GENERAL NOTES

- 1. ALL WORK PERFORMED SHALL BE DONE IN STRICT ACCORDANCE TO ALL APPLICABLE MECHANICAL, BUILDING, ENERGY, FUEL GAS, AND LOCAL CODES, WITH AMENDMENTS.
- 2. WHERE USED, THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL"
- 3. COORDINATE MECHANICAL WORK WITH ELECTRICAL, ARCHITECTURAL, STRUCTURAL, CIVIL AND LANDSCAPE WORK SHOWN ON OTHER CONTRACT DOCUMENTS. PROVIDE ADDITIONAL OFFSETS FOR COORDINATED INSTALLATION WHERE REQUIRED.
- 4. COORDINATE HVAC, PLUMBING, AND FIRE PROTECTION WORK PRIOR TO INSTALLATION. DUCTWORK AND EQUIPMENT ACCESS TAKES PRECEDENCE OVER ALL PIPING EXCEPT GRAVITY SYSTEMS FOR AVAILABLE SPACE.
- 5. COORDINATE EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS. COORDINATE AND PROVIDE DUCT AND PIPING TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE DUCT AND PIPING DIMENSIONS BEFORE FABRICATION.
- 6. CLEAN THE JOB SITE DAILY AND REMOVE FROM THE PREMISES ANY DIRT AND DEBRIS CAUSE BY THE PERFORMANCE OF THE WORK INCLUDED IN THIS CONTRACT, BEFORE SUBSTANTIAL COMPLETION, CLEAN EQUIPMENT, FIXTURES, EXPOSED DUCTS. PIPING AND SIMILAR ITEMS.
- 7. PROVIDE EQUIPMENT THAT FITS INTO THE SPACE ALLOTTED AND ALLOWS ADEQUATE ACCEPTABLE CLEARANCE FOR INSTALLATION, REPLACEMENT, SERVICING, AND MAINTENANCE. COORDINATE WITH OTHER TRADES TO ENSURE NO CONFLICT
- 8. CONTRACTOR SHALL OBTAIN & PAY FOR ALL PERMITS AND CONSTRUCTION FEES. FURNISH FINAL CERTIFICATE TO OWNER SHOWING COMPLIANCE WITH CODE REQUIREMENTS.
- 9. REFER TO TYPICAL DETAILS PROVIDED IN THIS DRAWING SET FOR DUCTWORK, PIPING, AND EQUIPMENT INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR CONFORMANCE WITH DETAILS.
- 10. A SHORT DASH IN A SCHEDULE TABLE CELL INDICATES THAT THE COLUMN HEADING IS NOT USED OR NOT APPLICABLE TO THAT SCHEDULED ITEM.
- 11. ALL PIPING & DUCTWORK IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD LID CEILING. COORDINATE WITH ARCHITECTURAL DOCUMENTS FOR FURRING & CHASE LOCATIONS & SIZES.
- 12. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH NFPA 70 STANDARDS AND LOCAL REQUIREMENTS.
- 13. ALL FIELD WIRING SHALL REQUIRE AN ELECTRICAL PERMIT AND SHALL BE PERFORMED BY A LICENSED ELECTRICIAN.
- 14. LOCATE VALVES, WATER HAMMER ARRESTERS, CLEANOUTS, DAMPERS, CONTROLS AND SIMILAR COMPONENTS SO THAT THEY ARE ACCESSIBLE. PROVIDE ACCESS DOORS FOR MECHANICAL EQUIPMENT INSTALLED BEHIND WALLS, ABOVE INACCESSIBLE CEILINGS AND BELOW FLOORS. COORDINATE ACCESS DOOR LOCATIONS WITH ARCHITECT/ENGINEER.
- 15. ACCESS PANELS SHALL BE 16 GA, STEEL, FLUSH TYPE ACCESS DOOR WITH CONCEALED HINGE AND SLOT SCREWDRIVER TYPE CAM LATCH. PROVIDE FACTORY PRIMED IN PAINTED SURFACE AREAS FOR FIELD PAINTING. PROVIDE STAINLESS STEEL FOR ALL OTHER AREAS. PROVIDE UL LISTED AND LABELED DOOR WHERE FIRE-RESISTANCE RATING IS INDICATED ON DRAWINGS. ACCESS DOOR SHALL BE SIZED SO THAT ADJACENT EQUIPMENT IS ACCESSIBLE. PROVIDE ACUDOR, ELMDOR, MILCOR, OR
- 16. INSTALL TAG ON CEILING GRID FRAME TO INDICATE LOCATION AND TYPE OF EQUIPMENT THAT REQUIRES MAINTENANCE.

PLUMBING:

- DOMESTIC WATER TUBE, PIPE, FITTINGS, JOINING MATERIALS, SPECIAL TIES, PLUMBING EQUIPMENT, PLUMBING FIXTURES, PLUMBING FITTINGS AND ALL OTHER APPURTENANCES IN CONTACT WITH DRINKING WATER SHALL BE LEAD-FREE EXCEPT THOSE EXPLICITLY EXEMPTED IN SECTION 3874 OF THE SAFE WATER DRINKING ACT. LEAD-FREE SHALL MEAN (A) NOT CONTAINING MORE THAN 0.2 PERCENT LEAD WHEN USED WITH RESPECT TO SOLDER AND FLUX; AND (B) NOT MORE THAN A WEIGHTED AVERAGE OF 0.25 PERCENT LEAD WHEN USED WITH RESPECT TO WETTED SURFACES OF DOMESTIC WATER TUBE, PIPE, FITTINGS, JOINING MATERIALS, SPECIALTIES, PLUMBING EQUIPMENT, PLUMBING FIXTURES, AND PLUMBING FITTINGS.
- 2. PROVIDE 3 W/FT HEAT TRACE FOR ALL DOMESTIC WATER PIPES PIPING & P-TRAPS IN UNHEATED, SEMI HEATED, OR LOW
- PROVIDE WATER HAMMER ARRESTORS IN DOMESTIC WATER PIPING IN ACCORDANCE WITH PDI-WH201.
- 4. INSULATE HOT AND COLD WATER AND HEAT TRACED SYSTEMS PER WASHINGTON STATE ENERGY CODE C403.10.3.
- 5. CIRCULATION SYSTEM SHALL AUTOMATICALLY DISABLE PUMP WHEN THE WATER IN THE CIRCULATION LOOP TEMPERATURE REACHES THE SUPPLY TEMPERATURE AND SHALL NOT ENABLE PUMP UNTIL CIRCULATION LOOP TEMPERATURE IS A MINIMUM OF 10 dF LOWER THAN SUPPLY TEMPERATURE PER WSEC C404.7.1.
- 6. HEAT TRACE SYSTEM CONTROLS SHALL COMPLY WITH C404.7.2.
- 7. DISCHARGE TEMPERATURE OF PUBLIC LAVATORIES SHALL BE 104 DEGREES FAHRENHEIT
- 8. PROVIDE R-10 INSULATED SURFACE UNDER ELECTRIC WATER HEATERS.
- 9. VALVES, EXPANSION FITTINGS/LOOPS, AND PIPING SPECIALTIES SHALL BE FULL SIZE OF PIPE UNLESS NOTED OTHERWISE

APPLICABLE CODES

AS ADOPTED BY THE CITY OF PUYALLUP, WA

INTERNATIONAL MECHANICAL CODE, IMC 2018 INTERNATIONAL BUILDING CODE, IBC 2018 WASHINGTON STATE ENERGY CODE, WSEC 2018 INTERNATIONAL FUEL GAS CODE, IFGC 2018 UNIFORM PLUMBING CODE, UPC 2018

AND ASSOCIATED WASHINGTON ADMINISTRATIVE CODE AMENDMENTS

DESIGN CONDITIONS

WATER PRESSURE 55 PSI

SCOPE OF WORK

- 1. PROVIDE NEW DOMESTIC COLD AND HOT WATER DISTRIBUTION
- PROVIDE NEW TRENCH DRAINS IN CAR WASH BAY. DRAINS LEAD TO OIL-WATER SEPARATOR (BY OTHERS).
- PROVIDE NEW ELECTRIC WATER HEATER.

ABBREVIATIONS

MECHANICAL CONTRACTOR

MAXIMUM CIRCUIT AMPACITY

MOCP/ MOP MAXIMUM OVER CURRENT PROTECTION

NON-POTABLE COLD WATER

NON-POTABLE HOT WATER

POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH

UNDERWRITERS LABORATORY UNIFORM PLUMBING CODE

VARIABLE REFRIGERANT FLOW

WASHINGTON STATE ENERGY CODE

WATER SUPPLY FIXTURE UNITS

POLYVINYL CHLORIDE REDUCED PRESSURE REVOLUTIONS PER MINUTE

POUNDS PER SQUARE INCH, GAUGE

NON-POTABLE HOT WATER CIRC

MANUFACTURER MINIMUM

NUMBER

NOMINAL

NOT TO SCALE

STORM DRAIN SQUARE FEET

SPECIFICATION

THREADED

VENT/ VOLT

VENT TO ROOF

WATER COLUMN WALL CLEANOUT

VARIABLE AIR VOLUME

VOLTAGE

VERTICAL

WASTE

TYPICAL

MINIMUM EFFICIENCY REPORTING VALUE

MANUFACTURER'S STANDARDIZATION SOCIETY

NATIONAL FIRE PROTECTION ASSOCIATION

NATIONAL ENVIRONMENTAL BALANCING BUREAU NATIONAL ELECTRICAL MANUFACTURERS

MCA

MERV

NFPA

NOM

NPHWC

NTS

SPEC

THRD

TYP

VOLT

VTR

VAV

VERT

WCO

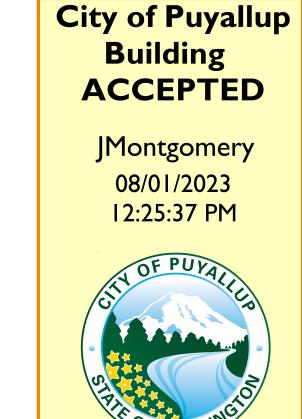
MFG/MFR

MECHANICAL LEGEND SYMBOL DESCRIPTION SYMBOL DESCRIPTION AMERICAN AIR BALANCE COUNCIL ABOVE FINISHED FLOOR AFUE ANNUAL FUEL UTILIZATION EFFICIENCY EQUIPMENT ABBREVIATION AND NUMBER (TAG) BRANCH-BOTTOM CONNECTION AIR GAP SD-X, XX/XX AGA AMERICAN GAS ASSOCIATION AIR TERMINAL TYPE, SIZE, AND CFM XXX CFM AHRI AIR CONDITIONING, HEATING, & REFRIGERATION INSTITUTE PIPE ANCHOR DETAIL NUMBER ASHRAE AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS DRAWING NUMBER WHERE DRAWN AMERICAN SOCIETY OF MECHANICAL PIPE GUIDE **FNGINFFRS** AMERICAN SOCIETY FOR TESTING AND MATERIALS DOMESTIC COLD WATER (CW) FLEXIBLE CONNECTION (PIPE) ACID WASTE BUILDING AUTOMATION SYSTEM REDUCER BRAKE HORSEPOWER DOMESTIC HOT WATER (HW) **S** CATCH BASIN CFH CUBIC FEET PER HOUR SUCTION DIFFUSER DOMESTIC HOT WATER CIRCULATING (HWC) CAST IRON CLEANOUT CO CONFIG CONFIGURATION SOIL, WASTE (S, W) FLOOR DRAIN CANADIAN STANDARDS ASSOCIATION CSA COLD WATER VENT (V), OR HIDDEN BELOW WASTE FLOOR FUNNEL DRAIN DRY BULB DOUBLE CHECK EXISTING PIPING FLOOR SINK DDC DIRECT DIGITAL CONTROLS DEGREES FAHRENHEIT DFU DRAINAGE FIXTURE UNIT DRAIN VALVE TRAP PRIMER WITH ACCESS PANEL DIAMETER DOWN DN WALL HYDRANT DIRECT EXPANSION **EFFICIENCY** EXTERNAL STATIC PRESSURE MULTI-HEAD WALL HYDRANT TEMPERATURE INDICATOR ETC ET CETERA FLOOR CLEANOUT FCO CROSSING LINES, NON CONNECTING TEMPERATURE ELEMENT FLOOR DRAIN FULL LOAD AMPS PIPE CONTINUATION FLOW INDICATOR FACTORY MANUAL FPM FEET PER MINUTE FLOOR SINK FLOW DIRECTION FLOW ELEMENT GAUGE FLOW SWITCH GALLON **GALLONS PER FLUSH** WASTE/ VENT UP, SURFACE/ FLOOR CLEANOUT (SCO/FCO) GPH **GALLONS PER HOUR** CONDUCTIVITY SENSOR GPM GALLONS PER MINUTE HOSE BIBB WALL CLEANOUT PRESSURE INDICATOR **HORSEPOWER** HOUR HOT WATER CLEANOUT (CO) PRESSURE ELEMENT HOT WATER CIRCULATING INTERNATIONAL BUILDING CODE P-TRAP DIFFERENTIAL PRESSURE ELEMENT IFGC INTERNATIONAL FUEL GAS CODE INTERNATIONAL MECHANICAL CODE PIPE DOWN HUMIDISTAT (H'STAT) IRON PIPE SIZE LATERAL HUMIDITY ELEMENT LB/LBS/# POUND/ POUNDS LINEAR FEET BRANCH-TOP CONNECTION LOW WATER CUT OFF SWITCH LEVEL LVL MAX MAXIMUM MILLIONS OF BRITISH THERMAL MBH UNITS PER HOUR

> Approval of submitted plans is not an approval of omissions or oversights by this office or noncompliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable codes and regulations of the local government.

FULL SIZED LEDGIBLE COLOR PLANS ARE REQUIRED TO BE PROVIDED BY THE PERMITTEE ON

SITE FOR ALL INSPECTIONS (MIN. PLAN SIZE 24" X 36")



LEBR



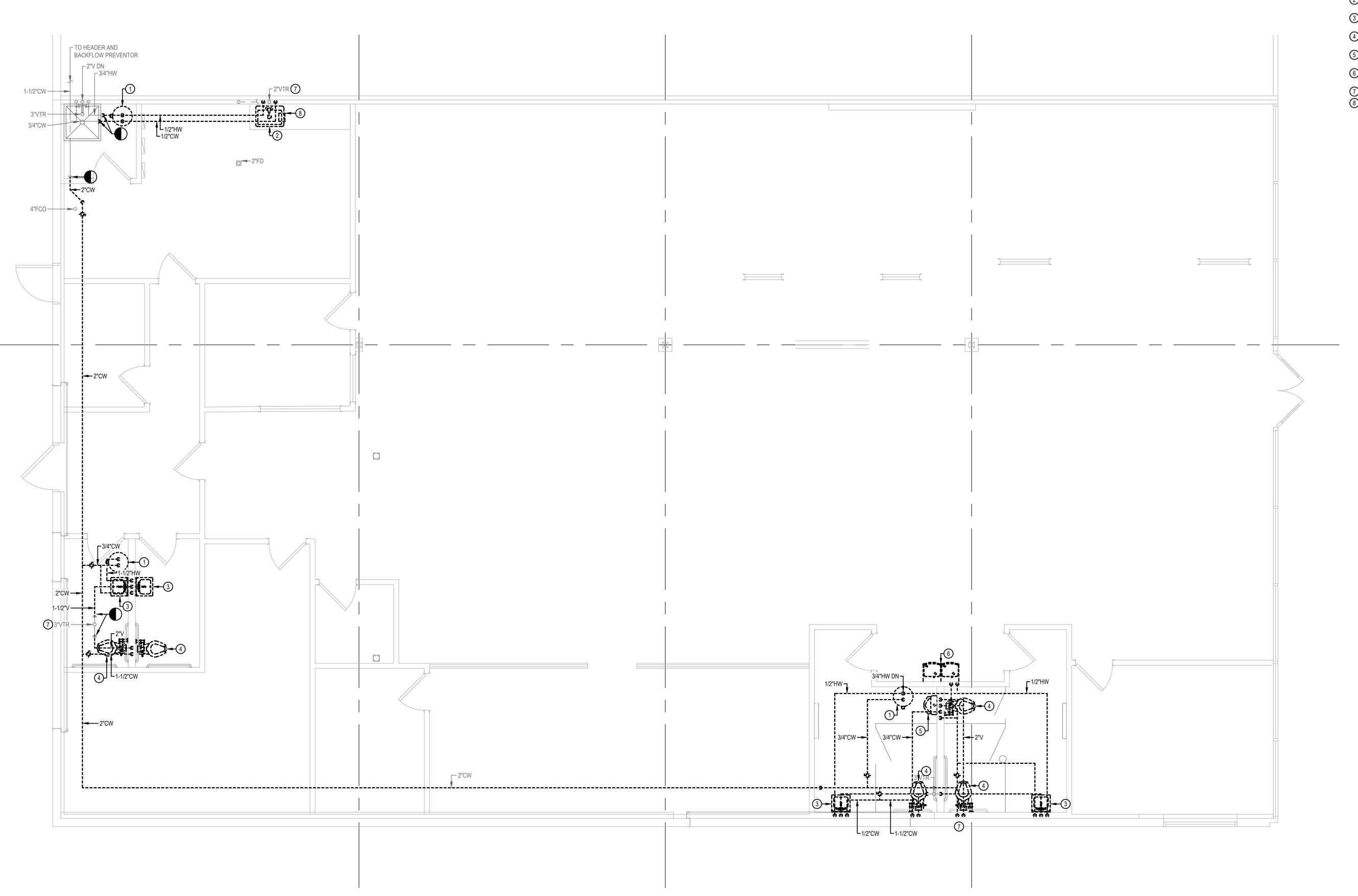
GEND AND GE

PRCTI20221460

City of Puyallup Development & Permitting Services **ISSUED PERMIT** Building Planning Engineering **Public Works** Traffic

> ENTERPRISE RENT-A-CAR T.I. RIVER ROAD PLAZA SHOPPING CENTER 733 RIVER ROAD, PUYALLUP, WA 98371 REVISIONS DESCRIPTION

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PLUMBING DEMOLITION PLAN

SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. THIS DRAWING WAS CREATED FROM AS BUILT DOCUMENTATION AND FIELD NOTES AND MAY NOT REPRESENT ACTUAL AS BUILT CONDITIONS. CONTRACTOR TO VERIFY SCOPE PRIOR TO COMMENCING WORK.

2. LINES AND EQUIPMENT SHOWN DARK AND DASHED IS TO BE DEMOLISHED. LINES AND EQUIPMENT SHOWN LIGHT AND SOLID IS TO REMAIN.

PLAN NOTES

REMOVE EXISTING ABOVE-CEILING WATER HEATER AND ALL RELATED APPURTENANCES AND PIPING.

REMOVE EXISTING LAVATORY AND ALL RELATED APPURTENANCES AND

4 REMOVE EXISTING WATER CLOSET AND ALL RELATED APPURTENANCES

REMOVE EXISTING URINAL AND ALL RELATED APPURTENANCES AND

6 REMOVE EXISTING DRINKING FOUNTAIN AND ALL RELATED APPURTENANCES AND PIPING.

(7) EXISTING VTR TO REMAIN FOR FUTURE RECONNECTION.

8 REMOVE EXISTING UNDER COUNTER INSTANTANEOUS WATER HEATER AND ALL RELATED APPURTENANCES AND PIPING.

2 REMOVE EXISTING KITCHEN SINK AND ALL RELATED APPURTENANCES AND

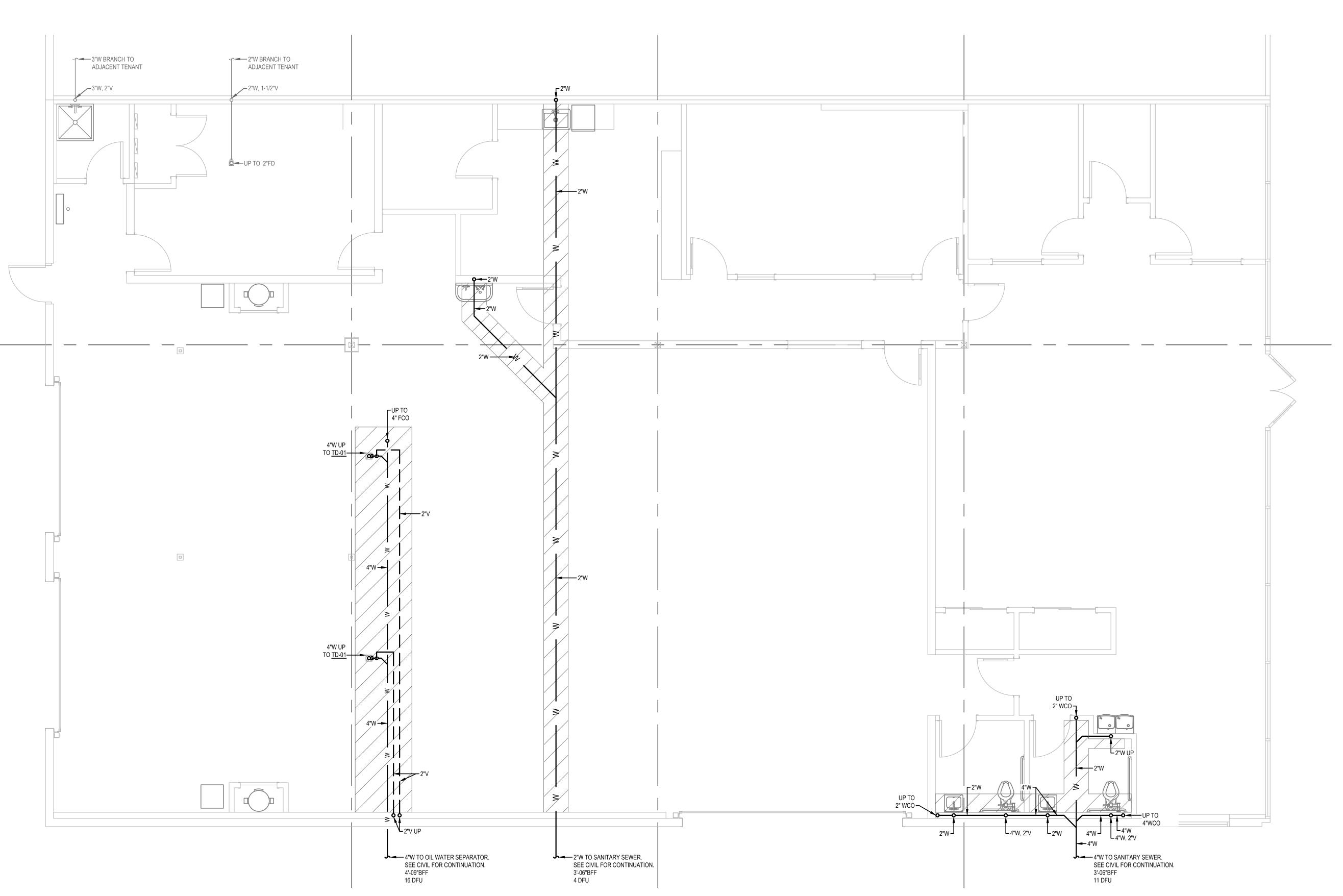
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City of Puyallup Development & Permitting Services
ISSUED PERMIT Building Planning Engineering Public Works

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)	DESCRIPTION	DATE					
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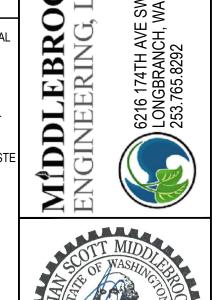


FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

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. THIS DRAWING WAS CREATED FROM AS BUILT DOCUMENTATION AND FIELD NOTES AND MAY NOT REPRESENT ACTUAL AS BUILT CONDITIONS. CONTRACTOR TO VERIFY SCOPE PRIOR TO COMMENCING WORK.
- 3. WASTE PIPING 4" AND LARGE SHALL BE SLOPED AT 1/8" PER FOOT. WASTE PIPING 3" AND SMALLER SHALL BE SLOPED AT 1/4" PER FOOT.
- 4. LINES AND EQUIPMENT SHOWN DARK IS NEW WORK. LINES AND EQUIPMENT SHOWN LIGHT IS EXISTING TO REMAIN.
- 5. PLANS ASSUME ELEVATION OF FLOOR IS SET AT 0 FEET. COORDINATE FINAL ELEVATIONS WITH STRUCTURAL AND CIVIL PLANS.
- 6. HATCHED AREAS INDICATE ANTICIPATED SLAB CUTTING REQUIRED TO FACILITATE UNDERGROUND SANITARY PIPING.



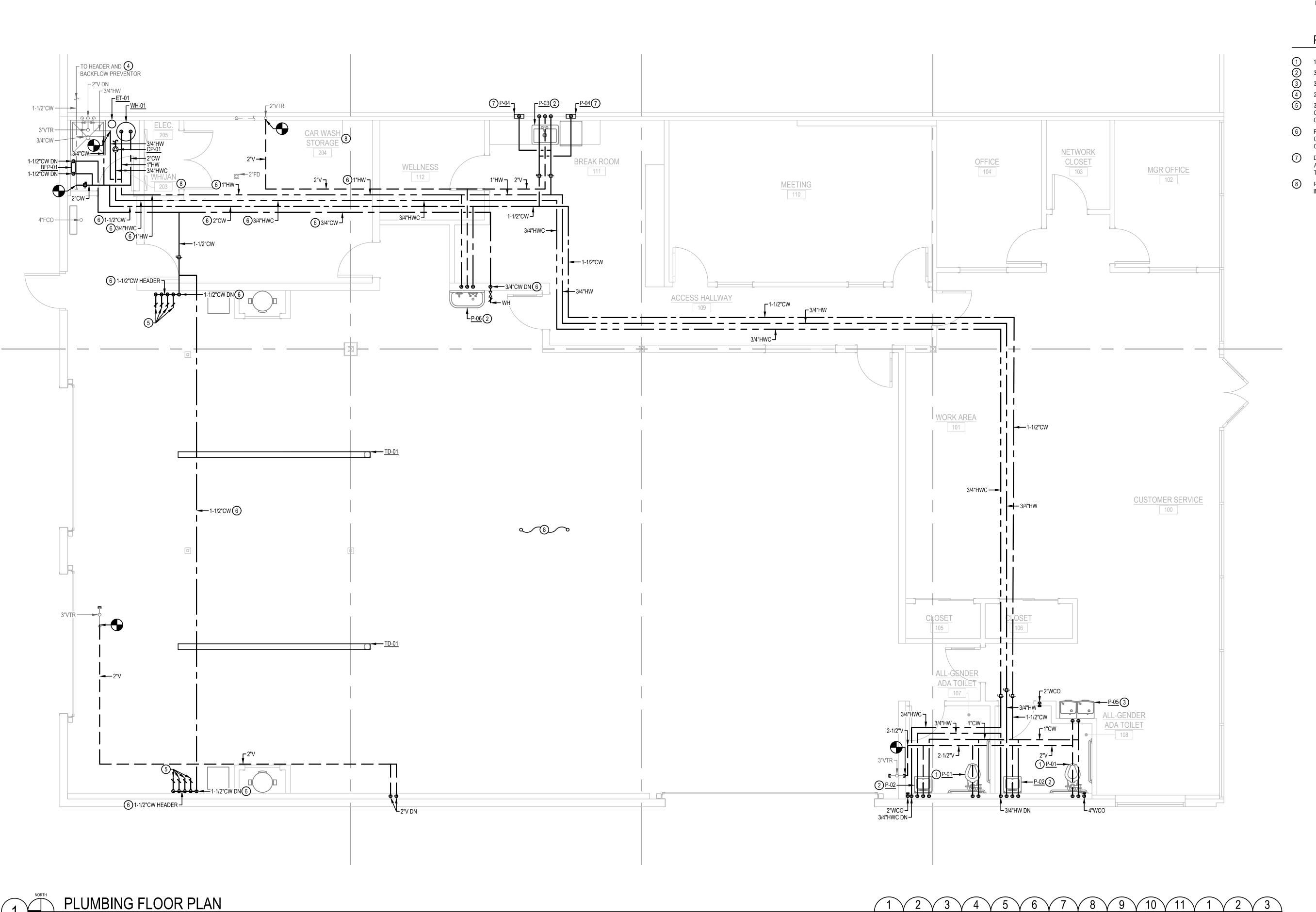
PRCTI20221460

City of Puyallup **Development & Permitting Services** ISSUED PERMIT Building Planning Engineering Public Works

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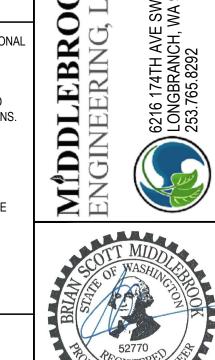
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- 4. PLANS ASSUME ELEVATION OF FLOOR IS SET AT 0 FEET. COORDINATE FINAL ELEVATIONS WITH STRUCTURAL AND CIVIL PLANS.

PLAN NOTES

- 1"CW, 4"W, 2"V.
- 2) 3/4"CW, 3/4"HW, 2"W, 1-1/2"V.
- 3/4"CW, 2"W, 1-1/2"V.
- 2"CW TO BACKFLOW PREVENTOR IN ADJACENT TENANT SPACE.
 3/4"CW DROP WITH ISOLATION VALVE. TERMINATE WITH 3/4" HOSE-END CONNECTIONS LOCATED AT A HEIGHT COORDINATED IN A FIELD BY
- OWNER'S REPRESENTATIVE.

 6 PROVIDE 3 W/LF HEAT TRACE FOR FREEZE PROTECTION.
- COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR. BASED ON 120V, 1PH, 1500W TOTAL.
- DOWN TO WALL SUPPLY BOX. COORDINATE FINAL HEIGHT, LOCATION AND CONNECTION REQUIREMENTS WITH OWNER/ARCHITECT PRIOR TO INSTALLATION.
- ROOM IS A LOW ENERGY SPACE PER ARCHITECT. DOMESTIC PIPING IN AREA SHALL BE INSULATED AND HEAT TRACED.



PLUMBING FLOOR PLAN

PRCTI20221460

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building Planning

Engineering Public Works

Fire Traffic

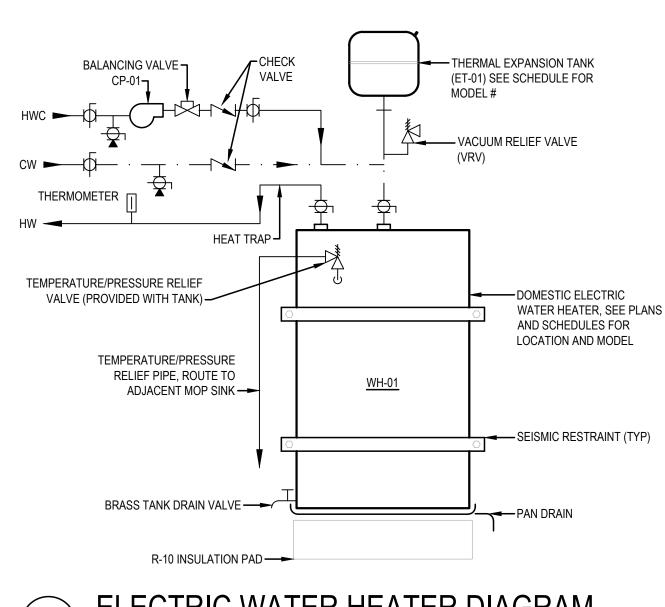
NTERPRISE RENT-A-CAR T.I.
VER ROAD PLAZA SHOPPING CENTER
3 RIVER ROAD, PUYALLUP, WA 98371

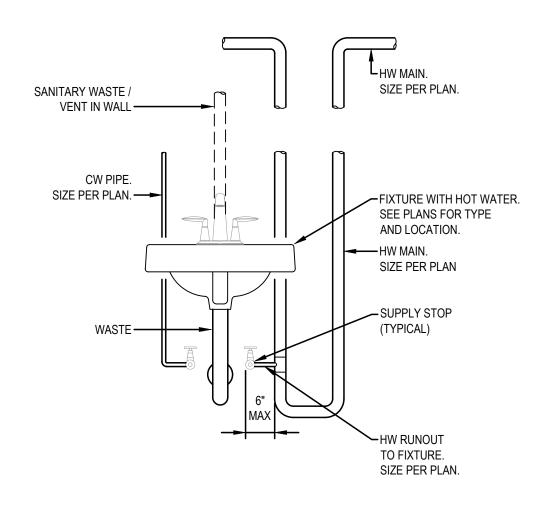
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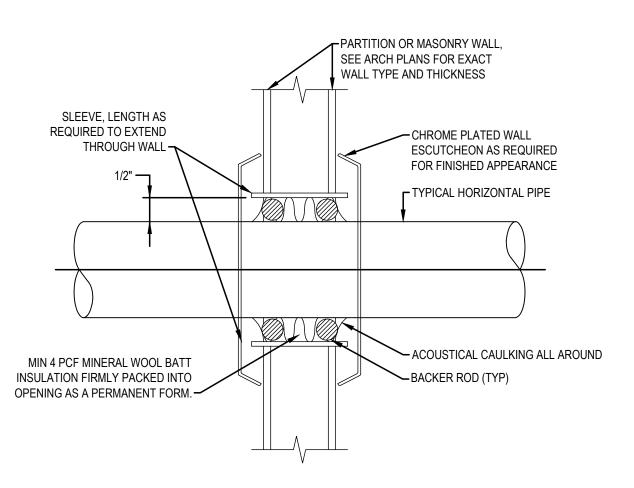
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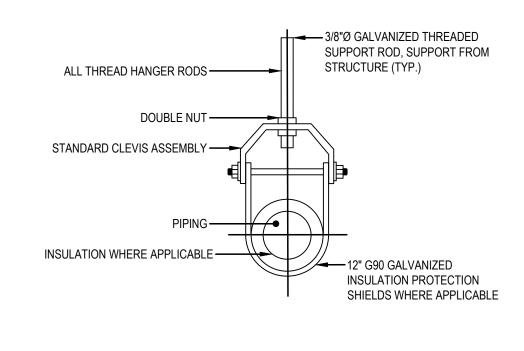
SHEET

PP102

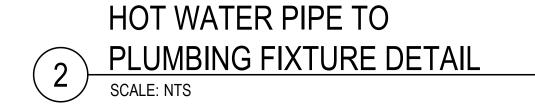














PLUMBING RUNOUT

PIPE, SIZED PER PLANS -

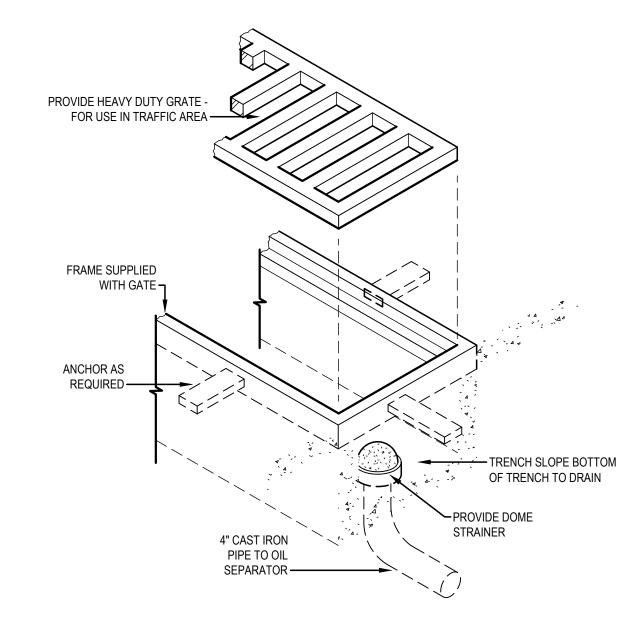
PIPE SIZE TO FIXTURE: SIZE PER PLUMING

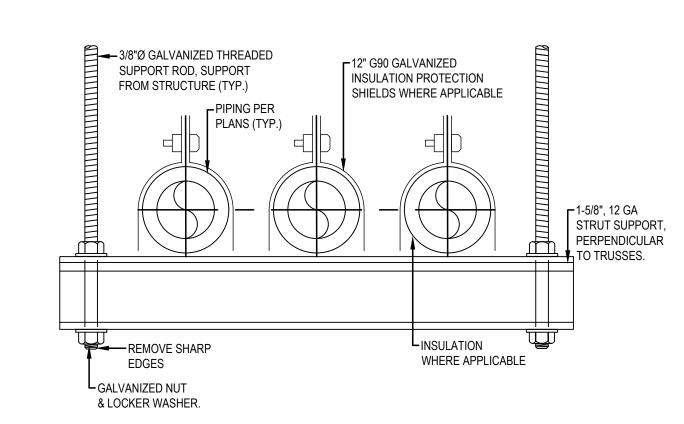
THAN OR EQUIVALENT TO RUNOUT PIPE.

TRANSITION WITHIN 6" OF PLUMBING STOP. -

FIXTURE SCHEDULE. PIPE MUST BE SMALLER







NOTE:
PROVIDE THREE SUPPORT RODS FOR STRUT LONGER THAN 24"

PIPE TRAPEZE DETAIL

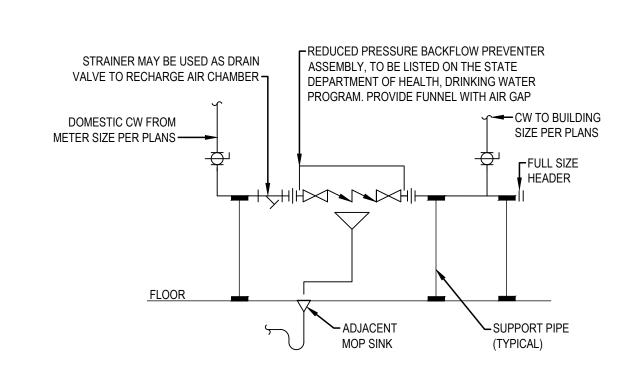
-1/8 CAST IRON BEND,

BALANCE OF PIPING SAME

CLEANOUT ACCESS COVER, TOP

OF COVER TO BE FLUSH WITH

TOP OF FINISHED FLOOR. -



DOMESTIC WATER HEADER DETAIL
SCALE: NTS

- ABOVE GRADE WASTE AND VENT PIPE COUPLING.

WHEN INSTALLED IN BRICK

THE STAINLESS STEEL WALL COVER

✓ 12" OR AS NOTED.

AND SCREW.

A A ... A ... A.

MAY EXTEND AS A WASTE OR VENT

INTERIOR WALL SYSTEM, SEE ARCH PLANS FOR

TYPE AND THICKNESS +

PLUGGED TEE WITH CLEANOUT

THREADED CLEANOUT (CO) PLUG-



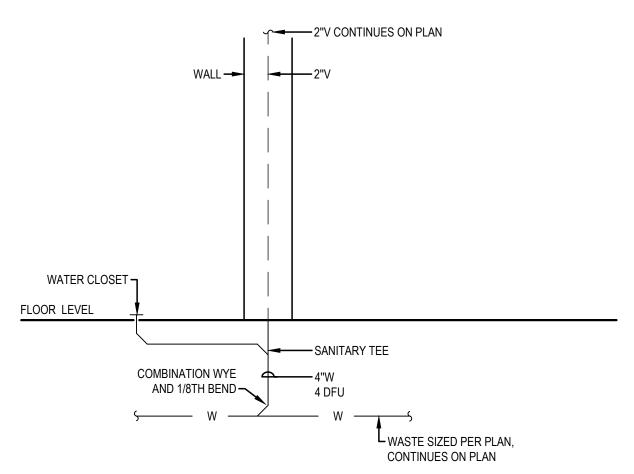
FIXTURE STOP TRANSITION

LBRAIDED STAINLESS FLEX WATER LINE

TO FIXTURE, WHERE APPROPRIATE

LFIXTURE STOP OR FIXTURE





AS CLEANOUT TO GRADE. WASTE PIPE ■ BELOW GRADE WASTE PIPE FLOOR CLEANOUT (FCO) COUPLING. 1/8 C.I. BEND — BALANCE OF PIPING SAME TYPICAL BELOW GRADE WASTE PIPE L 1/8 BEND IF CLEANOUT AS CLEANOUT TO GRADE. COUPLING, PER SPECIFICATIONS -OCCURS AT END OF LINE CLEANOUT TO GRADE (SCO) WALL CLEANOUT (WCO) **CLEANOUT DETAIL**

T16" SQUARE CONCRETE PAD TROWEL SMOOTH AND EDGE.

C.I. WASTE PIPE LENGTH TO SUIT

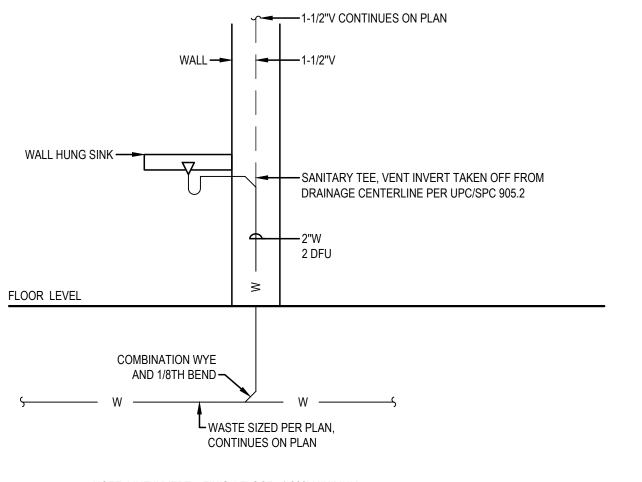
── 1/8 CAST IRON BEND

BRASS CLEANOUT PLUG WITH

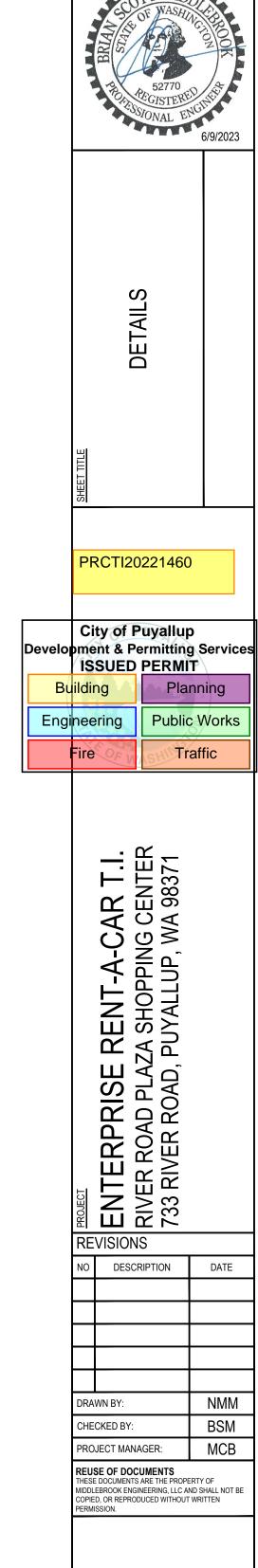
COUNTERSINK SCREWHEAD -



FLOOR MOUNTED WATER **CLOSET WASTE RISER**

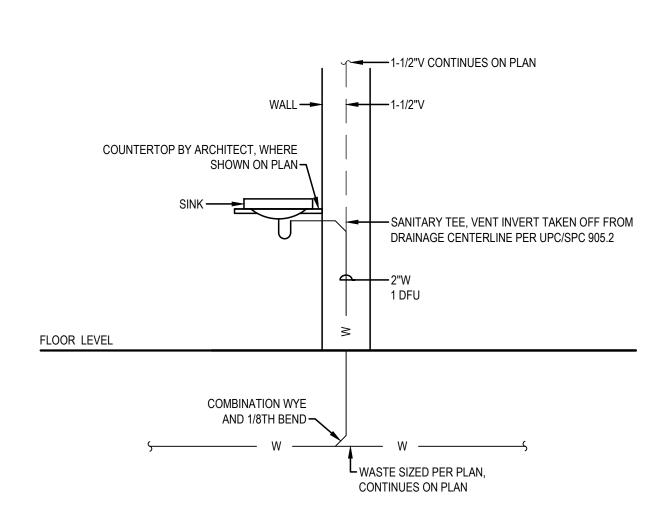






PP501

M'DDLEBROOK ENGINEERING, LLC



NOTE: LINE INVERT = FINISH FLOOR -1.208' MINIMUM

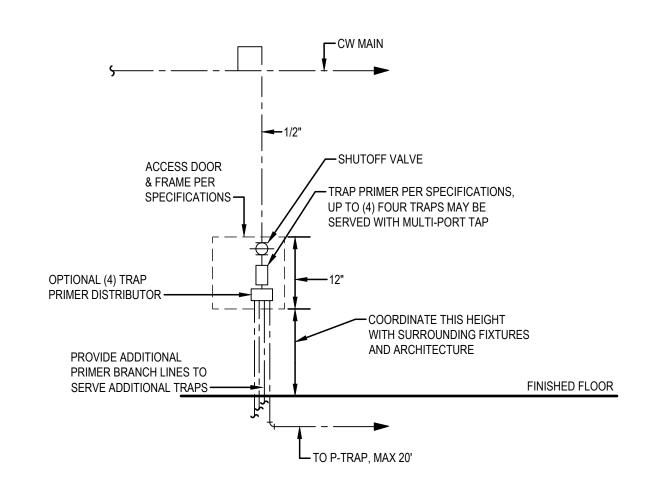
LAVATORY WASTE RISER
SCALE: NTS

WATER COOLER 120V POWER CORD ------3/8" CW STUB WITH SHUT-OFF, 3" MAX STUB OUT FROM WALL --1-1/2" WASTE OUTLET, DRAIN WALL MOUNT STUB 2 IN/OUT FROM WALL DRINKING FOR 1-1/2" P-TRAP FOUNTAIN — FLOOR SLAB 7

NOTES:

1. BASIS OF DESIGN IS BI-LEVEL ADA COOLER, NON-FILTERED REFRIGERATED, STAINLESS STEEL. 2. SEE PLUMBING FIXTURE SCHEDULE FOR EXACT ELKAY MODEL NUMBERS AND CONFIGURATION. 3. SEE ARCH PLANS AND SPECIFICATION FOR ACCESSIBILITY COMPLIANT FIXTURE MOUNTING HEIGHTS AND OTHER REQUIREMENTS.

DRINKING FOUNTAIN
SCALE: NTS



TRAP PRIMER PIPING DIAGRAM

MÎDDLEBROOK ENGINEERING, LLC S **DETAIL**(PRCTI20221460

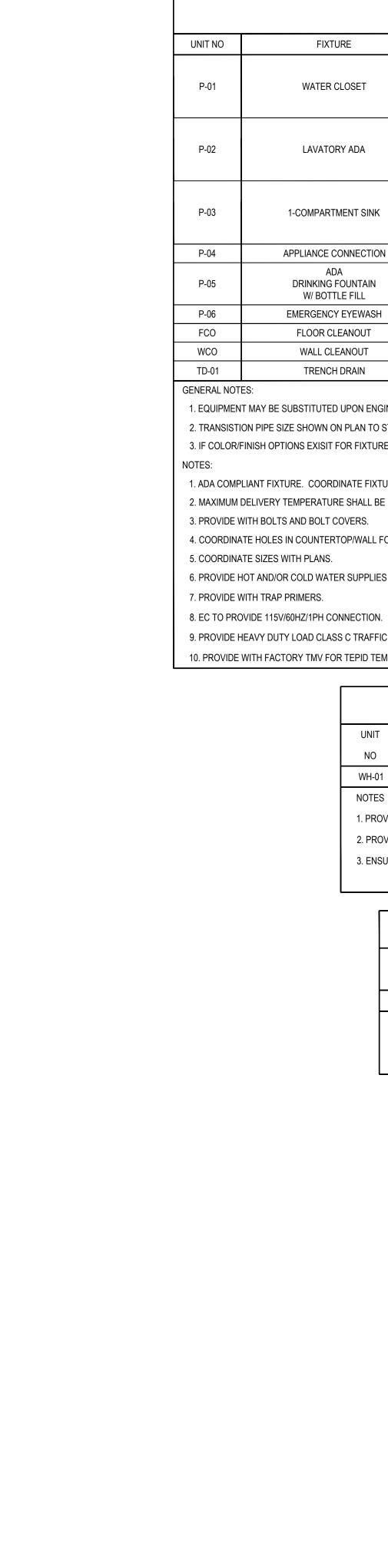
City of Puyallup
Development & Permitting Services
ISSUED PERMIT Building Planning Engineering Public Works Traffic

ENTERPRISE RENT-A-CAR T.I. RIVER ROAD PLAZA SHOPPING CENTER 733 RIVER ROAD, PUYALLUP, WA 98371

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PP502



			F	PLUMBING FIXTURE SCHEDULE	=						
UNIT NO	FIXTURE	MOUNTING		MANUFACTURER AND MODEL NUMBERS	W	V	HW	CW	GPF	GPM	NOTES
			TOILET:	SLOAN ST-2009	4"	2"	-	1"	1.28	-	1, 3
P-01	WATER CLOSET	FLOOR	SEAT:	BEMIS 1955SSCT	-	-	-	-	-	-	3
			VALVE:	SLOAN ROYAL 111-1.28	-	-	-	1"	-	-	
			LAVATORY:	AMERICAN STANDARD 0476.028	2"	1-1/2"	-	-	-	-	
P-02	LAVATORY ADA	DROP-IN	FAUCET:	CHICAGO FAUCETS 802-V317ABCP	-	-	3/8"	3/8"	-	0.5	1, 2
			SUPPLIES:	EBC - LAH16	-	-	3/8"	3/8"	-	-	
			SINK:	ELKAY/DAYTON - D11719	2"	1-1/2"	-	-	-	-	
P-03	1-COMPARTMENT SINK	DROP-IN	FAUCET:	ELKAY - LK1500	-	-	3/8"	3/8"	-	1.5	1, 4
			SUPPLIES:	EBC - LAH16	-	-	3/8"	3/8"	-	-	
P-04	APPLIANCE CONNECTION	WALL	UNIT:	OATEY - MODA 37905	-	-	3/4"	3/4"	-	-	6
P-05	ADA DRINKING FOUNTAIN W/ BOTTLE FILL	WALL	UNIT:	ELKAY - EZSDWSLK	-	1-1/2"	-	3/4"	-	-	1, 8
P-06	EMERGENCY EYEWASH	WALL	UNIT:	GUARDIAN - G1750P W/ G62020 TMV	-	-	3/4"	3/4"	-	0.5	1, 10
FCO	FLOOR CLEANOUT	FLOOR	UNIT:	JR SMITH - 4040	-	-	-	-	-	-	5
WCO	WALL CLEANOUT	WALL	UNIT:	JR SMITH - 4422	-	-	-	-	-	-	5
TD-01	TRENCH DRAIN	FLOOR	UNIT:	JR SMITH 9930	4"	2"	-	-	-	-	7, 9, 11

- 1. EQUIPMENT MAY BE SUBSTITUTED UPON ENGINEER'S APPROVAL FOR EQUAL OR OTHER MFG/MODEL. REFER TO EQUIPMENT SUBMITTAL FOR FINAL SELECTIONS.
- 2. TRANSISTION PIPE SIZE SHOWN ON PLAN TO STOP OR CONNECTION SIZE SHOWN ON SCHEDULE.
- 3. IF COLOR/FINISH OPTIONS EXISIT FOR FIXTURES, COORDINATE FINAL COLORS/FINISHES WITH ARCHITECT.
- 1. ADA COMPLIANT FIXTURE. COORDINATE FIXTURE HEIGHT WITH ARCHITECT.
- 2. MAXIMUM DELIVERY TEMPERATURE SHALL BE 105 DEGREES FAHRENHEIT. PROVIDE WITH BELOW DECK MIXING VALVE. WATTS-LFUSG-B OR APPROVED EQUAL.
- 4. COORDINATE HOLES IN COUNTERTOP/WALL FOR FIXTURE INSTALLATION.
- 5. COORDINATE SIZES WITH PLANS.
- 6. PROVIDE HOT AND/OR COLD WATER SUPPLIES PER APPLIANCE CONNECTION REQUIREMENTS.

- 9. PROVIDE HEAVY DUTY LOAD CLASS C TRAFFIC RATING AND STAINLESS PERFORATED GRATE.
- 10. PROVIDE WITH FACTORY TMV FOR TEPID TEMPERATURE DELIVERY. MAXIMUM DELIVERY TEMPERATURE SHALL BE 90°F.

-	-	-	1"	-	-	
2"	1-1/2"	-	-	-	-	
-	-	3/8"	3/8"	-	0.5	1, 2
-	-	3/8"	3/8"	-	-	
2"	1-1/2"	-	-	-	-	
-	-	3/8"	3/8"	-	1.5	1, 4
-	-	3/8"	3/8"	-	-	
-	-	3/4"	3/4"	-	-	6
-	1-1/2"	-	3/4"	-	-	1, 8
-	-	3/4"	3/4"	-	0.5	1, 10
•	•	•	-	-	ı	5
-	-	-	-	-	-	5
4"	2"	-	-	-	-	7, 9, 11

11. COORDINATE FINAL LENGTH WITH SLAB SLOPING PER ARCHITECTURAL.

PRCTI20221460

	WATER HEATER SCHEDULE														
UNIT	MFR.	MODEL	LOCATION	TANK SIZE	ELEMENT	INPUT	RECOVERY	TEMP	ELECTRICAL		DISCONNECT	WEIGHT	NOTES		
NO				(GAL)	KW	KW	(GPH)	RISE (F)	MCA	MOCP	VOLT	PH	FURN. BY		
WH-01	AO SMITH	LTE 66D	WH/JAN 203	66	6.1	12.2	56	90	51	65	240	1	EC	795	1, 2, 3, 4, 5

- 1. PROVIDE DRIP PAN AND R-10 INSULATED PAD. T&P PIPING TO DRAIN AT ADJACENT FLOOR SINK.
- 2. PROVIDE SEISMIC RESTRAINT.
- 3. ENSURE UNIT FITS IN MECHANICAL ROOM BEFORE PROCUREMENT.

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	BACKFLOW PREVENTER SCHEDULE													
UNIT NO	MFR	MODEL	LOCATION		TYPE		TYPE		SIZE	PRESSURE DROP	SERVICE	NOTES		
				RP	RP DC AG		(IN)	(PSI)						
BFP-01	WATTS	LF009	WH/JAN 203	Х	X - X		1.5	12	NON-POTABLE	1, 2				
NOTES:														

NOTES:

- 1. PROVIDE WITH 1" AIR GAP FITTING.
- 2. PROVIDE WITH QUARTER TURN VALVES.

	PUMP SCHEDULE													
UNIT NO	MFR	MODEL	LOCATION	FLOW	HEAD	RPM	ELECTRICAL			DISCONNECT	NOTES			
				(GPM)	FT		HP	WATT	VOLTS	PH	FURN. BY			
CP-01	ARMSTRONG	E7.B	WH/JAN 203	1	15	-	0.17	125	120	1	EC	1, 2		

- 1. PROVIDE WITH AQUASTAT AND TIMER AS UNIT STARTER.
- 2. PROVIDE WITH BRONZE BODY. UNIT SHALL BE CERTIFIED FOR POTABLE WATER.

EXPANSION TANK SCHEDULE													
UNIT	MFR	MODEL	LOCATION	TANK SIZE	ACCEPTANCE	WEIGHT	NOTES						
NO				(GAL)	FACTOR	(LBS)							
ET-01	AMTROL	ST-12	WH/JAN 203	4.4	0.73	10	1						

1. RELIEF PRESSURE SHALL BE 125 PSI.

ENTERPRISE RENT-A-CAR T.I. RIVER ROAD PLAZA SHOPPING CENTER 733 RIVER ROAD, PUYALLUP, WA 98371 REVISIONS DESCRIPTION DRAWN BY: BSM CHECKED BY: MCB PROJECT MANAGER:

REUSE OF DOCUMENTS
THESE DOCUMENTS ARE THE PROPERTY OF
MIDDLEBROOK ENGINEERING, LLC AND SHALL NOT BE
COPIED, OR REPRODUCED WITHOUT WRITTEN
PERMISSION.

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.
 - MAINTENANCE AND OPERATING INSTRUCTIONS (3 SETS). EXTENDED WARRANTIES (OTHER THAN THE ONE-YEAR).
- BALANCING LOGS (AIR AND HYDRONIC SYSTEMS) (3 SETS).
- FINAL CERTIFICATES OF INSPECTION AND CODE COMPLIANCE. COMMISSIONING DOCUMENTATION PER WSEC
- 11. 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.

DEMOLITION

- COMPLETE ALL DEMOLITION AND REMOVAL OF WORK NECESSARY FOR THE COMPLETION OF THE WORK SHOWN ON THE DRAWINGS. ALL MECHANICAL MATERIALS DESIGNATED FOR REMOVAL SHALL BE REMOVED FROM SITE AND DISPOSED OF LEGALLY. THE CONTRACTOR SHALL COORDINATE FOR ALL RECYCLABLE CONSTRUCTION WASTE GENERATED UNDER THIS CONTRACT TO BE RECYCLED. LOADING AND DISPOSAL AS DESCRIBED HERE SHALL BE AT NO ADDITIONAL EXPENSE TO THE OWNER.
- COMPLY WITH APPLICABLE CODES AND REGULATIONS FOR DEMOLITION OPERATIONS AND SAFETY OF ADJACENT STRUCTURES AND PUBLIC. OBTAIN REQUIRED PERMITS.
- PROVIDE, ERECT, AND MAINTAIN TEMPORARY BARRIERS AND SECURITY
- CONDUCT OPERATIONS TO MINIMIZE EFFECTS ON AND INTERFERENCE WITH ADJACENT STRUCTURES AND OCCUPANTS.
- CONDUCT OPERATIONS TO MINIMIZE OBSTRUCTION OF PUBLIC AND PRIVATE ENTRANCES AND EXITS: DO NOT OBSTRUCT REQUIRED EXITS AT ANY TIME: PROTECT PERSONS USING ENTRANCES AND EXITS FROM REMOVAL OPERATIONS.
- DO NOT BEGIN REMOVAL UNTIL RECEIPT OF NOTIFICATION TO PROCEED FROM OWNER. OWNER HAS FIRST RIGHTS OF REFUSAL FOR DEMOLISHED MATERIALS AND
- EXISTING MATERIALS THAT ARE REMOVED SHALL NOT BE REUSED IN NEW SYSTEMS EXCEPT WHERE INDICATED ON DRAWINGS.
- CONTRACTOR SHALL REMOVE ALL PIPING, DUCTWORK, AND EQUIPMENT INCLUDING ALL ASSOCIATED INSULATION, HANGERS, VALVES, PLENUM WALLS, DAMPERS, WIREMOLD, WIRING, CONTROLS, AND APPURTENANCES ASSOCIATE WITH EACH PIECE OF EQUIPMENT
- PROTECT EXISTING STRUCTURES AND OTHER ELEMENTS THAT ARE NOT TO BE REMOVED. WHERE EXISTING ITEMS PENETRATE A WALL, CEILING, FLOOR, OR ROOF, CONTRACTOR SHALL PROVIDE INFILL AT (E) PENETRATIONS WITH LIKE MATERIALS. PATCH AND REPAIRS TO MATCH SURROUNDING SURFACES, INCLUDING PAINT.
- CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT OF EXISTING MECHANICAL EQUIPMENT WHERE REQUIRED BY DEMOLITION OR ALTERATION OF EXISTING STRUCTURE DURING CONSTRUCTION. COORDINATE WITH GC AND PROVIDE NECESSARY SUPPORTS AND HANGERS TO MAINTAIN INTEGRITY, SAFETY AND PROPER OPERATION OF EXISTING MECHANICAL SYSTEMS
- MAINTAIN AND RESTORE (IF INTERRUPTED) ALL CONDUITS & CONDUCTORS, PIPING, & DUCTWORK PASSING THROUGH RENOVATED AREAS AND SERVICING UNDISTURBED REMOVE ALL ABANDONED DUCTWORK, PIPING, CONTROLS, WIRING, ETC., WHERE
- ACCESSIBLE IN RENOVATED AREAS. WHERE CONTROLS ARE DEMOLISHED, REMOVE WIRING BACK TO NEAREST CONTROL
- PANEL OR JUNCTION BOX. REMOVE ACCESSIBLE CONDUIT, JUNCTION BOXES, ETC.
- CONTRACTOR SHALL PERFORM DEMOLITION IN NEAT AND SKILLFUL MANNER SO AS NOT TO DAMAGE OR DEFACE ANY CONSTRUCTION THAT IS TO REMAIN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INCLUDE ALL COSTS ASSOCIATED WITH
- NECESSARY DEMOLITION TO ALLOW NEW CONSTRUCTION SHOWN IN CONTRACT DOCUMENTS.

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.
- A. 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.

- 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
- 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.

START-UP, BALANCING AND COMMISSIONING.

- ALL MOTORS SHALL BE ELECTRONICALLY COMMUTATED UNLESS NOTED ON
- ELECTRICAL INSTALLATION SHALL COMPLY WITH THE NEC. PROTECT STORED MATERIALS. REPLACE DAMAGED MATERIALS PRIOR TO
- INSTALLATION. PROVIDE WATER-TIGHT SEAL FOR OPENINGS TO THE BUILDING THROUGH WHICH PIPE PASSES.
- 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 THE UPC OR IMC.
- 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 MAINTAINED UNTIL APPROVED.
 - 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.

COPPER PIPING

- COPPER PIPING SHALL BE USED FOR DOMESTIC HOT AND COLD WATER. MATERIALS FOR ABOVE GROUND COPPER PIPE, FITTINGS AND ACCESSORIES
- ASTM B88, TYPE "L". PROVIDE LEAD-FREE SOLDER JOINTS FOR PIPING 2" AND SMALLER.
- PROVIDE ROLLED GROVE MECHANICAL JOINTS FOR PIPING 2-1/2" AND LARGER.
- MATERIAL FOR BELOW GROUND COPPER PIPE SHALL BE ASTM B42, HARD DRAWN, TYPE K. FITTINGS SHALL BE ASME B16.18 CAST COPPER ALLOY OR ASME B16.22 WROUGHT COPPER OR BRONZE. JOINTS SHALL BE BRAZED UTILIZING AWS A5.8M/A5.8 BCuP COPPER SILVER BRAZE.

CROSS-LINKED POLYETHYLENE PIPE

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

CAST IRON PIPE, DWV & SEWER

- CAST IRON PIPING SHALL BE PROVIDED FOR ABOVE GRADE SANITARY, VENT,
- HUBLESS CAST IRON (ASTM A888/ CISPI 310).

PLASTIC PIPE, DWV & SEWER

PVC PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS SHALL BE PER IAPMO INSTALLATION STANDARD (IS) 09-03, "PVC BUILDING DRAIN, WASTE, AND VENT PIPE AND FITTINGS."

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
- PROVIDE SENSORS WHERE INDICATED ON THE PLANS.
- PROVIDE DIELECTRIC BREAKS BETWEEN DISSIMILAR METALS. TRAP PRIMERS:
- A. BRASS CONSTRUCTION WITH OPERATING RANGE FROM 20-80 PSI. SUITABLE
- FOR 1-4 LOW USE FIXTURES. APPROVED MANUFACTURERS: PPP

<u>VALVES</u>

- 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.
- LOCATE AND ORIENT VALVES TO PERMIT PROPER OPERATION AND ACCESS FOR MAINTENANCE OF PACKING, SEAT, AND DISK. GENERALLY, LOCATE VALVES IN OVERHEAD PIPING IN HORIZONTAL POSITION. PROVIDE A UNION ADJACENT TO ONE END OF EACH THREADED VALVE.

PIPE TESTING

- 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. 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. PIPING IS CONSIDERED "PASSED" IF THE PRESSURE REMAINS UNCHANGED FOR THE DURATIONS LISTED ABOVE.

- 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
- PROVIDE INSULATION ON THE FIRST 10' OF OVERFLOW PIPING.

HEAT TRACE CABLE

- THE SELF-REGULATING HEATING CABLE SHALL CONSIST OF TWO 16A W.G. NICKEL-COPPER BUS WIRES EMBEDDED IN PARALLEL IN A SELF-REGULATING POLYMER CORE THAT VARIES ITS POWER OUTPUT TO RESPOND TO TEMPERATURE ALL ALONG ITS LENGTH, ALLOWING THE HEATING CABLE TO BE CUT TO LENGTH IN THE FIELD THE HEATING CABLE SHALL BE COVERED BY A RADIATION-CROSS LINKED, MODIFIED
- POLYOLEFIN DIELECTRIC JACKET. HEATING CABLE CIRCUIT SHALL BE PROTECTED BY A GROUND-FAULT DEVICE FOR
- EQUIPMENT PROTECTION. THIS REQUIREMENT IS IN ACCORDANCE WITH SECTION
- PROVIDE 5 WATT/ LF CABLE FOR PIPING UNDER 3" IN DIAMETER. INSTALL PER MANUFACTURER'S RECOMMENDATION.

PLUMBING - GENERAL

- PROVIDE PLUMBING PER THE UPC AND THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- PLUMBING FIXTURES AND EQUIPMENT SHALL BE AS INDICATED ON THE
- DRAWING SCHEDULES. ACCESS PANELS: PROVIDE FOR MAINTENANCE OF VALVES, TRAP PRIMERS WATER HAMMER ARRESTORS. AND OTHER ITEMS REQUIRING ACCESS WHEN OBSTRUCTED BY WALLS, AND HARD LID CEILING.
- LOCATE VALVES, CONTROLS, AND SIMILAR COMPONENTS SO THAT THEY ARE ACCESSIBLE
 - A. INSTALL TAG ON CEILING GRID FRAME TO INDICATE LOCATION AND TYPE OF EQUIPMENT THAT REQUIRES MAINTENANCE.
- PROVIDE ACCESS DOORS FOR EQUIPMENT INSTALLED BEHIND WALLS, ABOVE INACCESSIBLE CEILINGS AND BELOW FLOORS. COORDINATE ACCESS DOOR LOCATIONS WITH ARCHITECT/ENGINEER. ACCESS DOOR SHALL BE SIZED SO THAT ADJACENT EQUIPMENT IS ACCESSIBLE
 - PROVIDE 16 GA, STEEL, FLUSH TYPE ACCESS DOOR WITH CONCEALED HINGE AND SLOT SCREWDRIVER TYPE CAM LATCH. PROVIDE FACTORY PRIMED IN PAINTED SURFACE AREAS FOR FIELD PAINTING.
 - PROVIDE STAINLESS STEEL FOR ALL OTHER AREAS. PROVIDE UL LISTED AND LABELED DOOR WHERE FIRE-RESISTANCE RATING IS INDICATED ON

PLUMBING - FLOOR DRAINS

- 1. DRAINS SHALL BE JAY R. SMITH, SIOUX CHIEF, ZURN, WADE, OR APPROVED EQUAL.
- TRENCH DRAINS
- A. TRENCH DRAINS SHALL BE COMPOSED OF MULTIPLE 0.6% SLOPING SEGMENTS. COORDINATE NUMBER OF SEGMENTS WITH LENGTH
- B. SHOWN ON PLAN. PROVIDE ALL SEGMENTS. PROVIDE END CAPS. C. PROVIDE GRAVITY OPTIONS AS SHOWN ON SCHEDULE.
- D. TRENCH DRAIN SHALL BE CONSTRUCTED OF 100% POLYPROPYLENE
- E. WITH TONGUE AND GROOVE ENDS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

PLUMBING - CLEANOUTS

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

PLUMBING FIXTURE AND TRIM

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

DOMESTIC WATER HEATERS

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

	PIPE INSULATION SCHEDULE												
FLUID OPERATING	INSULATION	NOMINAL OR TUBE SIZE (inches)											
AND USAGE (°F)	BTU · in./(h · ft² · °F)	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 THICKNESESS 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 MINUMUM 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 TEMPERATUREAND PIPE SIZE.

k = THE UPPER VALUE OF THE CONDUCTIVITY RANGE LISTED IN THE TABLE FOR THE APPLICABLE FLUID TEMPERATURE

- $K = \text{CONDUCTIVITY OF ALTERNATE MATERIAL AT MEAN RATING TEMPERATURE INDICATED FOR THE APPLICABLE FLUID TEMPERATURE (Btu · in/h · ft² x °F)$
- 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)

PRCTI20221460

City of Puyallup Development & Permitting Services **ISSUED PERMIT** Building Planning **Public Works** Engineering Traffic

> ENT-A-CAR T. SHOPPING CENTE YALLUP, WA 9837 ZA SHOP PUYALL ENTERPRISE | RIVER ROAD PLAZ 733 RIVER ROAD, F

REVISIONS

DRAWN BY:

DESCRIPTION

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