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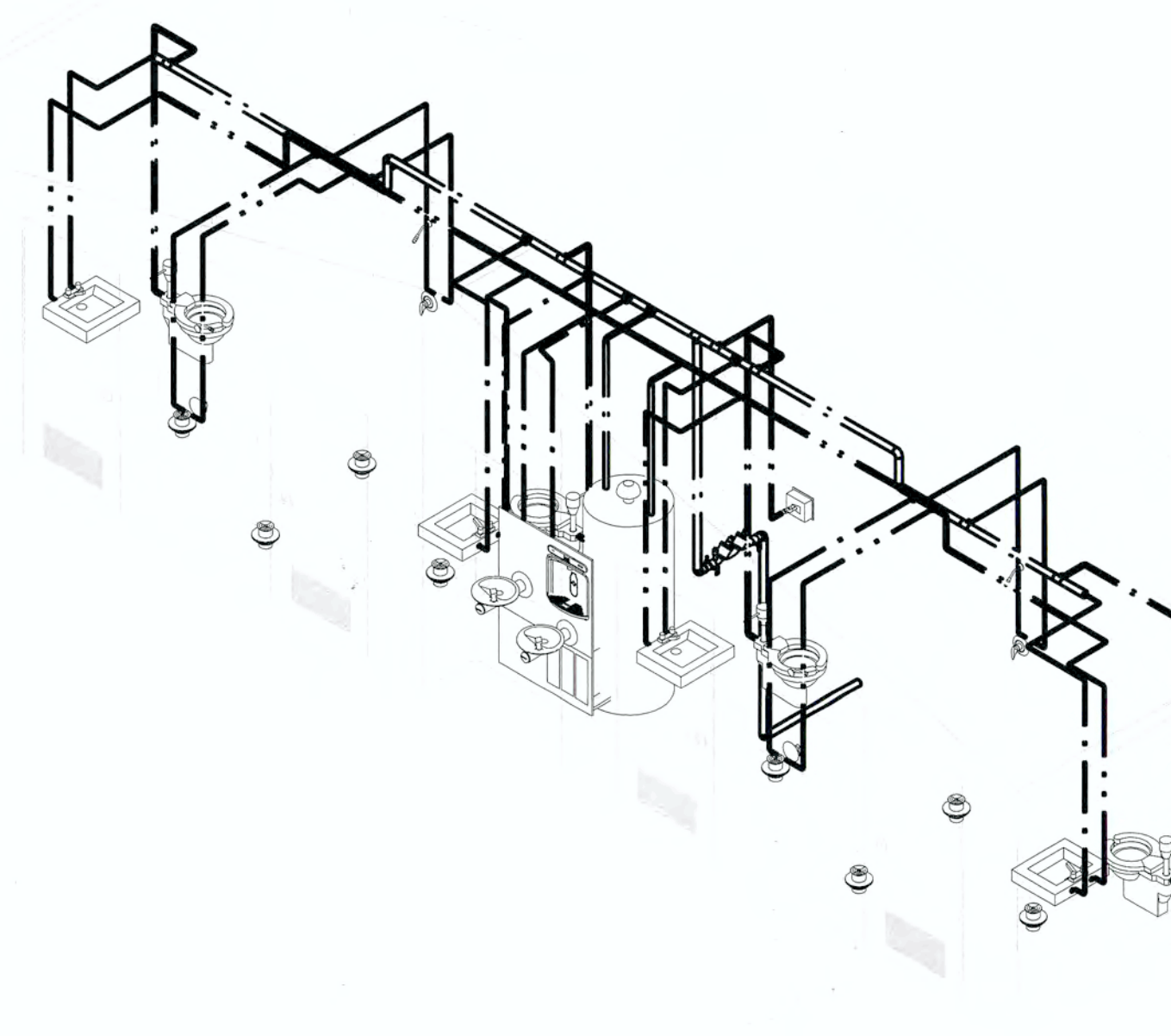
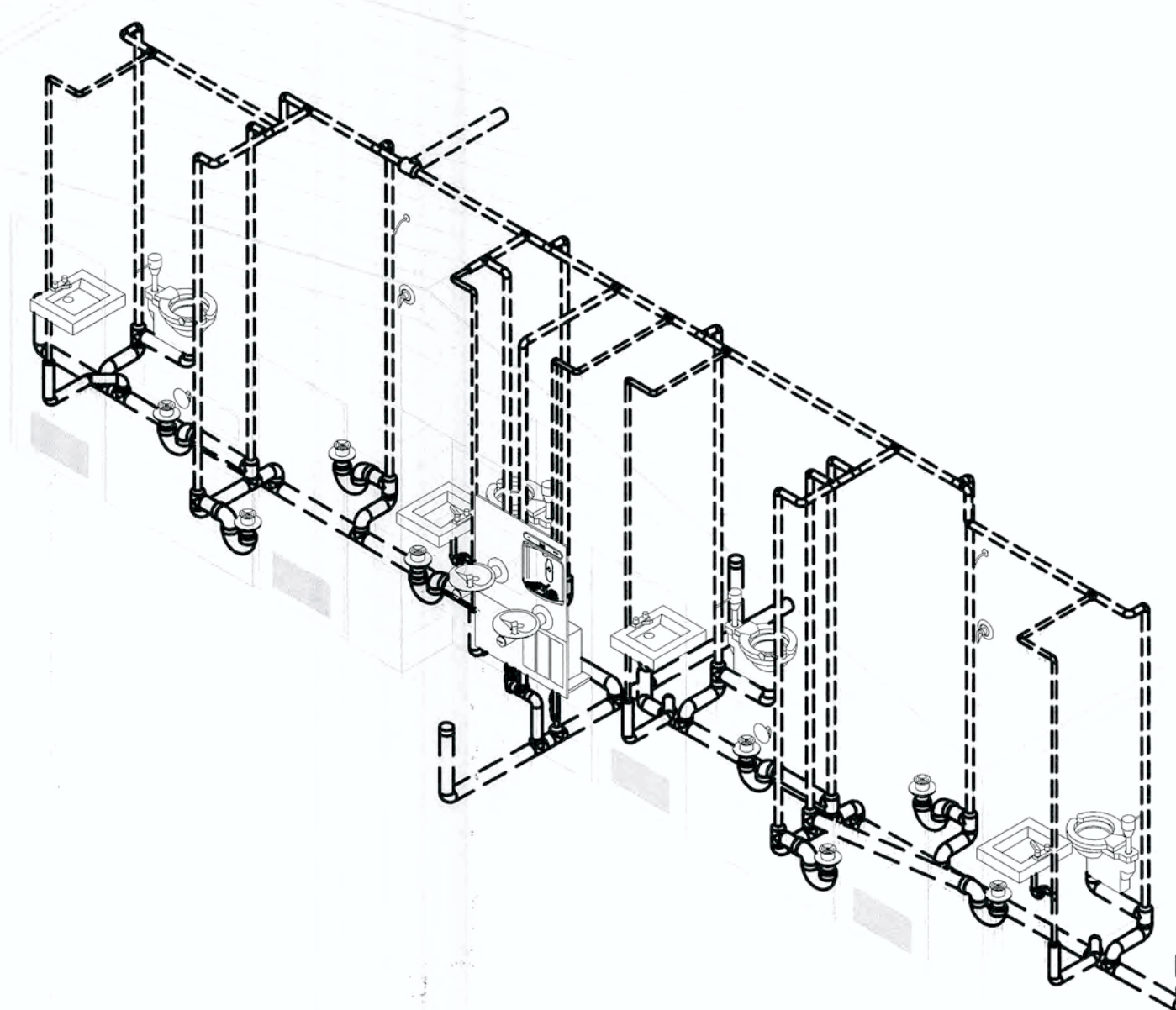
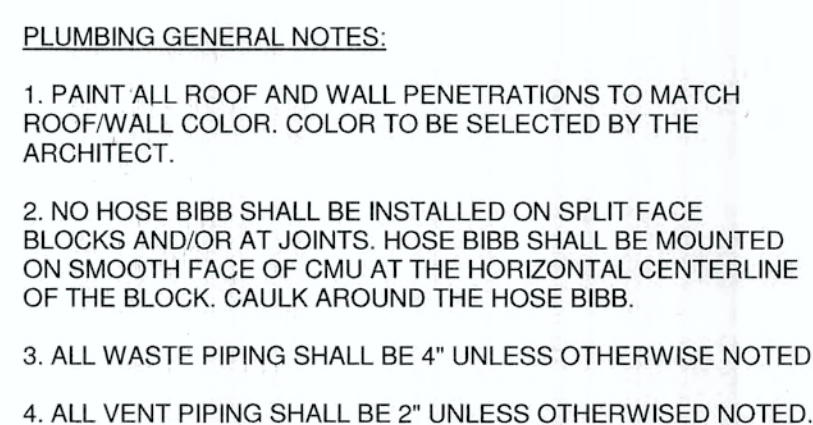
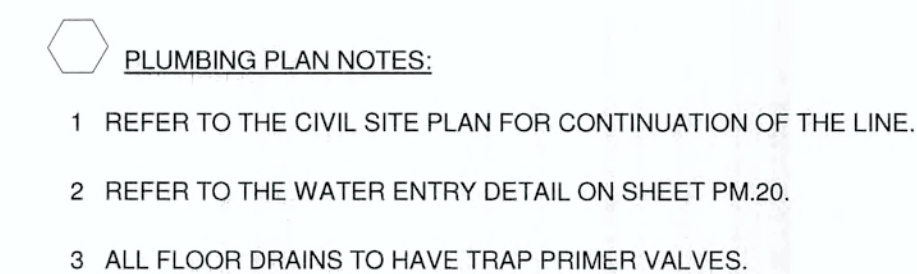
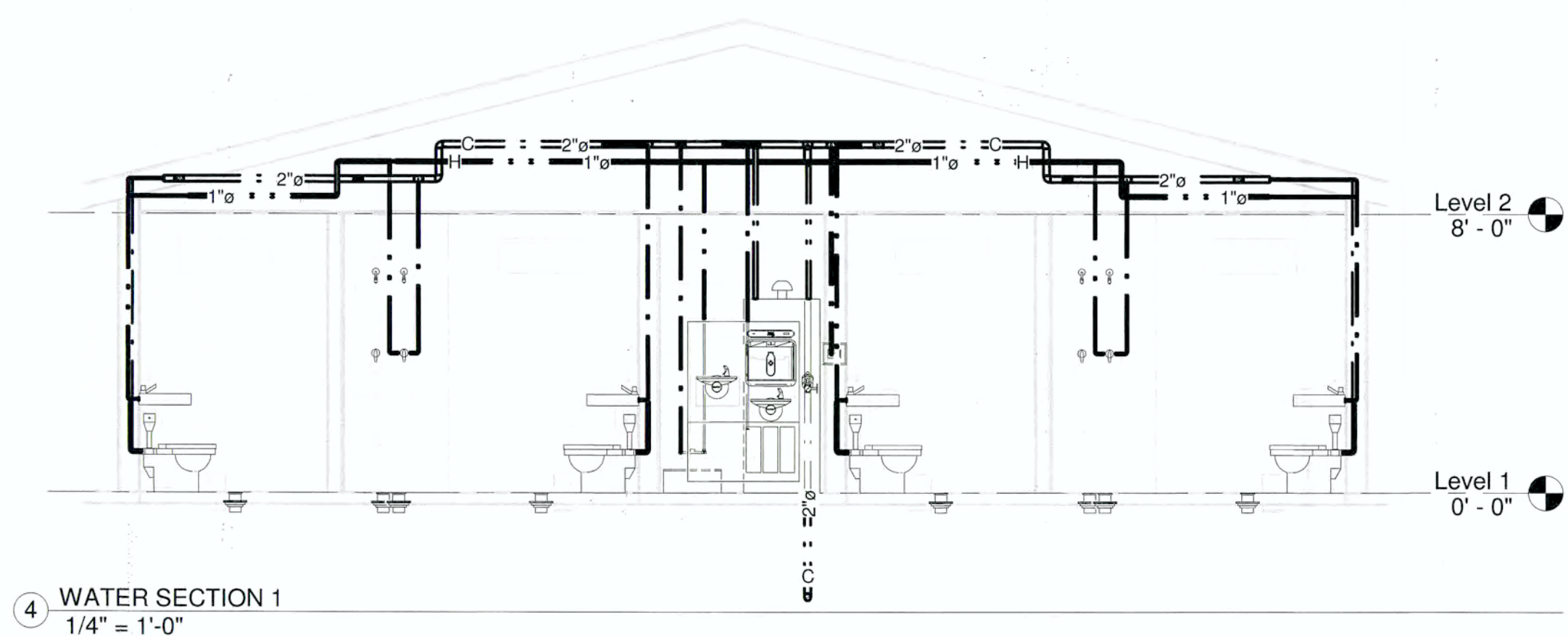
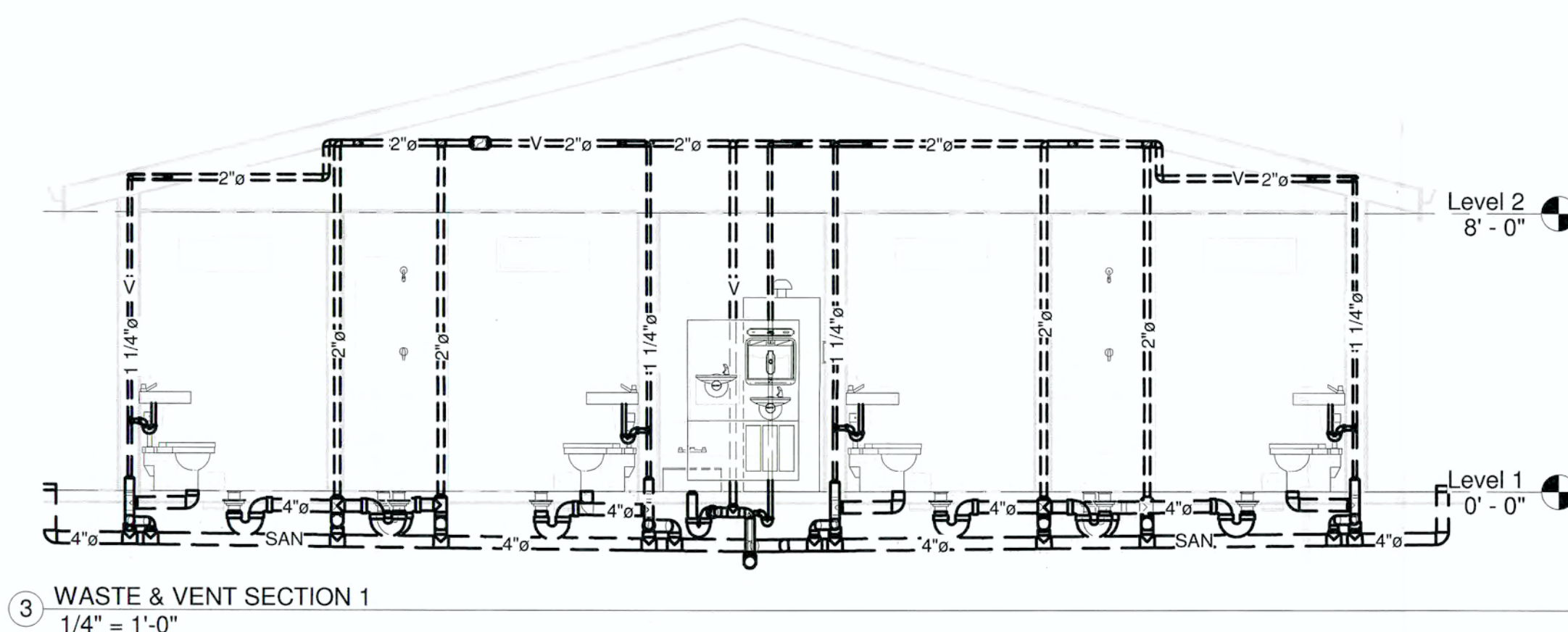
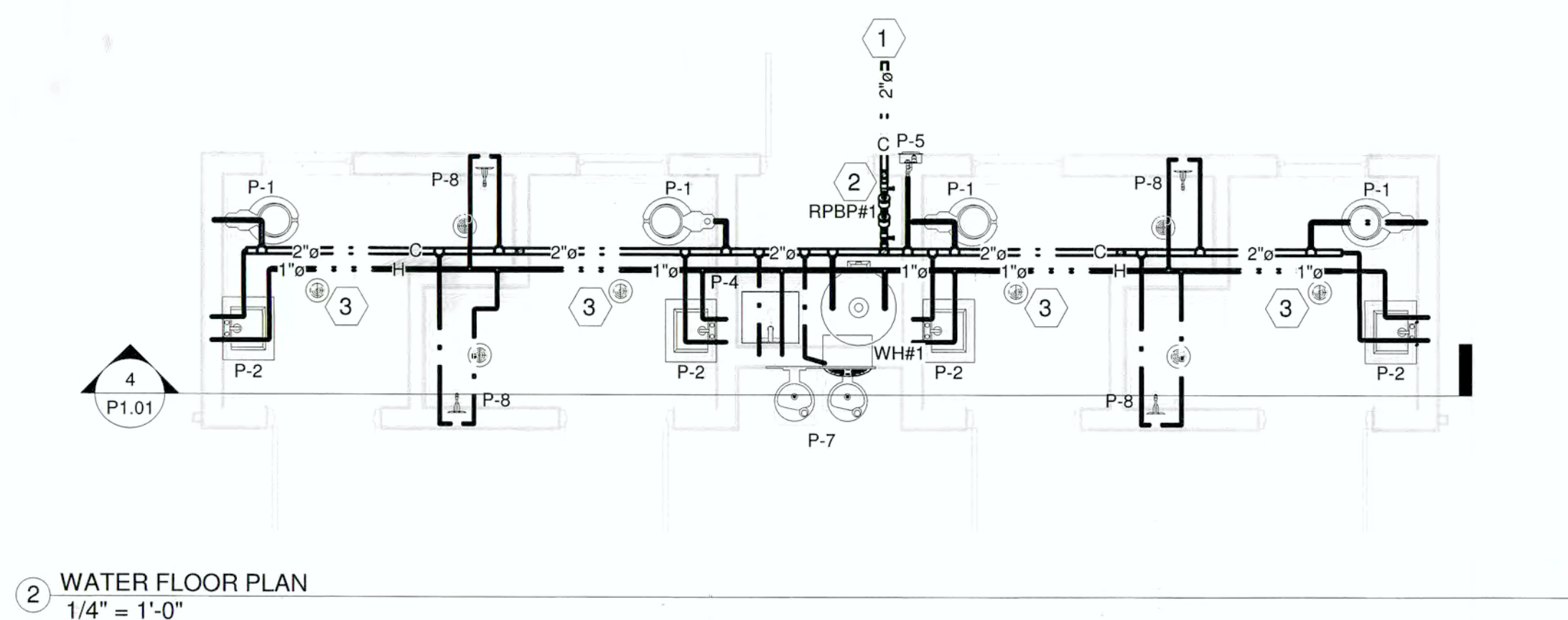
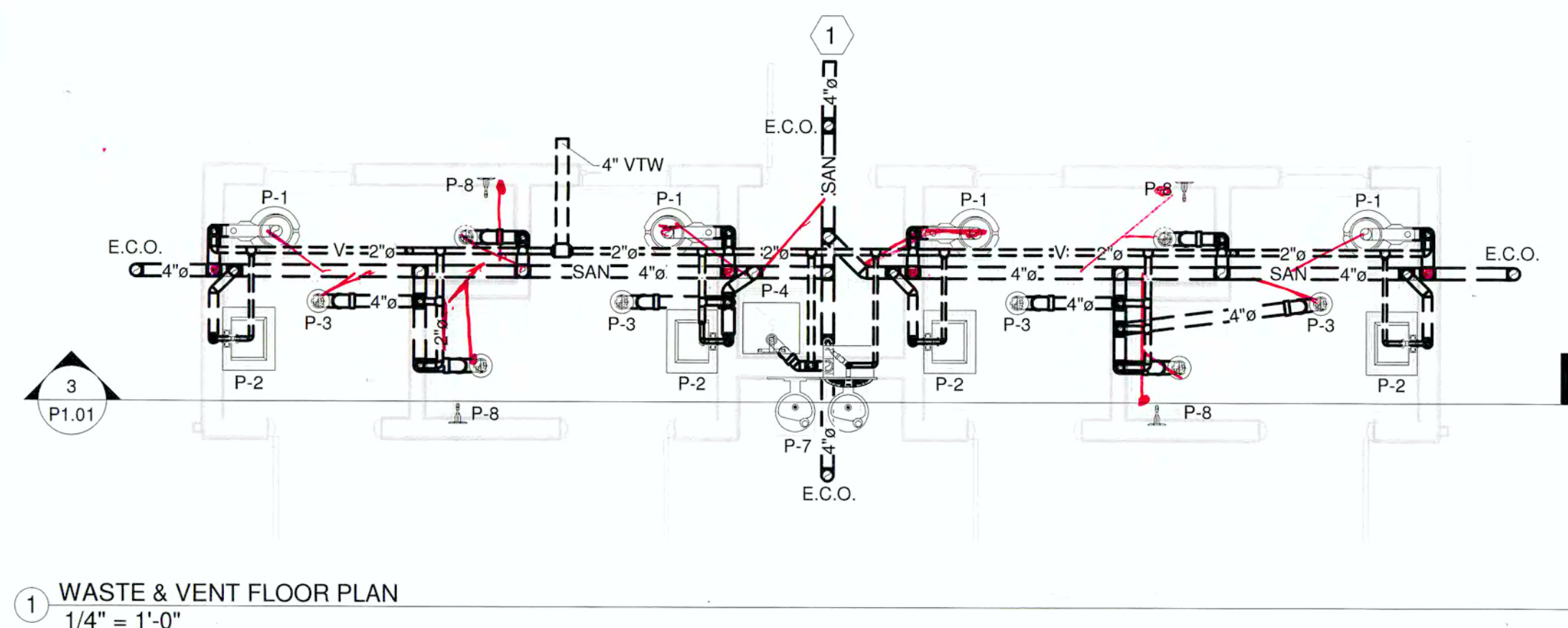
FACTORY SHOALS PARK

Kevin King Plumbing
1360 Danielsville Road
Athens, GA 30601
ph: 706-224-4414

Dennis Adams

dadams@kingsplumbingcompany.com

22-0000 Plumbing Northside As-built



GENERAL PLUMBING LEGEND	
	SANITARY DRAIN
	COLD WATER
	HOT WATER
	VENT PIPING
P-1	PLUMBING FIXTURE IDENTIFICATION
VTW	VENT THRU WALL
	CHECK VALVE
	BALL VALVE
	BALANCING VALVE

WATER HEATER SCHEDULE													
W.H. #	MANUFACTURER	MODEL #	SYS.	QTY.	K.W.	VOLTAGE	EWT	LWT	STORAGE GALLON	FLOW REC. (GPH)	TANK HT.	TANK DIA.	REMARKS
WH#1	A.O. SMITH	DEN-120	DOM.	1	9.0	240/160	40 F	110 F	119.0	51.0	62"	30"	1,2,3
1. WATER HEATER TO PROVIDE 4.5 KW SIMULTANEOUS DUAL ELEMENT OPERATION.													
2. PROVIDE HEAT TRAP ON PIPING FOR WATER HEATER.													
3. PROVIDE INSULATION COVER OVER WATER HEATER.													

REDUCED PRESSURE BACKFLOW PREVENTER SCHEDULE							
RPBP #	MANUFACTURER	MODEL #	QTY.	SIZE	GPM	PRESS. DROP	SERVING
RPBP #1	WATTS	LF009 QT	1	2 INCH	80	10.0 PSIG	DOM. WTR.

P-#	DESCRIPTION	C.W. (IN.)	H.W. (IN.)	WASTE (IN.)	VENT (IN.)	NOTES
P-1	WATER CLOSET (FLOOR MTD., FLUSH VALVE, HANDICAP ACCESSIBLE)	1	-	4	2	1,2,5
P-2	LAVATORY (WALL MTD., HANDICAP ACCESSIBLE)	1/2	1/2	1 1/4	1 1/4	1,3,5
P-3	FLOOR DRAIN	---	---	4	2	4,5
P-4	JANITOR'S SINK	1/2	1/2	3	2	4,5
P-5	WALL HYDRANT (FREEZE PROOF)	3/4	---	---	---	4,5
P-6	WALL HYDRANT	3/4	---	---	---	4,5
P-7	DRINKING FOUNTAIN (HI/LOW, S.S., HANDICAP ACCESSIBLE)	1/2	---	1 1/4	1 1/4	4,5
P-8	SHOWER (HANDICAP ACCESSIBLE)	1/2	---	3	2	1,3,5

- EQUALS BY ELIER, KOHLER, CRANE, OF APPROVED EQUAL QUALITY.
- PROVIDE MIN. 18" HIGH AIR CHAMBER.
- PROVIDE INSULATE WASTE & WATER WITH TRUEBRO HANDI LAV-GUARD SYSTEM FOR ALL ACCESSIBLE LAVATORIES.
- EQUALS BY ZUFIN, JR SMITH, WADE, OASIS.
- ALL FIXTURES TO BE APPROVED BY THE OWNER.

PLUMBING FIXTURES:

P-1 WATER CLOSET (HANDICAP ACCESSIBLE)
AMERICAN STANDARD #3461.712 FLOOR MOUNTED AT 17" AFF, VITREOUS CHINA, 1-1/2" TOP-SPUD, ELONGATED RIM TOILET; ZURN #ZER6000PL-HET-CPM BATTERY SINKER FLUSH VALVE(1.28GPF), PUSH BUTTON CAN NOT BE MORE THAN 36" AFF; CENTOCO #500CCSS OPEN FRONT SEAT WITH COVER.

P-2 LAVATORY (HANDICAP ACCESSIBLE)
AMERICAN STANDARD #9355.012 WALL MOUNTED AT 34" AFF, VITREOUS CHINA, WITH CONCEALED WALL HANGER (PROVIDE ZURN #Z-1251 FOR 4" BLOCK WALL); ZURN #ZURN1251 WALL MOUNTED METERING FAUCET WITH 1/5-CPM AERATOR, POLISHED CHROME-PLATED; FAUCET HOLES 4" ON CENTER; MCGUIRE #H5HW OFFSET HANDICAP GRID DRAIN, MCGUIRE #H-2165LK SUPPLY PIPES, STOP VALVES, AND P-TAP, THERMOSTATIC MIXING VALVE. PROVIDE AN ADRSE STAINLESS STEEL SINK ENCLOSURE. (PROVIDE HARDWIRED SINKER FAUCET AS AN UPGRADE ALTERNATE).

P-3 FLOOR DRAIN
J.R. SMITH #2005, DUCO CAST IRON BODY WITH FLASHING COLLAR AND ADJUSTABLE STRAINER.

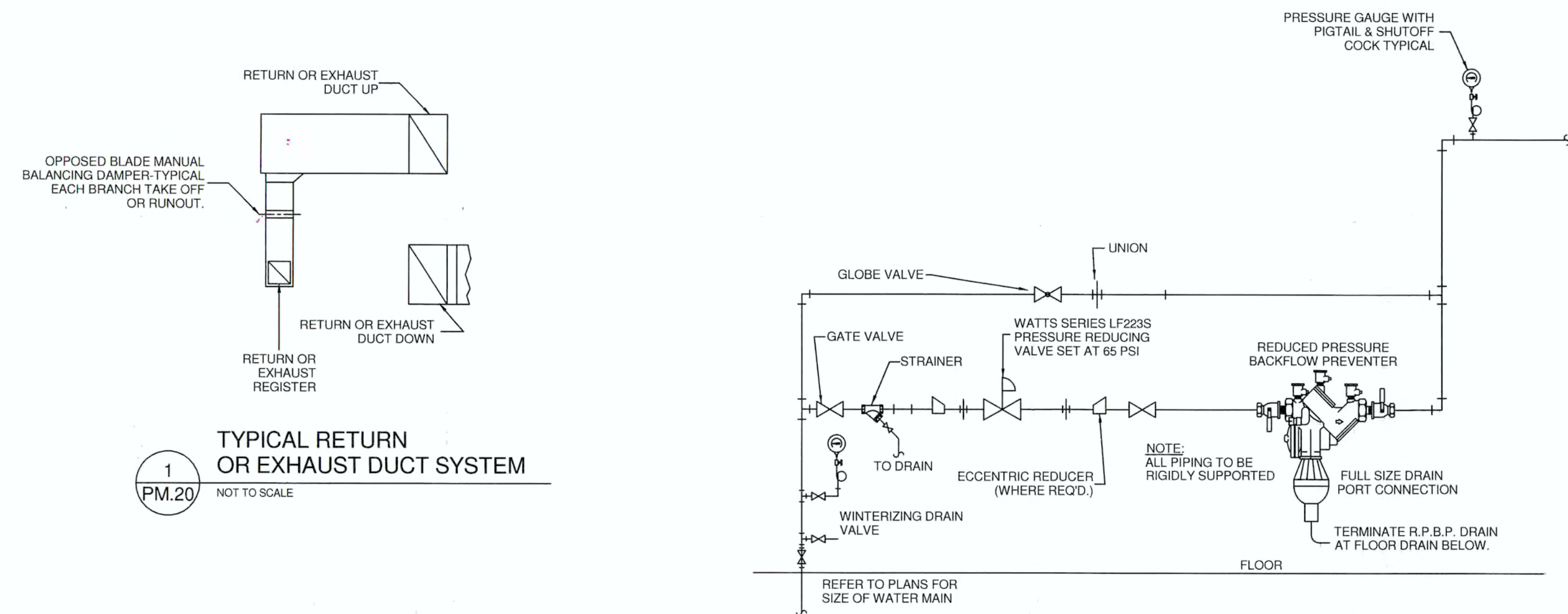
P-4 JANITOR'S SINK
FIAT #MSB2424 MOP SINK WITH #330-AA SERVICE FAUCET, MCGUIRE H-2165 SUPPLIES W/STOPS AND P-TAP.

P-5 WALL HYDRANT(FREEZE PROOF)
WOODFORD #B65 WALL HYDRANT WITH BOX AND DOOR

P-6 WALL HYDRANT
WOODFORD #B74 WALL HYDRANT WITH BOX AND DOOR, PROVIDE VACUUM BREAKER WITH WALL HYDRANT.

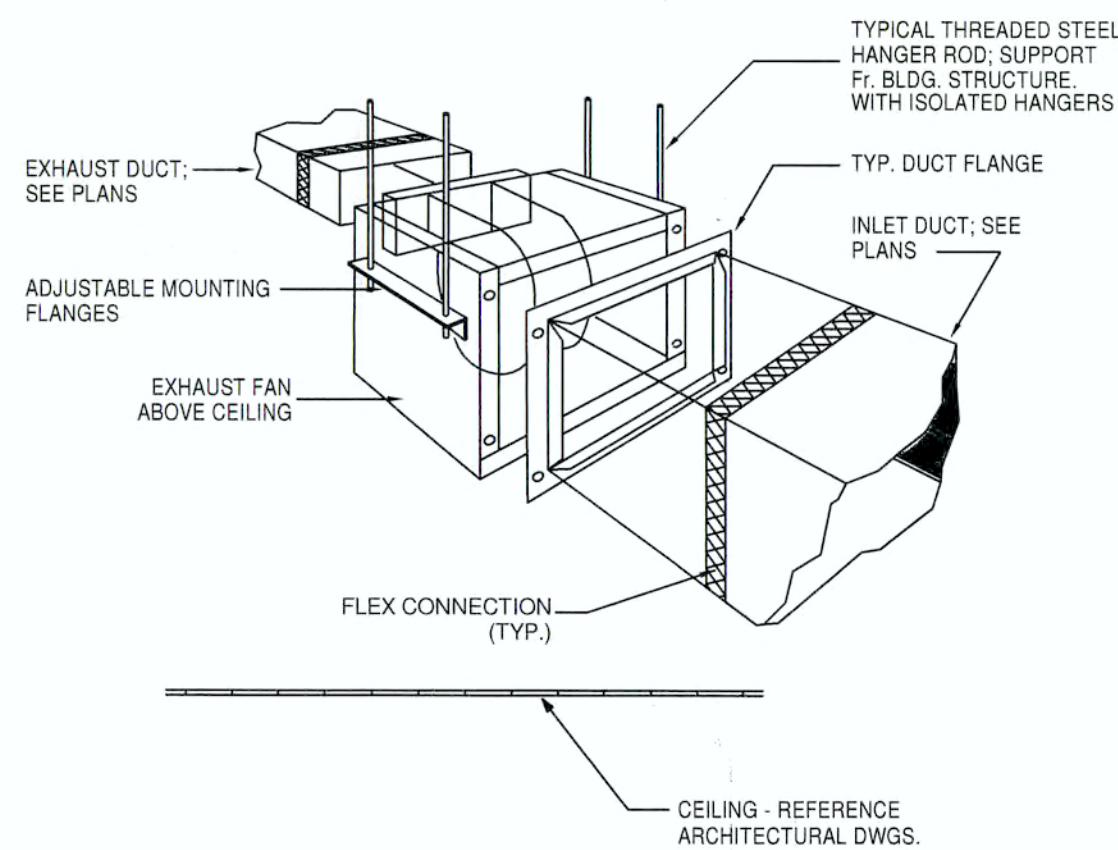
P-7 DRINKING FOUNTAIN(HANDICAP ACCESSIBLE, HILOW, WITH BOTTLE FILLER)
HALSEY TAYLOR #H7B-OVLSEBP-1, STAINLESS STEEL TOP AND BODY, WITH BOTTLE FILLER. PROVIDE STOP, SUPPLY, TRAP, ETC., TO MAKE A COMPLETE INSTALLATION. 1/2" C.W., 1 1/4" SAN. MOUNT 3/32"LOW TO SPOUT AND 3/8"HIGH TO SPOUT.

P-8 SHOWER (HANDICAP ACCESSIBLE)
SYMMONS # S-25-300-830 WALL/HAND SHOWER/PROVIDE ALL METAL HAND/SHOWER WITH ALSONS #476 VOLUME CONTROL AND PAUSE), FLEXIBLE METAL HOSE MINIMUM 60" IN LENGTH, WALL CONNECTION AND FLANGE. 30" SLIDE BAR; J.R. SMITH #2005 ROUND TOP FLOOR DRAIN, PROVIDE A P-TAP.



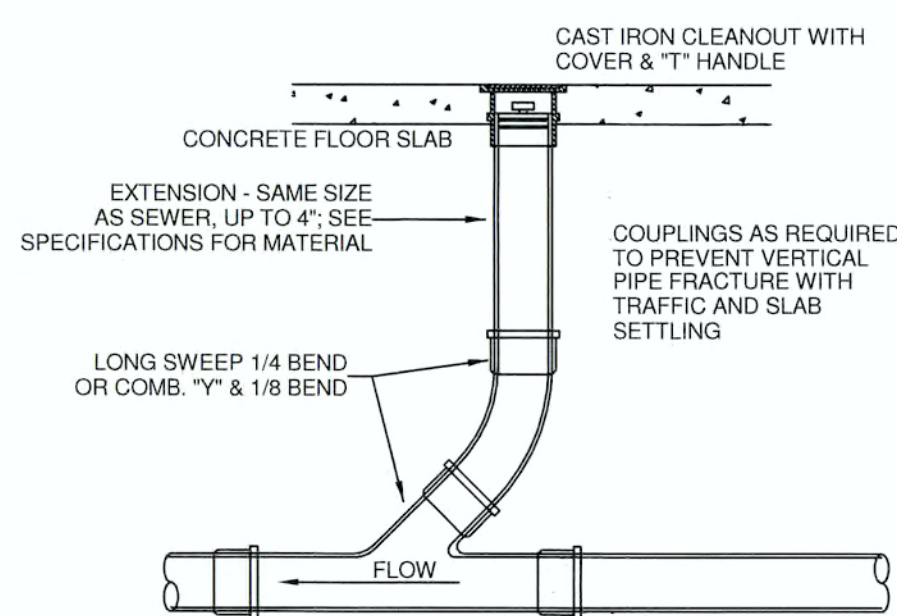
1 TYPICAL RETURN OR EXHAUST DUCT SYSTEM

PM.20 NOT TO SCALE



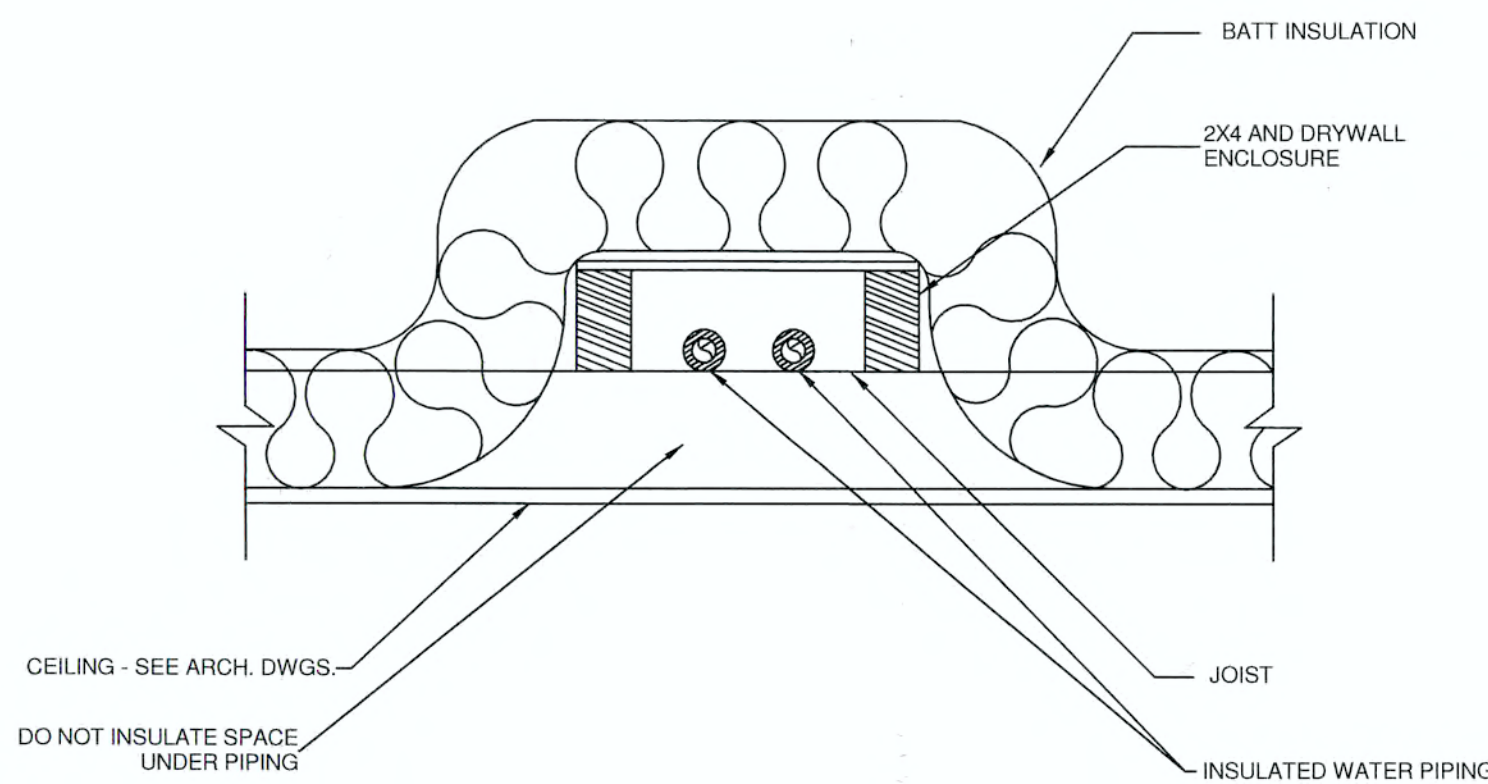
2 IN-LINE EXHAUST FAN

PM.20 NOT TO SCALE



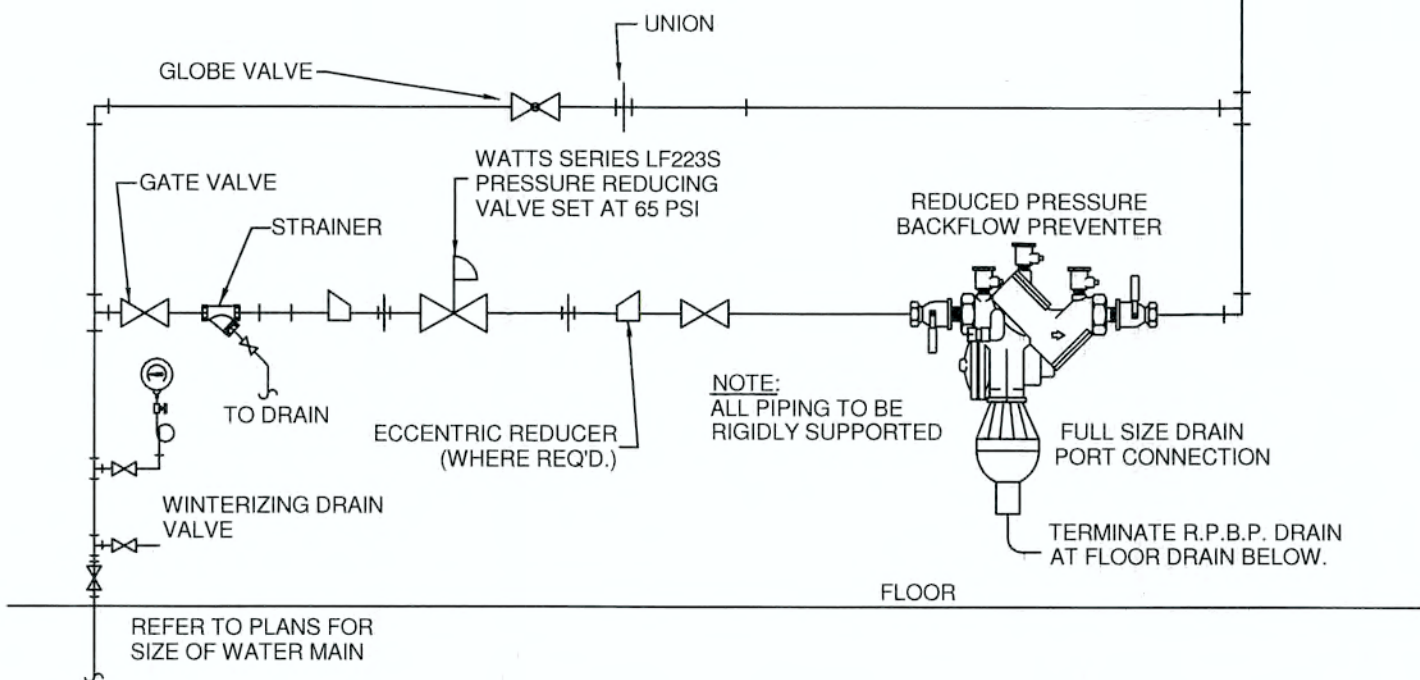
3 EXTERIOR (E.C.O.)/INTERIOR (I.C.O.) CLEANOUT DETAIL

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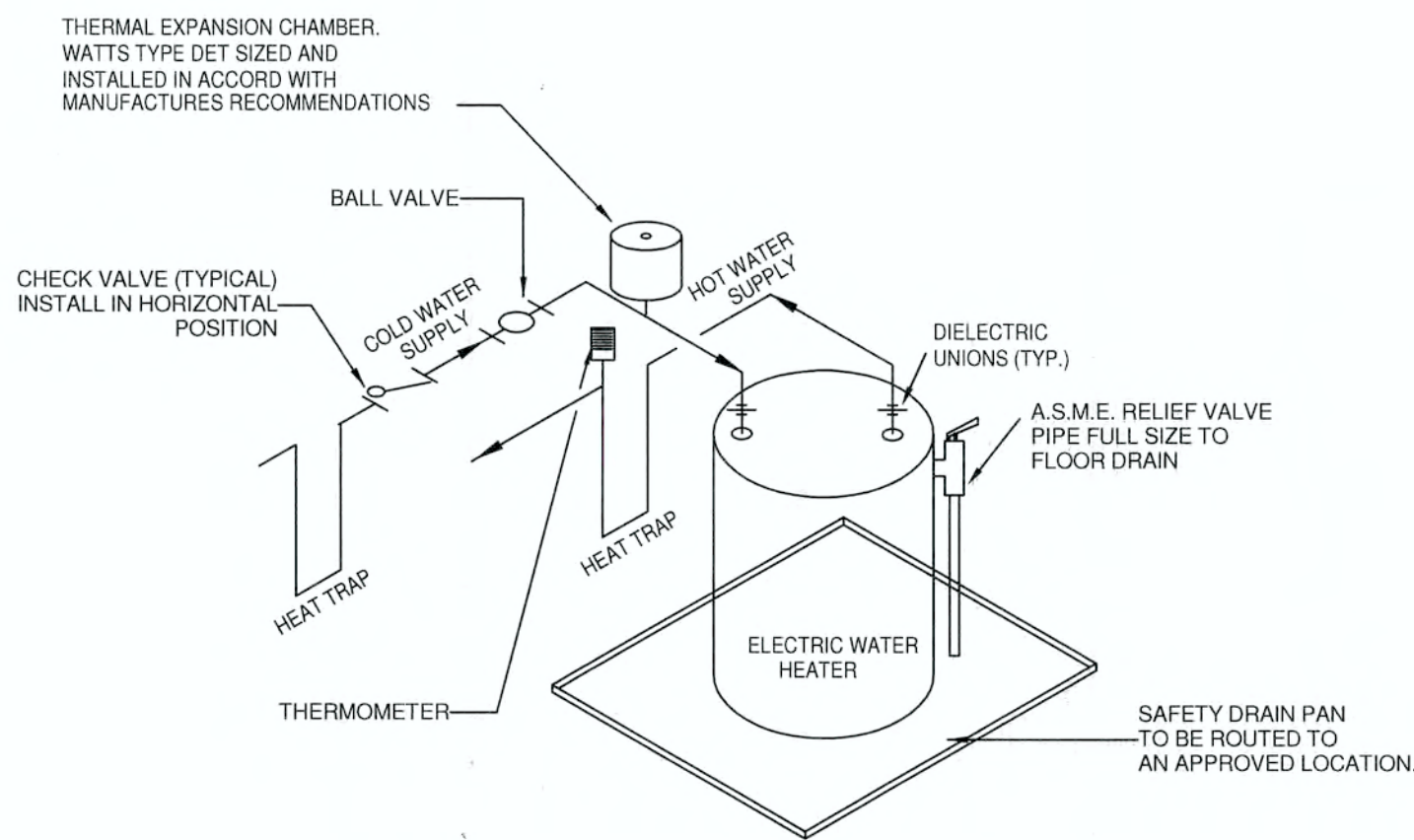
4 WATER PIPING INSTALLED IN ATTIC

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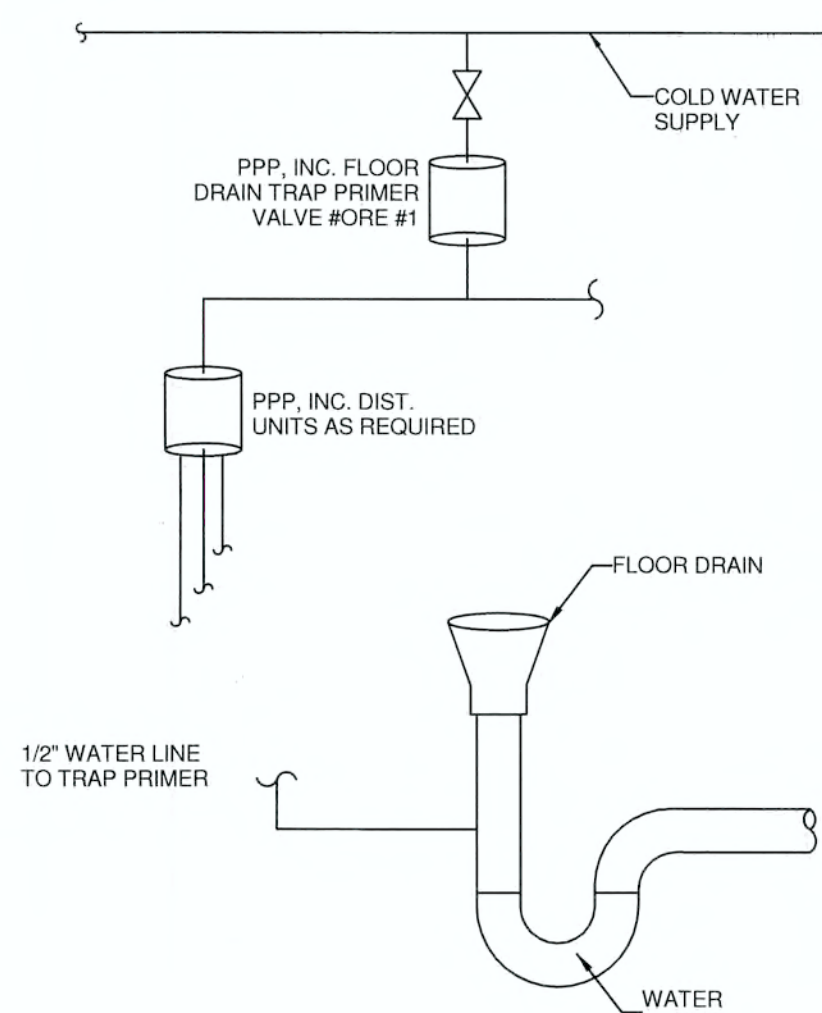
5 WATER ENTRY RISER ASSEMBLY DETAIL

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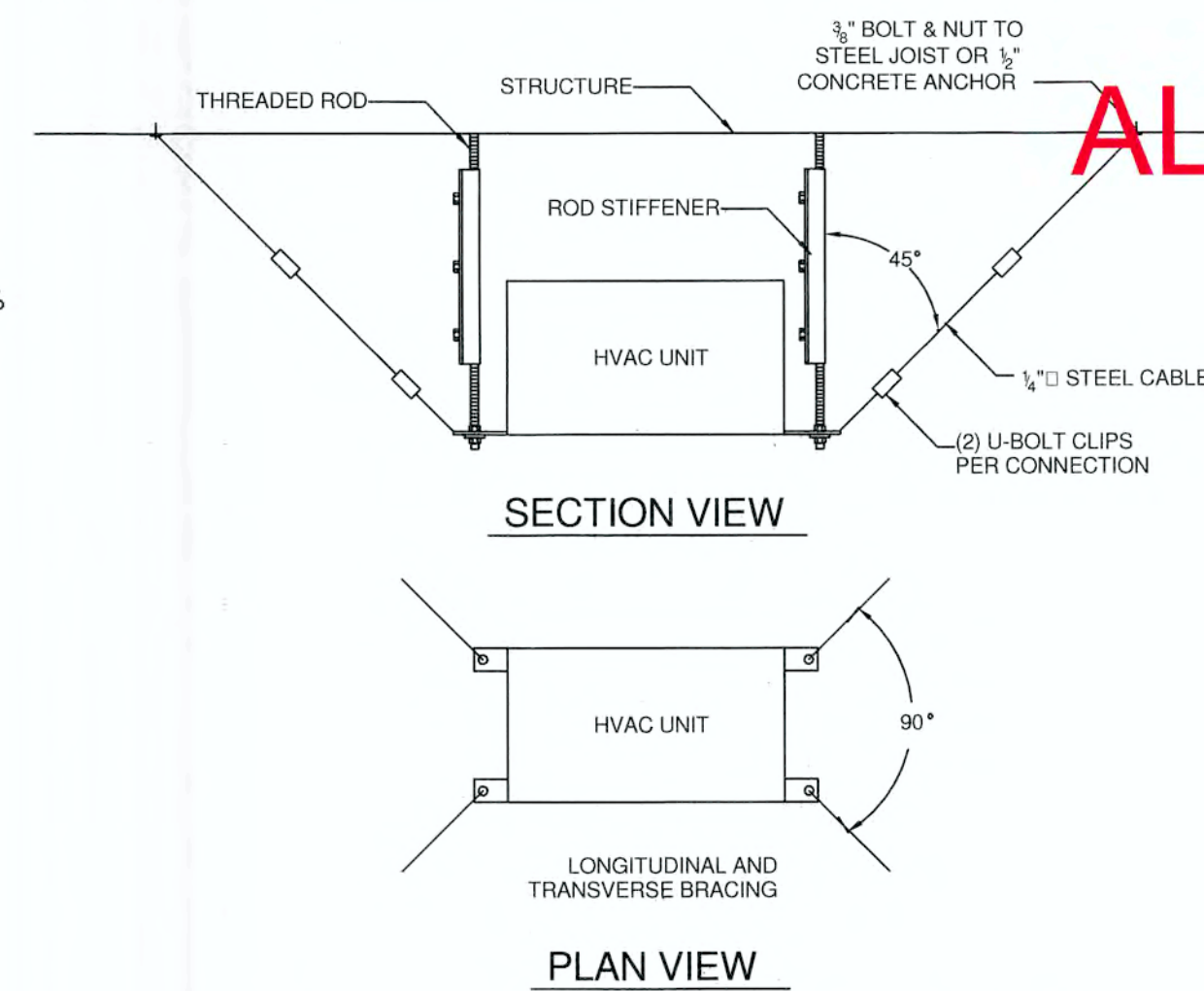
6 ELECTRIC WATER HEATER DETAIL

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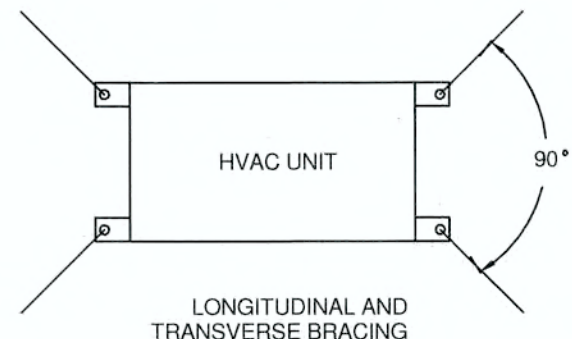


7 TRAP PRIMER/FLOOR DRAIN DETAIL (TPV)

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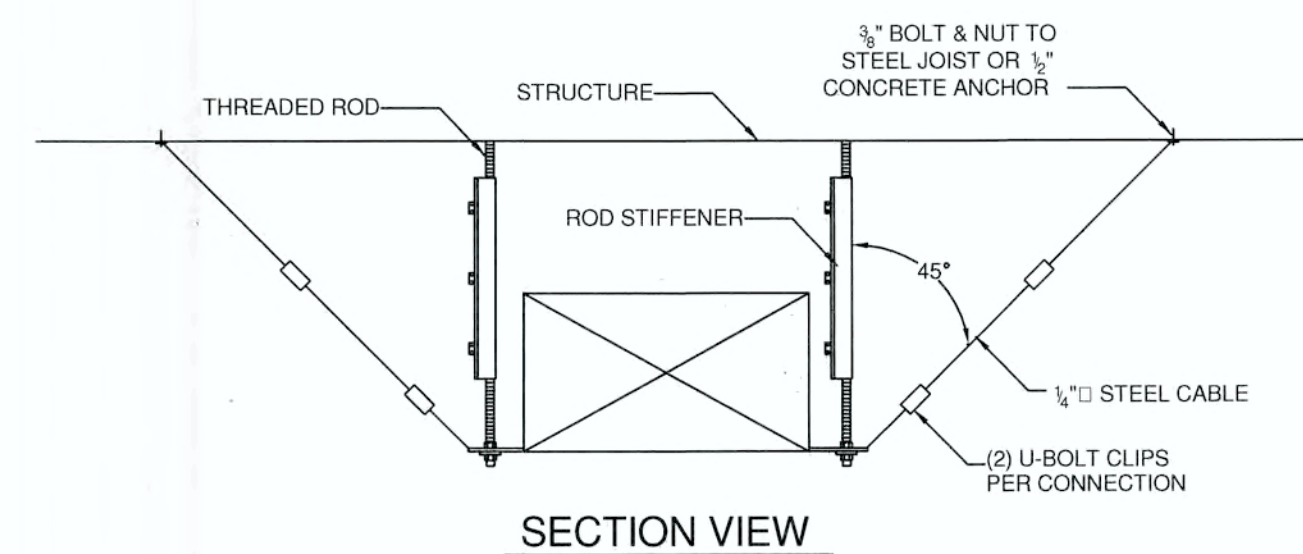


SECTION VIEW

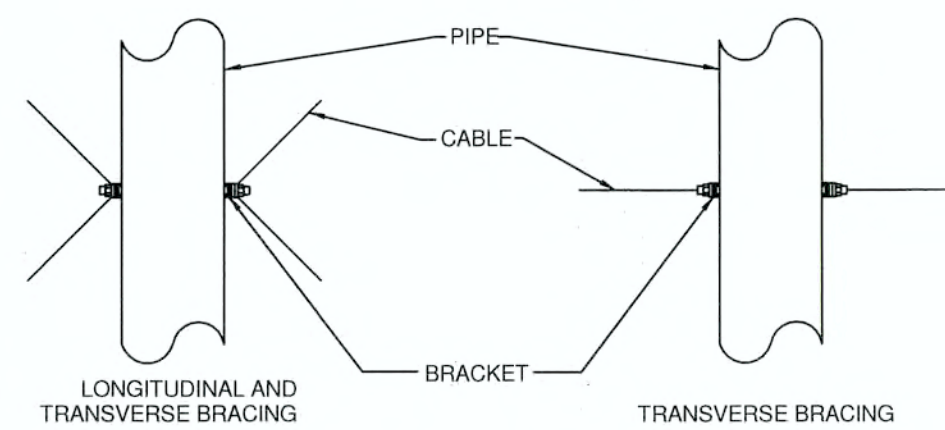


PLAN VIEW

SEISMIC HVAC EQUIPMENT RESTRAINTS DETAIL

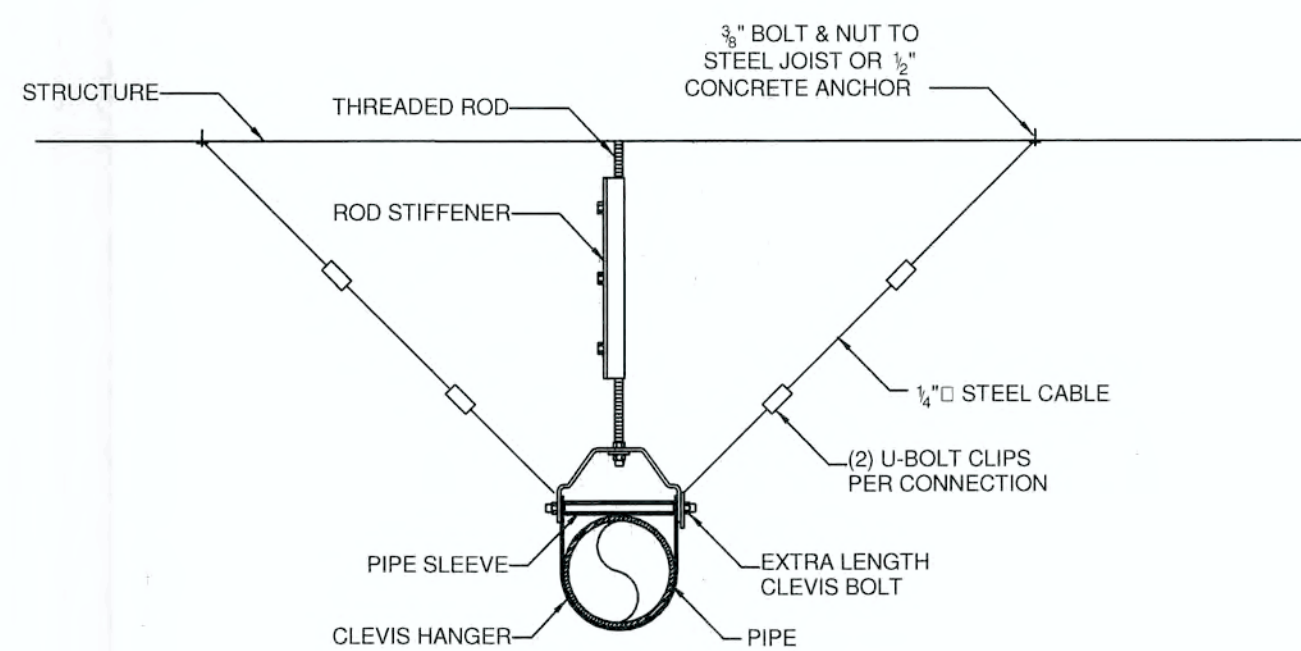


SECTION VIEW

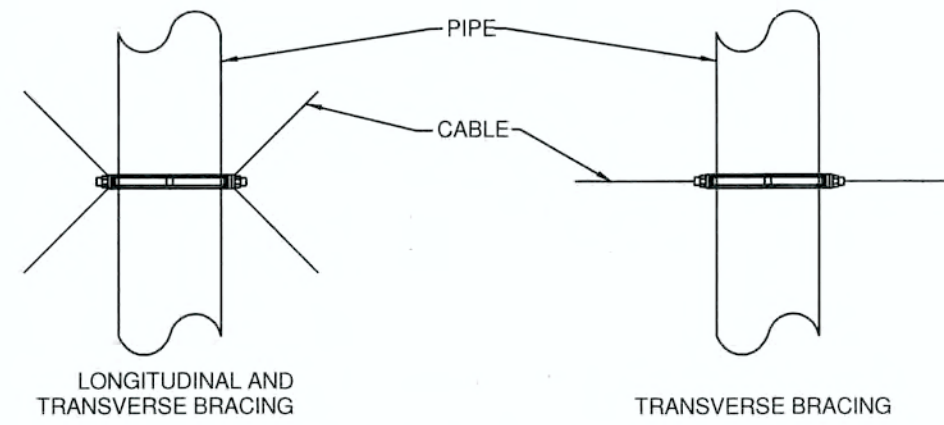


PLAN VIEW

SEISMIC DUCT RESTRAINTS DETAIL



SECTION VIEW



PLAN VIEW

SEISMIC PIPE RESTRAINTS DETAIL

SEISMIC RESTRAINTS FOR EQUIPMENT, DUCTS, AND PIPES

PM.20 NOT TO SCALE

ALPHA BLDG SET 01-15-2026

A. GENERAL/RISK CATEGORY II; DESIGN CATEGORY B)

1. DUCTS, PIPES, AND CONDUITS SHALL BE BRACED IN ACCORDANCE WITH THE LATEST EDITION OF THE SMACNA SEISMIC RESTRAINT MANUAL AND IBC.

2. ALTERNATIVE DETAILS DIFFERING FROM THE LATEST SMACNA MANUAL MAY BE USED WHERE SHOWN ON THE MECHANICAL AND PLUMBING DRAWINGS.

3. IN-LINE EQUIPMENT SHALL BE BRACED INDEPENDENTLY OF THE DUCTS OR PIPES AND IN CONFORMANCE WITH APPLICABLE BUILDING CODES. REFER TO THE MP DRAWINGS FOR ANCHORAGE AND BRACING DETAILS.

4. COLD-FORMED ANGLES SHALL CONFORM TO AISI "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" WITH A MINIMUM $F_y = 33$ KSI. MINIMUM THICKNESS FOR SHEET METAL BRACING SHALL BE AS FOLLOWS:

16 GA. = 0.0598"
14 GA. = 0.0747"
12 GA. = 0.1046"

5. HOT-ROLLED SHAPES AND PLATES SHALL CONFORM TO ASTM A36. PIPES USED AS BRACES SHALL BE STANDARD STEEL PIPES PER ASTM A500-A OR A53.

6. BRACE CONDUIT USING THE SAME CRITERIA AS FOR PIPES. (SEE NOTE 2 UNDER "REQUIREMENTS FOR BRACING OF PIPES"). WHEN CONDUIT IS REQUIRED TO BE BRACED, IT MAY BE BRACED THE SAME AS THE EQUIVALENT WEIGHT PIPE.

7. PIPE, DUCT, AND CONDUIT HANGERS SHALL BE POSITIVELY ATTACHED TO THE SUPPORTING STRUCTURE ABOVE. THE USE OF C-CLAMPS OR OTHER FRICTION-TYPE ANCHORS ON HANG PIPES, DUCT, AND CONDUIT IS PROHIBITED IN SEISMIC REGIONS.

8. APPROPRIATE EXPANSION/CONTRACTION CAPABILITY SHALL BE PROVIDED IN DUCTS, CONDUITS, PIPES, ETC., WHICH CROSS BUILDING EXPANSION (SEISMIC) JOINTS. THE TOTAL RELATIVE MOVEMENT IN ANY HORIZONTAL DIRECTION ON EACH SIDE OF THE JOINT CENTERLINE SHALL BE, AS A MINIMUM, EQUAL TO THE SIZE OF THE BUILDING EXPANSION JOINT. FOR EXAMPLE, AT A 3-INCH BUILDING EXPANSION JOINT, A PIPE, DUCT, OR CONDUIT SHALL BE PERMITTED TO MOVE A MINIMUM OF THREE INCHES (1-5/8 INCHES IN EACH OF TWO OPPOSITE HORIZONTAL DIRECTIONS) ON EACH SIDE OF THE JOINT CENTERLINE.

B. REQUIREMENTS FOR BRACING OF DUCTS

1. BRACE RECTANGULAR DUCTS WITH CROSS-SECTIONAL AREAS OF 6 SQUARE FEET AND LARGER. BRACE ROUND DUCTS WITH DIAMETERS OF 28 INCHES AND LARGER. BRACE FLAT OVAL DUCTS THE SAME AS RECTANGULAR DUCTS OF THE SAME NOMINAL SIZE.

EXCEPTION: NO BRACING IS REQUIRED IF THE DUCT IS SUSPENDED BY HANGERS 12 INCHES OR LESS IN LENGTH, AS MEASURED FROM THE TOP OF THE DUCT TO THE BOTTOM OF THE SUPPORT WHERE THE HANGER IS ATTACHED. HANGERS SHALL BE POSITIVELY ATTACHED TO THE SUPPORTING STRUCTURE ABOVE AND MUST BE POSITIVELY ATTACHED TO THE DUCT WITHIN 2 INCHES OF THE TOP OF THE DUCT WITH A MINIMUM OF TWO #10 SHEET METAL SCREWS.

2. TRANSVERSE BRACING SHALL OCCUR AT THE INTERVAL SPECIFIED IN THE TABLES IN CHAPTERS 5, 6, AND 7 OF THE SMACNA SEISMIC RESTRAINT MANUAL, OR AT BOTH ENDS IF THE DUCT RUN IS LESS THAN THE SPECIFIED INTERVAL. TRANSVERSE BRACING SHALL BE INSTALLED AT EACH DUCT TURN AND AT EACH END OF A DUCT RUN, WITH A MINIMUM OF ONE BRACE AT EACH END.

3. LONGITUDINAL BRACING SHALL OCCUR AT THE INTERVAL SPECIFIED IN THE TABLES IN CHAPTERS 5, 6, AND 7 OF THE SMACNA SEISMIC RESTRAINT MANUAL, WITH AT LEAST ONE BRACE PER DUCT RUN. TRANSVERSE BRACING FOR ONE DUCT SECTION MAY ALSO ACT AS LONGITUDINAL BRACING FOR A DUCT SECTION CONNECTED PERPENDICULAR TO IT IF THE BRACING IS INSTALLED WITHIN 4 FEET OF THE INTERSECTION OF THE DUCTS AND IF THE BRACING IS SIZED FOR THE LARGER DUCT (SEE CHAPTER 4 IN THE SMACNA SEISMIC RESTRAINT MANUAL FOR TYPICAL LOCATIONS OF BRACING). DUCT JOINTS SHALL CONFORM TO SMACNA DUCT CONSTRUCTION STANDARDS.

4. A GROUP OF DUCTS MAY BE COMBINED IN A LARGER FRAME SO THE COMBINED WEIGHTS AND DIMENSIONS OF THE DUCTS ARE LESS THAN OR EQUAL TO THE MAXIMUM WEIGHT AND DIMENSIONS OF THE DUCT FOR WHICH BRACING DETAILS ARE SELECTED. (EXAMPLE: TO BRACE A 30" X 30" DUCT BESIDE A 54" X 28" DUCT, SELECT BRACING FOR AN 84" X 42" DUCT. THE HORIZONTAL DIMENSION OF THE 84" X 42" DUCT IS EQUAL TO THE COMBINED DUCTS AND ITS WEIGHT IS GREATER THAN THEIR COMBINED WEIGHTS.)

5. WALLS, INCLUDING GYPSUM BOARD NONBEARING PARTITIONS, WHICH HAVE DUCTS RUNNING THROUGH THEM, MAY REPLACE A TYPICAL TRANSVERSE BRACE, PROVIDE SOLID BLOCKING AROUND DUCT PENETRATIONS AT STUD WALL CONSTRUCTION.

6. UNBRACED DUCTS SHALL BE INSTALLED WITH A 6-INCH MINIMUM CLEARANCE TO VERTICAL CEILING HANGER WIRES.

SEISMIC RESTRAINTS NOTES FOR EQUIPMENT, DUCTS, AND PIPES

PM.20 NOT TO SCALE

C. REQUIREMENTS FOR BRACING OF PIPES

1. BRACING DETAILS, SCHEDULES, AND NOTES APPLY TO ALL TYPES OF PIPE, CONDUIT, AND JOINTS.
2. BRACE PIPING AS DESCRIBED IN a), b), AND c).
a. BRACE FUEL-OIL PIPING, GAS PIPING (SUCH AS FUEL GAS), MEDICAL GAS PIPING, AND COMPRESSED AIR PIPING THAT IS 1 INCH NOMINAL DIAMETER OR LARGER.
b. BRACE PIPING LOCATED IN BOILER ROOMS, MECHANICAL EQUIPMENT ROOMS, AND REFRIGERATION MECHANICAL ROOMS THAT IS 1-5/8 INCHES NOMINAL DIAMETER AND LARGER.
c. BRACE PIPES 2-5/8 INCHES NOMINAL DIAMETER AND LARGER.

EXCEPTION: PIPING SUSPENDED BY INDIVIDUAL HANGERS 12 INCHES OR LESS IN LENGTH, AS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE SUPPORT WHERE THE HANGER IS ATTACHED, NEED NOT BE BRACED. HOWEVER, HANGERS FOR PIPING, REGARDLESS OF SIZE, SHALL BE POSITIVELY ATTACHED TO THE SUPPORTING STRUCTURE ABOVE. FRICTION-TYPE ANCHORS SUCH AS C-CLAMPS SHALL NOT BE PERMITTED TO HANG PIPE.

3. TRANSVERSE BRACING SHALL BE AT 40 FEET MAXIMUM, EXCEPT WHERE A LESSER SPACING IS INDICATED IN THE TABLES FOR BRACING OF PIPES.

4. LONGITUDINAL BRACING SHALL BE AT 80 FEET MAXIMUM, EXCEPT WHERE A LESSER SPACING IS INDICATED IN THE TABLES. IN PIPES WHERE THERMAL EXPANSION IS A CONSIDERATION, AN ANCHOR POINT MAY BE USED AS THE SPECIFIED LONGITUDINAL BRACE PROVIDED IT HAS A CAPACITY EQUAL TO OR GREATER THAN A LONGITUDINAL BRACE. THE LONGITUDINAL BRACES AND CONNECTIONS MUST BE CAPABLE OF RESISTING THE ADDITIONAL FORCE INDUCED BY EXPANSION AND CONTRACTION. THERMAL EXPANSION CONSIDERATIONS SHALL BE THE RESPONSIBILITY OF THE MPE ENGINEER (REFER TO THE MPE DOCUMENTS FOR APPROPRIATE REQUIREMENTS).

5. TRANSVERSE BRACING FOR ONE PIPE SECTION MAY ALSO ACT AS LONGITUDINAL BRACING FOR A PIPE SECTION OF THE SAME SIZE CONNECTED PERPENDICULAR TO IT IF THE BRACING IS INSTALLED WITHIN 24 INCHES OF THE ELBOW OR TEE. SEE CHAPTER 4 OF THE SMACNA SEISMIC RESTRAINT MANUAL FOR TYPICAL LOCATIONS OF BRACING.

6. SEISMIC BRACES FOR PIPES ON TRAPEZE HANGERS MAY BE USED. SEE DETAILS IN CHAPTER 4 OF THE SMACNA SEISMIC RESTRAINT MANUAL.

7. PROVIDE FLEXIBILITY IN JOINTS WHERE PIPES PASS THROUGH BUILDING SEISMIC JOINTS OR EXPANSION JOINTS OR WHERE RIGIDLY SUPPORTED PIPES CONNECT TO EQUIPMENT WITH VIBRATION ISOLATORS. FOR THERMAL PIPING, THE FLEXIBILITY MAY BE PROVIDED BY THE INSTALLATION OF SWING JOINTS. FOR PIPING WITH MANUFACTURED BALL JOINTS, SELECT THE LENGTH OF PIPING OFFSET USING TWICE THE SEISMIC DRIFT OR THE EXPANSION JOINT SIZE SHOWN ON THE DRAWINGS, WHICHEVER IS LESS, IN PLACE OF THE EXPANSION GIVEN IN THE JOINT MANUFACTURERS' SELECTION TABLE. SEISMIC DRIFT = 0.012 FT PER FOOT OF HEIGHT ABOVE THE BASE WHERE SEISMIC SEPARATION OCCURS.

8. BRANCH LINES MAY NOT BE USED TO BRACE MAIN LINES.

9. A RIGID PIPING SYSTEM SHALL NOT BE BRACED TO DISSIMILAR PARTS OF THE BUILDING OR TO TWO DISSIMILAR BUILDING SYSTEMS THAT MAY RESPOND DIFFERENTLY DURING AN EARTHQUAKE.

10. VERTICAL RISERS SHALL BE LATERALLY SUPPORTED WITH A RISER CLAMP AT EACH FLOOR. FOR BUILDINGS GREATER THAN SIX STORIES HIGH, RISERS SHALL BE ENGINEERED INDIVIDUALLY.

11. FOR RISERS IN HUBLESS PIPING SYSTEMS WHERE THE RISER JOINTS ARE UNSUPPORTED BETWEEN FLOORS, SEE CHAPTER 9 OF THE SMACNA SEISMIC RESTRAINT MANUAL FOR RISER BRACING DETAILS.

12. THE SPACING OF VERTICAL SUPPORTS AND LATERAL BRACING, AND THE DETAILS OF THE VERTICAL SUPPORTS FOR THE FIRE-SPRINKLER SYSTEM SHALL COMPLY WITH NFPA PAMPHLET 13. THE DETAILS FOR THE LATERAL BRACING SHALL COMPLY WITH THE GUIDELINES OF THE SMACNA SEISMIC RESTRAINT MANUAL.

D. EQUIPMENT REQUIREMENTS

1. CONTRACTOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE FROM EACH EQUIPMENT MANUFACTURER STATING THAT EQUIPMENT WITH AN OPERATING WEIGHT OVER 200 POUNDS OR EQUIPMENT THAT MUST REMAIN OPERATIONAL DURING A DESIGN EARTHQUAKE, WILL WITHSTAND THE SEISMIC DESIGN PROVISIONS OF THE INTERNATIONAL BUILDING CODE. AMPLIFIED SEISMIC FORCES, AS THE RESULT OF NON-RIGID OR FLEXIBLE SUPPORTS SHALL BE CONSIDERED WHERE APPROPRIATE. BASIS OF CERTIFICATION SHALL BE BY ACTUAL TEST ON A SHAKING TABLE, BY THREE DIMENSIONAL SHOCK TESTS, BY AN ANALYTICAL METHOD USING DYNAMIC CHARACTERISTICS AND FORCES, BY USE OF EXPERIENCE DATA, OR BY MORE RIGOROUS ANALYSIS PROVIDING FOR EQUIVALENT SAFETY.

2. VIBRATION ISOLATORS, SNUBBERS, ISOLATION RAILS, ETC., AND THE ANCHORAGE OF THESE ASSEMBLIES FOR FLOOR- OR ROOFMOUNTED OR SUSPENDED EQUIPMENT SHALL BE DESIGNED FOR THE APPROPRIATE SEISMIC FORCES PER IBC.

LOSE DESIGN SPACES FOR LIFE.

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11-21-2025

HARMS ENGINEERING, INC. NASHVILLE, TENNESSEE HARMSENGINEERING.NET

FACTORY SHOALS PARK NORTHSIDE RESTROOM BUILDING

PREPARED FOR: NEWTON COUNTY, GEORGIA

COVINGTON

SUBMITTALS / REVISIONS

NO.	DATE	DESCRIPTION

SHEET TITLE

HVAC & PLUMBING DETAILS

PROJECT NO. 23042-1
DRAWN BY TMH
CHECKED BY TMH
SHEET NO.

DATE 11/21/2025
SCALE

PM.20