PLUM	BING LEGEND							
SYMBOL	DESCRIPTION							
	COLD WATER PIPING							
	HOT WATER PIPING (120°)							
	HOT WATER RECIRCULATION PIPING							
	WASTE PIPING							
GW	GREASE WASTE PIPING							
	VENT PIPING							
○ VTR	VENT THROUGH ROOF							
	BACKFLOW PREVENTER							
0	OVERFLOW ROOF DRAIN							
0	ROOF DRAIN							
	STRAINER							
○ FCO	FLOOR CLEANOUT (FCO)							
$\vdash$	WALL CLEANOUT (WCO)							
0	FLOOR DRAIN							
	FUNNEL FLOOR DRAIN							
	FLOOR SINK							
	AREA DRAIN							
	BALANCING VALVE							
<del></del>	PRESSURE REDUCING VALVE							
	UNION							
	CHECK VALVE							
Φ	BALL VALVE							
<u>}</u>	RELIEF OR SAFETY VALVE							
$-\!$	GATE VALVE							
	WATER HAMMER ARRESTOR							
	HOSE BIBB/WALL HYDRANT							

	ABBREVIATIONS
ABBREV.	DESCRIPTION
ADA CO CW CV DEG F, °F DN EQUIP ELEC, EC FCO FM FT GC GPM HW HWC I.E. KW MC MFR MAX MECH MIN N.I.C. NO., # PC PH P.D.I. PSI RO SCO TYP VTR V WCO WH W W/	AMERICANS WITH DISABILITIES ACT CLEANOUT COLD WATER CHECK VALVE DEGREE FAHRENHEIT DOWN EQUIPMENT ELECTRICAL, ELECTRICAL CONTRACTOR FLOOR CLEANOUT FORCED MAIN FEET GENERAL CONTRACTOR GALLON PER MINUTE HOT WATER HOT WATER HOT WATER CIRCULATING INVERT ELEVATION KILOWATT MECHANICAL HVAC CONTRACTOR MANUFACTURER MAXIMUM MECHANICAL MINIMUM NOT IN CONTRACT NUMBER PLUMBING CONTRACTOR PHASE PLUMBING AND DRAINAGE INSTITUTE POUNDS PER SQUARE INCH REVERSE OSMOSIS SURFACE CLEANOUT TYPICAL VENT THROUGH ROOF VOLTS, VOLTAGE WALL CLEAN OUT WALL HYDRANT WASTE WITH

# PLUMBING GENERAL NOTES

1. <u>PIPING MATERIAL SCHEDULE:</u> PIPING	LOCATION	MATERIAL	JOINT
COLD WATER (MAINS)**:	ALL	TYPE 'L' COPPER	95/5 LEAD FREE SOLDER
HOT WATER (MAINS)**:	ALL	TYPE 'L' COPPER	95% LEAD FREE SOLDER
COLD WATER (BRANCH)*:	ALL	PEX	MECHANICAL (ENGINEERED P
HOT WATER (BRANCH)*:	ALL	PEX	MECHANICAL (ENGINEERED P
WASTE RUNOUTS:	ALL	ABS	SOLVENT CEMENT
WASTE MAINS (SUB GRADE):	ALL	ABS	SOLVENT CEMENT
VENT:	ALL	ABS	SOLVENT CEMENT

\* UNLESS OTHERWISE SPECIFIED, ALL PEX PIPE FITTINGS MATERIAL SHALL BE ENGINEERED PLASTIC TYPE. \*\* OPTIONAL PROPRESS PIPE FITTING JOINTS.

2. PIPING INSULATION SHALL BE PER PP801.

- 3. MATERIALS, METHODS AND INSTALLATION SHALL COMPLY WITH THE PROVISIONS OF THE FOLLOWING STATE OF
- WASHINGTON ADOPTED CODES: B. 2018 UNIFORM PLUMBING CODE (UPC)
- C. 2018 WASHINGTON STATE ENERGY CODE (WSEC)
- D. WASHINGTON ADMINISTRATIVE CODE (WAC) E. 2010 STANDARDS FOR ACCESSIBLE DESIGN (CHAPTER 6)
- I. PLUMBING PLANS ARE SCHEMATIC AND DO NOT INDICATE EVERY OFFSET REQUIRED. PRIOR TO COMMENCING ROUGH-IN, COORDINATE WITH ALL TRADES FOR ROUTING AND EQUIPMENT ACCESS/CLEARANCE REQUIREMENTS.
- 5. TRENCHING, BACKFILLING AND COMPACTING FOR UNDERGROUND PLUMBING PIPING SHALL BE THE RESPONSIBILITY OF TACOMA PLUMBING UNLESS STATED OTHERWISE IN THE CONTRACT DOCUMENTS. BACKFILL PER LOCAL JURISDICTION REQUIREMENTS.
- 6. PRIOR TO PLUMBING ROUGH—IN FOR ALL PLUMBING FIXTURES, VERIFY MOUNTING HEIGHT ELEVATIONS AND ROUGH—IN LOCATIONS WITH ARCHITECTURAL FLOOR PLANS AND ARCHITECTURAL INTERIOR ELEVATIONS.
- 7. UNLESS OTHERWISE SPECIFIED, SLOPE ALL WASTE PIPING 3" AND SMALLER AT 2% PER LINEAR FOOT, AND ALL PIPING 4" AND LARGER AT 1% PER LINEAR FOOT.
- 8. WHERE POSSIBLE, SUSPEND PIPING WITHIN 12" OF BUILDING STRUCTURE AND PER UPC TABLES 313.3 AND
- 9. PIPING PENETRATIONS OF FIRE RATED CEILING, WALLS, AND FLOOR ASSEMBLIES SHALL BE FIRE STOPPED WITH ENGINEERED AND TESTED UL LISTED MATERIALS WHICH ARE FM APPROVED, MEETING THE RATED ASSEMBLY SO AS TO MAINTAIN THE INTEGRITY AND THE RATING OF THE FIRE RATED CEILING, WALL AND FLOOR ASSEMBLIES.
- 10. PIPING PENETRATIONS OF SMOKE RATED CEILING, WALLS, AND FLOORS SHALL BE STOPPED SO AS TO MAINTAIN THE INTEGRITY AND RATING OF THE FIRE RATED CEILING, WALL, AND FLOOR ASSEMBLIES.
- 11. INSTALL RECTORSEAL TRAP SEALS FOR ALL FLOOR DRAINS. SIZE TO MATCH FLOOR DRAIN OUTLET. ALL LOW USE TRAPS SHALL BE PROVIDED WITH TRAP PRIMERS. PROVIDE PPP OR EQUAL.
- 12. PROVIDE DIELECTRIC FITTING CONNECTIONS BETWEEN DISSIMILAR METALS.
- 13. FLOOR AND WALL CLEANOUTS SHALL BE LOCATED IN EASILY ACCESSIBLE LOCATIONS.
- 14. INSTALL LEAD FREE FULL PORT BALL VALVES. (AB1953, NSF/ANSI 61 AND 372)
- 15. LOCATE AND PROVIDE ALL REQUIRED FLOOR, WALL, AND FOOTING SLEEVES.
- 16. INSTALL ESCUTCHEON PLATES AT ALL EXPOSED FINISH WALL PIPE PENETRATIONS.
- 17. PROVIDE AND INSTALL LINK SEALS FOR ALL PLUMBING PIPING PENETRATIONS THROUGH EXTERIOR BUILDING
- WALL PENETRATIONS BELOW GRADE AS INDICATED ON PLUMBING PLANS.
- 18. ALL PLUMBING EQUIPMENT AT AN OPERATIONAL WEIGHT OF A MINIMUM OF 400 LBS SHALL BE SEISMICALLY BRACED TO BUILDING STRUCTURE WITH ENGINEERED SEISMIC BRACING COMPONENTS.
- THE GENERAL CONTRACTOR FOR CONCEALED VALVE INSTALLATION LOCATIONS. COORDINATE WITH FLOOR PLANS FOR SHUTOFF VALVE AND POSSIBLE ACCESS PANEL LOCATIONS. 20. PLUMBING CONTRACTOR TO COORDINATE WITH THE GENERAL CONTRACTOR FOR PIPE ROUTING WHICH REQUIRES

19. PLUMBING EQUIPMENT AND VALVES SHALL BE LOCATED IN EASILY ACCESSIBLE LOCATIONS, UNLESS SHOWN OTHERWISE ON ARCHITECTURAL DRAWINGS. REQUIRED ACCESS PANELS SHALL BE PROVIDED AND INSTALLED BY

- MODIFICATION TO THE BUILDING STRUCTURE. GENERAL CONTRACTOR TO PROVIDE ALL NECESSARY MODIFICATIONS IN BUILDING STRUCTURAL AND NON-STRUCTURAL COMPONENTS FOR PIPE ROUTING.
- 21. THE GENERAL CONTRACTOR TO PROVIDE BACKING FOR ALL WALL MOUNT PLUMBING FIXTURES.
- 22. THE GENERAL CONTRACTOR TO PROVIDE ROUGH OPENINGS IN FINISH SURFACES FOR PLUMBING TRIM WORK.
- 23. STORM PIPING PROVIDED AND INSTALLED BY OTHERS.
- 24. CONDENSATE PUMPS AND PIPING PROVIDED AND INSTALLED BY OTHERS.
- 25. PAINTING OF PIPING AND PIPING COMPONENTS BY OTHERS.
- 26. ELECTRICAL POWER FOR PLUMBING EQUIPMENT PROVIDED AND INSTALLED BY OTHERS.

TACOMA PLUMBING & HEATING, INC.

DESIGN BUILD COMMERCIAL

INDUSTRIAL UTILITIES

SERVICE 1817 112TH STREET EAST

SUITE G TACOMA, WA. 98445 OFFICE 253-531-3444

FAX 253-537-0382 |INFO@TACOMAPLUMBING.COM| WWW.TACOMAPLUMBING.COM

STEP BY STEP GATEWAY BUILDING

303 #A 8TH AVENUE SE

PUYALLUP, WA

LEGEND, ABBREVIATIONS, AND GEBNRAL NOTES

STATIC WATER PRESSURE 80 PSI @ HYRANT ON SW CORNER OF PARCEL PER VALLEY WATER DISTRICT.

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> > PP001

RPG

BSM

8/20/2021

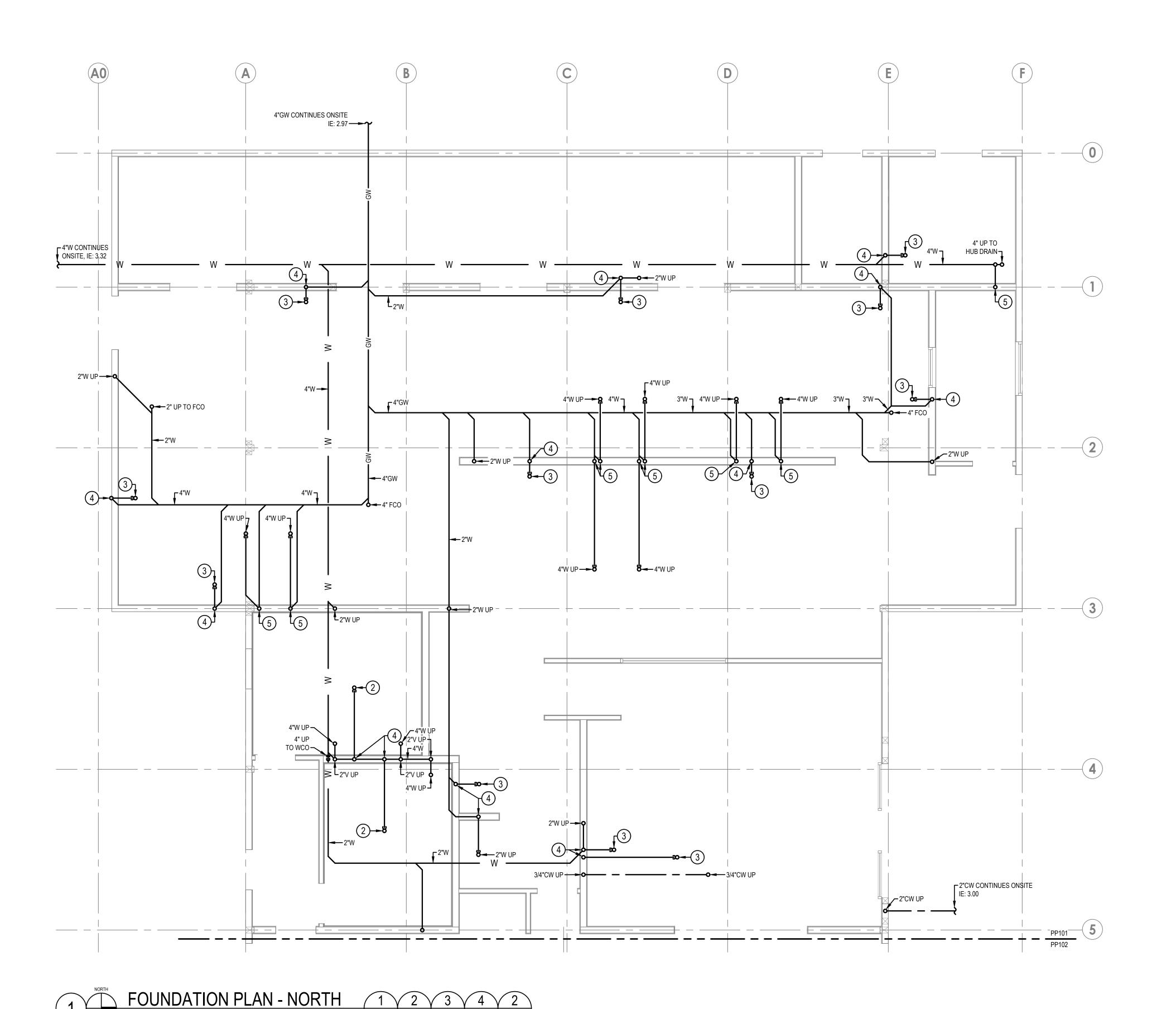
DATE: JOB NUMBER: REVISION:

DESIGNED:

REVIEWED:

DRAWN:

FOR WASHING BEEN STONAL ENGINEER 8/20/2021
MIDDLEBROOK ENGINEERING, LLC 6216 174TH AVE. SW, LONGBRANCH, WA 98351

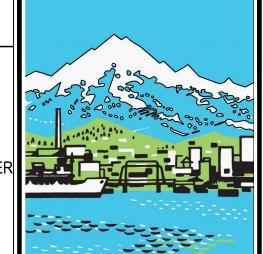


# **GENERAL NOTES**

- 1. PIPING IS SCHEMATIC IN NATURE CONTRACTOR TO PROVIDE ADDITIONAL FITTINGS AND OFFSETS AS REQUIRED TO INSTALL A COMPLETE AND FUNCTIONING SYSTEM.
- 2. ALL WASTE PIPING 3" AND BELOW SLOPED AT 1/4" PE FOOT AND ALL WASTE PIPING 4" OR ABOVE SLOPED AT 1/8" PER FOOT.
- 3. FINISHED FLOOR ELEVATION OF BUILDING IS 75.53'. COORDINATE ANY VARIATIONS IN AS-BUILT ELEVATION OF BUILDING WITH INVERT ELEVATIONS LISTED ON THIS PLAN WITH PLUMBING SCOPE AND CIVIL.

# PLAN NOTES

- 1) PROVIDE 2" WCO IN RISER.
- 2" UP TO FD2
- 3 2" UP TO FS2
- 4 1-1/2"V UP
- (5) 2"V UP



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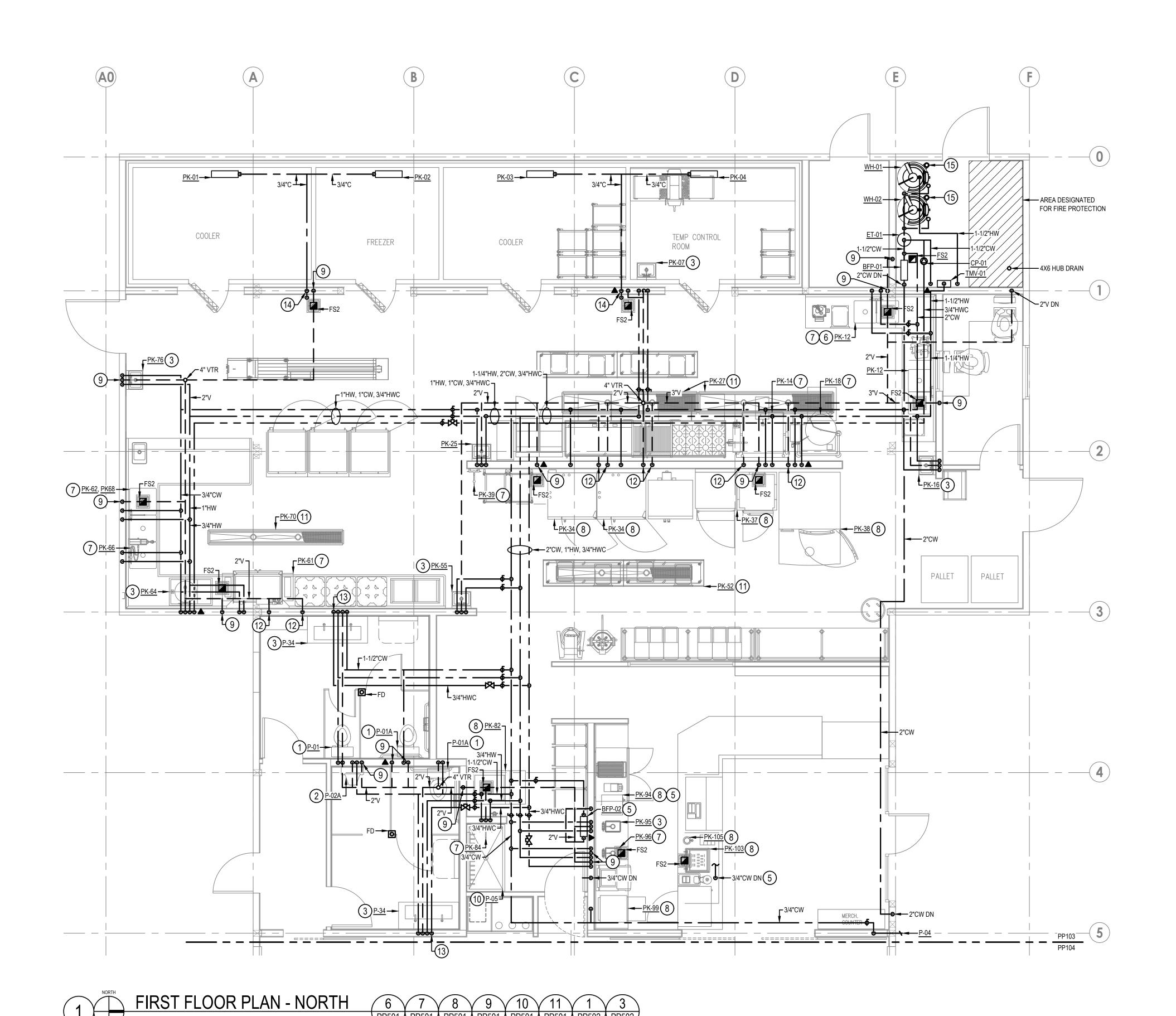
PUYALLUP, WA

FOUNDATION PLAN NORTH

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	DESIGNED:	BSM
	DRAWN:	RPG
	REVIEWED:	BSM
	DATE:	8/20/2021
	JOB NUMBER:	
	REVISION:	
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# **GENERAL NOTES**

- PIPING IS SCHEMATIC IN NATURE CONTRACTOR TO PROVIDE ADDITIONAL FITTINGS AND OFFSETS AS REQUIRED TO INSTALL A COMPLETE AND FUNCTIONING SYSTEM.
- MAINTAIN 10' CLEAR BETWEEN PLUMBING VENTS AND EXHAUST AND MECHANICAL AIR INTAKES.

# PLAN NOTES

- 1 4"W, 2"V, 3/4"CW
- 2"W, 1-1/2"V, 3/4"CW
- 3 2"W, 1-1/2"V, 3/4"CW, 3/4"HW.
- 4 ROUTE 3/4" COND DOWN TO FLOOR SINK.
- (5) ROUTE COLD WATER FROM BACKFLOR PREVENTER TO COFFEE MAKER. CONFIRM EXACT REQUIREMENTS WITH CLIENT BEFORE INSTALLATION AND PROVIDE APPROPRIATE CONNECTIONS.
- ROUTE HOT WATER AND COLD WATER DOWN IN WALL AND UNDERNEATH FIXTURE. CONNECT TO DECK MOUNTED FAUCETS.
- 7 3/4"HW AND CW
- 8 3/4"CW
- 9 1-1/2"V DN
- (10) 2"W, 1-1/2"V
- (11) 4"W, 2"V
- (12) 2"V DN
- PROVIDE P-TRAP FOR CONDENSING UNITS OUTSIDE OF REFRIGERATION UNIT. ROUTE 3/4"C TO NEARBY FLOOR
- (15) ROUTE 3" COMBUSTION AIR AND FLUE TO ROOFTOP. TERMINATE WITH CONCENTRIC VENT KIT.

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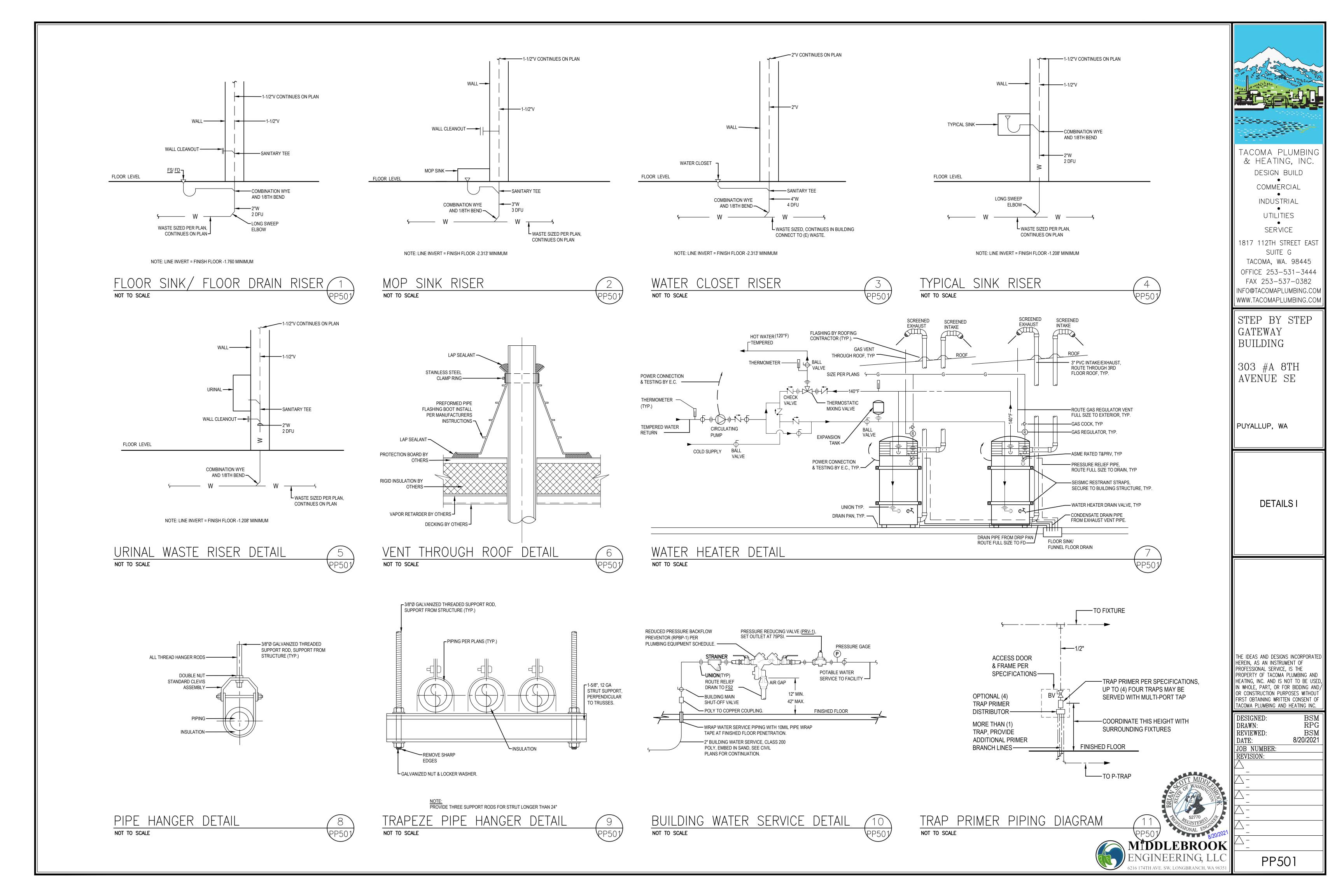
PUYALLUP, WA

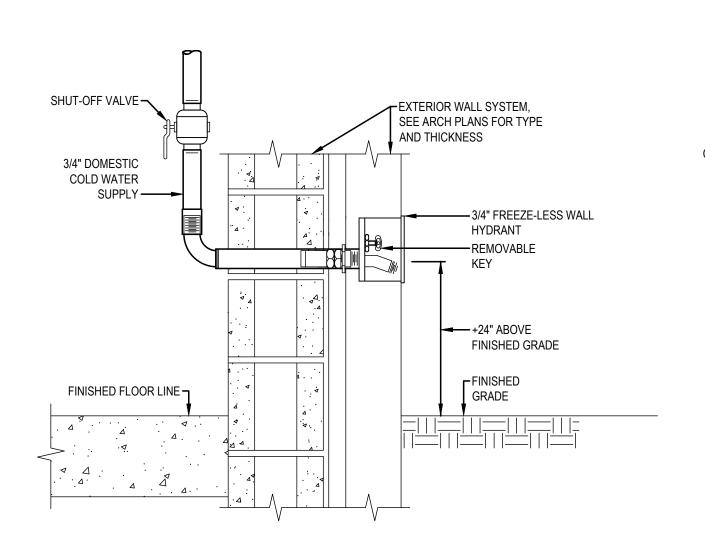
FIRST FLOOR NORTH

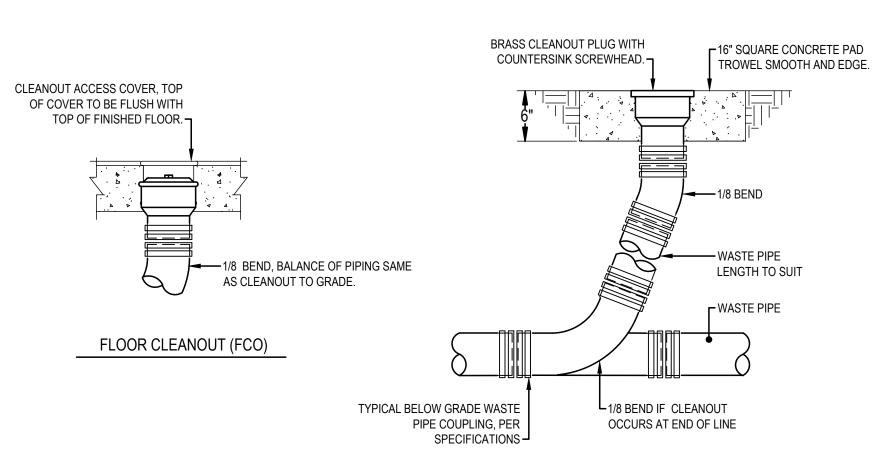
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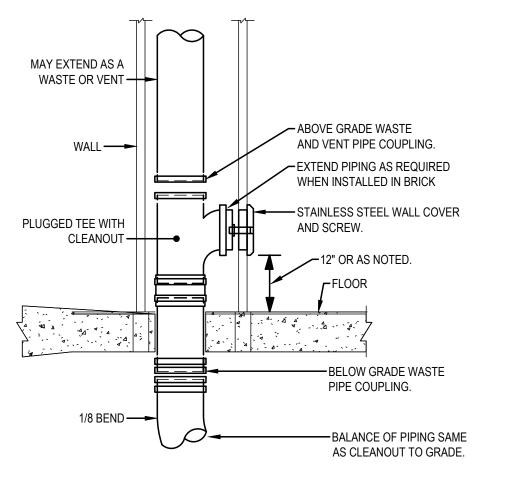
**MÎDDLEBROOK** 



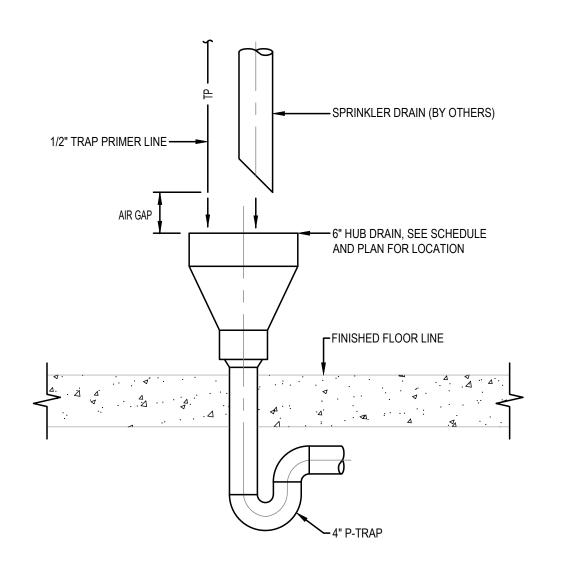




CLEANOUT TO GRADE (SCO)



WALL CLEANOUT (WCO)



EXTERIOR WALL HYDRANT NOT TO SCALE

CLEANOUT DETAIL

NOT TO SCALE

HUB DRAIN DETAIL NOT TO SCALE

RP502

PP502

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& HEATING, INC.

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**DETAILS II** 

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PP502

RPG

BSM

8/20/2021

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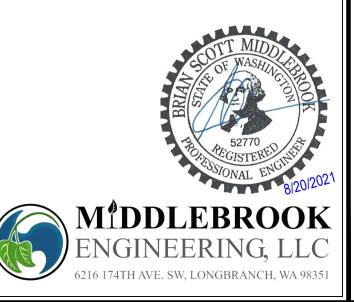
REVIEWED:

JOB NUMBER:

DRAWN:

DATE:

SONAL ENGINEERS
MIDDLEBROOK
ENGINEERING, LLC



	BACKFLOW PREVENTER SCHEDULE												
UNIT NO	MFR	MODEL	LOCATION		TYPE		SIZE	PRESSURE DROP	SERVICE	NOTES			
				RP	DC	AG	(IN)	(PSI)					
BFP-01	WATTS	LF009	MECHANICAL ROOM	Х	-	Χ	2	12	DOMESTIC CW	1, 2			
BFP-02	WATTS	LF009	KITCHEN	Х	-	Χ	0.75	12	KITCHEN APPLIANCES	1, 2			

NOTES:

1. PROVIDE WITH 1" AIR GAP FITTING.

2. PROVIDE WITH QUARTER TURN VALVES.

	WATER HEATER SCHEDULE															
UNIT	MFR.	MODEL	LOCATION	TANK SIZE	INPUT	EFF	RECOVERY	TEMP	TEMP ELECTRICAL		STARTER	DISCONNECT	WEIGHT	NOTES		
NO				(GAL)	MBH		(GPH)	RISE (F)	MCA	MOCP	VOLT	PH	FURN. BY	FURN. BY		
WH-01	AO SMITH	BTH-199	MECHANICAL	119	199	97	261	90	5		120	1	NA	EC	1386	1, 2, 3, 4
WH-01	AO SMITH	BTH-119	MECHANICAL	119	199	97	261	90	5	ı	120	1	NA	EC	1386	1, 2, 3, 4

NOTES

1. GAS CONNECTION SHALL BE 3/4". PROVIDE MANUFACTURER'S RECOMMENDED GAS TRAIN.

2. PROVIDE WITH CONCENTRIC VENT KIT.

3. ROUTE PRV DRAIN TO NEAREST DRAIN.

4. PROVIDE WITH CONDENSATE NEUTRALIZATION KIT.

	PUMP SCHEDULE												
UNIT NO	MFR	MODEL	LOCATION	FLOW	HEAD	RPM		ELECT	RICAL		STARTER	DISCONNECT	NOTES
				(GPM)	FT		HP	WATT	VOLTS	PH	FURN. BY	FURN. BY	
CP-01	ARMSTRONG	E7.2	MECHANICAL RM	3	15	3400	0.17	-	120	1	MC	EC	1, 2

NOTES:

1. PROVIDE WITH AQUASTAT AND TIMER AS UNIT STARTER.

2. PROVIDE WITH BRONZE BODY. UNIT SHALL BE CERTIFIED FOR POTABLE WATER.

	THERMOSTATIC MIXING VALVE SCHEDULE												
UNIT NO	MFR	MODEL	SERVICE	INLET SIZES	OUTLET SIZE	MINIMUM FLOW	PRESSURE DROP	NOTES					
				(IN)	(IN)		(PSI)						
TMV-01	SYMMONS	7-1000	DOMESTIC HW	1-1/2"	2"	0.5	5	1, 2					
NOTES:													

1. SET TO 120 dF OUTLET TEMPERATURE (ADJUSTABLE).

1. RELIEF PRESSURE SHALL BE 125 PSI.

2. PROVIDE WITH WALL MOUNTING BRACKET.

EXPANSION TANK SCHEDULE												
UNIT	MFR	MODEL	LOCATION	TANK SIZE	ACCEPTANCE	WEIGHT	NOTES					
NO				(GAL)	(GAL)	(LBS)						
ET-1	AMTROL	ST-30	MECHANICAL ROOM	16.5	11.2	48	1					
NOTES:	-			-								

				KITCHEN FI	XTURE	SCHED	JLE				
UNIT NO	FIXTURE		MANUFACTURER AND MODEL NUMBERS	W	V	HW	CW	IDW	G	DATA	NOTES
PK-1	EVAPORATOR COIL	UNIT:	THERMALRITE - CUSTOM	-	-	-	-	3/4"	-	CONFIRM REQUIREMENTS WITH KITCHEN CONSULTANT	
PK-2	EVAPORATOR COIL	UNIT:	THERMALRITE - CUSTOM	-	-	-	-	3/4"	-	CONFIRM REQUIREMENTS WITH KITCHEN CONSULTANT	
PK-3	EVAPORATOR COIL	UNIT:	THERMALRITE - CUSTOM	-	-	-	-	3/4"	-	CONFIRM REQUIREMENTS WITH KITCHEN CONSULTANT	
PK-4	EVAPORATOR COIL	UNIT:	THERMALRITE - CUSTOM	-	-	-	-	3/4"	-	CONFIRM REQUIREMENTS WITH KITCHEN CONSULTANT	
PK-7	WALL MOUNTED HAND SINK	UNIT:	JOHN BOOS - PBHS-W-1410-KVAPS-X	2"	1-1/2'	1/2"	1/2"	-	-	-	5
PK-12	CUSTOM SINK/ COUNTER	UNIT:	ARCHON - CUSTOM	-	-	(2) 1/2"	(2) 1/2"	1-1/2"	-	EACH FAUCET PROVIDES 1.15 GPM	2, 3
PK-16	WALL MOUNTED HAND SINK	UNIT:	JOHN BOOS - PBHS-W-1410-KVAPS-X	2"	1-1/2'	1/2"	1/2"	-	-	-	5
PK-18	40 GAL TILT KETTLE	UNIT:	CLEVELAND - KGL40T	-	-	1/2"	1/2"	-	-	-	
PK-19	40 GAL TILT SKILLET	UNIT:	CLEVELAND - SGL40T1	-	-	1/2"	1/2"	-	-	-	
PK-25	WALL MOUNTED HAND SINK	UNIT:	JOHN BOOS - PBHS-W-1410-KVAPS-X	2"	1-1/2'	1/2"	1/2"	-	-	-	5
PK-27	FLOOR TROUGH	UNIT:	ADVANCED TABCO - FFTG-12120	(2) 4"	2"	-	-	-	-	CONFIRM REQUIREMENTS WITH KITCHEN CONSULTANT	3
PK-34	COMBI OVEN	UNIT:	ALTO SHAAM - CTP20-20G0QS	-	-	-	(2) 3/4"	1-1/2"	-	PROVIDED OPTIPURE OPS175CR FILTER.	4, 6
PK-37	ROLL IN PROOFER	UNIT:	BAXTER - PW1E-34"D	-	-	-	1/2"	1/2"	-	0.5 GPM	
PK-38	ROLL IN OVEN	UNIT:	BAXTER - OV500G1EE	-	-	-	1/2"	1/2"	-	2.0 GPM	
PK-39	POT FILLER FAUCET	UNIT:	T&S BRASS - B-0610	-	-	1/2"	1/2"	-	-	-	
PK-52	FLOOR TROUGH	UNIT:	ADVANCED TABCO - FFTG-12120	(2) 4"	2"	-	-	-	-	CONFIRM REQUIREMENTS WITH KITCHEN CONSULTANT	3
PK-55	WALL MOUNTED HAND SINK	UNIT:	JOHN BOOS - PBHS-W-1410-KVAPS-X	2"	1-1/2'	1/2"	1/2"	-	-	-	5
PK-61	CONVEYOR DISHWASHER	UNIT:	CHAMPION 44 PROVHR	-	-	1/2"	1/2"	1-1/2"	-	PROVIDED WITH 21KW BOOSTER HEATER, 100 GPH	
PK-62	CUSTOM SINK/ COUNTER	UNIT:	SKILFAB - CUSTOM	-	-	1/2"	1/2"	1-1/2"	-	EACH FAUCET PROVIDES 1.15 GPM	3
PK-64	WASTE COLLECTOR	UNIT:	SALVAJOR- P914	2"	1-1/2'	3/4"	3/4"	-	-	-	
PK-66	HOSE REEL	UNIT:	T&S BRASS - B-7232-U01XS1E	-	-	1/2"	1/2"	-	-	-	
PK-68	FAUCET	UNIT:	T&S BRASS - B-0290	-	-	3/4"	3/4"	-	-	-	
PK-70	FLOOR TROUGH	UNIT:	ADVANCED TABCO - FFTG-12120	(2) 4"	2"	-	-	-	-	CONFIRM REQUIREMENTS WITH KITCHEN CONSULTANT	3
PK-76	WALL MOUNTED HAND SINK	UNIT:	JOHN BOOS - PBHS-W-1410-KVAPS-X	2"	1-1/2'	1/2"	1/2"	-	-	-	5
PK-82	ICE MAKER	UNIT:	HOSHIZAKI - FD-520MAJ-C	-	-	-	1/2"	Х	-	PROVIDED WITH H9320-51 FILTER, 3/8", 2 GPM.	1, 4
PK-83	MOP SINK	UNIT:	JOHN BOOS - PBJC-222584-X	2"	-	1/2"	1/2"	-	-	-	
PK-84	FAUCET	UNIT:	T&S BRASS - B-0665-BSTR	-	-	1/2"	1/2"	-	-	-	
PK-94	COFFEE BREWER	UNIT:	BUNN - 20900.0008	-	-	-	(2) 1/4"	-	-	-	
PK-95	WELD IN UNDERCOUNTER SINK	UNIT:	JOHN BOOS - CUT1014106	1-1/2"	1-1/2'	1/2"	1/2"	-	-	-	5
PK-96	WELD IN UNDERCOUNTER SINK	UNIT:	JOHN BOOS - CUT1014106	-	-	1/2"	1/2"	3/4"	-	-	5
PK-99	UNDERCOUNTER DISHWASHER	UNIT:	CHAMPION - UH330B	-	-	-	1/2"	5/8"	-	MAX DRAIN FLOW 15GPM @ 3' HEAD	
PK-103	ESPRESSO MACHINE	UNIT:	RANCILIO/ EGRO - CLASSE 9 USB2	-	-	-	3/8"	2"	-	-	
PK-105	DIPPERWELL	UNIT:	T&S BRASS - B-2282-01	-	-	-	1/2"	1-1/2"	-	-	

GENERAL NOTES:

1. UNITS ON THIS SCHEDULE ARE PROVIDED BY OTHERS. THIS CONTRACTOR SHALL MAKE PLUMBING CONNECTIONS AS SHOWN ON THE DOCUMENTS. SEE KITCHEN DOCUMENTS FOR MORE INFORMATION.

2. TRANSISTION PIPE SIZE SHOWN ON PLAN TO STOP OR CONNECTION SIZE SHOWN ON SCHEDULE.

3. NATURAL GAS SCOPE BY OTHERS. REFER TO MECHANICAL PLANS. NOTES:

1. PROVIDE (3) IDW DRAIN CONNECTIONS: (2) 3/4" AND (1) 3/8".

2. PROVIDED WITH TWO FAUCETS.

3. PROVIDED WITH MUTLIPLE DRAINS. SEE KITCHEN PLANS. CONFIRM SIZING WITH KITCHEN PLANS.

4. WATER LINE RAN THROUGH FILTER. SEE KITCHEN PLANS.

5. PROVIDED WITH FAUCET.

6. ONE WATER CONNECTION SHALL BE DIRECTED FROM WATER FILTER.

7. PROVIDE (3) IDW DRAIN CONNECTIONS: (2) 3/4" AND (1) 3/8".

PLUMBING FIXTURE SCHEDULE											
UNIT NO	FIXTURE	MOUNTING	MANUFACTURER AND MODEL NUMBERS		W	V	HW	CW	GPF	GPM	NOTES
P-01	WATER OLOGET	FLOOR -	TOILET:	KOHLER - K25097	4"	2"	-	3/8"	1.28	-	1, 4
	WATER CLOSET	FLOOR	SEAT:	KOHLER - K-4660 LUSTRA	-	-	-	-	-	-	4
P-01A	WATER CLOSET, ADA	FLOOR -	TOILET:	KOHLER - K25077	4"	2"	-	3/8"	1.28	-	1, 4, 6
	WATER OLOGET, ADA	PLOUR	SEAT:	BEMIS - 1955CT	-	-	-	-	-	-	4
P-02A	URINAL, ADA	WALL	URINAL:	AMERICAN STANDARD WASHBROOK 6590.001	2"	1-1/2"	-	-	-	-	1, 6
	UNIIVAL, ADA	VVALL	VALVE:	SLOAN - ROYAL 186-0.125	-	-	-	3/4"	0.125	-	1
			LAVATORY:	BY OTHERS	2"	1-1/2"	-	-	-	-	1
P-03A	LAVATORY ADA	WALL	FAUCET:	BY OTHERS	-	-	3/8"	3/8"	-	0.5	1, 2, 3
			SUPPLIES:	BY OTHERS	-	-	3/8"	3/8"	-	0.5	1
P-04	WALL HYDRANT	WALL	UNIT:	PRIER - C-634	-	-	3/4"	-	-	16	1
P-05	MOP SINK	FLOOR -	SINK:	BY OTHERS	2"	1-1/2"	-	-	-	-	1
F-05	MOL 2INK	FLOOR	FAUCET:	CHICAGO - 897-RCF	-	-	1/2"	1/2"	-	2.5	1
FCO	FLOOR CLEANOUT	FLOOR	UNIT:	JR SMITH - 4040	-	-	-	-	-	-	5
wco	WALL CLEANOUT	WALL	UNIT:	JR SMITH - 4422	-	-	-	-	-	-	5
FS	FLOOR SINK	FLOOR	UNIT:	ZURN - FD-2375	-	-	-	-	-	-	5
FD	FLOOR DRAIN	FLOOR	UNIT:	SIOUS CHIEF - 833-2A	-	-	-	-	-	-	5

GENERAL NOTES:

1. EQUIPMENT MAY BE SUBSTITUTED UPON ENGINEER'S APPROVAL FOR EQUAL OR OTHER MFG/MODEL. REFER TO EQUIPMENT SUBMITTAL FOR FINAL SELECTIONS.

NOTES:

1. TRANSISTION PIPE SIZE SHOWN ON PLAN TO STOP OR CONNECTION SIZE SHOWN ON SCHEDULE.

2. MAXIMUM DELIVERY TEMPERATURE SHALL BE 105 DEGREES FAHRENHEIT. PROVIDE WITH BELOW DECK MIXING VALVE.

3. PROVIDED WITH TWO FAUCETS. PROVIDE CONNECTION TO BOTH FAUCETS

5. COORDINATE SIZES WITH PLANS.

4. PROVIDE WITH BOLTS AND BOLT COVERS.

6. ADA COMPLIANT FIXTURE. COORDINATE FIXTURE HEIGHT WITH ARCHITECT.



TACOMA PLUMBING & HEATING, INC. DESIGN BUILD COMMERCIAL INDUSTRIAL

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PUYALLUP, WA

SCHEDULES

THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF TACOMA PLUMBING AND HEATING, INC. AND IS NOT TO BE USED, IN WHOLE, PART, OR FOR BIDDING AND/OR CONSTRUCTION PURPOSES WITHOUT FIRST OBTAINING WRITTEN CONSENT OF

FIRST OBTAINING WRITTEN CONSENT OF TACOMA PLUMBING AND HEATING INC.

DESIGNED:
DRAWN:
RPG
REVIEWED:
BSM
DATE:
8/20/2021

DATE:

JOB NUMBER:

REVISION:

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#### GENERAL CONTRACT REQUIREMENTS

- MECHANICAL, PLUMBING, AND CONTROLS SCOPE SHALL FALL UNDER THE ULTIMATE RESPONSIBILITY OF ONE CONTRACTOR, WHO IS RESPONSIBLE FOR UNDERSTANDING ALL MECHANICAL AND PLUMBING DOCUMENTS, DISTRIBUTING CONTRACT DOCUMENTS
- TO ALL SUBCONTRACTORS, AND SHALL BE RESPONSIBLE FOR CONTRACT COMPLETION. THE DRAWINGS ARE DIAGRAMMATIC. COORDINATE INSTALLATION WITH THE BUILDING, PROVIDE ALL NECESSARY OFFSETS, CHANGES IN DIRECTION, EXTENSIONS AND
- ASSOCIATED MATERIALS FOR A COMPLETE AND FUNCTIONAL INSTALLATION. \*\*\*COORDINATE MECHANICAL WORK WITH ELECTRICAL, ARCHITECTURAL, STRUCTURAL, CIVIL, AND LANDSCAPE WORK SHOWN ON OTHER CONTRACT DOCUMENTS. PROVIDE ADDITIONAL PIPE OR DUCT OFFSETS WHERE REQUIRED TO COORDINATE
- \*\*\* LOCATIONS AND SIZES OF (FLOOR, WALL, AND ROOF OPENINGS) SHALL BE COORDINATED WITH OTHER TRADES INVOLVED. INCLUDE THE FOLLOWING IN THE COST OF MECHANICAL WORK: CUTTING, CORING, PATCHING AND PAINTING OF EXISTING WALLS, CEILINGS, FLOORS, AND ROOFS AS REQUIRED TO ACCOMMODATE WORK AS INDICATED IN THE MECHANICAL CONTRACT DOCUMENTS UNLESS SPECIFICALLY SHOWN ON ARCHITECTURAL DOCUMENTS.\*\*\*
- MAINTAIN A SET OF PLANS ON SITE. RECORD ALL CHANGES TO ACTUAL ARRANGEMENTS ON THESE PLANS. PROVIDE THIS SET OF PLANS TO THE OWNER'S
- REPRESENTATIVE WHEN WORK IS COMPLETE. ). ALL WORK PERFORMED SHALL BE DONE IN STRICT ACCORDANCE TO ALL APPLICABLE
- MECHANICAL, BUILDING, ENERGY, FUEL GAS, AND LOCAL CODES, WITH AMENDMENTS. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND CONSTRUCTION FEES. FURNISH FINAL CERTIFICATE TO OWNER SHOWING COMPLIANCE WITH CODE
- PROJECT SCHEDULING: COMPLY WITH OWNER'S REQUIREMENTS OPERATION AND MAINTENANCE MANUAL: PROVIDE COMPLETE OPERATIONS AND MAINTENANCE MANUAL IN HARD COVER. PROVIDE OPERATIONS, MAINTENANCE AND
- PARTS DATA ON ANY ITEM OF EQUIPMENT THAT HAS MOVING PARTS. PROVIDE THE FOLLOWING DOCUMENTS PRIOR TO FINAL ACCEPTANCE OF THE PROJECT. FINAL PAYMENT OF THE CONTRACT WILL BE CONTINGENT UPON RECEIVING
- THESE DOCUMENTS: RECORD (AS-BUILT) DRAWINGS.

INSTALLATION.\*\*\*

- MAINTENANCE AND OPERATING INSTRUCTIONS (3 SETS).
- EXTENDED WARRANTIES (OTHER THAN THE ONE-YEAR). BALANCING LOGS (3 SETS).
- FINAL CERTIFICATES OF INSPECTION AND CODE COMPLIANCE.
- COMMISSIONING DOCUMENTATION PER WSEC 5. WARRANTY PROVISIONS: THE CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT AND SYSTEMS FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE. REPAIR OR REPLACE DEFECTIVE MATERIAL, EQUIPMENT, OR POOR WORKMANSHIP, WHICH MAY SHOW ITSELF DURING THIS WARRANTY PERIOD.

# SEISMIC AND VIBRATION REQUIREMENTS

- HANGERS AND SEISMIC BRACING FOR THE MECHANICAL SYSTEMS SHALL BE DESIGNED AND PROVIDED BY THE MECHANICAL CONTRACTOR. REFER TO CONTRACTOR SHOP DRAWINGS FOR LOCATIONS OF EQUIPMENT AND HUNG MECHANICAL SYSTEMS. THE MECHANICAL CONTRACTOR SHALL COORDINATE THE SUPPORT SYSTEMS AND DESIGN LOADS FOR HUNG MECHANICAL SYSTEMS WITH THE GENERAL CONTRACTOR AND OTHER TRADES THAT MAY BE IMPACTED.
- PROVIDE ALL SEISMIC RESTRAINT REQUIRED BY THE AUTHORITY HAVING JURISDICTION AND THE APPLICABLE CODES.
- EMPLOY A LICENSED STRUCTURAL ENGINEER, IF NECESSARY, TO ACHIEVE COMPLIANCE. THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL
- ASSOCIATION, INC. (SMACNA) SEISMIC RESTRAINT MANUAL GUIDELINES MAY BE USED FOR PIPING AND DUCTWORK. INSURE THE PROPER HAZARD LEVEL IS EMPLOYED FOR THE AREA OF INSTALLATION.
- VIBRATION CRITERIA: PROVIDE VIBRATION ISOLATION IN ACCORDANCE WITH THE AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS (ASHRAE): APPLICATIONS HANDBOOK.

#### BASIC MATERIALS AND METHODS

- ALL MATERIALS AND EQUIPMENT SHALL BE LISTED OR LABELED BY A RECOGNIZED
- AGENCY. UL, AGA, FM, CSA, ARI, ETC. EQUIPMENT SHALL BE AS INDICATED ON THE DRAWING SCHEDULES. THE DRAWING SCHEDULES ESTABLISH THE LEVEL OF QUALITY. SUBSTITUTIONS WILL BE CONSIDERED, SUBMIT TECHNICAL DATA (PERFORMANCE AND CONSTRUCTION) TO THE
- OWNER'S REPRESENTATIVE FOR APPROVAL. ALLOW TWO WEEKS FOR TURN-AROUND. MECHANICAL SYSTEM PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL BE PROTECTED IN ACCORDANCE WITH THE BUILDING CODE IN FORCE IN THE AUTHORITY HAVING JURISDICTION FOR THIS PROJECT. THIS INCLUDES PIPING, DUCTWORK, SUPPORTS, CONDUIT, AND ANY OTHER SYSTEM AND APPURTENANCE PROVIDED AS PART OF THE MECHANICAL WORK OF THIS CONTRACT. IN ADDITION, ALL THROUGH-PENETRATION SEALING METHODOLOGIES SHALL BE LISTED IN THE UNDERWRITER'S LABORATORIES (UL) FIRE RESISTANCE DIRECTORY, ISSUE CURRENT
- AT TIME OF BID. MOTORS SHALL COMPLY WITH THE WSEC.

THE UPC OR IMC.

MAINTAINED UNTIL APPROVED.

COMMISSIONING.

- ELECTRICAL INSTALLATION SHALL COMPLY WITH THE NEC.
- PROTECT OF STORED MATERIALS. REPLACE DAMAGED MATERIALS PRIOR TO
- PROVIDE WATER-TIGHT SEAL FOR OPENINGS TO THE BUILDING THROUGH WHICH PIPE
- PROVIDE AND INSTALL PIPE SUPPORTS IN ACCORDANCE WITH MANUFACTURER'S STANDARDIZATION SOCIETY OF THE VALVE AND FITTING INDUSTRY (MSS) STANDARDS. SPECIFICALLY STANDARD SP-69, "PIPE HANGERS AND SUPPORTS - SELECTION AND APPLICATION" AND STANDARD SP-58, "PIPE HANGERS AND SUPPORTS - MATERIALS, DESIGN AND MANUFACTURE". PROVIDE PIPE SUPPORT SPACING IN ACCORDANCE WITH
- TESTING: ALL WORK UNDER THIS CONTRACT SHALL BE THOROUGHLY AND SYSTEMATICALLY TESTED, BOTH DURING CONSTRUCTION AND AFTER COMPLETION. PIPE TESTING SHALL BE EITHER AS SPECIFIED IN THE APPROPRIATE SPECIFICATION SECTION, OR AS SPECIFIED IN THE APPLICABLE PLUMBING OR MECHANICAL CODE. DUCTWORK SHALL BE TESTED AS PART OF THE AIR BALANCING PROCESS. NOTIFY THE OWNER'S REPRESENTATIVE 48-HOURS IN ADVANCE OF ALL TESTS. TESTS SHALL BE
- 10. START-UP, BALANCING AND COMMISSIONING. EQUIPMENT STARTUP SHALL BE PERFORMED BY QUALIFIED PERSONNEL. THE
- TECHNICAL SPECIFICATION SECTIONS WILL DETAIL OTHER SPECIAL REQUIREMENTS, IF ANY. PROVIDE A STATEMENT OF THE STARTUP TECHNICIAN'S QUALIFICATIONS IF REQUESTED BY THE OWNER'S REPRESENTATIVE OR ELSEWHERE SPECIFIED.

ENHANCED COMMISSIONING IS REQUIRED. PROVIDE DOCUMENTATION OF

BALANCE ALL WATER SYSTEMS. PROVIDE COMMISSIONING IN ACCORDANCE WITH THE WSEC, UNLESS

# CROSS-LINKED POLYETHYLENE PIPE

INTERIOR SERVICE: CONFORM TO ASTM F877, "CROSSLINKED POLYETHYLENE (PEX) PLASTIC HOT- AND COLD- WATER DISTRIBUTION SYSTEMS."

#### PLASTIC PIPE, DWV & SEWER

ABS PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS SHALL BE PER IAPMO INSTALLATION STANDARD (IS) 05-03, "ABS BUILDING DRAIN, WASTE, AND VENT

### COPPER PIPING

- COPPER PIPING SHALL BE USED FOR HYDRONICS AND AIR LINES.
- MATERIALS FOR COPPER PIPE, FITTINGS AND ACCESSORIES. ASTM B88, TYPE "L".

#### CAST IRON PIPE, DWV & SEWER

HUBLESS CAST IRON (ASTM A888/ CISPI 310) OR BELL AND SPIGOT CAST IRON (ASTM

#### PIPING SYSTEM SPECIALTIES

- SPECIALITY PIPE SYSTEMS SHALL BE CONSTRUCTED OF MATERIALS THAT ARE COMPATIBLE WITH THE TYPE OF PIPING MATERIAL AND FLUIDS IN THE SYSTEM. THEY SHALL BE RATED FOR THE TEMPERATURES AND PRESSURES OF THE SYSTEMS IN
- WHICH THE VALVES ARE INSTALLED 2. PROVIDE SENSORS WHERE INDICATED ON THE PLANS.
- PROVIDE DIELECTRIC BREAKS BETWEEN DISSIMILAR METALS. TEST PLUGS: PROVIDE NIPPLES AND COUPLINGS TO MAKE THE TEST PLUGS EXTEND
- THROUGH THE INSULATED PIPE. 5. STRAINERS: BASKETS SHALL BE TYPE-304 STAINLESS STEEL. TEE-TYPE DESIGN SHALL PROVIDE STRAIGHT-THROUGH FLOW.

#### **VALVES**

1. VALVES SHALL BE CONSTRUCTED OF MATERIALS THAT ARE COMPATIBLE WITH THE TYPE OF PIPING MATERIAL AND FLUIDS IN THE SYSTEM. VALVES SHALL BE RATED FOR THE TEMPERATURES AND PRESSURES OF THE SYSTEMS IN WHICH THE VALVES ARE INSTALLED.

#### PIPE TESTING

- 1. DOMESTIC PLUMBING PIPING SHALL BE TESTED AT A PRESSURE NOT LESS THAN THE DESIGN PRESSURE FOR A PERIOD OF NOT LESS THAN 15 MINUTES. TESTS SHALL BE PER UPC CHAPTER 6. TEST GAUGES SHALL BE PER UPC 318.
- 2. WASTE AND VENT PIPING SHALL BE TESTED WITH AT LEAST 10 FOOT HEAD OF WATER FOR A PERIOD OF NOT LESS THAN 15 MINUTES. TESTS SHALL BE PER UPC CHAPTER 7. TEST GAUGES SHALL BE PER UPC 318.

#### WATER PIPE INSULATION

- 1. PRE-FORMED FIBERGLASS INFORMATION FOR PIPE, VALVES, FITTINGS, EQUIPMENT,
- PROVIDE PER THE WSEC AND THE MIDWEST INSULATION CONTRACTORS ASSOCIATION (MICA) STANDARDS. INSULATION THICKNESSES SHALL COMPLY WITH WSEC.

#### PLUMBING - GENERAL

- 1. PROVIDE PLUMBING PER THE UPC AND THE REQUIREMENTS OF THE AUTHORITY
- 2. PLUMBING FIXTURES AND EQUIPMENT SHALL BE AS INDICATED ON THE DRAWING

#### PLUMBING - FLOOR DRAINS

- 1. DRAINS SHALL BE JAY R. SMITH, SIOUX CHIEF, ZURN, WADE, OR APPROVED EQUAL.
- 2. FLOOR DRAINS: DUCO CAST IRON BODY WITH FLASHING COLLAR, SQUARE POLISHED NICKEL BRONZE ADJUSTABLE STRAINER HEAD AND GRATE, TRAP PRIMER CONNECTION AND VANDAL PROOF SCREWS. SIZE AS PER PLANS.
- 3. FLOOR SINKS: STAINLESS STEEL FLANGED RECEPTOR FABRICATED OF 304 STAINLESS STEEL WITH 12" HALF GRATE STAINLESS STEEL TOP, SEDIMENT BUCKET AND
- FLASHING CLAMP. SIZES AS SHOWN ON PLANS. 4. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

# PLUMBING - CLEANOUTS

- 1. CLEANOUTS SHALL BE JAY R. SMITH, SIOUX CHIEF, ZURN, WADE OR APPROVED EQUAL 2. WALL CLEANOUT, DUCO CAST IRON CAULK FERRULE WITH CAST IRON COUNTERSUNK
- CLOSURE PLUG. PROVIDE WITH STAINLESS STEEL COVER AND SCREW. 3. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

# PLUMBING FIXTURE AND TRIM

- 1. FIXTURES ARE SPECIFIED IN THE PLUMBING FIXTURE SCHEDULE AND ARE THE BASIS
- OF THIS DESIGN. SIMILAR FIXTURES OF EQUAL QUALITY CAN BE SUBMITTED UPON. 2. PROVIDE STOP VALVES, WATER SUPPLY, TRAPS, TRAP ARMS, INSULATION, AND WASTE
- AS APPLICABLE AND INDICATED ON DRAWINGS. 3. PROVIDE CARRIER AND/OR MOUNTING BRACKETS.
- 4. PROVIDE ESCUTCHEON PLATES FOR ALL LINES THROUGH WALL OR FLOOR, UNLESS PLANS INDICATE A DIFFERENT PENETRATION.
- 5. INSTALL FIXTURE PER MANUFACTURER'S RECOMMENDATIONS.

# DOMESTIC WATER HEATERS

- 1. TANK SHALL BE RATED AT 1.5 TIMES THE WORKING PRESSURE. WATER HEATER SHALL COMPLY WITH STATE AND LOCAL ENERGY CODES.
- 2. PROVIDE HOUSEKEEPING PAD FOR TANK.
- 3. PROVIDE ASME RATED PRESSURE RELIEF VALVE.
- 4. INSTALL WATER HEATERS PER THE UPC AND MANUFACTURER'S RECOMMENDATIONS. PROVIDE CATCHPAN. DRAIN TO NEARBY SERVICE SINK.

PIPE INSULATION SCHEDULE									
FLUID OPERATING	INSULATION CONDUCTIVITY		NOMINAL OR TUBE SIZE (inches)						
AND USAGE (°F)	$BTU\cdotin./(h\cdotft^2^\circF)$	TEMPERATURE, °F	< 1	1 to 1-1/2	1-1/2 to < 4	4 to < 8	≥8		
> 350	0.32 - 0.34	250	4.5	5.0	5.0	5.0	5.0		
251 - 350	0.29 - 0.32	200	3.0	4.0	4.5	4.5	4.5		
201 - 250	0.27 - 0.30	150	2.5	2.5	2.5	3.0	3.0		
141 - 200	0.25 - 0.29	125	1.5	1.5	2.0	2.0	2.0		
105 - 140	0.21 - 0.28	100	1	1.0	1.5	1.5	1.5		
40 - 60	0.21 - 0.27	75	0.5	0.5	1.0	1.0	1.0		
< 40	0.20 - 0.26	75	0.5	1.0	1.0	1.0	1.5		

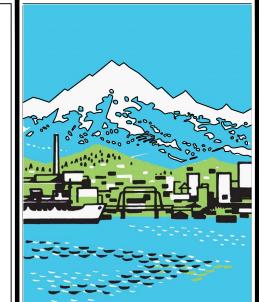
#### **GENERAL NOTES:**

- 1. FOR PIPING SMALLER THAN 1-1/2 INCH (38mm) AND LOCATED IN PARTITIONS WITHIN CONDITIONED SPACES,
- REDUCTION OF THESE THICKNESSES BY 1 INCH (25mm) SHALL BE PERMITTED (BEFORE THICKNESSES REQUIRED IN FOOTNOTE b) NOT TO A THICKNESS LESS THAN 1 INCH (25mm).
- 2. FOR INSULATION OUTSIDE THE STATED CONDUCTIVITY RANGE, THE MINIMUM THICKNESS (T) SHALL BE DETERMINED AS FOLLOWS:
- $T = r\{(1 + t/r)^{K/k} 1\}$

WHERE:

- T = MINIMUM INSULATION THICKNESS,
- r = ACTUAL OUTSIDE RADIUS OF PIPE.
- t = INSULATION THICKNESS LISTED IN THE TABLE FOR APPLICABLE FLUID TEMPERATURE AND PIPE SIZE.
- K = CONDUCTIVITY OF ALTERNATE MATERIAL AT MEAN RATING TEMPERATURE INDICATED FOR THE APPLICABLE FLUID TEMPERATURE (Btu · in/h · ft<sup>2</sup> x °F)
- k = THE UPPER VALUE OF THE CONDUCTIVITY RANGE LISTED IN THE TABLE FOR THE APPLICABLE FLUID TEMPERATURE.
- 3. FOR DIRECT-BURIED HEATING AND HOT WATER SYSTEM PIPING, REDUCTION OF THESE THICKNESSES BY 1-1/2 INCHES (38mm) SHALL BE PERMITTED

(BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE b BY BUT NOT TO THICKNESS LESS THAN 1 INCH (25mm)



TACOMA PLUMBINO & HEATING, INC. DESIGN BUILD

> COMMERCIAL INDUSTRIAL UTILITIES

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**SPECIFICATIONS** 

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DESIGNED:

COTT MIDD WASHING TO SECULIAR SOLONAL ENGINEE 8/20/2021
IIDDLEBROOK
NGINEERING, LLC
174TH AVE. SW, LONGBRANCH, WA 98351

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