BACKFLOW PREVENTER SCHEDULE										
SYMBOL	SERVICE	MODEL	TYPE	MINIMUM FLOW GPM	MAXIMUM FLOW (GPM)	DESIGN FLOW (GPM)	PRESSURE DROP DESIGN (PSI)	SIZE (IN)	LENGTH (IN)	NOTES
BFP-1	MAKE-UP WATER	FCIS 375	REDUCED PRESSURE	10	250	200	8	3	45	1, 2, 3, 4
BFP-2	DOMESTIC WATER	FCIS 975XL2	REDUCED PRESSURE	1	80	60	8	1-1/2	26	1, 2, 3, 4
NOTES:										
1 SCHEDULE BASED ON WILKINS										

1. SCHEDULE BASED ON WILKINS.

2. ACCEPTABLE MANUFACTURERS INCLUDE: ZURN-WILKINS, WATTS, FEBCO, AMES. 3. CONNECTIONS TO DOMESTIC WATER SYSTEM SHALL BE LEAD FREE AND MEET THE REQUIREMENTS OF NSF/ANSI 61.

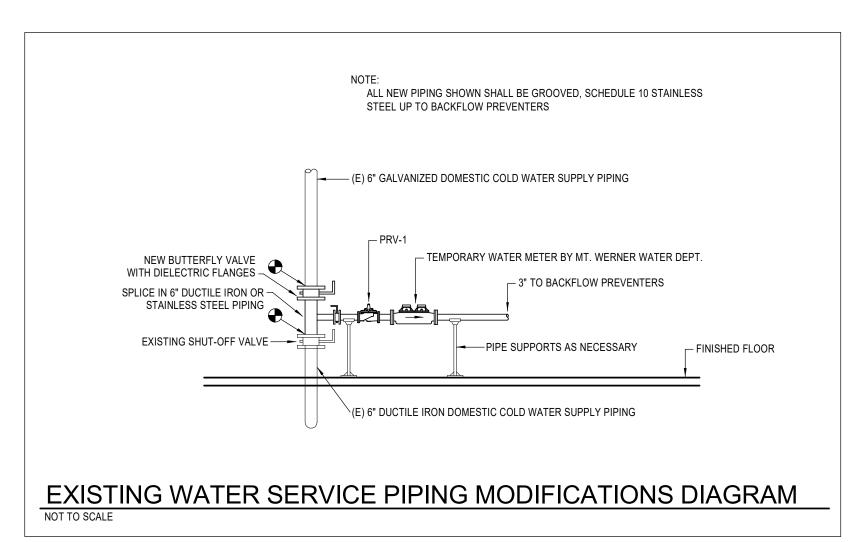
4. LENGTH INCLUDES STRAINER AND SHUT-OFF VALVE.

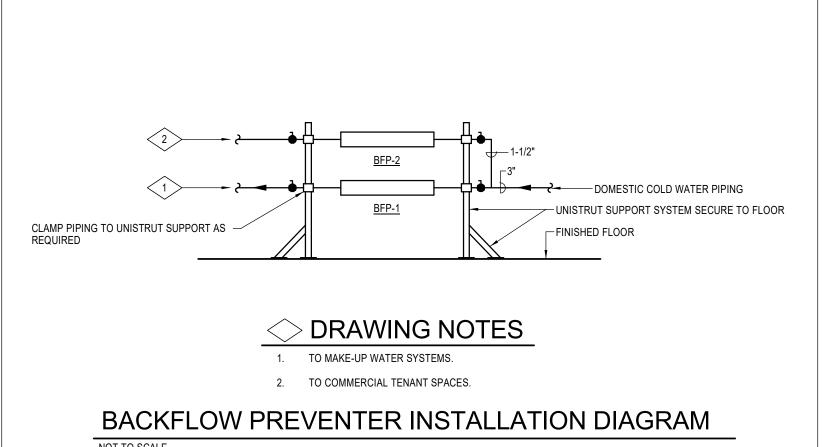
WATER PRESSURE REDUCING VALVE SCHEDULE									
SYMBOL	MODEL	SIZE (IN)	DESIGN FLOW GPM	MINIMUM FLOW GPM	INLET PRESSURE	OUTLET PRESSURE	FALLOFF PRESSURE	NOTES	
					(PSIG)	(PSIG)	(PSIG)		
PRV-1	ACV-115	3	200	1	110	65	5	1, 2	
NOTES:									
1 FOUIPMENT SCHEDUI E BASED ON: WATTS									

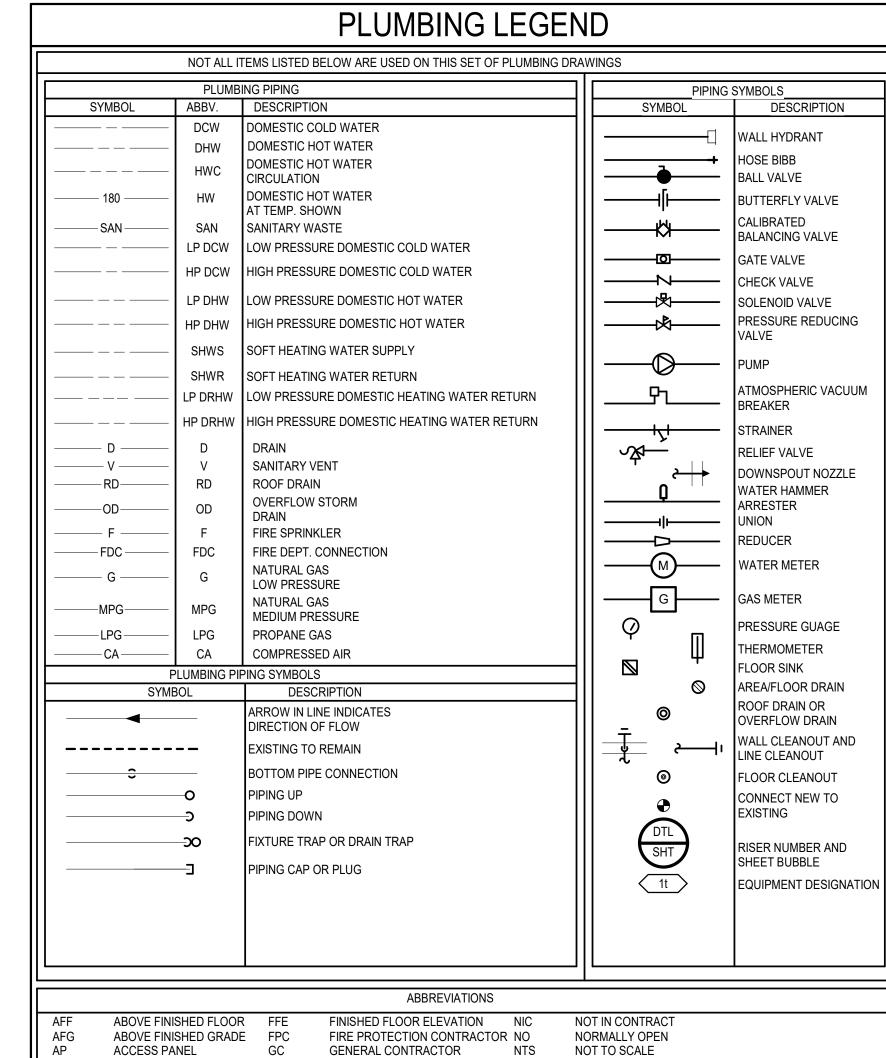
1. EQUIPMENT SCHEDULE BASED ON: WATTS. 2. ACCEPTABLE MANUFACTURERS INCLUDE: WILKINS.

SPECIFICATION:

ALL BRONZE, SPRING AND DIAPHRAGM, MANUAL ADJUSTMENT FOR OUTLET WATER PRESSURE, 2" AND SMALLER SHALL HAVE FEMALE THREAD CONNECTIONS. 2-1/2" AND LARGER SHALL HAVE FLANGED CONNECTIONS. PROVIDE WITH IN-LINE INLET STRAINER. VALVES SHALL BE SUITABLE FOR WATER PRESSURES UP TO 300PSI.







APPLICABLE CODE STANDARDS 2021 INTERNATIONAL BUILDING CODE

NOTE:

**EXISTING** 

2021 INTERNATIONAL FIRE CODE

INVERT ELEVATION

NORMALLY CLOSED

MECHANICAL CONTRACTOR

LINE CLEANOUT

MANHOLE

2021 INTERNATIONAL MECHANICAL CODE 2021 INTERNATIONAL PLUMBING CODE

BACKFLOW PREVENTER IE

ELECTRICAL CONTRACTOR (N)

DOWNSPOUT NOZZLE

ELEVATION FLOOR CLEAN OUT

2021 INTERNATIONAL ENERGY CONSERVATION CODE 2021 INTERNATIONAL FUEL GAS CODE

VIR

WCO

RELOCATED

VALVE IN RISER

**TYPICAL** 

SURFACE CLEAN OUT

VET THROUGH ROOF

WALL CLEAN OUT



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> **REVIEWED** COMPLIANCE 02/07/2024

STEAMBOAT GRAND
COMMERCIAL TENANTS TEMPORARY
DOMESTIC WATER SYSTEM

DATE OWNER REVIEW 10/13/2023 FOR PERMIT

> PROJECT #: 23295 DESIGNED: MAB CHECKED: KVB

PLUMBING LEGEND SCHEDULES AND **DIAGRAMS** 



# DIVISION 220000 - PLUMBING SPECIFICATIONS

### BASIC MECHANICAL REQUIREMENTS

- QUALITY ASSURANCE: 1. IF MANUFACTURER'S MATERIAL OR EQUIPMENT IS LISTED IN SCHEDULES OR ON DRAWINGS, THEY 1. KEEP IN CUSTODY DURING ENTIRE PERIOD OF CONSTRUCTION, A CURRENT SET OF DOCUMENTS A. WELDING MATERIALS AND LABOR SHALL CONFORM TO ASME CODE FOR PRESSURE PIPING AND ARE TYPES TO BE PROVIDED FOR ESTABLISHMENT OF SIZE, CAPACITY, GRADE, AND QUALITY. IF OTHER ACCEPTABLE MANUFACTURERS ARE USED, COST OF ANY CHANGE IN CONSTRUCTION
- REQUIRED BY THEIR USE SHALL BE BORNE BY CONTRACTOR. 2. EQUIPMENT SHALL CONFORM TO STATE AND/OR LOCAL ENERGY CONSERVATION STANDARDS.
- 3. COMPLY WITH RULES AND REGULATIONS OF LOCAL UTILITY COMPANIES. INCLUDE COST OF VALVES, VALVE BOXES, METER BOXES, METERS, ACCESSORY EQUIPMENT REQUIRED FOR

### INTENT AND INTERPRETATIONS 1. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO RESULT IN A COMPLETE

- MECHANICAL INSTALLATION IN COMPLETE ACCORDANCE WITH ALL APPLICABLE LOCAL CODES AND
- 2. DRAWINGS ARE DIAGRAMMATIC IN CHARACTER AND DO NOT NECESSARILY INDICATE EVERY REQUIRED PIPE, OFFSET, TRANSITION, ETC. ITEMS NOT SPECIFICALLY MENTIONED IN THE SPECIFICATION OR NOTED ON THE DRAWINGS, BUT WHICH ARE NECESSARY TO MAKE A COMPLETE 3. FURNISH EQUIPMENT WARRANTIES TO OWNER. WORKING INSTALLATION, SHALL BE INCLUDED.
- BINDING AS THOUGH CALLED FOR IN BOTH. IF THERE IS A CONFLICT IN THE CONTRACT DOCUMENTS, THE MORE DEMANDING AND COSTLY DESIGN SHALL BE SELECTED FOR BIDDING PURPOSES. THE CONTRACTOR SHALL IMMEDIATELY PRESENT THE CONFLICT FOUND IN THE CONTRACT DOCUMENTS TO THE ARCHITECT/ENGINEER FOR RESOLUTION. IF THE RESOLUTION FAVORS A LESS COSTLY DESIGN, THE CONTRACTOR WILL BE REQUIRED TO REIMBURSE THE
- 4. DRAWINGS SHALL NOT BE SCALED FOR ROUGH-IN MEASUREMENTS OR USED AS SHOP DRAWINGS. 1. DO NOT COVER UP OR ENCLOSE WORK UNTIL INSPECTED. TESTED. AND APPROVED. ANY WORK WHERE DRAWINGS ARE REQUIRED FOR THESE PURPOSES OR HAVE TO BE MADE FROM FIELD MEASUREMENTS, TAKE THE NECESSARY MEASUREMENTS AND PREPARE THE DRAWINGS.
- 5. BEFORE ANY WORK IS INSTALLED, DETERMINE THAT EQUIPMENT WILL PROPERLY FIT THE SPACE, THAT REQUIRED CLEARANCES CAN BE MAINTAINED AND THAT EQUIPMENT CAN BE LOCATED WITHOUT INTERFERENCES BETWEEN SYSTEMS, WITH STRUCTURAL ELEMENTS, OR WITH THE WORK OF OTHER TRADES.
- 6. IF CONFLICTS ARE DISCOVERED IN CONTRACT DOCUMENTS AS WORK PROGRESSES, SUBMIT A SET OF DRAWINGS MARKED WITH RED PENCIL SHOWING RECOMMENDED MODIFICATIONS TO THE 2. ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.
- 7. CONTRACTOR SHALL COORDINATE WITH ALL OWNER SUPPLIED EQUIPMENT PRIOR TO ROUGH-IN. INSTALLATION: ENSURE ALL EQUIPMENT CONNECTIONS ARE PROVIDED FOR AND THAT THE INSTALLATION WILL MEET ALL LOCAL AND NATIONAL CODE REQUIREMENTS.
- JOB CONDITIONS: CONFER. COOPERATE. AND COORDINATE WORK WITH OTHER TRADES. COORDINATE CEILING CAVITY SPACE CAREFULLY WITH ALL TRADES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND HAVE CONTROL OVER CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES AS WELL AS COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT, UNLESS THE CONTRACT DOCUMENTS GIVE OTHER SPECIFIC INSTRUCTIONS CONCERNING THESE MATTERS.
- PERMITS AND FEES: 1. ARRANGE AND PAY FOR ALL INSPECTIONS, PERMITS, LICENSES, CERTIFICATES, AND FEES REQUIRED IN CONNECTION WITH WORK.

### SUBMITTALS AND SHOP DRAWINGS:

- 1. CONFORM TO REQUIREMENTS OF DIVISION 1 AND FOLLOWING PARAGRAPHS. 2. SUBMITTALS SHALL INCLUDE CATALOG CUT-SHEETS AND MANUFACTURER'S DATA SHEETS
- 3. PRIOR TO ORDERING EQUIPMENT OR BEGINNING INSTALLATION WORK, ASSEMBLE, PREPARE, AND FURNISH SUBMITTALS AND SHOP DRAWINGS REQUIRED FOR PROJECT. FURNISH SUBMITTALS AND SHOP DRAWINGS AS REQUIRED BY INDIVIDUAL SECTIONS OF SPECIFICATIONS.
- 4. CONTRACTOR SHALL THOROUGHLY CHECK SUBCONTRACTORS' OR VENDORS' SUBMITTALS AND SHOP DRAWINGS AND, AFTER APPROVING THEM, SUBMIT THEM FOR REVIEW. SUBMITTALS AND SHOP DRAWINGS THAT DO NOT BEAR CONTRACTOR'S REVIEW STAMP WILL BE RETURNED NOT REVIEWED.
- 5. IF DISCREPANCIES BETWEEN SUBMITTALS, SHOP DRAWINGS, AND CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SUBMITTALS AND SHOP DRAWINGS ARE REVIEWED, REQUIREMENTS OF CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE. SUBMITTALS AND SHOP DRAWINGS WHICH ARE SUBMITTED, BUT WHICH ARE NOT REQUIRED BY CONTRACT DOCUMENTS, WILL BE RETURNED NOT REVIEWED.
- 6. SUBMITTALS AND SHOP DRAWINGS SHALL IDENTIFY SPECIFIC EQUIPMENT WITH NUMBERS OR LETTERS IDENTICAL TO THOSE LISTED OR SCHEDULED ON THE DRAWINGS OR SPECIFICATIONS.

### BASIC MECHANICAL REQUIREMENTS (CONTINUED)

- RECORD DOCUMENTS:
- UPON COMPLETION OF WORK, SUBMIT THE COMPLETE SET OF RECORD DOCUMENTS TO THE ARCHITECT.

INDICATING CHANGES THAT HAVE BEEN MADE TO THE CONTRACT DOCUMENTS.

- PROTECTION OF EQUIPMEN 1. PROTECT MATERIALS AND EQUIPMENT FROM PHYSICAL DAMAGE, CONSTRUCTION DIRT, AND THE C. ALL PIPING MATERIALS SHALL COMPLY WITH LOCAL CODES ELEMENTS FROM TIME OF SHIPMENT TO TIME INSTALLATION IS ACCEPTED BY OWNER.
- 1. GUARANTEE MATERIALS, WORKMANSHIP, AND OPERATION OF EQUIPMENT INSTALLED FOR PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF ENTIRE WORK. REPAIR OR REPLACE ANY PART OF WORK WHICH SHOWS DEFECT DURING THAT TIME.
- 2. BE RESPONSIBLE FOR DAMAGE TO PROPERTY OF OWNER OR TO WORK OF OTHER CONTRACTORS DURING CONSTRUCTION AND GUARANTEE PERIOD.

REQUIRING ADJUSTMENT OR SERVICING.

- MECHANICAL EQUIPMENT WIRING AND CONNECTIONS 3. DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY. WHATEVER IS CALLED FOR IN EITHER IS 1. VOLTAGE CHARACTERISTICS SHALL BE AS IN ELECTRICAL DIVISION OF SPECIFICATIONS AND ON ELECTRICAL DRAWINGS.
  - **TEMPORARY FACILITIES:** 1. USE OF EXISTING EQUIPMENT FOR TEMPORARY HEATING OR COOLING: DO NOT USE NEW OR EXISTING BUILDING EQUIPMENT WITHOUT WRITTEN PERMISSION FROM OWNER.

ENCLOSED OR COVERED UP BEFORE SUCH APPROVAL SHALL BE UNCOVERED, TESTED, AND

- ACCESS DOORS FURNISH HINGED STEEL ACCESS DOORS WITH CONCEALED LATCH, WHETHER SHOWN OR NOT, IN D. MAINTAIN FOLLOWING PIPE SLOPES UNLESS OTHERWISE NOTED ON DRAWINGS:
- ACCESS DOOR SHALL BE SIZE OF EQUIPMENT TO BE REMOVED OR 24" BY 24" IF USED FOR SERVICE GREASE WASTE: 1/4" DOWN PER 1'-0" IN DIRECTION OF FLOW.

ARRESTERS, AIR VENTS, MOTORS, FANS, BALANCING VALVES, OR OTHER OPERATING DEVICES

- WORKMANSHIP SHALL BE FIRST QUALITY. APPEARANCE OF WORK SHALL BE OF EQUAL IMPORTANCE TO ITS MECHANICAL OPERATION. LACK OF QUALITY WORKMANSHIP SHALL BE REASON FOR REJECTION OF SYSTEM IN PART OR IN WHOLE.
- 2. INSTALL SO THAT ALL VALVES AND EQUIPMENT CAN BE EASILY ACCESSED AND SERVICED BY ADEQUATE CLEARANCE, INSTALLATION OF ACCESS DOORS, UNIONS IN PIPING, OR OTHER
- METHODS. 3. COMPLETE INSTALLATION SHALL FUNCTION SMOOTHLY AND NOISELESSLY.
- 4. INSTALL EQUIPMENT AND MATERIALS PER MANUFACTURERS' RECOMMENDATIONS AND LOCAL
- CODES OR REGULATIONS. 5. PLACE OR REPLACE ALL EQUIPMENT NAMEPLATES WHERE THEY CAN BE SEEN AND READ WITHOUT
- 6. FLUSH PIPES FREE OF FOREIGN SUBSTANCES BEFORE INSTALLING VALVES OR MAKING FINAL CONNECTIONS. CLEAN ALL PIPING AND EQUIPMENT.

### <u>PIPE AND PIPE FITTINGS</u>

- LITY ASSURANCE APPLICABLE STATE LABOR REGULATIONS.
- B. USE WELDERS FULLY QUALIFIED AND LICENSED BY STATE AUTHORITIES. FURNISH CERTIFICATION FROM APPROVED TESTING AGENCY OR NATIONAL CERTIFIED PIPE WELDING BUREAU THAT WELDERS PERFORMING WORK ARE CERTIFIED.
- UNIONS AND COUPLINGS A. 2" AND SMALLER: 125 PSI CAST IRON FOR THREADED FERROUS PIPING; BRONZE FOR COPPER OR BRASS PIPE, SOLDERED JOINTS.
- B. 2-1/2" AND LARGER: 150 PSI FORGED STEEL FLANGES, RAISED FACE WITH WELDING NECK, FOR FERROUS PIPING: BRONZE FLANGES FOR COPPER OR BRASS PIPING. GASKETS FOR WATER PIPING TO 140 F EQUAL TO GARLOCK PREMIUM GRADE STYLE 22 RED RUBBER, 1/16" THICK. GASKETS FOR 1/16" THICK. GASKETS FOR CONDENSATE, AND WATER ABOVE 140 F AS MANUFACTURED BY
- C. DIELECTRIC UNIONS AND FLANGES: EPCO OR EQUAL HAVING PROPER GASKET MATERIAL FOR CONNECTION OF DISSIMILAR METALS. UNIONS, 2" AND SMALLER; DIELECTRICALLY GASKETED FLANGES, 2-1/2" AND LARGER. USE DIELECTRIC CONNECTIONS WHEREVER JOINING DISSIMILAR METALS IN OPEN DOMESTIC WATER SYSTEMS.
- A. VERIFY LOCATION(S) OF ALL AIR PLENUMS. ALL PIPING AND SUPPORT MATERIALS INSTALLED IN AIR PLENUMS SHALL BE PLENUM-RATED. DO NOT INSTALL SPECIFIED NON-PLENUM-RATED MATERIALS IN AIR PLENUMS; USE PLENUM-RATED OPTIONS.
- B. ROUTE PIPING IN ORDERLY MANNER AND MAINTAIN PROPER SLOPE.
- C. CONCEAL PIPING IN WALLS OR ABOVE CEILING UNLESS OTHERWISE NOTED.
- WALLS AND PLASTER OR GYPSUM BOARD CEILINGS FOR ACCESS TO CONCEALED VALVES, SHOCK SANITARY WASTE 2-1/2" AND SMALLER: 1/4" DOWN PER 1'-0" IN DIRECTION OF FLOW.

COOLING COIL CONDENSATE DRAIN PIPING: 1/8" DOWN PER LINEAR FOOT IN THE DIRECTION OF

- SANITARY WASTE 3" AND LARGER: 1/8" DOWN PER 1'-0" IN DIRECTION OF FLOW.
- SANITARY VENT PIPING, ALL SIZES: GRADED AND CONNECTED AS TO DRIP BACK BY GRAVITY TO THE DRAINAGE PIPE IT SERVES
- STORM DRAIN PIPING, ALL SIZES: 1/8" DOWN PER 1'-0" IN DIRECTION OF FLOW. E. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE OR
- CONNECTED EQUIPMENT. F. PROVIDE CLEARANCE FOR INSTALLATION OF INSULATION AND FOR ACCESS TO VALVES, AIR VENTS
- G. INSTALL SAME TYPE PIPING MATERIAL SPECIFIED FOR INSIDE BUILDING TO 5'-0" OUTSIDE BUILDING.
- H. MAKE CONNECTIONS TO EQUIPMENT WITH UNIONS OR FLANGES

### PIPE AND PIPE FITTINGS (CONTINUED) EL PIPE CONNECTIONS

- A. 2" AND SMALLER THREADED; 2-1/2" AND LARGER WELDED.
- B. DO NOT USE MITERED AND WELDED ELBOWS IN LIEU OF FITTINGS.
- C. DIE CUT THREADED JOINTS WITH FULL CUT STANDARD TAPER PIPE THREADS WITH 1/2" WIDE WHITE TEFLON PIPE JOINT SEALANT TAPE APPLIED TO MALE THREADS ONLY.
- D. USE ONLY MALLEABLE IRON THREADED PIPE FITTINGS FOR GAS PIPING
- E. USE BUTT WELD FITTINGS FOR WELDED STEEL PIPES. USE OXYACETYLENE OR ELECTRIC ARC

# CAST IRON PIPE CONNECTIONS

- A. JOINTS FOR BELL AND SPIGOT PIPES: NEOPRENE GASKETING SYSTEM WITH "TY-SEAL" WATER SOLUBLE LUBRICANT.
- NATURAL GAS EQUAL TO GARLOCK BLUE-GARD STYLE 3000 SYNTHETIC FIBER WITH NITRILE BINDER, B. JOINTS FOR PLAIN END PIPE ABOVE GRADE: STAINLESS STEEL BAND TYPE GASKET AND CLAMP MECHANICAL FASTENER.

## C. USE HUBLESS PIPING ABOVE GRADE ONLY

COPPER PIPE CONNECTIONS A. 2-1/2" AND SMALLER: USE 15% SILVER BRAZING ALLOY AND SILVER BRAZING FLUX ON BELOW-GRADE JOINTS. USE 95% TIN, 5% ANTIMONY LEAD-FREE SOLDER AND ASTM B813-91 NON-CORROSIVE STM 1.0

FLUX ON JOINTS. APPLY FLUX ON CLEANED END OF PIPE AND INSIDE FITTINGS WITH SMOOTH EVEN

B. 3" AND LARGER: USE 15% SILVER BRAZING ALLOY AND SILVER BRAZING FLUX. APPLY FLUX ON CLEANED END OF PIPE AND INSIDE FITTINGS WITH SMOOTH EVEN COATS.

## APPLICATION OF PIPING SYSTEMS:

SERVICE	MATERIAL
EQUIPMENT DRAINS AND OVERFLOWS	COPPER, TYPE M OR DWV, HARD DRAWN
SANITARY DRAIN AND VENT ABOVE SLAB-ON-GRADE	COPPER, TYPE DWV, HARD DRAWN; CAST IRON; SCH 40 PV (PVC NOT ALLOWED IN ANY RETURN AIR PLENUM)
SANITARY DRAIN AND VENT, BELOW SLAB-ON-GRADE INSIDE BUILDING	CAST IRON; SCHEDULE 40 PVC (PVC NOT ALLOWED IN ANY RETURN AIR PLENUM)
STORM DRAIN INSIDE BUILDING	CAST IRON; SCHEDULE 40 PVC (PVC NOT ALLOWED IN ANY RETURN AIR PLENUM)
DOMESTIC WATER UNBURIED	COPPER, TYPE L, HARD DRAWN CROSS-LINKED POLYETHYLENE (PEX) ASTM F877 FOR DOMESTIC HOT AND COLD WATER
DOMESTIC WATER BURIED	COPPER, TYPE K, HARD DRAWN CROSS-LINKED POLYETHYLENE (PEX) ASTM F877 FOR DOMESTIC HOT AND COLD WATER
DOMESTIC WATER EXPOSED AT FIXTURES	SEAMLESS BRASS PIPE, CHROME PLATED
GAS PIPING	SCHEDULE 40 BLACK STEEL

### CAST IRON PIPING AND FITTINGS A. CAST IRON PIPING SHALL BEAR THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE (CISPI) AND LISTED BY NSF INTERNATIONAL.

B. HUBLESS STANDARD DUTY CAST IRON PIPE AND FITTINGS SHALL CONFORM TO CISPI 310 AND LISTED BY NSF INTERNATIONAL.

UNDERGROUND PIPE INSTALLATION A. PROTECT STEEL PIPE INSTALLED BELOW GRADE AND TO MINIMUM 6" ABOVE GRADE WITH FACTORY APPLIED COVERING, PRO-CO FELT AND PIPE LINE ENAMEL NO. 4 DOUBLE WRAP OR X-TRU-COAT PLASTIC COATING. PROTECT FIELD JOINTS ON STEEL PIPE BY WITH TAPECOAT COMPANY PRIME COAT AND ONE LAYER OF TAPECOAT #20 HEAT APPLIED, 62 MIL TAPE PER MANUFACTURER'S RECOMMENDATIONS.

- B. PROVIDE THRUST BLOCK AT ALL DIRECTION CHANGES ON PRESSURE PIPE.
- C. BURY ALL OUTSIDE WATER PIPING MINIMUM 5'-0" BELOW GRADE TO TOP OF PIPE
- D. BURY ALL OUTSIDE GAS PIPING MINIMUM 1'-6" BELOW GRADE TO TOP OF PIPE.

# **DIVISION 220000 - PLUMBING SPECIFICATIONS**

A. FURNISH MANUFACTURER'S SUBMITTAL DATA FOR VALVES.

- B. VALVES SHALL BE OF SAME MANUFACTURER WHERE POSSIBLE. VALVE SEATS AND MATERIALS SHALL INSERTS BE SUITABLE FOR SERVICE INTENDED.
- ACCEPTABLE MANUFACTURES A. BALL VALVE: APOLLO, KITZ, NIBCO.
- B. GAS VALVE: DEZURIK
- A. UNLESS OTHERWISE INDICATED, VALVES SHALL BE SUITABLE FOR 200 PSIG WOG AND 250
- A. BALL VALVE, ALL SIZES: TWO-PIECE BRONZE OR FORGED BRASS BODY WITH PTFE SEATS, PRESSURE C. WALL SUPPORT, PIPE SIZES TO 3": CARBON STEEL HOOK. RATED TO 150 SWP/600 WOG, FULL PORT, BLOWOUT-PROOF STEM AND POSITIVE SHUT-OFF. PACKING GLAND WITH PTFE PACKING. STEM EXTENSION WHERE INSULATED, LOCKABLE HANDLE.

# A. FULL PORTED BALL VALVE WITH BALANCING STOPS.

- A. 2" AND SMALLER: BRONZE, SWING DISC, SOLDER OR THREADED ENDS.
- B. 2-1/2" AND LARGER: IRON BODY, BRONZE TRIM, SWING DISC, RENEWABLE DISC AND SEAT, FLANGED
- C. SPRING LOADED, SILENT TYPE, CAST IRON BODY WITH BUNA-N SEATS SUITABLE FOR 250F. WAFER AND DISCS OF ALUMINUM, BRONZE, OR DUCTILE IRON. SHAFT AND SPRINGS TYPE 316 STAINLESS

# D. IRON OR FORGED BRASS BODY INDOORS, BRONZE OR FORGED BRASS BODY OUTDOORS.

- E. FORGED BRASS BALL VALVE. CERTIFIED TO CSA, ASME B16.33, AND UL FOR GAS PIPING SYSTEMS.
- A. BALL VALVE WITH NIPPLE, CAP, HOSE THREAD.
- A. PROVIDE VALVES SUITABLE TO CONNECT TO ADJOINING PIPING AS SPECIFIED FOR PIPE JOINTS.
- USE PIPE SIZE VALVES. B. 2" AND SMALLER: THREADED OR SOLDERED.
- C. 2-1/2" AND LARGER: FLANGED.
- D. SOLDER OR SCREW TO SOLDER ADAPTERS FOR COPPER TUBING.
- E. PROVIDE DRAIN VALVES AT MAIN SHUT-OFF VALVES, LOW POINTS OF PIPING AND APPARATUS. F. USE SPRING LOADED CHECK VALVES AT PUMPS AND WHERE INSTALLED IN VERTICAL POSITION.

- EFERENCE STANDARDS A. PIPE SUPPORTS: ANSI B31.1, POWER PIPING
- A. MALLEABLE IRON CASE, GALVANIZED STEEL SHELL, EXPANDER PLUG FOR THREADED CONNECTION WITH LATERAL ADJUSTMENT, TOP SLOT FOR REINFORCING RODS, LUGS FOR ATTACHING TO FORMS. USE INSERTS AND ANCHORS SUITABLE FOR TYPE OF STRUCTURAL CONDITIONS AND COMPONENTS.
- PIPE HANGERS AND SUPPORTS A. HANGERS, PIPE SIZES TO 1-1/2": ADJUSTABLE STEEL RING (INSULATED PIPE) OR BAND (UNINSULATED PIPE).
- B. HANGERS, HOT PIPE SIZES 2" TO 4" AND ALL COLD PIPE SIZES: ADJUSTABLE STEEL CLEVIS.
- D. WALL SUPPORT, PIPE SIZES 4" AND OVER: WELDED STEEL BRACKET AND PIPE STRAP.
- ADJUSTABLE STEEL YOKE PIPE ROLL OR ROLLER CHAIR FOR HOT PIPE SIZES 5" AND OVER. E. VERTICAL SUPPORT: STEEL RISER CLAMP.
- ADJUSTABLE PIPE SADDLE, LOCKNUT NIPPLE, FLOOR FLANGE, CONCRETE PIER OR STEEL SUPPORT SIZED FOR PIPE ELEVATION.

F. FLOOR SUPPORT, HOT PIPE SIZES TO 4" AND ALL COLD PIPE SIZES: CARBON STEEL,

- G. FOR PIPE SIZES 1-1/2" AND SMALLER, PROTECT INSULATED HORIZONTAL PIPE AT POINT OF SUPPORT BY 180 DEGREE, 12" LONG SHEET METAL SHIELD. NO HANGER SHALL PENETRATE OR CRUSH INSULATING MATERIAL.
- H. FOR PIPE SIZES 2" AND LARGER, PROTECT INSULATED HORIZONTAL PIPE AT POINT OF SUPPORT BY 180 DEGREE, 12" LONG GALVANIZED SHEET METAL SHIELD SURROUNDING 180 DEGREE INSERT OF HIGH DENSITY CALCIUM SILICATE INSULATION OF SAME THICKNESS AS ADJOINING PIPE INSULATION. ON COLD PIPING, EXTEND INSULATION INSERT 1" BEYOND SHEET METAL SHIELD AT EACH END. OVERSIZE HANGERS TO ACCOMMODATE SHIELDED INSERTS. NO HANGER SHALL PENETRATE OR CRUSH INSULATING MATERIAL. AT CONTRACTOR'S OPTION, PRE-MANUFACTURED THERMAL HANGER SHIELDS WITH INTEGRAL VAPOR BARRIER, EQUIVALENT TO VALUE ENGINEERED PRODUCTS PRO-SHIELD OR PRO-SHIELD N/T, MAY BE
- UTILIZED. FOR EXTERIOR INSTALLATIONS USE WEATHER SHIELD WITH ALUMINUM JACKET. I. PROVIDE COPPER PLATED HANGERS AND SUPPORTS FOR COPPER PIPING WHERE PIPING AND HANGER ARE IN DIRECT CONTACT WITH ONE ANOTHER.

### PIPE HANGER RODS A. THREADED STEEL.

## PIPE HANGERS AND SUPPORTS

UPPORT HORIZONTAL PIPING AS FOLLOWS:						
NOMINAL	MA	XIMUM HAN	HANGER ROD			
PIPE SIZE	STEEL	COPPER	SCHEDULE 40 PVC	DIAMETER		
1-1/2" AND SMALLER	6'-0"	6'-0"	4'-0"	3/8"		
2" TO 4"	10'-0"	10'-0"	4'-0"	3/8"		
5" TO 8"	10'-0"	10'-0"	4'-0"	1/2"		

- A. INSTALL HANGERS TO PROVIDE MINIMUM 1/2" CLEAR SPACE BETWEEN FINISHED COVERING AND ADJACENT WORK, EXCEPT WHERE UL LISTING FOR FIRE RATED CEILING REQUIRES 4" MINIMUM SEPARATION.
- B. SUPPORT HORIZONTAL CAST IRON HUB AND SPIGOT PIPE WITHIN 1'-0" OF EACH HUB AND WITH 5'-0" MAXIMUM SPACING BETWEEN HANGERS, EXCEPT THAT PIPE EXCEEDING 5'-0" IN LENGTH SHALL BE SUPPORTED AT INTERVALS NO GREATER THAN 10'-0". SUPPORT HORIZONTAL NO-HUB CAST IRON PIPE RUNS AT EACH FITTING AND AT EACH LENGTH OF PIPE LESS THAN 4'-0" WITH AT LEAST ONE HANGER. SUPPORT HORIZONTAL NO-HUB PIPES LONGER THAN 4'-0" ON BOTH SIDES OF EACH
- C. PLACE HANGER WITHIN 1'-6" OF EACH ELBOW OR TEE.
- D. SUPPORT VERTICAL PIPING AT EVERY FLOOR, SUPPORT VERTICAL SOIL PIPE AT EACH FLOOR AT HUB. SUPPORT NO-HUB PIPE SO WEIGHT IS CARRIED FROM PIPE TO SUPPORT AND NOT FROM JOINT TO SUPPORT. SUPPORT 2" AND SMALLER PIPES MIDWAY BETWEEN FLOORS WITH RESTRAINTS ADEQUATE TO PREVENT PERPENDICULAR AXIAL MOVEMENT.
- E. SUPPORT EACH BRANCH PIPE TO EQUIPMENT AT TAKE-OFF AND WITHIN 12" OF
- F. PROVIDE GALVANIZED STEEL INSULATION PROTECTION SADDLES AT ALL SUPPORT POINTS FOR INSULATED PIPES ON TRAPEZE HANGERS.
- G. ANCHOR ALL SUPPORTING LUGS OR GUIDES TO BUILDING STRUCTURE.
- H. ANCHOR AND SUPPORT WATER CONNECTIONS TO PLUMBING FIXTURES, IN PIPE CHASES OR WALLS, TO FIXTURE CARRIERS OR WASTE AND VENT PIPING. SUPPORTS SHALL BE SIMILAR TO ADJUSTO-SPACER SYSTEM AS MANUFACTURED BY THOMAS INDUSTRIES. PLACE ADJUSTO-SPACERS EVERY 10'-0" ON VERTICAL PIPE AND EVERY 5'-0" ON HORIZONTAL PIPE. INSULATE PIPE AREA IN CONTACT WITH ADJUSTO-SPACERS WITH DUCT TAPE, FELT LINER, OR PLASTIC LINER MATERIAL.

# SUPPORTS, ANCHORS, SEALS (CONTINUED)

- A. WHERE EXPOSED PIPING PASSES THROUGH WALLS, FLOORS, ROOFS, PROVIDE CHROME PLATED OR STAINLESS STEEL ESCUTCHEON FOR PIPING.
- B. FLASH AND COUNTERFLASH WHERE MECHANICAL EQUIPMENT PASSES THROUGH WEATHER-OR WATER-PROOFED WALLS, FLOORS, ROOFS. C. PROVIDE PRE-MANUFACTURED PIPE BOOT FOR VENT AND/OR WASTE STACKS PASSING THROUGH ROOF. SECURE BOOT TO PIPE WITH STAINLESS STEEL BAND CLAMP OR OTHER
- CLAMPING DEVICE AS APPROVED BY ROOFING MANUFACTURER, RE: ARCHITECT. A. PROVIDE PIPE SLEEVES TO APPLICABLE TRADES WITH PRECISE ROUGH-IN LOCATIONS FOR PIPES PASSING THROUGH CONCRETE OR MASONRY CONSTRUCTION. UNLESS OTHERWISE
- BARE PIPE AND SLEEVE. WHERE PIPE PASSES THROUGH CONCRETE FLOOR, EXTEND SLEEVE MINIMUM 1" ABOVE FINISHED FLOOR. B. SLEEVES IN BEARING WALLS, WATERPROOF MEMBRANE FLOORS, WET AREAS SHALL BE STEEL PIPE OR CAST IRON PIPE. SLEEVES IN NON-BEARING WALLS, FLOORS, CEILINGS SHALL BE

INDICATED, SLEEVES SHALL BE OF SIZE TO PROVIDE FROM 1/4" TO 1" CLEARANCE BETWEEN

STEEL PIPE OR CAST IRON PIPE. C. WHERE UNINSULATED PIPES PENETRATE BEARING WALLS (EXCLUDING FOUNDATIONS), FIRE RATED WALLS, PARTITIONS, FLOORS, PACK AND SEAL ENTIRE SPACE BETWEEN PIPE AND SLEEVE WITH DOW CORNING 3-6548 SILICONE RTV FOAM, OR 1" MINIMUM THICKNESS OF 3M

FIRE BARRIER, CP-25 CAULK, OR 303 PUTTY ON EACH SIDE OF OPENING.

ENCASE ALL INSULATED PIPES PENETRATING FIRE WALLS AND FLOORS IN 360 DEGREE METAL-SHIELDED INSULATION INSERTS AS MANUFACTURED BY VALUE ENGINEERED PRODUCTS. PACK AND SEAL SPACE BETWEEN SHIELD AND SLEEVE PER PRECEDING PARAGRAPH. EXTEND INSULATION INSERT ON ALL DOMESTIC WATER LINES 1" BEYOND SHEET METAL SHIELD.

E. PIPE TO SLEEVE CLOSURE FOR PIPES PENETRATING FOUNDATIONS, WATERPROOFING

### MEMBRANE FLOORS, WET AREAS SHALL BE "LINK-SEAL." METERS AND GAUGES

- A. FURNISH MANUFACTURER'S SUBMITTAL DATA FOR: THERMOMETERS, PRESSURE GAUGES, FLOW MEASURING DEVICES, TEST PLUGS.
- PORTABLE INSERTION TYPE THERMOMETERS A. 5" STEMS, ACCURATE WITHIN 1% OVER DIAL RANGE, HERMETICALLY SEALED. CONSTANT READ THERMOMETERS
- FILLED TUBE, SEPARABLE SOCKET CONNECTION, EXTENSION NECK TO CLEAR INSULATION, SWIVEL ANGLE STEM, FULLY ADJUSTABLE, ACCURATE WITHIN 1% OVER DIAL RANGE. PORTABLE INSERTION TYPE PRESSURE GAUGES C. 4-1/2" DIAL, PHOSPHOR-BRONZE BOURDON TUBE, STAINLESS STEEL MOVEMENT, ACCURATE

B. MERCURY FREE THERMOMETER: 9" ALUMINUM CASE. NON-TOXIC HEAT TRANSFER MEDIUM-

- WITHIN 1/2% OVER SCALE RANGE. A. 4-1/2" OR 5" DIAL, STANDARD BLACK CASE, BRASS PRESSURE SNUBBER AND NEEDLE VALVE. ACCURATE WITHIN 1% OVER MIDDLE HALF OF SCALE RANGE, 2% OVER REMAINDER.
- FLOW MEASURING DEVICE A. ORIFICE OR VENTURI TYPE, FACTORY ASSEMBLED WITH 300 PSIG RATED BALL VALVE OR 125 PSIG RATED MULTI-TURN GLOBE VALVE WITH ADJUSTABLE MEMORY STOP. SCHRADER TYPE PRESSURE TEST PORTS AND CAPS WITH PORT EXTENSIONS. CHAINED METAL TAG INDICATING LOCATION, GPM, AND METER READING.

# A. MOUNT THERMOMETERS TO BE EASILY READ FROM FLOOR.

- B. INSTALL FLOW MEASURING DEVICES PER MANUFACTURER'S RECOMMENDATIONS.
- C. FURNISH METERING STATION WITH PERMANENT METAL TAG MARKED WITH STATION DESIGNATION, GPM, METER READING FOR GPM.

## MECHANICAL IDENTIFICATION

5/8" TO 2"

2-1/2" AND LARGER

- PIPE IDENTIFICATION A. IDENTIFY EACH PIPING SYSTEM AND INDICATE DIRECTION OF FLOW WITH BAND-SECURED OR SNAP-ON PRINTED LABELS IN MECHANICAL ROOM AND OTHER EXPOSED AREAS AND PRESSURE SENSITIVE, SELF-ADHESIVE LABELS IN CONCEALED AREAS. APPLY MARKINGS AFTER PAINTING AND CLEANING OF PIPING AND INSULATION IS COMPLETED.
- B. APPLY LEGEND AND FLOW ARROWS AT VALVE LOCATIONS. AT POINTS WHERE PIPING ENTERS OR LEAVES VALVE OR METER BOX, AT NOT LESS THAN EVERY 30'-0" OF RUN OR AT LEAST ONCE IN EVERY EXPOSED LOCATION. LOCATE MARKINGS FOR MAXIMUM VISIBILITY.

2-1/2"

C. WORDING/COLOR COMBINATIONS SHALL MEET ANSI SPECIFICATIONS UNLESS COLORS ARE

SPECIFIED OTHERWISE. D. SIZES OF LETTERING AND FLOW ARROWS SHALL BE AS FOLLOWS: OUTSIDE DIAMETER OF PIPE | SIZE OF | MINIMUM LENGTH OR COVERING (INCLUSIVE) LETTER OF FLOW ARROW

C. DO NOT COVER PIPING UNTIL TESTED.

DRAINS, UNIONS.

A. ADHESIVES AND INSULATION MATERIALS: COMPOSITE FIRE AND SMOKE HAZARD RATINGS MAXIMUM 25 FOR FLAME SPREAD AND 50 FOR SMOKE DEVELOPED. ADHESIVES SHALL BE

- PIPE INSULATION A. HEAVY DENSITY ONE-PIECE FIBERGLASS, FACTORY APPLIED VAPOR BARRIER JACKET, DOUBLE SURFACE ADHESIVE SELF-SEALING LAP, "K" FACTOR 0.23 AT 75 F MEAN TEMPERATURE. INSULATION EXPOSED TO WEATHER: PROTECT INSULATION WITH WEATHERPROOF METAL JACKET. JACKET SHALL BE FACTORY APPLIED ALUMINUM, 0.016" THICK, WITH LAMINATED VAPOR BARRIER AND "Z" GROOVE WATERTIGHT SEAL. SEAL EACH JOINT WITH SNAP STRAPS CONTAINING PERMANENT PLASTIC SEALING COMPOUND. SECURE WITH 1/2" WIDE STAINLESS STEEL BANDS. INSULATE FITTINGS WITH MITERED SECTIONS OF SAME MATERIAL. SEAL JOINTS
- WITH SEALING COMPOUND AND PREFORMED ALUMINUM BANDS. . INSULATION SHALL BE CONTINUOUS THROUGH INSIDE WALLS. PACK AROUND PIPES WITH
- FIREPROOF SELF-SUPPORTING INSULATION MATERIAL, FULLY SEALED. B. FINISH INSULATION NEATLY AT HANGERS, SUPPORTS, OTHER PROTRUSIONS, AND WHERE THE INSULATION BREAKS FOR SERVICE OR ACCESS REQUIREMENTS.
- REMOVE AND REAPPLY INSULATION IF, IN OPINION OF ARCHITECT, IT HAS NOT BEEN INSTALLED IN FIRST CLASS WORKMANLIKE MANNER.
- E. REPAIR SEPARATION OF JOINTS OR CRACKING OF INSULATION DUE TO THERMAL MOVEMENT OR POOR WORKMANSHIP. INSTALLATION OF PIPE INSULATION A. SEAL LONGITUDINAL LAPS WITH VAPOR BARRIER ADHESIVE OR WITH FACTORY APPLIED DOUBLE SURFACE PRESSURE SENSITIVE ADHESIVE SYSTEM. SEAL END JOINTS WITH 3" WIDE

### PIPING WITH BENJAMIN FOSTER 30-35 SEAL FAST MASTIC. INSTALLATION OF INSULATION ON FITTINGS AND VALVES A. INSULATE FITTINGS AND VALVES WITH FIRMLY COMPRESSED FOIL-FACED FIBERGLASS

BUTT STRIPS SECURED WITH VAPOR BARRIER ADHESIVE. SEAL ALL SEAMS ON COLD WATER

- BLANKET AND 25/50 UL RATED PVC FITTING COVERS (ZESTON OR EQUAL). B. WHERE INSTALLATION OF PVC FITTING COVERS IS PROHIBITED BY LOCAL AUTHORITIES, INSULATE FITTINGS AND VALVES WITH MOLDED FIBERGLASS FITTINGS OR FIRMLY COMPRESSED FOIL-FACED FIBERGLASS BLANKET. SECURE IN PLACE WITH 20 GAUGE CORROSION RESISTANT WIRE AND APPLY SMOOTHING COAT OF INSULATING CEMENT. FINISH WITH LAYER OF GLASS CLOTH EMBEDDED BETWEEN TWO COATS OF VAPOR BARRIER MASTIC. LAP GLASS FABRIC 2" ONTO ADJACENT INSULATION.
- C. INSULATION ON FITTINGS AND VALVES SHALL BE SAME THICKNESS AS ON PIPE.

TION SCHEDULE:		
SERVICE	PIPE SIZE	THICKNESS
DOMESTIC COLD WATER	ALL	1"
DOMESTIC HOT WATER,	1-1/2" AND SMALLER	1"
DOMESTIC HOT WATER RECIRCULATION	2" AND LARGER	2"
ROOF DRAIN, OVERFLOW DRAIN PIPING (VERTICAL LEADER FROM DRAIN BOWLS, AND ALL HORIZONTAL)	ALL	1/2"
ROOF DRAIN, OVERFLOW DRAIN BOWL	ALL	1"

### TESTING AND BALANCING

- STATUS OF SYSTEMS A. DO NOT BEGIN TESTING AND BALANCING WORK UNTIL SYSTEM HAS BEEN COMPLETED AND IS IN FULL WORKING ORDER.
- B. PUT SYSTEMS AND EQUIPMENT INTO FULL OPERATION AND CONTINUE OPERATION OF SAME DURING EACH WORKING DAY OF TESTING AND BALANCING. ASCERTAIN PRELIMINARY TAB REQUIREMENTS PRIOR TO COMMENCEMENT OF WORK THROUGH REVIEW OF AVAILABLE DRAWINGS AND SPECIFICATIONS. MAKE VISUAL OBSERVATIONS AT SITE DURING CONSTRUCTION TO DETERMINE LOCATION AND SUITABILITY OF REQUIRED

## REQUIREMENTS OF WORK

CHLORINATION OF DOMESTIC WATER LINE

AND REPLACE WITH SOUND MATERIAL.

**GENERAL PIPE TESTING** 

- A. DOMESTIC CIRCULATING HOT WATER a. ADJUST MANUAL BALANCING VALVES IN SYSTEM SO ALL HOT WATER OUTLETS RECEIVE ADEQUATE SUPPLY OF HOT WATER. b. WHEN BALANCING IS DONE, MARK VALVES IN BALANCED POSITION, SET LOCKING RINGS.
- A. TEST ALL PIPING SYSTEMS. CORRECT LEAKS BY REMAKING JOINTS. REMOVE EQUIPMENT NOT ABLE TO WITHSTAND TEST PRESSURE FROM SYSTEM DURING TEST. CONSULT GOVERNING CODES FOR SPECIAL SYSTEM

B. TEST PIPING BEFORE BEING PERMANENTLY ENCLOSED.

- C. OBTAIN CERTIFICATES OF APPROVAL, ACCEPTANCE, COMPLIANCE WITH REGULATIONS OF AGENCIES HAVING JURISDICTION. SUBMIT TO OWNER.
- INTRODUCE CHLORINE OR HYPOCHLORITE TO NOT LESS THAN 50 PPM RESIDUAL CHLORINE. LET STAND FOR 24 B. FLUSH SYSTEM WITH CLEAN WATER UNTIL CHLORINE CONTENT IS REDUCED TO 1 PPM AT POINT FURTHEST FROM WHERE CHLORINE WAS INTRODUCED.
- A. HYDROSTATIC TEST WATER PIPING (NEW PIPING ONLY): HAND PUMP SYSTEM TO GREATER OF 100 PSIG OR 150% OF OPERATING PRESSURE. MAINTAIN PRESSURE UNTIL SYSTEM HAS BEEN INSPECTED FOR LEAKS BUT NOT LESS

A. STERILIZE DOMESTIC WATER SYSTEM AFTER PRESSURE TESTS HAVE BEEN COMPLETED. FLUSH ENTIRE SYSTEM,

- B. COMPRESSED AIR OR NITROGEN TEST FOR NATURAL GAS PIPING: SUBJECT PIPING SYSTEM TO REQUIRED GAS PRESSURE WITH OIL FREE AIR OR NITROGEN. SYSTEM SHALL MAINTAIN PRESSURE FOR DURATION OF SOAPY WATER TEST OF EACH JOINT. TEST PRESSURE OF 100 PSIG FOR 4 HOURS OR TEST PRESSURE OF 60 PSIG OR ABOVE FOR 24 HOURS SHOWING NO PRESSURE DROP EXCEPT THAT CAUSED BY TEMPERATURE CHANGES. DO NOT USE FLAME OR OTHER LIQUID FOR TESTING. DO NOT REPAIR DEFECTS IN GAS PIPING OR FITTINGS; REMOVE
- C. WASTE, DRAIN, VENT PIPING: FILL SYSTEM WITH WATER TO POINT OF OVERFLOW BUT NOT LESS THAN 10'-0" HEAD. MAINTAIN WATER LEVEL FOR 4 HOURS.



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OMPLIANC 02/07/2024

OWNER REVIEW 10/13/2023 01/08/2024

CHECKED: KVB

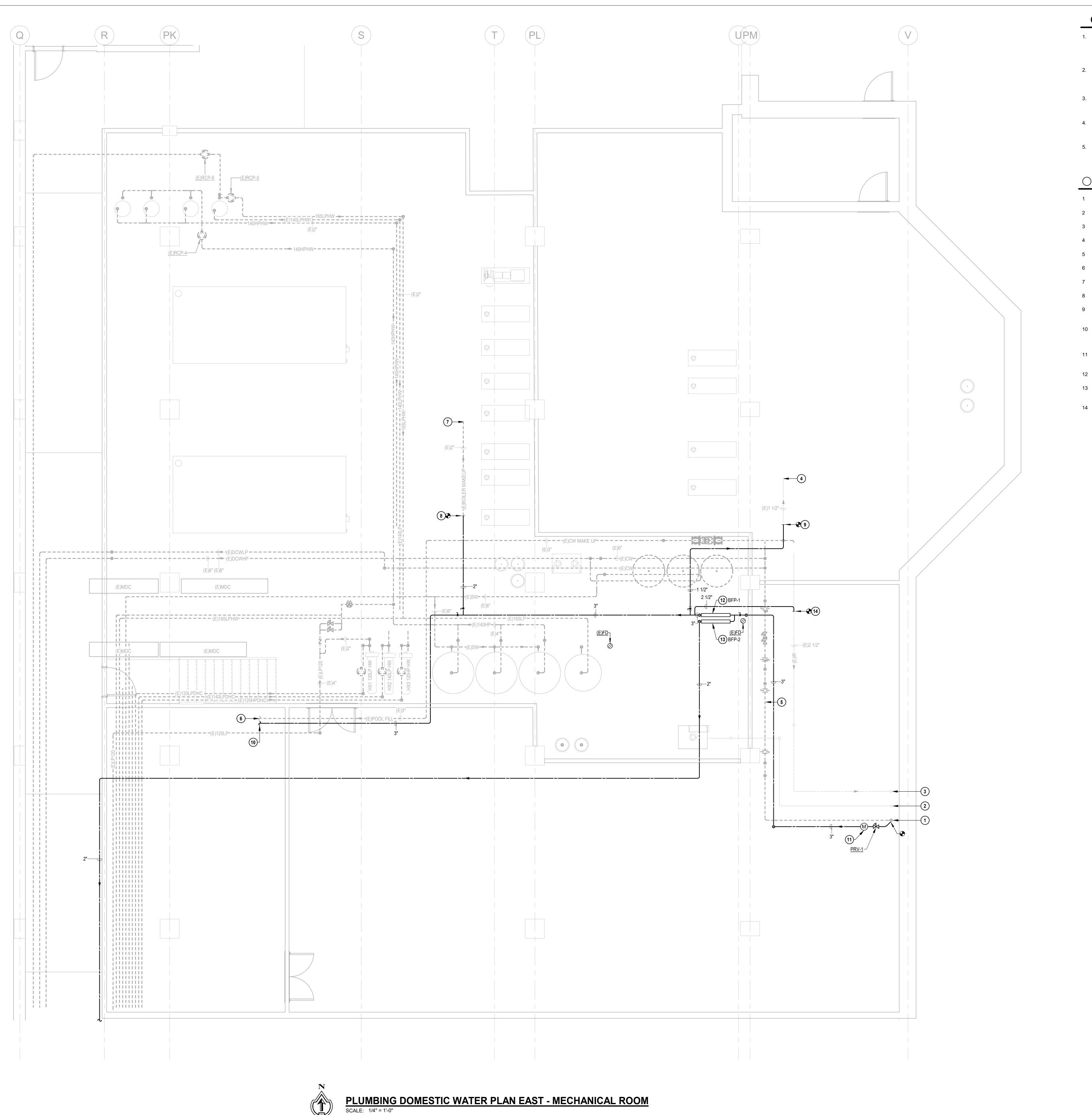
**PLUMBING** 

**SPECIFICATIONS** 

PROJECT #: 23295

DESIGNED: MAB





## **GENERAL NOTES:**

- 1. COORDINATE WORK WITH CURRENT FULL BUILDING DOMESTIC COLD AND HOT WATER PIPING REPLACEMENT PROJECT. THAT PROJECT WILL TAKE PLACE FROM APPROXIMATELY APRIL 2024 THRU DECEMBER 2024. DURING THIS CONSTRUCTION, THE BUILDINGS DOMESTIC COLD AND HOT WATER SYSTEM WLL BE SHUT DOWN.
- 2. SCOPE OF WORK TO INCLUDE MAINTAINING DOMESTIC COLD AND HOT WATER SYSTEMS FOR THE COMMERCIAL RETAIL SPACES, DURING THE PIPING REPLACEMENT PROJECT, SO THAT THEY MAY REMAIN OPEN, DURING THE PIPING REPLACEMENT PROJECT.
- 3. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS WITH ALL WORK SHOWN ON THIS PLAN, PRIOR TO THE START OF CONSTRUCTION. NOTIFY THE OWNER/ENGINEER OF ANY DISCREPANCIES.
- CONTRACTOR SHALL INSTALL PIPING SO THAT ALL NEW PIPING CAN BE SUPPORTED FROM EXISTING PIPE SUPPORTS, TRAPEZE SUPPORTS, HANGERS,
- 5. PIPE ROUTING SHOWN FOR INTENT OF PROJECT. CONTRACTOR SHALL DETERMINE BEST POSSIBLE PIPE ROUTING WITH EXISTING CONDITIONS, MATERIAL, BUILDING CONSTRUCTION AND INSTALL ACCORDINGLY.

### **O DRAWING NOTES**

- 1 EXISTING DOMESTIC WATER SERVICE UP FROM BELOW SLAB ON GRADE.
- EXISTING FIRE SERVICE UP FROM BELOW SLAB ON GRADE.
- 3 EXISTING IRRIGATION SERVICE UP FROM BELOW SLAB ON GRADE.
- 4 EXISTING MAKE-UP WATER FOR CHILLED WATER SYSTEM TO REMAIN.
  - EXISTING DOMESTIC WATER SERVICE.

**KEY PLAN:** 

- 6 EXISTING POOL FILL.
- EXISTING 2" BOILER FILL SYSTEM. FIELD VERIFY.
- 8 CONNECT NEW 2" TO EXISTING BOILER HEATING SYSTEM FILL PIPING, FIELD VERIFY.
- 9 CONNECT NEW 1-1/2" COLD WATER TO EXISTING CHILLED WATER FILL SYSTEM. FIELD VERIFY.
- O CONNECT NEW 3" TO EXISTING POOL FILL SYSTEM. FIELD VERIFY. CONTRACTOR SHALL FIELD VERIFY POINT WHERE FILL SYSTEM PIPING CHANGES TO PVC, DOWNSTREAM OF GALVANIZED PIPING.
- 11 TEMPORARY 3" WATER METER, OBTAIN FROM MT. WERNER WATER DISTRICT. SEE DIAGRAM.
- 12 TEMPORARY BFP-1, FOR BLDG FILL SYSTEMS. SEE DIAGRAM.
- 13 TEMPORARY BFP-2, FOR COMMERCIAL SPACES DOMESTIC WATER SYSTEM. SEE DIAGRAM
- 14 CONNECT TEMPORARY 2-1/2" COLD WATER TO EXISTING IRRIGATION SYSTEM PIPING.



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REVIEWED FOR CODE COMPLIANCE 02/07/2024

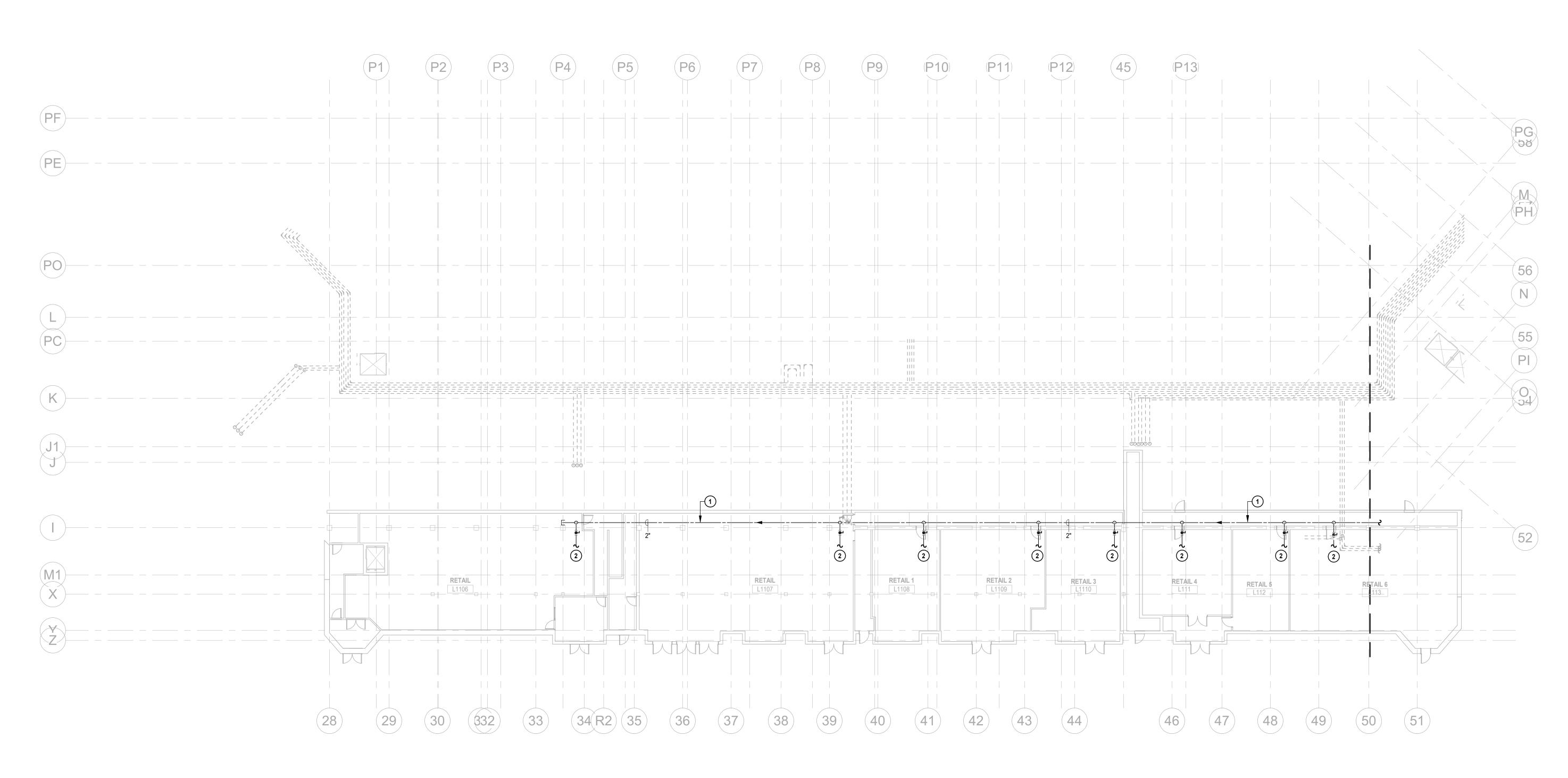
STEAMBOAT GRAND RCIAL TENANTS TEMPORAF OMESTIC WATER SYSTEM

ISSUE DATE
OWNER REVIEW 10/13/2023
FOR PERMIT 01/08/2024

PROJECT#: 23295
DESIGNED: MAB
CHECKED: KVB

ENLARGED MECHANICAL ROOM PLUMBING PLAN







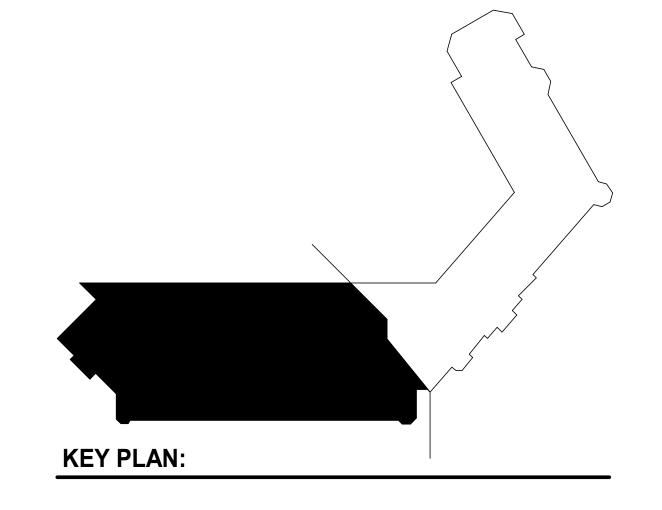
## **GENERAL NOTES:**

BEGINNING WORK.

- 1. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL CUTTING AND PATCH WITH GENERAL CONTRACTOR. 2. CONTRACTOR SHALL FIELD VERIFY ALL PLUMBING SYSTEMS, PIPE SIZES, SLOPES, INVERTS, DIRECTIONS OF FLOW, AND EXACT LOCATIONS PRIOR TO
- 3. PLANS ARE DIAGRAMMATIC AND ONLY SHOW THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. THE PLANS DO NOT SHOW EVERY OFFSET AND TRANSITION. CONTRACTOR SHALL FOLLOW PLANS IN LAYING OUT WORK AND COORDINATE WITH OTHER TRADES TO VERIFY SPACE IN WHICH WORK IS
- 4. REFER TO SCHEDULES, DIAGRAMS AND ISOMETRIC DIAGRAMS FOR ALL PIPE SIZES NOT SHOWN ON PLAN. FIELD VERIFY EXISTING PIPE SIZES PRIOR TO
- 5. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ANY AND ALL SERVICE DOWNTIME WITH AFFECTED TENANT(S) AND PROJECT MANAGER PRIOR TO THE INTERRUPTION OF SERVICE.
- 6. COORDINATE SCHEDULE OF FLOOR PENETRATIONS AND WASTE PIPE INSTALLATION WITH TENANT BELOW AND BUILDING MANAGEMENT PRIOR TO BEGINNING CONSTRUCTION. UTILIZE ANY EXISTING ROUGH-IN AND BUILDING MAIN WASTE AND VENT CONNECTIONS.
- 7. CONTRACTOR SHALL CONFIRM REQUIREMENTS FOR LOCATING STEEL REINFORCING PRIOR TO MAKING FLOOR PENETRATIONS. PERFORM FLOOR X-RAY AS REQUIRED TO LOCATE STEEL.
- 8. CONTRACTOR SHALL FIELD VERIFY THE PIPING CONTINUITY OF SERVICE TO
- 9. NOT ALL PIPING SYSTEMS ARE SHOWN.

# O DRAWING NOTES

- ROUTE PIPING IN A MANNER THAT FOLLOWS THE EXISTING HEATING SUPPLY AND RETURN PIPING. CONTRACTOR SHALL FIELD VERIFY. SUPPORT TEMPORARY DOMESTIC WATER PIPING FROM EXISTING HEATING SUPPLY AND RETURN PIPING SUPPORTS. CONTRACTOR SHALL MAKE NECESSARY ADJUSTMENTS AS REQUIRED.
- CONTRACTOR SHALL FIELD VERIFY ACTUAL COLD WATER SUPPLY PIPING SERVING EXISTING RETAIL SPACE. MAKE CONNECTIONS TO EXISTING BRANCHES ACCORDINGLY.





CODE COMPLIANCE

02/07/2024

STEAMBOAT GRAND STEAMBOAT GRAND STANDARD STIC WATER STORMS

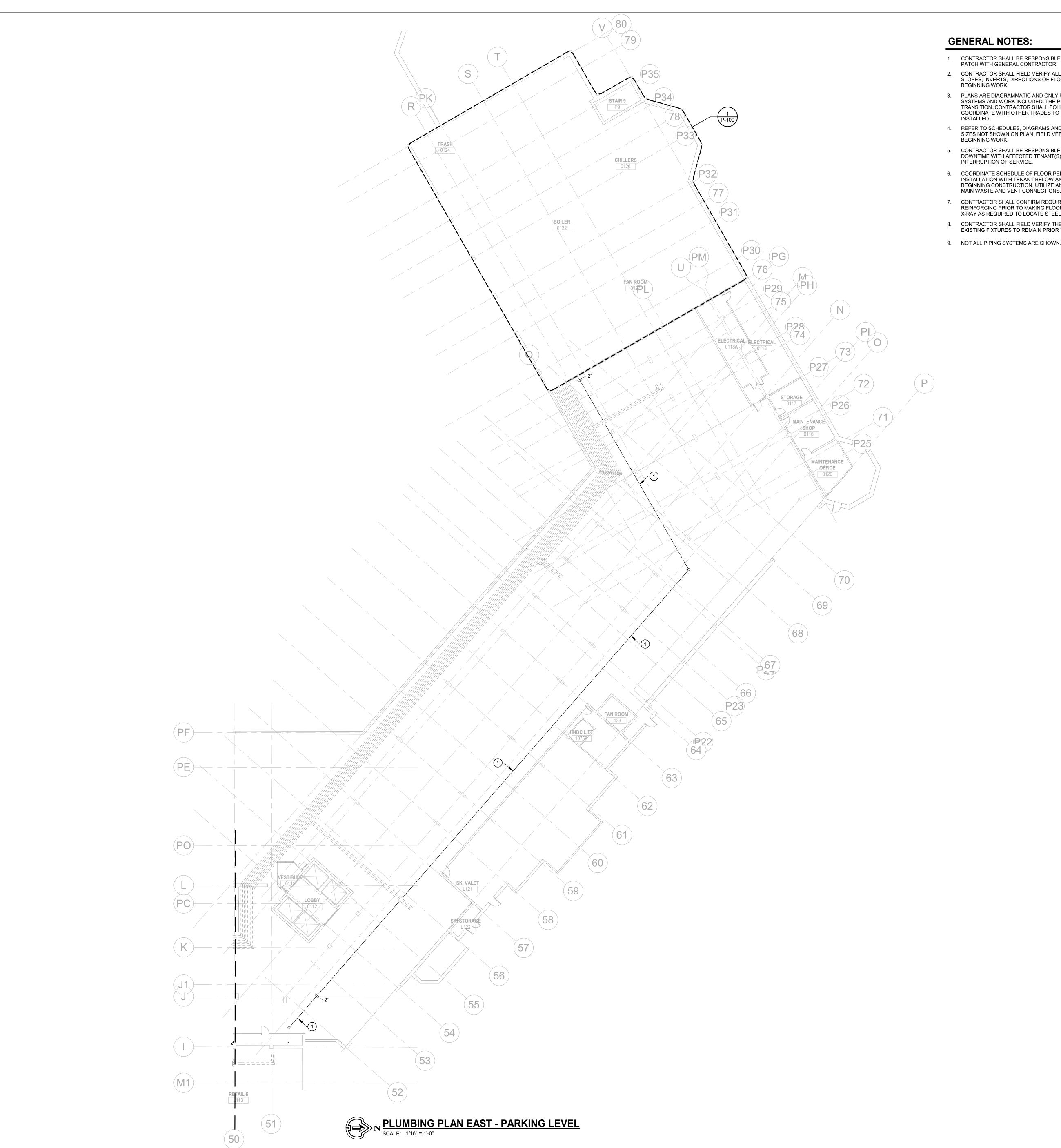
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DATE OWNER REVIEW 10/13/2023 FOR PERMIT

> PROJECT #: 23295 DESIGNED: MAB CHECKED: KVB

PLUMBING PLAN -SOUTH - PARKING LEVEL





### **GENERAL NOTES:**

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- CONTRACTOR SHALL FIELD VERIFY ALL PLUMBING SYSTEMS, PIPE SIZES, SLOPES, INVERTS, DIRECTIONS OF FLOW, AND EXACT LOCATIONS PRIOR TO
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- 5. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ANY AND ALL SERVICE DOWNTIME WITH AFFECTED TENANT(S) AND PROJECT MANAGER PRIOR TO THE INTERRUPTION OF SERVICE.
- 6. COORDINATE SCHEDULE OF FLOOR PENETRATIONS AND WASTE PIPE INSTALLATION WITH TENANT BELOW AND BUILDING MANAGEMENT PRIOR TO BEGINNING CONSTRUCTION. UTILIZE ANY EXISTING ROUGH-IN AND BUILDING MAIN WASTE AND VENT CONNECTIONS.
- 7. CONTRACTOR SHALL CONFIRM REQUIREMENTS FOR LOCATING STEEL REINFORCING PRIOR TO MAKING FLOOR PENETRATIONS. PERFORM FLOOR X-RAY AS REQUIRED TO LOCATE STEEL.
- 8. CONTRACTOR SHALL FIELD VERIFY THE PIPING CONTINUITY OF SERVICE TO EXISTING FIXTURES TO REMAIN PRIOR TO BEGINNING DEMOLITION OF PIPING.
- 9. NOT ALL PIPING SYSTEMS ARE SHOWN.

### **○ DRAWING NOTES**

ROUTE PIPING IN A MANNER THAT FOLLOWS THE EXISTING HEATING SUPPLY AND RETURN PIPING. CONTRACTOR SHALL FIELD VERIFY. SUPPORT TEMPORARY DOMESTIC WATER PIPING FROM EXISTING HEATING SUPPLY AND RETURN PIPING SUPPORTS. CONTRACTOR SHALL MAKE NECESSARY ADJUSTMENTS.



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PLUMBING PLAN -EAST - PARKING LEVEL

