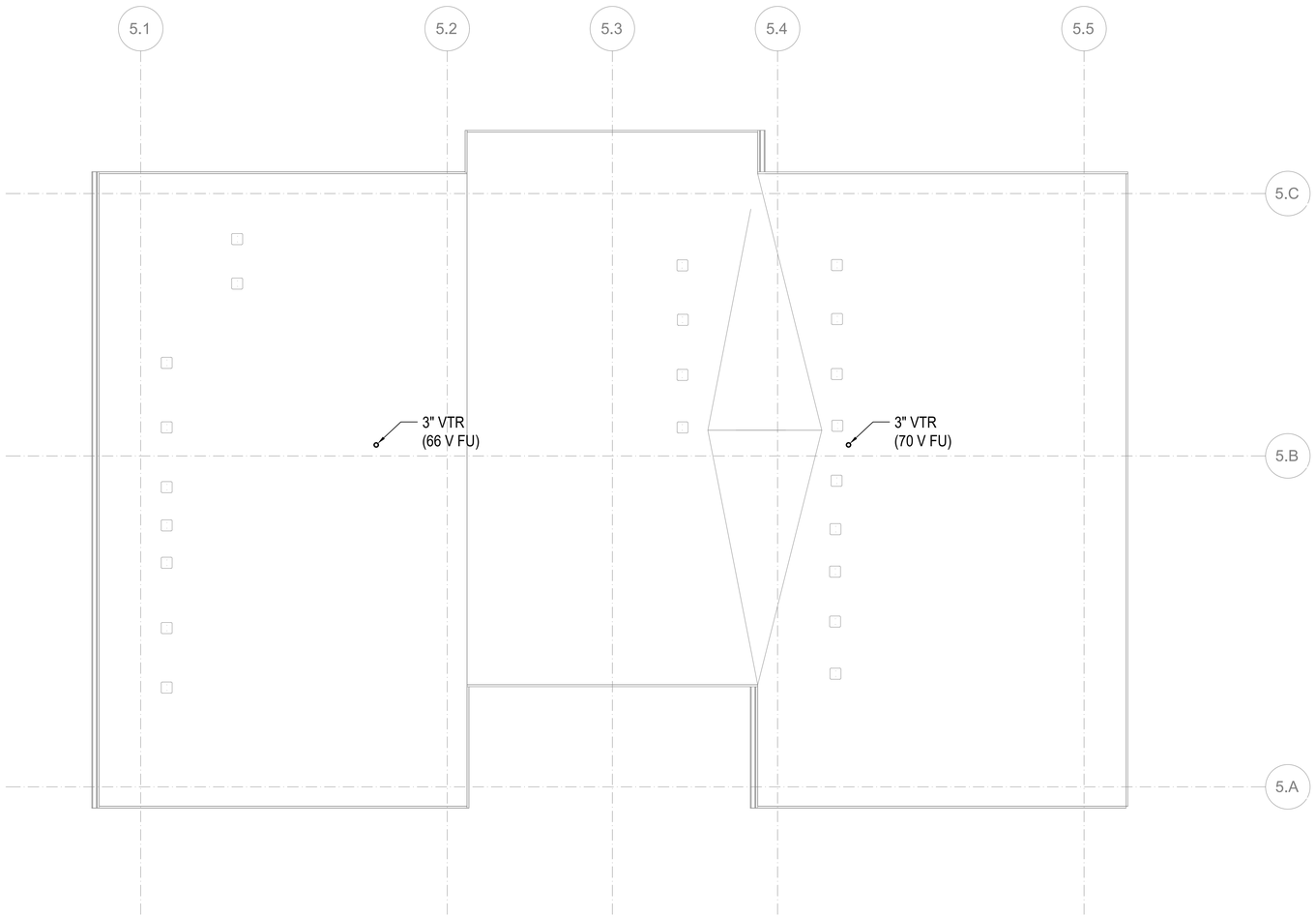
TITLE

PLAN - LEVEL 3

PERMIT #	BMF22-09882
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P12-103

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 12 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

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Seattle, WA 98104

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King County Housing Authority

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General Partner
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Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 12

BID SET

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STATE OF WASHINGTON
22041009
REGISTERED PROFESSIONAL ENGINEER
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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

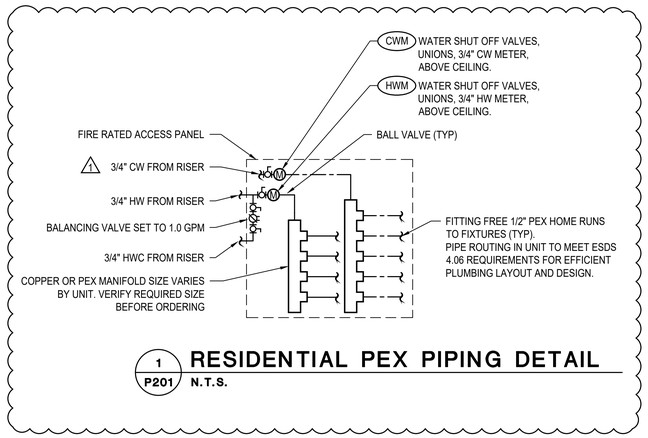
TITLE

PLAN - ROOF

PERMIT #	BMF22-09882
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P12-104

10/7/2021 7:33:34 AM



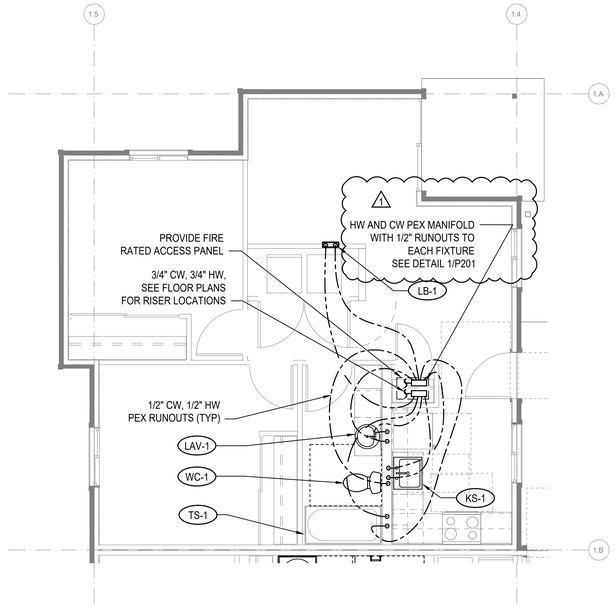
1 P201 **RESIDENTIAL PEX PIPING DETAIL**

N.T.S.

GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

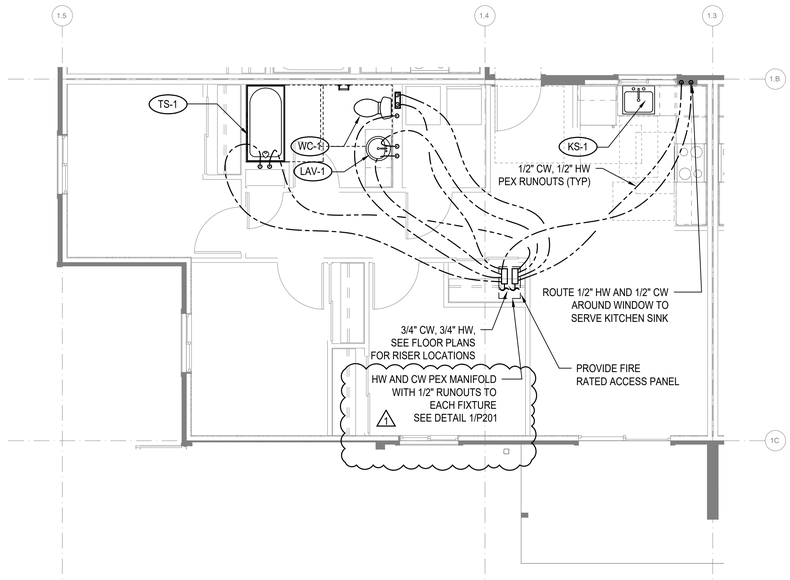
FLAG NOTES (X):



2 P201 **ENLARGED PLAN - 2-BED**

1/4"=1'-0"

UNITS: A, D, E, H, I, L



1 P201 **ENLARGED PLAN - 3-BED**

1/4"=1'-0"

UNITS: B, C, F, G, J, K

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King County Housing Authority

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KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 12

BID SET

DANA AMBER COLLINS STATE OF WASHINGTON 25041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

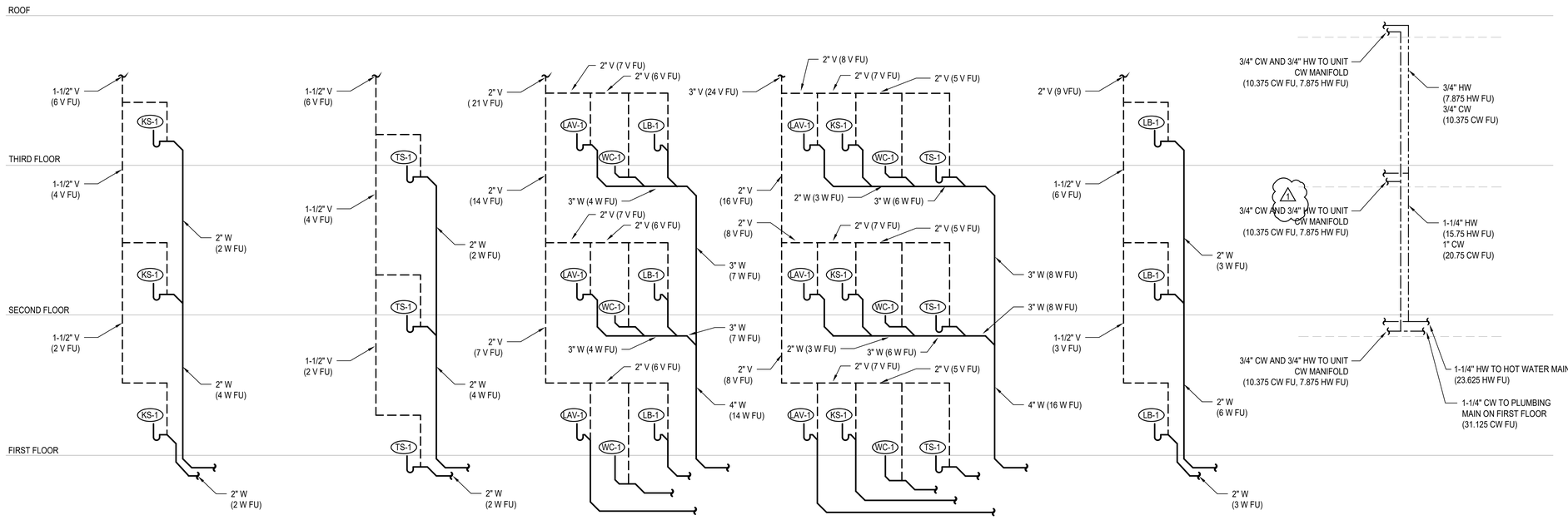
ENLARGED UNIT PLANS

PERMIT #	BMF22-09882
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P12-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - KITCHEN SINK** N.T.S.

2 P202 **WASTE RISER - TUB/SHOWER** N.T.S.

3 P202 **WASTE RISER - LB, LAV, WC** N.T.S.

4 P202 **WASTE RISER - LAV, KS, WC, TS** N.T.S.

5 P202 **WASTE RISER - LAUNDRY BOX** N.T.S.

6 P202 **WATER RISER** N.T.S.

10/7/2021 7:33:34 AM

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REVISIONS / NOTES

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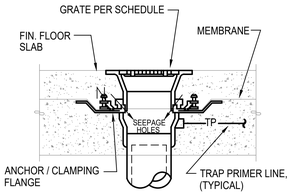
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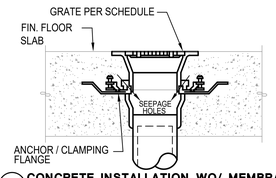
RISERS

PERMIT #	BMF22-09882
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

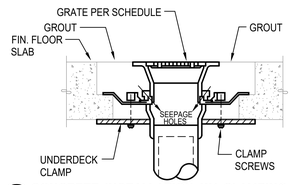
P12-202



A CONCRETE INSTALLATION W/ MEMBRANE

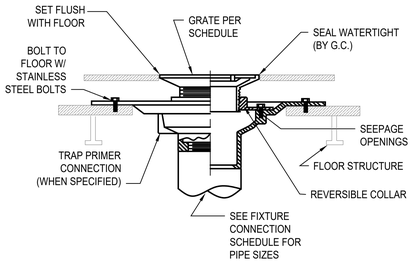


B CONCRETE INSTALLATION WO/ MEMBRANE



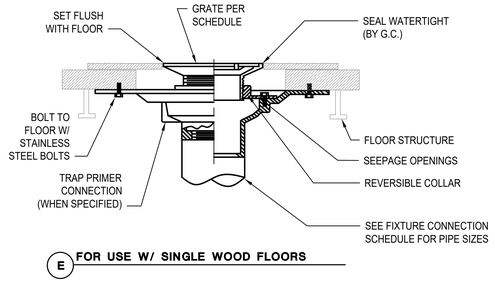
C CONCRETE INSTALLATION W/ CLAMPING RING

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



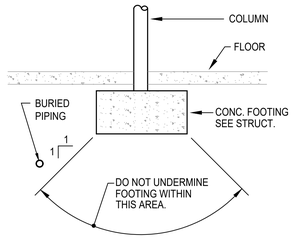
D FOR USE W/ DOUBLE WOOD FLOORS

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

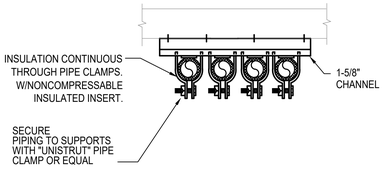


E FOR USE W/ SINGLE WOOD FLOORS

1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.

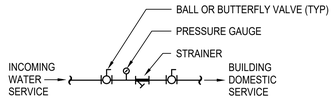


2 P301 BURIED PIPING DETAIL
N.T.S.

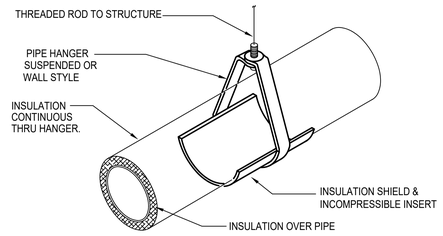


NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

3 P301 PIPE SUPPORT
N.T.S.



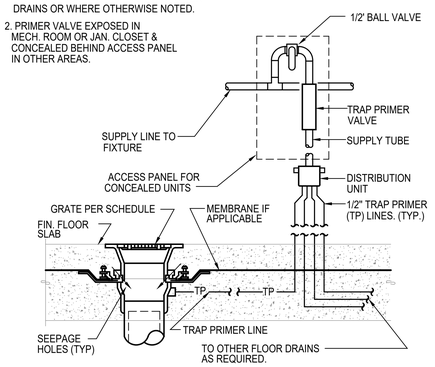
4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

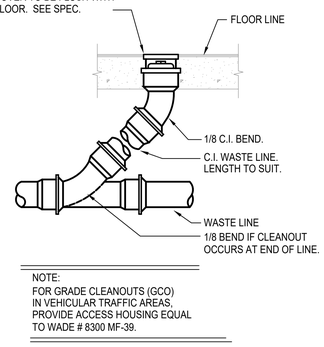
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



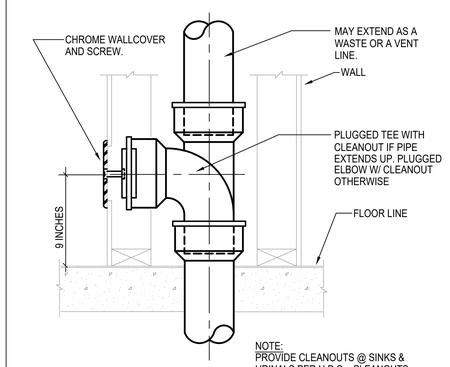
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

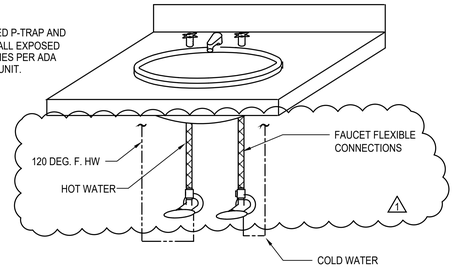
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



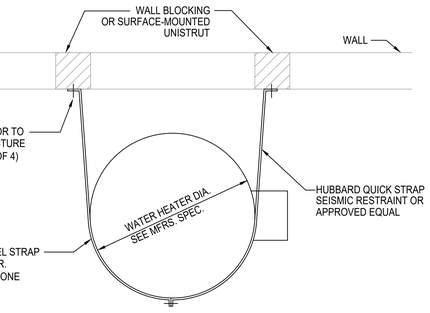
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

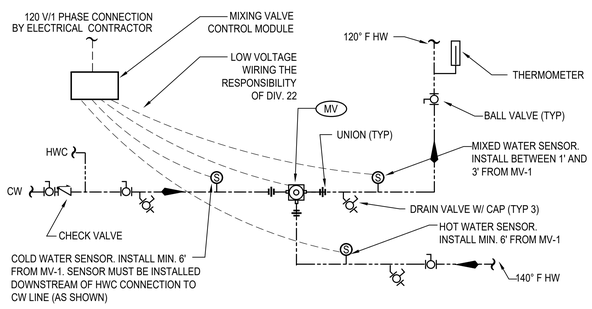
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



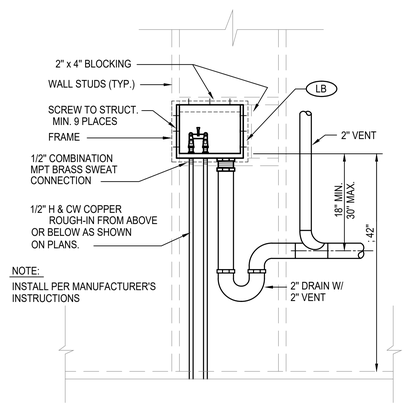
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



12 P301 LAUNDRY BOX DETAIL
N.T.S.

10/7/2021 7:33:34 AM

SIDER+BYERS
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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13426 NE 133rd St.,
Kirkland, WA 98034

BUILDING 12

BID SET

DIANE AMBER FORBES — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

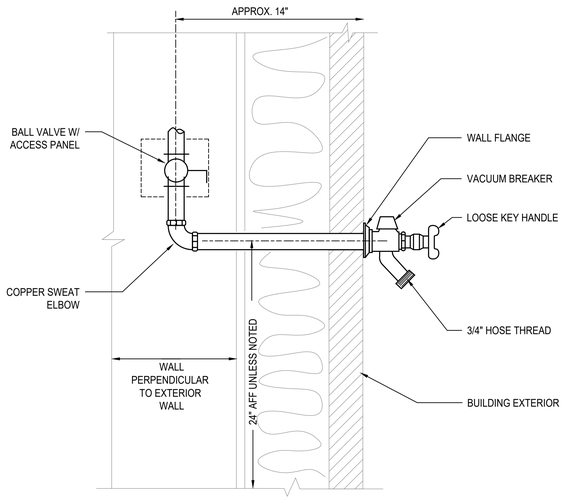
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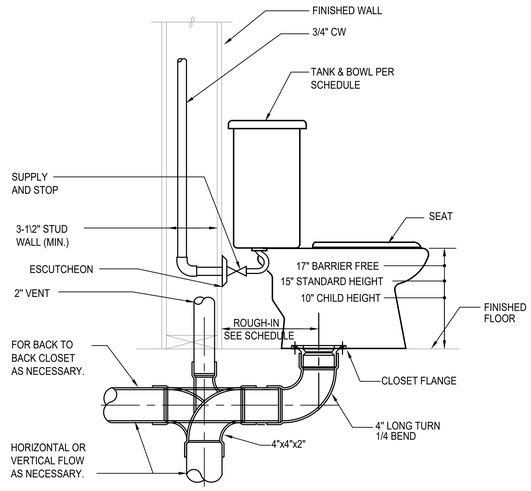
DETAILS

PERMIT #	BMF22-09882
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P12-301



1 P302 FREEZE PROOF HOSE BIBB DETAIL

N.T.S.



2 P302 TANK WATER CLOSET DETAIL

N.T.S.

3 P302 NOT USED

N.T.S.

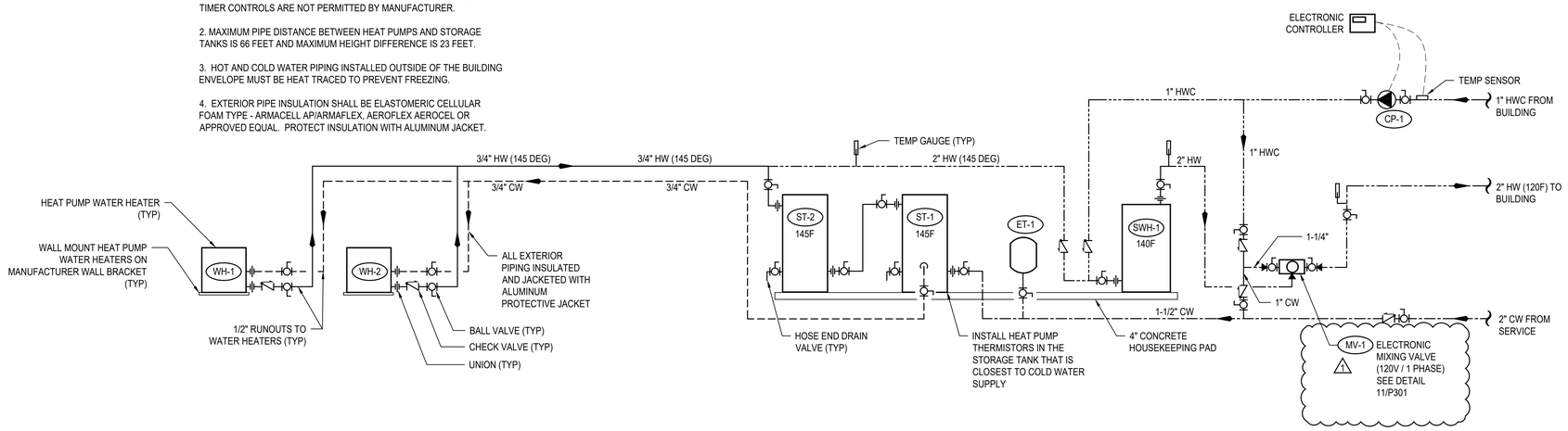
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL

N.T.S.

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DPD STAMP

TITLE

DETAILS

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DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P12-302

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PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- CAP OR CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	LEVEL 3 FLOOR PLAN
P-104	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
   SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 17 GA BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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BUILDING 13

BID SET

DANA AMBER COLLETTE — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09885
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P13-001

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GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-35-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE.
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (COLD WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1 **WH-2** **WH-3**	HEAT PUMP WATER HEATER	SANCO2: GS4-45HPC-D	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE, UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET.
ST-1 **ST-2**	DOMESTIC STORAGE TANK	SANCO2: ECO-200GLBK	200 GALLON STORAGE TANK. 2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

kWh

***Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements**

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	H.W.	WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE		FIXTURE UNITS PER APPENDIX A					
		DOMESTIC WATER WSFU				SEWER DFU	
FIXTURE	QTY	PER FIXTURE	TOTAL	HW PER FIXTURE	TOTAL	PER FIXTURE	TOTAL
Private Tank Water Closet	12	2.5	30	-	-	3	36
Lavatory (Public or Private)	12	1	12	0.75	9	1	12
Bathtub or Combo Bath/Shwr	12	4	48	3	36	2	24
Kitchen Sink	12	1.5	18	1.125	13.50	2	24
Clothes Washer	12	4	48	3	36	3	36
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**64**		**159.5**		**94.50**		**136**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 58 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 136. BUILDING SERVICE SIZE = (1X) 4".

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c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13425 NE 133rd St.,
Kirkland, WA 98034

BUILDING 13

BID SET

DANA AMBER FORDYCE — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

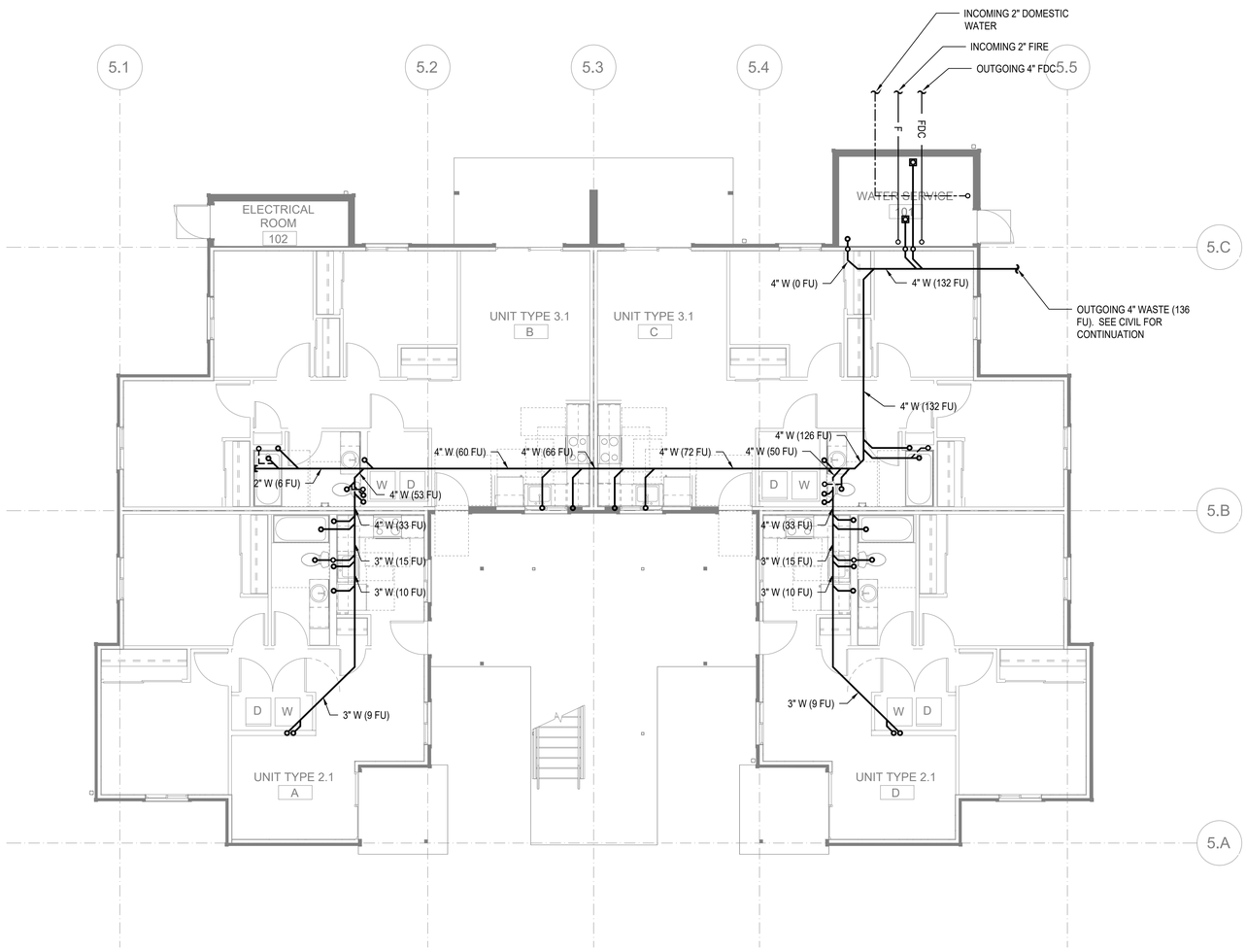
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NOTES AND SCHEDULES

PERMIT #	BMF22-09885
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P13-002

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 13 FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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BUILDING 13

BID SET

DANA AMBER COLLINS — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

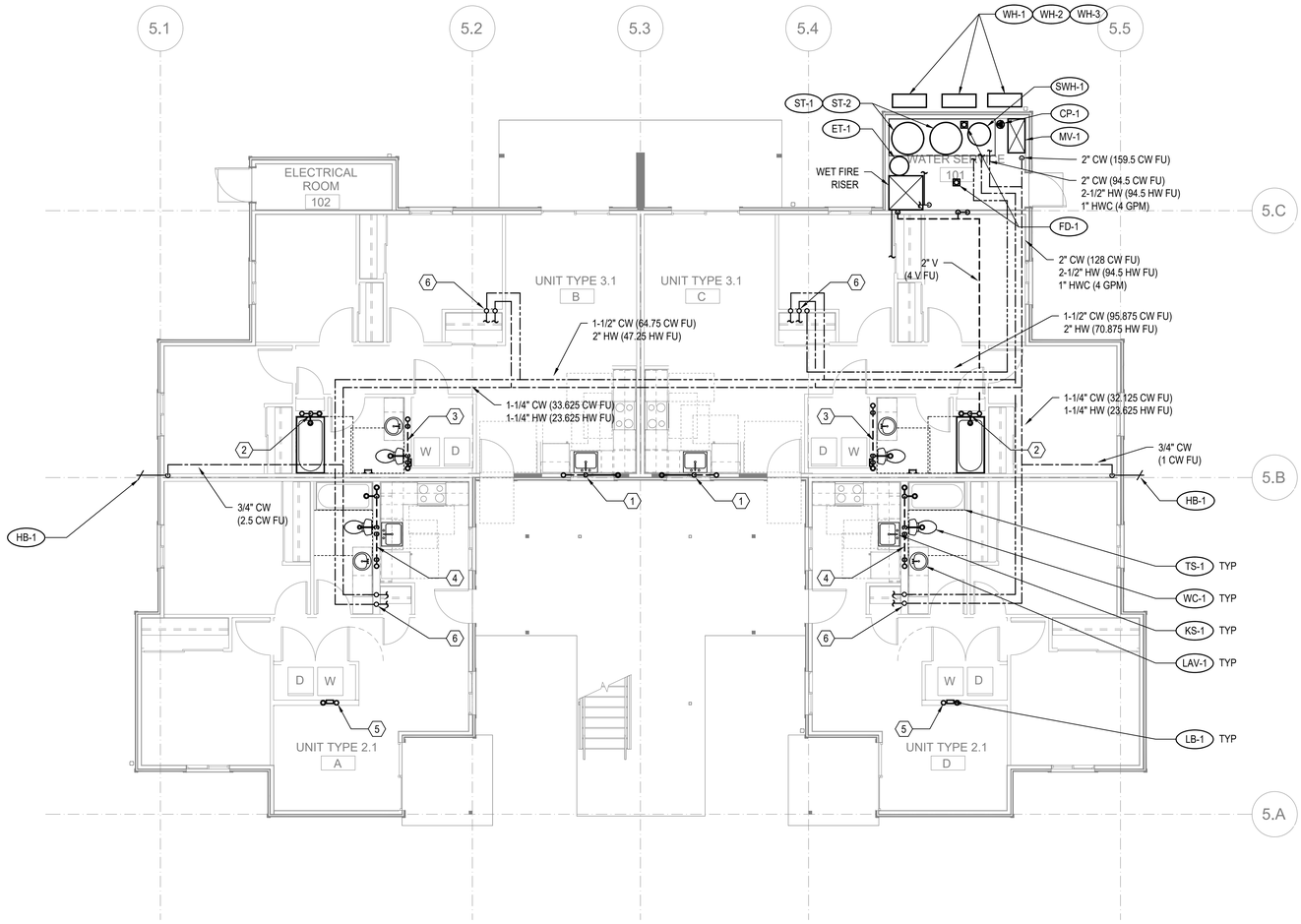
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PLAN - FOUNDATION

PERMIT #	BMF22-09885
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P13-100

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FLOOR PLAN - BUILDING 13 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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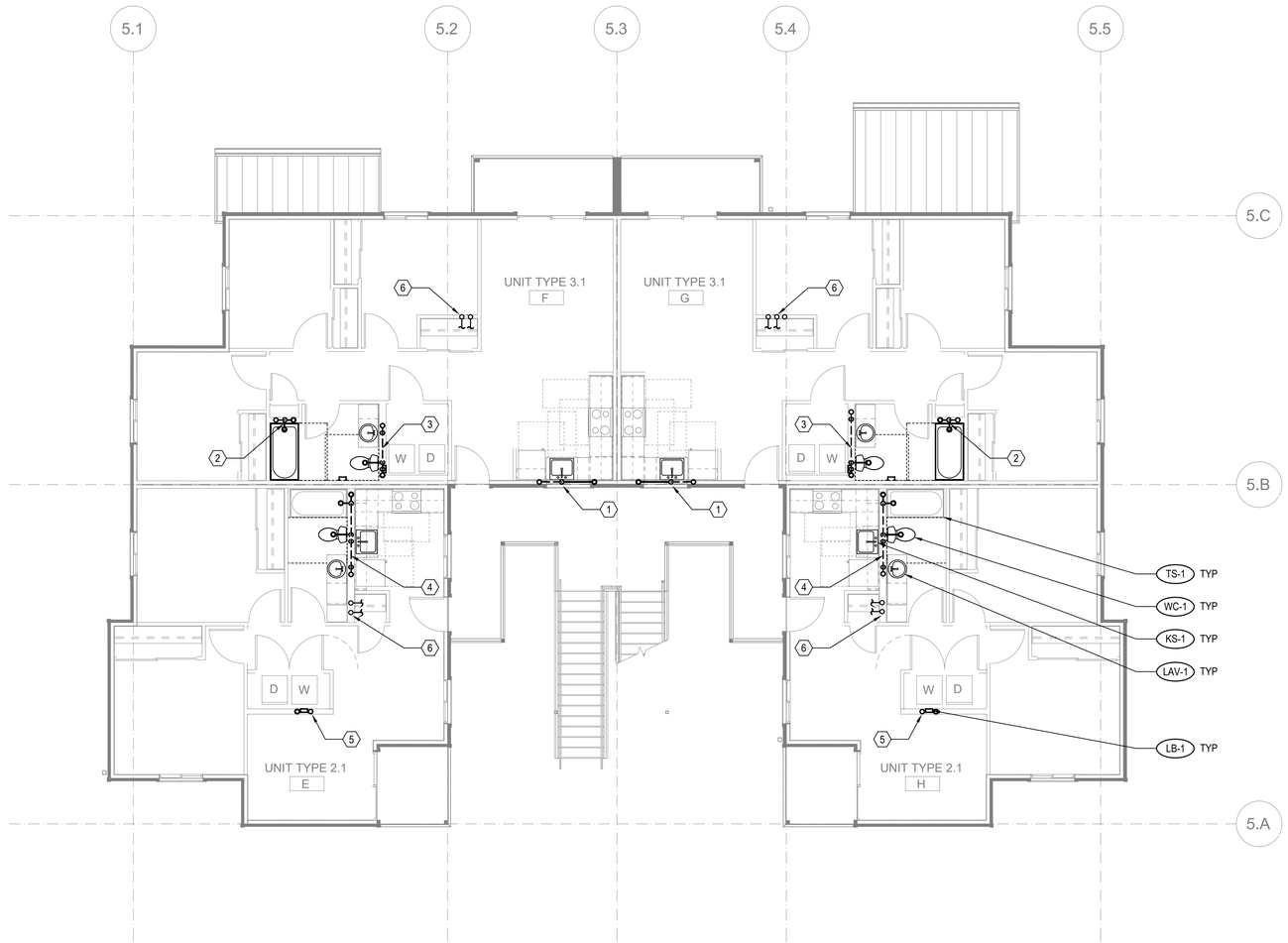
TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09885
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P13-101

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FLOOR PLAN - BUILDING 13 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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BUILDING 13

BID SET

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

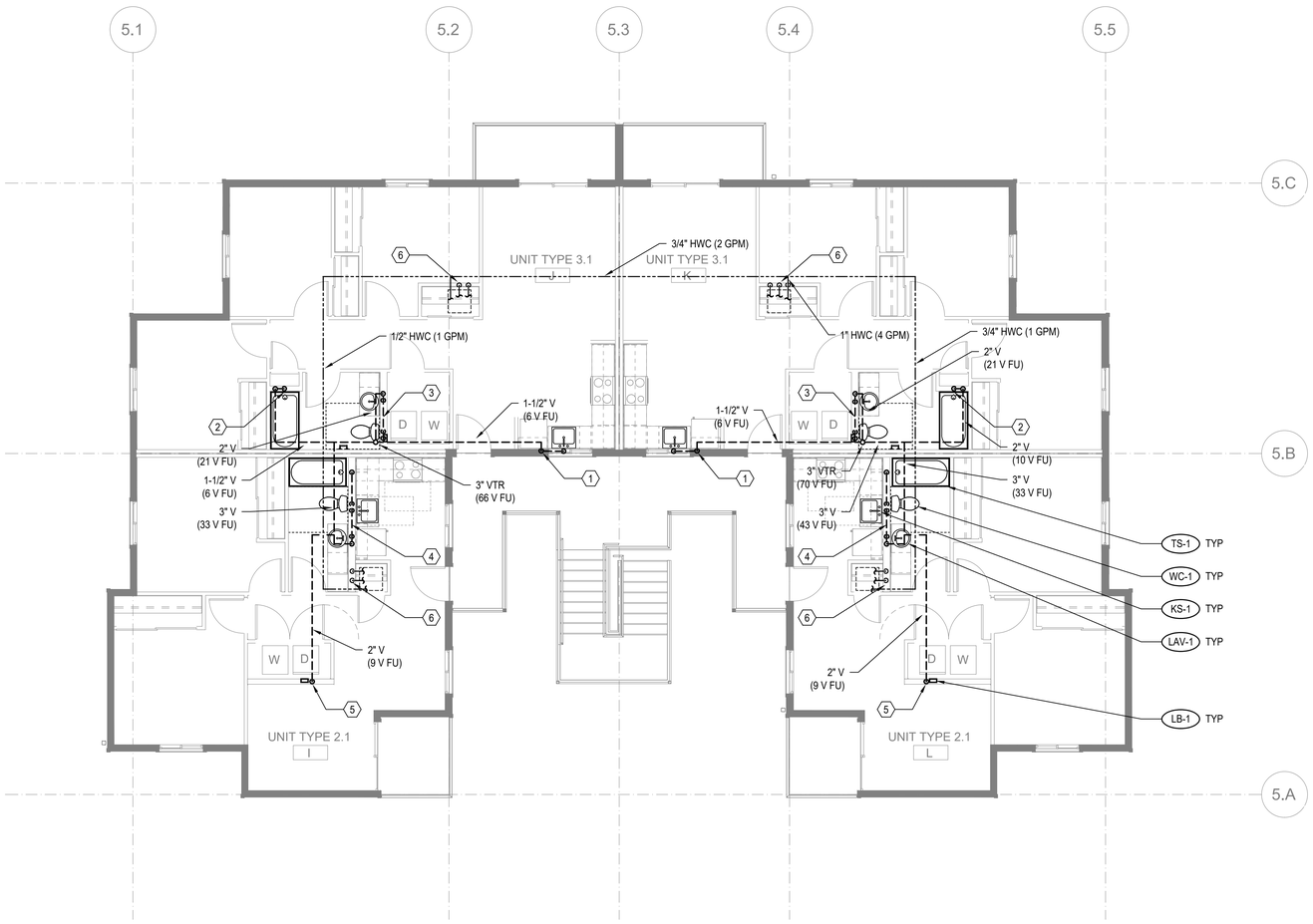
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PLAN - LEVEL 2

PERMIT #	BMF22-09885
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P13-102

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FLOOR PLAN - BUILDING 13 - LEVEL 3

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 13

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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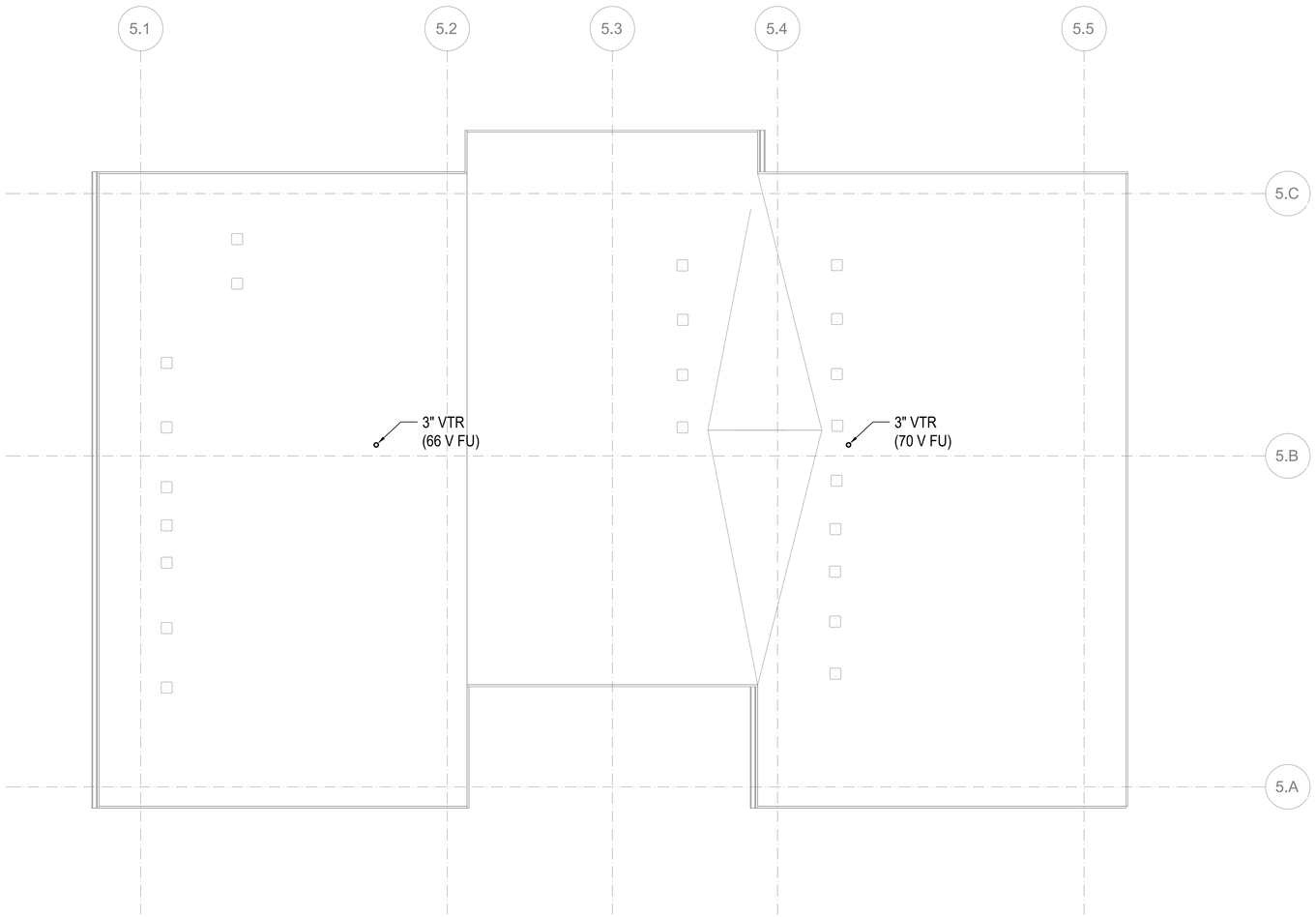
TITLE

PLAN - LEVEL 3

PERMIT #	BMF22-09885
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P13-103

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FLOOR PLAN - BUILDING 13 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
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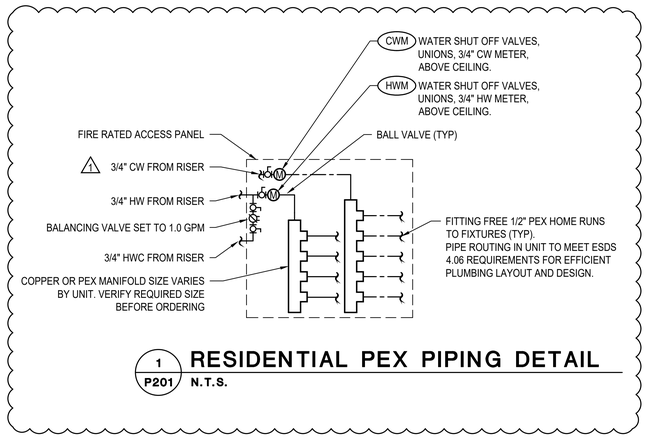
TITLE

PLAN - ROOF

PERMIT #	BMF22-09885
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ISSUE DATE	4/14/2023
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SHEET NO.:	

P13-104

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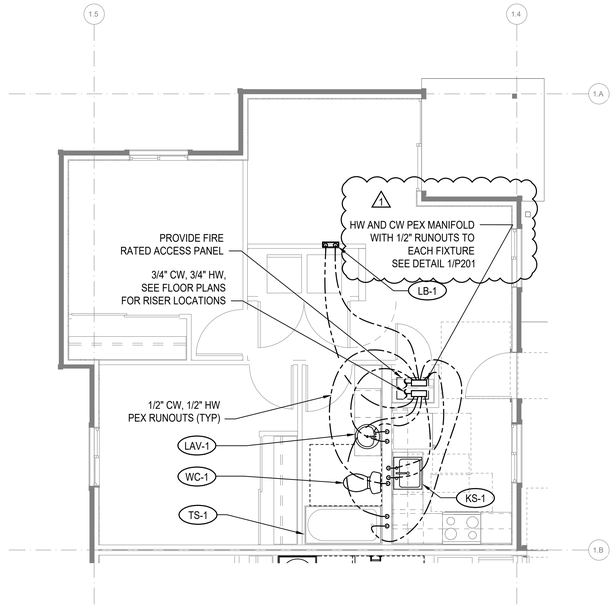


1 P201 RESIDENTIAL PEX PIPING DETAIL
N.T.S.

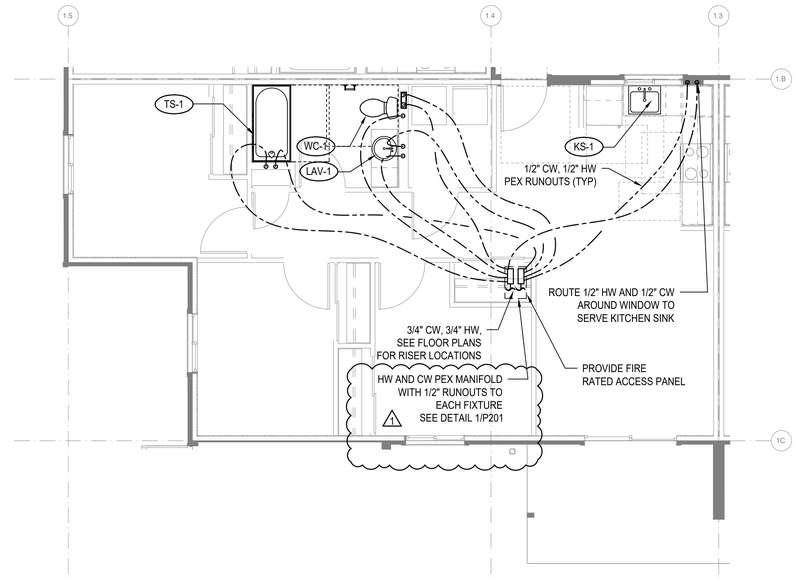
GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

FLAG NOTES (X):



2 P201 ENLARGED PLAN - 2-BED
1/4"=1'-0"
UNITS: A, D, E, H, I, L



1 P201 ENLARGED PLAN - 3-BED
1/4"=1'-0"
UNITS: B, C, F, G, J, K

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 13

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DANA AMBER FOSTER STATE OF WASHINGTON 22041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

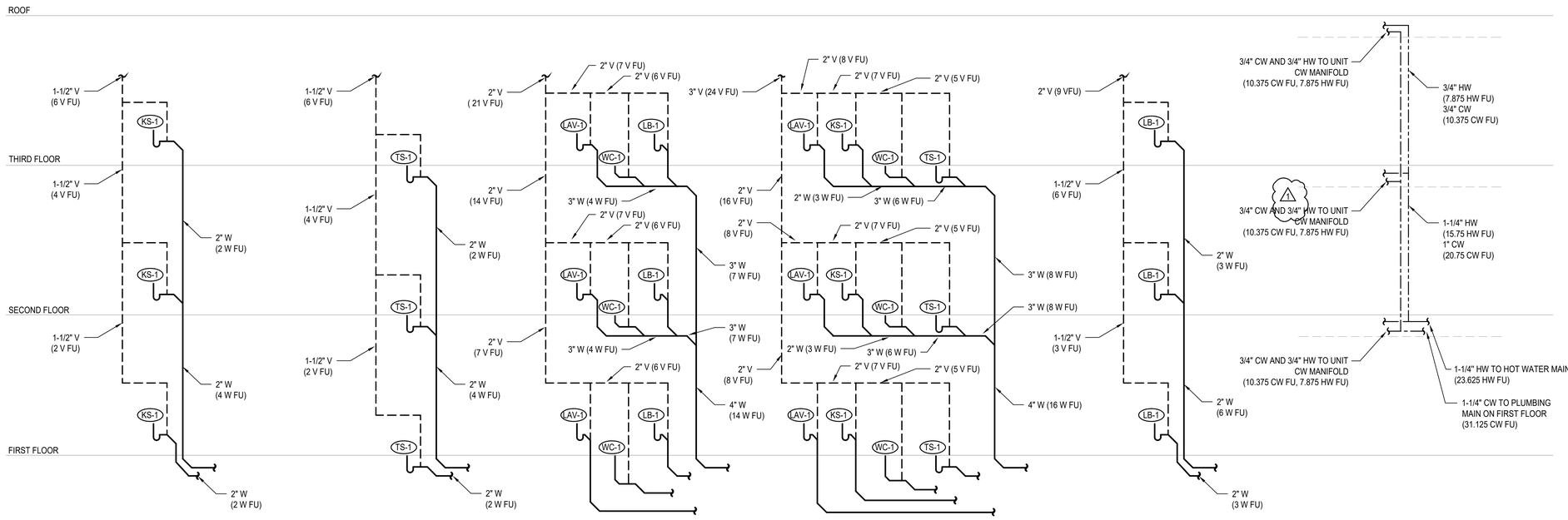
ENLARGED UNIT PLANS

PERMIT #	BMF22-09885
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P13-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - KITCHEN SINK** N.T.S.

2 P202 **WASTE RISER - TUB/SHOWER** N.T.S.

3 P202 **WASTE RISER - LB, LAV, WC** N.T.S.

4 P202 **WASTE RISER - LAV, KS, WC, TS** N.T.S.

5 P202 **WASTE RISER - LAUNDRY BOX** N.T.S.

6 P202 **WATER RISER** N.T.S.

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REVISIONS / NOTES

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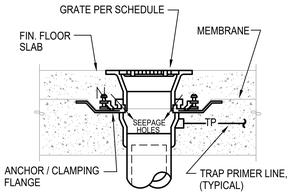
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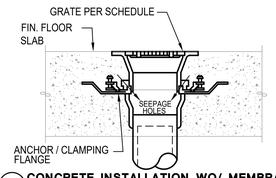
RISERS

PERMIT #	BMF22-09885
DRAWN	AJ, JL, PH, BF, KS
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JOB NO.	22016
SHEET NO.:	

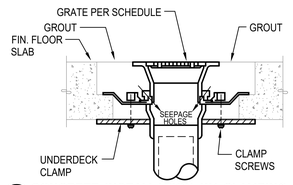
P13-202



A CONCRETE INSTALLATION W/ MEMBRANE

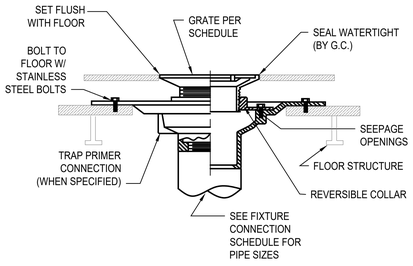


B CONCRETE INSTALLATION WO/ MEMBRANE



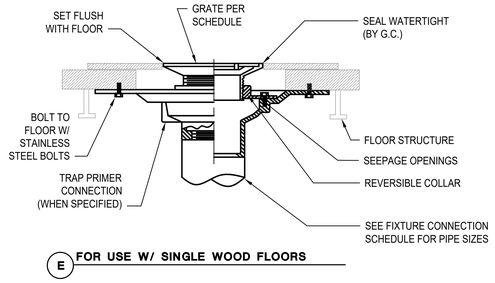
C CONCRETE INSTALLATION W/ CLAMPING RING

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



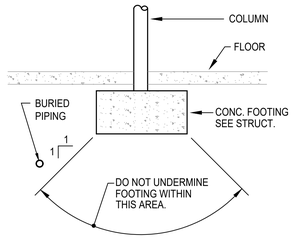
D FOR USE W/ DOUBLE WOOD FLOORS

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

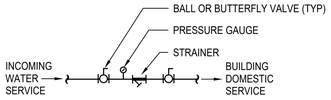


E FOR USE W/ SINGLE WOOD FLOORS

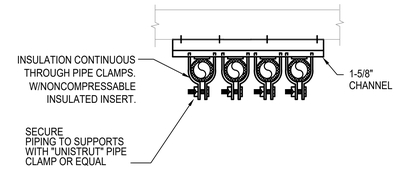
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



2 P301 BURIED PIPING DETAIL
N.T.S.

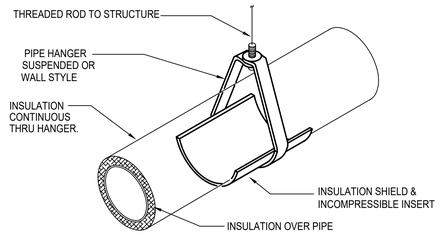


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

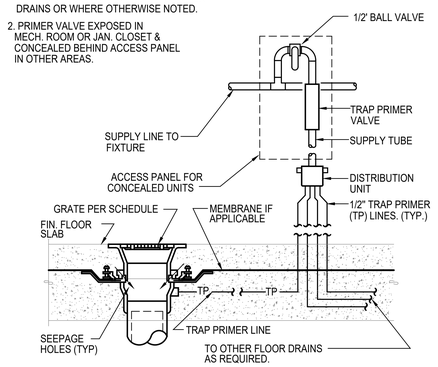
3 P301 PIPE SUPPORT
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

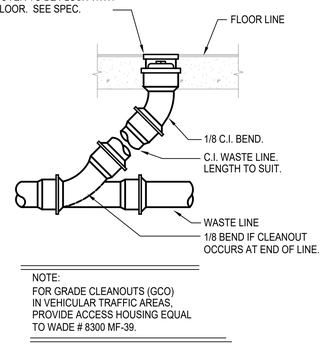
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



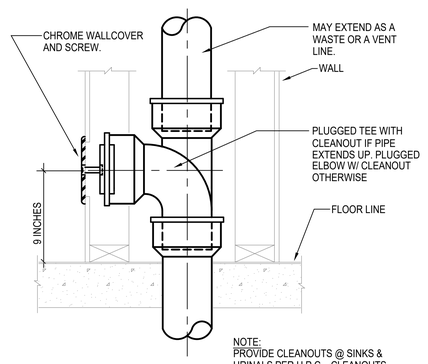
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

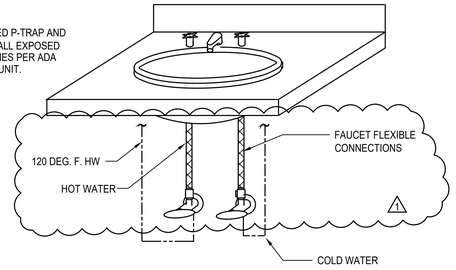
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



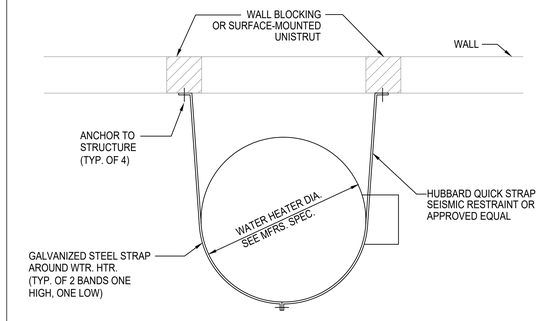
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

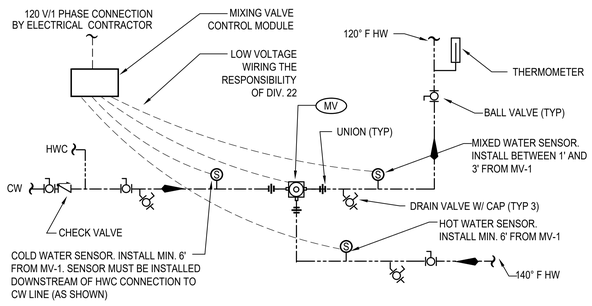
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



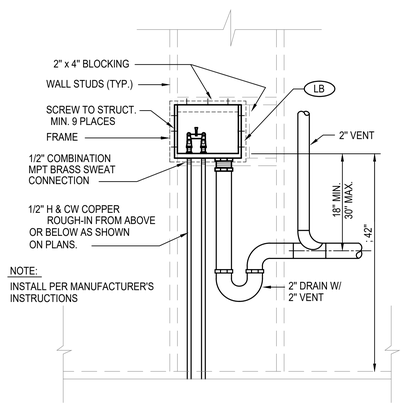
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



NOTE:
INSTALL PER MANUFACTURER'S INSTRUCTIONS

12 P301 LAUNDRY BOX DETAIL
N.T.S.

SIDER + BYERS
MECHANICAL + ELECTRICAL ENGINEERS
192 Nickerson, Suite #300
Seattle, Washington 98109
Phone: 206.285.2966

SMR Architects
117 S. Main St., Suite 400
Seattle, WA 98104

PH: 206.623.1104
FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13425 NE 133rd St.,
Kirkland, WA 98034

BUILDING 13

BID SET

DIANE AMBER FORDON — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

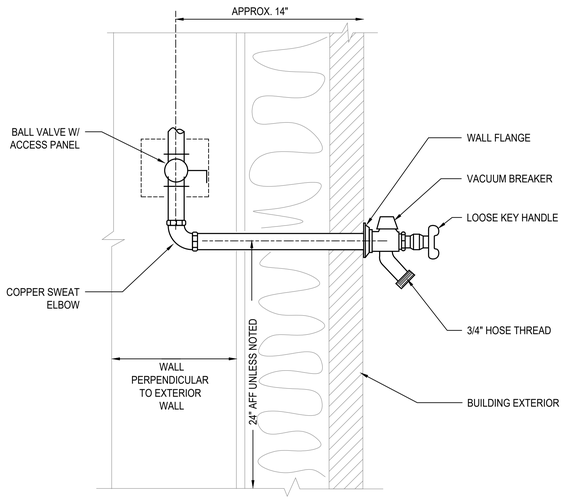
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TITLE

DETAILS

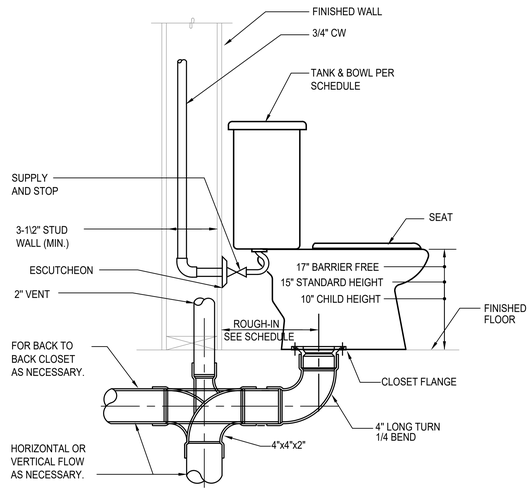
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DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P13-301

10/7/2021 7:33:34 AM



1 P302 FREEZE PROOF HOSE BIBB DETAIL

N.T.S.



2 P302 TANK WATER CLOSET DETAIL

N.T.S.

3 P302 NOT USED

N.T.S.

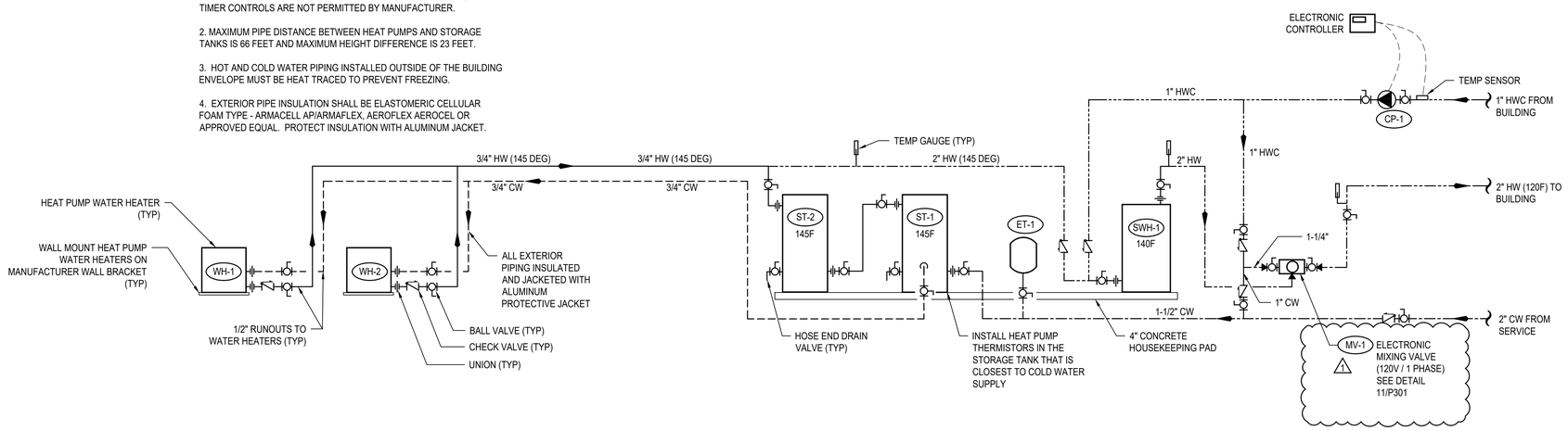
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL

N.T.S.

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
192 Nickerson, Suite #300
Seattle, Washington 98109
Phone: 206.285.2966

SMR Architects
117 S. Main St., Suite 400
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BUILDING 13

BID SET

DANA AMBER COLLINS STATE OF WASHINGTON 25041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

DETAILS

PERMIT #	BMF22-09885
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P13-302

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PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	LEVEL 3 FLOOR PLAN
P-104	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   - A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   - B. SHOWER HEADS 1.5 GPM
   - C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   - E. KITCHEN SINK FAUCETS 1.5 GPM

   SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 17 GA BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13409 NE 133rd St.,
Kirkland, WA 98034

BUILDING 14

BID SET

JAMES AMBER COLLIER — STATE OF WASHINGTON — 5041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09883
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P14-001

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GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-35-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE.
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (COLD WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1 **WH-2** **WH-3**	HEAT PUMP WATER HEATER	SANCO2: GS4-45HPC-D	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE, UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET.
ST-1 **ST-2**	DOMESTIC STORAGE TANK	SANCO2: ECO-200GLBK	200 GALLON STORAGE TANK. 2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy ____ kWh	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

*Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	H.W.	WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE		FIXTURE UNITS PER APPENDIX A					
		DOMESTIC WATER WSFU				SEWER DFU	
FIXTURE	QTY	PER FIXTURE	TOTAL	HW PER FIXTURE	TOTAL	PER FIXTURE	TOTAL
Private Tank Water Closet	12	2.5	30	-	-	3	36
Lavatory (Public or Private)	12	1	12	0.75	9	1	12
Bathtub or Combo Bath/Shwr	12	4	48	3	36	2	24
Kitchen Sink	12	1.5	18	1.125	13.50	2	24
Clothes Washer	12	4	48	3	36	3	36
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**64**		**159.5**		**94.50**		**136**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 58 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 136. BUILDING SERVICE SIZE = (1X) 4".

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General Partner
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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13409 NE 133rd St.,
Kirkland, WA 98034

BUILDING 14

BID SET

DANA AMBER FORDYCE — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

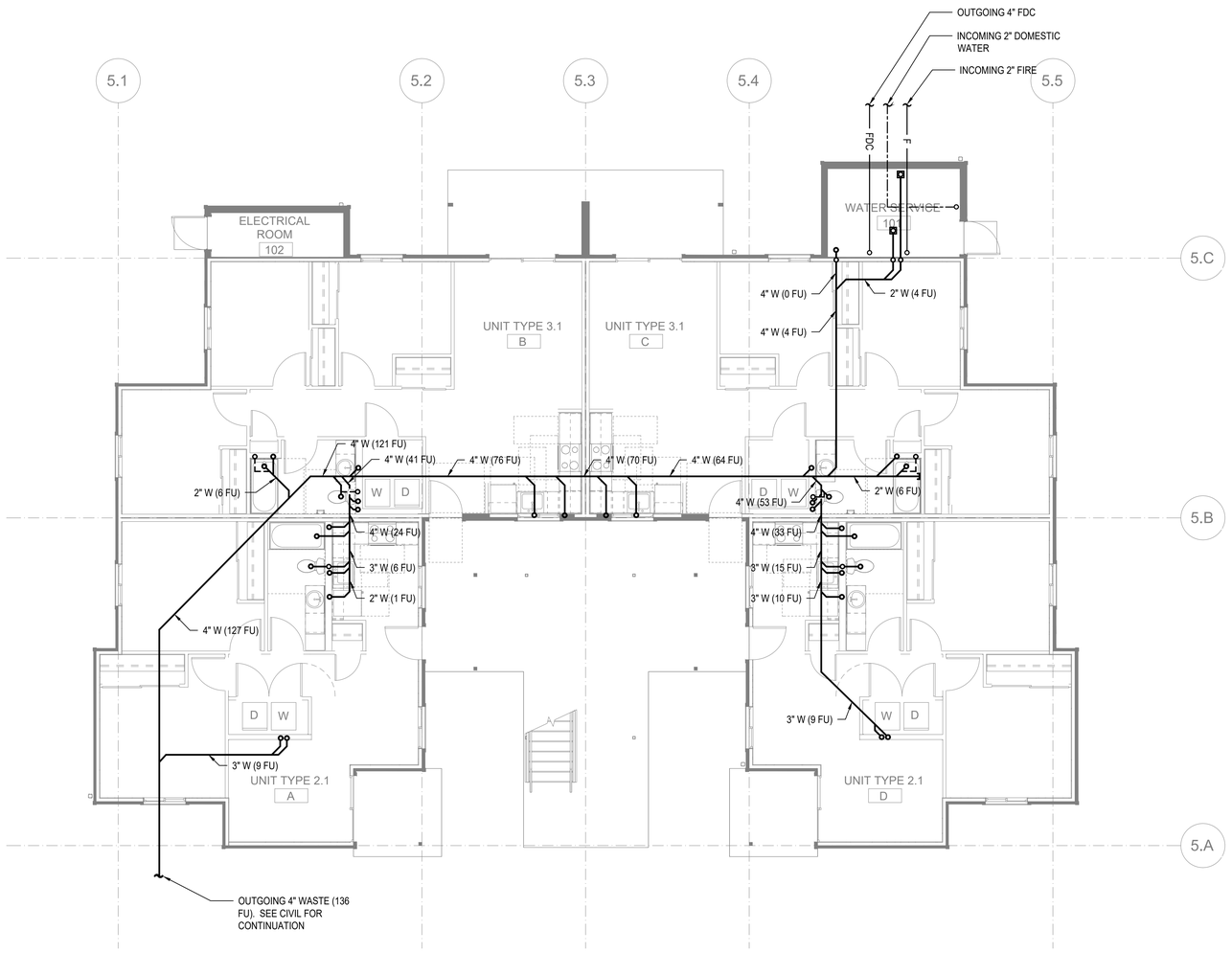
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NOTES AND SCHEDULES

PERMIT #	BMF22-09883
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P14-002

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FLOOR PLAN - BUILDING 14 FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 14

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
22041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

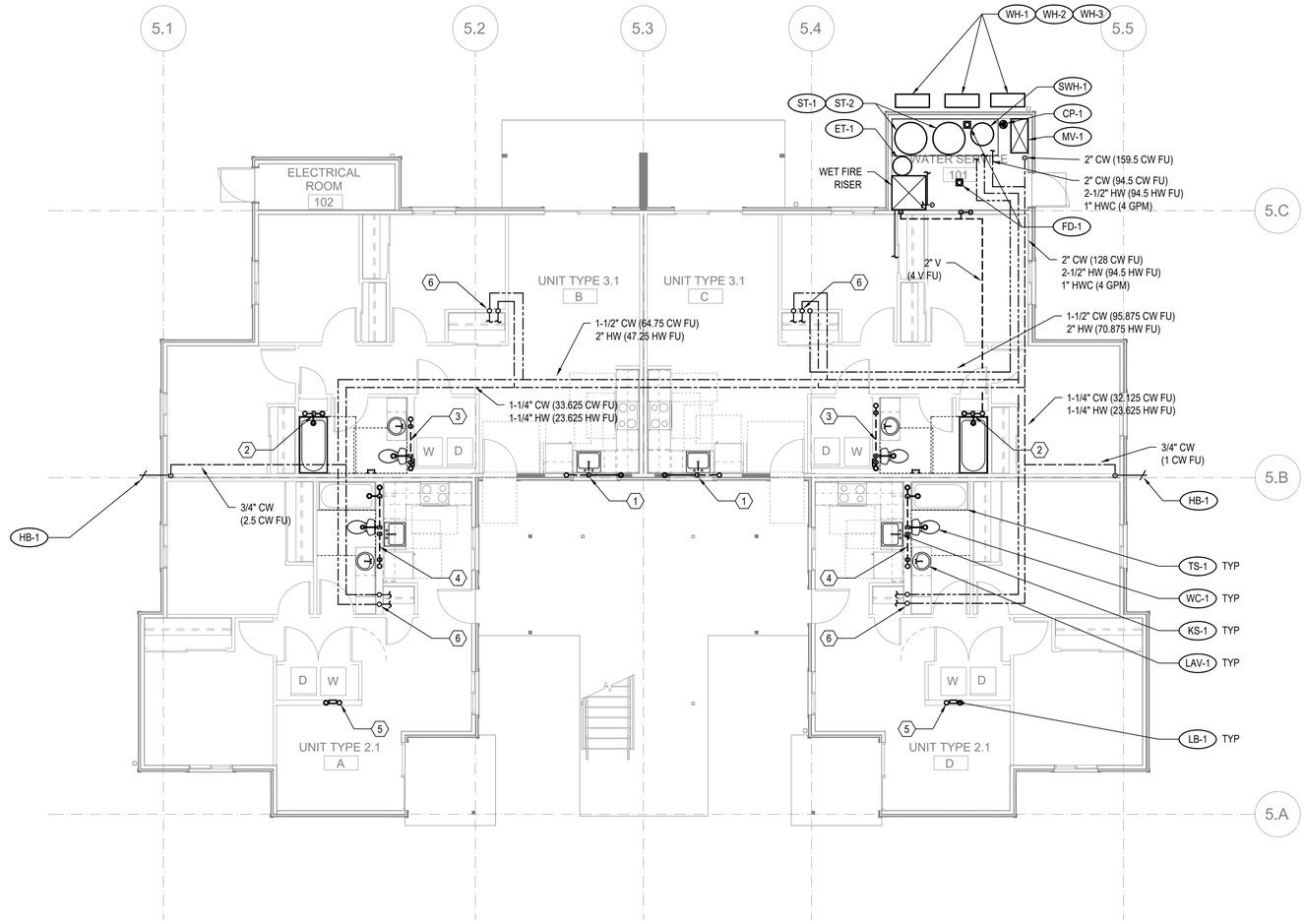
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PLAN - FOUNDATION

PERMIT #	BMF22-09883
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P14-100

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FLOOR PLAN - BUILDING 14 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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BUILDING 14

BID SET

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

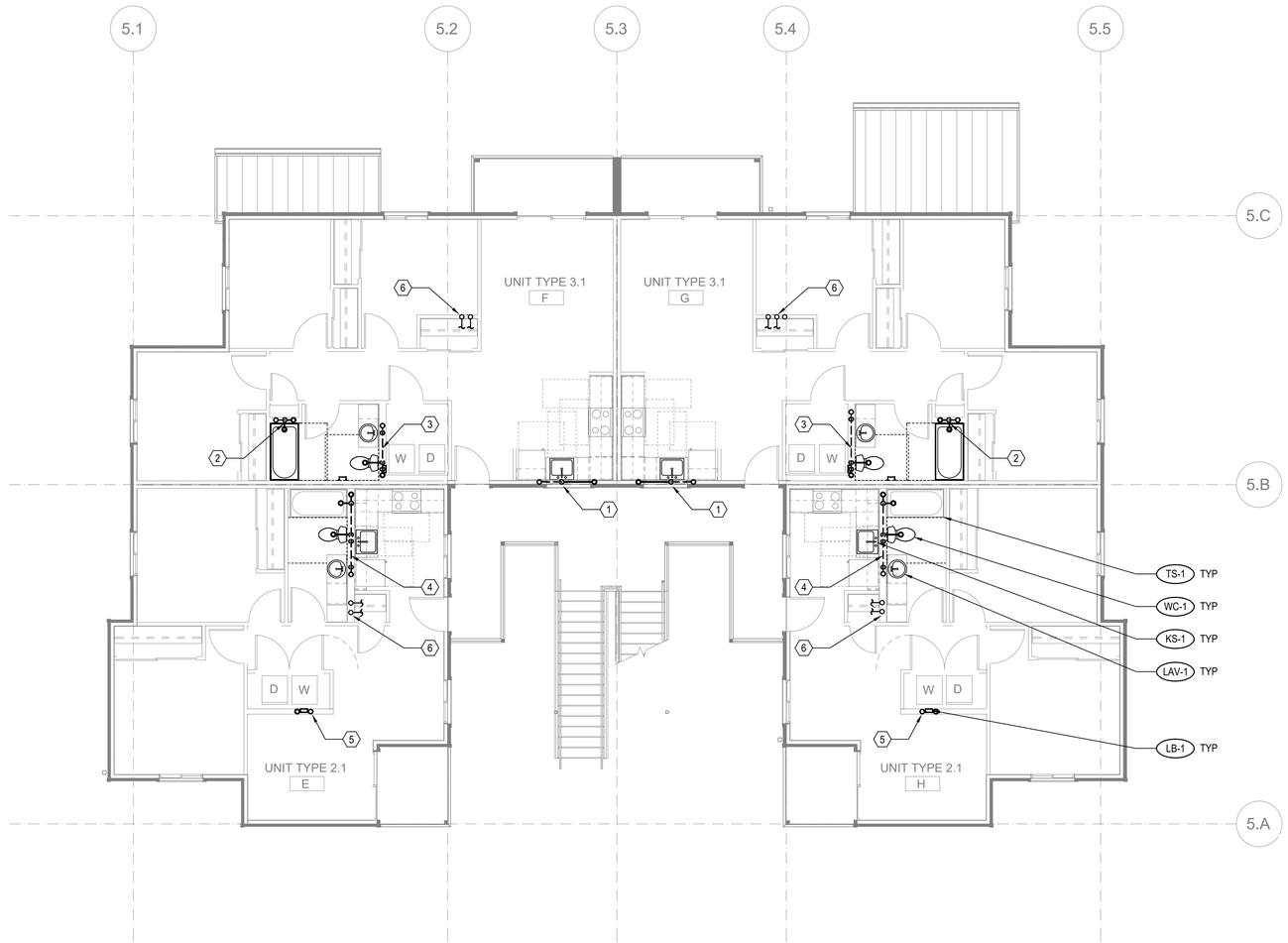
DPD STAMP

TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09883
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P14-101



FLOOR PLAN - BUILDING 14 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 14

BID SET

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

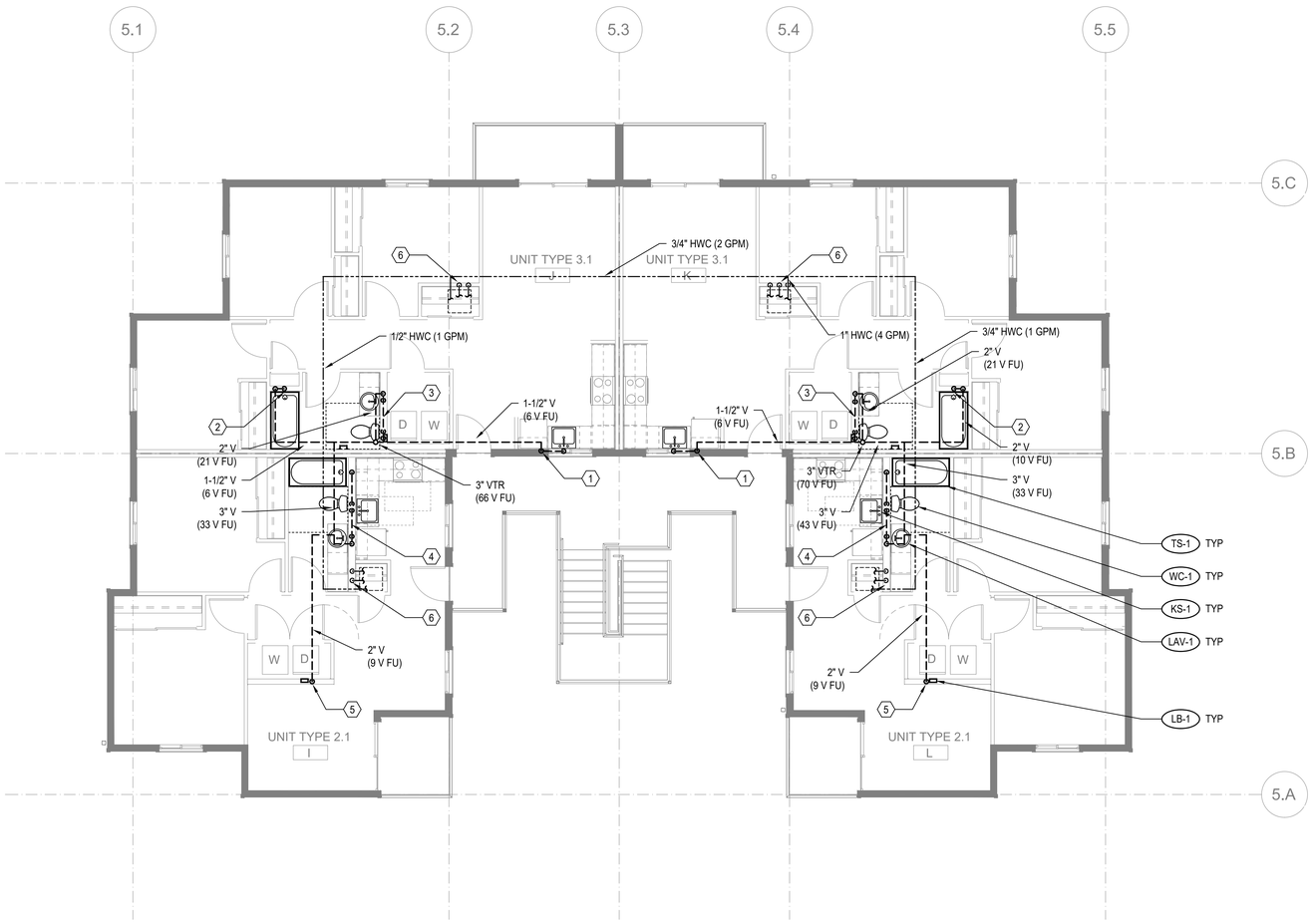
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PLAN - LEVEL 2

PERMIT #	BMF22-09883
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P14-102

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FLOOR PLAN - BUILDING 14 - LEVEL 3

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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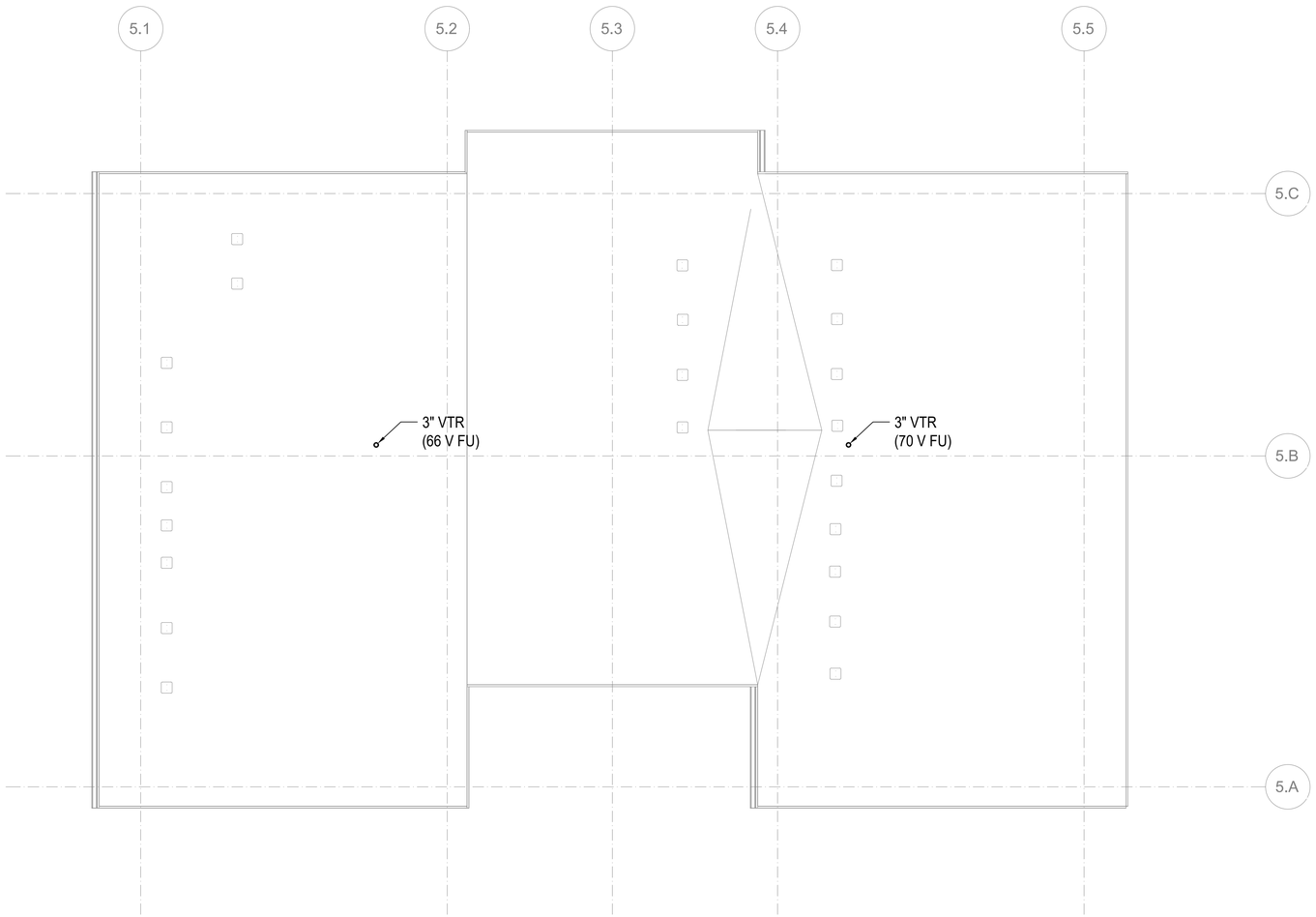
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PLAN - LEVEL 3

PERMIT #	BMF22-09883
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P14-103

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FLOOR PLAN - BUILDING 14 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

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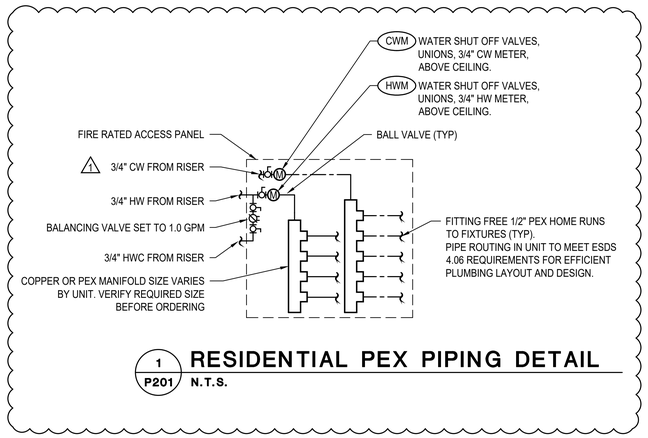
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PLAN - ROOF

PERMIT #	BMF22-09883
DRAWN	AJ, JL, PH, BF, KS
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SHEET NO.:	

P14-104

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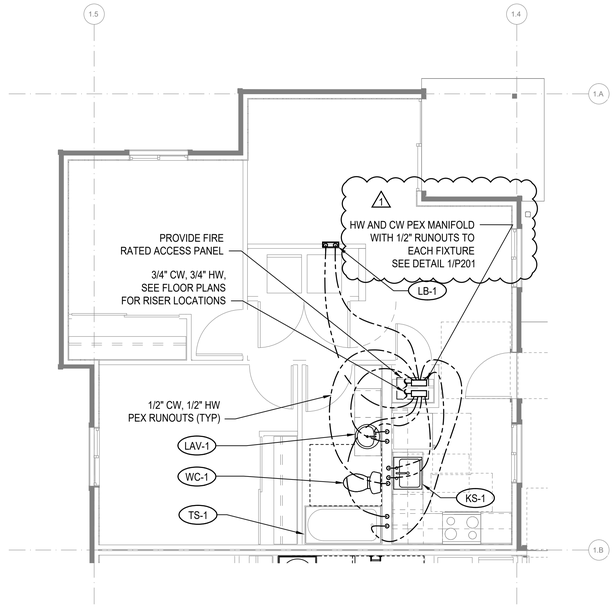


1 P201 RESIDENTIAL PEX PIPING DETAIL
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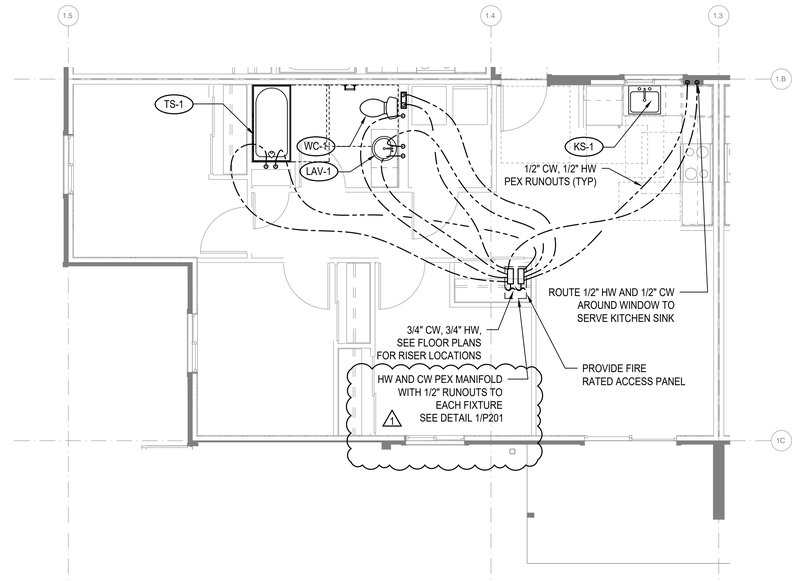
GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

FLAG NOTES (X):



2 P201 ENLARGED PLAN - 2-BED
1/4"=1'-0"
UNITS: A, D, E, H, I, L



1 P201 ENLARGED PLAN - 3-BED
1/4"=1'-0"
UNITS: B, C, F, G, J, K

10/7/2021 7:33:34 AM

SIDER+BYERS
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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13409 NE 133rd St.,
Kirkland, WA 98034

BUILDING 14

BID SET

DANA AMBER FOSTER STATE OF WASHINGTON 22041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

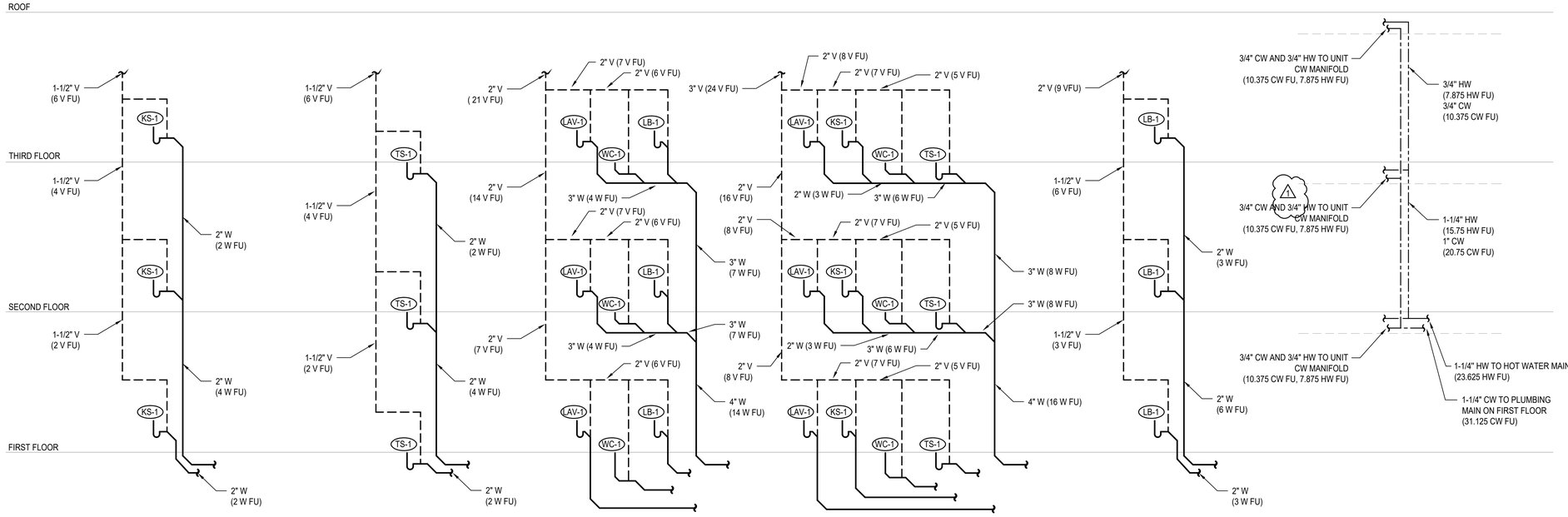
ENLARGED UNIT PLANS

PERMIT #	BMF22-09883
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P14-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - KITCHEN SINK** N.T.S.

2 P202 **WASTE RISER - TUB/SHOWER** N.T.S.

3 P202 **WASTE RISER - LB, LAV, WC** N.T.S.

4 P202 **WASTE RISER - LAV, KS, WC, TS** N.T.S.

5 P202 **WASTE RISER - LAUNDRY BOX** N.T.S.

6 P202 **WATER RISER** N.T.S.

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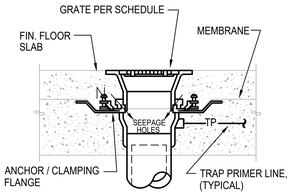
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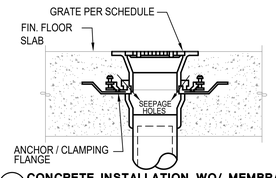
RISERS

PERMIT #	BMF22-09883
DRAWN	AJ, JL, PH, BF, KS
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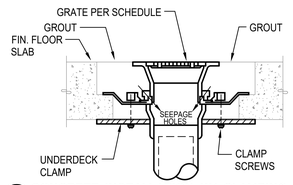
P14-202



A CONCRETE INSTALLATION W/ MEMBRANE

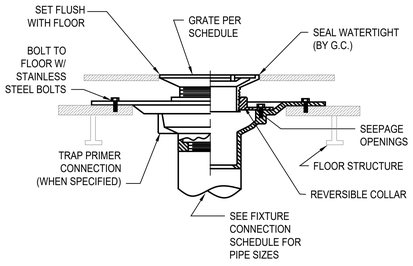


B CONCRETE INSTALLATION WO/ MEMBRANE



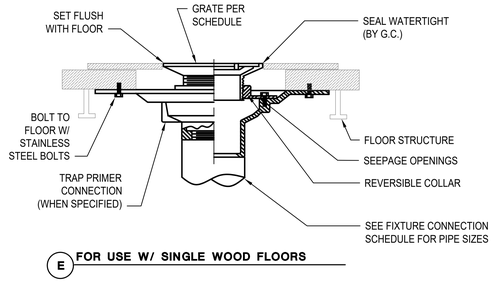
C CONCRETE INSTALLATION W/ CLAMPING RING

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



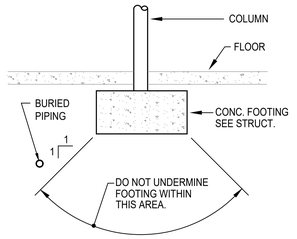
D FOR USE W/ DOUBLE WOOD FLOORS

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

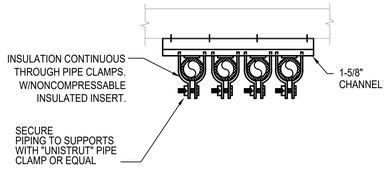


E FOR USE W/ SINGLE WOOD FLOORS

1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.

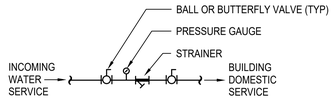


2 P301 BURIED PIPING DETAIL
N.T.S.

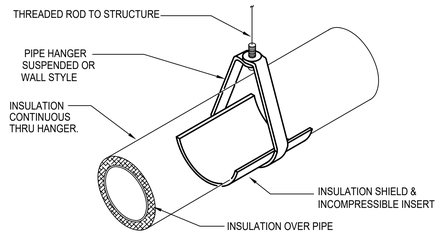


NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

3 P301 PIPE SUPPORT
N.T.S.



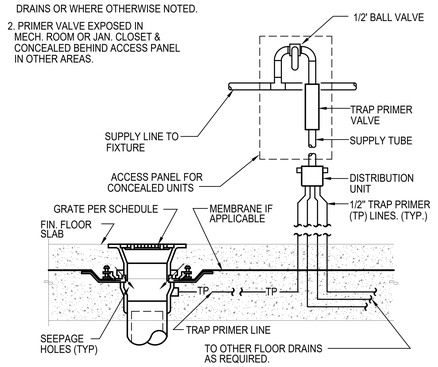
4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

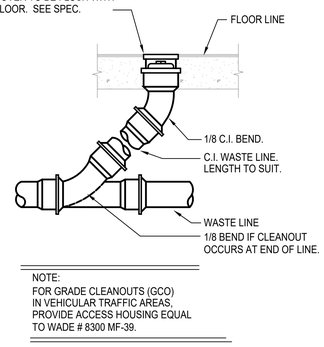
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



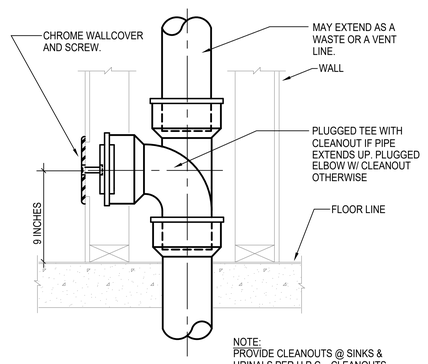
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

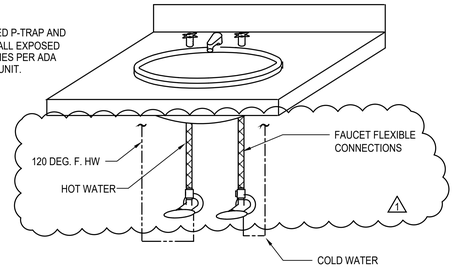
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



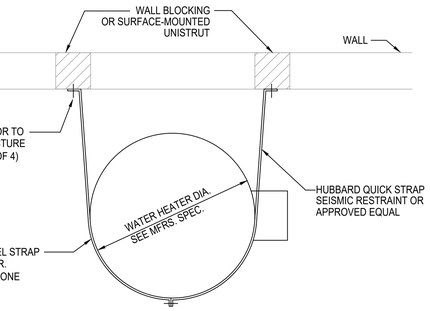
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

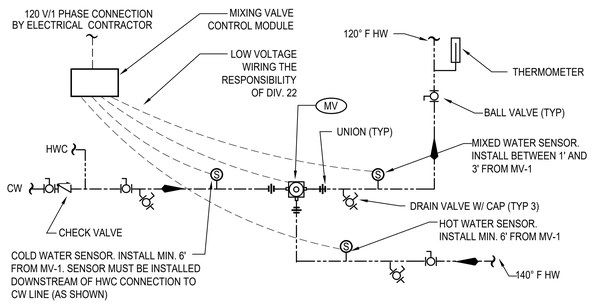
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



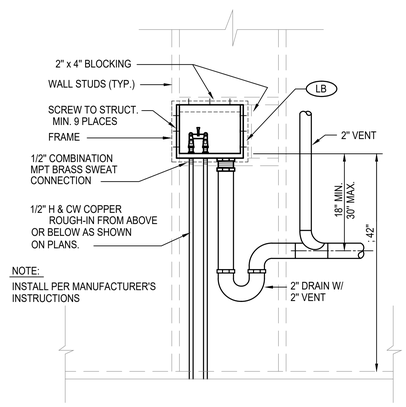
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



NOTE:
INSTALL PER MANUFACTURER'S INSTRUCTIONS

12 P301 LAUNDRY BOX DETAIL
N.T.S.

SIDER + BYERS
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Kirkland, WA 98034

BUILDING 14

BID SET

DIANE AMBER FORBES — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

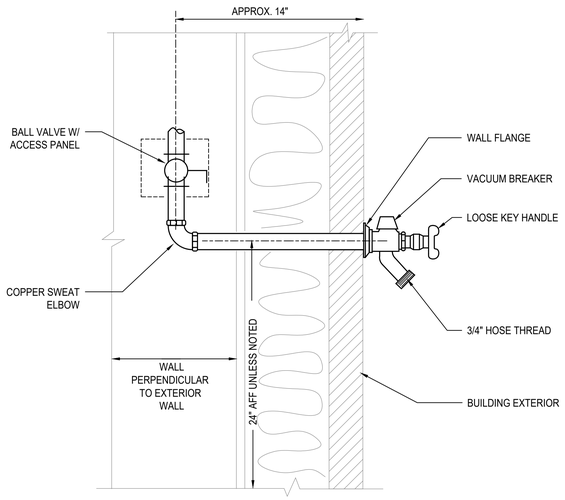
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DETAILS

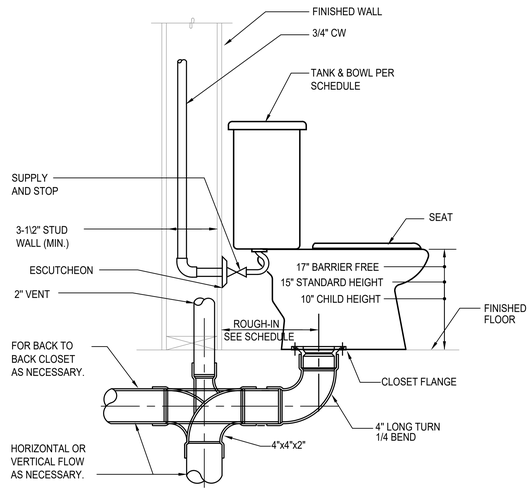
PERMIT #	BMF22-09883
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P14-301

10/7/2021 7:33:34 AM



1 P302 FREEZE PROOF HOSE BIBB DETAIL

N.T.S.



2 P302 TANK WATER CLOSET DETAIL

N.T.S.

3 P302 NOT USED

N.T.S.

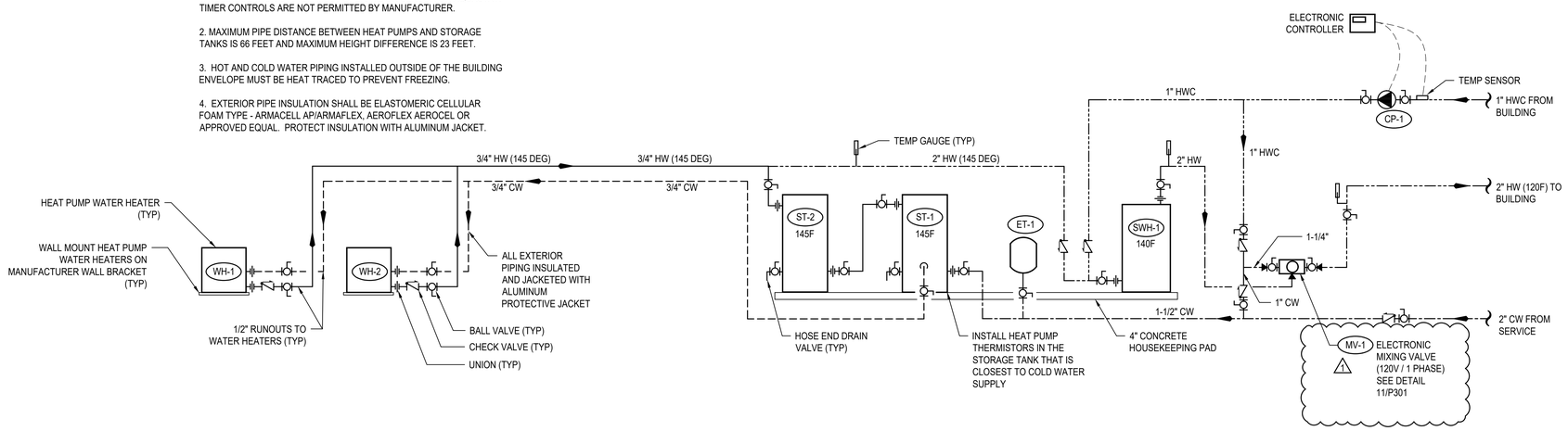
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL

N.T.S.

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

DETAILS

PERMIT #	BMF22-09883
DRAWN	AJ, JL, PH, BF, KS
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P14-302

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PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
2. SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 17 GA. BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
3. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
4. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
5. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
6. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
7. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
8. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
9. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
10. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
11. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
12. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
13. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
14. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
15. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13319 NE 133rd St.,
Kirkland, WA 98034

BUILDING 15

BID SET

JAMES LAMBER COLBURN — STATE OF WASHINGTON — 5041009 — REGISTERED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09884
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P15-001

10/7/2021 7:33:34 AM

GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA, **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA, **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.
NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.			
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.
NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.			
HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ1	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-70VC	16" DIAMETER X 45" HIGH, FAB, STEEL, MAX 150 PSI, 3/4" NPT CONNECTION SIZE. (1)
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (COLD WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1	HEAT PUMP WATER HEATER	SANCO2: GS4-45HPC-D	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE, UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
WH-2			
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET. (1)
ST-1	DOMESTIC STORAGE TANK	SANCO2: SAN-119GLBK	119 GALLON STORAGE TANK. 1500 LB WET.
ST-2			
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	(1) 1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

*Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	PIPE SIZE H.W.	PIPE SIZE WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

(1)

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE		FIXTURE UNITS PER APPENDIX A					
		DOMESTIC WATER WSFU				SEWER DFU	
FIXTURE	QTY	PER FIXTURE	TOTAL	HW PER FIXTURE	TOTAL	PER FIXTURE	TOTAL
Private Tank Water Closet	8	2.5	20	-	-	3	24
Lavatory (Public or Private)	8	1	8	0.75	6	1	8
Bathtub or Combo Bath/Shwr	4	4	16	3	12	2	8
Kitchen Sink	4	1.5	6	1.125	4.50	2	8
Clothes Washer	4	4	16	3	12	3	12
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**32**		**69.5**		**34.50**		**64**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 33 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 1.5".
BUILDING WATER METER SIZE = 1"
TOTAL BUILDING WASTE FIXTURE UNITS IS 64. BUILDING SERVICE SIZE = (1X) 4".

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13319 NE 133rd St.,
Kirkland, WA 98034

BUILDING 15

BID SET

DANA AMBER FOSTER STATE OF WASHINGTON 24041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

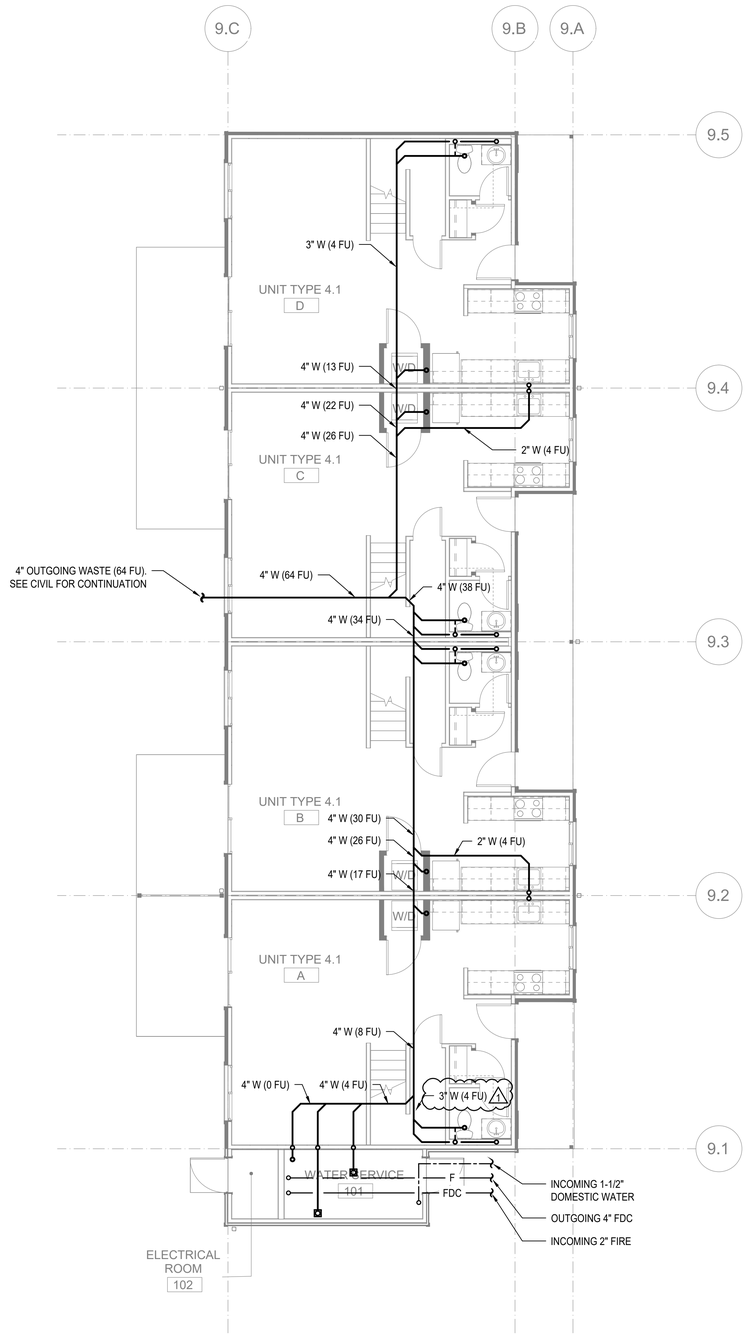
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TITLE

NOTES AND SCHEDULES

PERMIT #	BMF22-09884
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P15-002

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 15 - FOUNDATION

SCALE: 3/16"=1'-0"

10/7/2021 7:33:34 AM

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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BUILDING 15

BID SET

DANA AMBER CAMPBELL — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

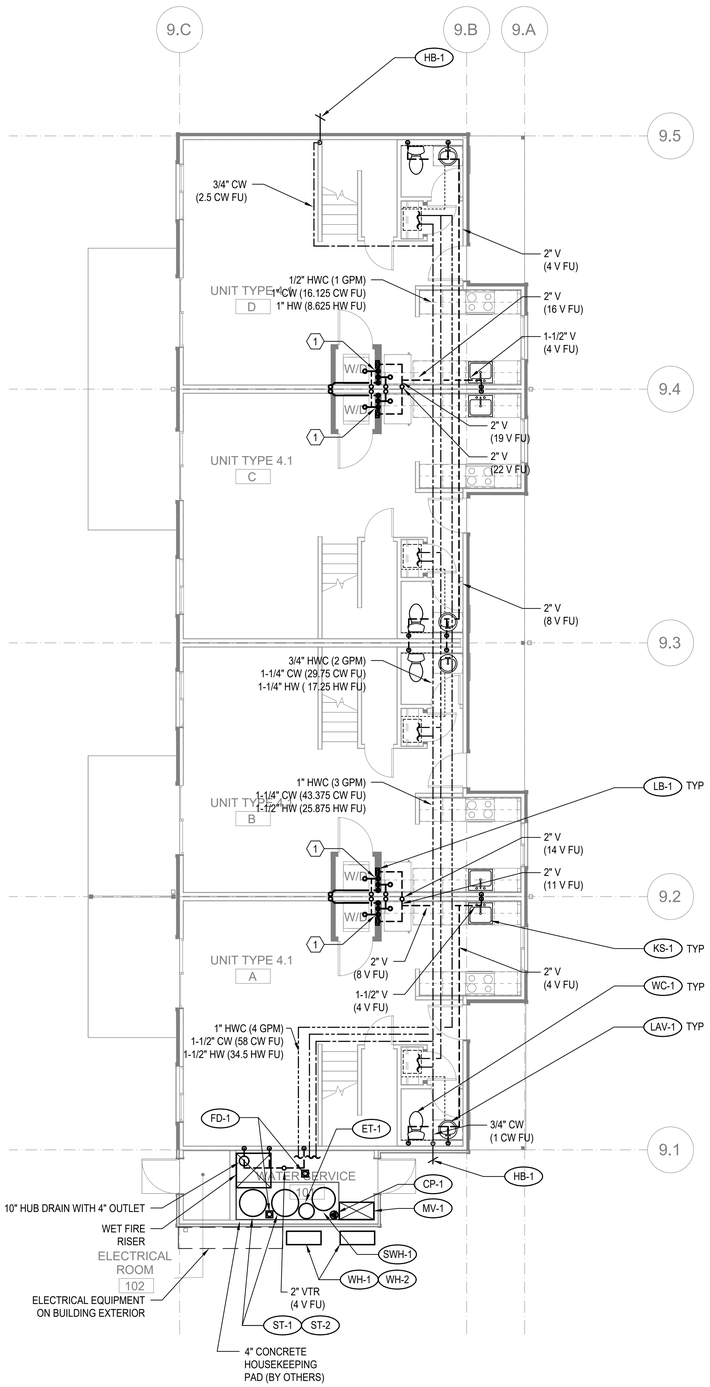
DPD STAMP

TITLE

PLAN - FOUNDATION

PERMIT #	BMF22-09884
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P15-100



FLOOR PLAN - BUILDING 15 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P-202 FOR WASTE AND VENT PIPE SIZING.

GENERAL NOTES:

1. PROVIDE HOT WATER, WASTE, AND AIR GAP CONNECTIONS FOR DISHWASHERS. (1)

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BID SET

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NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

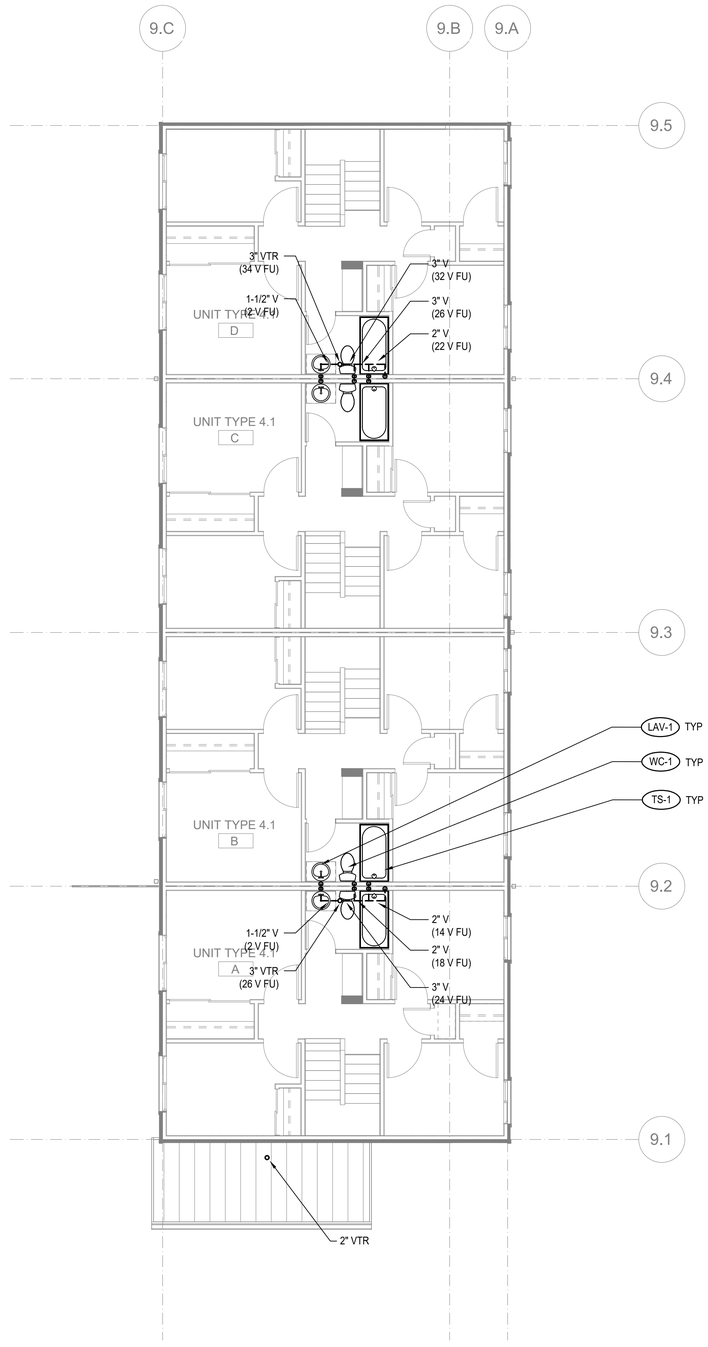
TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09884
DRAWN	AJ, JL, PH, BF, KS
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SHEET NO.:	

P15-101

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FLOOR PLAN - BUILDING 15 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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BID SET

DANA AMBER JOHNSON
STATE OF WASHINGTON
22041009
REGISTERED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

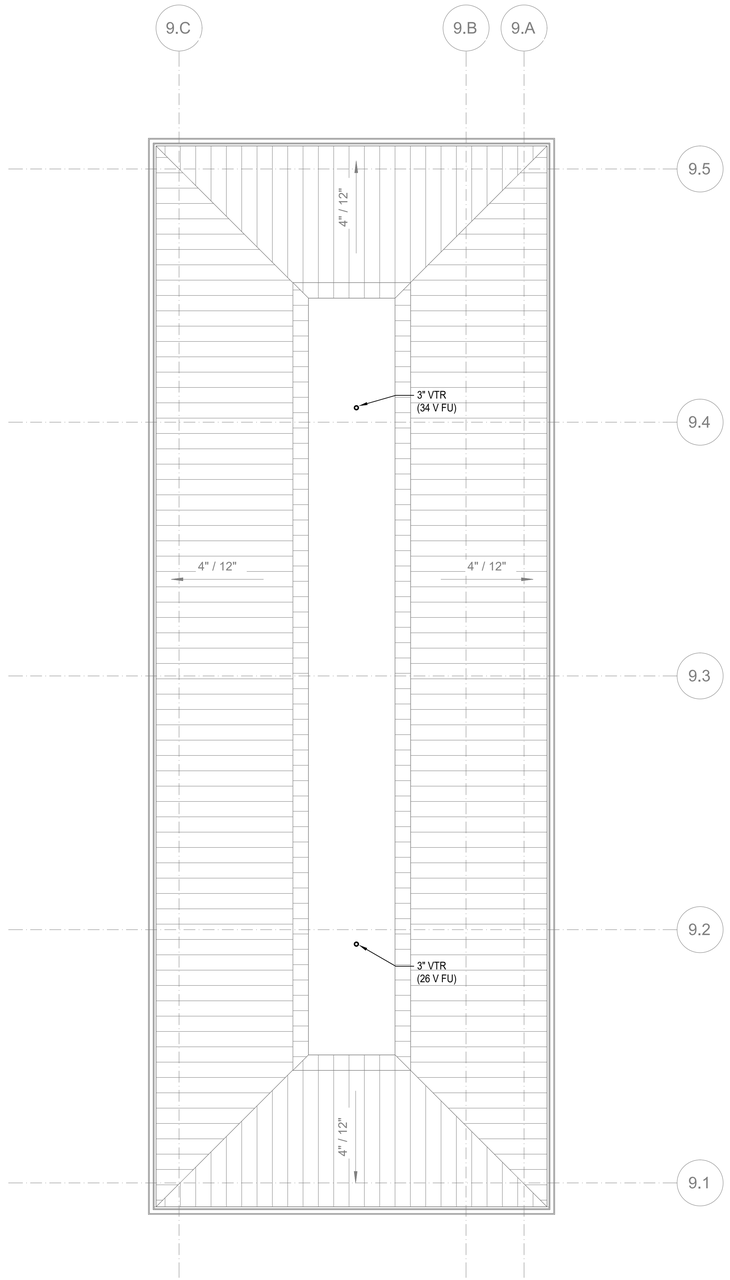
TITLE

PLAN - LEVEL 2

PERMIT #	BMF22-09884
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P15-102

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 15 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES.

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
192 Nickerson, Suite #300
Seattle, Washington 98109
Phone: 206.285.2966

SMR Architects
117 S. Main St., Suite 400
Seattle, WA 98104

PH: 206.623.1104
FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13319 NE 133rd St.,
Kirkland, WA 98034

BUILDING 15

BID SET

DANIEL AMBER FOX — STATE OF WASHINGTON — 24410 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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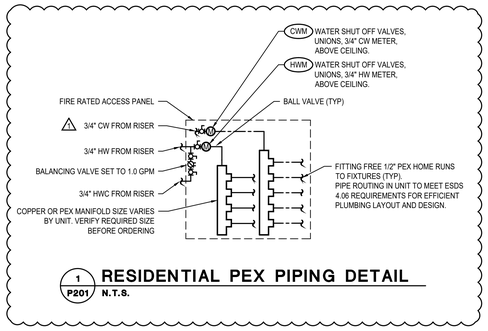
TITLE

PLAN - ROOF

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ISSUE DATE	4/14/2023
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SHEET NO.:	

P15-103

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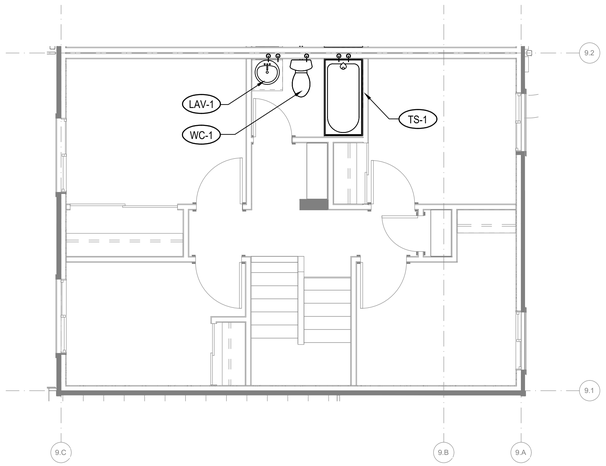
1/P201 RESIDENTIAL PEX PIPING DETAIL

N.T.S.

GENERAL NOTES:

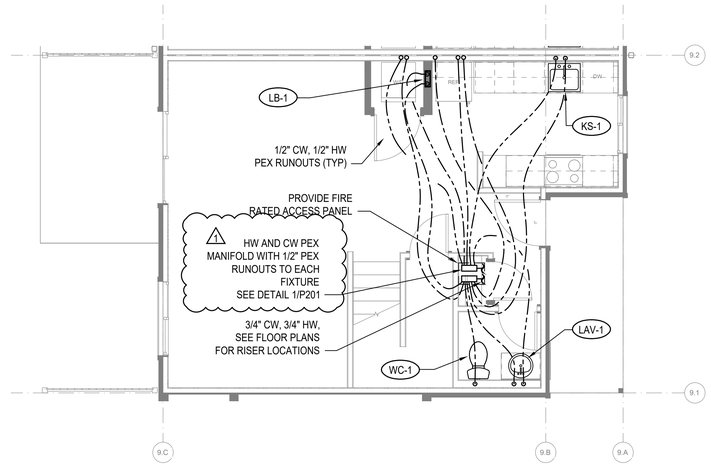
1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

FLAG NOTES (X):



2/P201 ENLARGED PLAN - TH - LEVEL 2

1/4"=1'-0"



1/P201 ENLARGED PLAN - TH - LEVEL 1

1/4"=1'-0"

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Kirkland, WA 98034

BUILDING 15

BID SET

DANA AMBER FOSTER — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

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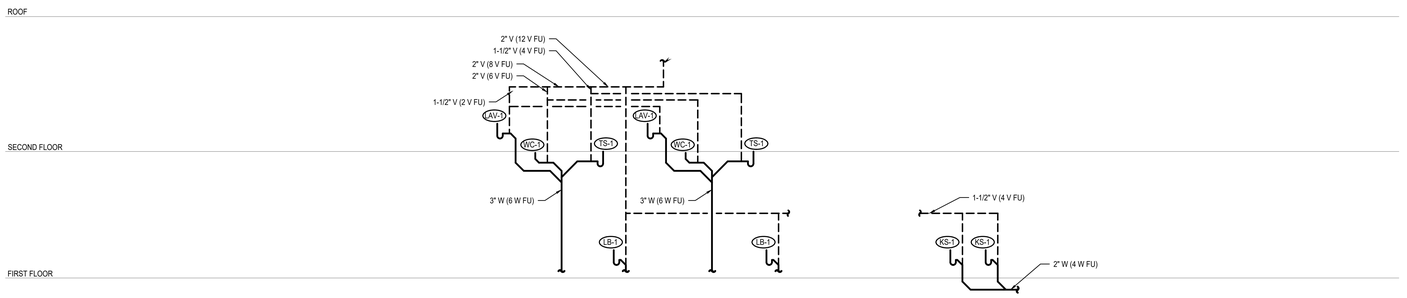
ENLARGED UNIT PLANS

PERMIT #	BMF22-09884
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P15-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - LB, LAV, WC, TS**
N.T.S.

1 P202 **WASTE RISER - KS**
N.T.S.

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Kirkland, WA 98034

BUILDING 15

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DANA AMBER CAMERON
STATE OF WASHINGTON
20041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

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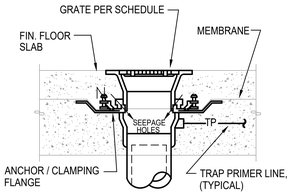
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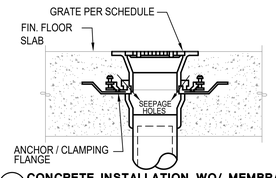
RISERS

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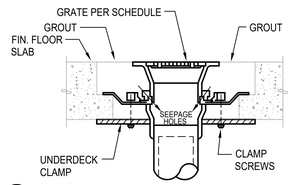
P15-202



A CONCRETE INSTALLATION W/ MEMBRANE

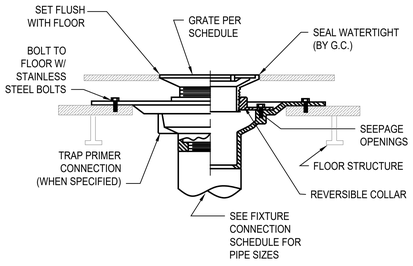


B CONCRETE INSTALLATION WO/ MEMBRANE



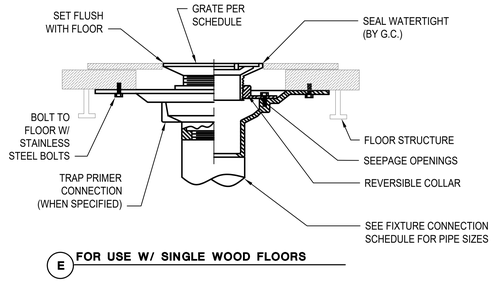
C CONCRETE INSTALLATION W/ CLAMPING RING

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



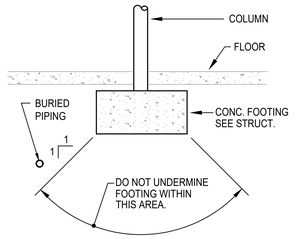
D FOR USE W/ DOUBLE WOOD FLOORS

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

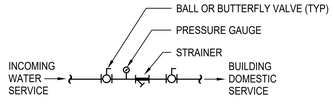


E FOR USE W/ SINGLE WOOD FLOORS

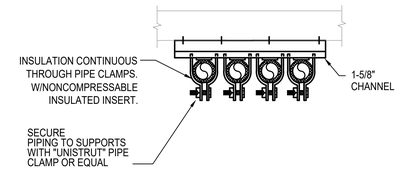
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



2 P301 BURIED PIPING DETAIL
N.T.S.

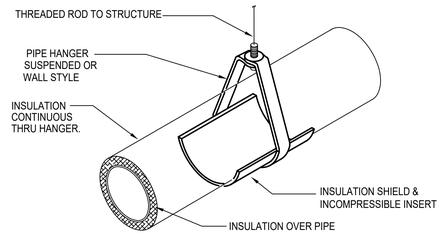


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

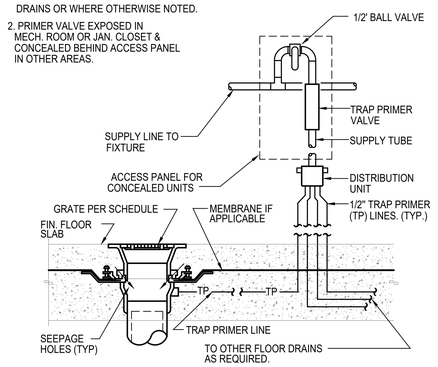
3 P301 PIPE SUPPORT
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

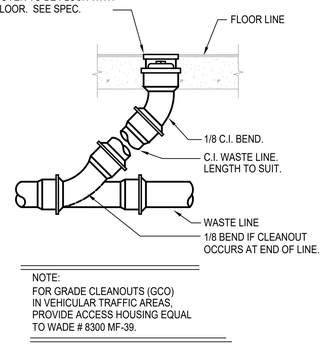
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



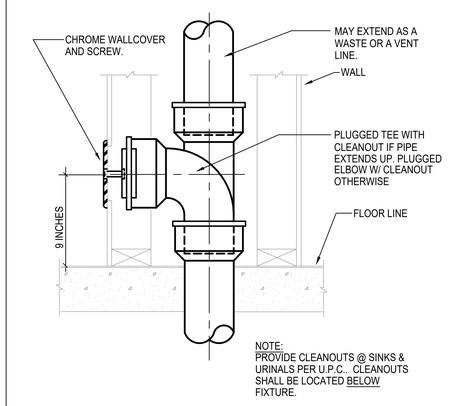
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

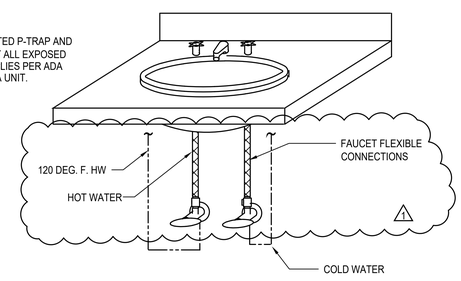
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



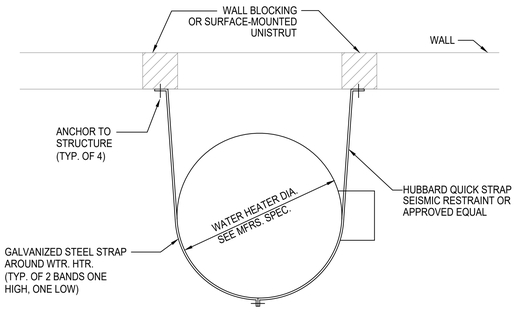
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

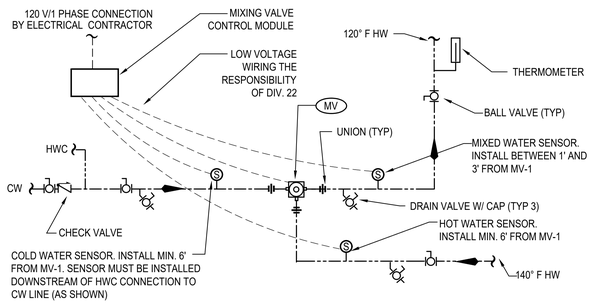
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



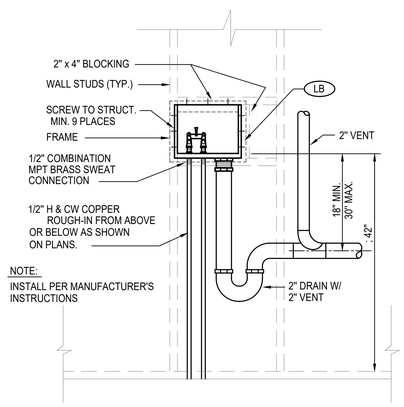
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



NOTE:
INSTALL PER MANUFACTURER'S INSTRUCTIONS

12 P301 LAUNDRY BOX DETAIL
N.T.S.

SIDER + BYERS
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BUILDING 15

BID SET

DIANE AMBER FORDON — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
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REVISIONS / NOTES

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DPD STAMP

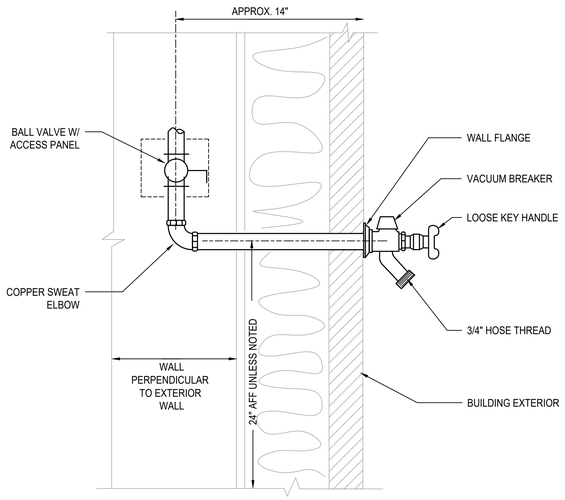
TITLE

DETAILS

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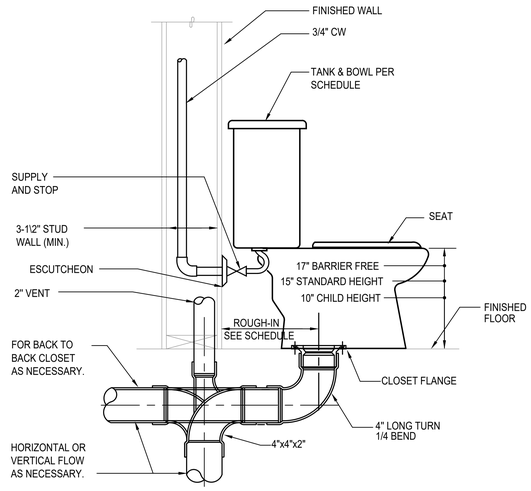
P15-301

10/7/2021 7:33:34 AM



1 P302 FREEZE PROOF HOSE BIBB DETAIL

N.T.S.



2 P302 TANK WATER CLOSET DETAIL

N.T.S.

3 P302 NOT USED

N.T.S.

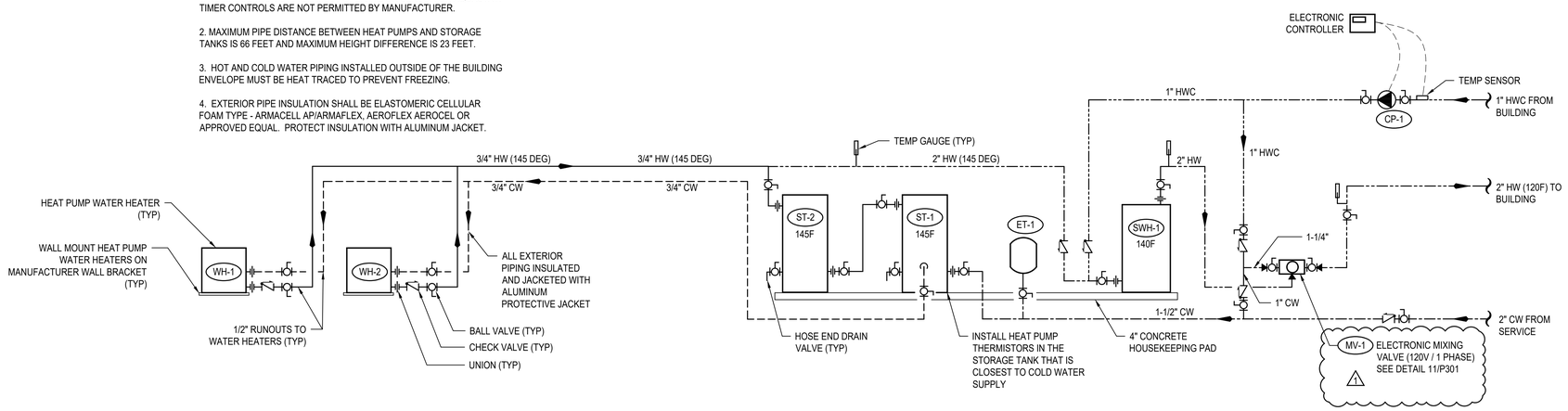
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL

N.T.S.

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P15-302

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	LEVEL 3 FLOOR PLAN
P-104	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
   SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED TUBULAR BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ALT	ALTERNATE
AP	ACCESS PANEL
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL/ARCHITECT
AS	AIR SEPARATOR
AUX	AUXILIARY
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BHP	BRAKE HORSE POWER
BLDG	BUILDING
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CA	COMBUSTION AIR
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COND	CONDENSATE
CW	COLD WATER
CX	CONNECT TO EXISTING
dB	DECIBEL
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DDCV	DOUBLE DETECTOR CHECK VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT
DHW	DOMESTIC HOT WATER
DHWC	DOMESTIC HOT WATER RECIRCULATION
Ø OR DIA	DIAMETER
DN	DOWN
DWG(S)	DRAWING(S)
DWV	DRAIN, WASTE, VENT
EA	EACH
EEW	EMERGENCY EYEWASH
EFF	EFFICIENCY
ELEV	ELEVATION
EQUIP	EQUIPMENT
ES	EMERGENCY SHOWER
ET	EXPANSION TANK
EX	EXISTING/EXISTING TO REMAIN
EXP	EXPANSION
FC	FAIL CLOSED
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR
FLA	FULL LOAD AMPS
FM	FORCE MAIN
FO	FAIL OPEN
FP	FIRE PROTECTION
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOOR SINK
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY
FT	FEET/FOOT
FTG	FOOTING
FV	FLUSH VALVE
G	NATURAL GAS
GA	GAUGE
GAL	GALLON
G.C.	GENERAL CONTRACTOR
GCO	GRADE CLEANOUT
GD	GARAGE DRAIN
GPF	GALLONS PER FLUSH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
H	HEIGHT
HB	HOSE BIBB
HBVB	HOSE BIBB VACUUM BREAKER
HD	HEAD
HP	HORSEPOWER
HS	HAND SINK
HW	HOT WATER
HX	HEAT EXCHANGER
IE	INVERT ELEVATION
IN	INCH/INCHES
KW	KILOWATT/KILOWATTS
LAV	LAVATORY
LBS	POUNDS
LF	LINEAL FOOT
LTG	LIGHTING
LWT	LEAVING WATER TEMPERATURE
MBH	1000 BRITISH THERMAL UNITS PER HOUR
MED	MEDIUM
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MEZZ	MEZZANINE
MIN	MINIMUM
MISC	MISCELLANEOUS
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NOM	NOMINAL
NPC	NON-POTABLE COLD WATER
NPCW	NON POTABLE COLD WATER
NPH	NON-POTABLE HOT WATER
NPHR	NON-POTABLE HOT WATER RETURN
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OD	OUTSIDE DIAMTER/OVERLOW DRAIN
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
ORD	OVERFLOW ROOF DRAIN
ORL	OVERFLOW RAINWATER LEADER
ΔP	PRESSURE DIFFERENTIAL
PD	PLANTER DRAIN; PRESSURE DROP
PERF	PERFORATED
PH	PHASE
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER INCH GAUGE
QTY	QUANTITY
RD	ROOF DRAIN
REQD	REQUIRED
RL	RAIN WATER LEADER
RM	ROOM
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
RLX	RELOCATE EXISTING
RV	RELIEF VALVE
RX	REMOVE EXISTING
S	SINK
S	STORM
SCFM	STANDARD CUBIC FEET PER MINUT
SD	STORM DRAIN
SF	SQUARE FOOT
SFU	SUPPLY FIXTURE UNIT
SH	SHOWER
S.O.V.	SHUTOFF VALVE
SPEC	SPECIFICATION
S/S, OR SS	STAINLESS STEEL
STD	STANDARD
SYM	SYMBOL
T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
TBD	TO BE DETERMINED
TD	TRENCH DRAIN
TEMP	TEMPERATURE
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOD	TOP OF DECK
TOJ	TOP OF JOIST
TOS	TOP OF SLAB/TOP OF STEEL
TP	TRAP PRIMER
T&P	TEMPERATURE & PRESSURE
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
V	VENT(S)
V	VOLT
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VIB	VALVE-IN-BOX
VTR	VENT THROUGH ROOF
W	WASTE/WATER
W/	WITH
W/IN	WITHIN
W/O	WITHOUT
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER
WPD	WATER PRESSURE DROP
WT	WEIGHT
YCO	YARD CLEANOUT

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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BUILDING 16

BID SET

DANA AMBER CLARK — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09887
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P16-001

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GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-35-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE.
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (COLD WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1 **WH-2** **WH-3**	HEAT PUMP WATER HEATER	SANCO2: GS4-45HPC-D	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE, UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET.
ST-1 **ST-2**	DOMESTIC STORAGE TANK	SANCO2: ECO-200GLBK	200 GALLON STORAGE TANK. 2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

*Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	H.W.	WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE		FIXTURE UNITS PER APPENDIX A					
		DOMESTIC WATER WSFU				SEWER DFU	
FIXTURE	QTY	PER FIXTURE	TOTAL	HW PER FIXTURE	TOTAL	PER FIXTURE	TOTAL
Private Tank Water Closet	12	2.5	30	-	-	3	36
Lavatory (Public or Private)	12	1	12	0.75	9	1	12
Bathtub or Combo Bath/Shwr	12	4	48	3	36	2	24
Kitchen Sink	12	1.5	18	1.125	13.50	2	24
Clothes Washer	12	4	48	3	36	3	36
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**64**		**159.5**		**94.50**		**136**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 58 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 136. BUILDING SERVICE SIZE = (1X) 4".

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King County Housing Authority

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c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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BUILDING 16

BID SET

DANA AMBER FORDYCE STATE OF WASHINGTON 21041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

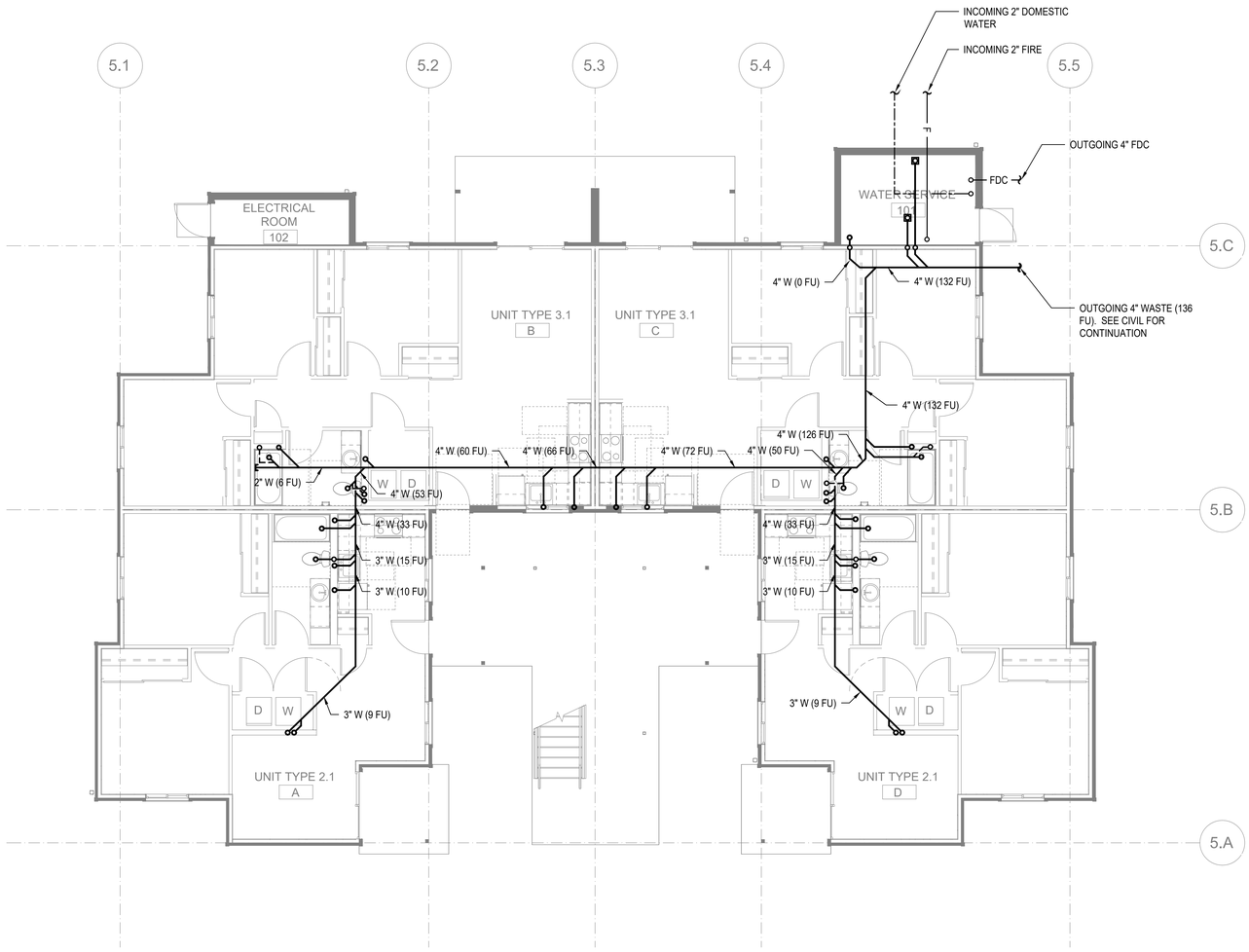
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NOTES AND SCHEDULES

PERMIT #	BMF22-09887
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
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P16-002

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FLOOR PLAN - BUILDING 16 FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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1	5.19.23	BID ADDENDUM 2

DPD STAMP

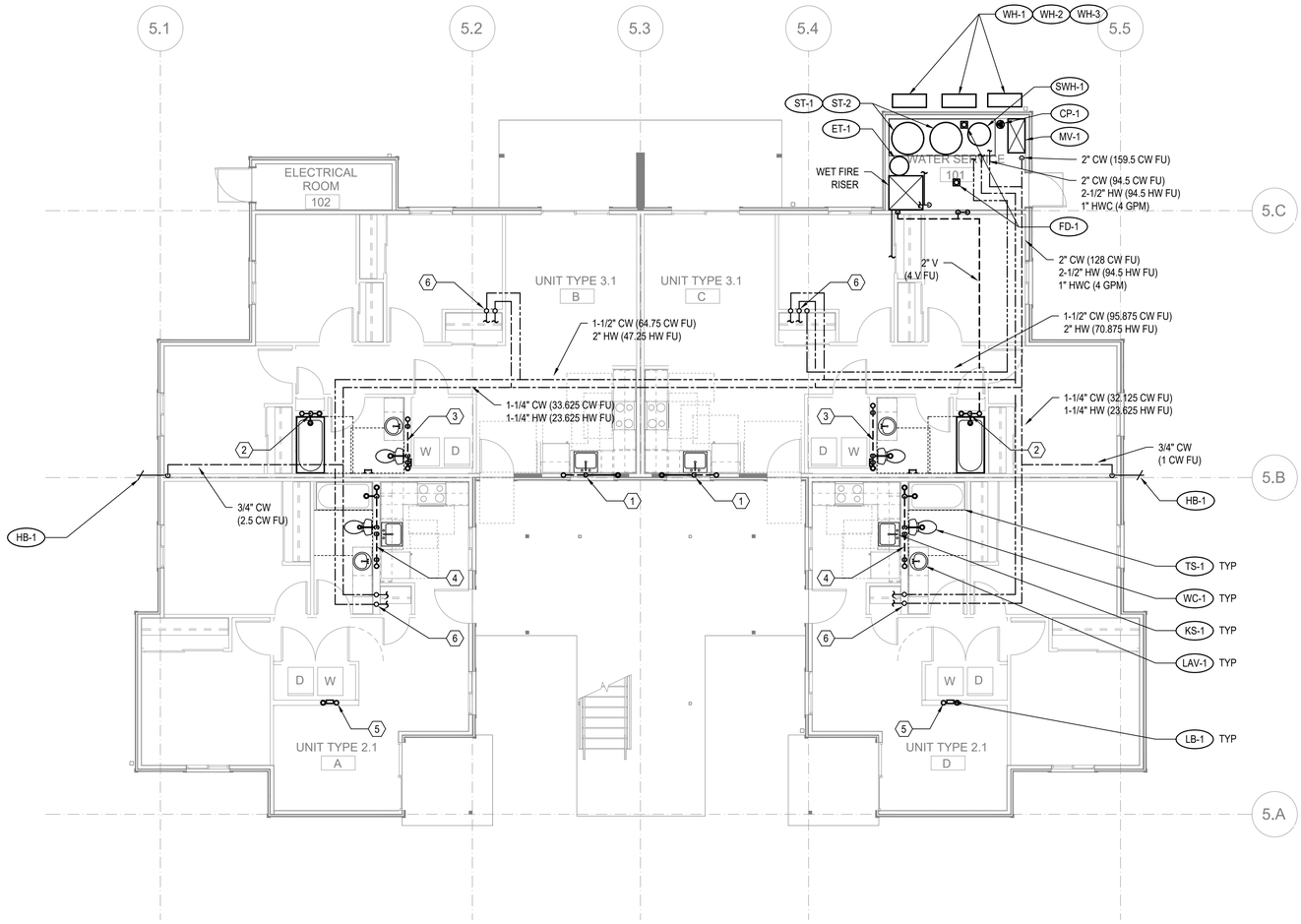
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PLAN - FOUNDATION

PERMIT #	BMF22-09887
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P16-100

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 16 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

10/7/2021 7:33:34 AM

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
192 Nickerson, Suite #300
Seattle, Washington 98109
Phone: 206.285.2966

SMR Architects
117 S. Main St., Suite 400
Seattle, WA 98104

PH: 206.623.1104
FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13407 NE 133rd St.,
Kirkland, WA 98034

BUILDING 16

BID SET

DANA AMBER FOSTER — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

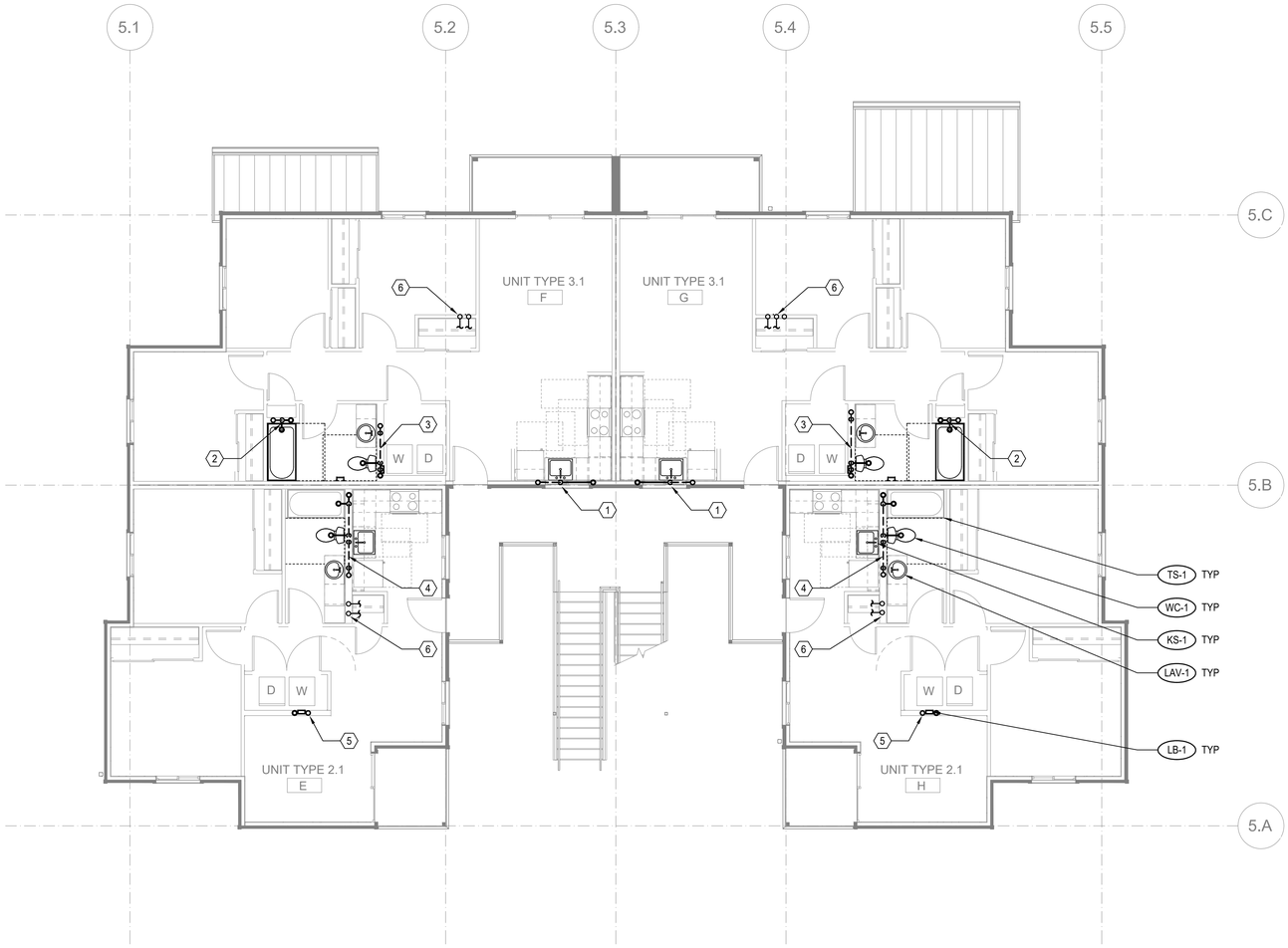
DPD STAMP

TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09887
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P16-101



FLOOR PLAN - BUILDING 16 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 16

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
22041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

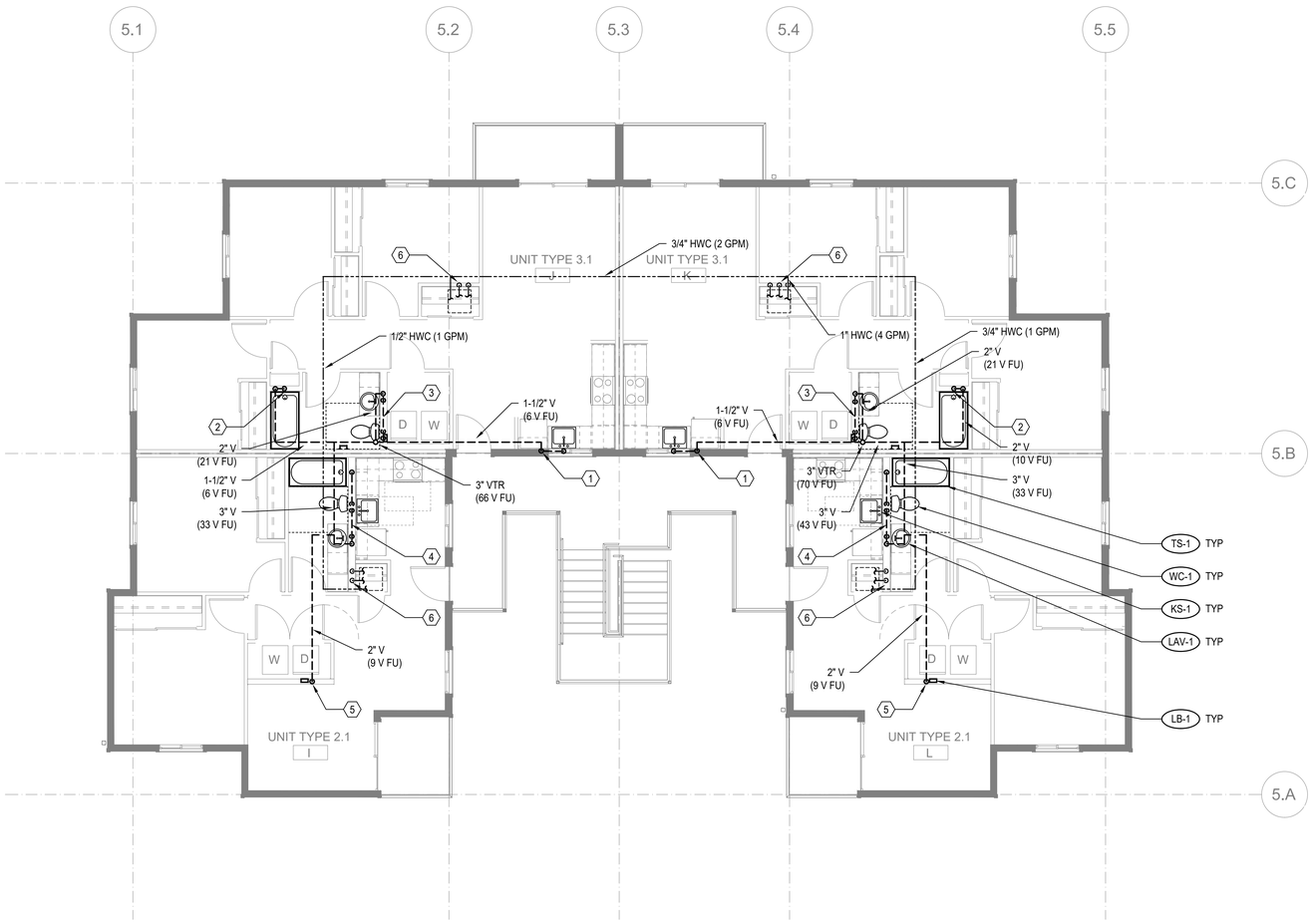
PLAN - LEVEL 2

PERMIT #	BMF22-09887
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P16-102

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 16 - LEVEL 3

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 16

BID SET

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STATE OF WASHINGTON
22041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

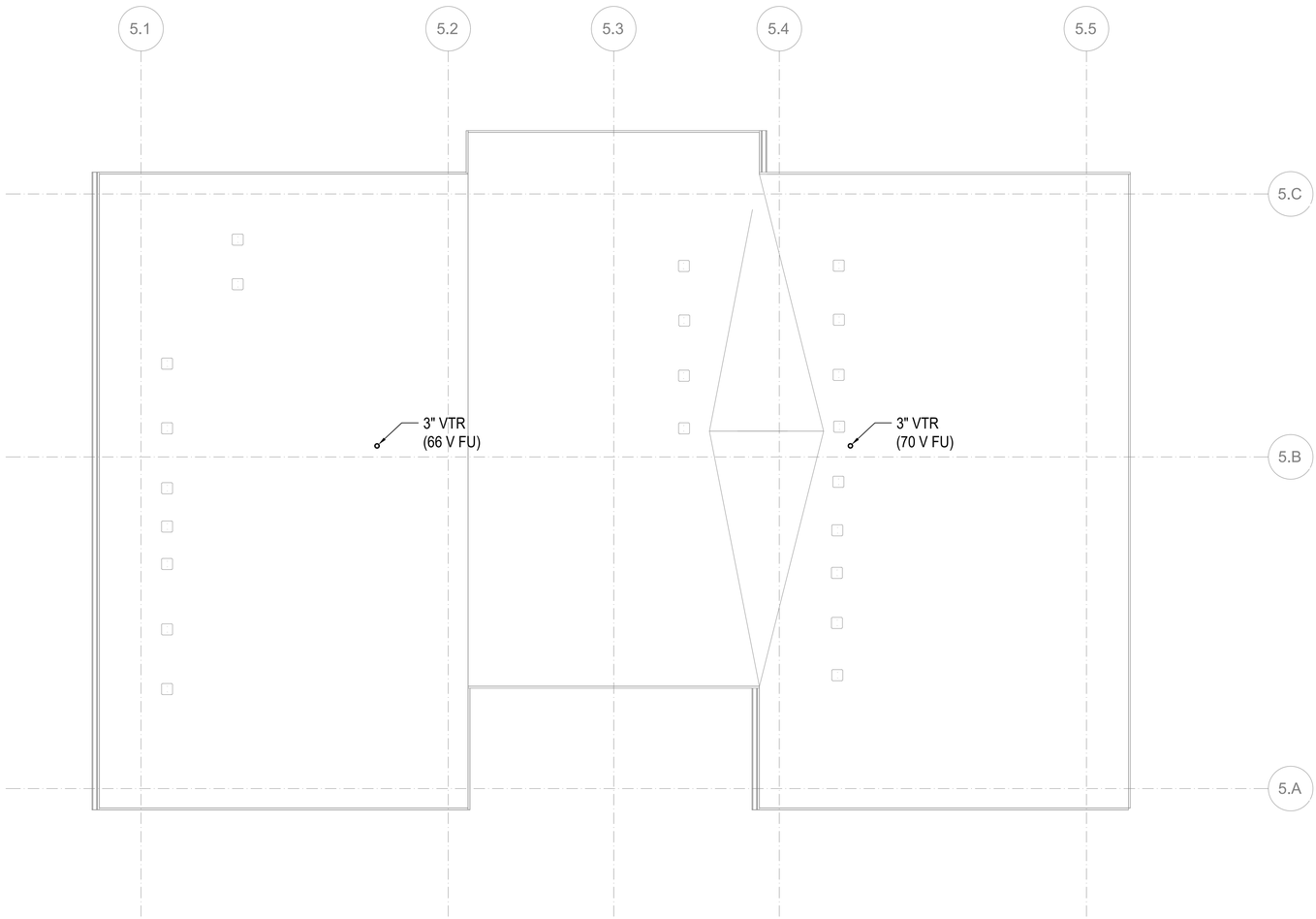
TITLE

PLAN - LEVEL 3

PERMIT #	BMF22-09887
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P16-103

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 16 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 16

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
20041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

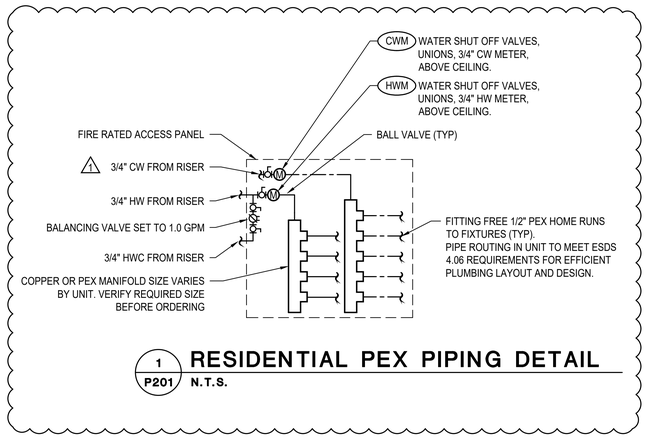
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PLAN - ROOF

PERMIT #	BMF22-09887
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P16-104

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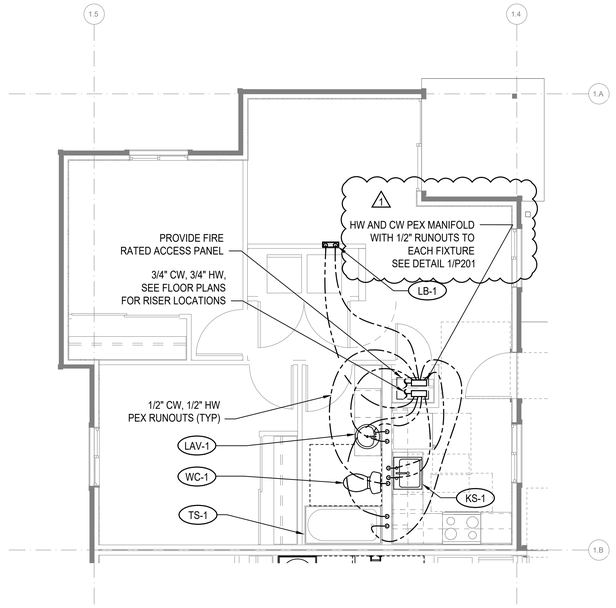
1 P201 **RESIDENTIAL PEX PIPING DETAIL**

N.T.S.

GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

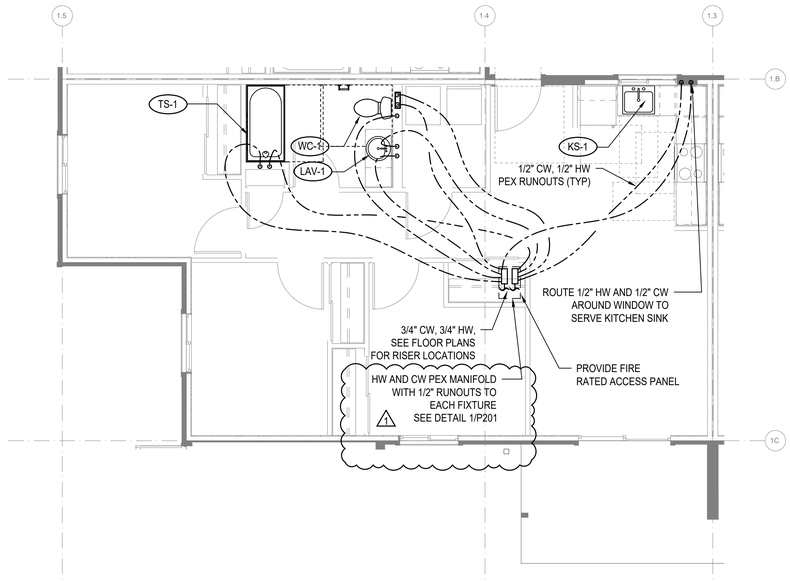
FLAG NOTES (X):



2 P201 **ENLARGED PLAN - 2-BED**

1/4"=1'-0"

UNITS: A, D, E, H, I, L



1 P201 **ENLARGED PLAN - 3-BED**

1/4"=1'-0"

UNITS: B, C, F, G, J, K

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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13407 NE 133rd St.,
Kirkland, WA 98034

BUILDING 16

BID SET

DANA AMBER FOSTER STATE OF WASHINGTON 22041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

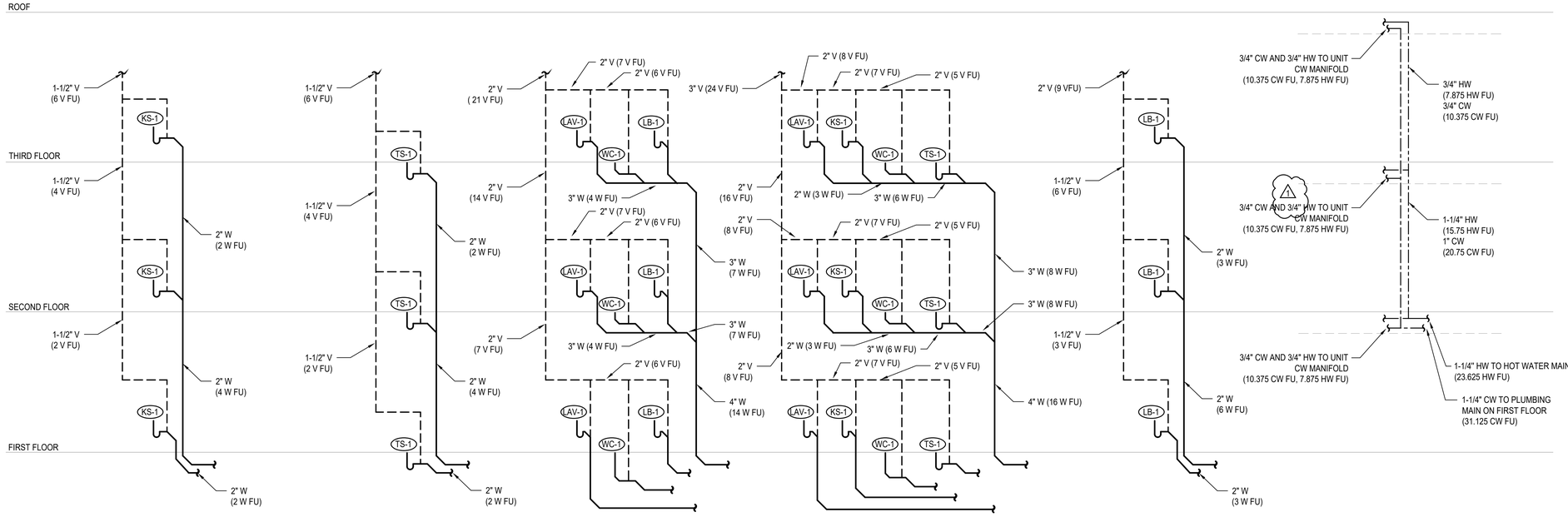
ENLARGED UNIT PLANS

PERMIT #	BMF22-09887
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
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SHEET NO.:	

P16-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - KITCHEN SINK** N.T.S.

2 P202 **WASTE RISER - TUB/SHOWER** N.T.S.

3 P202 **WASTE RISER - LB, LAV, WC** N.T.S.

4 P202 **WASTE RISER - LAV, KS, WC, TS** N.T.S.

5 P202 **WASTE RISER - LAUNDRY BOX** N.T.S.

6 P202 **WATER RISER** N.T.S.

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

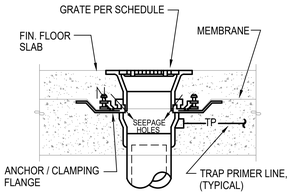
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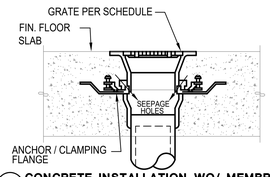
RISERS

PERMIT #	BMF22-09887
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

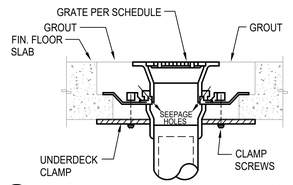
P16-202



A CONCRETE INSTALLATION W/ MEMBRANE

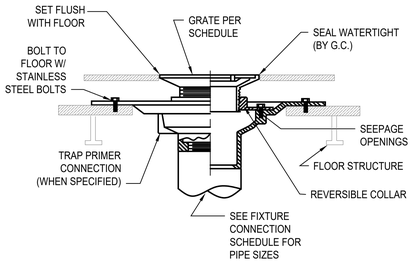


B CONCRETE INSTALLATION WO/ MEMBRANE



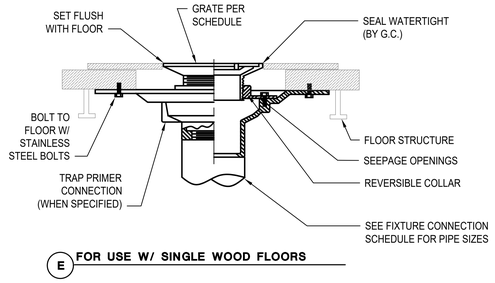
C CONCRETE INSTALLATION W/ CLAMPING RING

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



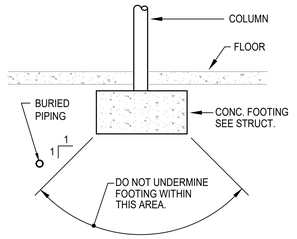
D FOR USE W/ DOUBLE WOOD FLOORS

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

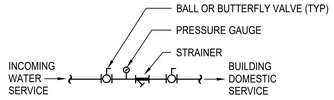


E FOR USE W/ SINGLE WOOD FLOORS

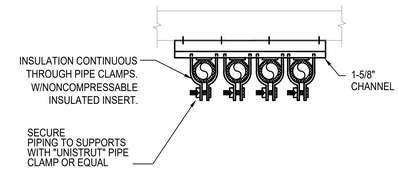
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



2 P301 BURIED PIPING DETAIL
N.T.S.

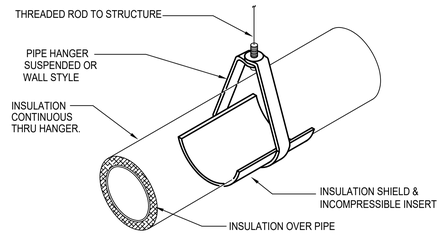


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

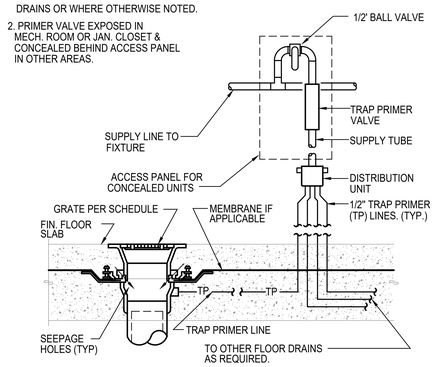
3 P301 PIPE SUPPORT
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

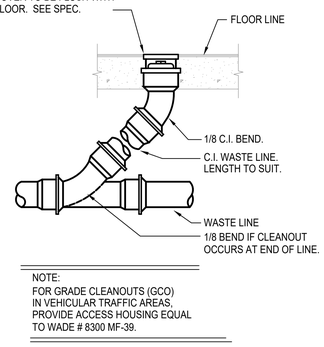
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



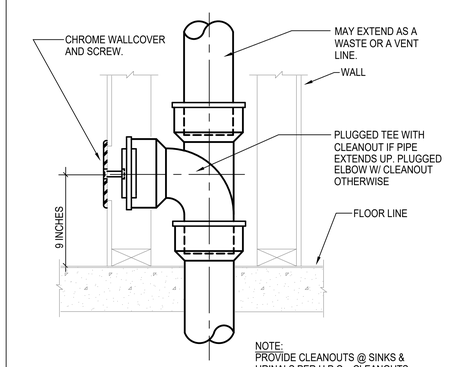
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

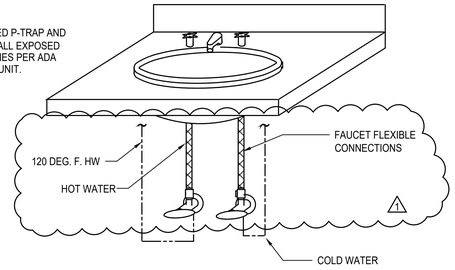
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



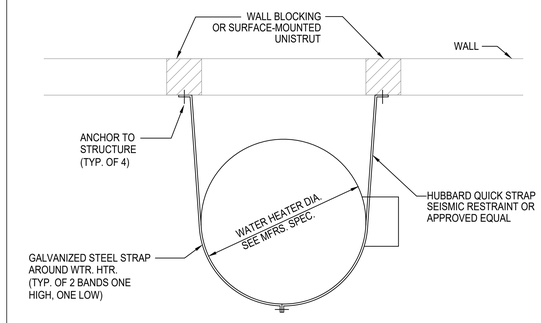
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

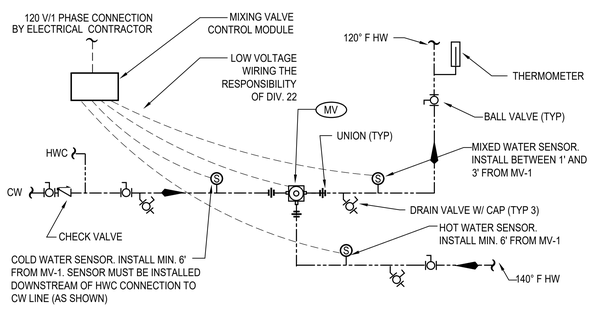
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



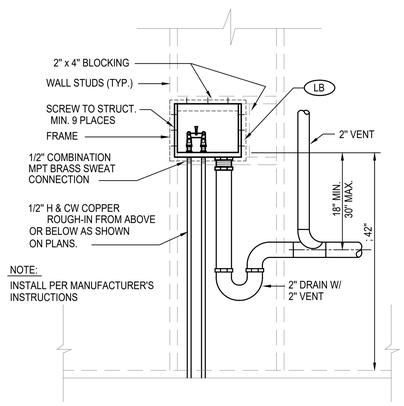
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



12 P301 LAUNDRY BOX DETAIL
N.T.S.

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KIRKLAND HEIGHTS APARTMENTS

13407 NE 133rd St.,
Kirkland, WA 98034

BUILDING 16

BID SET

DIANE AMBER FORBES — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

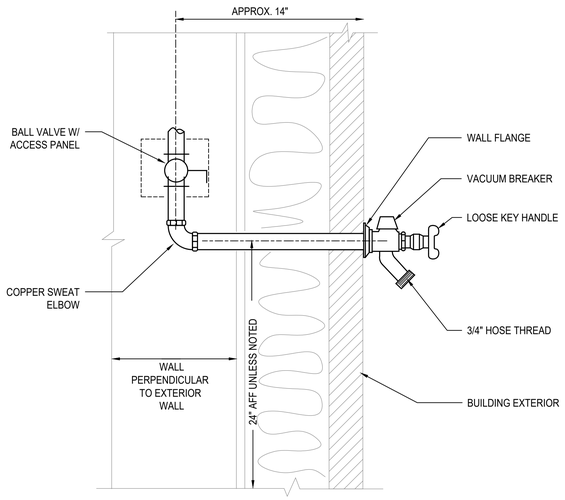
NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

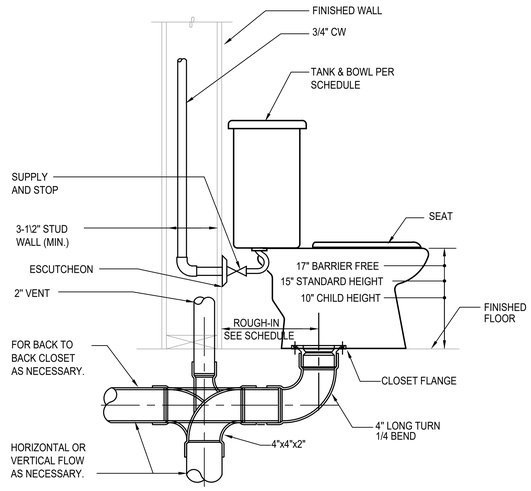
DETAILS

PERMIT #	BMF22-09887
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P16-301



1 P302 FREEZE PROOF HOSE BIBB DETAIL

N.T.S.



2 P302 TANK WATER CLOSET DETAIL

N.T.S.

3 P302 NOT USED

N.T.S.

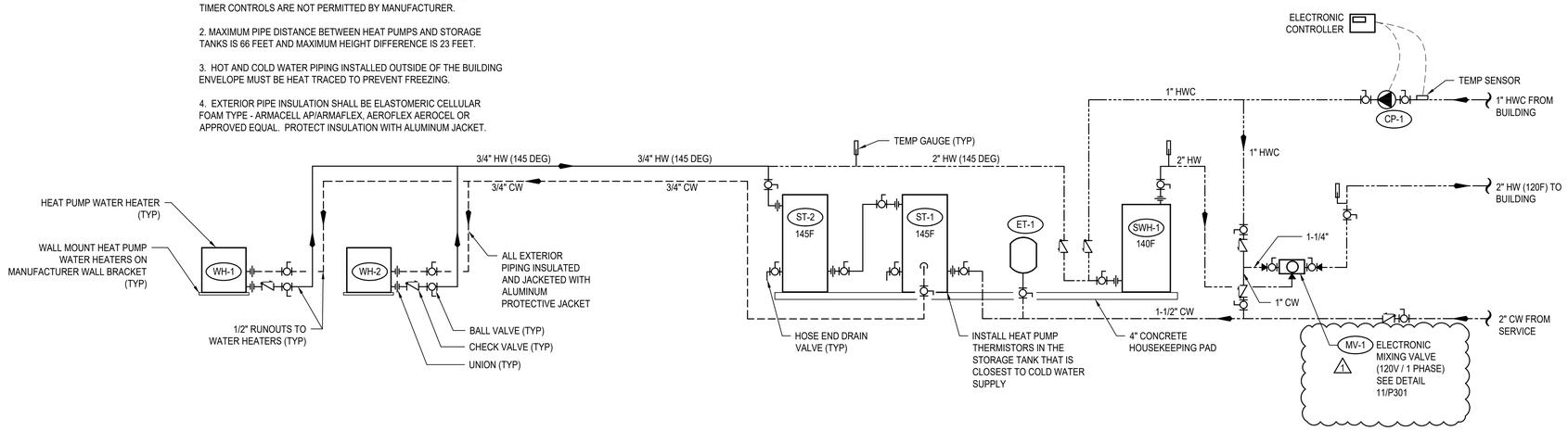
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL

N.T.S.

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King County Housing Authority

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c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13407 NE 133rd St.,
Kirkland, WA 98034

BUILDING 16

BID SET

DANA AMBER COLLINS STATE OF WASHINGTON 25041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

DETAILS

PERMIT #	BMF22-09887
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
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SHEET NO.:	

P16-302

10/7/2021 7:33:34 AM

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
2. SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 17 GA. BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
3. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
4. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
5. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
6. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
7. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
8. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
9. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
10. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
11. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
12. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
13. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
14. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
15. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ALT	ALTERNATE
AP	ACCESS PANEL
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL/ARCHITECT
AS	AIR SEPARATOR
AUX	AUXILIARY
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BHP	BRAKE HORSE POWER
BLDG	BUILDING
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CA	COMBUSTION AIR
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COND	CONDENSATE
CW	COLD WATER
CX	CONNECT TO EXISTING
dB	DECIBEL
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DDCV	DOUBLE DETECTOR CHECK VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT
DHW	DOMESTIC HOT WATER
DHWC	DOMESTIC HOT WATER RECIRCULATION
Ø OR DIA	DIAMETER
DN	DOWN
DWG(S)	DRAWING(S)
DWV	DRAIN, WASTE, VENT
EA	EACH
EEW	EMERGENCY EYEWASH
EFF	EFFICIENCY
ELEV	ELEVATION
EQUIP	EQUIPMENT
ES	EMERGENCY SHOWER
ET	EXPANSION TANK
EX	EXISTING/EXISTING TO REMAIN
EXP	EXPANSION
FC	FAIL CLOSED
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR
FLA	FULL LOAD AMPS
FM	FORCE MAIN
FO	FAIL OPEN
FP	FIRE PROTECTION
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOOR SINK
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY
FT	FEET/FOOT
FTG	FOOTING
FV	FLUSH VALVE
G	NATURAL GAS
GA	GAUGE
GAL	GALLON
G.C.	GENERAL CONTRACTOR
GCO	GRADE CLEANOUT
GD	GARAGE DRAIN
GPF	GALLONS PER FLUSH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
H	HEIGHT
HB	HOSE BIBB
HBVB	HOSE BIBB VACUUM BREAKER
HD	HEAD
HP	HORSEPOWER
HS	HAND SINK
HW	HOT WATER
HX	HEAT EXCHANGER
IE	INVERT ELEVATION
IN	INCH/INCHES
KW	KILOWATT/KILOWATTS
LAV	LAVATORY
LBS	POUNDS
LF	LINEAL FOOT
LTG	LIGHTING
LWT	LEAVING WATER TEMPERATURE
MBH	1000 BRITISH THERMAL UNITS PER HOUR
MED	MEDIUM
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MEZZ	MEZZANINE
MIN	MINIMUM
MISC	MISCELLANEOUS
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NOM	NOMINAL
NPC	NON-POTABLE COLD WATER
NPCW	NON POTABLE COLD WATER
NPH	NON-POTABLE HOT WATER
NPHR	NON-POTABLE HOT WATER RETURN
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OD	OUTSIDE DIAMTER/OVERLOW DRAIN
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
ORD	OVERFLOW ROOF DRAIN
ORL	OVERFLOW RAINWATER LEADER
ΔP	PRESSURE DIFFERENTIAL
PD	PLANTER DRAIN; PRESSURE DROP
PERF	PERFORATED
PH	PHASE
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER INCH GAUGE
QTY	QUANTITY
RD	ROOF DRAIN
REQD	REQUIRED
RL	RAIN WATER LEADER
RM	ROOM
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
RLX	RELOCATE EXISTING
RV	RELIEF VALVE
RX	REMOVE EXISTING
S	SINK
S	STORM
SCFM	STANDARD CUBIC FEET PER MINUT
SD	STORM DRAIN
SF	SQUARE FOOT
SFU	SUPPLY FIXTURE UNIT
SH	SHOWER
S.O.V.	SHUTOFF VALVE
SPEC	SPECIFICATION
S/S, OR SS	STAINLESS STEEL
STD	STANDARD
SYM	SYMBOL
T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
TBD	TO BE DETERMINED
TD	TRENCH DRAIN
TEMP	TEMPERATURE
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOD	TOP OF DECK
TOJ	TOP OF JOIST
TOS	TOP OF SLAB/TOP OF STEEL
TP	TRAP PRIMER
T&P	TEMPERATURE & PRESSURE
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
V	VENT(S)
V	VOLT
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VIB	VALVE-IN-BOX
VTR	VENT THROUGH ROOF
W	WASTE/WATER
W/	WITH
W/IN	WITHIN
W/O	WITHOUT
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER
WPD	WATER PRESSURE DROP
WT	WEIGHT
YCO	YARD CLEANOUT

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13421 NE 133rd St.,
Kirkland, WA 98034

BUILDING 17

BID SET

DANIEL LAMBERT COLEMAN — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09891
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P17-001

GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA, **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA, **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ1	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-70VC	16" DIAMETER X 45" HIGH, FAB, STEEL, MAX 150 PSI, 3/4" NPT CONNECTION SIZE. ⚠1
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (COLD WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1 **WH-2**	HEAT PUMP WATER HEATER	SANCO2: GS4-45HPC-D	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE, UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET. ⚠1
ST-1 **ST-2**	DOMESTIC STORAGE TANK	SANCO2: SAN-119GLBK	119 GALLON STORAGE TANK. 1500 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	⚠1 1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

***Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements**

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	PIPE SIZE H.W.	PIPE SIZE WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

⚠1

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE		FIXTURE UNITS PER APPENDIX A					
		DOMESTIC WATER WSFU				SEWER DFU	
FIXTURE	QTY	PER FIXTURE	TOTAL	HW PER FIXTURE	TOTAL	PER FIXTURE	TOTAL
Private Tank Water Closet	8	2.5	20	-	-	3	24
Lavatory (Public or Private)	8	1	8	0.75	6	1	8
Bathtub or Combo Bath/Shwr	4	4	16	3	12	2	8
Kitchen Sink	4	1.5	6	1.125	4.50	2	8
Clothes Washer	4	4	16	3	12	3	12
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**32**		**69.5**		**34.50**		**64**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 33 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 1.5".
BUILDING WATER METER SIZE = 1"
TOTAL BUILDING WASTE FIXTURE UNITS IS 64. BUILDING SERVICE SIZE = (1X) 4".

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FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13421 NE 133rd St.,
Kirkland, WA 98034

BUILDING 17

BID SET

DANA AMBER FOSTER — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

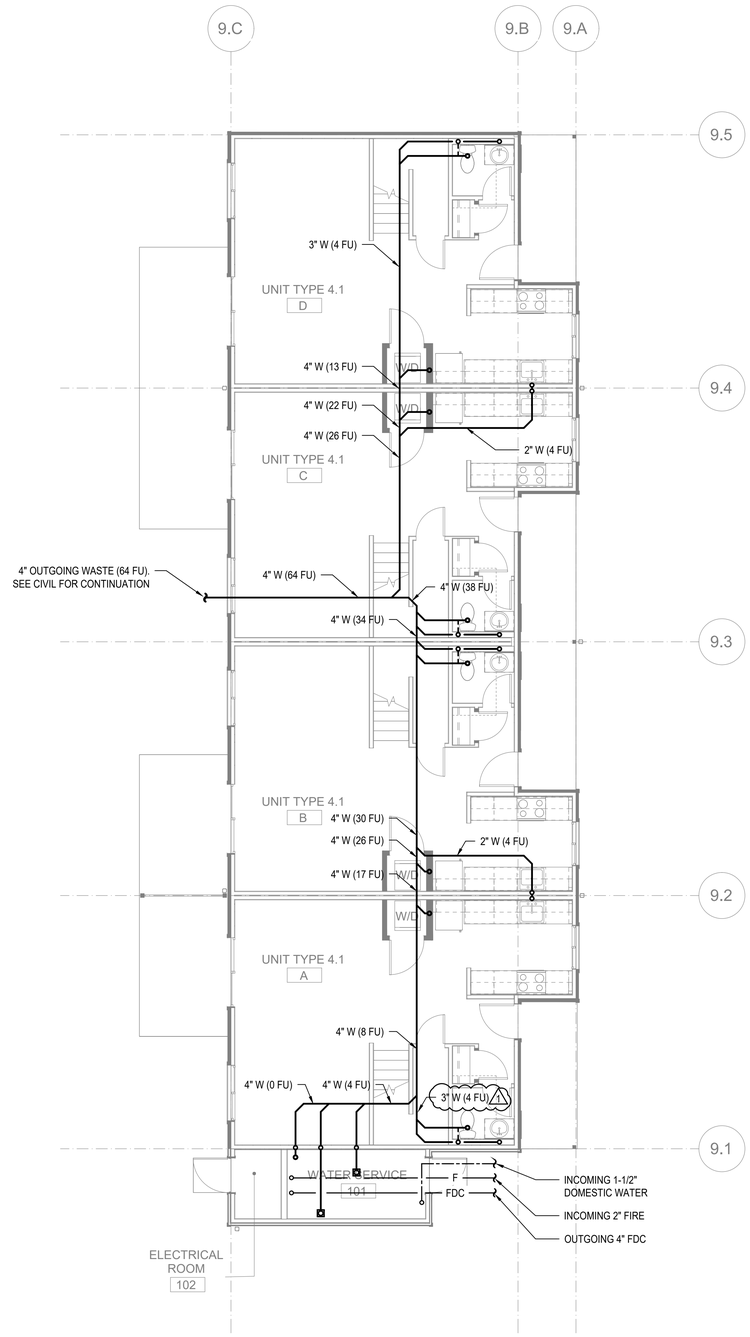
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TITLE

NOTES AND SCHEDULES

PERMIT #	BMF22-09891
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P17-002

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 17 - FOUNDATION

SCALE: 3/16"=1'-0"

10/7/2021 7:33:34 AM

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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King County Housing Authority

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General Partner
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Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 17

BID SET

DANA AMBER CAMERON
STATE OF WASHINGTON
5041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

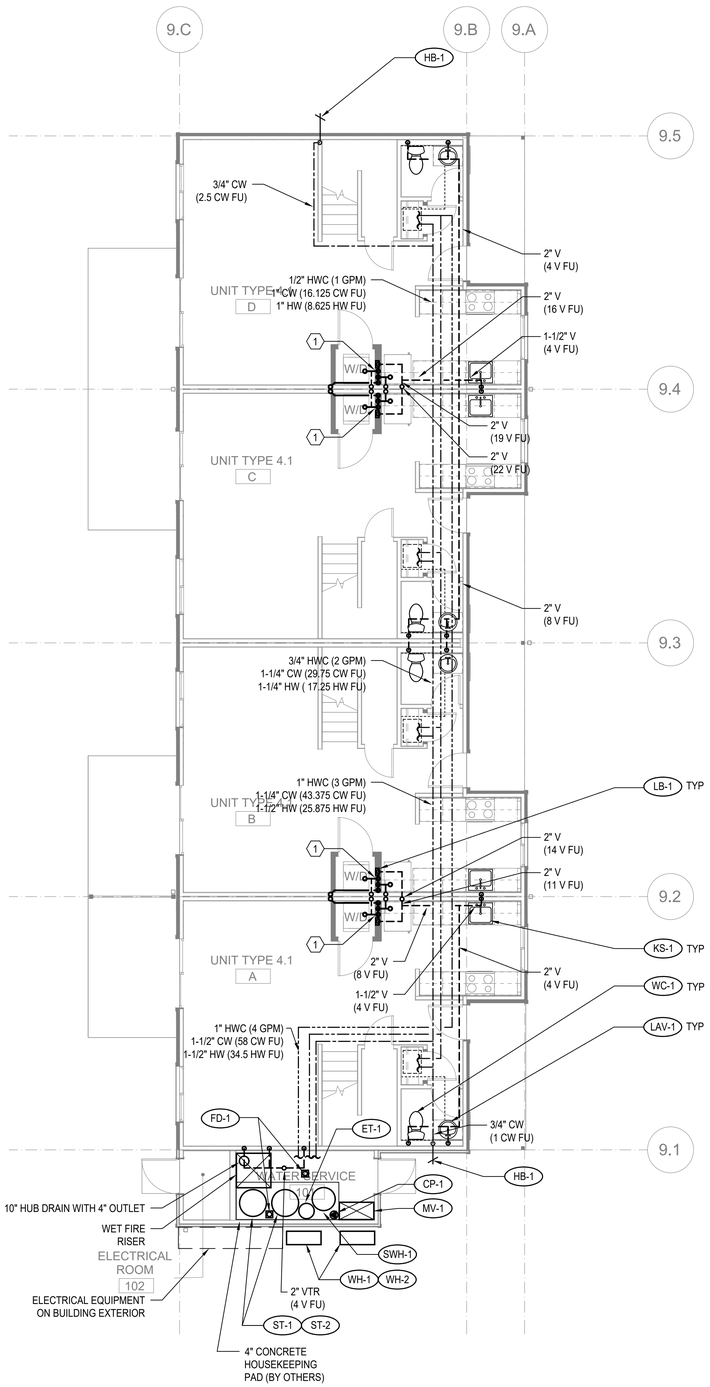
DPD STAMP

TITLE

PLAN - FOUNDATION

PERMIT #	BMF22-09891
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P17-100



FLOOR PLAN - BUILDING 17 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P-202 FOR WASTE AND VENT PIPE SIZING.

GENERAL NOTES:

1. PROVIDE HOT WATER, WASTE, AND AIR GAP CONNECTIONS FOR DISHWASHERS. (1)

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King County Housing Authority

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13421 NE 133rd St.,
Kirkland, WA 98034

BUILDING 17

BID SET

DANA AMBER COLBURN
STATE OF WASHINGTON
5041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

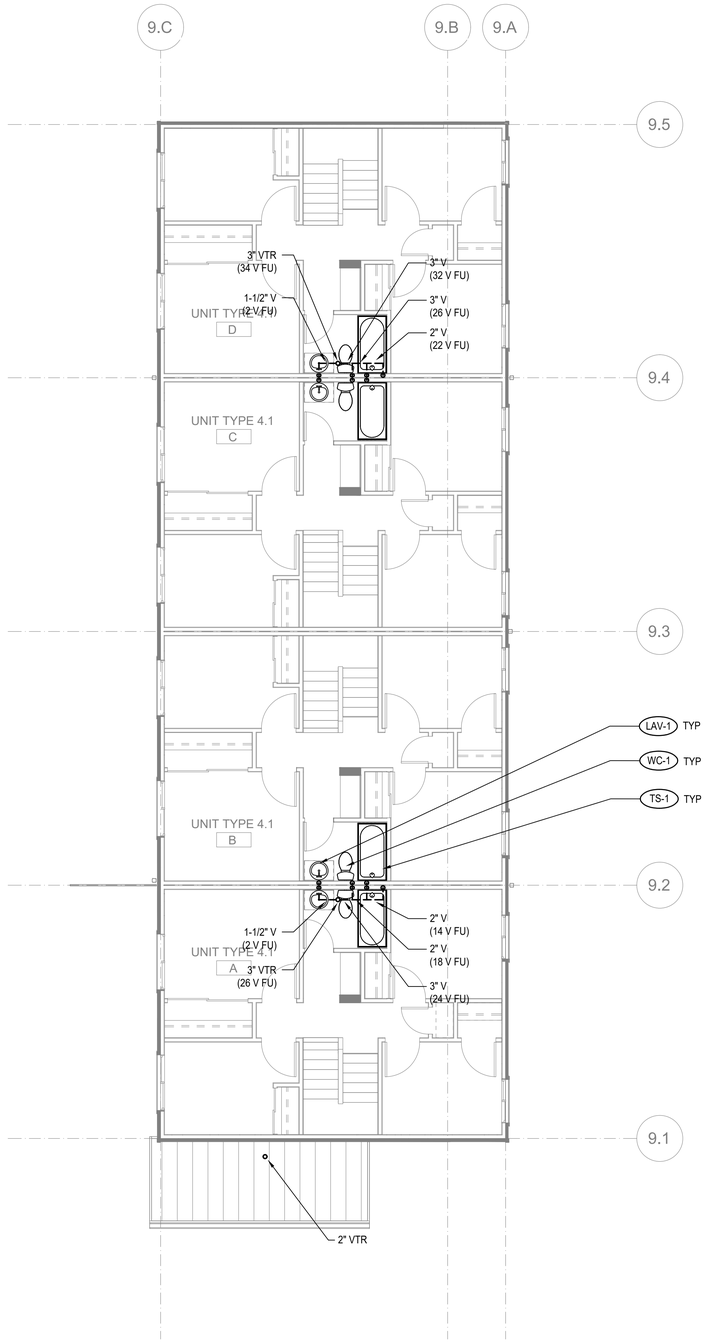
TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09891
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
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SHEET NO.:	

P17-101

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FLOOR PLAN - BUILDING 17 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 17

BID SET

DANA AMBER JOHNSON
STATE OF WASHINGTON
22041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

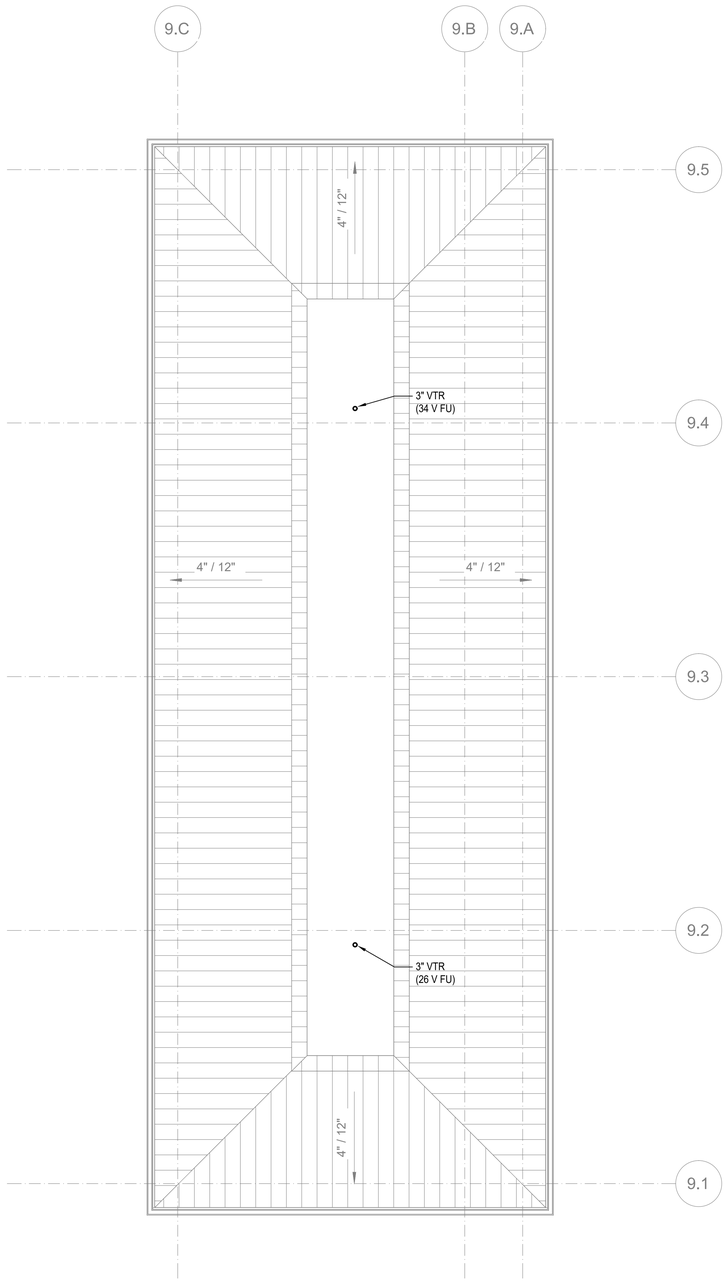
TITLE

PLAN - LEVEL 2

PERMIT #	BMF22-09891
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P17-102

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FLOOR PLAN - BUILDING 17 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES.

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 17

BID SET

DANA AMBER JONES — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

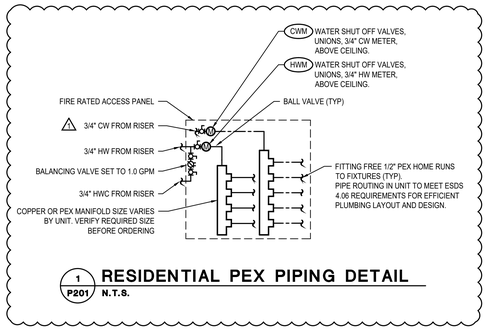
TITLE

PLAN - ROOF

PERMIT #	BMF22-09891
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ISSUE DATE	4/14/2023
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SHEET NO.:	

P17-103

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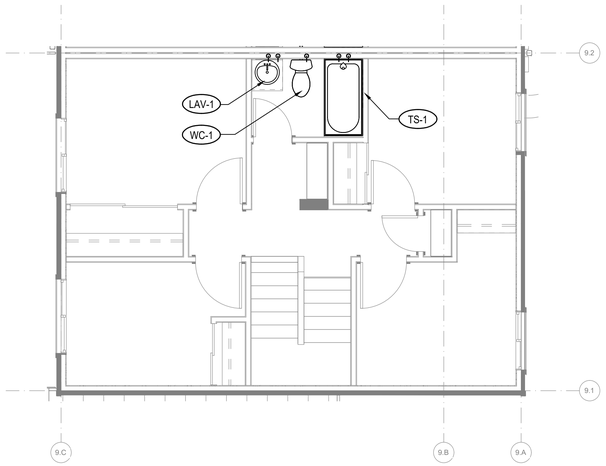
1/P201 RESIDENTIAL PEX PIPING DETAIL

N.T.S.

GENERAL NOTES:

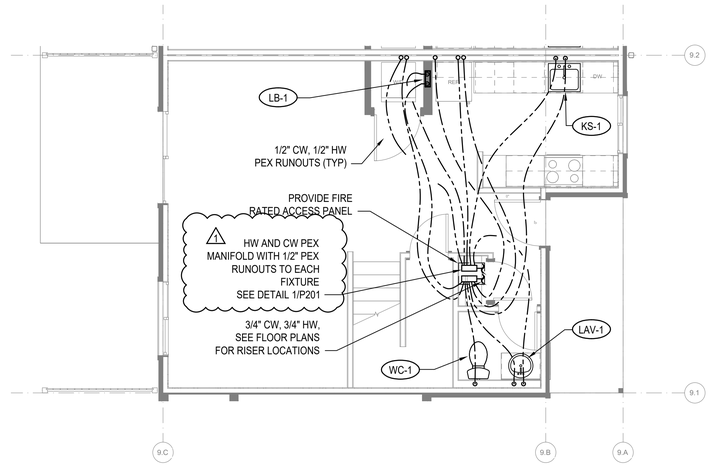
1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

FLAG NOTES (X):



2/P201 ENLARGED PLAN - TH - LEVEL 2

1/4"=1'-0"



1/P201 ENLARGED PLAN - TH - LEVEL 1

1/4"=1'-0"

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 17

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

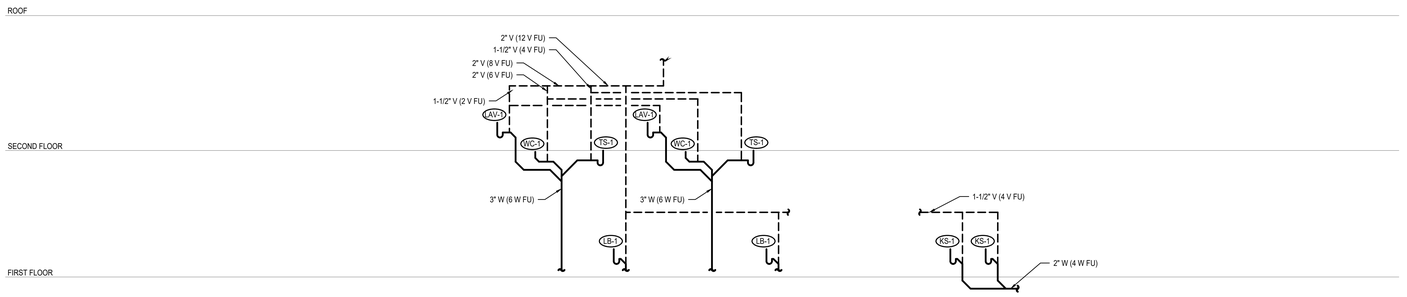
ENLARGED UNIT PLANS

PERMIT #	BMF22-09891
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P17-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - LB, LAV, WC, TS**
N.T.S.

1 P202 **WASTE RISER - KS**
N.T.S.

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BUILDING 17

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

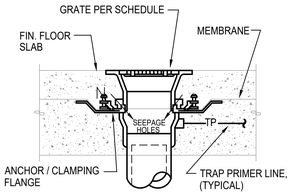
TITLE

RISERS

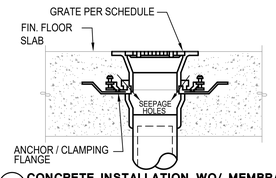
PERMIT #	BMF22-09891
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P17-202

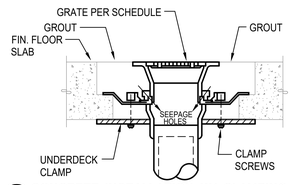
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A CONCRETE INSTALLATION W/ MEMBRANE

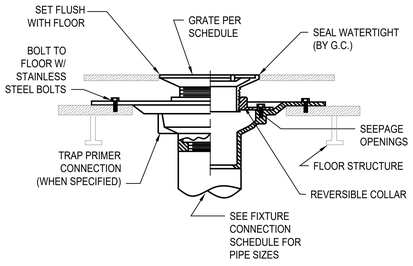


B CONCRETE INSTALLATION WO/ MEMBRANE



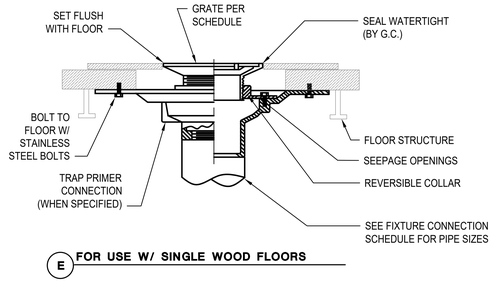
C CONCRETE INSTALLATION W/ CLAMPING RING

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



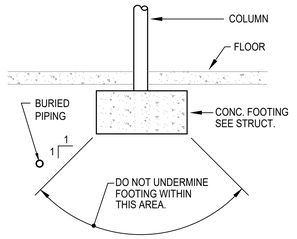
D FOR USE W/ DOUBLE WOOD FLOORS

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

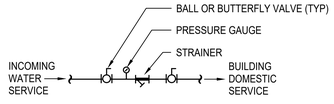


E FOR USE W/ SINGLE WOOD FLOORS

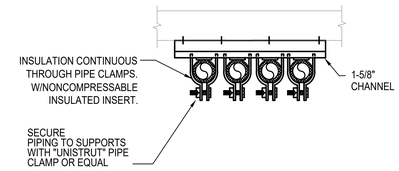
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



2 P301 BURIED PIPING DETAIL
N.T.S.

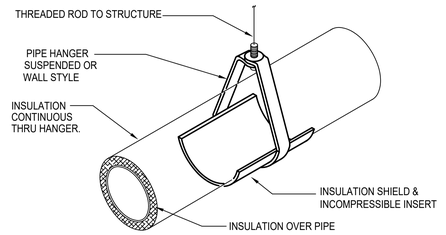


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

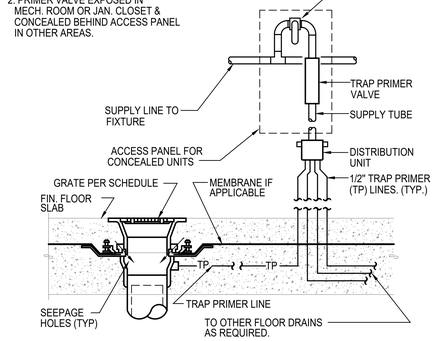
3 P301 PIPE SUPPORT
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

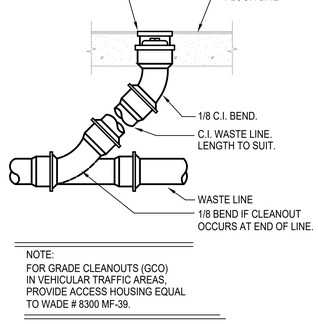
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



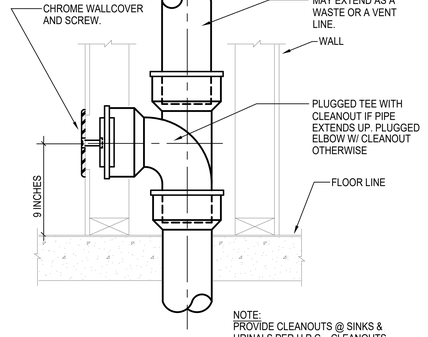
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

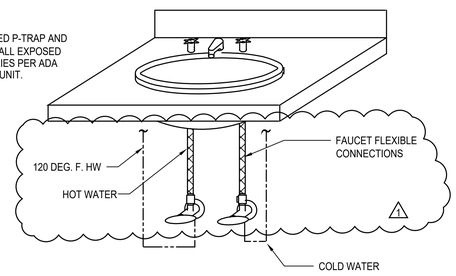
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



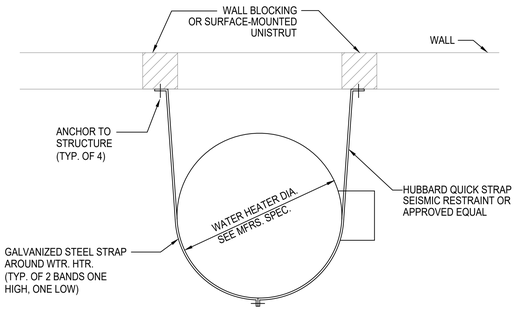
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

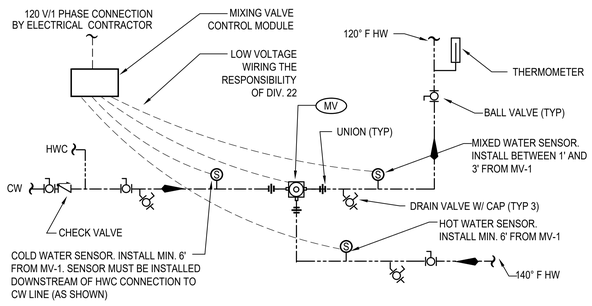
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



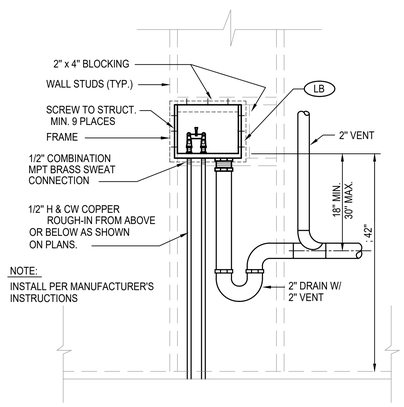
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



12 P301 LAUNDRY BOX DETAIL
N.T.S.

10/7/2021 7:33:34 AM

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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13421 NE 133rd St.,
Kirkland, WA 98034

BUILDING 17

BID SET

DANA AMBER FORSMAN — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

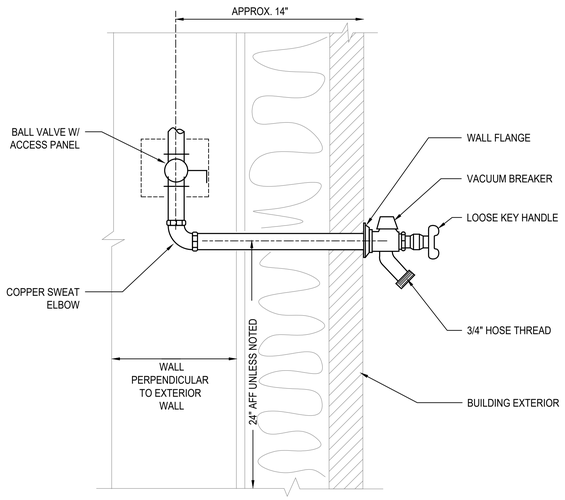
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1	5.19.23	BID ADDENDUM 2

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TITLE

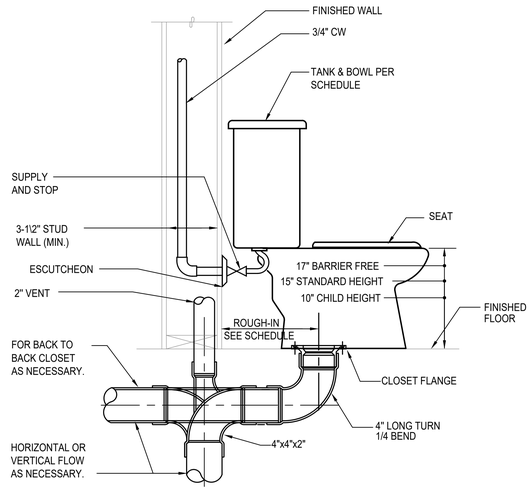
DETAILS

PERMIT #	BMF22-09891
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P17-301



1 P302 FREEZE PROOF HOSE BIBB DETAIL

N.T.S.



2 P302 TANK WATER CLOSET DETAIL

N.T.S.

3 P302 NOT USED

N.T.S.

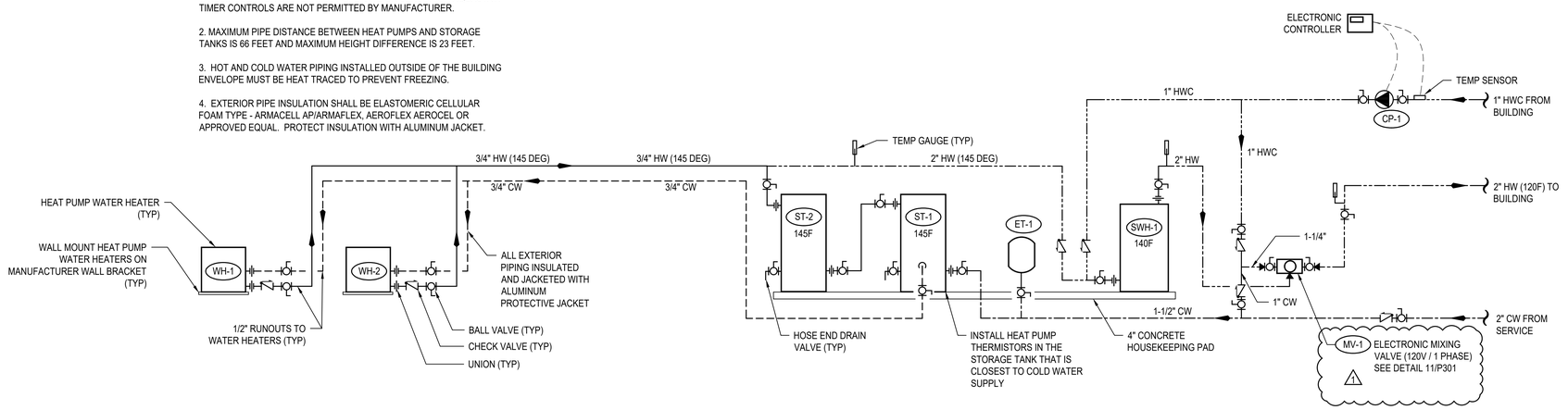
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL

N.T.S.

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

DETAILS

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CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P17-302

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- F — BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
   SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED TUBULAR BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	LEVEL 3 FLOOR PLAN
P-104	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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CONTRACT #: TC2300131

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Kirkland, WA 98034

BUILDING 18

BID SET

DANA AMBER CHERON — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09888
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P18-001

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GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-35-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE.
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (COLD WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1 **WH-2** **WH-3**	HEAT PUMP WATER HEATER	SANCO2: GS4-45HPC-D	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE, UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET.
ST-1 **ST-2**	DOMESTIC STORAGE TANK	SANCO2: ECO-200GLBK	200 GALLON STORAGE TANK. 2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy ____ kWh	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

*Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	H.W.	WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE — FIXTURE UNITS PER APPENDIX A

FIXTURE	QTY	DOMESTIC WATER WSFU: PER FIXTURE	TOTAL	HW PER FIXTURE	TOTAL	SEWER DFU: PER FIXTURE	TOTAL
Private Tank Water Closet	12	2.5	30	-	-	3	36
Lavatory (Public or Private)	12	1	12	0.75	9	1	12
Bathtub or Combo Bath/Shwr	12	4	48	3	36	2	24
Kitchen Sink	12	1.5	18	1.125	13.50	2	24
Clothes Washer	12	4	48	3	36	3	36
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**64**		**159.5**		**94.50**		**136**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 58 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 136. BUILDING SERVICE SIZE = (1X) 4".

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King County Housing Authority

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13223 135th Ave NE,
Kirkland, WA 98034

BUILDING 18

BID SET

DANA AMBER FORDYCE — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

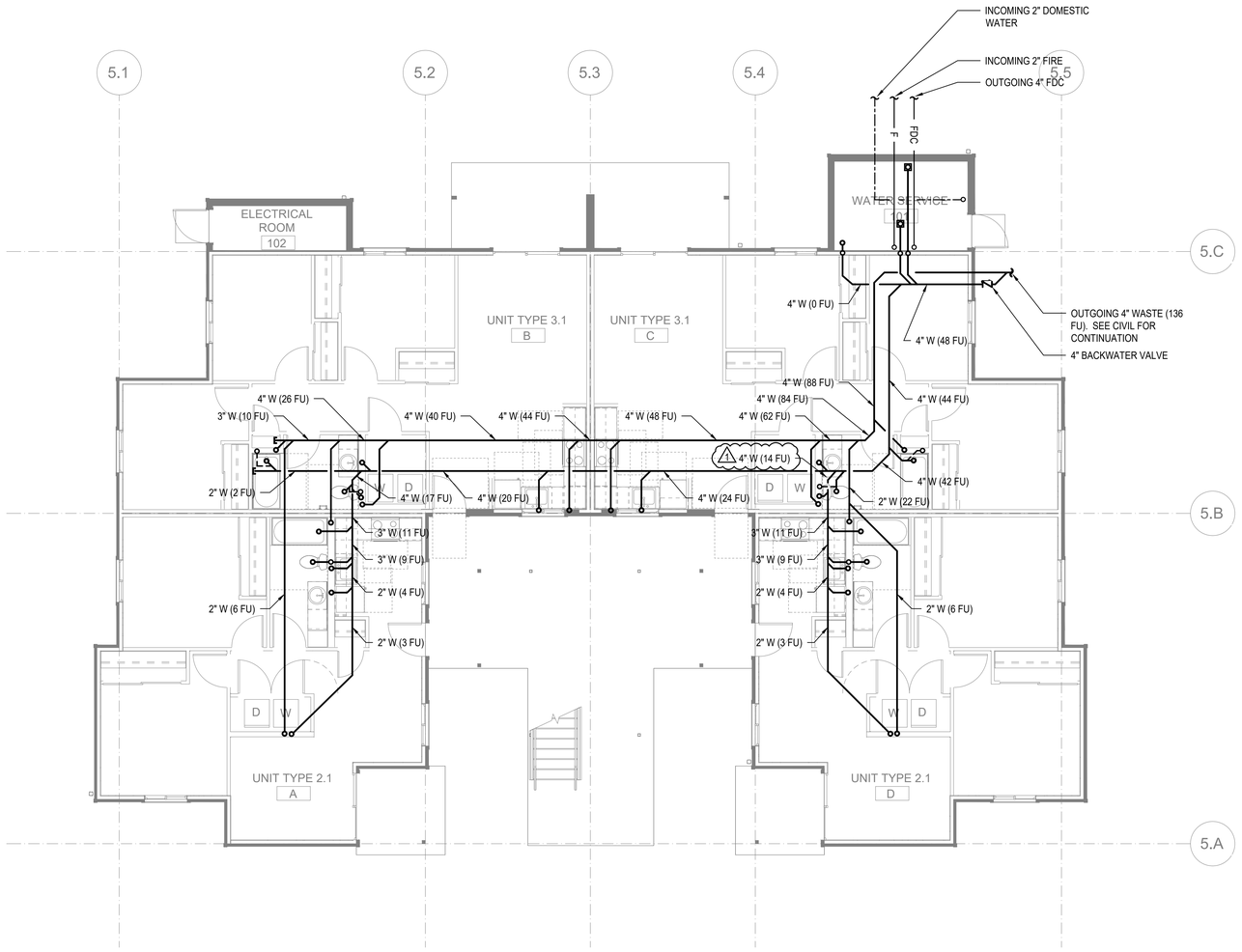
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NOTES AND SCHEDULES

PERMIT #	BMF22-09888
DRAWN	AJ, JL, PH, BF, KS
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P18-002

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FLOOR PLAN - BUILDING 18 FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 18

BID SET

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NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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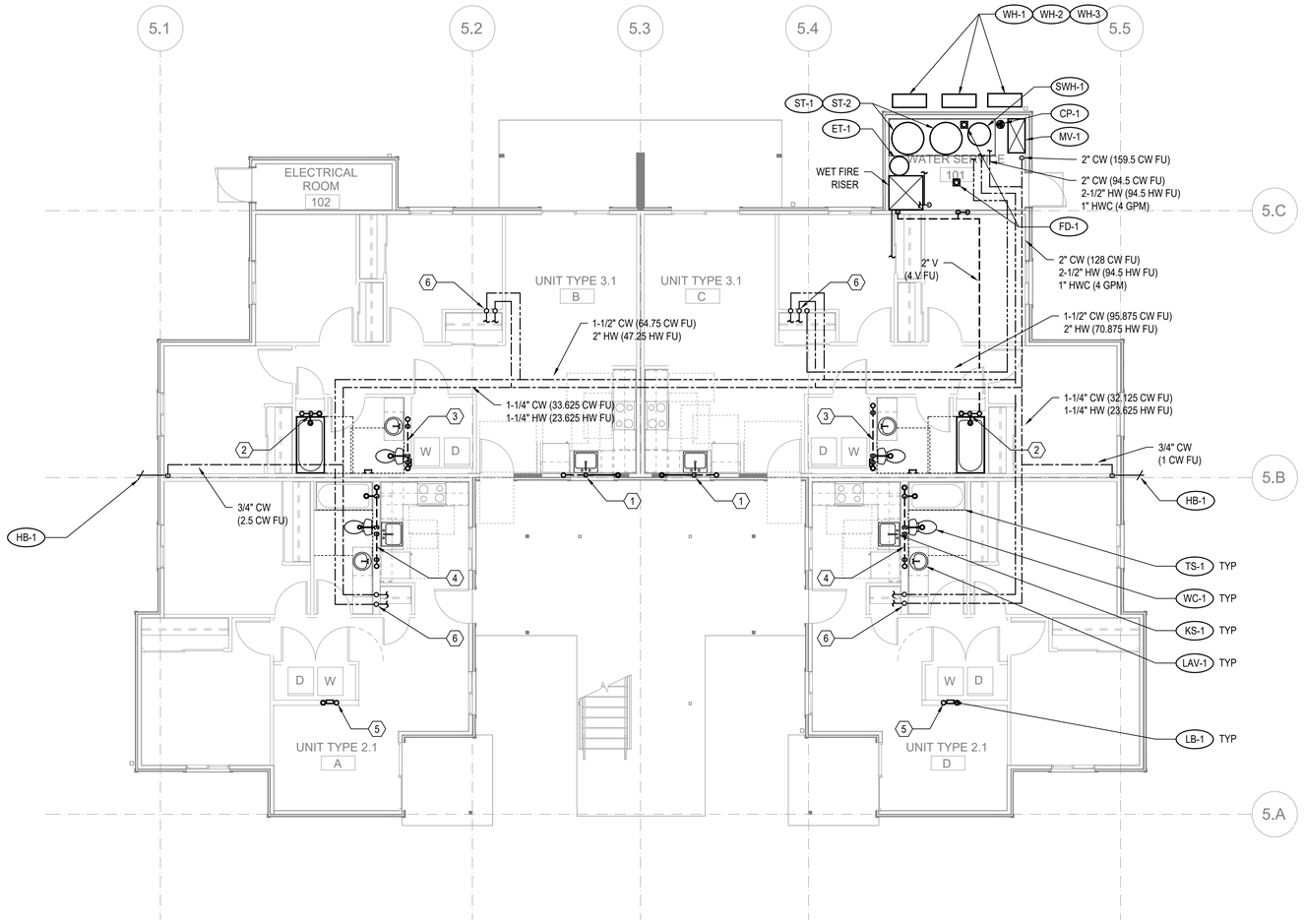
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PLAN - FOUNDATION

PERMIT #	BMF22-09888
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P18-100

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FLOOR PLAN - BUILDING 18 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 18

BID SET

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

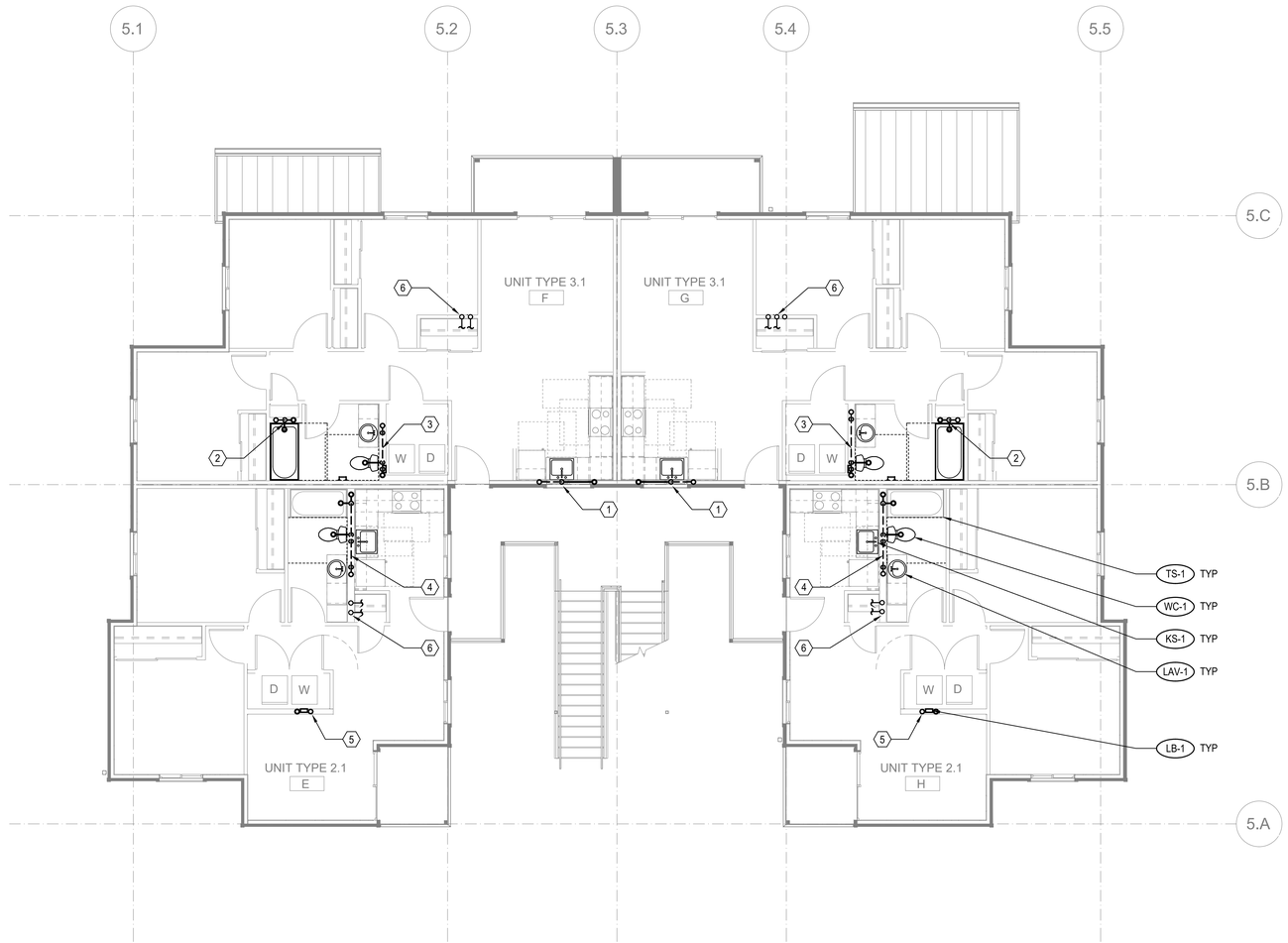
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TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09888
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P18-101



FLOOR PLAN - BUILDING 18 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 18

BID SET

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STATE OF WASHINGTON
5041009
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PROFESSIONAL ENGINEER
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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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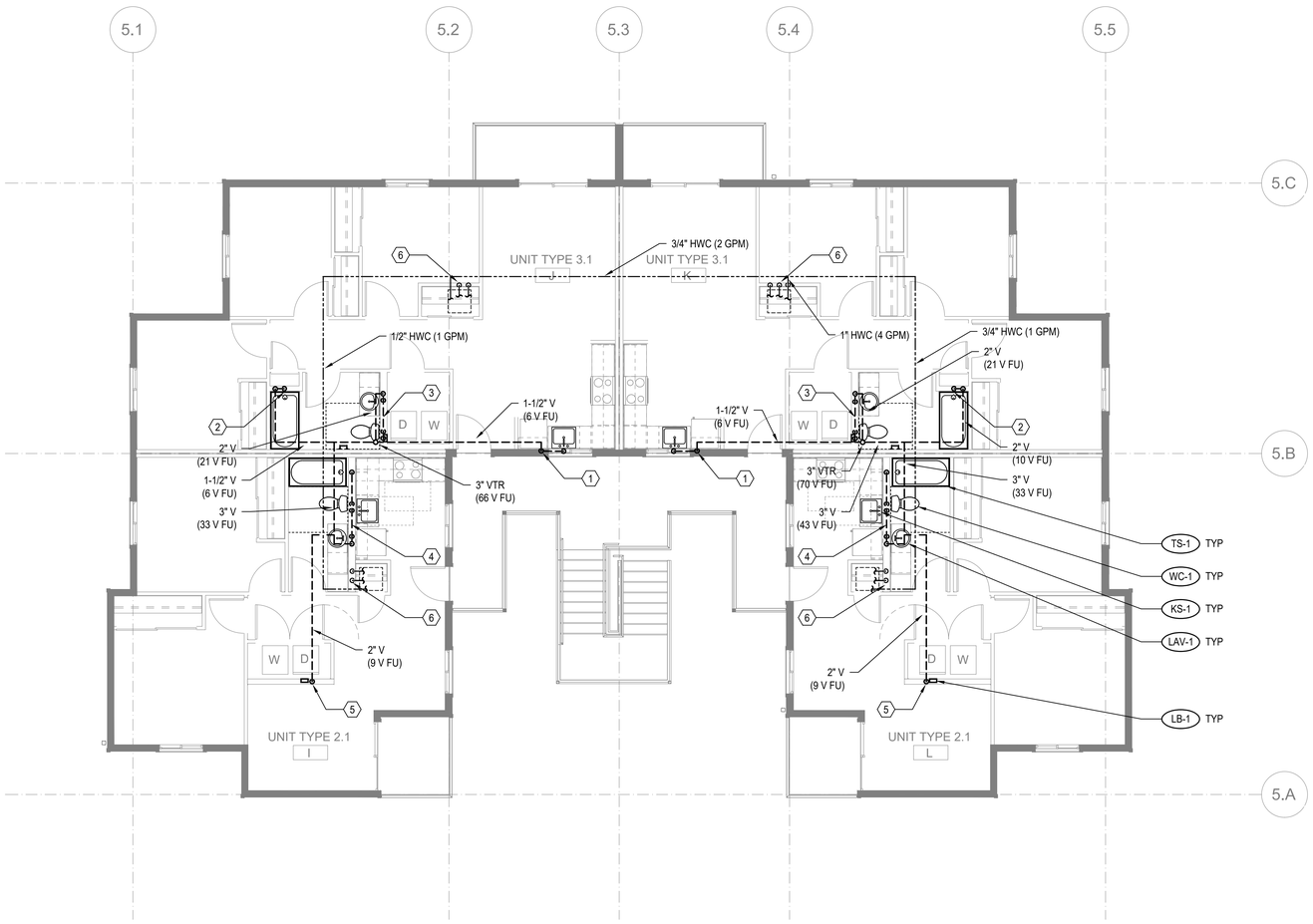
TITLE

PLAN - LEVEL 2

PERMIT #	BMF22-09888
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P18-102

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FLOOR PLAN - BUILDING 18 - LEVEL 3

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 18

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
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PROFESSIONAL ENGINEER
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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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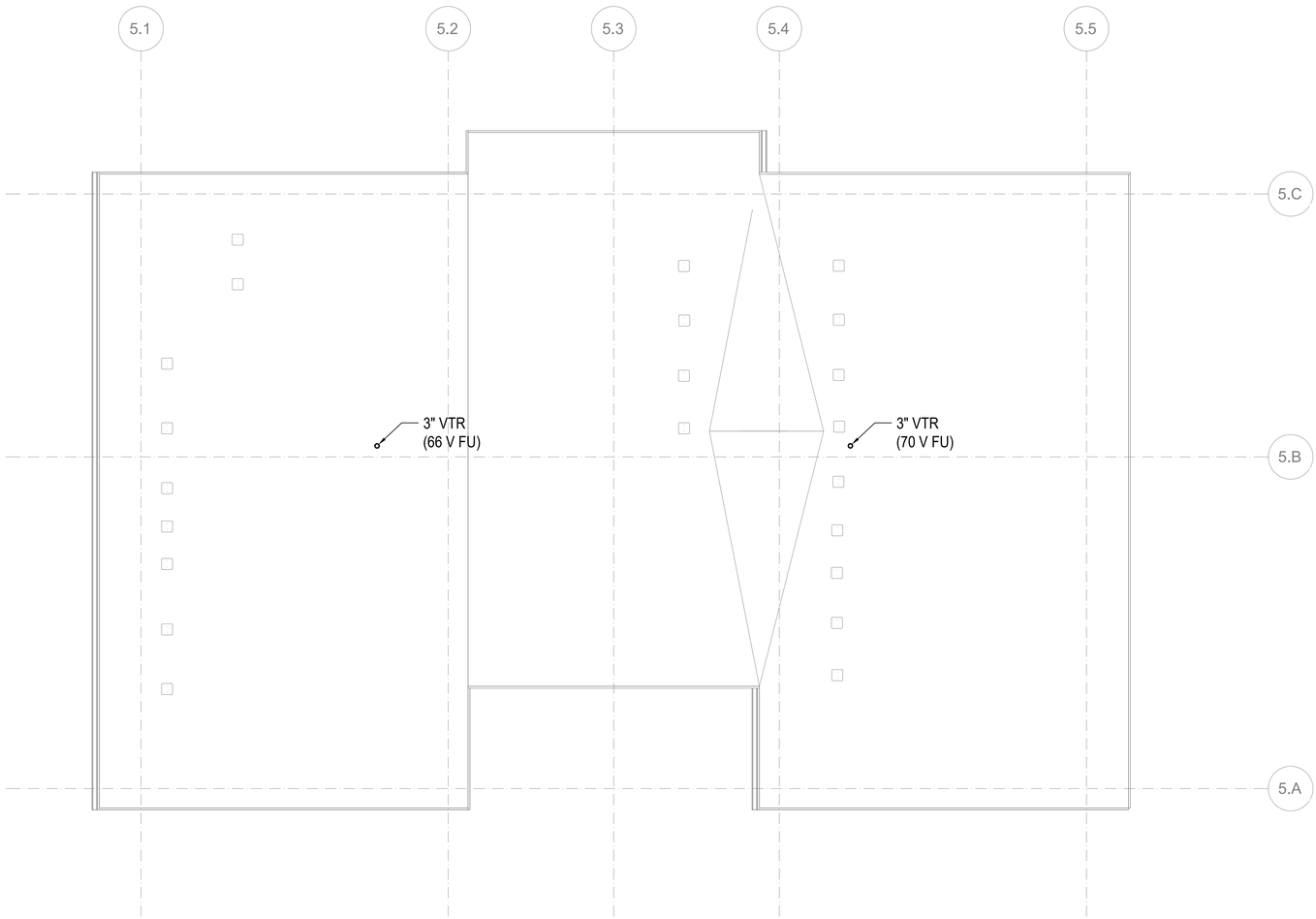
TITLE

PLAN - LEVEL 3

PERMIT #	BMF22-09888
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ISSUE DATE	4/14/2023
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P18-103

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FLOOR PLAN - BUILDING 18 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

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BUILDING 18

BID SET

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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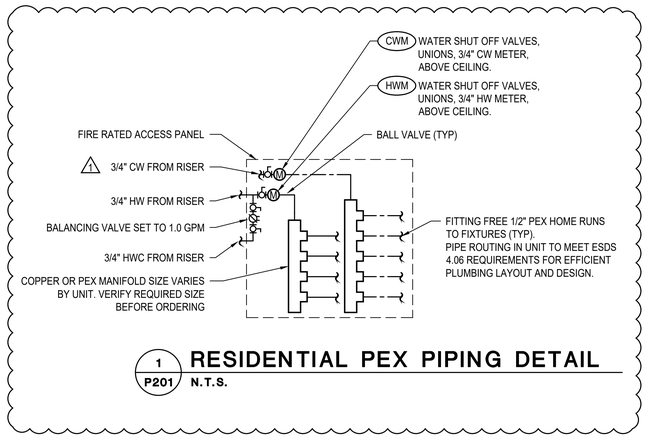
TITLE

PLAN - ROOF

PERMIT #	BMF22-09888
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ISSUE DATE	4/14/2023
JOB NO.	22016
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P18-104

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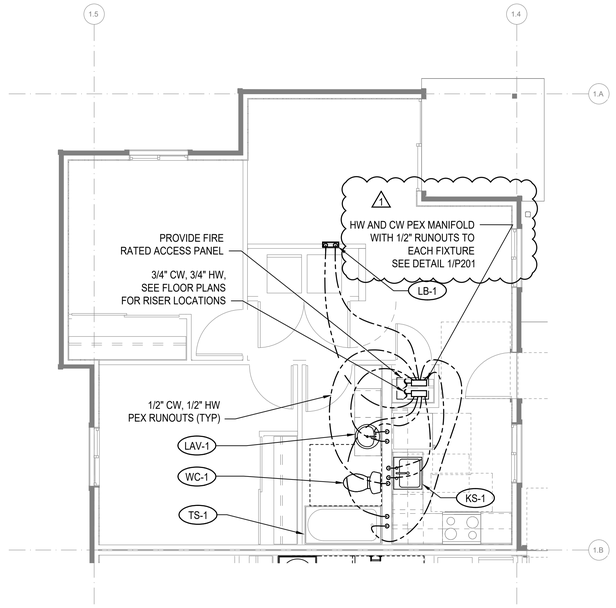


1 P201 RESIDENTIAL PEX PIPING DETAIL
N.T.S.

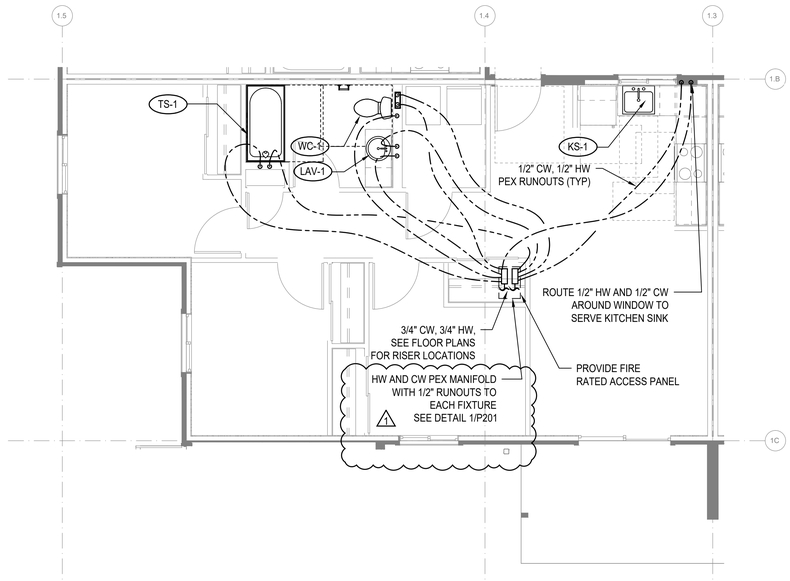
GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

FLAG NOTES (X):



2 P201 ENLARGED PLAN - 2-BED
1/4"=1'-0"
UNITS: A, D, E, H, I, L



1 P201 ENLARGED PLAN - 3-BED
1/4"=1'-0"
UNITS: B, C, F, G, J, K

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KIRKLAND HEIGHTS APARTMENTS

13223 135th Ave NE,
Kirkland, WA 98034

BUILDING 18

BID SET

DANA AMBER FOSTER
STATE OF WASHINGTON
20041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

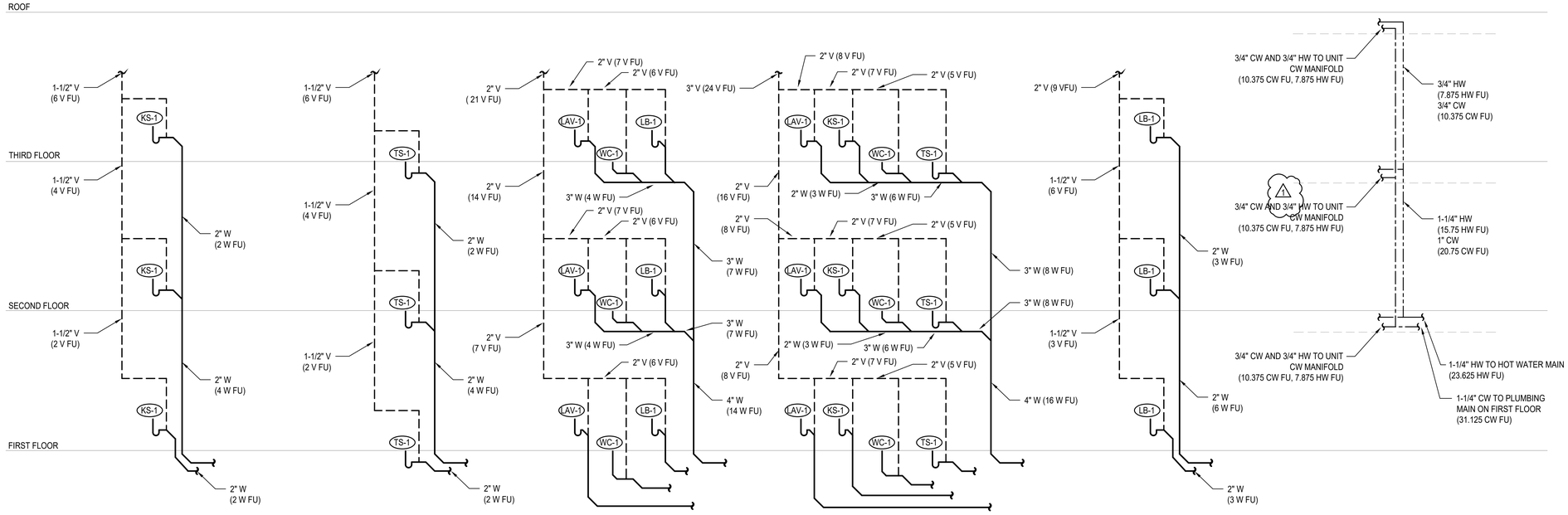
ENLARGED UNIT PLANS

PERMIT #	BMF22-09888
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P18-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - KITCHEN SINK** N.T.S.

2 P202 **WASTE RISER - TUB/SHOWER** N.T.S.

3 P202 **WASTE RISER - LB, LAV, WC** N.T.S.

4 P202 **WASTE RISER - LAV, KS, WC, TS** N.T.S.

5 P202 **WASTE RISER - LAUNDRY BOX** N.T.S.

6 P202 **WATER RISER** N.T.S.

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REVISIONS / NOTES

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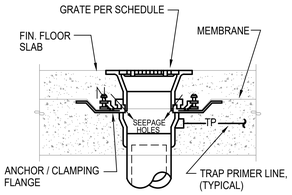
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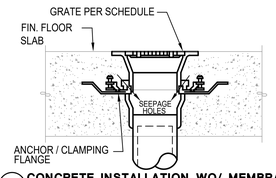
RISERS

PERMIT #	BMF22-09888
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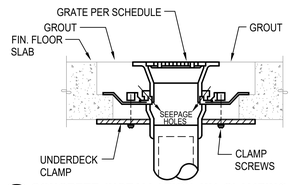
P18-202



A CONCRETE INSTALLATION W/ MEMBRANE

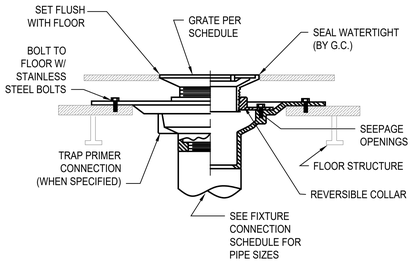


B CONCRETE INSTALLATION WO/ MEMBRANE



C CONCRETE INSTALLATION W/ CLAMPING RING

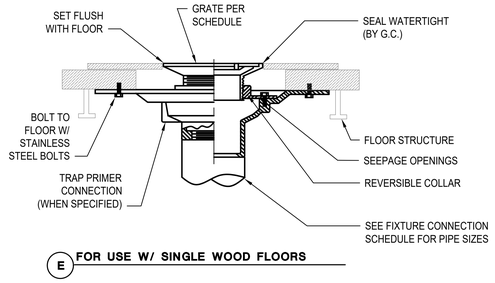
NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



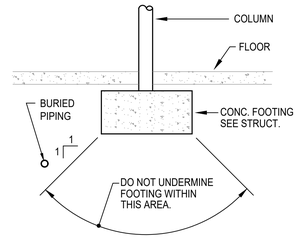
D FOR USE W/ DOUBLE WOOD FLOORS

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

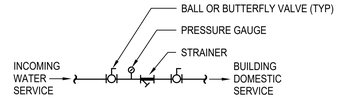
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



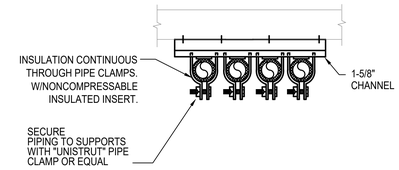
E FOR USE W/ SINGLE WOOD FLOORS



2 P301 BURIED PIPING DETAIL
N.T.S.

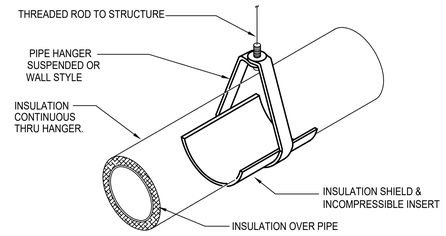


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

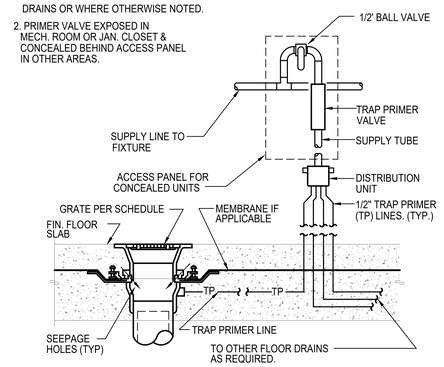
3 P301 PIPE SUPPORT
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

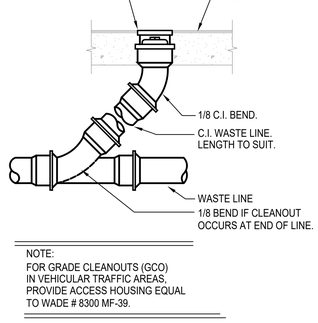
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



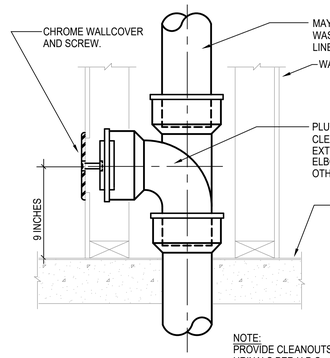
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

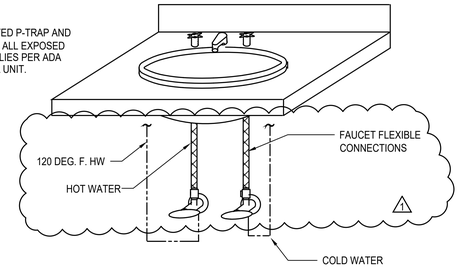
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



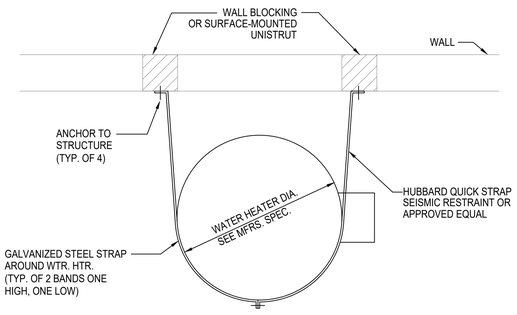
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

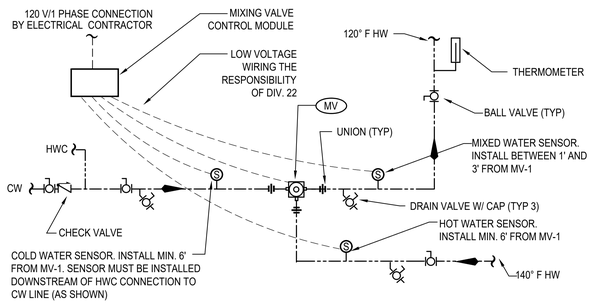
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



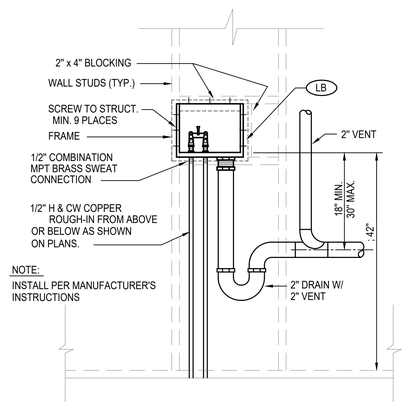
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



12 P301 LAUNDRY BOX DETAIL
N.T.S.

10/7/2021 7:33:34 AM

SIDER+BYERS
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FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13223 135th Ave NE,
Kirkland, WA 98034

BUILDING 18

BID SET

DIANE AMBER FORBES — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

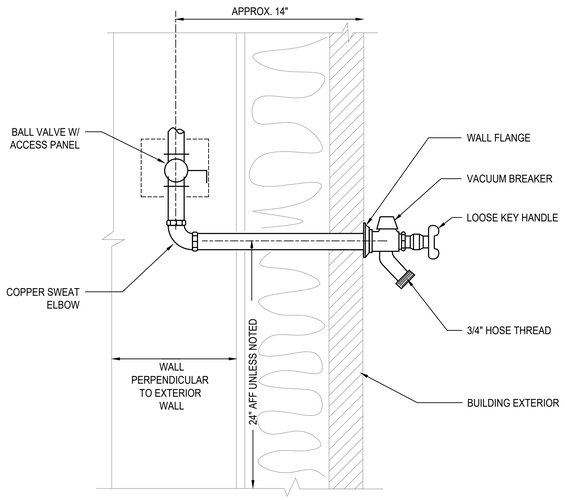
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1	5.19.23	BID ADDENDUM 2

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TITLE

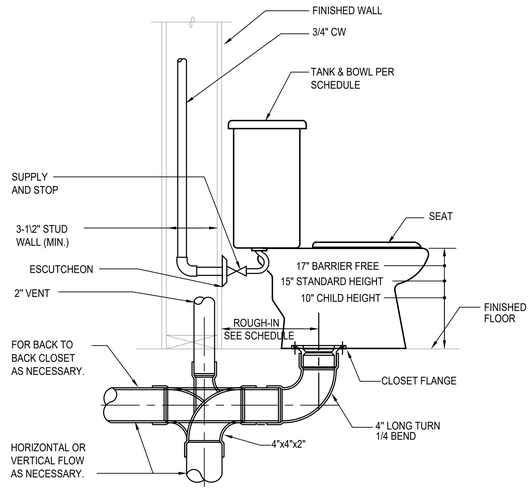
DETAILS

PERMIT #	BMF22-09888
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P18-301



1 P302 FREEZE PROOF HOSE BIBB DETAIL

N.T.S.



2 P302 TANK WATER CLOSET DETAIL

N.T.S.

3 P302 NOT USED

N.T.S.

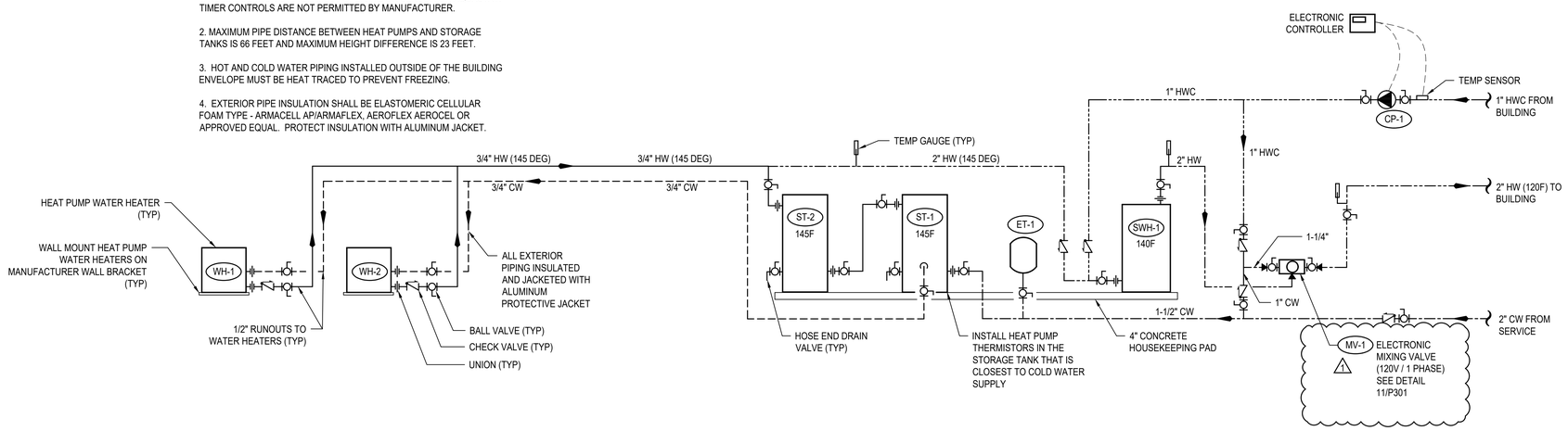
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL

N.T.S.

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BUILDING 18

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
5041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

DETAILS

PERMIT #	BMF22-09888
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P18-302

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PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
   SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 17 GA. BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS. 1
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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c/o: King County Housing Authority,
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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13215 135th Ave NE,
Kirkland, WA 98034

BUILDING 19

BID SET

JAMES LAMBER COLLINSON — STATE OF WASHINGTON — 5041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09889
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P19-001

GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA, **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA, **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ1	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-70VC	16" DIAMETER X 45" HIGH, FAB, STEEL, MAX 150 PSI, 3/4" NPT CONNECTION SIZE. ⚠1
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (COLD WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1	HEAT PUMP	SANCO2:	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE,
WH-2	WATER HEATER	GS4-45HPC-D	UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET. ⚠1
ST-1	DOMESTIC	SANCO2:	119 GALLON STORAGE TANK.
ST-2	STORAGE TANK	SAN-119GLBK	1500 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	⚠1 1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

***Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements**

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	PIPE SIZE H.W.	PIPE SIZE WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

⚠1

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE		FIXTURE UNITS PER APPENDIX A					
		DOMESTIC WATER WSFU				SEWER DFU	
FIXTURE	QTY	PER FIXTURE	TOTAL	HW PER FIXTURE	TOTAL	PER FIXTURE	TOTAL
Private Tank Water Closet	8	2.5	20	-	-	3	24
Lavatory (Public or Private)	8	1	8	0.75	6	1	8
Bathtub or Combo Bath/Shwr	4	4	16	3	12	2	8
Kitchen Sink	4	1.5	6	1.125	4.50	2	8
Clothes Washer	4	4	16	3	12	3	12
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**32**		**69.5**		**34.50**		**64**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 33 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 1.5".
BUILDING WATER METER SIZE = 1"
TOTAL BUILDING WASTE FIXTURE UNITS IS 64. BUILDING SERVICE SIZE = (1X) 4".

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13215 135th Ave NE,
Kirkland, WA 98034

BUILDING 19

BID SET

DIANE M. AMBER FOLEY — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

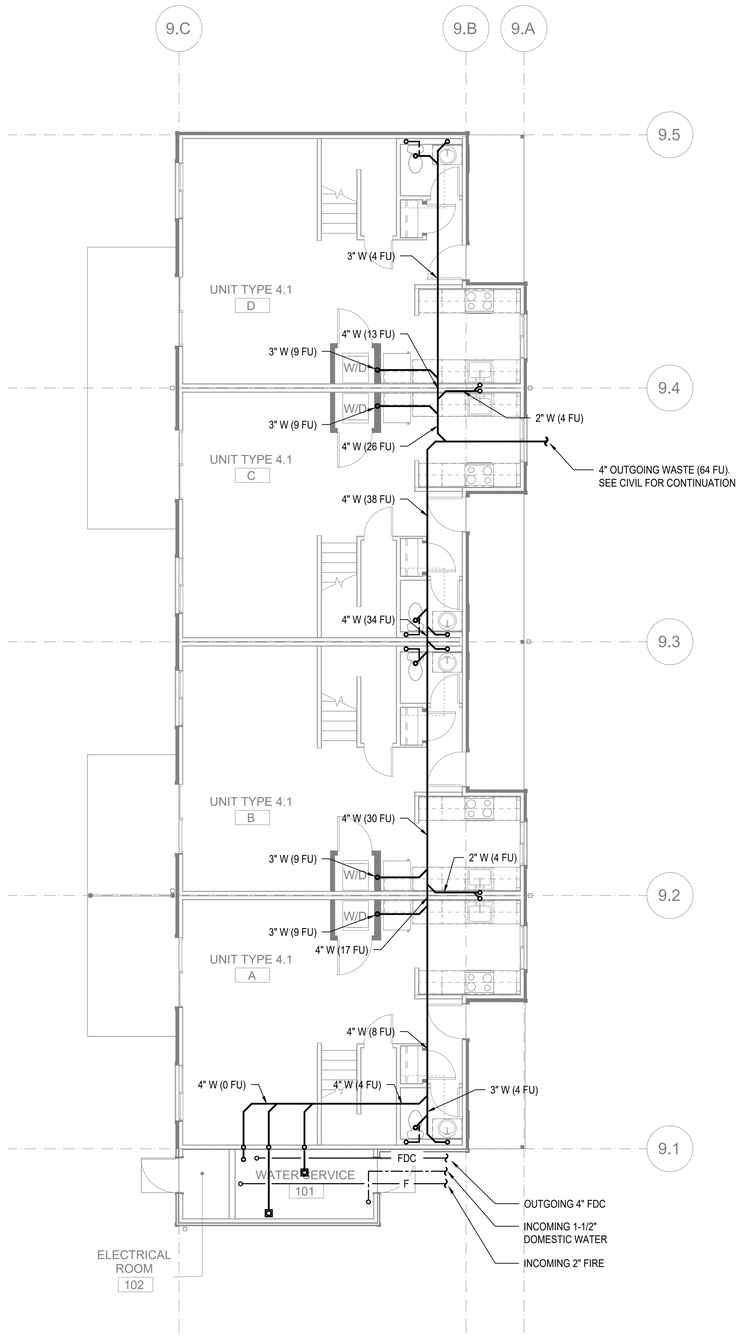
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TITLE

NOTES AND SCHEDULES

PERMIT #	BMF22-09889
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P19-002

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 19 - FOUNDATION

SCALE: 3/16"=1'-0"

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FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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BUILDING 19

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
5041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

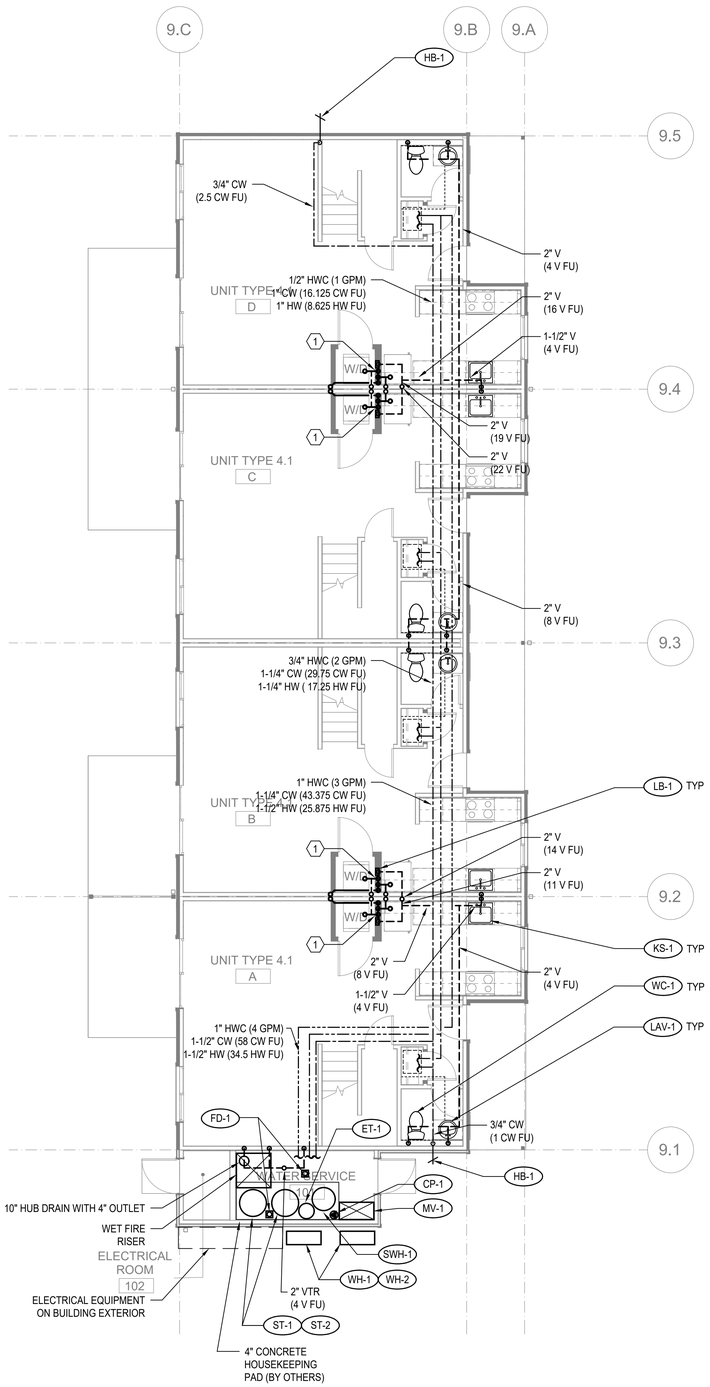
DPD STAMP

TITLE

PLAN - FOUNDATION

PERMIT #	BMF22-09889
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P19-100



FLOOR PLAN - BUILDING 19 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P-202 FOR WASTE AND VENT PIPE SIZING.

GENERAL NOTES:

1. PROVIDE HOT WATER, WASTE, AND AIR GAP CONNECTIONS FOR DISHWASHERS. (1)

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BUILDING 19

BID SET

DANA AMBER COLLINS — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

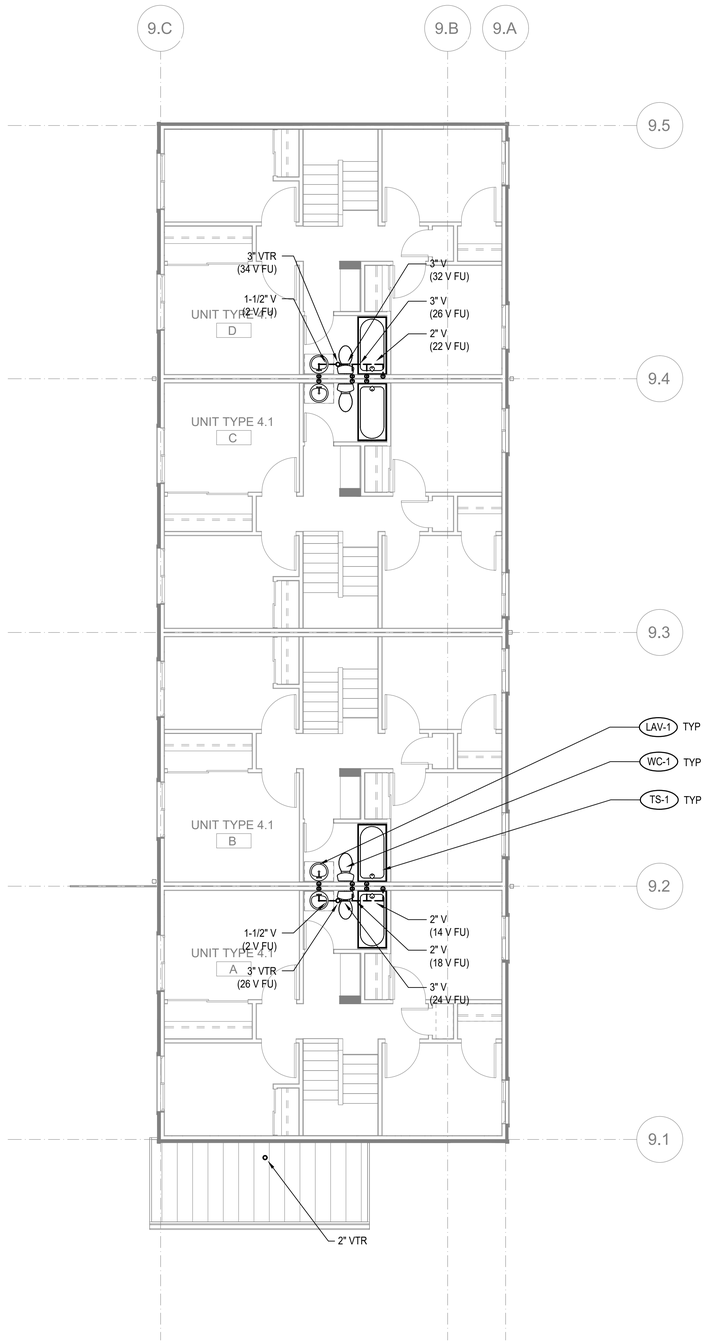
TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09889
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P19-101

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FLOOR PLAN - BUILDING 19 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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BUILDING 19

BID SET

DANA AMBER JOHNSON
STATE OF WASHINGTON
22041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

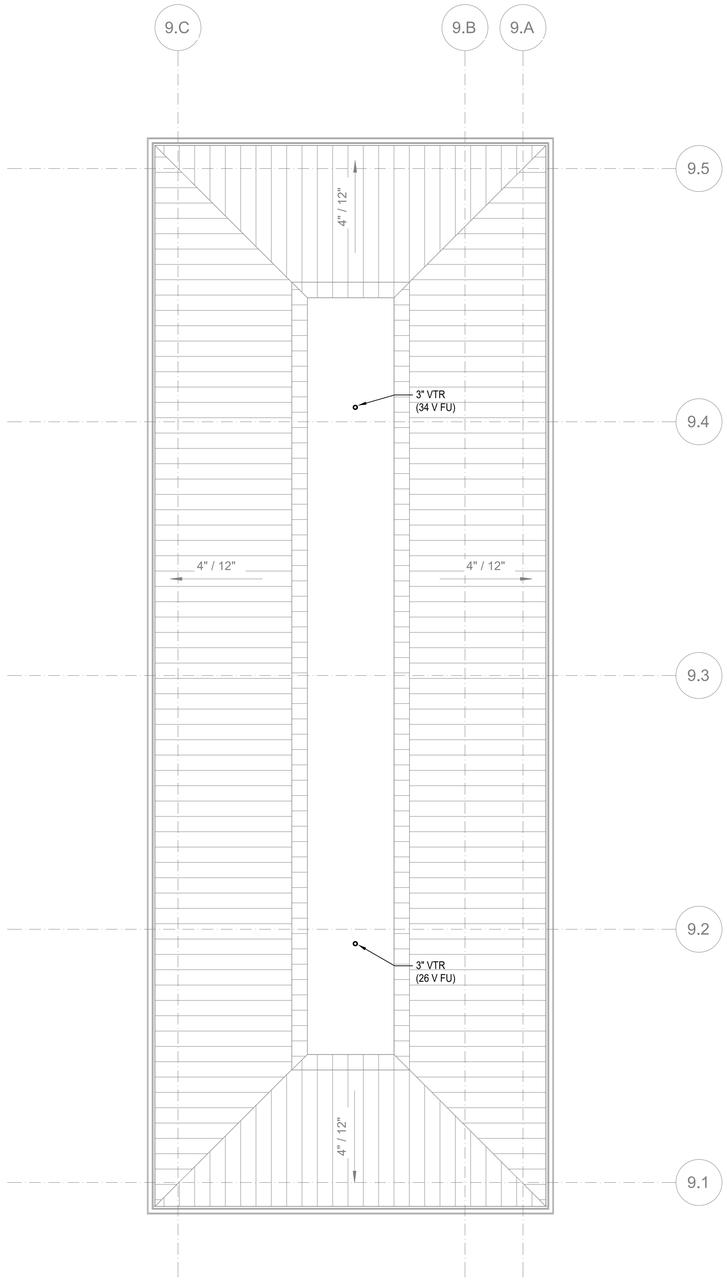
DPD STAMP

TITLE

PLAN - LEVEL 2

PERMIT #	BMF22-09889
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P19-102



FLOOR PLAN - BUILDING 19 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES.

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BUILDING 19

BID SET

DANA AMBER FORDYCE — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

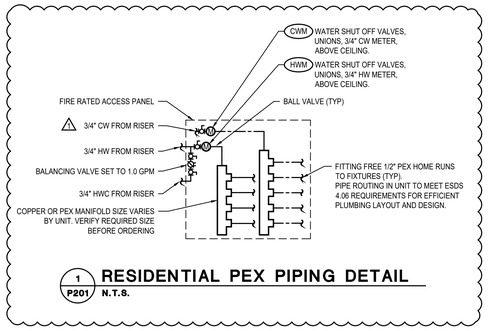
PLAN - ROOF

PERMIT #	BMF22-09889
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P19-103

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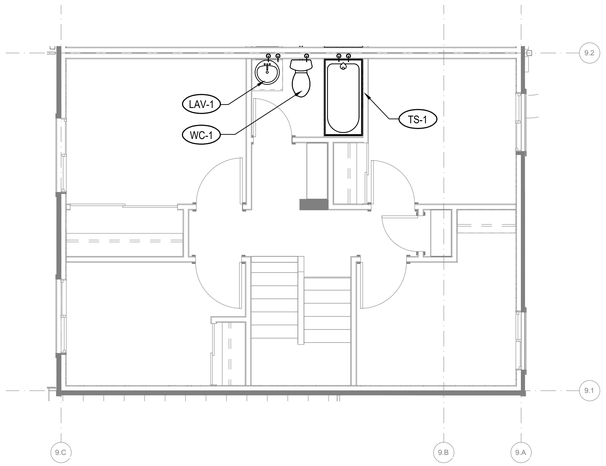
1/P201 RESIDENTIAL PEX PIPING DETAIL

N.T.S.

GENERAL NOTES:

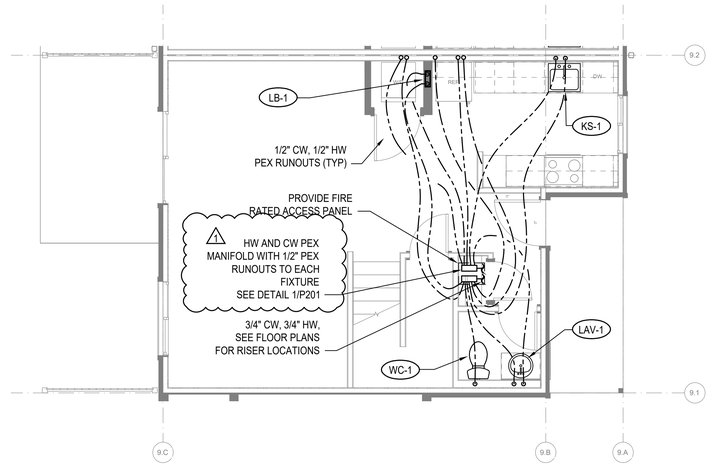
1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

FLAG NOTES (X):



2/P201 ENLARGED PLAN - TH - LEVEL 2

1/4"=1'-0"



1/P201 ENLARGED PLAN - TH - LEVEL 1

1/4"=1'-0"

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BUILDING 19

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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TITLE

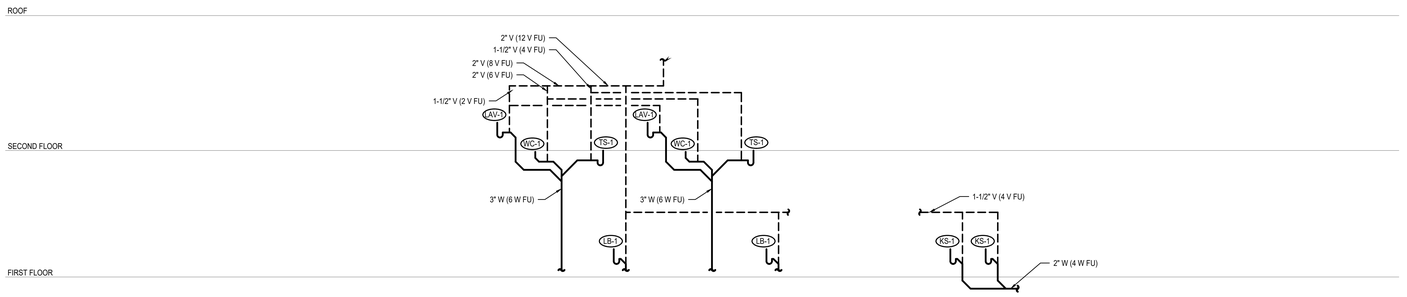
ENLARGED UNIT PLANS

PERMIT #	BMF22-09889
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P19-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 / P202 WASTE RISER - LB, LAV, WC, TS
N.T.S.

1 / P202 WASTE RISER - KS
N.T.S.

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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13215 135th Ave NE,
Kirkland, WA 98034

BUILDING 19

BID SET

DANA AMBER COLBURN
STATE OF WASHINGTON
20041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

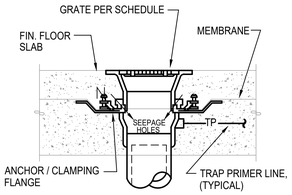
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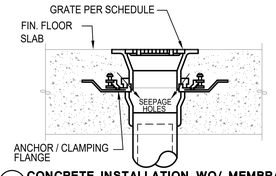
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ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P19-202

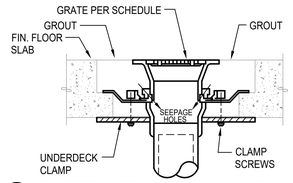
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A CONCRETE INSTALLATION W/ MEMBRANE

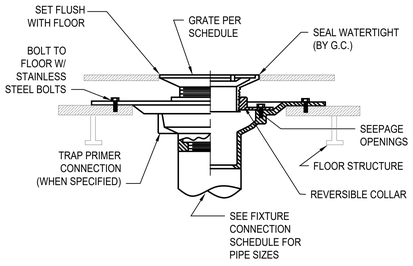


B CONCRETE INSTALLATION WO/ MEMBRANE



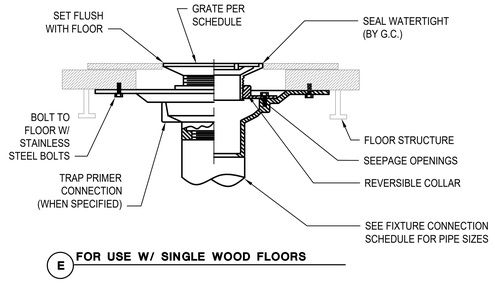
C CONCRETE INSTALLATION W/ CLAMPING RING

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



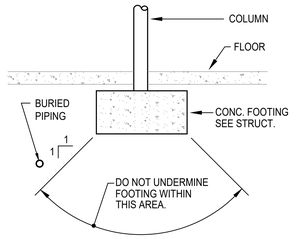
D FOR USE W/ DOUBLE WOOD FLOORS

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

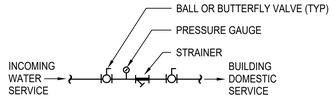


E FOR USE W/ SINGLE WOOD FLOORS

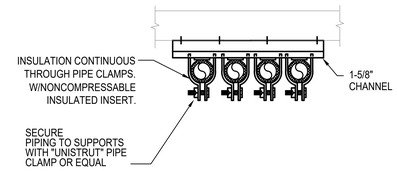
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



2 P301 BURIED PIPING DETAIL
N.T.S.

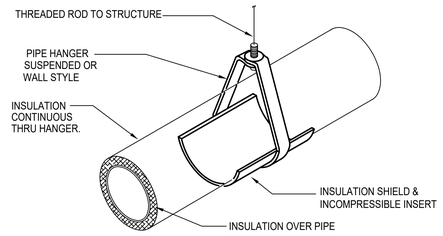


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

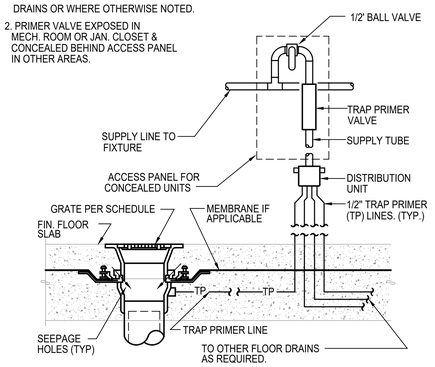
3 P301 PIPE SUPPORT
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

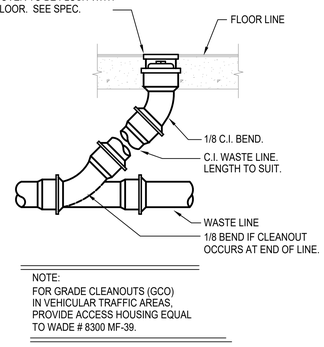
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



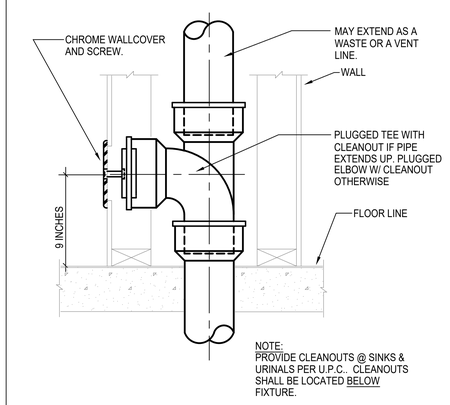
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

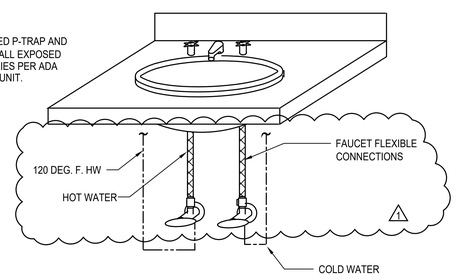
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



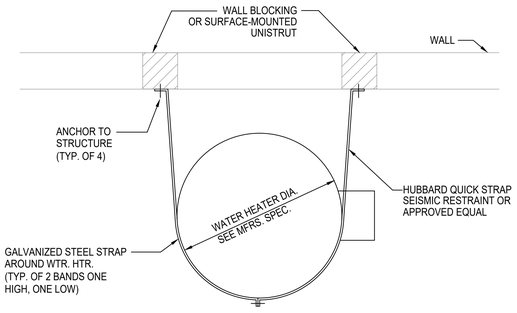
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

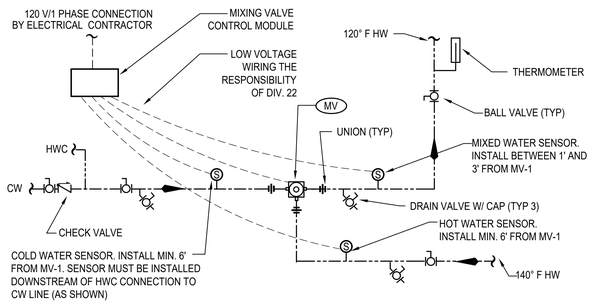
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



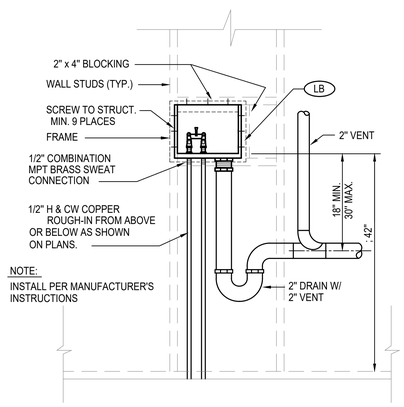
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



12 P301 LAUNDRY BOX DETAIL
N.T.S.

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REVISIONS / NOTES

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1	5.19.23	BID ADDENDUM 2

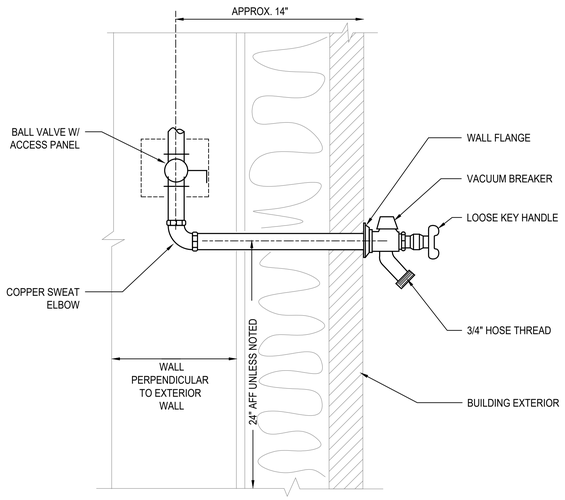
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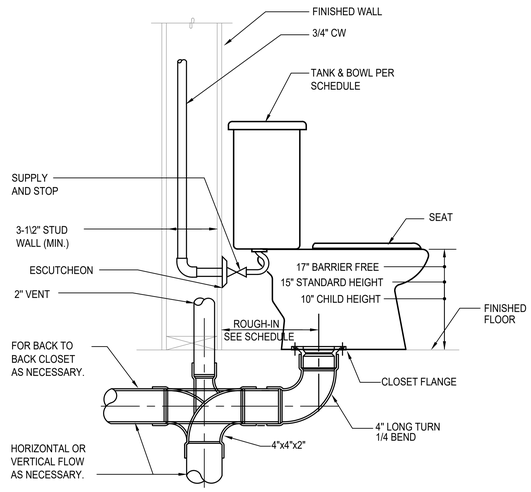
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P19-301



1 P302 FREEZE PROOF HOSE BIBB DETAIL

N.T.S.



2 P302 TANK WATER CLOSET DETAIL

N.T.S.

3 P302 NOT USED

N.T.S.

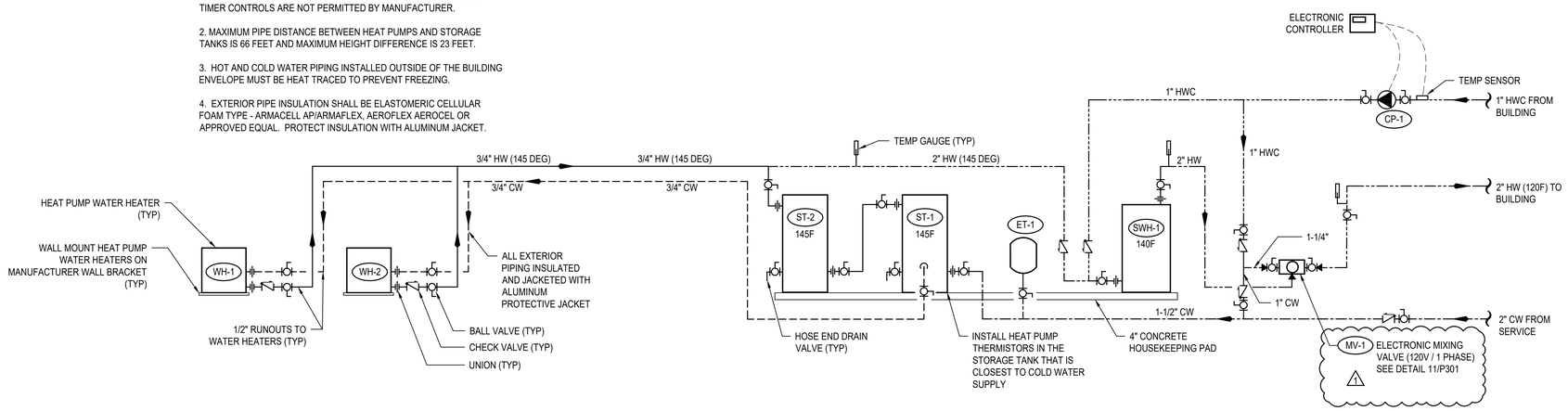
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL

N.T.S.

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DANA AMBER EDWARDS STATE OF WASHINGTON 24041009 REGISTERED PROFESSIONAL ENGINEER
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REVISIONS / NOTES

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1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

DETAILS

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DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P19-302

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- F — BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   - A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   - B. SHOWER HEADS 1.5 GPM
   - C RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   - E. KITCHEN SINK FAUCETS 1.5 GPM
   - SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED TO BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	LEVEL 3 FLOOR PLAN
P-104	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13205 135th Ave NE,
Kirkland, WA 98034

BUILDING 20

BID SET

DANA AMBER COLEMAN — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09890
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P20-001

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GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-35-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE.
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (COLD WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1	HEAT PUMP WATER HEATER	SANCO2: GS4-45HPC-D	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE, UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
WH-2			
WH-3			
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET.
ST-1	DOMESTIC STORAGE TANK	SANCO2: ECO-200GLBK	200 GALLON STORAGE TANK.
ST-2			2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

*Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	PIPE SIZE H.W.	PIPE SIZE WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE		FIXTURE UNITS PER APPENDIX A					
		DOMESTIC WATER WSFU				SEWER DFU	
FIXTURE	QTY	PER FIXTURE	TOTAL	HW PER FIXTURE	TOTAL	PER FIXTURE	TOTAL
Private Tank Water Closet	12	2.5	30	-	-	3	36
Lavatory (Public or Private)	12	1	12	0.75	9	1	12
Bathtub or Combo Bath/Shwr	12	4	48	3	36	2	24
Kitchen Sink	12	1.5	18	1.125	13.50	2	24
Clothes Washer	12	4	48	3	36	3	36
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**64**		**159.5**		**94.50**		**136**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 58 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 136. BUILDING SERVICE SIZE = (1X) 4".

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King County Housing Authority

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General Partner
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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13205 135th Ave NE,
Kirkland, WA 98034

BUILDING 20

BID SET

DANA AMBER FORDYCE — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

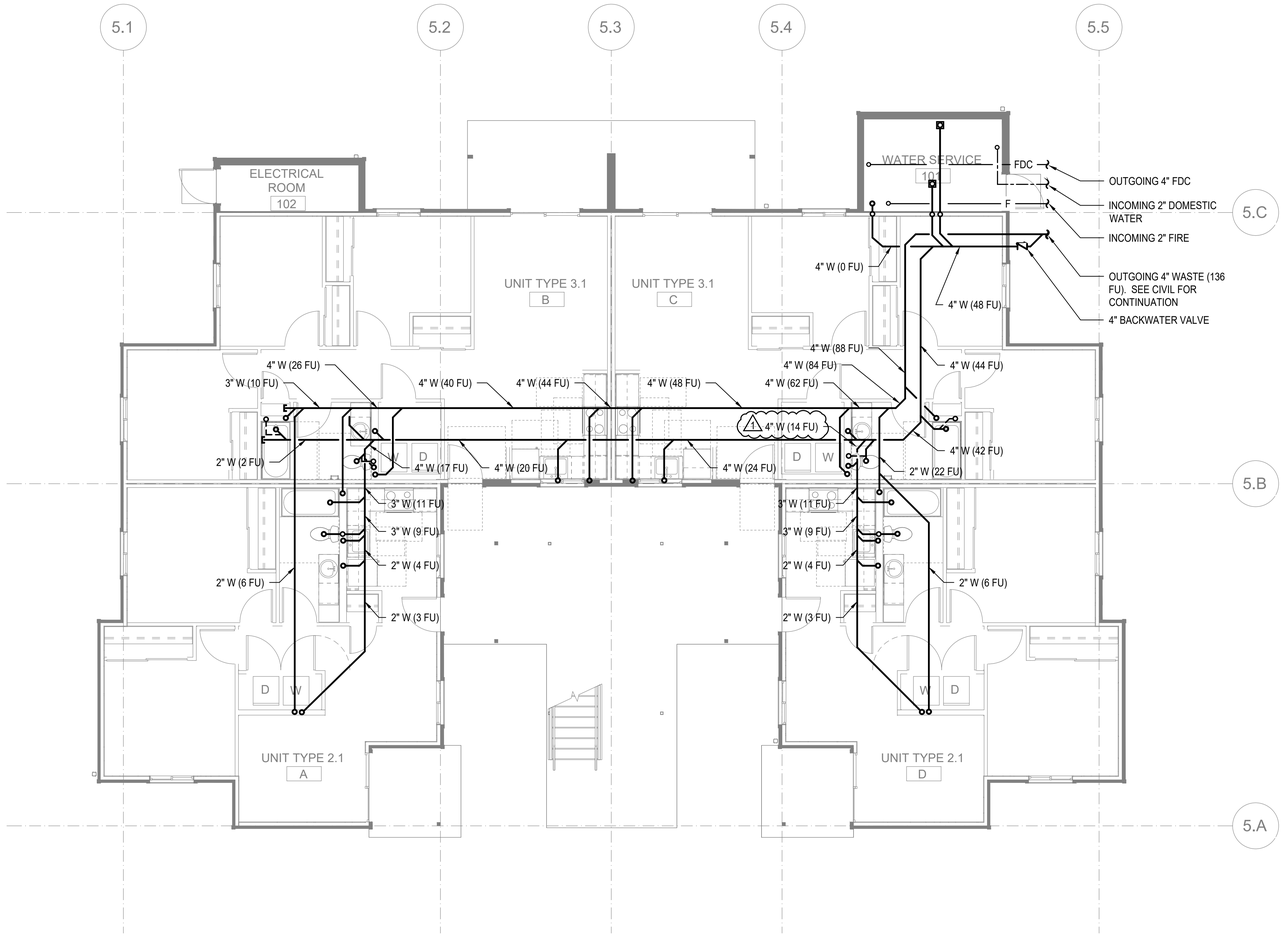
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NOTES AND SCHEDULES

PERMIT #	BMF22-09890
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P20-002

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FLOOR PLAN - BUILDING 20 - FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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BUILDING 20

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
22041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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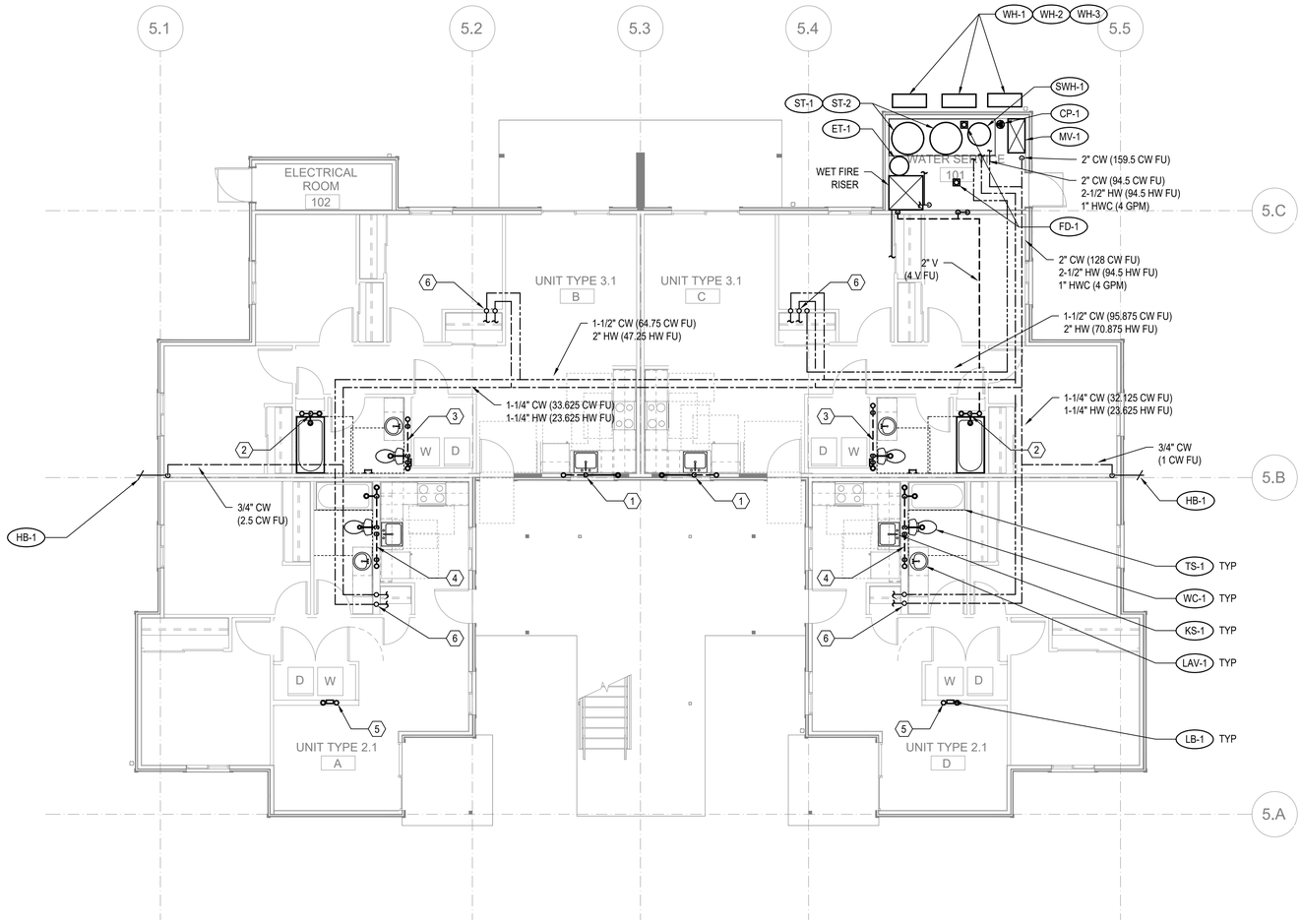
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PLAN - FOUNDATION

PERMIT #	BMF22-09890
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P20-100

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FLOOR PLAN - BUILDING 20 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 20

BID SET

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STATE OF WASHINGTON
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REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

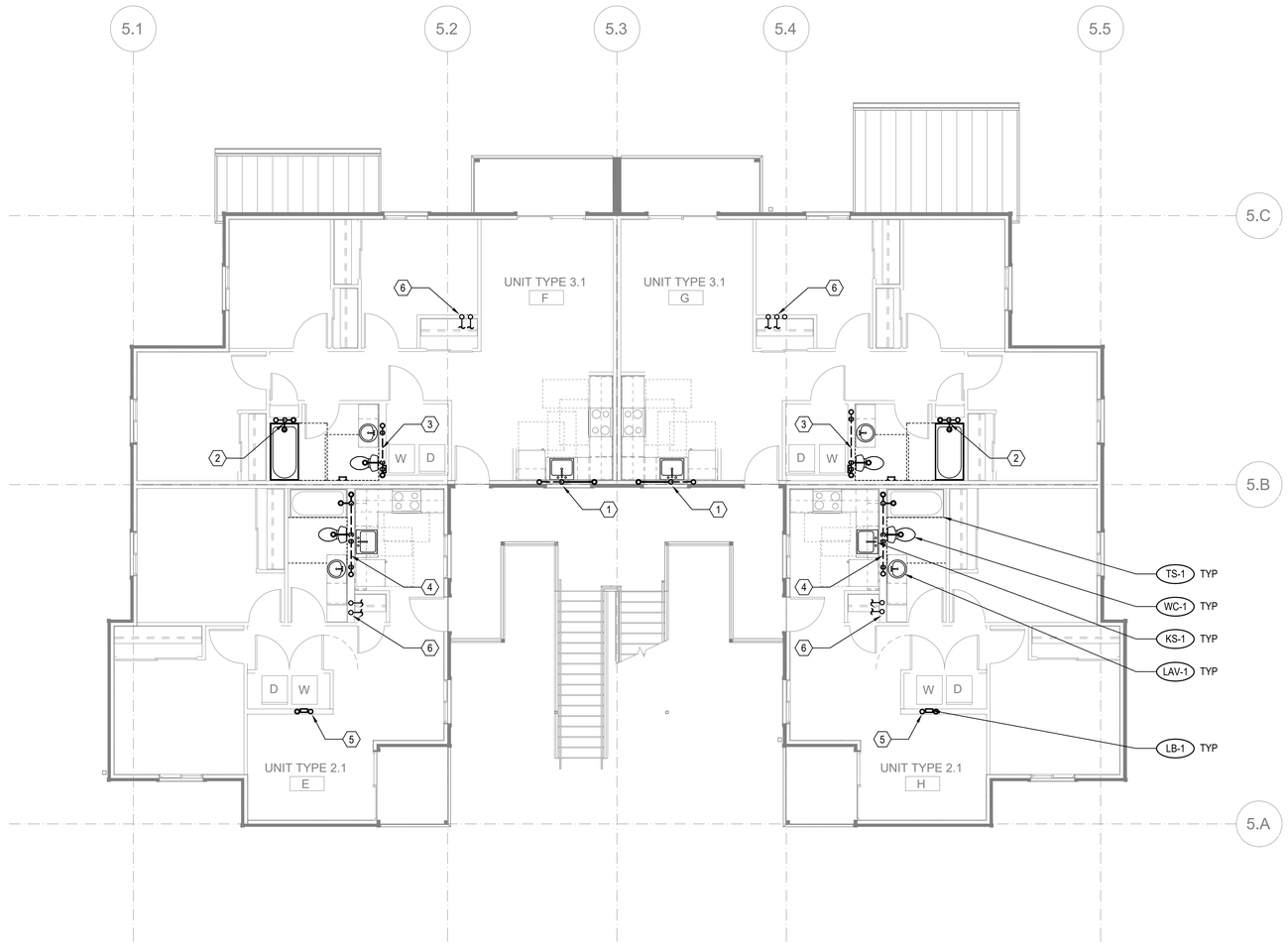
DPD STAMP

TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09890
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P20-101



FLOOR PLAN - BUILDING 20 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 20

BID SET

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

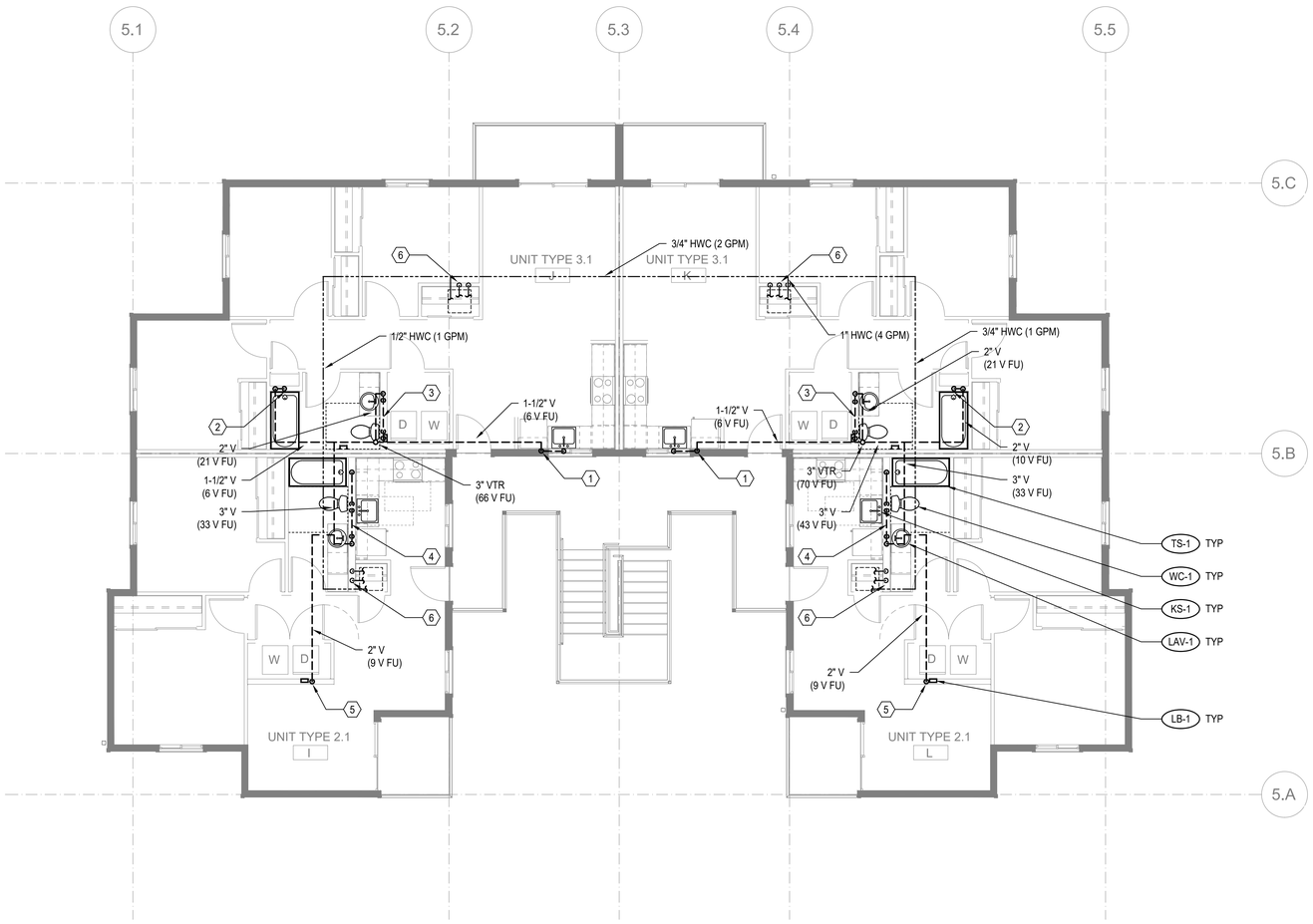
TITLE

PLAN - LEVEL 2

PERMIT #	BMF22-09890
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P20-102

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FLOOR PLAN - BUILDING 20 - LEVEL 3

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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1	5.19.23	BID ADDENDUM 2

DPD STAMP

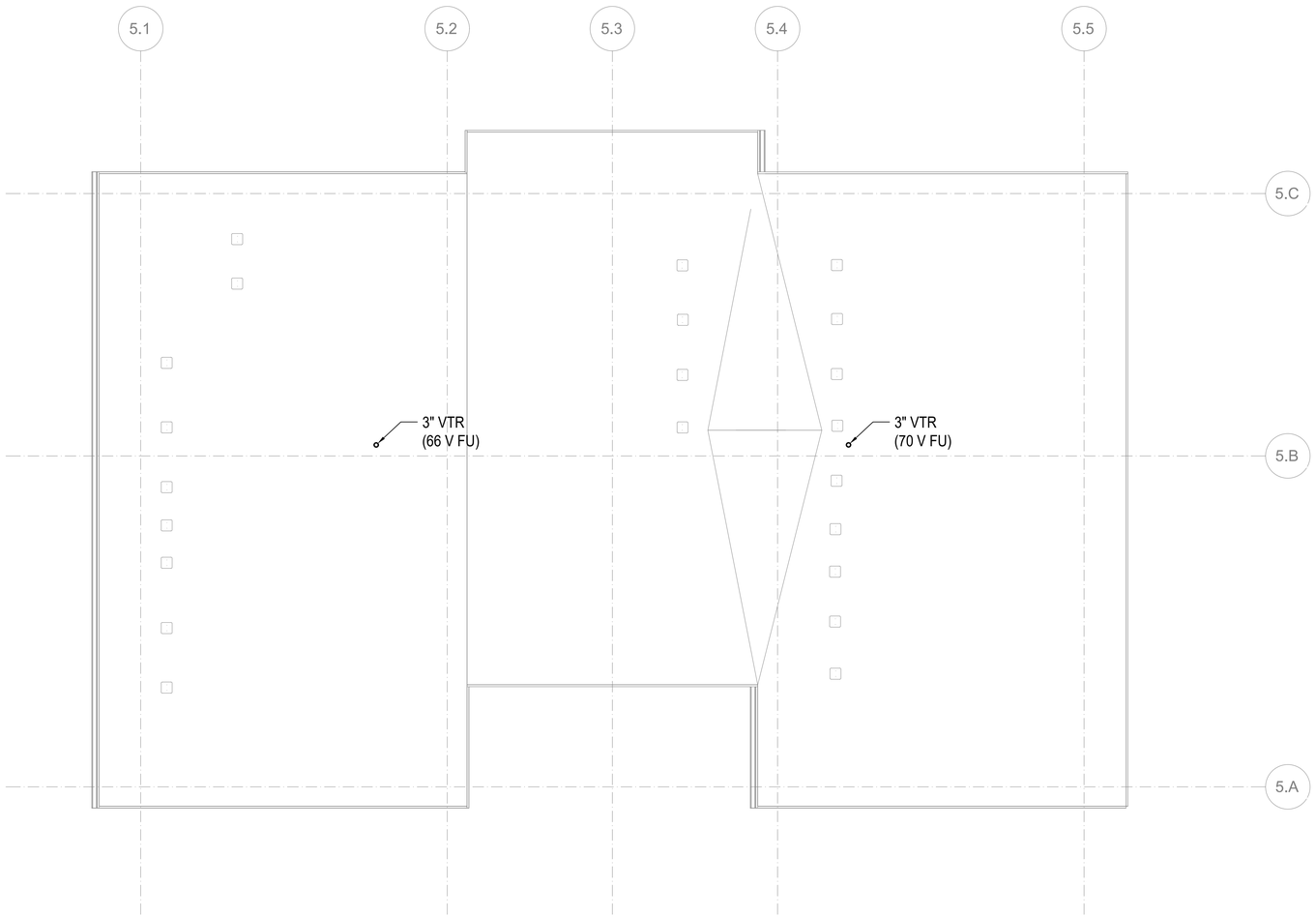
TITLE

PLAN - LEVEL 3

PERMIT #	BMF22-09890
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P20-103

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 20 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
192 Nickerson, Suite #300
Seattle, Washington 98109
Phone: 206.285.2966

SMR Architects
117 S. Main St., Suite 400
Seattle, WA 98104

PH: 206.623.1104
FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13205 135th Ave NE,
Kirkland, WA 98034

BUILDING 20

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
22041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

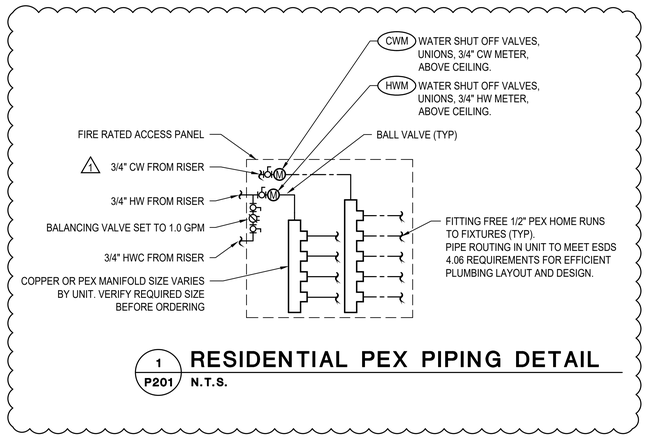
TITLE

PLAN - ROOF

PERMIT #	BMF22-09890
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P20-104

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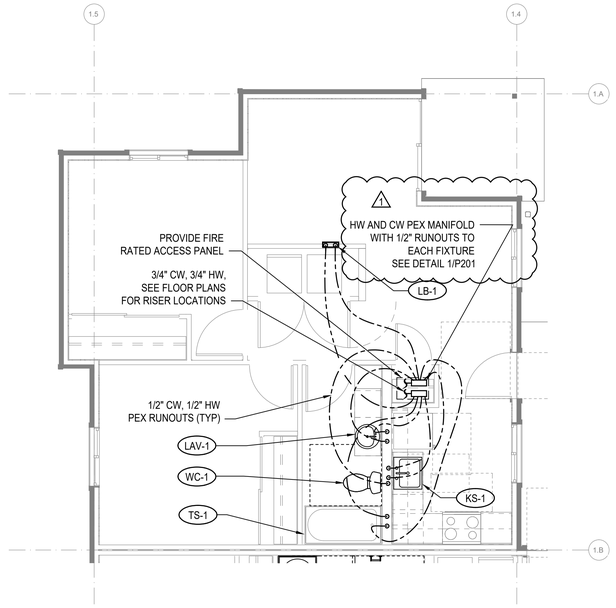
1 P201 **RESIDENTIAL PEX PIPING DETAIL**

N.T.S.

GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

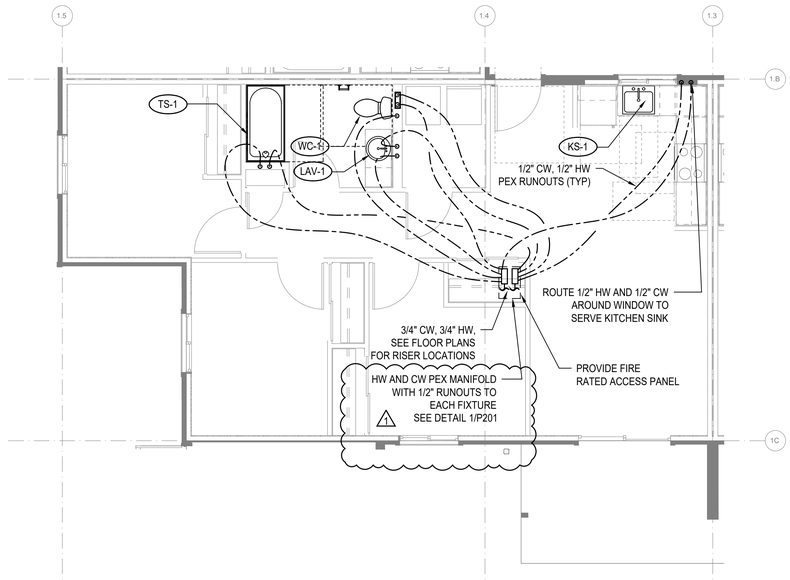
FLAG NOTES (X):



2 P201 **ENLARGED PLAN - 2-BED**

1/4"=1'-0"

UNITS: A, D, E, H, I, L



1 P201 **ENLARGED PLAN - 3-BED**

1/4"=1'-0"

UNITS: B, C, F, G, J, K

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KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 20

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
5041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

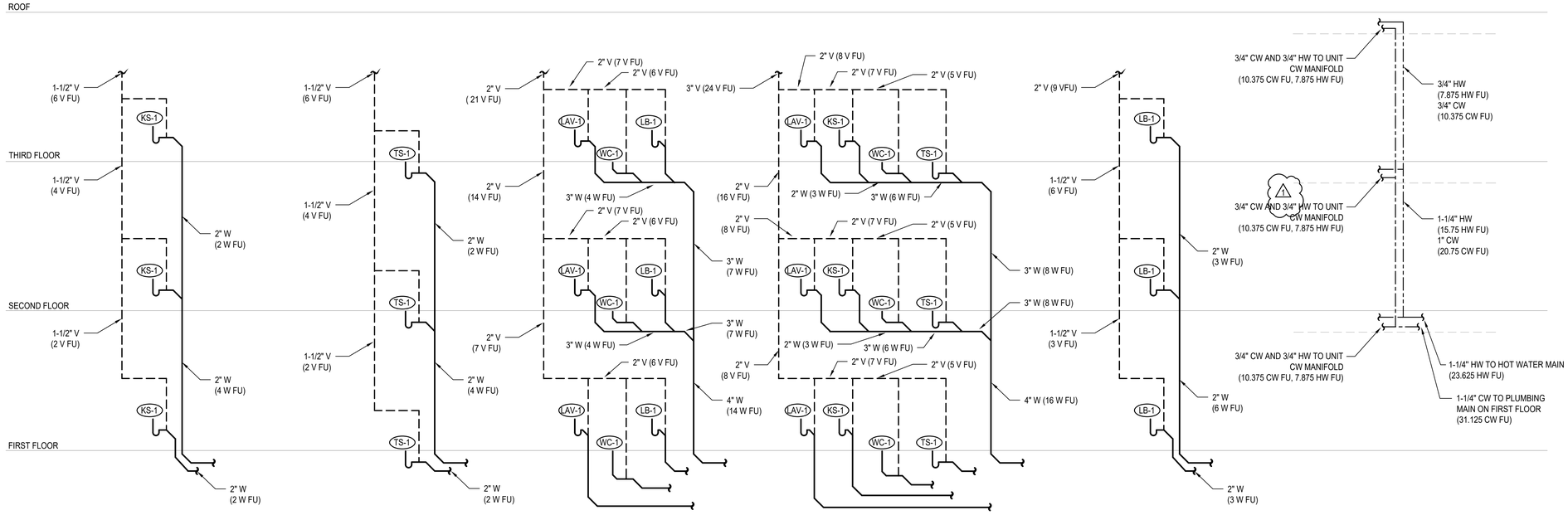
ENLARGED UNIT PLANS

PERMIT #	BMF22-09890
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P20-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - KITCHEN SINK** N.T.S.

2 P202 **WASTE RISER - TUB/SHOWER** N.T.S.

3 P202 **WASTE RISER - LB, LAV, WC** N.T.S.

4 P202 **WASTE RISER - LAV, KS, WC, TS** N.T.S.

5 P202 **WASTE RISER - LAUNDRY BOX** N.T.S.

6 P202 **WATER RISER** N.T.S.

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Kirkland, WA 98034

BUILDING 20

BID SET

DANA AMBER COLBURN STATE OF WASHINGTON 24041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

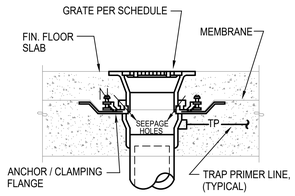
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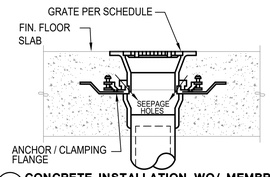
RISERS

PERMIT #	BMF22-09890
DRAWN	AJ, JL, PH, BF, KS
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SHEET NO.:	

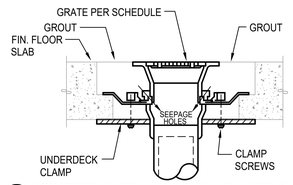
P20-202



A CONCRETE INSTALLATION W/ MEMBRANE

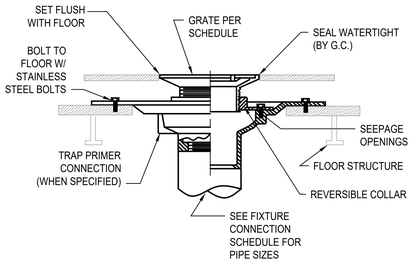


B CONCRETE INSTALLATION WO/ MEMBRANE



C CONCRETE INSTALLATION W/ CLAMPING RING

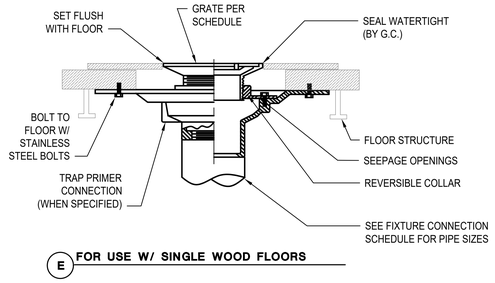
NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



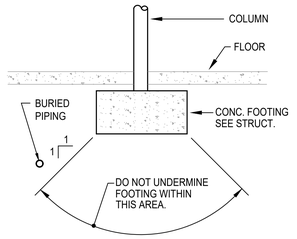
D FOR USE W/ DOUBLE WOOD FLOORS

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

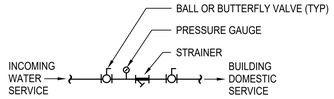
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



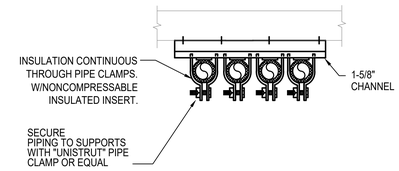
E FOR USE W/ SINGLE WOOD FLOORS



2 P301 BURIED PIPING DETAIL
N.T.S.

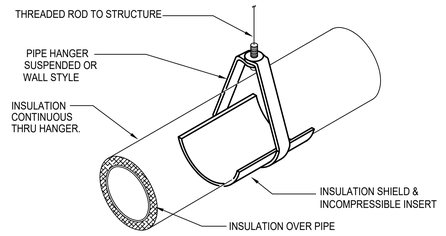


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

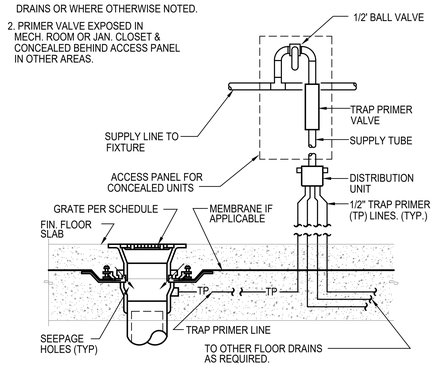
3 P301 PIPE SUPPORT
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

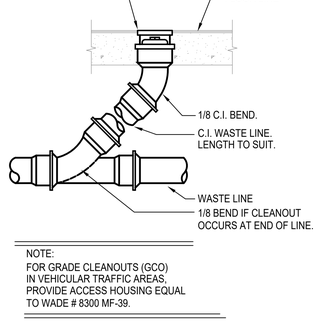
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



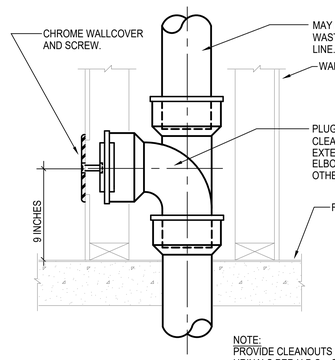
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

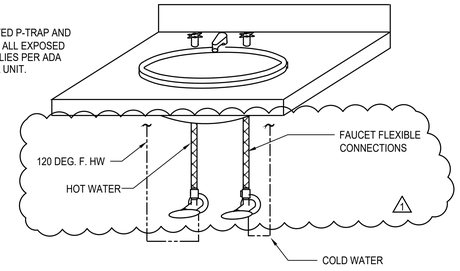
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



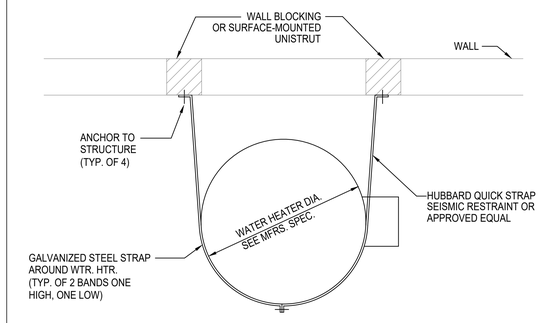
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

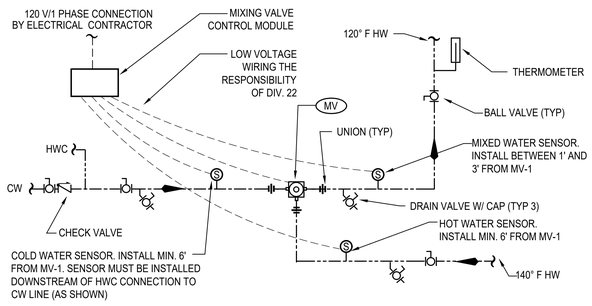
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



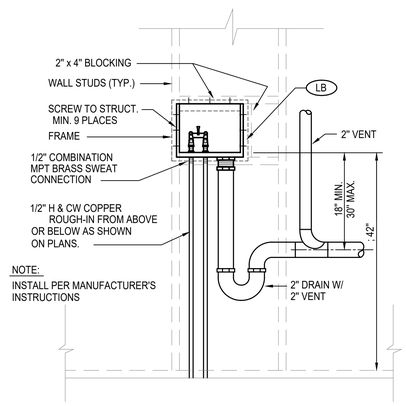
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



NOTE:
INSTALL PER MANUFACTURER'S INSTRUCTIONS

12 P301 LAUNDRY BOX DETAIL
N.T.S.

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BUILDING 20

BID SET

DIANE AMBER FORDON — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

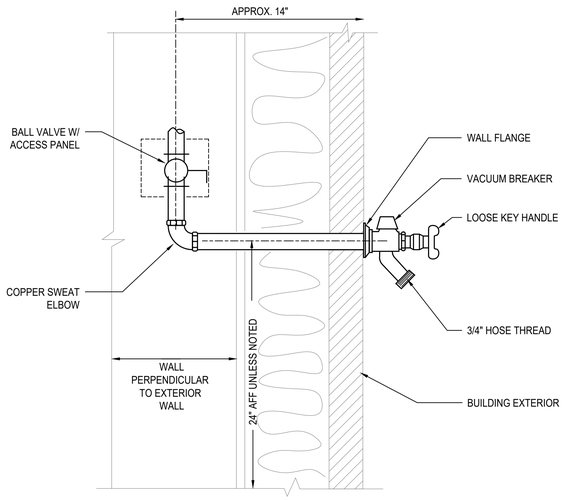
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DETAILS

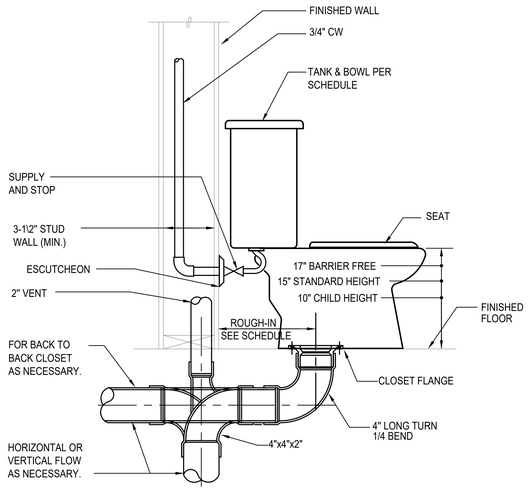
PERMIT #	BMF22-09890
DRAWN	AJ, JL, PH, BF, KS
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SHEET NO.:	

P20-301



1 P302 FREEZE PROOF HOSE BIBB DETAIL

N.T.S.



2 P302 TANK WATER CLOSET DETAIL

N.T.S.

3 P302 NOT USED

N.T.S.

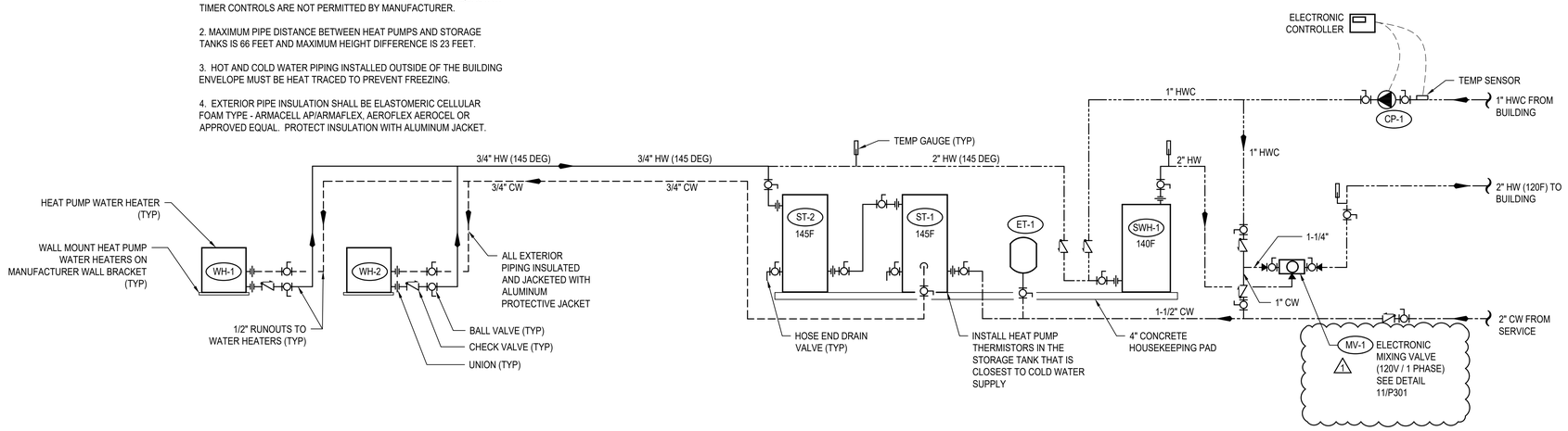
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL

N.T.S.

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

DETAILS

PERMIT #	BMF22-09890
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P20-302

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PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	LEVEL 3 FLOOR PLAN
P-104	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
   SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED TO BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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King County Housing Authority

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c/o: King County Housing Authority,
General Partner
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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13414 NE 132nd St,
Kirkland, WA 98034

BUILDING 21

BID SET

DANA AMBER COLLEEN — STATE OF WASHINGTON — 5041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09895
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P21-001

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GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.
HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-35-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE.
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (COLD WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1	HEAT PUMP WATER HEATER	SANCO2: GS4-45HPC-D	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE, UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
WH-2			
WH-3			
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET.
ST-1	DOMESTIC STORAGE TANK	SANCO2: ECO-200GLBK	200 GALLON STORAGE TANK.
ST-2			2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

kWh

***Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements**

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	PIPE SIZE H.W.	PIPE SIZE WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE — FIXTURE UNITS PER APPENDIX A

FIXTURE	QTY	DOMESTIC WATER WSFU: PER FIXTURE	DOMESTIC WATER WSFU: TOTAL	HW PER FIXTURE	HW TOTAL	SEWER DFU: PER FIXTURE	SEWER DFU: TOTAL
Private Tank Water Closet	12	2.5	30	-	-	3	36
Lavatory (Public or Private)	12	1	12	0.75	9	1	12
Bathtub or Combo Bath/Shwr	12	4	48	3	36	2	24
Kitchen Sink	12	1.5	18	1.125	13.50	2	24
Clothes Washer	12	4	48	3	36	3	36
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**64**		**159.5**		**94.50**		**136**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 58 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 136. BUILDING SERVICE SIZE = (1X) 4".

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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 21

BID SET

DANA AMBER FORDYCE — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

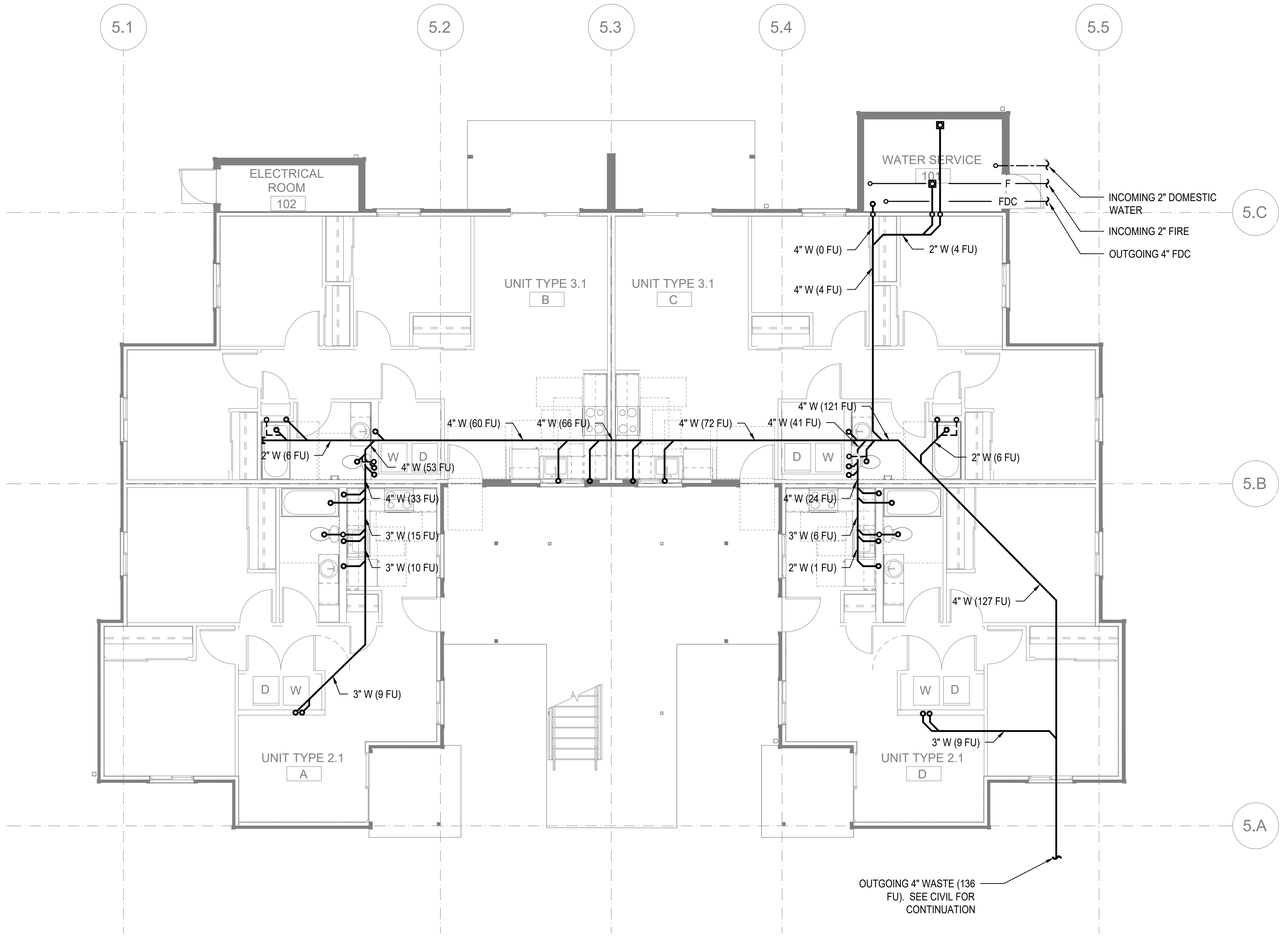
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NOTES AND SCHEDULES

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DRAWN	AJ, JL, PH, BF, KS
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P21-002

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FLOOR PLAN - BUILDING 21 - FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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1	5.19.23	BID ADDENDUM 2

DPD STAMP

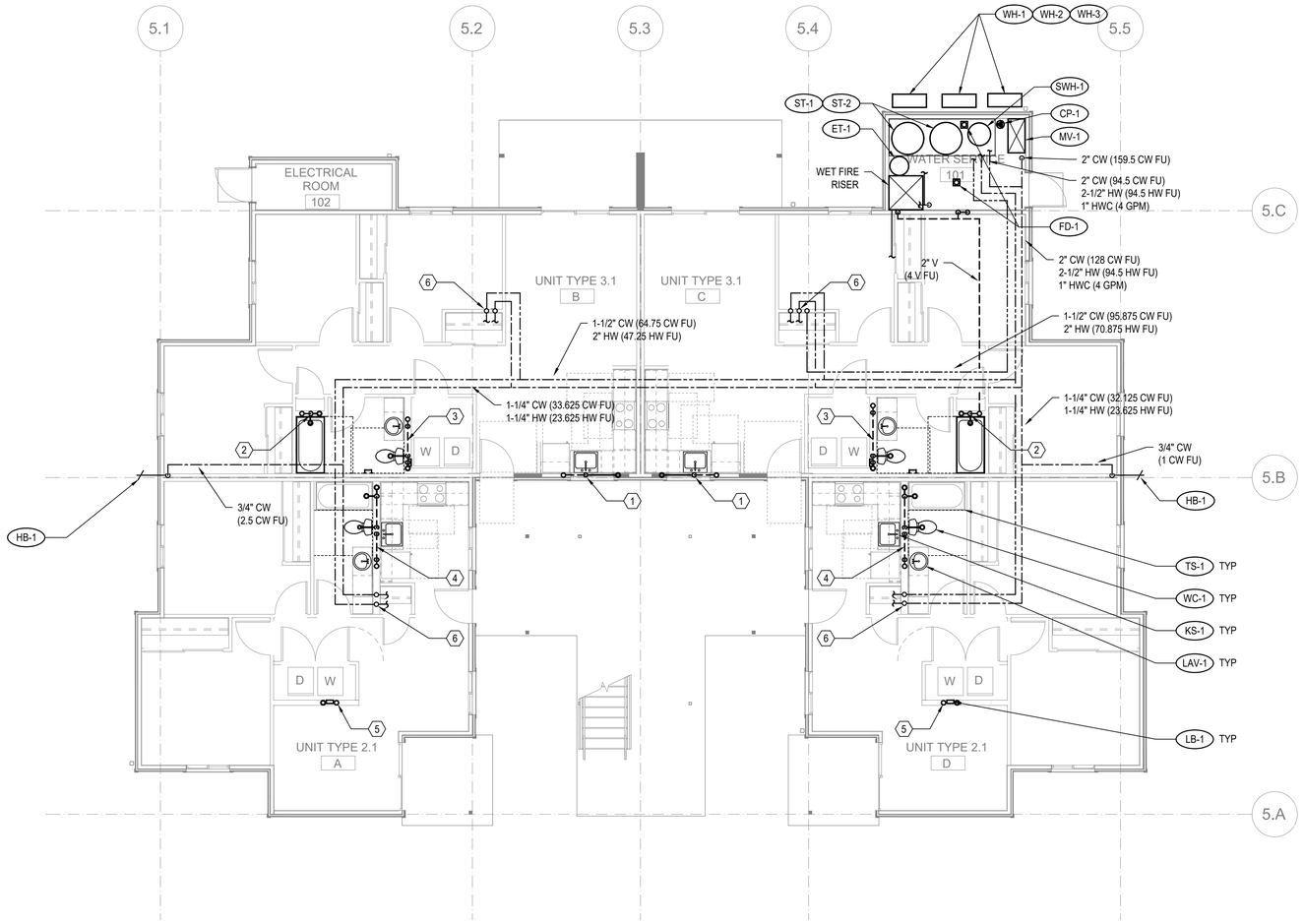
TITLE

PLAN - FOUNDATION

PERMIT #	BMF22-09895
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P21-100

10/7/2021 1:33:34 AM



FLOOR PLAN - BUILDING 21 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

10/7/2021 7:33:34 AM

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
192 Nickerson, Suite #300
Seattle, Washington 98109
Phone: 206.285.2966

SMR Architects
117 S. Main St., Suite 400
Seattle, WA 98104

PH: 206.623.1104
FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13414 NE 132nd St,
Kirkland, WA 98034

BUILDING 21

BID SET

DANA AMBER FOLKERTSEN
STATE OF WASHINGTON
22041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

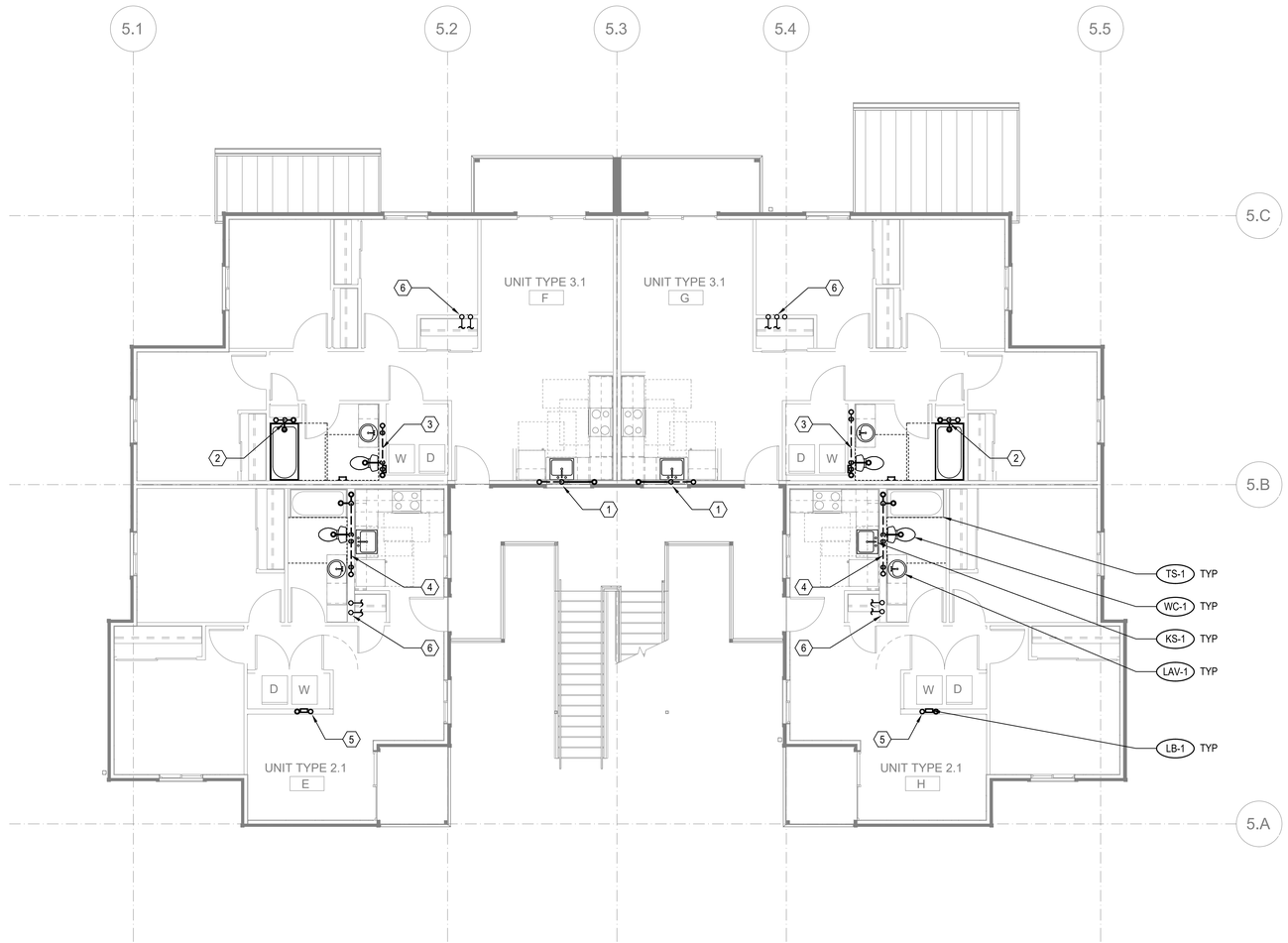
DPD STAMP

TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09895
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P21-101



FLOOR PLAN - BUILDING 21 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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MECHANICAL + ELECTRICAL ENGINEERS
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CONTRACT #: TC2300131

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Kirkland, WA 98034

BUILDING 21

BID SET

DANA AMBER COLLINSON
STATE OF WASHINGTON
22041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

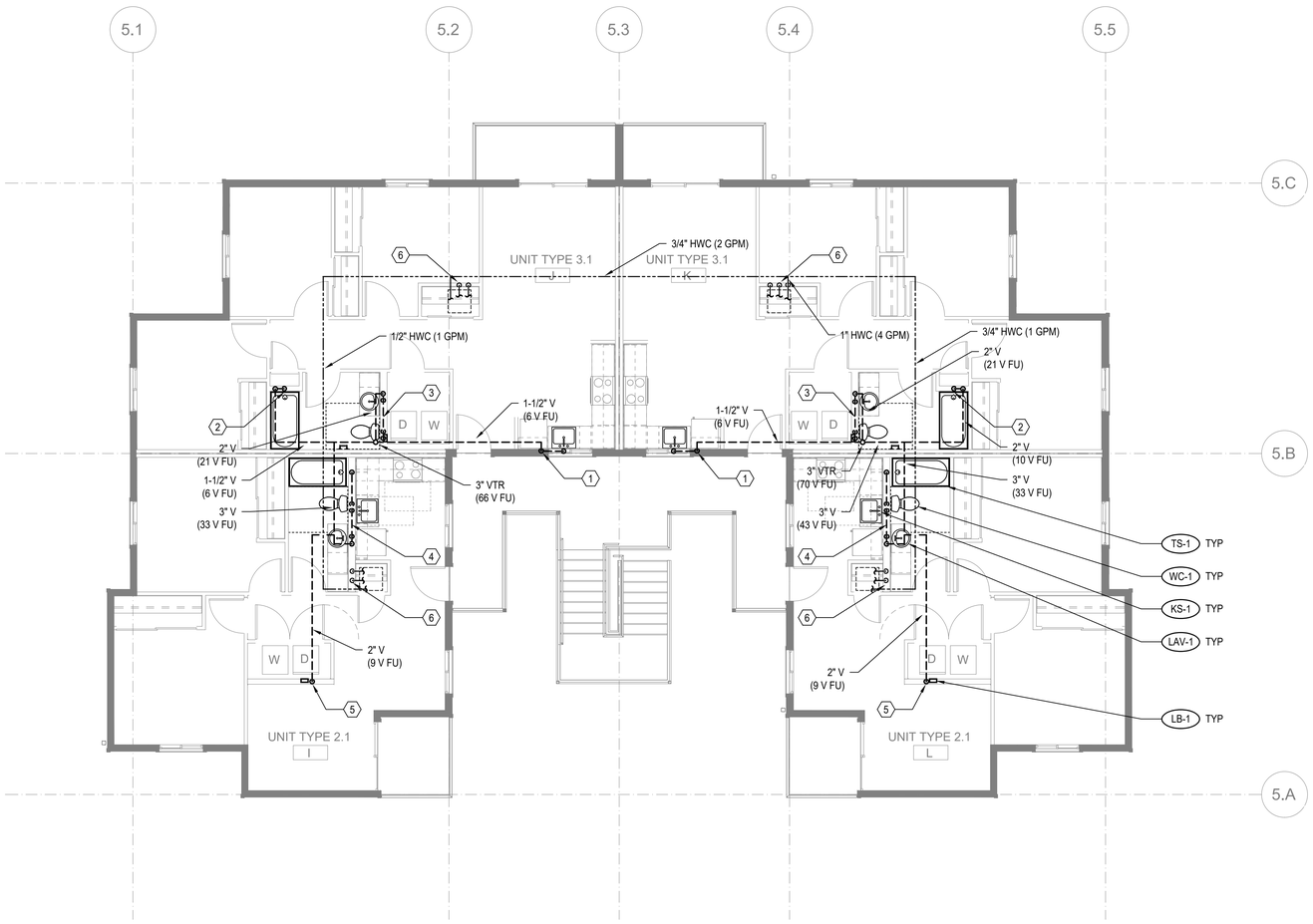
TITLE

PLAN - LEVEL 2

PERMIT #	BMF22-09895
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P21-102

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 21 - LEVEL 3

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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King County Housing Authority

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 21

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
22041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

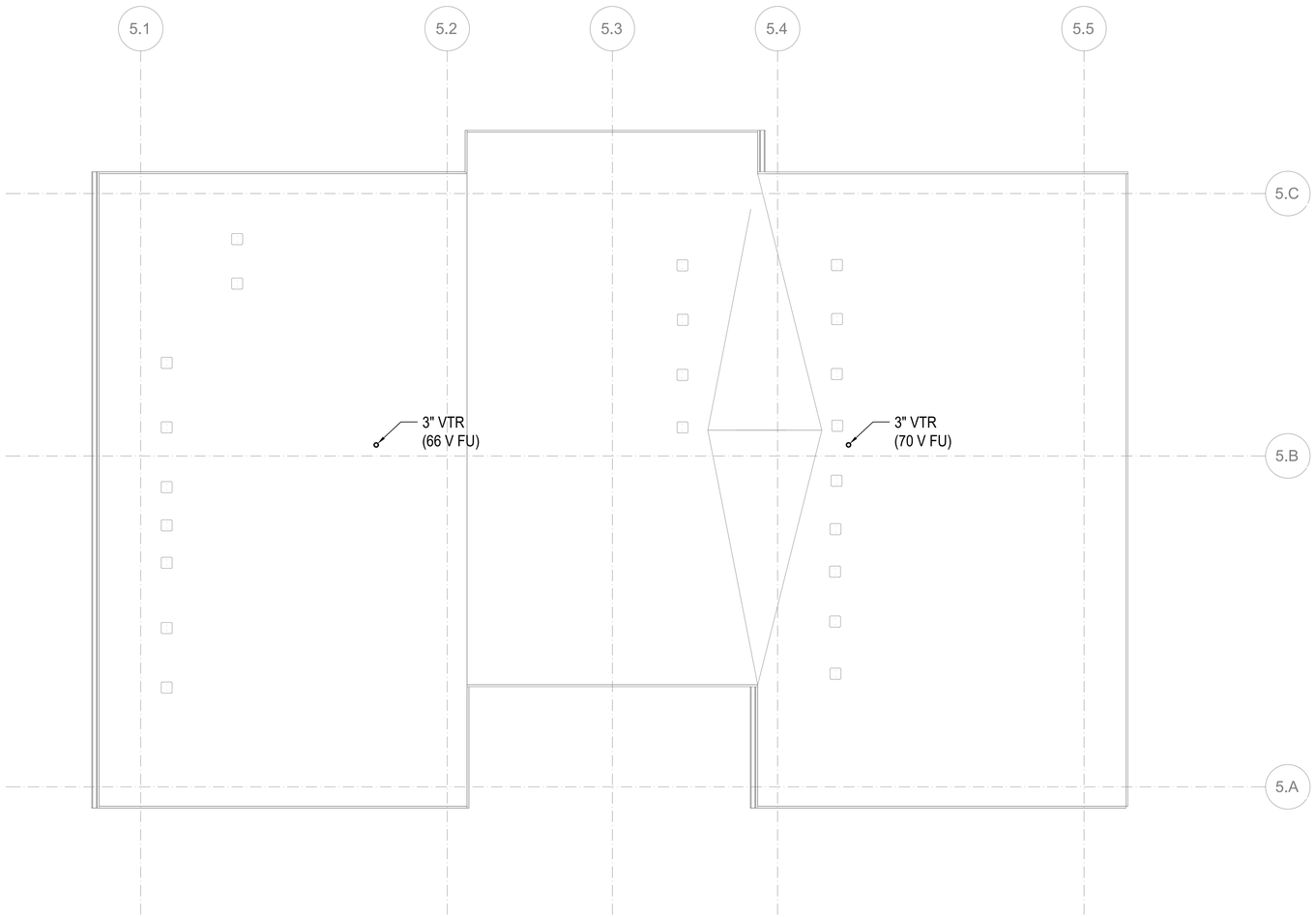
TITLE

PLAN - LEVEL 3

PERMIT #	BMF22-09895
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P21-103

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 21 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

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BUILDING 21

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

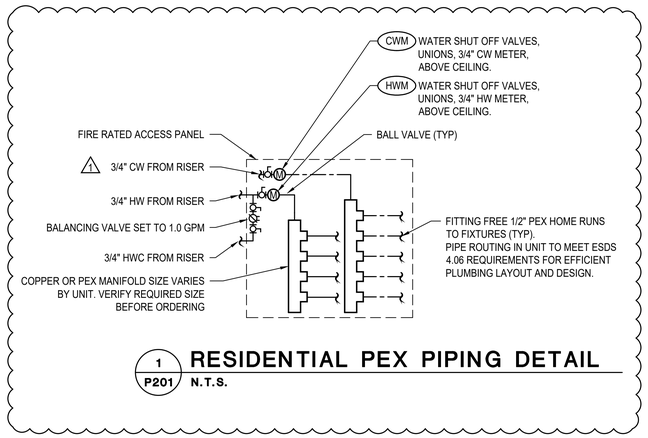
TITLE

PLAN - ROOF

PERMIT #	BMF22-09895
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P21-104

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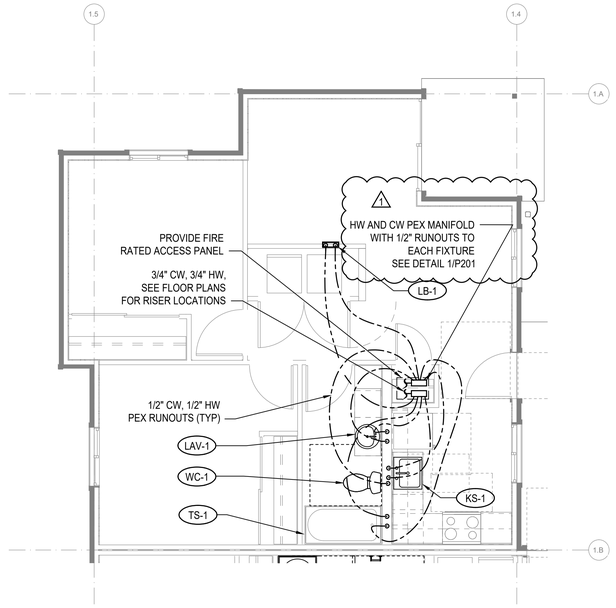
1 P201 **RESIDENTIAL PEX PIPING DETAIL**

N.T.S.

GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

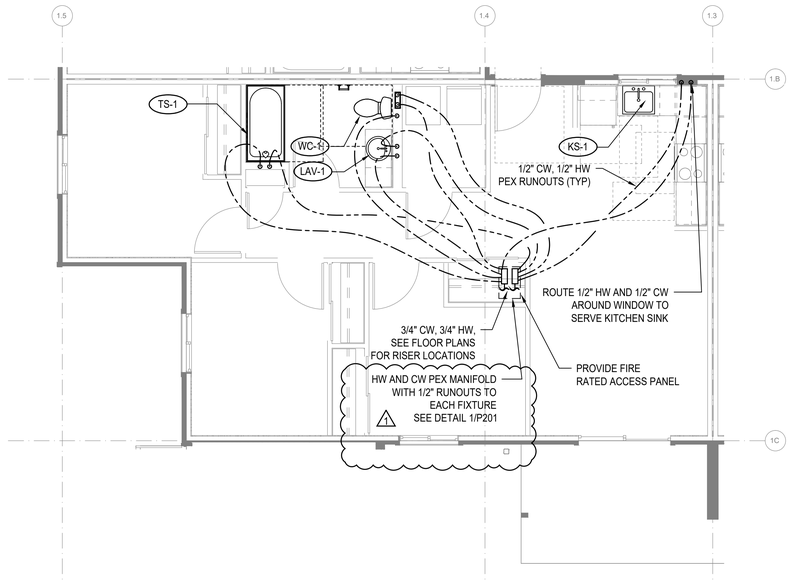
FLAG NOTES (X):



2 P201 **ENLARGED PLAN - 2-BED**

1/4"=1'-0"

UNITS: A, D, E, H, I, L



1 P201 **ENLARGED PLAN - 3-BED**

1/4"=1'-0"

UNITS: B, C, F, G, J, K

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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13414 NE 132nd St,
Kirkland, WA 98034

BUILDING 21

BID SET

DANA AMBER COLLINS STATE OF WASHINGTON 25041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

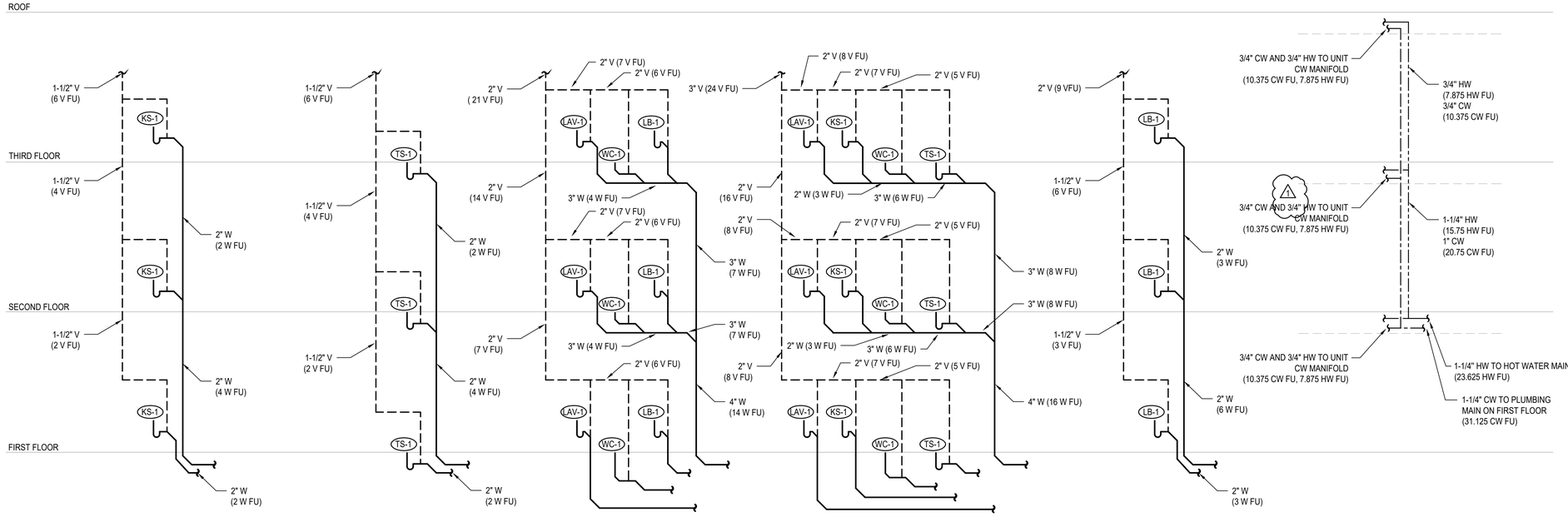
ENLARGED UNIT PLANS

PERMIT #	BMF22-09895
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
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P21-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - KITCHEN SINK** N.T.S.

2 P202 **WASTE RISER - TUB/SHOWER** N.T.S.

3 P202 **WASTE RISER - LB, LAV, WC** N.T.S.

4 P202 **WASTE RISER - LAV, KS, WC, TS** N.T.S.

5 P202 **WASTE RISER - LAUNDRY BOX** N.T.S.

6 P202 **WATER RISER** N.T.S.

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REVISIONS / NOTES

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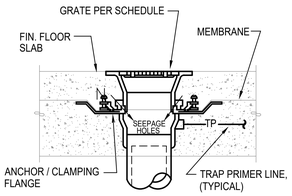
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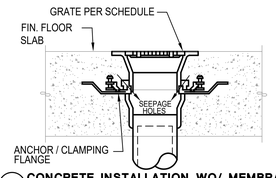
RISERS

PERMIT #	BMF22-09895
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

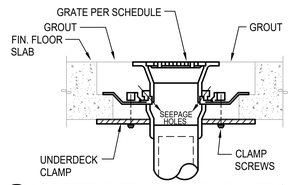
P21-202



A CONCRETE INSTALLATION W/ MEMBRANE

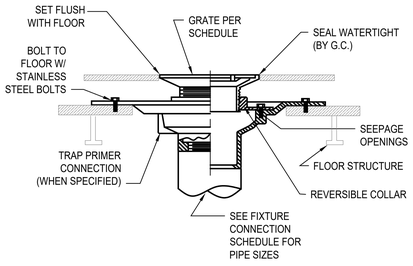


B CONCRETE INSTALLATION WO/ MEMBRANE



C CONCRETE INSTALLATION W/ CLAMPING RING

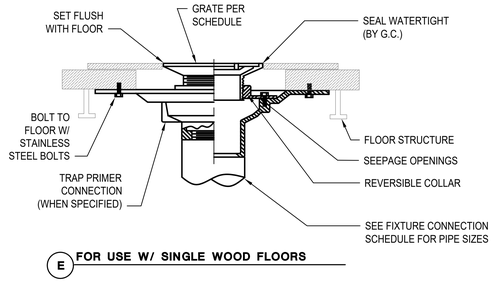
NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



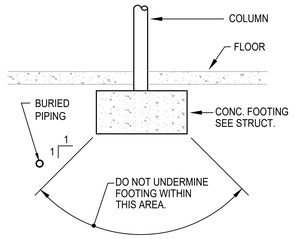
D FOR USE W/ DOUBLE WOOD FLOORS

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

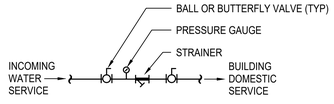
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



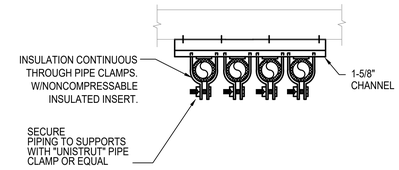
E FOR USE W/ SINGLE WOOD FLOORS



2 P301 BURIED PIPING DETAIL
N.T.S.

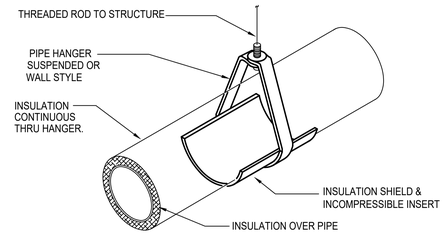


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

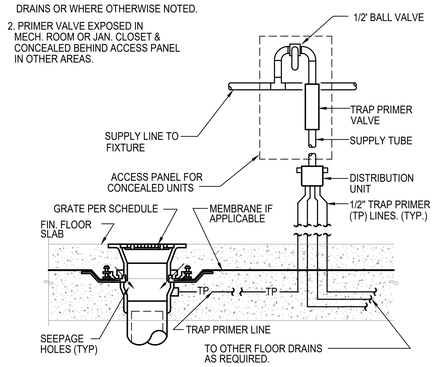
3 P301 PIPE SUPPORT
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

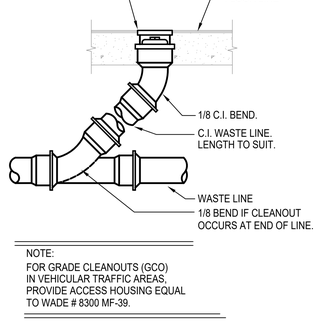
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



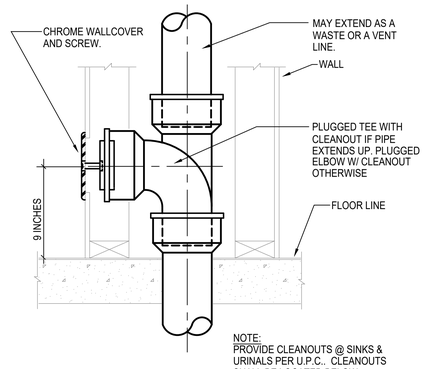
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

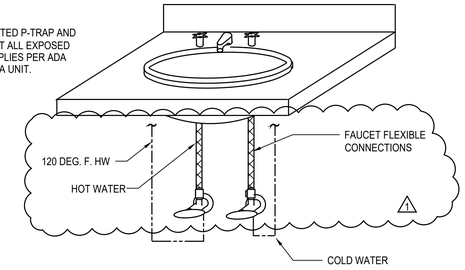
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



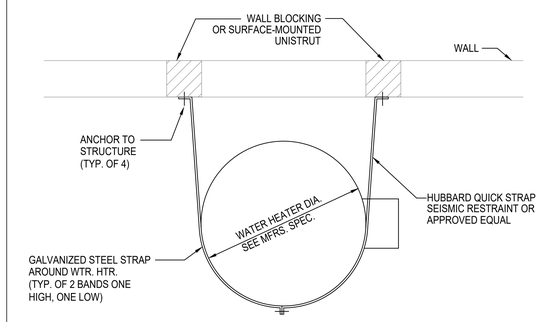
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

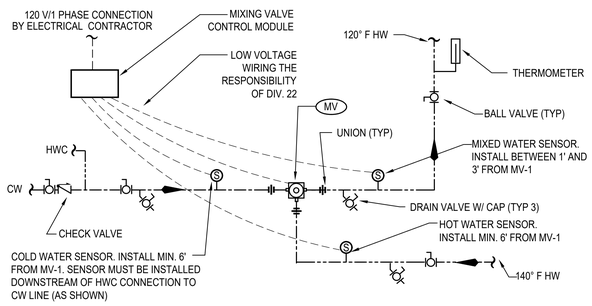
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



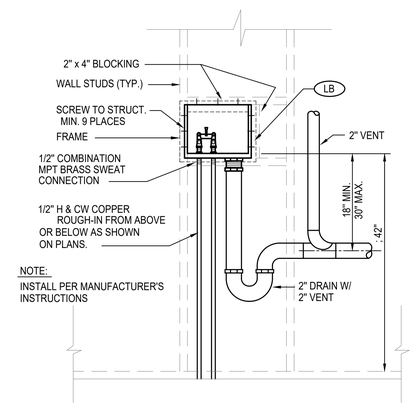
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



NOTE:
INSTALL PER MANUFACTURER'S INSTRUCTIONS

12 P301 LAUNDRY BOX DETAIL
N.T.S.

SIDER + BYERS
MECHANICAL + ELECTRICAL ENGINEERS
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CONTRACT #: TC2300131

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Kirkland, WA 98034

BUILDING 21

BID SET

DANA AMBER FORSMAN — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

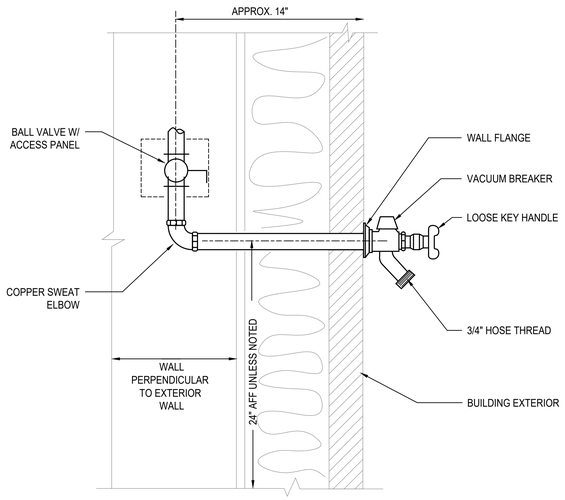
TITLE

DETAILS

PERMIT #	BMF22-09895
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

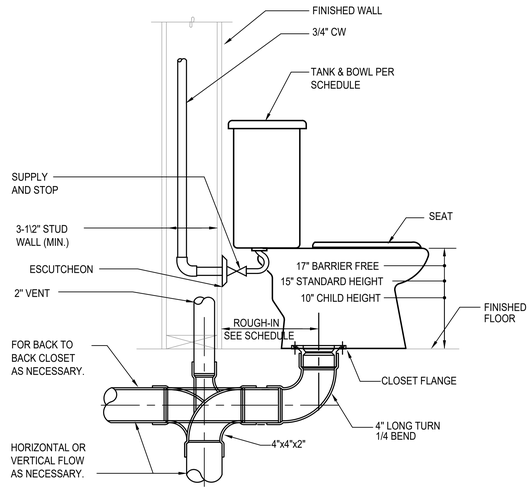
P21-301

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1 P302 FREEZE PROOF HOSE BIBB DETAIL

N.T.S.



2 P302 TANK WATER CLOSET DETAIL

N.T.S.

3 P302 NOT USED

N.T.S.

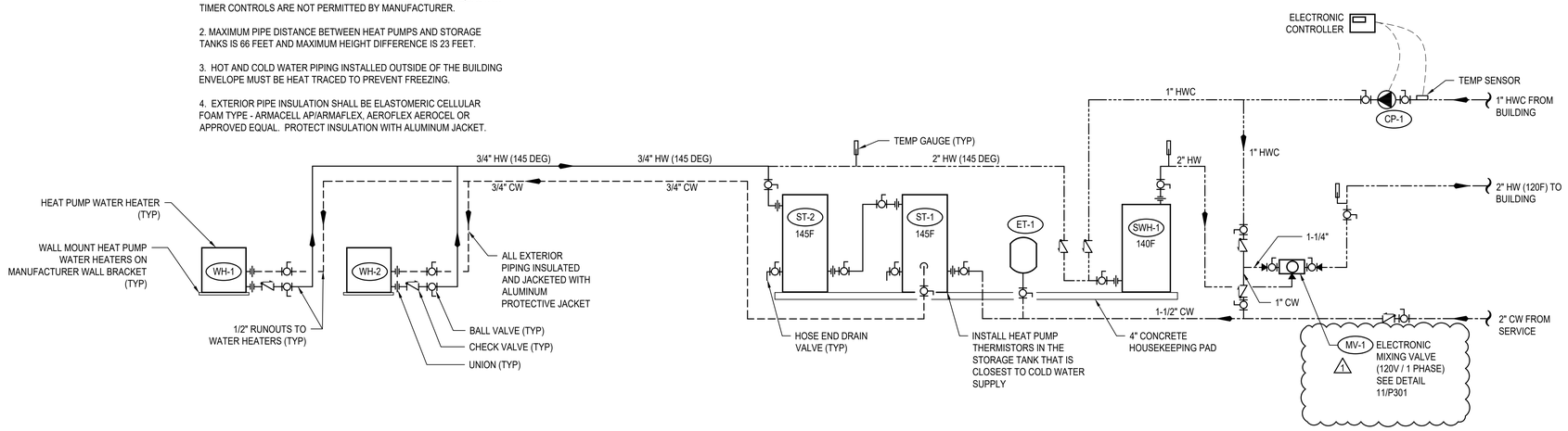
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL

N.T.S.

10/7/2021 7:33:34 AM

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King County Housing Authority

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c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13414 NE 132nd St,
Kirkland, WA 98034

BUILDING 21

BID SET

DANA AMBER EDWARDS STATE OF WASHINGTON 25041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

DETAILS

PERMIT #	BMF22-09895
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P21-302

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- F — BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
   SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED TUBULAR BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	LEVEL 3 FLOOR PLAN
P-104	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13410 NE 132nd St,
Kirkland, WA 98034

BUILDING 22

BID SET

DANA AMBER CLOUGH — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09894
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P22-001

10/7/2021 7:33:34 AM

GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-35-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE.
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (COLD WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1	HEAT PUMP WATER HEATER	SANCO2: GS4-45HPC-D	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE, UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
WH-2			
WH-3			
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET.
ST-1	DOMESTIC STORAGE TANK	SANCO2: ECO-200GLBK	200 GALLON STORAGE TANK.
ST-2			2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

*Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	H.W.	WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE		FIXTURE UNITS PER APPENDIX A					
		DOMESTIC WATER WSFU				SEWER DFU	
FIXTURE	QTY	PER FIXTURE	TOTAL	HW PER FIXTURE	TOTAL	PER FIXTURE	TOTAL
Private Tank Water Closet	12	2.5	30	-	-	3	36
Lavatory (Public or Private)	12	1	12	0.75	9	1	12
Bathtub or Combo Bath/Shwr	12	4	48	3	36	2	24
Kitchen Sink	12	1.5	18	1.125	13.50	2	24
Clothes Washer	12	4	48	3	36	3	36
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	64		159.5		94.50		136

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 58 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 136. BUILDING SERVICE SIZE = (1X) 4".

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King County Housing Authority

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c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13410 NE 132nd St,
Kirkland, WA 98034

BUILDING 22

BID SET

DANA AMBER FORDYCE — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

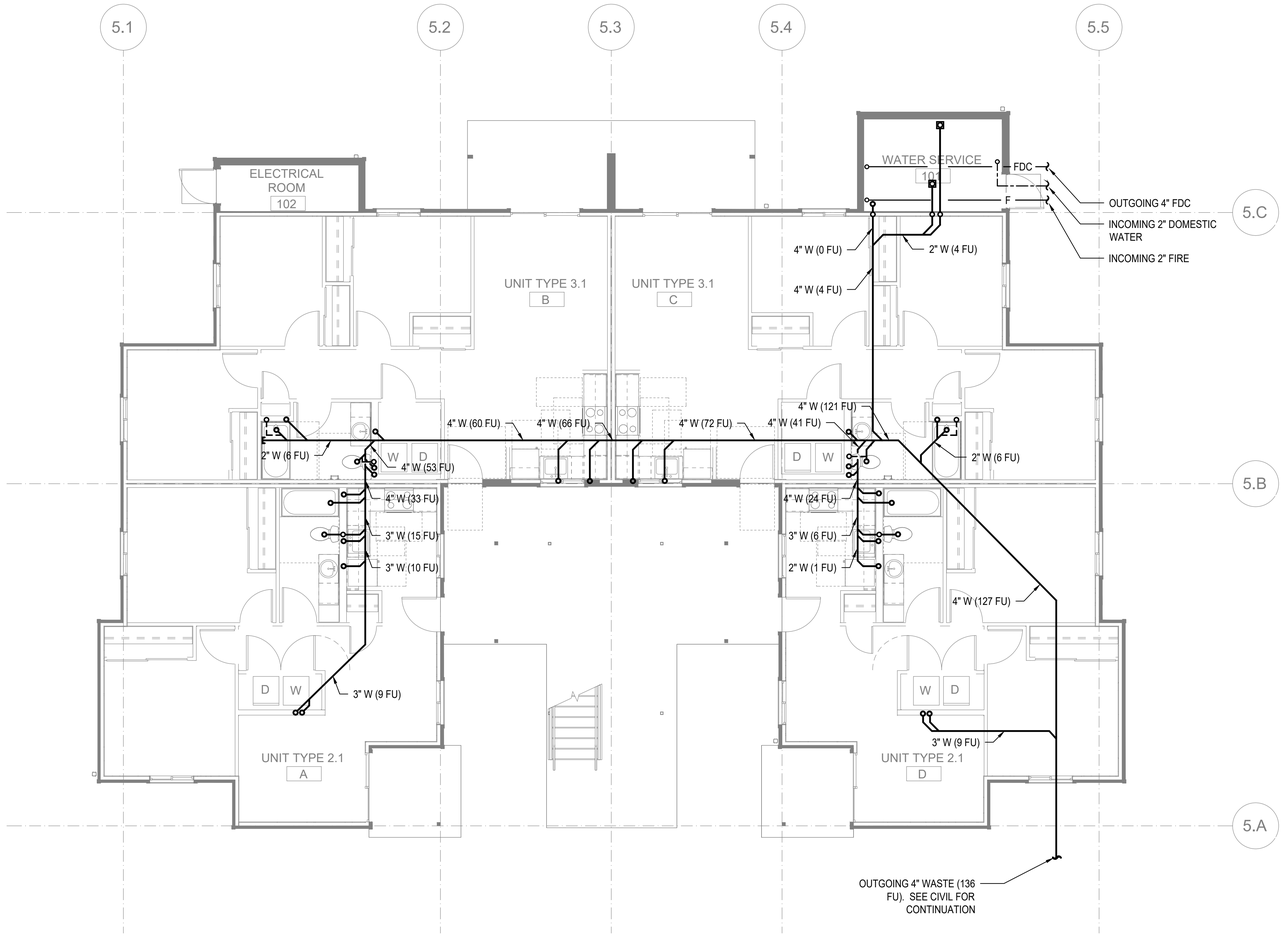
TITLE

NOTES AND SCHEDULES

PERMIT #	BMF22-09894
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
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SHEET NO.:	

P22-002

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 22 - FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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BUILDING 22

BID SET

DANA AMBER COLLINS — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

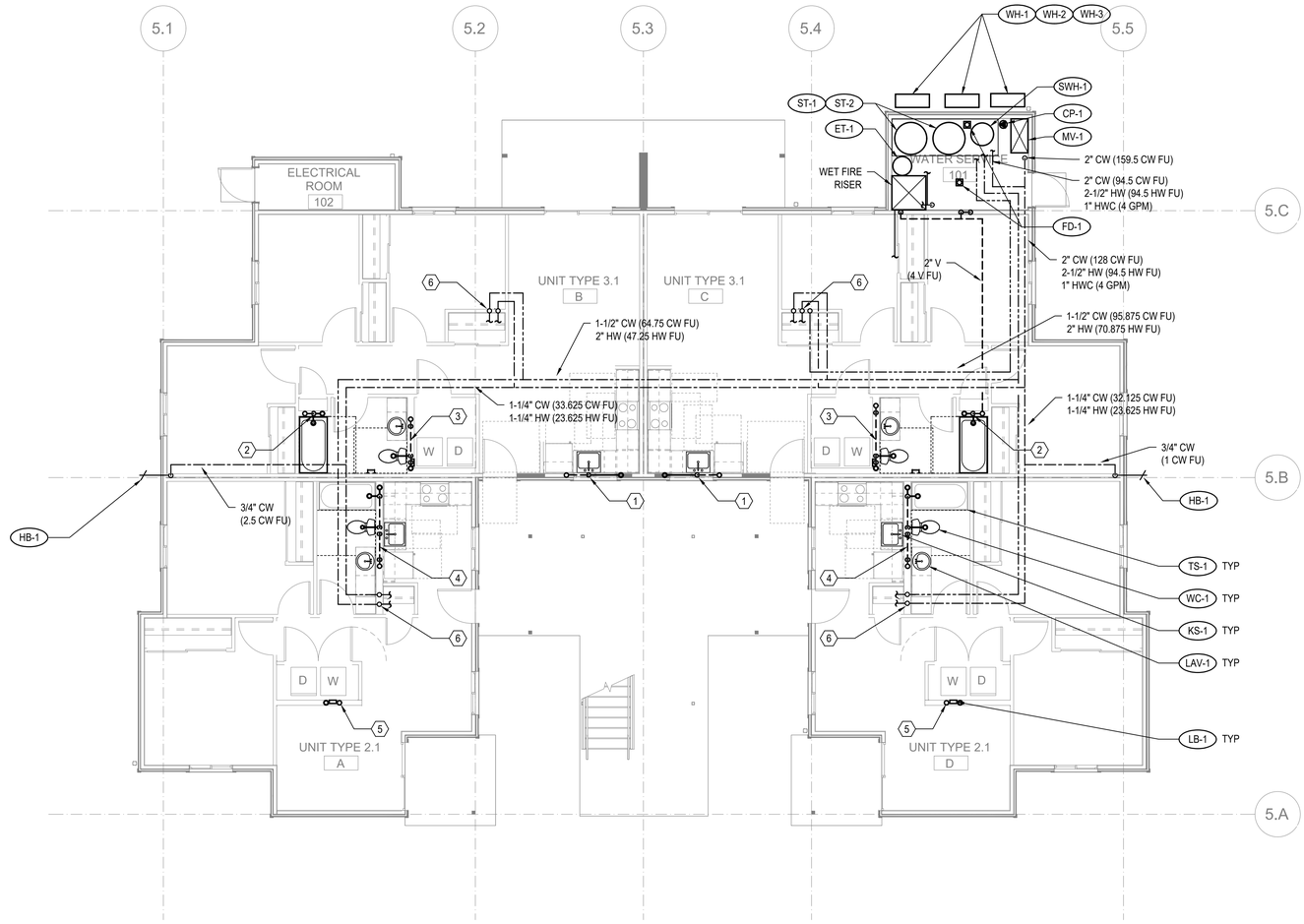
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PLAN - FOUNDATION

PERMIT #	BMF22-09894
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P22-100

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FLOOR PLAN - BUILDING 22 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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BUILDING 22

BID SET

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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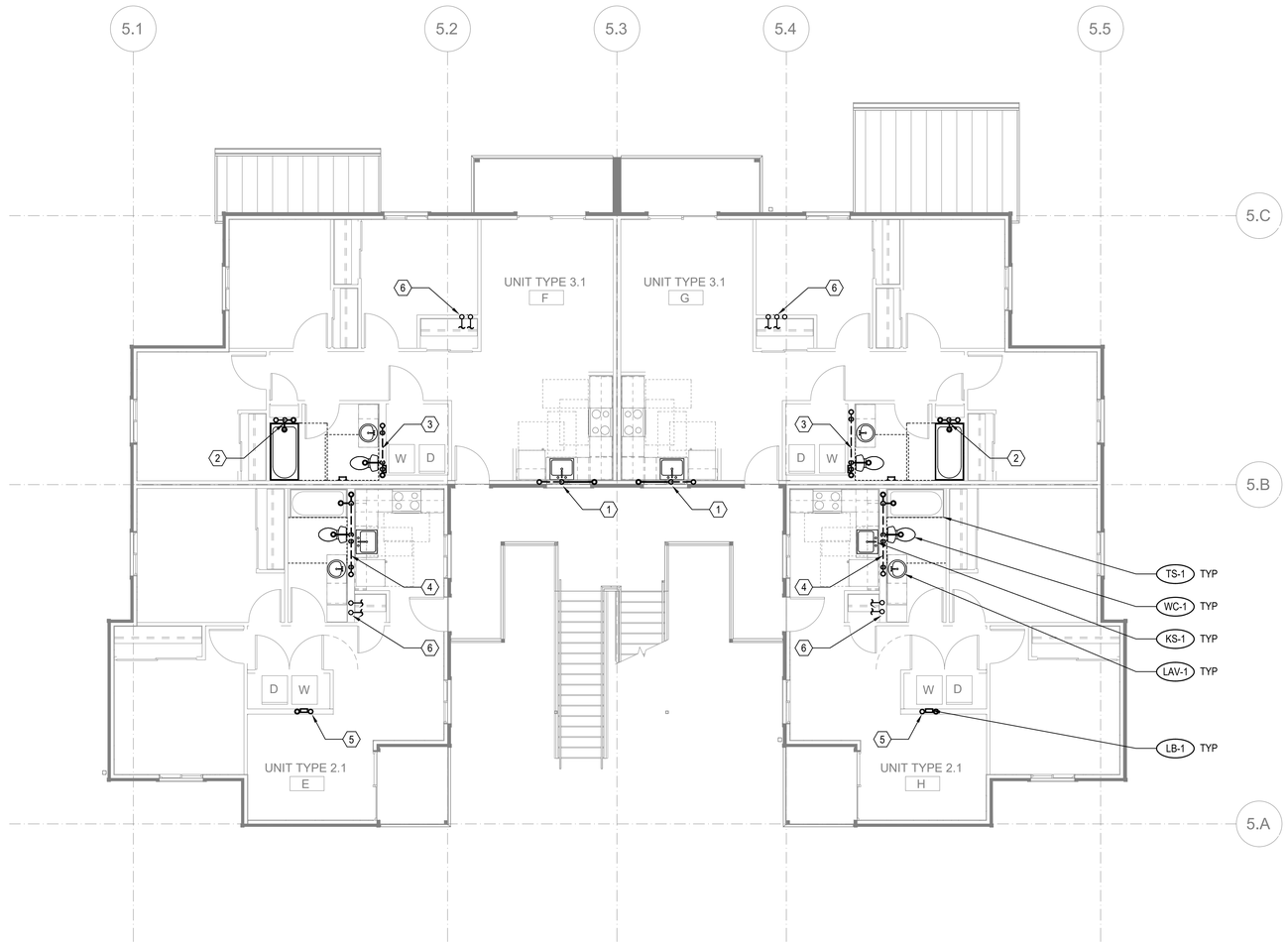
TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09894
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SHEET NO.:	

P22-101

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FLOOR PLAN - BUILDING 22 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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BUILDING 22

BID SET

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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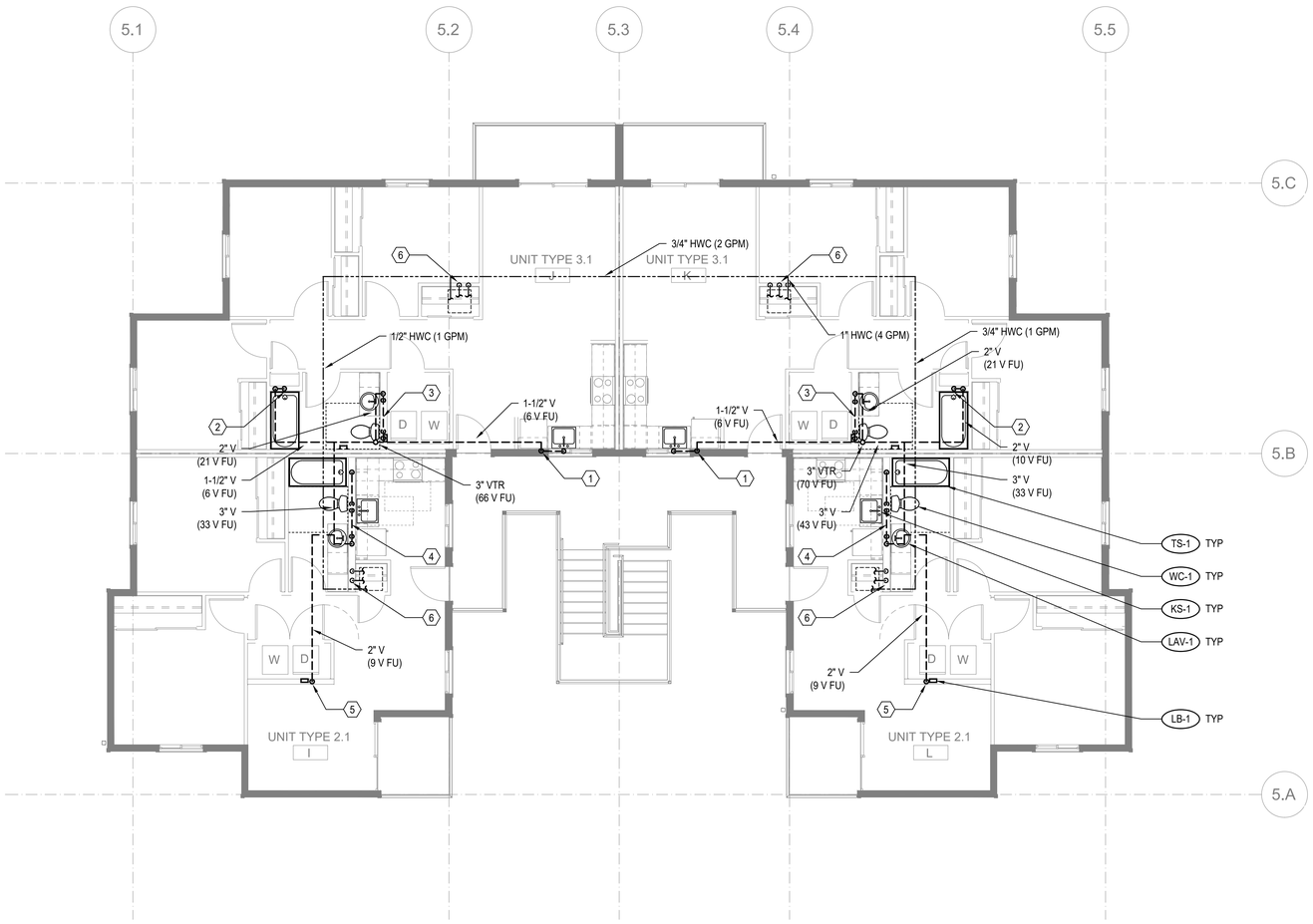
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PLAN - LEVEL 2

PERMIT #	BMF22-09894
DRAWN	AJ, JL, PH, BF, KS
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SHEET NO.:	

P22-102

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FLOOR PLAN - BUILDING 22 - LEVEL 3

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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BUILDING 22

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

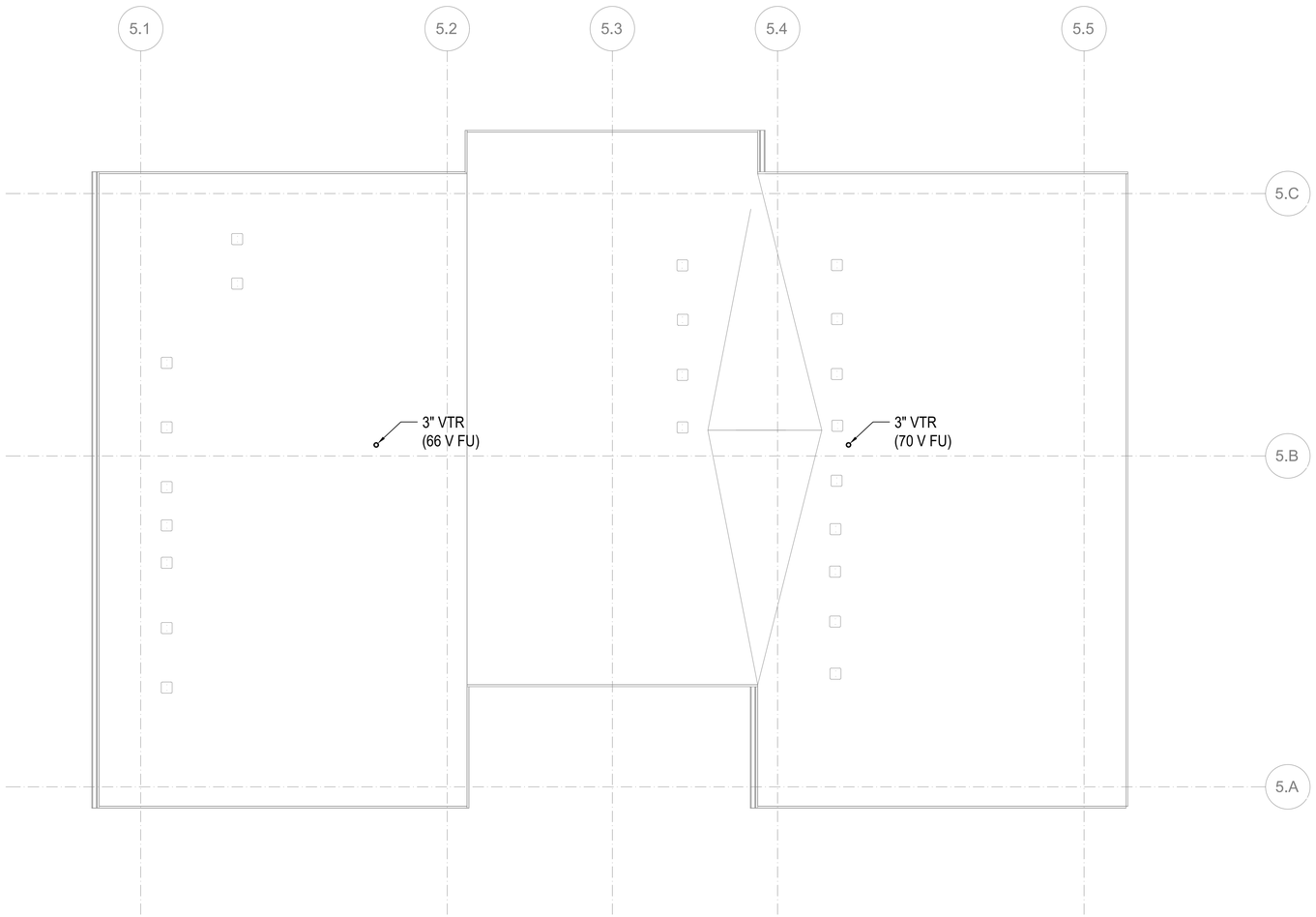
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PLAN - LEVEL 3

PERMIT #	BMF22-09894
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
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P22-103

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FLOOR PLAN - BUILDING 22 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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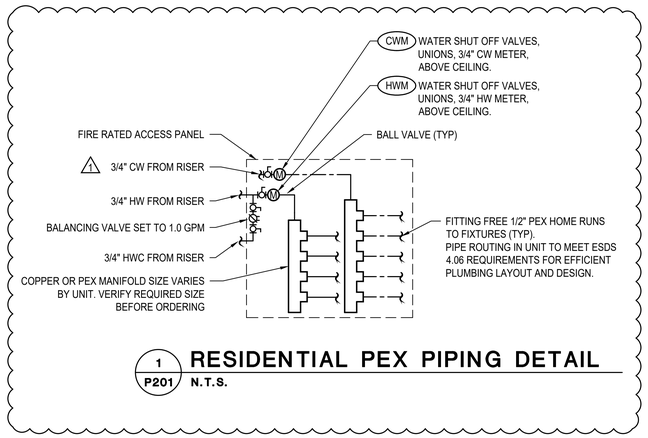
TITLE

PLAN - ROOF

PERMIT #	BMF22-09894
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P22-104

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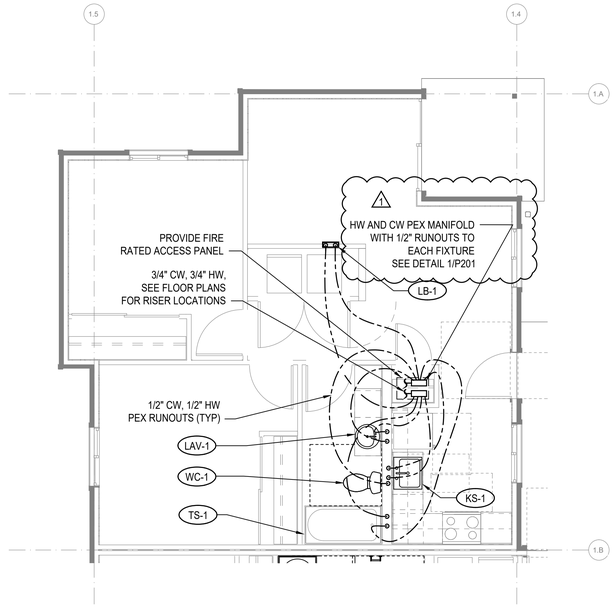
1 P201 **RESIDENTIAL PEX PIPING DETAIL**

N.T.S.

GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

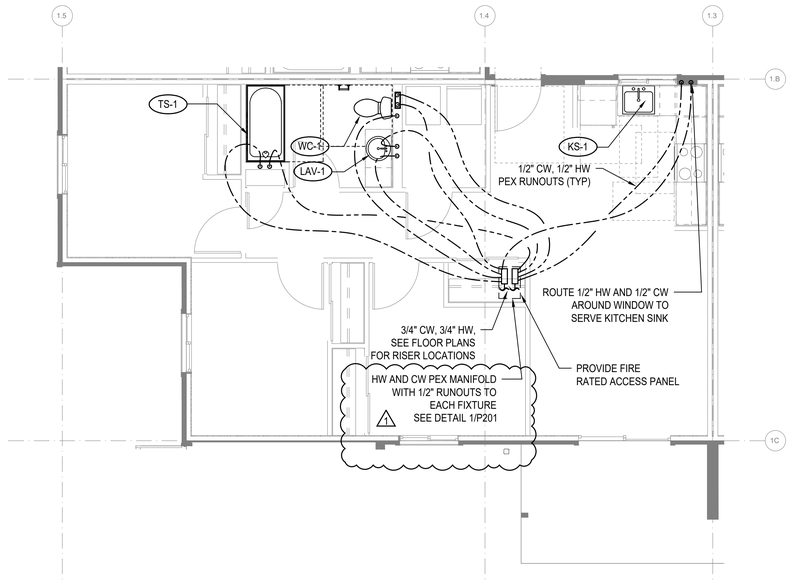
FLAG NOTES (X):



2 P201 **ENLARGED PLAN - 2-BED**

1/4"=1'-0"

UNITS: A, D, E, H, I, L



1 P201 **ENLARGED PLAN - 3-BED**

1/4"=1'-0"

UNITS: B, C, F, G, J, K

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KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 22

BID SET

DANA AMBER FOSTER STATE OF WASHINGTON 22041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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TITLE

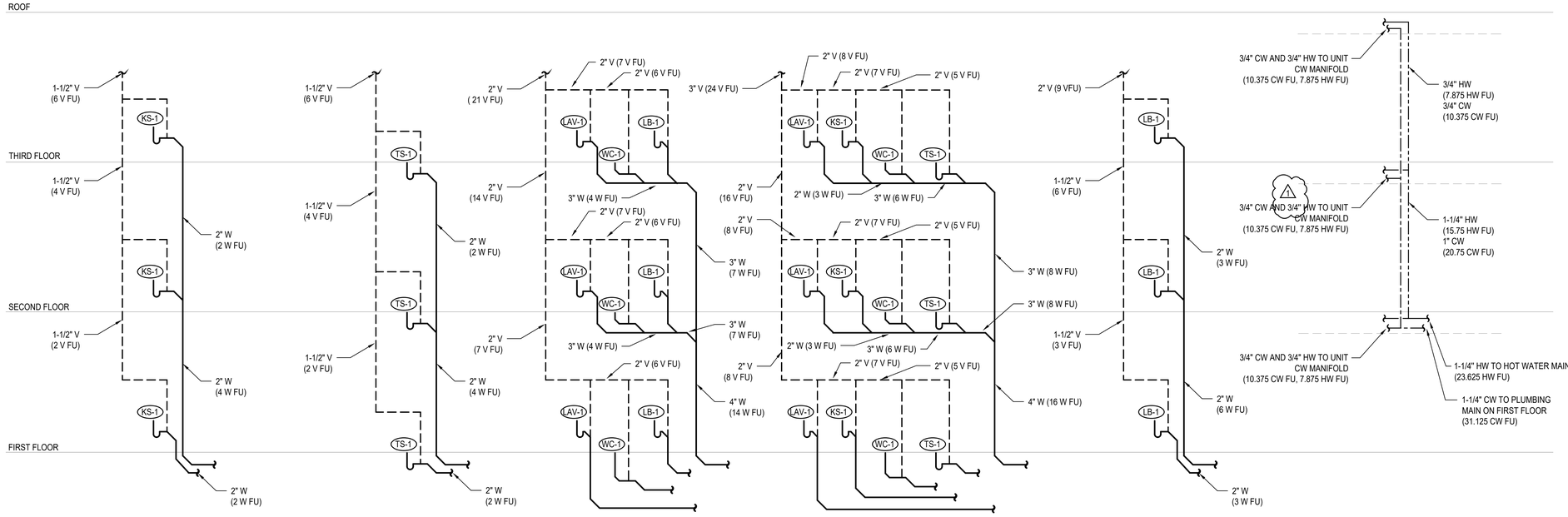
ENLARGED UNIT PLANS

PERMIT #	BMF22-09894
DRAWN	AJ, JL, PH, BF, KS
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P22-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - KITCHEN SINK** N.T.S.

2 P202 **WASTE RISER - TUB/SHOWER** N.T.S.

3 P202 **WASTE RISER - LB, LAV, WC** N.T.S.

4 P202 **WASTE RISER - LAV, KS, WC, TS** N.T.S.

5 P202 **WASTE RISER - LAUNDRY BOX** N.T.S.

6 P202 **WATER RISER** N.T.S.

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REVISIONS / NOTES

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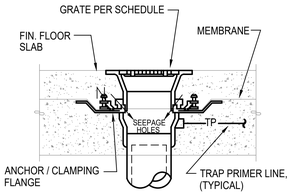
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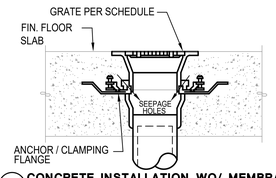
RISERS

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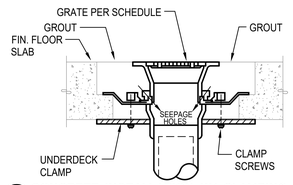
P22-202



A CONCRETE INSTALLATION W/ MEMBRANE

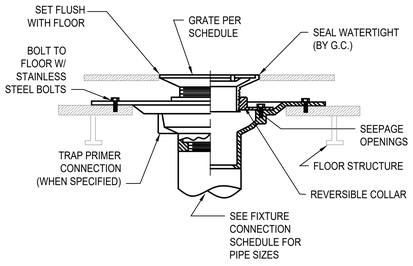


B CONCRETE INSTALLATION WO/ MEMBRANE



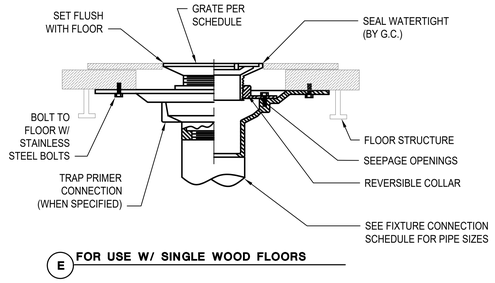
C CONCRETE INSTALLATION W/ CLAMPING RING

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



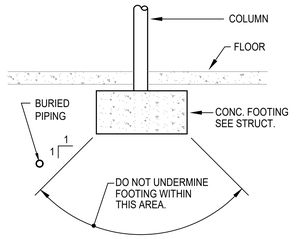
D FOR USE W/ DOUBLE WOOD FLOORS

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

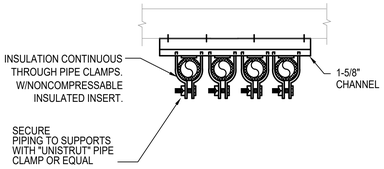


E FOR USE W/ SINGLE WOOD FLOORS

1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.

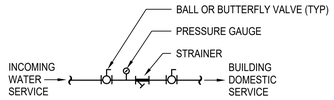


2 P301 BURIED PIPING DETAIL
N.T.S.

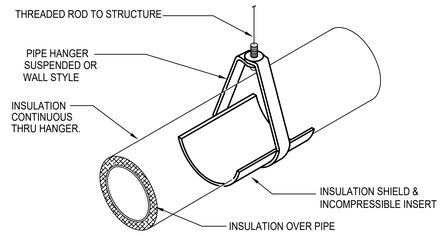


NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

3 P301 PIPE SUPPORT
N.T.S.



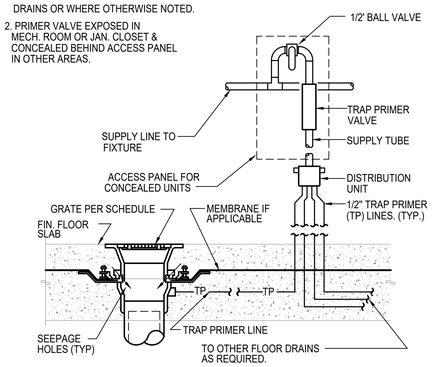
4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

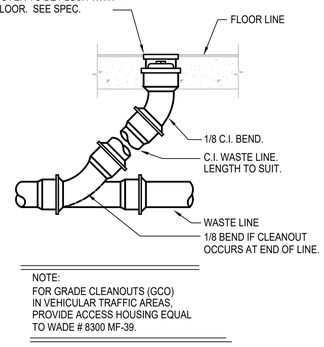
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



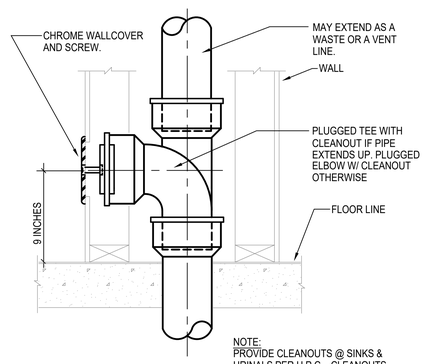
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

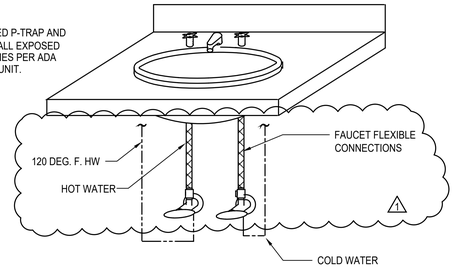
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



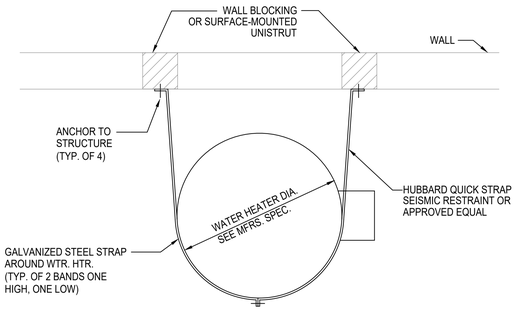
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

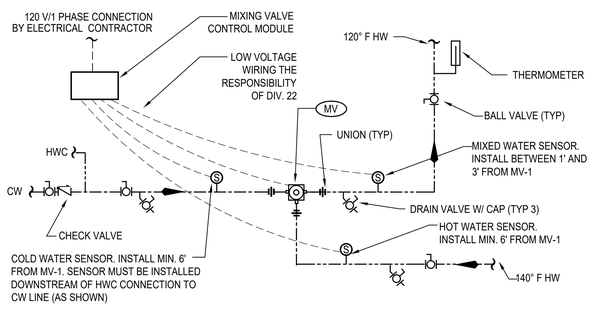
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



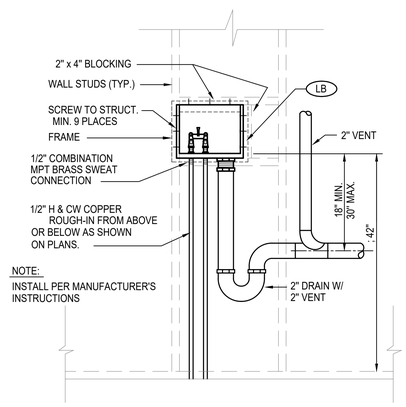
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



NOTE:
INSTALL PER MANUFACTURER'S INSTRUCTIONS

12 P301 LAUNDRY BOX DETAIL
N.T.S.

SIDER + BYERS
MECHANICAL + ELECTRICAL ENGINEERS
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Phone: 206.285.2966

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117 S. Main St., Suite 400
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FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13410 NE 132nd St,
Kirkland, WA 98034

BUILDING 22

BID SET

DIANE AMBER FORBES — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

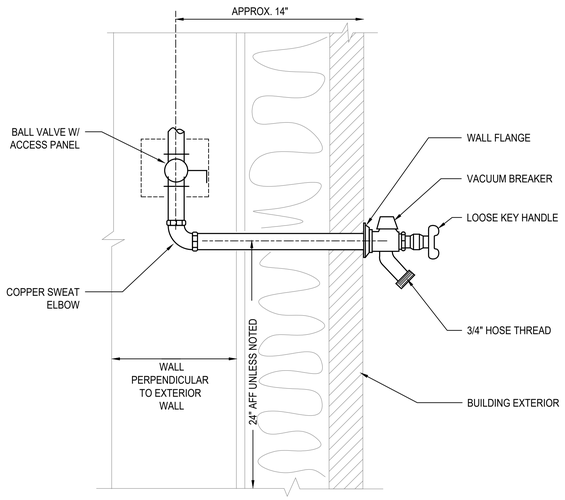
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DETAILS

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CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

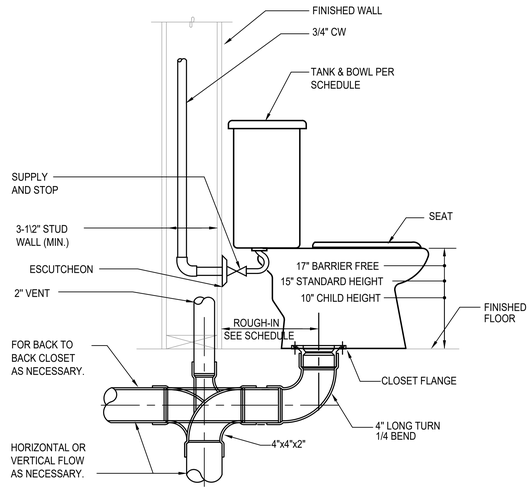
P22-301

10/7/2021 7:33:34 AM



1 P302 FREEZE PROOF HOSE BIBB DETAIL

N.T.S.



2 P302 TANK WATER CLOSET DETAIL

N.T.S.

3 P302 NOT USED

N.T.S.

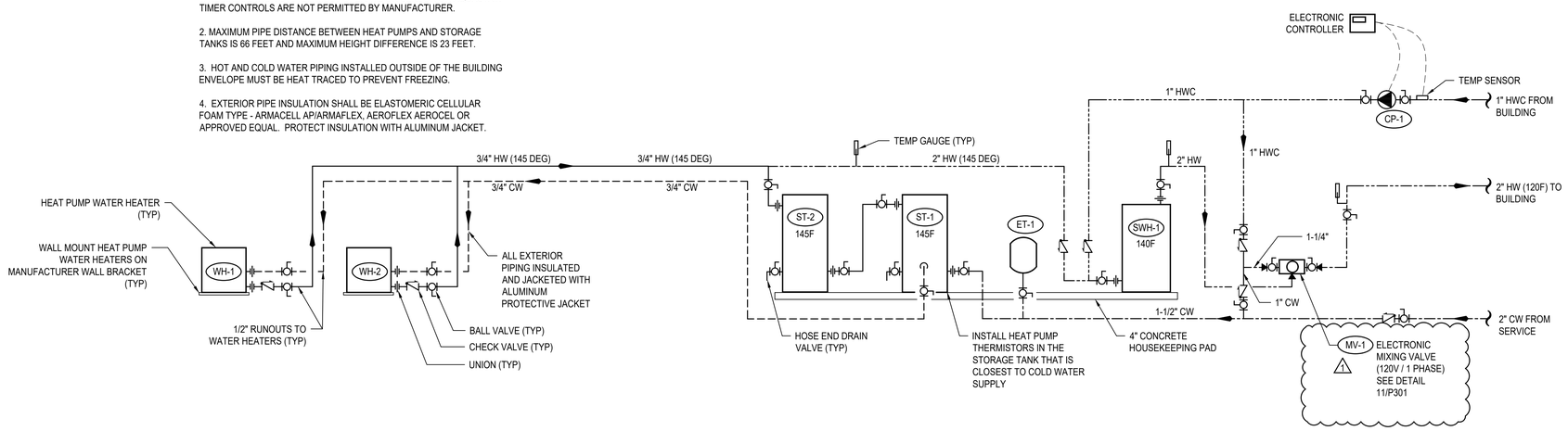
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL

N.T.S.

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1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

DETAILS

PERMIT #	BMF22-09894
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P22-302

10/7/2021 7:33:34 AM

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
   SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 17 GA. BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	S/S, OR SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAL FOOT	WT	WEIGHT
LTG	LIGHTING		
LWT	LEAVING WATER TEMPERATURE	YCO	YARD CLEANOUT

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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BUILDING 23

BID SET

DANA LAMBER CORRON — STATE OF WASHINGTON — 5041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09892
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P23-001

10/7/2021 7:33:34 AM

GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA, **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA, **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.
NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.			
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.
NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.			
HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ1	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-70VC	16" DIAMETER X 45" HIGH, FAB, STEEL, MAX 150 PSI, 3/4" NPT CONNECTION SIZE. (1)
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (COLD WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1	HEAT PUMP WATER HEATER	SANCO2: GS4-45HPC-D	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE, UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
WH-2			
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET. (1)
ST-1	DOMESTIC STORAGE TANK	SANCO2: SAN-119GLBK	119 GALLON STORAGE TANK. 1500 LB WET.
ST-2			
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	(1) 1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

*Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements

PLUMBING FIXTURE CONNECTION SCHEDULE

		PIPE SIZE				WATER FIXTURE	WASTE FIXTURE	
MARK	FIXTURE	C.W.	H.W.	WASTE	VENT	UNITS	UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

(1)

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE		FIXTURE UNITS PER APPENDIX A					
		DOMESTIC WATER WSFU				SEWER DFU	
FIXTURE	QTY	PER FIXTURE	TOTAL	HW PER FIXTURE	TOTAL	PER FIXTURE	TOTAL
Private Tank Water Closet	8	2.5	20	-	-	3	24
Lavatory (Public or Private)	8	1	8	0.75	6	1	8
Bathtub or Combo Bath/Shwr	4	4	16	3	12	2	8
Kitchen Sink	4	1.5	6	1.125	4.50	2	8
Clothes Washer	4	4	16	3	12	3	12
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**32**		**69.5**		**34.50**		**64**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 33 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 1.5".
BUILDING WATER METER SIZE = 1"
TOTAL BUILDING WASTE FIXTURE UNITS IS 64. BUILDING SERVICE SIZE = (1X) 4".

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King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13328 NE 132nd St,
Kirkland, WA 98034

BUILDING 23

BID SET

DANA AMBER FOSTER STATE OF WASHINGTON 24041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

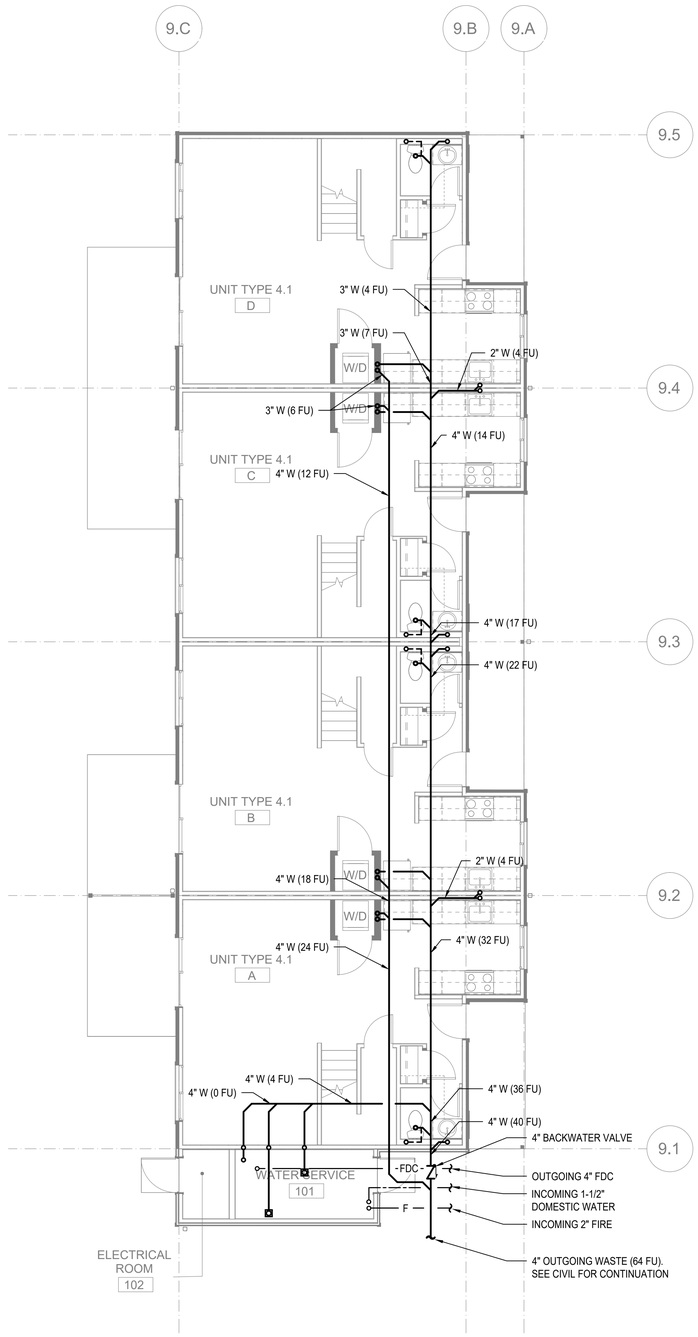
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TITLE

NOTES AND SCHEDULES

PERMIT #	BMF22-09892
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	P23-002

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 23 - FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 23

BID SET

DANA AMBER CAMPBELL — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

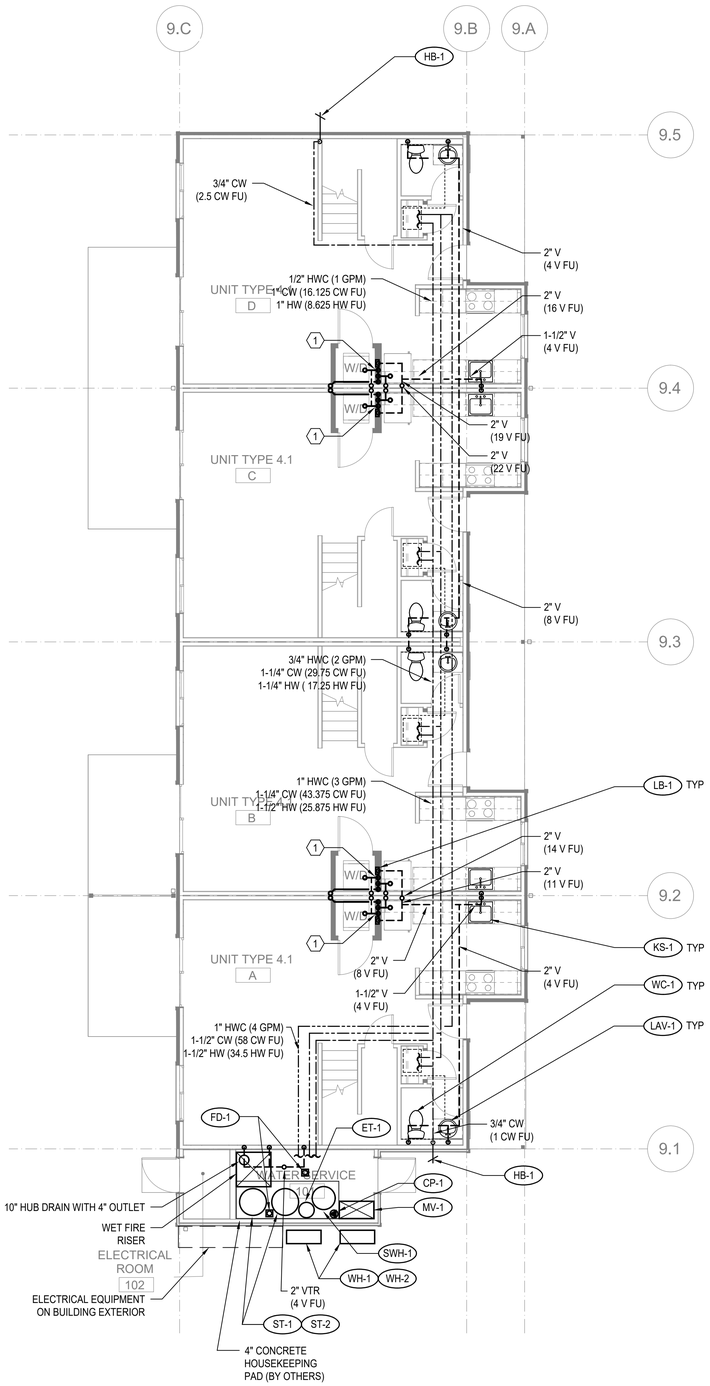
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PLAN - FOUNDATION

PERMIT #	BMF22-09892
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P23-100

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FLOOR PLAN - BUILDING 23 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P-202 FOR WASTE AND VENT PIPE SIZING.

GENERAL NOTES:

1. PROVIDE HOT WATER, WASTE, AND AIR GAP CONNECTIONS FOR DISHWASHERS. (1)

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KIRKLAND HEIGHTS APARTMENTS

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Kirkland, WA 98034

BUILDING 23

BID SET

DANA AMBER COLLINSON
STATE OF WASHINGTON
20041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

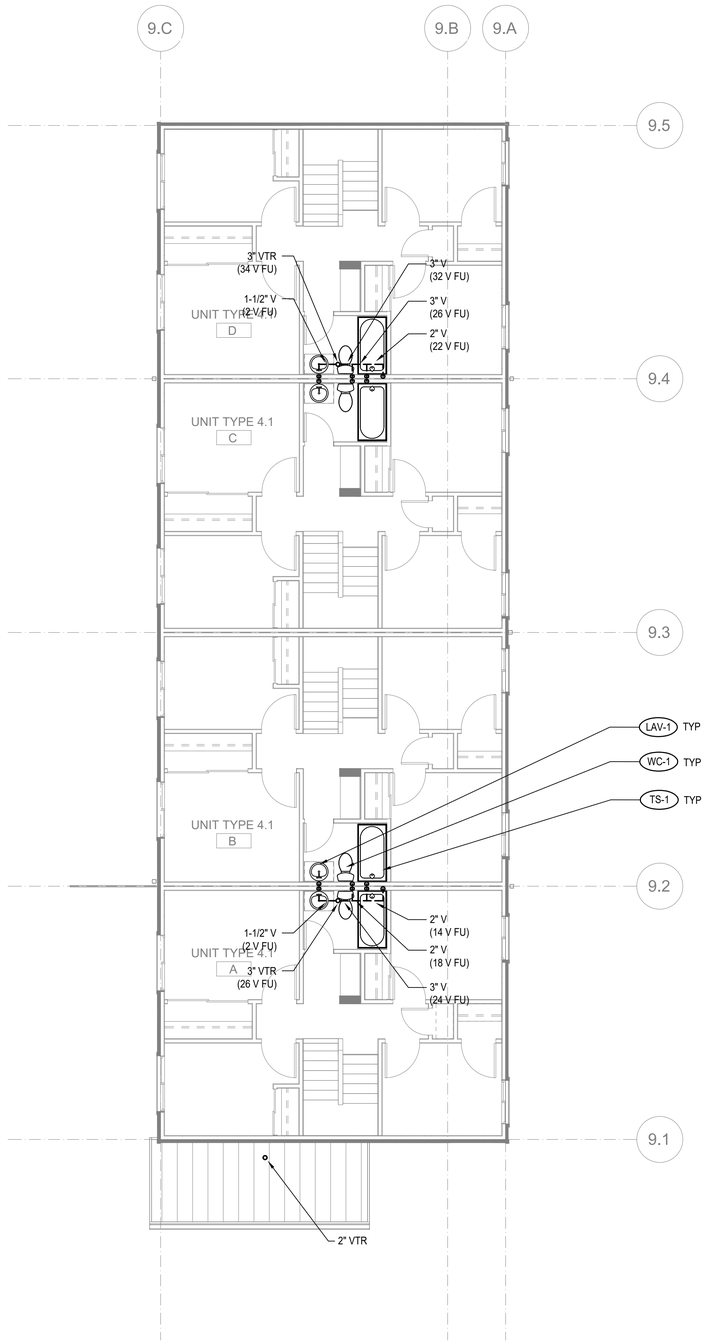
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PLAN - LEVEL 1

PERMIT #	BMF22-09892
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P23-101

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 23 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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KIRKLAND HEIGHTS APARTMENTS

13328 NE 132nd St,
Kirkland, WA 98034

BUILDING 23

BID SET

DANA AMBER JOHNSON
STATE OF WASHINGTON
20041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

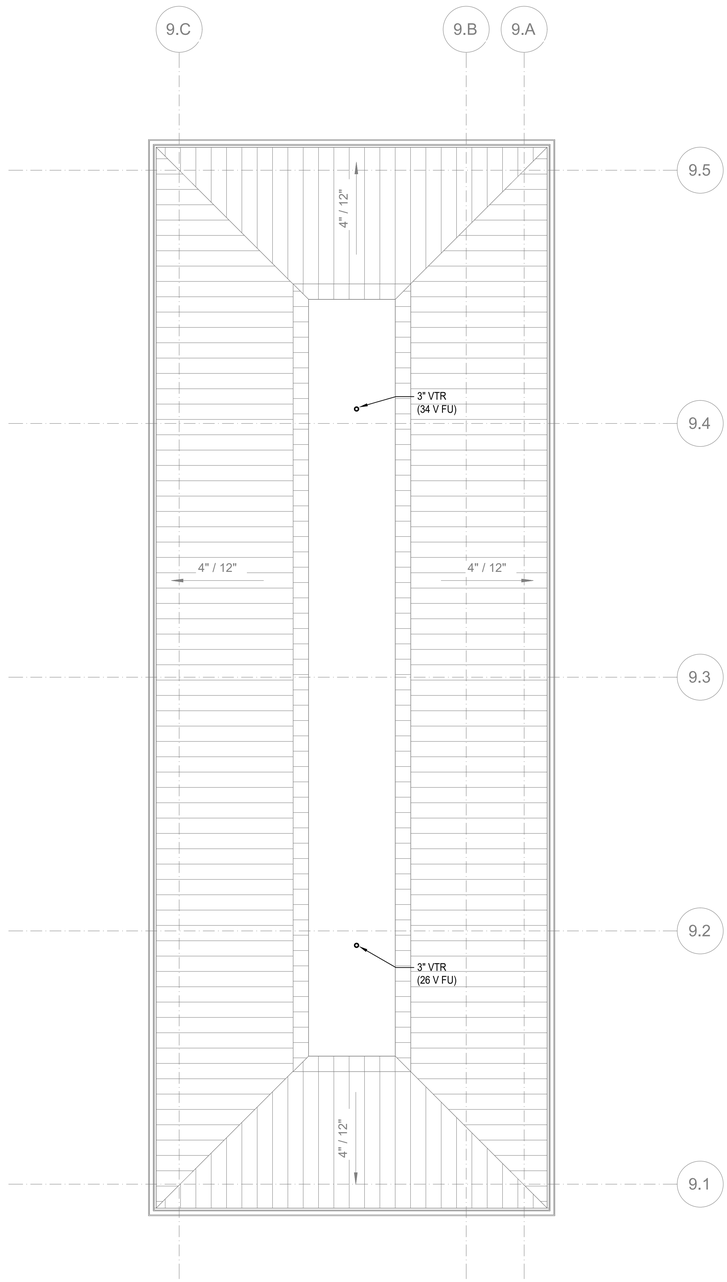
TITLE

PLAN - LEVEL 2

PERMIT #	BMF22-09892
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P23-102

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FLOOR PLAN - BUILDING 23 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES.

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KIRKLAND HEIGHTS APARTMENTS

13328 NE 132nd St,
Kirkland, WA 98034

BUILDING 23

BID SET

DIANE AMBER FORDON — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

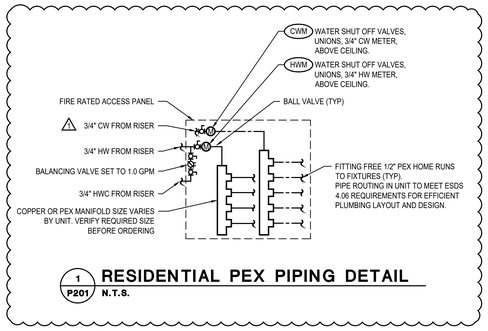
PLAN - ROOF

PERMIT #	BMF22-09892
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P23-103

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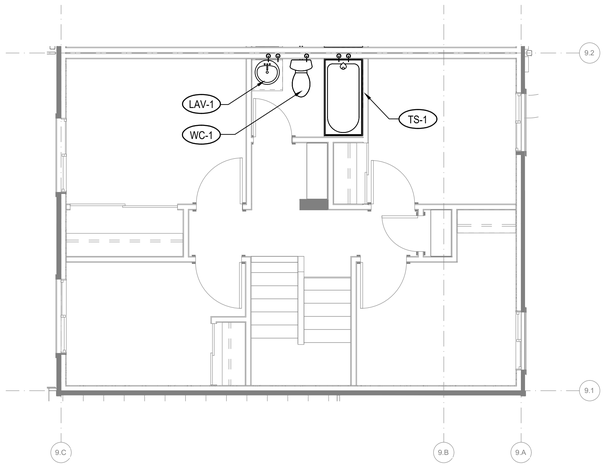
1/P201 RESIDENTIAL PEX PIPING DETAIL

N.T.S.

GENERAL NOTES:

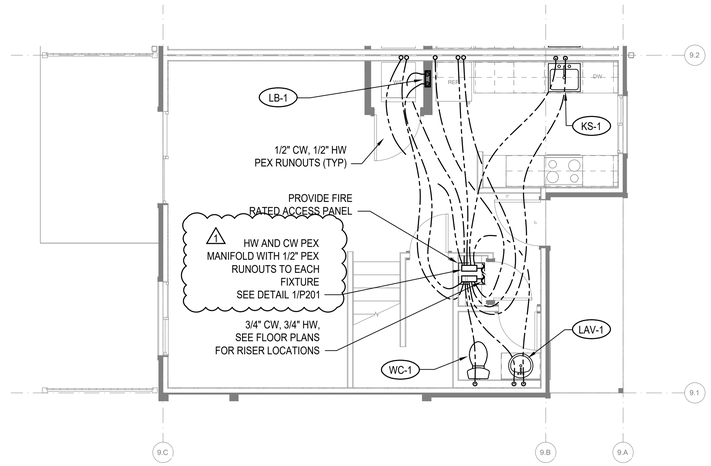
1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

FLAG NOTES (X):



2/P201 ENLARGED PLAN - TH - LEVEL 2

1/4"=1'-0"



1/P201 ENLARGED PLAN - TH - LEVEL 1

1/4"=1'-0"

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 23

BID SET

DANA AMBER FOSTER — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
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1	5.19.23	BID ADDENDUM 2

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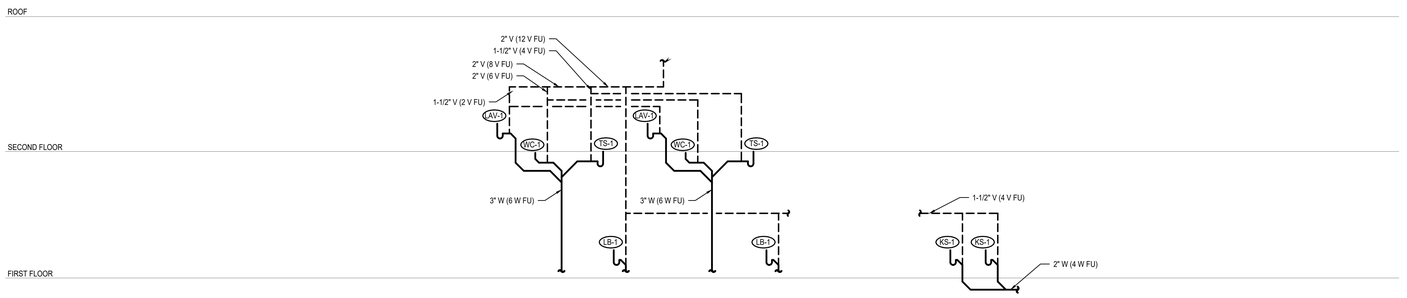
ENLARGED UNIT PLANS

PERMIT #	BMF22-09892
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
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P23-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - LB, LAV, WC, TS**
N.T.S.

1 P202 **WASTE RISER - KS**
N.T.S.

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KIRKLAND HEIGHTS APARTMENTS

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BUILDING 23

BID SET

DANA AMBER CLARK
STATE OF WASHINGTON
20041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

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1	5.19.23	BID ADDENDUM 2

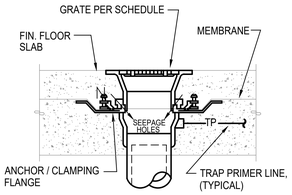
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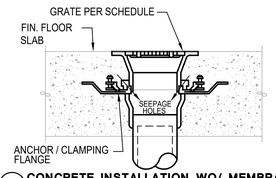
RISERS

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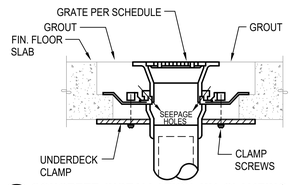
P23-202



A CONCRETE INSTALLATION W/ MEMBRANE

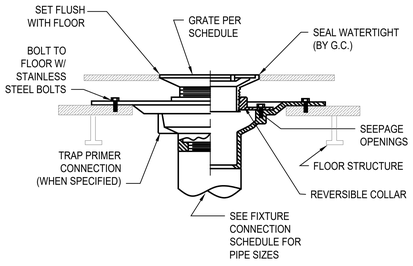


B CONCRETE INSTALLATION WO/ MEMBRANE



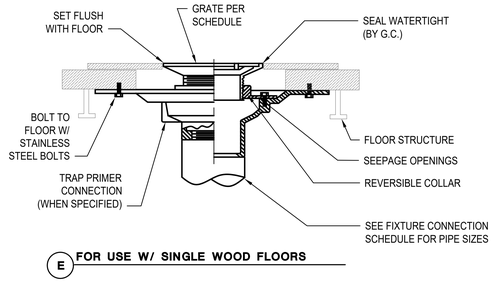
C CONCRETE INSTALLATION W/ CLAMPING RING

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



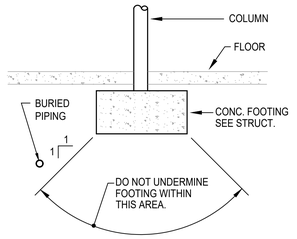
D FOR USE W/ DOUBLE WOOD FLOORS

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

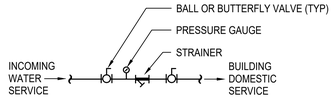


E FOR USE W/ SINGLE WOOD FLOORS

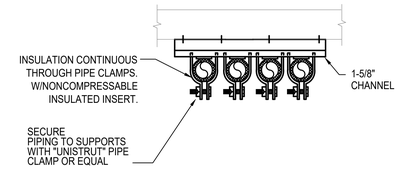
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



2 P301 BURIED PIPING DETAIL
N.T.S.

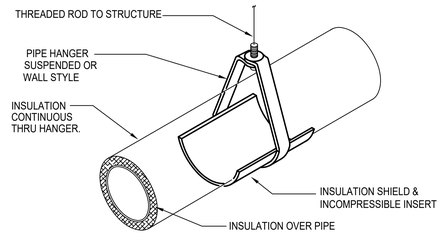


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

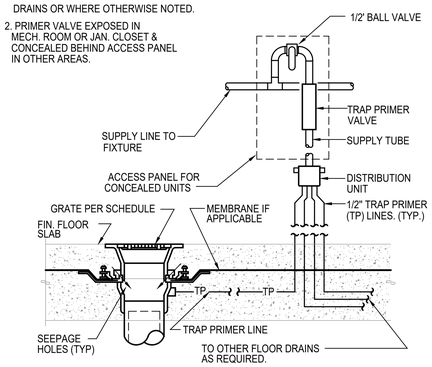
3 P301 PIPE SUPPORT
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

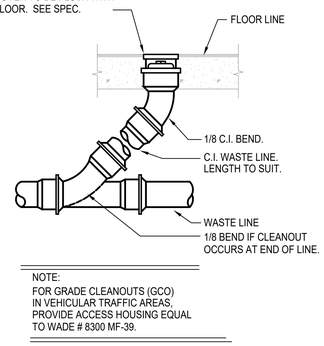
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



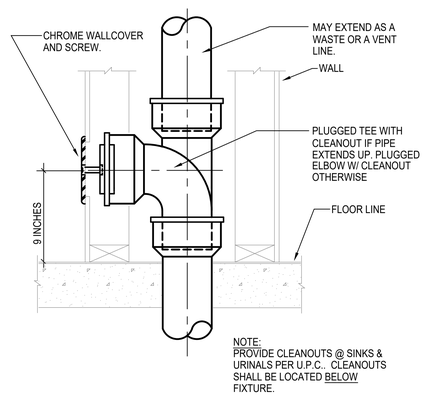
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

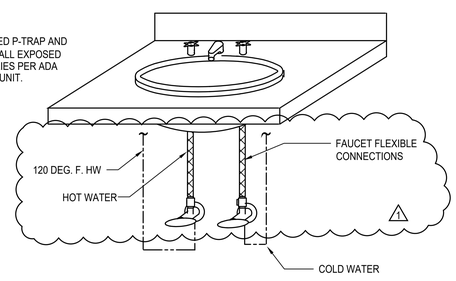
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



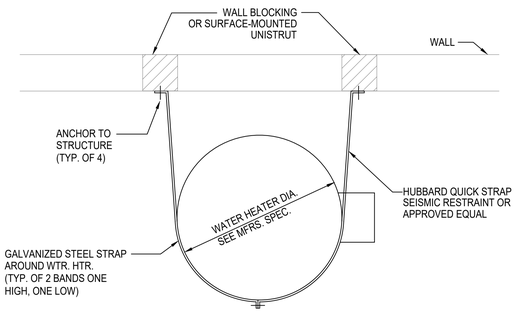
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

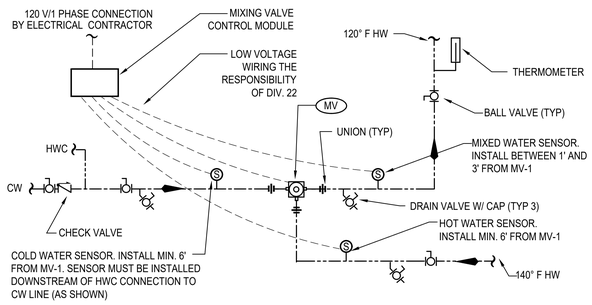
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



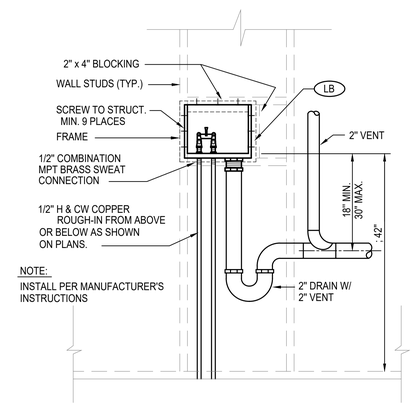
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



12 P301 LAUNDRY BOX DETAIL
N.T.S.

10/7/2021 7:33:34 AM

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
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Seattle, Washington 98109
Phone: 206.285.2966

SMR Architects
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Seattle, WA 98104
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FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13328 NE 132nd St,
Kirkland, WA 98034

BUILDING 23

BID SET

DIANE AMBER FORBES — STATE OF WASHINGTON — 21041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

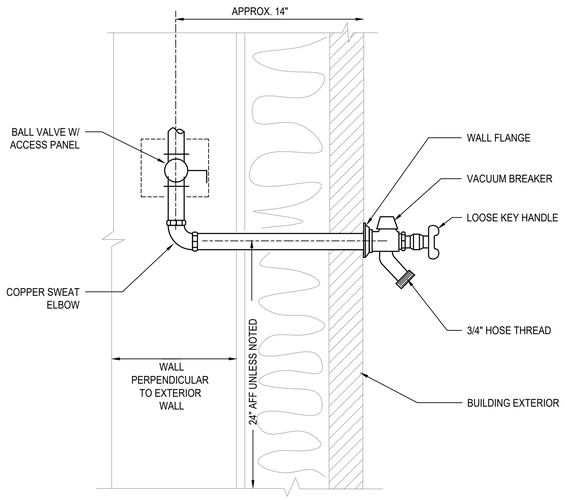
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DETAILS

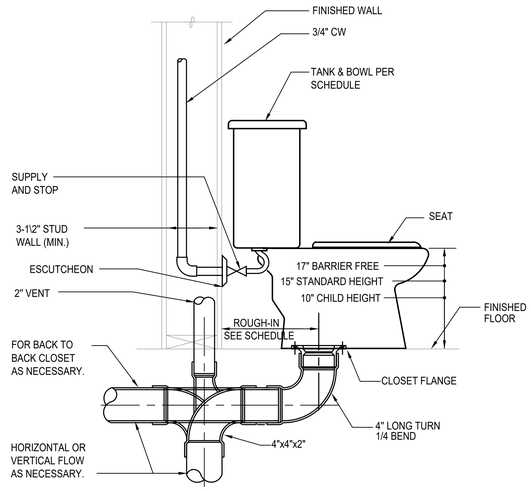
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DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P23-301



1 P302 FREEZE PROOF HOSE BIBB DETAIL

N.T.S.



2 P302 TANK WATER CLOSET DETAIL

N.T.S.

3 P302 NOT USED

N.T.S.

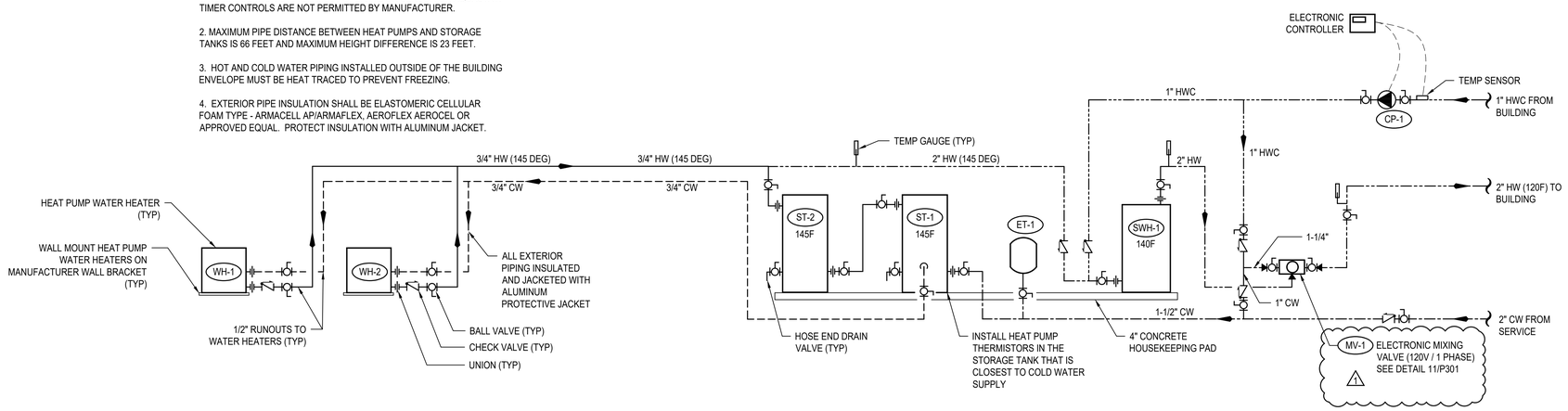
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 HEAT PUMP WATER HEATER DETAIL

N.T.S.

10/7/2021 7:33:34 AM

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BUILDING 23

BID SET

DANA AMBER COLEMAN STATE OF WASHINGTON 25041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

DETAILS

PERMIT #	BMF22-09892
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P23-302

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
   ~~SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 17-GA. BRASS~~ TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ALT	ALTERNATE
AP	ACCESS PANEL
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL/ARCHITECT
AS	AIR SEPARATOR
AUX	AUXILIARY
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BHP	BRAKE HORSE POWER
BLDG	BUILDING
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CA	COMBUSTION AIR
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COND	CONDENSATE
CW	COLD WATER
CX	CONNECT TO EXISTING
dB	DECIBEL
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DDCV	DOUBLE DETECTOR CHECK VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT
DHW	DOMESTIC HOT WATER
DHWC	DOMESTIC HOT WATER RECIRCULATION
Ø OR DIA	DIAMETER
DN	DOWN
DWG(S)	DRAWING(S)
DWV	DRAIN, WASTE, VENT
EA	EACH
EEW	EMERGENCY EYEWASH
EFF	EFFICIENCY
ELEV	ELEVATION
EQUIP	EQUIPMENT
ES	EMERGENCY SHOWER
ET	EXPANSION TANK
EX	EXISTING/EXISTING TO REMAIN
EXP	EXPANSION
FC	FAIL CLOSED
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR
FLA	FULL LOAD AMPS
FM	FORCE MAIN
FO	FAIL OPEN
FP	FIRE PROTECTION
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOOR SINK
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY
FT	FEET/FOOT
FTG	FOOTING
FV	FLUSH VALVE
G	NATURAL GAS
GA	GAUGE
GAL	GALLON
G.C.	GENERAL CONTRACTOR
GCO	GRADE CLEANOUT
GD	GARAGE DRAIN
GPF	GALLONS PER FLUSH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
H	HEIGHT
HB	HOSE BIBB
HBVB	HOSE BIBB VACUUM BREAKER
HD	HEAD
HP	HORSEPOWER
HS	HAND SINK
HW	HOT WATER
HX	HEAT EXCHANGER
IE	INVERT ELEVATION
IN	INCH/INCHES
KW	KILOWATT/KILOWATTS
LAV	LAVATORY
LBS	POUNDS
LF	LINEAL FOOT
LTG	LIGHTING
LWT	LEAVING WATER TEMPERATURE
MBH	1000 BRITISH THERMAL UNITS PER HOUR
MED	MEDIUM
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MEZZ	MEZZANINE
MIN	MINIMUM
MISC	MISCELLANEOUS
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NOM	NOMINAL
NPC	NON-POTABLE COLD WATER
NPCW	NON POTABLE COLD WATER
NPH	NON-POTABLE HOT WATER
NPHR	NON-POTABLE HOT WATER RETURN
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OD	OUTSIDE DIAMTER/OVERLOW DRAIN
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
ORD	OVERFLOW ROOF DRAIN
ORL	OVERFLOW RAINWATER LEADER
ΔP	PRESSURE DIFFERENTIAL
PD	PLANTER DRAIN; PRESSURE DROP
PERF	PERFORATED
PH	PHASE
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER INCH GAUGE
QTY	QUANTITY
RD	ROOF DRAIN
REQD	REQUIRED
RL	RAIN WATER LEADER
RM	ROOM
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
RLX	RELOCATE EXISTING
RV	RELIEF VALVE
RX	REMOVE EXISTING
S	SINK
S	STORM
SCFM	STANDARD CUBIC FEET PER MINUT
SD	STORM DRAIN
SF	SQUARE FOOT
SFU	SUPPLY FIXTURE UNIT
SH	SHOWER
S.O.V.	SHUTOFF VALVE
SPEC	SPECIFICATION
S/S, OR SS	STAINLESS STEEL
STD	STANDARD
SYM	SYMBOL
T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
TBD	TO BE DETERMINED
TD	TRENCH DRAIN
TEMP	TEMPERATURE
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOD	TOP OF DECK
TOJ	TOP OF JOIST
TOS	TOP OF SLAB/TOP OF STEEL
TP	TRAP PRIMER
T&P	TEMPERATURE & PRESSURE
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
V	VENT(S)
V	VOLT
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VIB	VALVE-IN-BOX
VTR	VENT THROUGH ROOF
W	WASTE/WATER
W/	WITH
W/IN	WITHIN
W/O	WITHOUT
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER
WPD	WATER PRESSURE DROP
WT	WEIGHT
YCO	YARD CLEANOUT

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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c/o: King County Housing Authority,
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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13406 NE 132nd St,
Kirkland, WA 98034

BUILDING 24

BID SET

DANA AMBER COLE — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09893
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P24-001

GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.
NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.			
HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ1	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-165-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE. ⚠1
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1	HEAT PUMP	SANCO2:	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE,
WH-2	WATER HEATER	GS4-45HPC-D	UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET. ⚠1
ST-1	DOMESTIC	SANCO2:	200 GALLON STORAGE TANK.
ST-2	STORAGE TANK	ECO-200GLBK	2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	⚠1 1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

kWh

***Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements**

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	PIPE SIZE H.W.	PIPE SIZE WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

⚠1

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE — **FIXTURE UNITS PER APPENDIX A**

FIXTURE	QTY	DOMESTIC WATER WSFU: PER FIXTURE	DOMESTIC WATER WSFU: TOTAL	DOMESTIC WATER WSFU: HW PER FIXTURE	DOMESTIC WATER WSFU: TOTAL	SEWER DFU: PER FIXTURE	SEWER DFU: TOTAL
Private Tank Water Closet	8	2.5	20	-	-	3	24
Lavatory (Public or Private)	8	1	8	0.75	6	1	8
Bathtub or Combo Bath/Shwr	8	4	32	3	24	2	16
Kitchen Sink	8	1.5	12	1.125	9.00	2	16
Clothes Washer	8	4	32	3	24	3	24
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**44**		**107.5**		**63.00**		**92**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 44 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 92. BUILDING SERVICE SIZE = (1X) 4".

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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13406 NE 132nd St,
Kirkland, WA 98034

BUILDING 24

BID SET

DIANE M. AMBER FORD — STATE OF WASHINGTON — 41041009 — REGISTERED PROFESSIONAL ENGINEER
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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

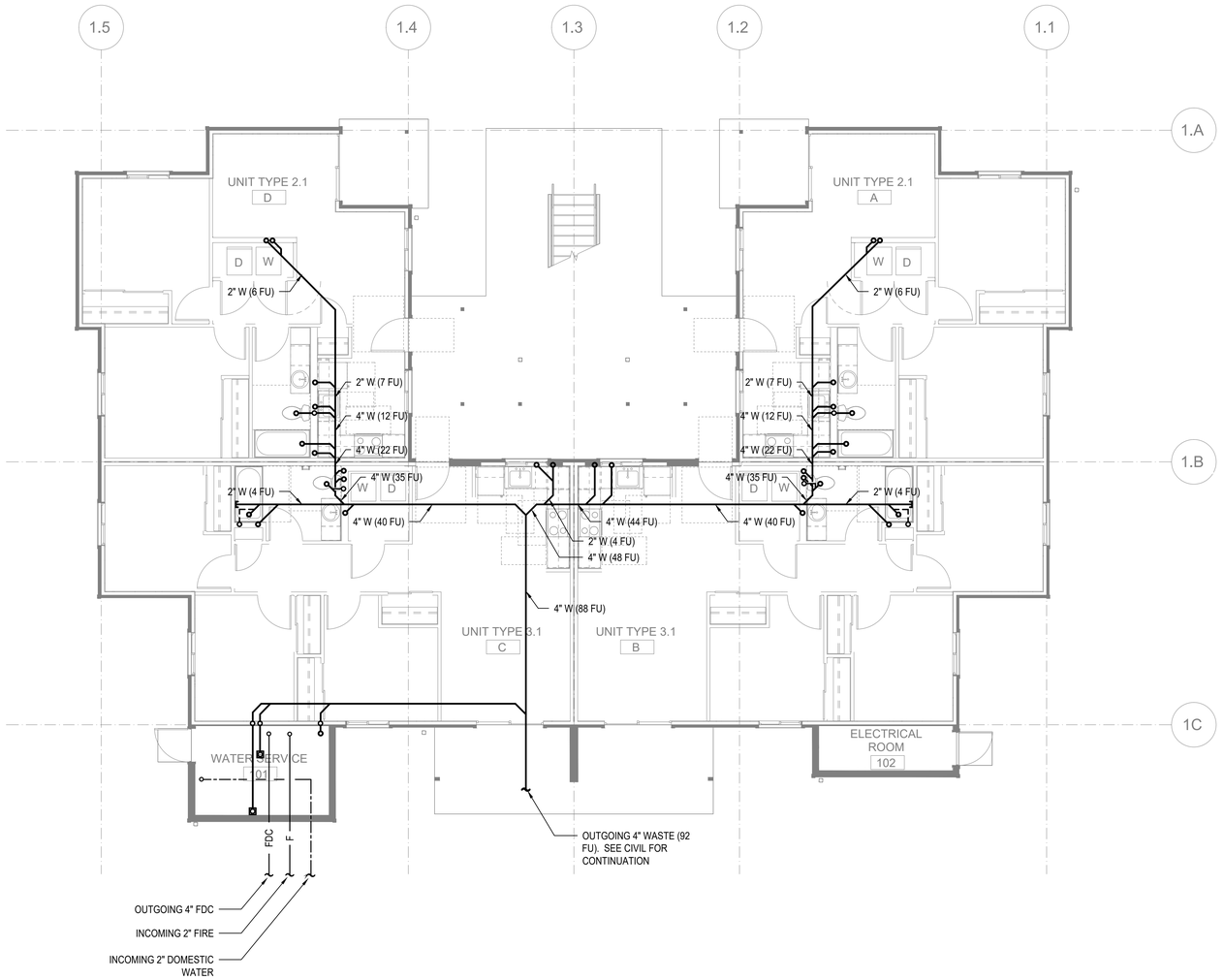
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NOTES AND SCHEDULES

PERMIT #	BMF22-09893
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P24-002



FLOOR PLAN - BUILDING 24 - FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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BUILDING 24

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
22041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

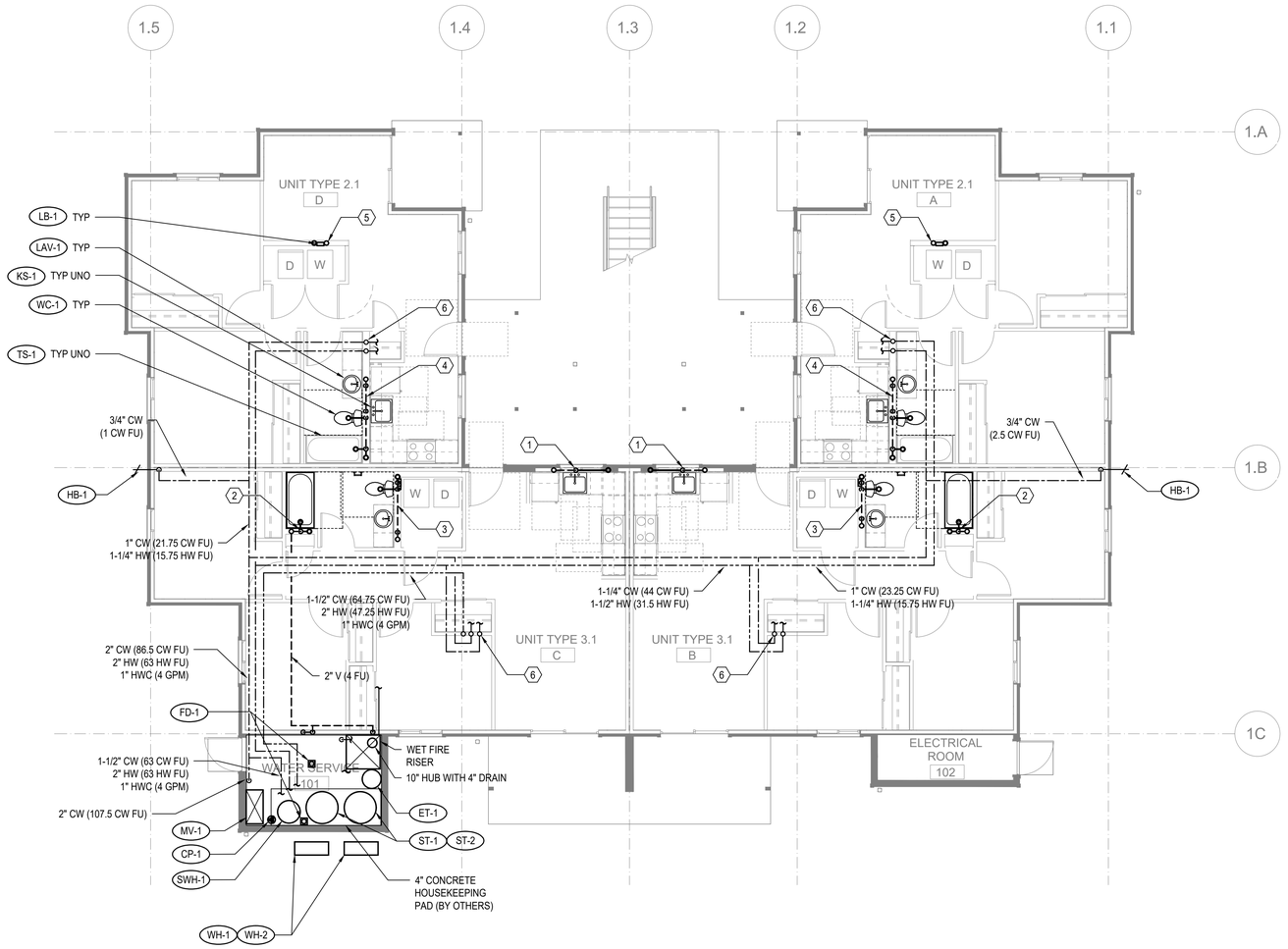
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PLAN - FOUNDATION

PERMIT #	BMF22-09893
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P24-100

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FLOOR PLAN - BUILDING 24 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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BUILDING 24

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

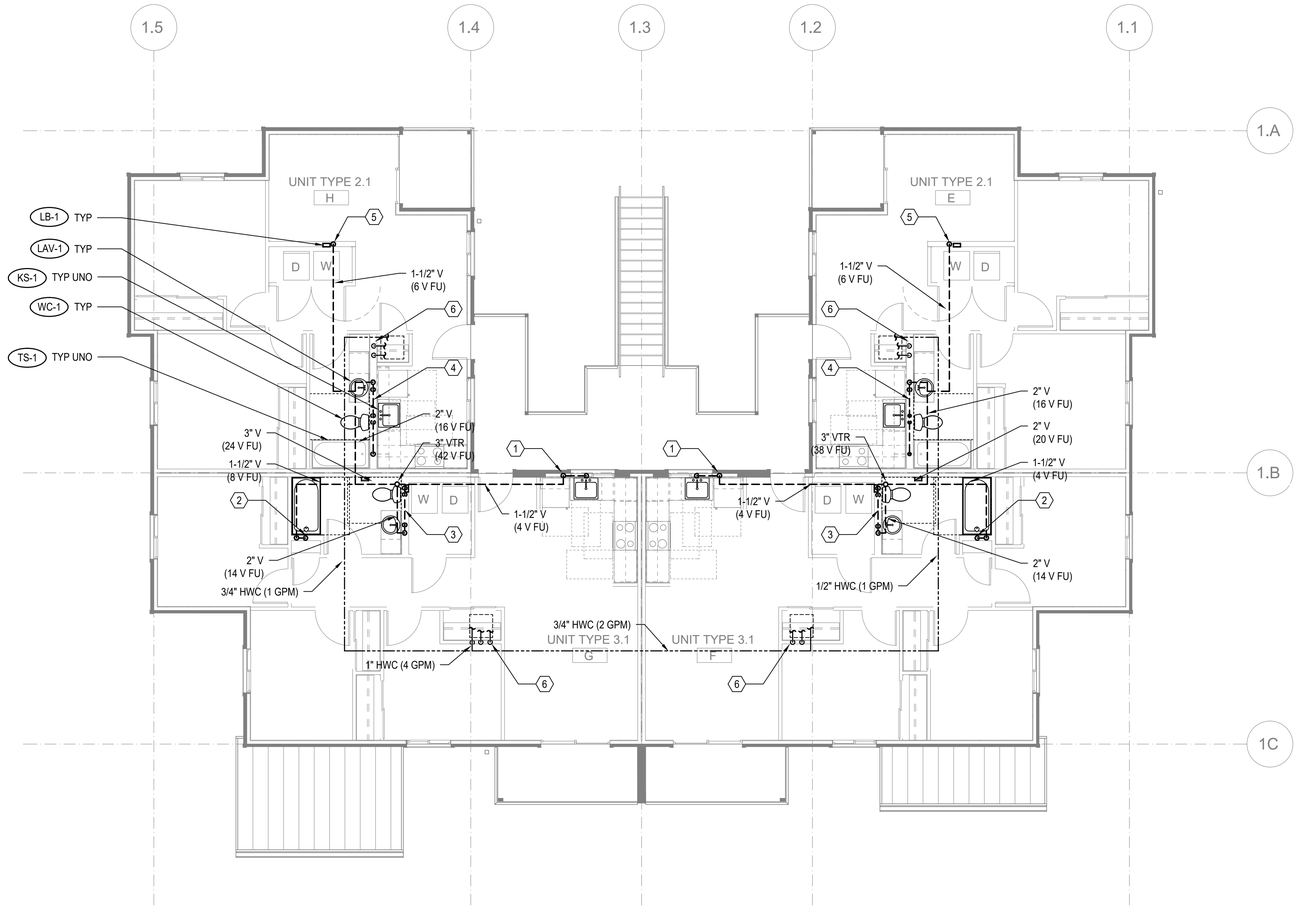
TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09893
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P24-101

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FLOOR PLAN - BUILDING 24 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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BUILDING 24

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

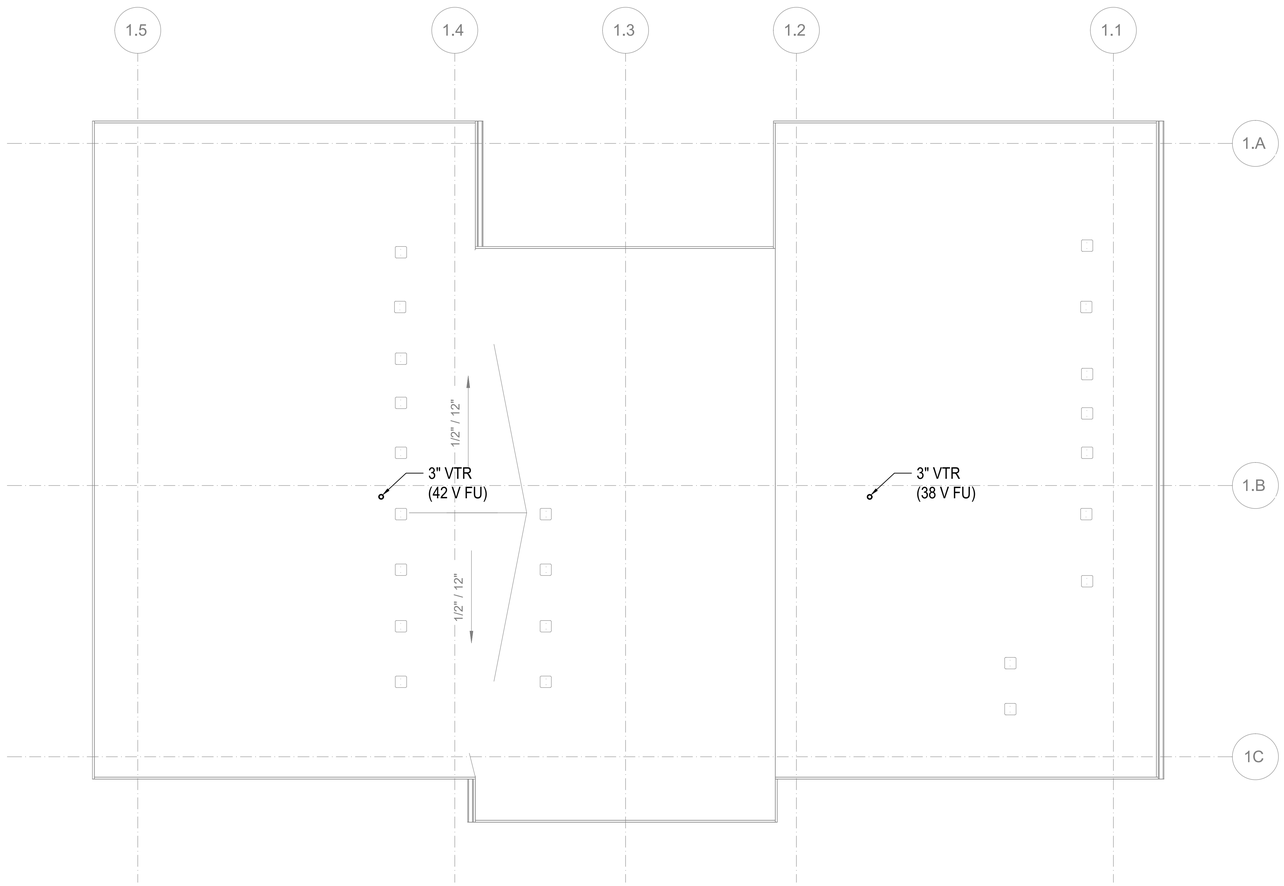
TITLE

PLAN - LEVEL 2

PERMIT #	BMF22-09893
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P24-102

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FLOOR PLAN - BUILDING 24 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

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BUILDING 24

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

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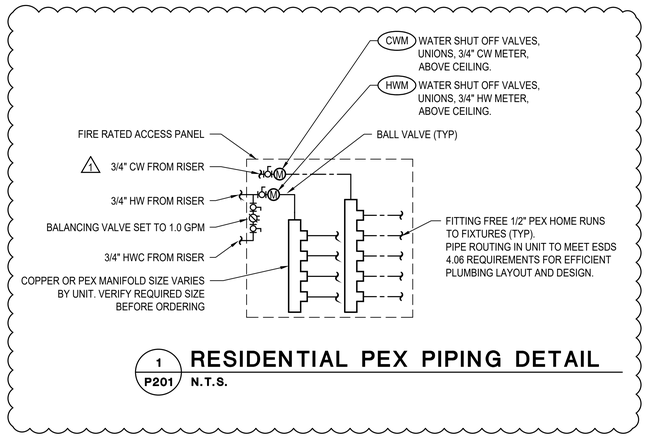
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PLAN - ROOF

PERMIT #	BMF22-09893
DRAWN	AJ, JL, PH, BF, KS
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ISSUE DATE	4/14/2023
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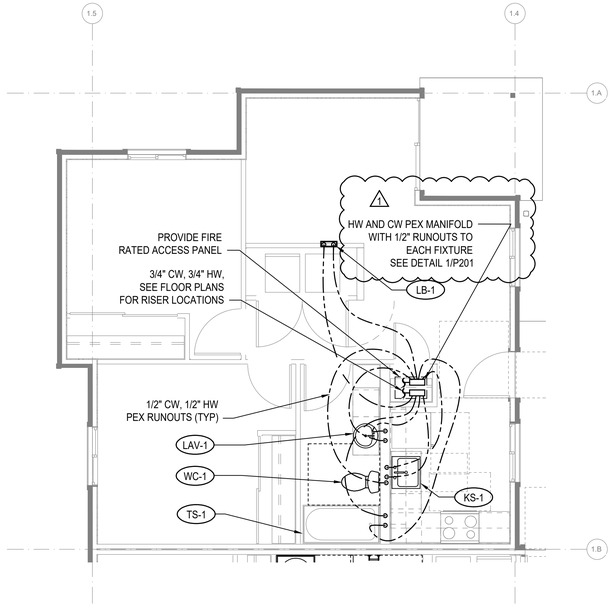
1 / P201 **RESIDENTIAL PEX PIPING DETAIL**

N.T.S.

GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

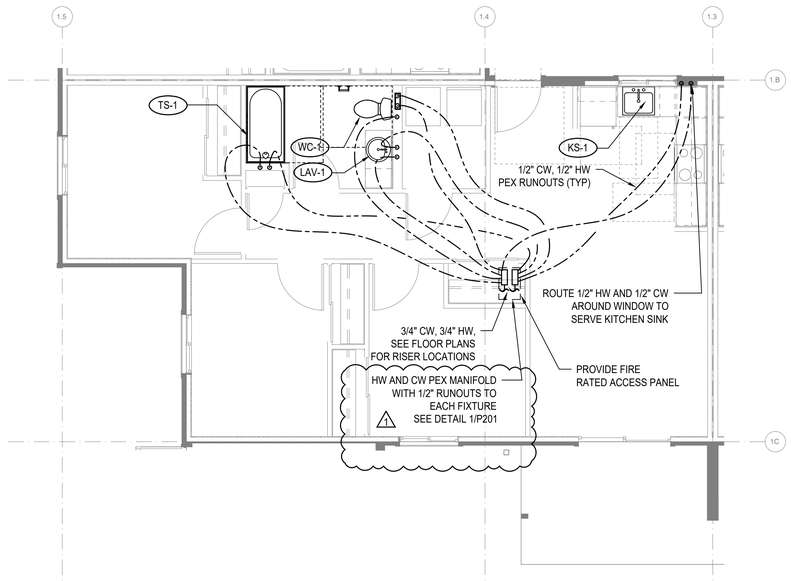
FLAG NOTES (X):



2 / P201 **ENLARGED PLAN - 2-BED**

1/4"=1'-0"

UNITS: A, D, E, H



3 / P201 **ENLARGED PLAN - 3-BED**

1/4"=1'-0"

UNITS: B, C, F, G

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NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

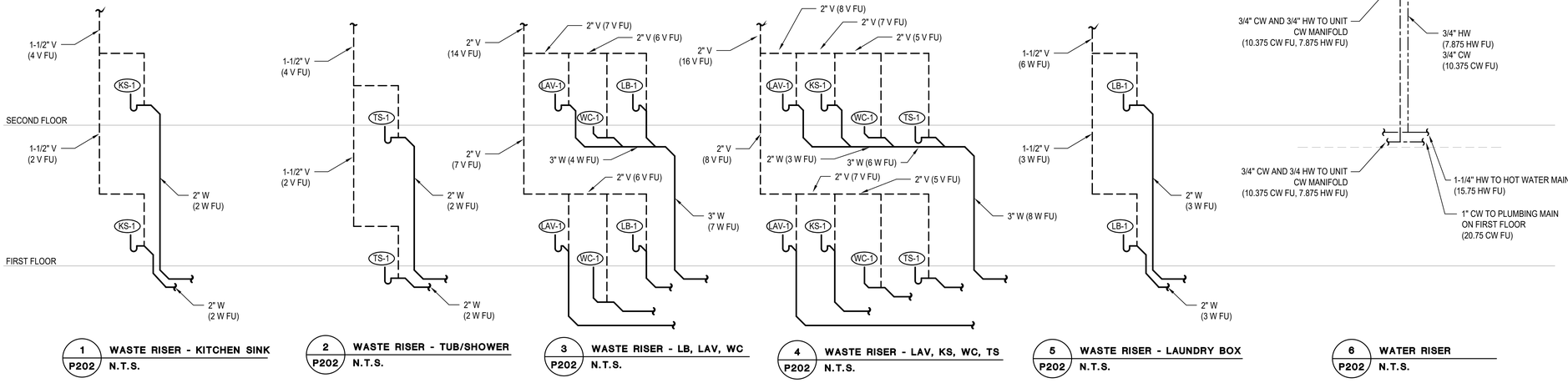
ENLARGED UNIT PLANS

PERMIT #	BMF22-09893
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P24-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 **WASTE RISER - KITCHEN SINK** N.T.S.

2 P202 **WASTE RISER - TUB/SHOWER** N.T.S.

3 P202 **WASTE RISER - LB, LAV, WC** N.T.S.

4 P202 **WASTE RISER - LAV, KS, WC, TS** N.T.S.

5 P202 **WASTE RISER - LAUNDRY BOX** N.T.S.

6 P202 **WATER RISER** N.T.S.

SIDER+BYERS
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192 Nickerson, Suite #300
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Phone: 206.285.2966

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FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority,
General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13406 NE 132nd St,
Kirkland, WA 98034

BUILDING 24

BID SET

DANA AMBER FOSTER
STATE OF WASHINGTON
21041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

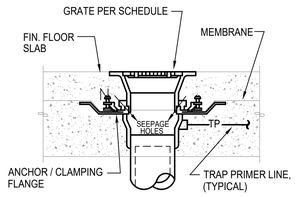
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RISERS

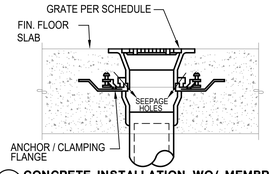
PERMIT #	BMF22-09893
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P24-202

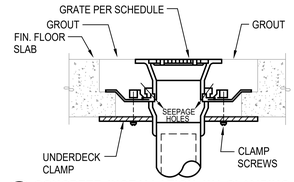
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A **CONCRETE INSTALLATION W/ MEMBRANE**

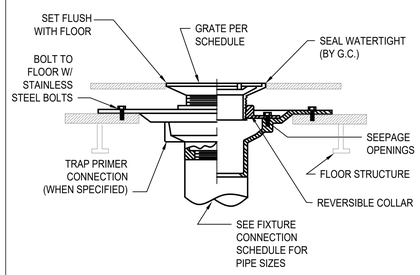


B **CONCRETE INSTALLATION WO/ MEMBRANE**



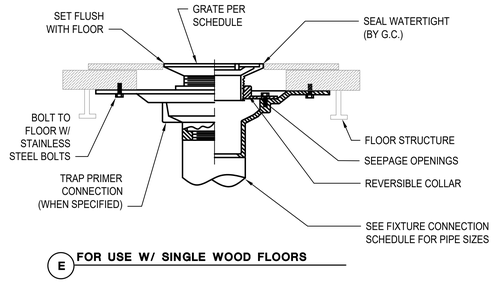
C **CONCRETE INSTALLATION W/ CLAMPING RING**

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



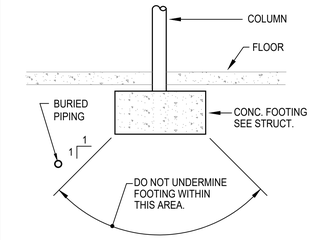
D **FOR USE W/ DOUBLE WOOD FLOORS**

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

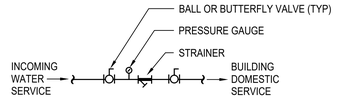


E **FOR USE W/ SINGLE WOOD FLOORS**

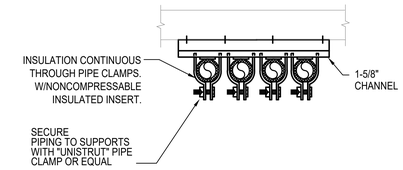
1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.



2 P301 BURIED PIPING DETAIL
N.T.S.

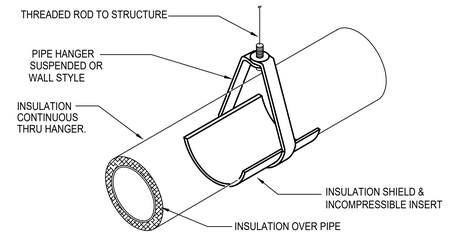


4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

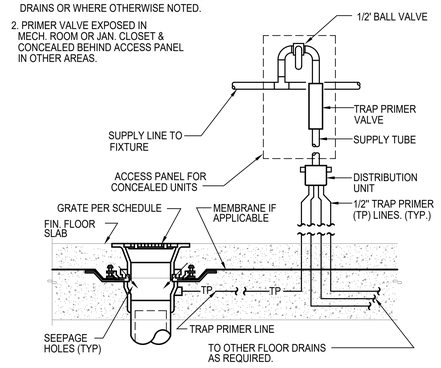
3 P301 PIPE SUPPORT
N.T.S.



NOTE:
INSULATE & LABEL PIPING PER. SPEC.

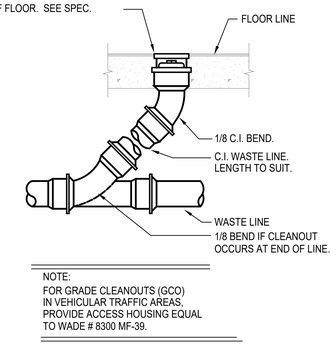
5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.



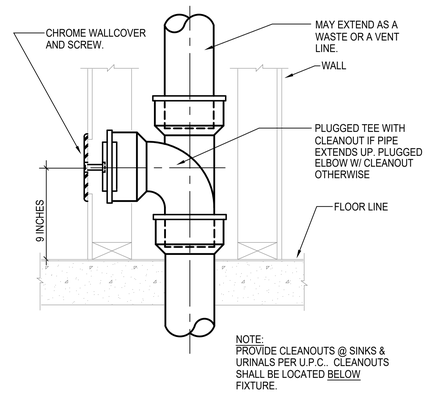
6 P301 TRAP PRIMER DETAIL
N.T.S.

CLEANOUT AND ACCESS COVER. TOP OF COVER TO BE FLUSH WITH TOP OF FLOOR. SEE SPEC.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

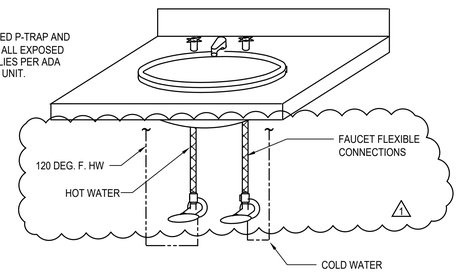
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



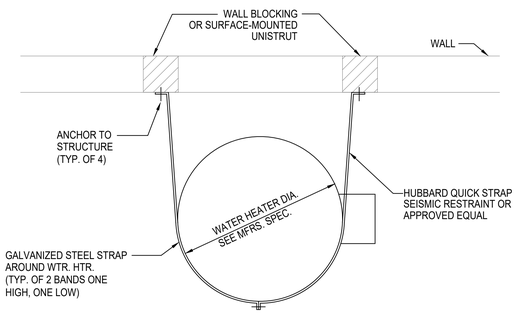
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

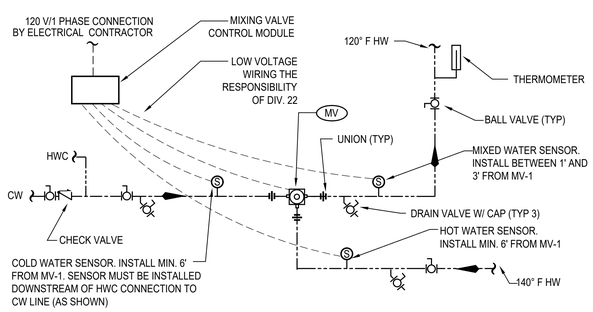
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



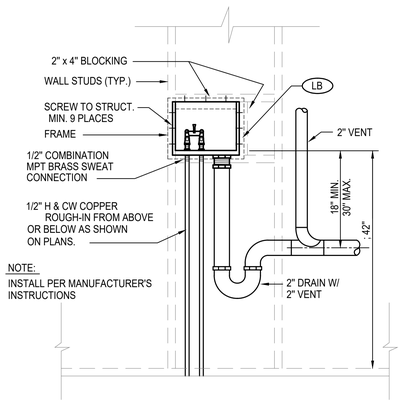
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



NOTE:
INSTALL PER MANUFACTURER'S INSTRUCTIONS

12 P301 LAUNDRY BOX DETAIL
N.T.S.

10/7/2021 7:33:34 AM

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Phone: 206.285.2966

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Seattle, WA 98104

PH: 206.623.1104
FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13406 NE 132nd St,
Kirkland, WA 98034

BUILDING 24

BID SET

DIANE AMBER TOMLINSON — STATE OF WASHINGTON — 24810 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

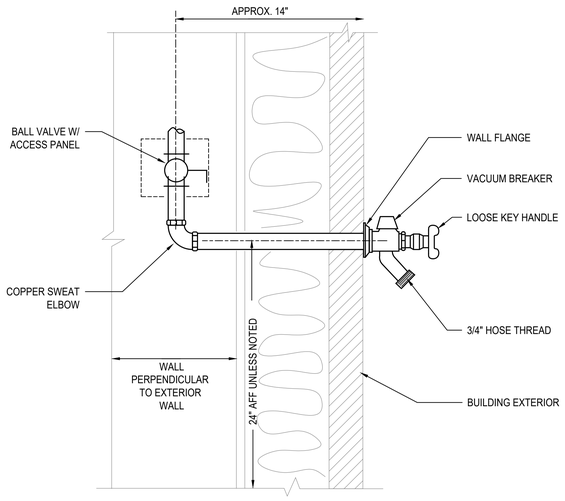
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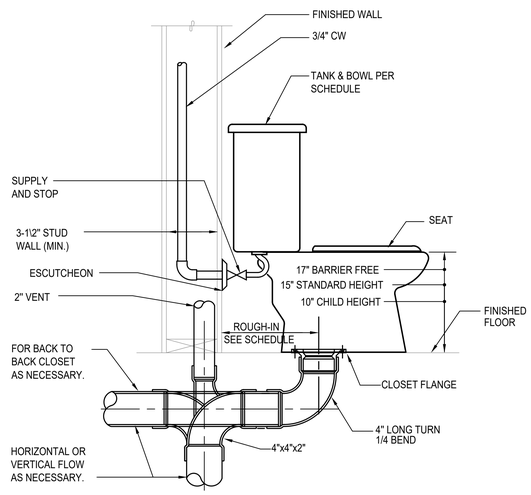
DETAILS

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P24-301



1 P302 **FREEZE PROOF HOSE BIBB DETAIL**
N.T.S.



2 P302 **TANK WATER CLOSET DETAIL**
N.T.S.

3 P302 **NOT USED**
N.T.S.

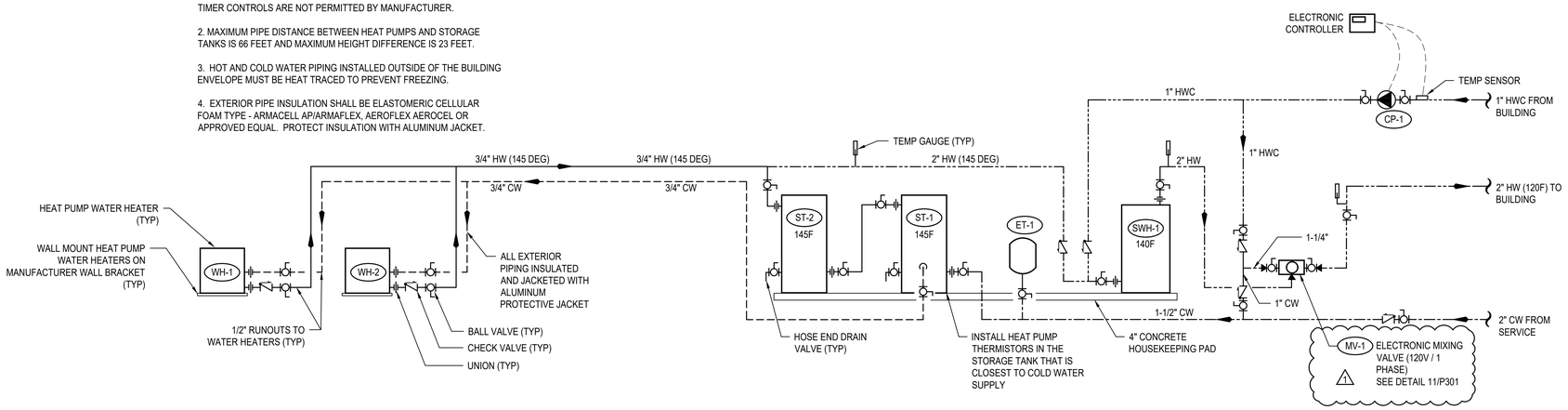
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 **HEAT PUMP WATER HEATER DETAIL**
N.T.S.

10/7/2021 7:33:34 AM

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BUILDING 24

BID SET

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REVISIONS / NOTES

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P24-302

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   B. SHOWER HEADS 1.5 GPM
   C. RESIDENTIAL LAVATORY FAUCETS. 1.0 GPM
   E. KITCHEN SINK FAUCETS 1.5 GPM
   ~~SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 17 GA. BRASS~~ TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS APPROXIMATELY 70 PSI.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.
14. PROPANE TANK LOCATIONS SHALL BE VERIFIED BY CONTRACTOR WITH LOCAL GAS SUPPLIER PRIOR TO INSTALLATION OF TANK PAD OR PROPANE PIPING TO/FROM BUILDING. GAS SUPPLIER REQUIRMENTS MAY BE MORE STRICT THAN NFPA 58.

RESIDENTIAL ENERGY CODE NOTES

1. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED. (R403.4.1)
2. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
3. ENERGY CONSERVATION MEASURES FOR SERVICE HOT WATER SYSTEMS SHALL BE IN ACCORDANCE WITH SECTIONS R403.5.1 THROUGH R403.5.5. SERVICE WATER HEATING EQUIPMENT SHALL MEET THE REQUIREMENT OF DOE 10 CFR PART 430 UNIFORM ENERGY FACTOR OR THE EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION C404.2. (R403.5)
4. HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING THE HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE WHEN THERE IS NO DEMAND FOR HOT WATER. (R403.5.1.1)
5. DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENSE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE. THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO NOT GREATER THAN 104°F. (R403.5.2)
6. INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3. IT IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS, OR OTHER STRUCURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT, OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION. (R403.5.3)
7. DRAIN WATER HEAT RECOVERY UNITS SHALL COMPLY WITH CSA 55.2 OR IAPMO PS 92. DRAIN WATER HEAT RECOVERY UNITS SHALL BE IN ACCORDANCE WITH CSA 55.1 OR IAPMO IGC 346-2017. (R403.5.4)
8. ALL ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES, OR ON CONCRETE FLOORS IN CONDITIONED SPACES, SHALL BE PLACED ON AN INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10, AND A MINIMUM COMPRESSIVE STRENGHT OF 40 PSI OR ENGINEERED TO SUPPORT THE APPLIANCE. (R403.5.5)

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ALT	ALTERNATE
AP	ACCESS PANEL
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL/ARCHITECT
AS	AIR SEPARATOR
AUX	AUXILIARY
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BHP	BRAKE HORSE POWER
BLDG	BUILDING
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CA	COMBUSTION AIR
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COND	CONDENSATE
CW	COLD WATER
CX	CONNECT TO EXISTING
dB	DECIBEL
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DDCV	DOUBLE DETECTOR CHECK VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT
DHW	DOMESTIC HOT WATER
DHWC	DOMESTIC HOT WATER RECIRCULATION
Ø OR DIA	DIAMETER
DN	DOWN
DWG(S)	DRAWING(S)
DWV	DRAIN, WASTE, VENT
EA	EACH
EEW	EMERGENCY EYEWASH
EFF	EFFICIENCY
ELEV	ELEVATION
EQUIP	EQUIPMENT
ES	EMERGENCY SHOWER
ET	EXPANSION TANK
EX	EXISTING/EXISTING TO REMAIN
EXP	EXPANSION
FC	FAIL CLOSED
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR
FLA	FULL LOAD AMPS
FM	FORCE MAIN
FO	FAIL OPEN
FP	FIRE PROTECTION
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOOR SINK
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY
FT	FEET/FOOT
FTG	FOOTING
FV	FLUSH VALVE
G	NATURAL GAS
GA	GAUGE
GAL	GALLON
G.C.	GENERAL CONTRACTOR
GCO	GRADE CLEANOUT
GD	GARAGE DRAIN
GPF	GALLONS PER FLUSH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
H	HEIGHT
HB	HOSE BIBB
HBVB	HOSE BIBB VACUUM BREAKER
HD	HEAD
HP	HORSEPOWER
HS	HAND SINK
HW	HOT WATER
HX	HEAT EXCHANGER
IE	INVERT ELEVATION
IN	INCH/INCHES
KW	KILOWATT/KILOWATTS
LAV	LAVATORY
LBS	POUNDS
LF	LINEAL FOOT
LTG	LIGHTING
LWT	LEAVING WATER TEMPERATURE
MBH	1000 BRITISH THERMAL UNITS PER HOUR
MED	MEDIUM
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MEZZ	MEZZANINE
MIN	MINIMUM
MISC	MISCELLANEOUS
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NOM	NOMINAL
NPC	NON-POTABLE COLD WATER
NPCW	NON POTABLE COLD WATER
NPH	NON-POTABLE HOT WATER
NPHR	NON-POTABLE HOT WATER RETURN
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OD	OUTSIDE DIAMTER/OVERLOW DRAIN
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
ORD	OVERFLOW ROOF DRAIN
ORL	OVERFLOW RAINWATER LEADER
ΔP	PRESSURE DIFFERENTIAL
PD	PLANTER DRAIN; PRESSURE DROP
PERF	PERFORATED
PH	PHASE
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER INCH GAUGE
QTY	QUANTITY
RD	ROOF DRAIN
REQD	REQUIRED
RL	RAIN WATER LEADER
RM	ROOM
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
RLX	RELOCATE EXISTING
RV	RELIEF VALVE
RX	REMOVE EXISTING
S	SINK
S	STORM
SCFM	STANDARD CUBIC FEET PER MINUT
SD	STORM DRAIN
SF	SQUARE FOOT
SFU	SUPPLY FIXTURE UNIT
SH	SHOWER
S.O.V.	SHUTOFF VALVE
SPEC	SPECIFICATION
S/S, OR SS	STAINLESS STEEL
STD	STANDARD
SYM	SYMBOL
T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
TBD	TO BE DETERMINED
TD	TRENCH DRAIN
TEMP	TEMPERATURE
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOD	TOP OF DECK
TOJ	TOP OF JOIST
TOS	TOP OF SLAB/TOP OF STEEL
TP	TRAP PRIMER
T&P	TEMPERATURE & PRESSURE
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
V	VENT(S)
V	VOLT
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VIB	VALVE-IN-BOX
VTR	VENT THROUGH ROOF
W	WASTE/WATER
W/	WITH
W/IN	WITHIN
W/O	WITHOUT
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER
WPD	WATER PRESSURE DROP
WT	WEIGHT
YCO	YARD CLEANOUT

PLUMBING SHEET LIST

P-001	COVER SHEET
P-002	SCHEDULES
P-011	PLUMBING SITE PLAN
P-100	FOUNDATION PLAN
P-101	LEVEL 1 FLOOR PLAN
P-102	LEVEL 2 FLOOR PLAN
P-103	ROOF PLAN
P-201	ENLARGED PLANS
P-202	ENLARGED PLANS
P-301	DETAILS
P-302	DETAILS

REFERENCE DESIGN CODES

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE ENERGY CODE (WSEC-R)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 UNIFORM PLUMBING CODE (UPC)

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Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13324 NE 132nd St,
Kirkland, WA 98034

BUILDING 25

BID SET

DANA AMBER COLE — STATE OF WASHINGTON — 22041009 — REGISTERED PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

COVER SHEET

PERMIT #	BMF22-09896
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P25-001

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GENERAL CONTRACTOR NOTE:

CONTRACTOR MUST ALERT ENGINEER AND ARCHITECT WHEN ROUGH-IN FOR PLUMBING SYSTEMS IS COMPLETE AND PROVIDE THE DESIGN TEAM WITH OPPORTUNITY TO REVIEW THE INSTALLATION PRIOR TO COVER. IF NOTICE IS NOT PROVIDED, IT WILL BE AT THE EXPENSE OF THE CONTRACTOR TO RE-OPEN CEILINGS & WALLS FOR INSPECTION BY DESIGN TEAM.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
WC-1	WATER CLOSET	NIAGARA: N7717 + N7714TFH	FLOOR MOUNT, TANK TYPE, VIT. CHINA, ELONGATED BOWL, 0.8 GPF, 12" ROUGH-IN, 17" TALL BOWL, WATERSENSE, PROVIDE STAINLESS BRAIDED SUPPLY AND 1/4 TURN ANGLE STOP, INSTALL WITH LEVER ON OPEN SIDE OF BATHROOM, ADA.
	SEAT	BEMIS: 1200SLOWT	ELONGATED, CLOSED FRONT, W/ COVER.
LAV-1	LAVATORY (RESIDENTIAL)	KOHLER: K-2196-4	20-1/4" X 17-1/2", DROP IN, VITEROUS CHINA, 3 HOLES ON 4" CENTERS, WHITE, ADA.
	FAUCET	MOEN: L4621	SINGLE HANDLE, POP UP DRAIN ASSEMBLY, ADA, WATERSENSE, STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS. PROVIDE 1.0 GPM AERATOR (IN LIEU OF STANDARD 1.2 GPM)
	DRAIN		INSULATE DRAIN AND WATER SUPPLIES.
TS-1	TUB/SHOWER	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	TUB / SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, POSI-TEMP BALANCING VALVE, WATERSENSE. PROVIDE 1.5 GPM SHOWER HEAD.
	DRAIN		GRID TYPE DRAIN.
TS-2	SHOWER (ADA)	AMERICAN STANDARD: NEW SALEM RECESSED	60"X30"X14-1/4", ENAMELED STEEL, ADA. **VERIFY RIGHT OR LEFT HAND OUTLET.**
	SHOWER VALVE	MOEN: L2353EP	PRESSURE-BALANCING MIXING VALVE TRIM, LESS SHOWER HEAD. PROVIDE SYMMONS MODEL T736 36" GRAB BAR WITH 1.5 GPM HAND SHOWER.
	DRAIN		GRID TYPE DRAIN.
KS-1	KITCHEN SINK	ELKAY: DLR252210	25" X 22" X 10-3/8", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN.

NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.

MARK	ITEM	MFR: MODEL	DESCRIPTION
KS-2	KITCHEN SINK (ADA)	ELKAY: LRAD252265	25" X 22" X 6-1/2", SINGLE COMPARTMENT, STAINLESS, 18 GAUGE, 3 HOLES, ADA.
	FAUCET	MOEN: 67425	SWING SPOUT, 4" CENTERS, 1.5 GPM, ADA, COPPER SUPPLY CONNECTIONS. PROVIDE BRAIDED STAINLESS STEEL SUPPLY LINES FROM FIXTURE STOPS.
	DRAIN		BASKET STRAINER. INSULATED DRAIN AND WATER PIPING PER ADA.
	OVERFLOW	FISHER: 11223	OVERFLOW ELBOW KIT, PROVIDE PIPING TO SINK DRAIN PIPE.
NOTE: CONTRACTOR SHALL VERIFY CABINET DIMENSIONS BEFORE ORDERING SINK.			
HB-1	HOSE BIBB (FREEZE-PROOF)	PRIER: P-264	WALL MOUNT, 3/4" HOSE THD., NON FREEZE, LOOSE KEY QUARTER TURN CONTROL.
FD-1	FLOOR DRAIN	ZURN: Z415BZ1	2" C.I. BODY, 5" DIAMETER NICKEL BRONZE STRAINER, PROVIDE TRAP PRIMER OR TRAP SEAL DEVICE (ONLY IF ALLOWED BY AHJ) **REFER TO FLOOR DRAIN DETAIL FOR DRAIN CONST. &/OR COVERING.**
LB-1	LAUNDRY BOX	OATEY: FIRE RATED	FIRE RATED WASHING MACHINE OUTLET BOX, 1/2" HW & 1/2" CW, 2" DRAIN, WATER HAMMER ARRESTORS.
ET-1	DOMESTIC EXPANSION TANK	AMTROL: ST-165-CL	20" DIAMETER X 40" HIGH, FAB, STEEL, MAX 150 PSI, 1" NPT CONNECTION SIZE. ⚠1
CP-1	HW CIRCULATION PUMP	ARMSTRONG: ASTRO 230SS	4 GPM @ 12' HEAD, 0.13 HP, 115 V/1PH, STAINLESS STEEL CONSTRUCTION, LEAD FREE.
HWM	HOT WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
CWM	COLD WATER METER	NORGAS SINGLEMAG (HOT WATER)	3/4". LEAD FREE, APPROVED FOR DOMESTIC WATER USE, NSF 61.
WH-1	HEAT PUMP	SANCO2:	15.4 MBH HEAT PUMP WATER HEATERS, 15A BREAKER SIZE,
WH-2	WATER HEATER	GS4-45HPC-D	UEF 3.40, COP 2.4 @ 47 DEG F. 7.2 MCA, 208/230V, 1 PHASE.
SWH-1	ELECTRIC SWING TANK	BRADFORD WHITE: SLE280T6-1SEVV	80 GALLON, 9 KW, SIMULTANEOUS ELEMENTS, 240V, 1 PHASE. 1000 LB WET. ⚠1
ST-1	DOMESTIC	SANCO2:	200 GALLON STORAGE TANK.
ST-2	STORAGE TANK	ECO-200GLBK	2000 LB WET.
MV-1	MIXING VALVE	HEAT TIMER: ETV PLATINUM PLUS	⚠1 1" ELECTRONIC MIXING VALVE COMPLETE ASSEMBLY INCLUDING IMMERSION SENSORS, STAINLESS VALVE, ACTUATOR AND CONTROL MODULE (120V/1 PHASE). MOUNT CONTROL MODULE ON WALL AND PROVIDE SYSTEM WITH HOT, COLD, AND MIXED WATER SENSORS.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
3	For heating system based on electric resistance only (either forced air or Zonal)	Electric Resistance Only	-1.0	5.5	4.5

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.3	NA	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab. Or 5% reduction in UA
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	2.0 ACH50 / Heat Recovery Ventilation min eff 65% / For R2, 0.25 cfm per ft2 at 50 Pa / HRV with min SHR eff of 0.65
3	High Efficiency HVAC		0.0	
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating	Not Selected	0.0	-
5.2-5.6	Efficient Water Heating	Option 5.5	2.5	NEEA Tier 3 heat pump water heater
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Option 7.1	1.5	Appliance Package
		Energy Credits	5.5	

kWh

***Refer to WSEC 2018 Table R406.3 for complete option descriptions and requirements**

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	PIPE SIZE H.W.	PIPE SIZE WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
WC-1	WATER CLOSET	1/2"	-	3"	2"	2.5	3	TANK TYPE, ADA
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	1	1	ADA
TS-1	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	
TS-2	BATHTUB	1/2"	1/2"	2"	1-1/2"	4	2	ADA
KS-1	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	
KS-2	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	1.5	2	ADA
HB-1	HOSE BIBB	3/4"	-	-	-	2.5	-	FREEZE PROOF
FD-1	FLOOR DRAIN	-	-	2"	2"	-	2	
LB-1	LAUNDRY BOX	1/2"	1/2"	2"	1-1/2"	3	3	

⚠1

ESDS V4.0 CREDITS

CRITERION #	CRITERION
4.01B	ADVANCED WATER-CONSERVING FIXTURES
4.04B	WATER METERING - NEW CONSTRUCTION
4.06	EFFICIENT PLUBING LAYOUT & DESIGN

PLUMBING CALCULATIONS

2018 UPC PLUMBING CODE		FIXTURE UNITS PER APPENDIX A					
		DOMESTIC WATER WSFU				SEWER DFU	
FIXTURE	QTY	PER FIXTURE	TOTAL	HW PER FIXTURE	TOTAL	PER FIXTURE	TOTAL
Private Tank Water Closet	8	2.5	20	-	-	3	24
Lavatory (Public or Private)	8	1	8	0.75	6	1	8
Bathtub or Combo Bath/Shwr	8	4	32	3	24	2	16
Kitchen Sink	8	1.5	12	1.125	9.00	2	16
Clothes Washer	8	4	32	3	24	3	24
Hose-bibb*	2	2.5	3.5	-	-	-	-
Floor Drain	2	-	-	-	-	2	4
TOTALS	**44**		**107.5**		**63.00**		**92**

*EACH ADDITIONAL HOSE BIBB AFTER FIRST IS 1.0 WSFU.
TOTAL BUILDING DEMAND IS 44 GPM PER APPENDIX A OF 2018 UPC. BUILDING WATER SERVICE SIZE = 2".
BUILDING WATER METER SIZE = 1-1/2".
TOTAL BUILDING WASTE FIXTURE UNITS IS 92. BUILDING SERVICE SIZE = (1X) 4".

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King County Housing Authority

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c/o: King County Housing Authority,
General Partner
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Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13324 NE 132nd St,
Kirkland, WA 98034

BUILDING 25

BID SET

DANA AMBER FOSTER STATE OF WASHINGTON 24041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

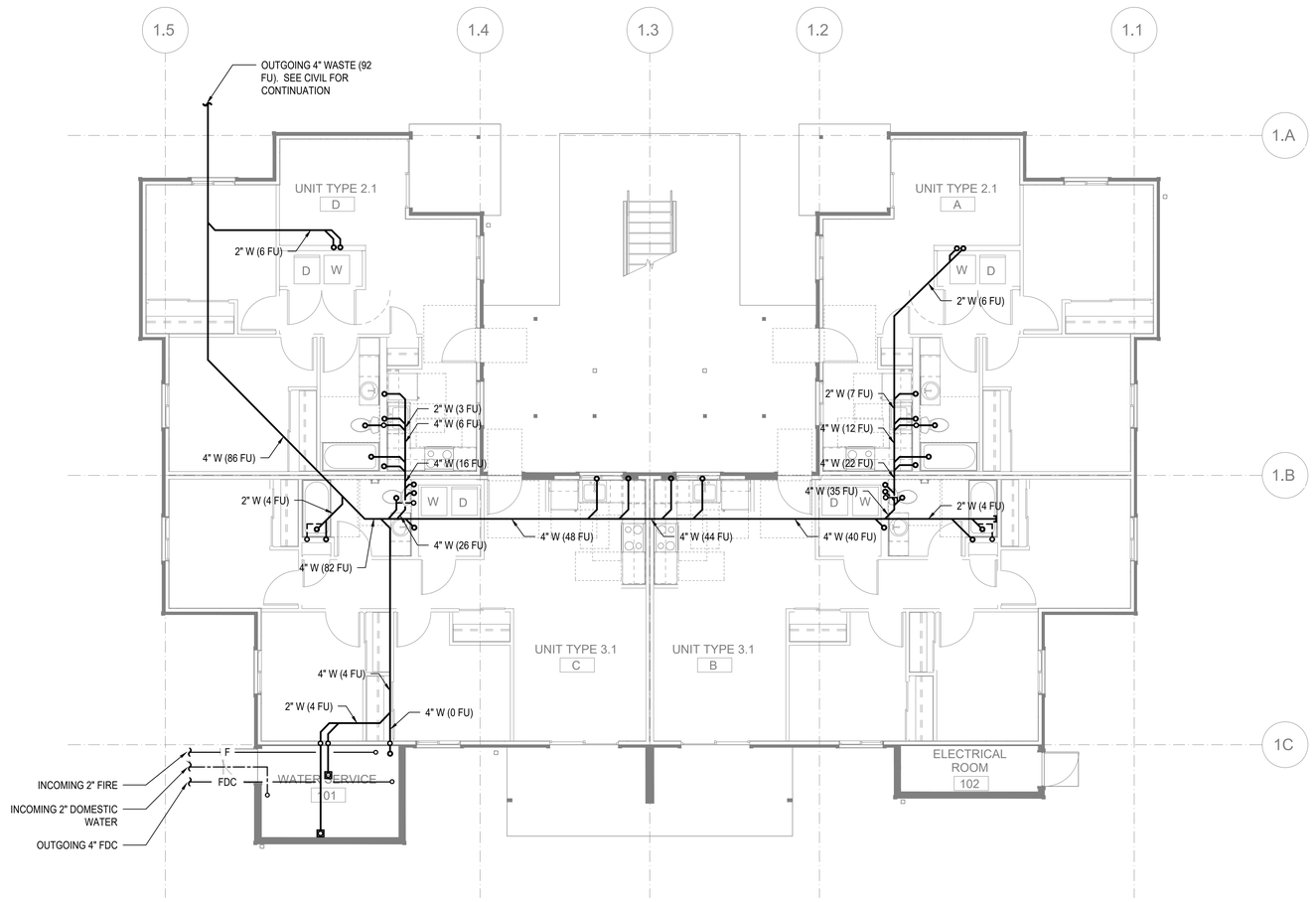
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NOTES AND SCHEDULES

PERMIT #	BMF22-09896
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P25-002



FLOOR PLAN - BUILDING 25 - FOUNDATION

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. -

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

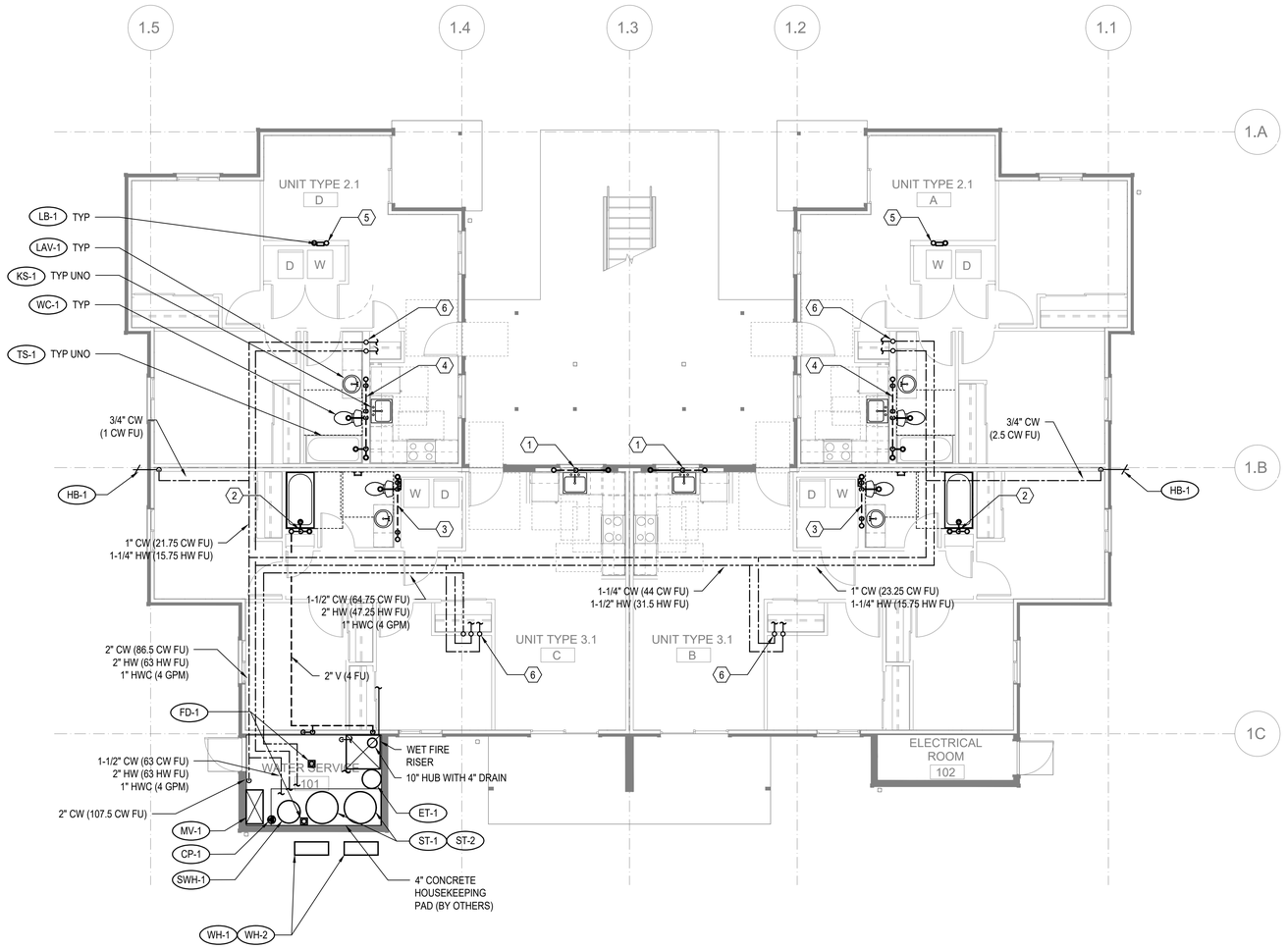
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PLAN - FOUNDATION

PERMIT #	BMF22-09896
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
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SHEET NO.:	

P25-100

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FLOOR PLAN - BUILDING 25 - LEVEL 1

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

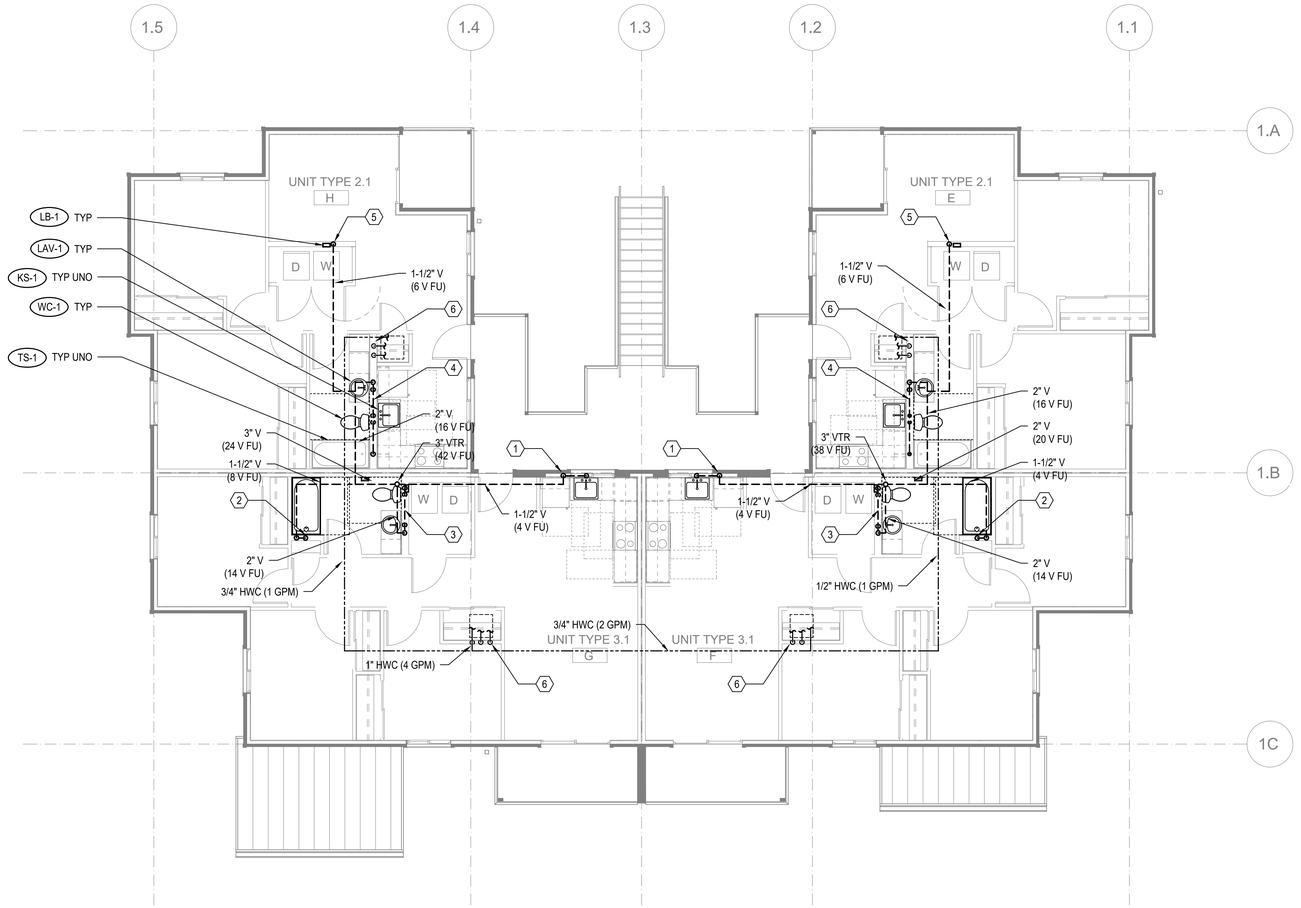
TITLE

PLAN - LEVEL 1

PERMIT #	BMF22-09896
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P25-101

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FLOOR PLAN - BUILDING 25 - LEVEL 2

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. SEE WASTE RISER 1 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
2. SEE WASTE RISER 2 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
3. SEE WASTE RISER 3 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
4. SEE WASTE RISER 4 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
5. SEE WASTE RISER 5 ON SHEET P202 FOR WASTE AND VENT PIPE SIZING.
6. SEE WATER RISER 7 ON SHEET P202 FOR CW AND HW PIPE SIZING.

GENERAL NOTES:

1. -

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1	5.19.23	BID ADDENDUM 2

DPD STAMP

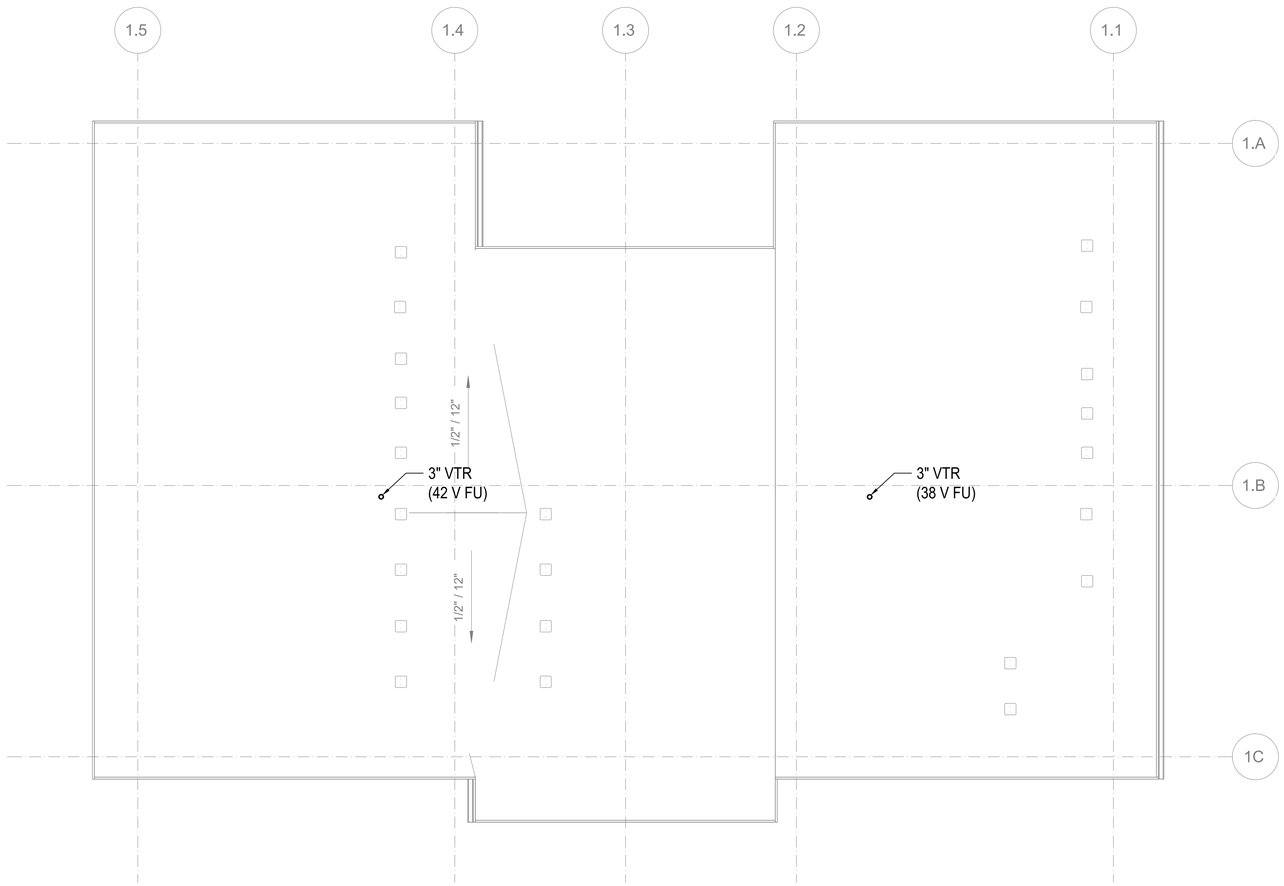
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PLAN - LEVEL 2

PERMIT #	BMF22-09896
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P25-102

10/7/2021 7:33:34 AM



FLOOR PLAN - BUILDING 25 - ROOF

SCALE: 3/16"=1'-0"

FLAG NOTES (X):

1. -

GENERAL NOTES:

1. MAINTAIN 10' CLEARANCE BETWEEN VENT TERMINATIONS AND MECHANICAL AIR INTAKES. (1)

SIDER+BYERS
MECHANICAL + ELECTRICAL ENGINEERS
192 Nickerson, Suite #300
Seattle, Washington 98109
Phone: 206.285.2966

SMR Architects
117 S. Main St., Suite 400
Seattle, WA 98104

PH: 206.623.1104
FX: 206.623.5285

King County Housing Authority

New Kirkland Heights LLLP
c/o: King County Housing Authority, General Partner
13310 NE 133rd St.
Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13324 NE 132nd St,
Kirkland, WA 98034

BUILDING 25

BID SET

DANA AMBER COLLINS
STATE OF WASHINGTON
20041009
REGISTERED
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

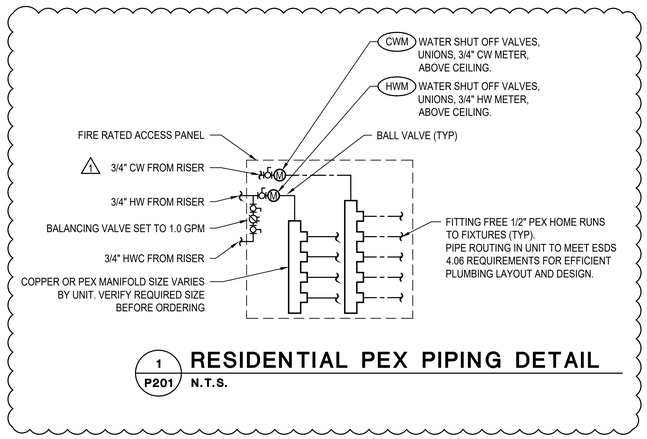
PLAN - ROOF

PERMIT #	BMF22-09896
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016

SHEET NO.:

P25-103

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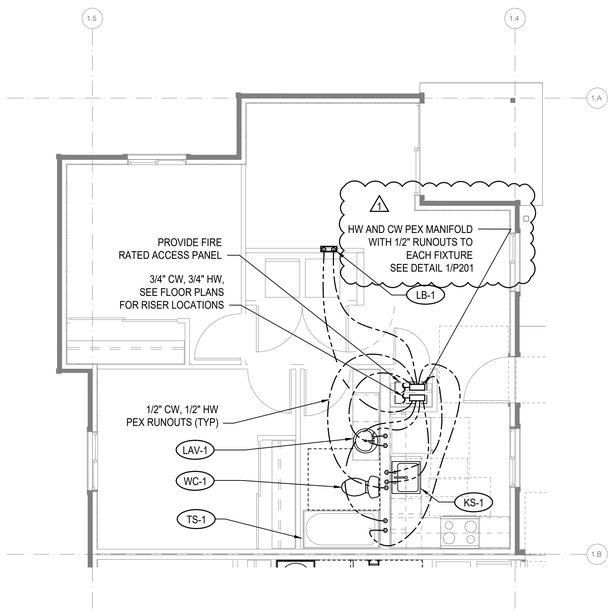
1 / P201 **RESIDENTIAL PEX PIPING DETAIL**

N.T.S.

GENERAL NOTES:

1. PLUMBING ROUTING AND LAYOUT TO BE IN ACCORDANCE WITH ESDS V4.0 SECTION 4.06 EFFICIENT PLUMBING LAYOUT AND DESIGN.

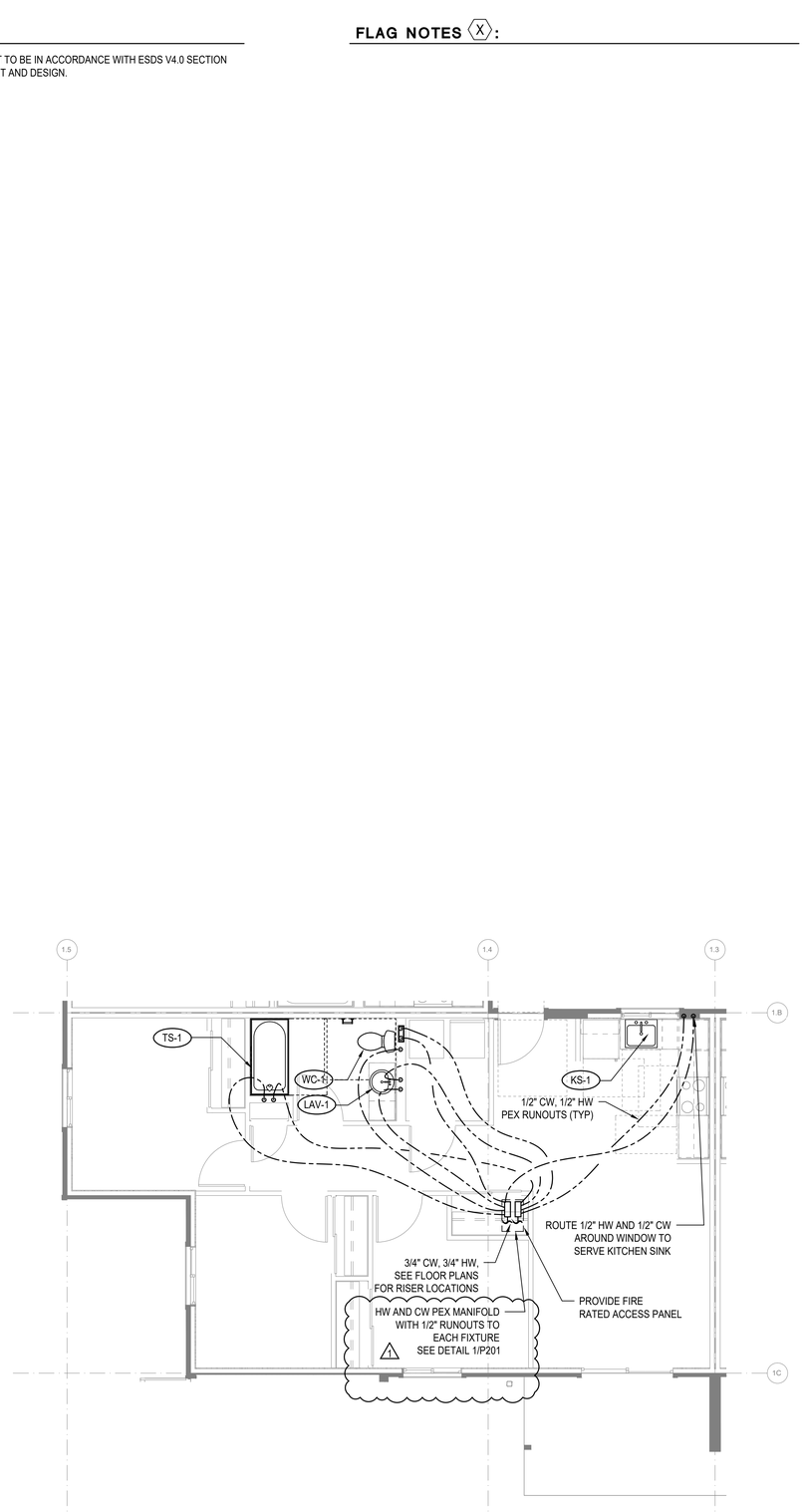
FLAG NOTES (X):



2 / P201 **ENLARGED PLAN - 2-BED**

1/4"=1'-0"

UNITS: A, D, E, H



3 / P201 **ENLARGED PLAN - 3-BED**

1/4"=1'-0"

UNITS: B, C, F, G

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King County Housing Authority

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Kirkland, WA 98034.
CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13324 NE 132nd St, Kirkland, WA 98034

BUILDING 25

BID SET

DANA AMBER FOSTER — STATE OF WASHINGTON — 24041009 — REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

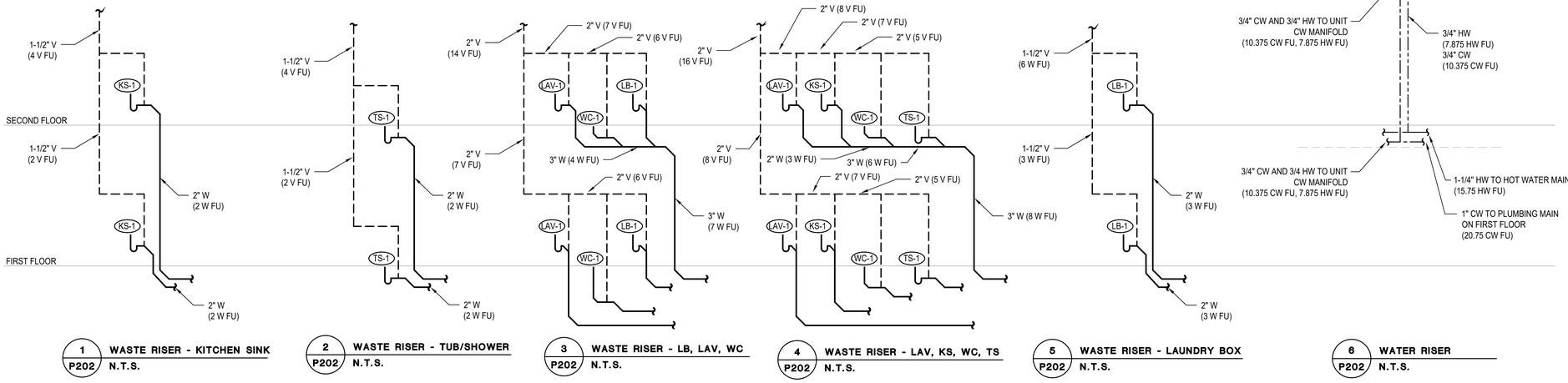
ENLARGED UNIT PLANS

PERMIT #	BMF22-09896
DRAWN	AJ, JL, PH, BF, KS
CHECKED	DF
ISSUE DATE	4/14/2023
JOB NO.	22016
SHEET NO.:	

P25-201

NOTES:

1. FIXTURE LABELS MAY DIFFER FOR RISERS SERVING ADA UNITS. SEE FLOOR PLANS FOR CORRECT FIXTURE LABELS.
2. SEE FIXTURE CONNECTION SCHEDULE ON SHEET P002 FOR WASTE AND VENT CONNECTION SIZES TO INDIVIDUAL FIXTURES



1 P202 WASTE RISER - KITCHEN SINK N.T.S.

2 P202 WASTE RISER - TUB/SHOWER N.T.S.

3 P202 WASTE RISER - LB, LAV, WC N.T.S.

4 P202 WASTE RISER - LAV, KS, WC, TS N.T.S.

5 P202 WASTE RISER - LAUNDRY BOX N.T.S.

6 P202 WATER RISER N.T.S.

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Kirkland, WA 98034

BUILDING 25

BID SET

DANA AMBER FORD
STATE OF WASHINGTON
24041009
REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
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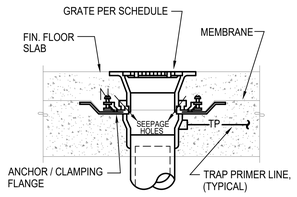
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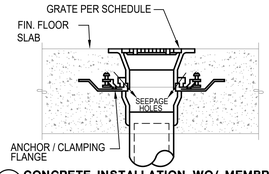
RISERS

PERMIT #	BMF22-09896
DRAWN	AJ, JL, PH, BF, KS
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SHEET NO.:	

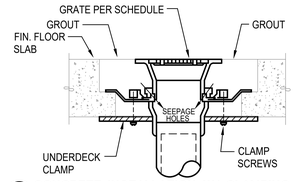
P25-202



A **CONCRETE INSTALLATION W/ MEMBRANE**

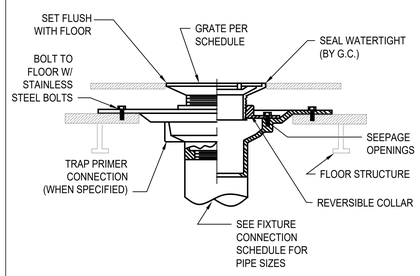


B **CONCRETE INSTALLATION WO/ MEMBRANE**



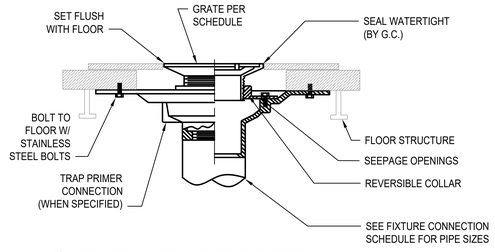
C **CONCRETE INSTALLATION W/ CLAMPING RING**

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.



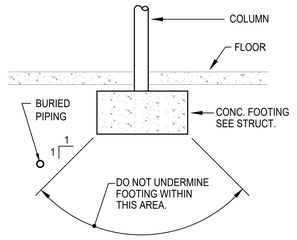
D **FOR USE W/ DOUBLE WOOD FLOORS**

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

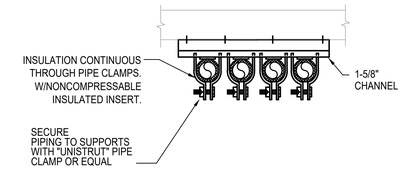


E **FOR USE W/ SINGLE WOOD FLOORS**

1 P301 FLOOR DRAIN / SINK INSTALLATION STYLES
N.T.S.

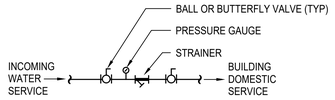


2 P301 BURIED PIPING DETAIL
N.T.S.

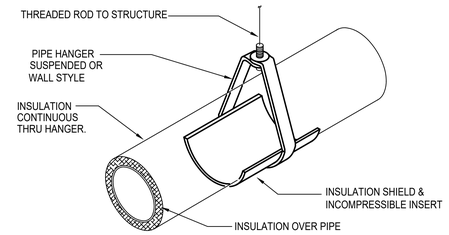


NOTE: QUANTITY OF PIPES SHOWN REPRESENTATIVE ONLY, PROVIDE QUANTITY OF PIPES REQUIRED.

3 P301 PIPE SUPPORT
N.T.S.



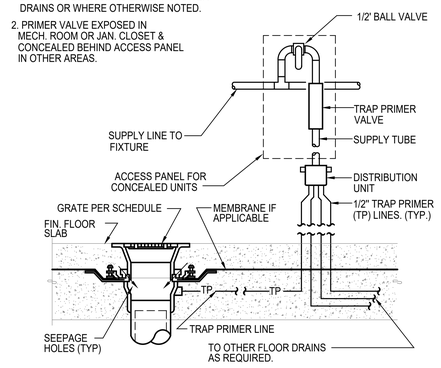
4 P301 INCOMING WATER SERVICE DETAIL
N.T.S.



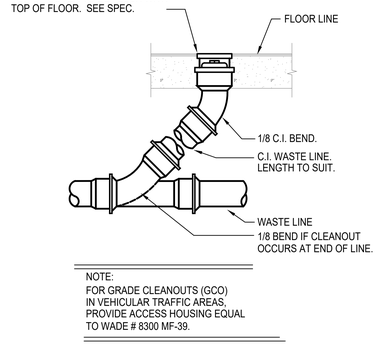
NOTE:
INSULATE & LABEL PIPING PER. SPEC.

5 P301 PIPE HANGER DETAIL
N.T.S.

NOTES:
1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS & FLOOR SINKS EXCEPT SHOWER DRAINS OR WHERE OTHERWISE NOTED.
2. PRIMER VALVE EXPOSED IN MECH. ROOM OR JAN. CLOSET & CONCEALED BEHIND ACCESS PANEL IN OTHER AREAS.

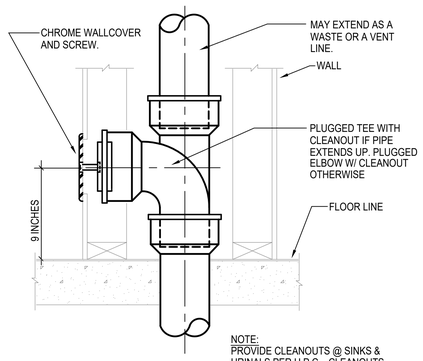


6 P301 TRAP PRIMER DETAIL
N.T.S.



NOTE:
FOR GRADE CLEANOUTS (GCO) IN VEHICULAR TRAFFIC AREAS, PROVIDE ACCESS HOUSING EQUAL TO WADE # 8300 MF-39.

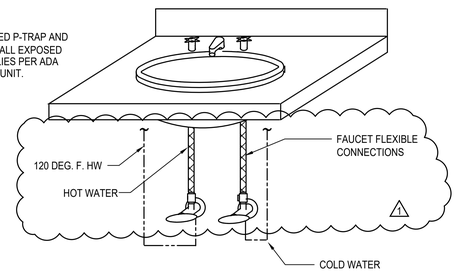
7 P301 FLOOR CLEANOUT DETAIL
N.T.S.



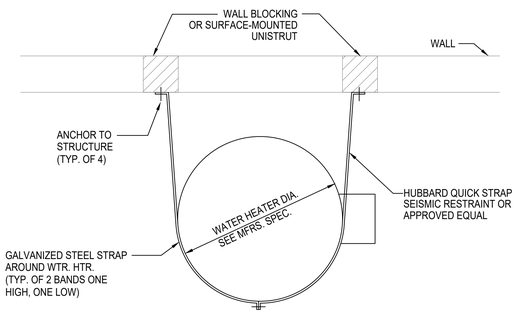
NOTE:
PROVIDE CLEANOUTS @ SINKS & URINALS PER U.P.C.. CLEANOUTS SHALL BE LOCATED BELOW FIXTURE.

8 P301 WALL CLEANOUT DETAIL
N.T.S.

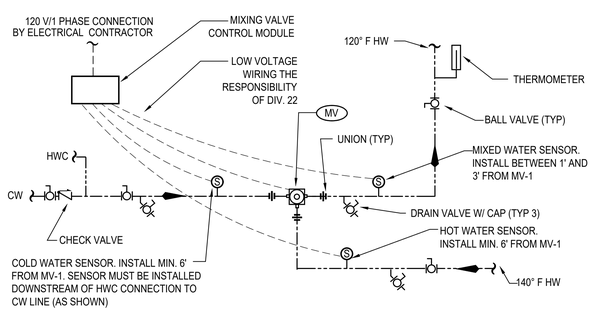
NOTES:
1. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS AT ALL EXPOSED P-TRAPS AND SUPPLIES PER ADA STANDARDS IN ADA UNIT.



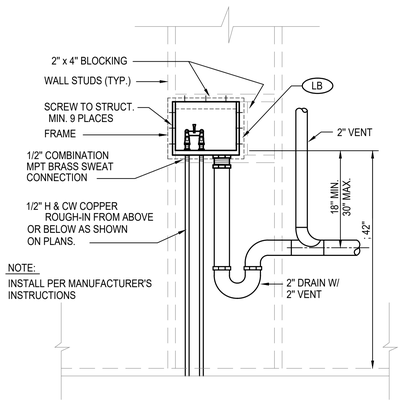
9 P301 PRIVATE LAVATORY WATER CONNECTION DETAIL
N.T.S.



10 P301 WATER HEATER/ STORAGE TANK SEISMIC BRACING
N.T.S.



11 P301 MASTER MIXING VALVE DETAIL
N.T.S.



NOTE:
INSTALL PER MANUFACTURER'S INSTRUCTIONS

12 P301 LAUNDRY BOX DETAIL
N.T.S.

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13310 NE 133rd St.
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CONTRACT #: TC2300131

KIRKLAND HEIGHTS APARTMENTS

13324 NE 132nd St,
Kirkland, WA 98034

BUILDING 25

BID SET

DIANE AMBER TOMLINSON STATE OF WASHINGTON 24510 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

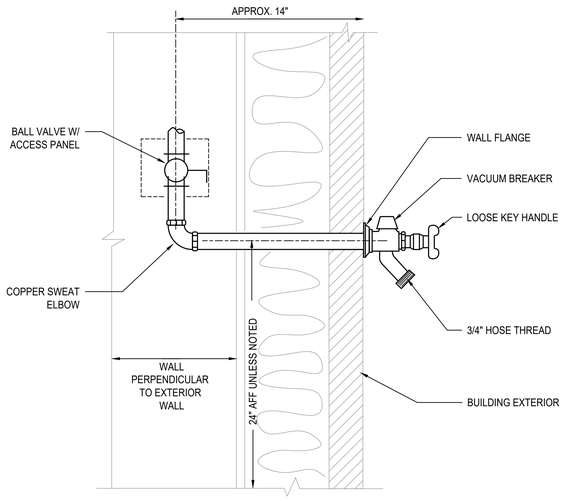
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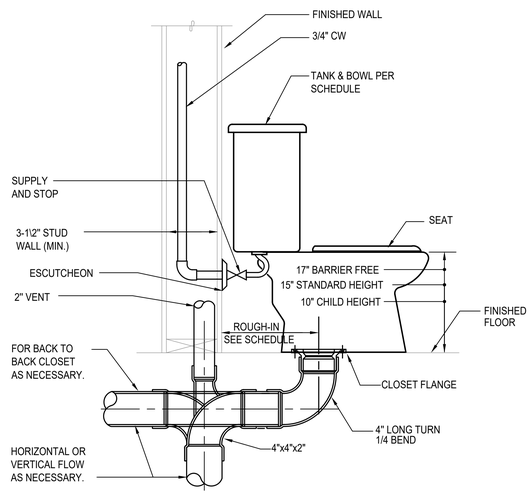
DETAILS

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P25-301



1 P302 **FREEZE PROOF HOSE BIBB DETAIL**
N.T.S.



2 P302 **TANK WATER CLOSET DETAIL**
N.T.S.

3 P302 **NOT USED**
N.T.S.

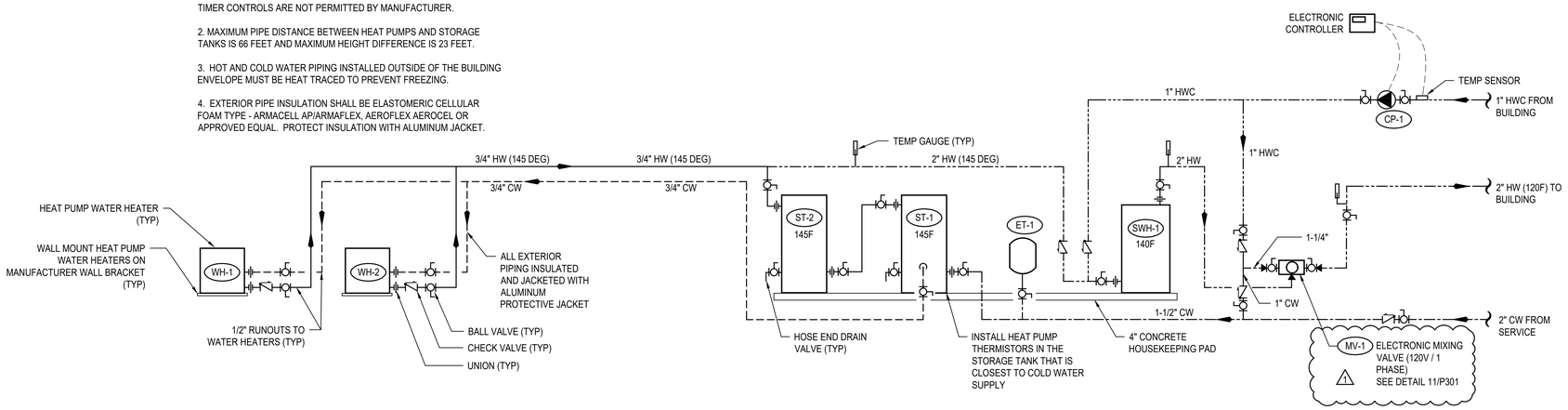
NOTES:

1. RECIRCULATION SYSTEM MUST OPERATE ON SENSOR OR AQUASTAT. TIMER CONTROLS ARE NOT PERMITTED BY MANUFACTURER.

2. MAXIMUM PIPE DISTANCE BETWEEN HEAT PUMPS AND STORAGE TANKS IS 66 FEET AND MAXIMUM HEIGHT DIFFERENCE IS 23 FEET.

3. HOT AND COLD WATER PIPING INSTALLED OUTSIDE OF THE BUILDING ENVELOPE MUST BE HEAT TRACED TO PREVENT FREEZING.

4. EXTERIOR PIPE INSULATION SHALL BE ELASTOMERIC CELLULAR FOAM TYPE - ARMACELL AP/ARMAFLEX, AEROFLEX AEROCEL OR APPROVED EQUAL. PROTECT INSULATION WITH ALUMINUM JACKET.



4 P302 **HEAT PUMP WATER HEATER DETAIL**
N.T.S.

10/7/2021 7:33:34 AM

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BUILDING 25

BID SET

DANA AMBER COLLINS STATE OF WASHINGTON 22041009 REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	5.19.23	BID ADDENDUM 2

DPD STAMP

TITLE

DETAILS

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P25-302