

PLUMBING SPECIFICATIONS

DIVISION 22 PLUMBING

22 05 00 BASIC PLUMBING REQUIREMENTS

- A. SEE DIVISION 00 PROCUREMENT AND CONTRACTING AND DIVISION 01 GENERAL REQUIREMENT FOR ADDITIONAL REQUIREMENTS.
- B. PLUMBING CONTRACTOR SHALL VERIFY REQUIREMENTS FOR TEMPORARY WATER WITH GENERAL CONTRACTOR AND INCLUDE IN HIS SCOPE OF WORK WHEN DIRECTED BY G.C.. INSTALL IN ACCORDANCE WITH ALL CODE AND OSHA REQUIREMENTS FOR CONSTRUCTION PROJECTS.
- C. SUBSTITUTIONS
- SEE DIVISION 01 23 00 PRODUCT SUBSTITUTION PROCEDURES FOR ADDITIONAL REQUIREMENTS.
 - CONTRACTOR SHALL PROVIDE ALL SUPPORTING DATA AND ASSUME THE BURDEN OF PROOF THAT ANY SUBSTITUTE IS EQUIVALENT AS TO APPEARANCE, CONSTRUCTION, CAPACITY, AND PERFORMANCE. THE JUDGMENT OF EQUIVALENCY SHALL BE MADE BY THE ENGINEER AT THE TIME OF SHOP DRAWING REVIEW, NOT DURING BIDDING.
 - WHERE SUBSTITUTE EQUIPMENT REQUIRES REDESIGN OF ANY PART OF THE PROJECT, THE COST OF REDESIGN AND ADDITIONAL COSTS OF THE WORK SHALL BE PAID BY THE CONTRACTOR. REDESIGN SHALL BE SUBJECT TO THE APPROVAL OF ALL JURISDICTION HAVING JURISDICTION OVER THE ARCHITECT/ ENGINEER.
 - CONTRACTOR SHALL ASSUME ALL COORDINATION RESPONSIBILITIES FOR SUBSTITUTE EQUIPMENT INCLUDING COORDINATION ACROSS TRADES AND COORDINATION OF PREVIOUSLY REVIEWED AND APPROVED SHOP DRAWING SUBMITTALS, SHOULD THESE SHOP DRAWINGS BE AFFECTED BY THE SUBSTITUTED EQUIPMENT.
- D. SHOP DRAWINGS, PRODUCT DATA, TEST RESULTS AND SAMPLE SUBMITTALS:
- SEE DIVISION 01 33 23 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES FOR ADDITIONAL REQUIREMENTS
 - PLUMBING CONSTRUCTION ADMINISTRATION SUBMITTAL LIST:
 - PIPING
 - PIPE IDENTIFICATION
 - FIXTURES
 - INSULATION
 - HANGERS
 - DRAINS AND CLEANOUTS
 - VALVES
 - BACKFLOW PREVENTERS
 - WATER HEATERS
 - PUMPS
 - SEWAGE EJECTORS
 - PROJECT CLOSEOUT
 - PROVIDE PLUMBING EQUIPMENT OPERATING AND MAINTENANCE MANUALS TO THE OWNER PER IECC C303.3 AND C408.2.5.1.
 - PROVIDE RECORD DRAWINGS TO THE OWNER IN AUTOCAD FORMAT.
 - FINISHING AND PAINTING
 - SEE DIVISION 09 91 00 FINISH AND PAINTING FOR ADDITIONAL REQUIREMENTS.
 - PREPARE EXPOSED PIPE, FITTINGS, SUPPORTS, AND ACCESSORIES FOR FINISH PAINTING IN ROOMS THAT WILL HAVE CEILING AND STRUCTURE PAINTED.
 - COORDINATE WORK WITH THE PAINTERS SO THAT ALL EQUIPMENT IS INSTALLED PRIOR TO PAINTING. P.C. SHALL PAINT ITEMS IF NOT IN PLACE PRIOR TO NORMAL ROUTINE PAINTING.
 - IF FINISH BECOMES RUSTED, CORRODED, SCRATCHED, OR FLAKED DURING STORAGE OR INSTALLATION, REFINISH THE EQUIPMENT TO THE SATISFACTION OF THE OWNER.
 - WHERE THE PLUMBING CONTRACTOR IS REQUIRED TO PAINT, THE PAINTING SHALL BE DONE IN ACCORDANCE WITH THE PAINTING PORTION OF THE ARCHITECTURAL SPECIFICATION.
 - DETAILS AND SCHEDULES ARE SHOWN TO Aid THE CONTRACTOR AND ARE NOT MEANT TO BE INCLUSIVE OF ALL DEVICES. PROVIDE EQUIPMENT AND ACCESSORIES FOR A COMPLETE INSTALLATION.
 - INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND REQUIREMENTS. PROVIDE ADDITIONAL WORK AND MATERIALS AS REQUIRED.
 - PROVIDE ALL STATE AND LOCAL PERMITS AND ANY OTHER RELATED FEES.
- H. REGULATORY REQUIREMENTS
- PROVIDE CERTIFICATE OF COMPLIANCE FROM AUTHORITY HAVING JURISDICTION INDICATING APPROVAL BACKFLOW PREVENTION DEVICES TESTING AND INSTALLATION.
 - PERFORM WORK PER ALL LOCAL AND STATE CODES, ORDINANCES AND REGULATIONS HAVING JURISDICTION.
- J. COORDINATE INSTALLATION OF PLUMBING WORK WITH THE OTHER CONTRACTORS TO AVOID CONFLICTS WITH OTHER WORK.
- K. VERIFY CONNECTION REQUIREMENTS FOR EQUIPMENT FURNISHED BY OTHERS WITH FINAL SHOP DRAWINGS.
- L. CUTTING AND PATCHING
- PROVIDE ALL CUTTING AND PATCHING NECESSARY FOR PLUMBING WORK INSTALLATION UNLESS THIS WORK IS IDENTIFIED TO BE THE WORK OF OTHER CONTRACTORS. PATCHING SHALL MATCH ADJACENT SURFACES. CORE DRILL OR SAW-CUT OPENINGS THROUGH EXISTING CONCRETE.
 - P.C. SHALL PROVIDE SAWCUTTING, EXCAVATION, AND BACKFILL OF EXISTING FLOORS AS REQUIRED FOR INSTALLATION OF NEW UNDERGROUND PIPING. P.C. SHALL PROVIDE CONCRETE AND REINFORCING PER FLOOR SLAB SPECIFICATIONS IN REMOVED AREA OF THICKNESS TO MATCH EXISTING (FIELD VERIFY). PROVIDE DOWELS INTO EXISTING FLOOR SLAB. DOWEL DIAMETER SHALL BE MINIMUM ONE EIGHTH OF FLOOR SLAB THICKNESS. DOWEL LENGTH SHALL BE 12" FOR SLABS LESS THAN 6" THICK, 16" FOR SLABS 6-7" THICK, 18" FOR SLABS 8-9" THICK, AND 20" FOR SLABS GREATER THAN 9" THICK. DOWELS SHALL BE SPACED 12" O.C. AND PENETRATION IN EXISTING SLAB SHALL BE HALF THE LENGTH.
- M. FIRE RATED INTERIOR WALL AND FLOOR PIPE PENETRATIONS
- SLEEVE REQUIRED FOR PENETRATION OF CONCRETE AND MASONRY WALLS AND FLOORS.
 - SEAL OPENING AROUND PIPE WITH A UL APPROVED FIRE-STOP SYSTEM HAVING AN F-RATING NOT LESS THAN THE HOURLY RATING OF THE ASSEMBLY BEING PENETRATED.
 - PROVIDE FIRE-RESISTIVE JOINT SYSTEM PRODUCTS BY THE SAME MANUFACTURER AS BEING USED ON THE REMAINDER OF THE PROJECT (COORDINATE WITH GC/C/M).
 - WHERE A SLEEVE IS REQUIRED, FURNISH AND INSTALL SLEEVES FOR NEW DRYWALL WALLS AND CONCRETE WALLS AND FLOORS. FURNISH SLEEVES TO THE MASON CONTRACTOR FOR INSTALLATION IN NEW MASONRY WALLS.
 - PROVIDE UL ASSEMBLY PENETRATION NUMBER TO AHJ COMPLIANT WITH BUILDING UL ASSEMBLY 30 DAYS PRIOR TO INSTALLATION IF REQUIRED BY AHJ.
- N. SEALANTS
- PLUMBING CONTRACTOR SHALL PROVIDE ALL SEALANTS WHERE JOINT IS HIDDEN AND WHERE JOINT IS EXPOSED IN MECHANICAL ROOM.
 - SEALANT CONTRACTOR SHALL PROVIDE SEALANTS AT ALL EXPOSED LOCATIONS IN FINISHED ROOMS.
- O. ESCUTCHEONS
- INSTALL ONE-PIECE (TWO PIECE FOR EXISTING PIPING) POLISHED CHROME PLATED STEEL ESCUTCHEONS AT PENETRATIONS EXPOSED IN FINISHED ROOMS (ROOMS WHICH DON'T HAVE UNFINISHED CONCRETE FLOORS).
 - ESCUTCHEONS WITH SPRINGS FOR WALL AND CEILING LOCATIONS.
 - ID TO CLOSELY FIT AROUND PIPE/INSULATION, OD THAT COMPLETELY COVERS THE OPENING.
 - ESCUTCHEONS REQUIRED IN CABINETS AND CASEWORK.
- P. PROJECT COMPLETION
- CLEAN FIXTURES AND EQUIPMENT AND LEAVE IN PROPER WORKING CONDITION AT THE TIME OF FINAL CLEAN-UP.
 - REMOVE, CLEAN AND REPLACE AERATORS AFTER FLUSHING WATER PIPING.
 - PROVIDE OPERATING INSTRUCTIONS FOR A TOTAL OF TWO (2) HOURS. MAINTAIN A RECORD OF OPERATING INSTRUCTION PERIODS AND OBTAIN OWNER SIGNOFF THAT INSTRUCTIONS HAVE BEEN COMPLETED.
- Q. ACCESS
- FURNISH ACCESS PANELS OF ADEQUATE SIZE TO PERMIT SERVICE OF EQUIPMENT, VALVES, OR OTHER SPECIALTIES WHICH REQUIRE MAINTENANCE OR ADJUSTMENT WHICH ARE INSTALLED BEHIND WALLS OR ABOVE NON-LAYIN CEILING SURFACES.
 - PANELS SHALL BE SUITABLE FOR INSTALLATION IN THE MATERIAL FORMING THE FINISHED SURFACE, WITH FLANGED FLUSH METAL FRAME, FLUSH HINGED STEEL DOOR, FLUSH SCREWDRIVER OPERATED LATCH.
 - PANELS UL LISTED TO CONFORM TO THE FIRE RATING OF THE SURFACE INSTALLED IN.
 - TURN ACCESS PANEL OVER TO CONTRACTOR SKILLED IN THE CONSTRUCTION OF THE SURFACES INVOLVED FOR INSTALLATION.
 - ARCHITECT TO APPROVE ACCESS PANEL LOCATION PRIOR TO INSTALLATION OF EQUIPMENT REQUIRING ACCESS.
 - COORDINATE WITH THE OTHER CONTRACTORS AND WHEREVER PRACTICAL, GROUP DEVICES IN SUCH A MANNER SO AS TO MINIMIZE PANELS.

22 05 19 METERS AND GAUGES

- A. PRESSURE GAUGES AND THERMOMETERS
- MANUFACTURERS: TERTRICE, U.S. GAUGE, ASHCROFT, MARSH, WEISER, WEKSLER.
 - PRESSURE GAUGES
 - GENERAL PURPOSE: TERTRICE 600CB P8F CERTIFIED LEAD FREE CAST ALUMINUM CASE, PHOSPHOR BRONZE BOURDON TUBE, TERTRICE 872-1P8F LEAD FREE BRASS PRESSURE SNUBBER.
 - GAUGE COCK: APOLLO 777FL-100 LEAD FREE FULL PORT THREADED BRASS VALVE, 150 PSI SWP, 400 DEG F MAXIMUM TEMPERATURE.
 - STEM THERMOMETERS:
 - GENERAL PURPOSE: TERTRICE BX9, ASTM E1, ORGANIC SPIRIT LIQUID FILL, CAST ALUMINUM CASE WITH EPOXY FINISH, CAST ALUMINUM ADJUSTABLE JOINT WITH POSITIVE LOCKING DEVICE, 9" SCALE, 3/4" NPT BRASS STEM, WITH EXTENSIONS AS REQUIRED FOR INSULATION.
 - PROVIDE THERMOWELL FOR ALL THERMOMETERS. BRASS IN COPPER TUBING. SIZE AND INSERTION LENGTH FOR APPLICATION. PROVIDE HEAT TRANSFER MEDIUM.
 - SCALE RANGES AND MINIMUM INCREMENT AS FOLLOWS:
 - COLD WATER: 0-100 PSIG/ 1 PSIG; 0-100 DEG F/ 1 DEG F
 - HOT WATER: 0-100 PSIG/ 1 PSIG; 0-160 DEG F/ 2 DEG F
 - EXTEND NIPPLES TO ALLOW INSULATION CLEARANCE.
 - INSTALL WHERE READ FROM NORMAL OPERATING LEVEL.
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 - PROVIDE THERMOWELL FOR ALL THERMOMETERS. BRASS IN COPPER TUBING. SIZE AND INSERTION LENGTH FOR APPLICATION. PROVIDE HEAT TRANSFER MEDIUM.
 - SCALE RANGES AND MINIMUM INCREMENT AS FOLLOWS:
 - COLD WATER: 0-100 PSIG/ 1 PSIG; 0-100 DEG F/ 1 DEG F
 - HOT WATER: 0-100 PSIG/ 1 PSIG; 0-160 DEG F/ 2 DEG F
 - EXTEND NIPPLES TO ALLOW INSULATION CLEARANCE.
 - INSTALL WHERE READ FROM NORMAL OPERATING LEVEL.
 - CALIBRATE FOR ACCURACY.

22 05 29 PIPE AND EQUIPMENT HANGERS AND SUPPORTS

- A. PRESSURE GAUGES AND THERMOMETERS
- MANUFACTURERS: TERTRICE, U.S. GAUGE, ASHCROFT, MARSH, WEISER, WEKSLER.
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 - GENERAL PURPOSE: TERTRICE 600CB P8F CERTIFIED LEAD FREE CAST ALUMINUM CASE, PHOSPHOR BRONZE BOURDON TUBE, TERTRICE 872-1P8F LEAD FREE BRASS PRESSURE SNUBBER.
 - GAUGE COCK: APOLLO 777FL-100 LEAD FREE FULL PORT THREADED BRASS VALVE, 150 PSI SWP, 400 DEG F MAXIMUM TEMPERATURE.
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 - PROVIDE THER

PLUMBING SPECIFICATIONS (CONT.)

- 2. SENSUS MODELS 496
- 3. FOR REGULATORS INSTALLED INDOORS, PIPE THE RELIEF VALVE VENT FULL SIZE TO THE OUTSIDE OF THE BUILDING AT A NON-HAZARDOUS LOCATION. INCREASE VENT SIZE ONE PIPE SIZE IF VENT LENGTH EXCEEDS 10 FEET. TERMINATE WITH AN ELBOW DOWN WITH A SCREEN OVER THE OPENING. DO NOT COMBINE VENTS.
- 4. MAXITROL 325 SERIES WITH VENT LIMITER ARE PERMITTED FOR INDOOR APPLICATIONS WHERE SUPPLYING LESS THAN 300,000 BTUH.
- 5. FOR REGULATORS INSTALLED OUTDOORS, POSITION THE REGULATOR SO THE RELIEF VALVE VENT IS FACING DOWN OR INSTALL ELBOW FACING DOWN A MINIMUM 10 FEET FROM AN OUTSIDE AIR INTAKE AND 5 FEET FROM A GAS FLUE DISCHARGE.

22 13 00 DRAIN PIPING AND VALVES

- A. PIPING INSTALLATION
 - 1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 - 2. FIELD VERIFY EXISTING AND PROPOSED SEWER ELEVATIONS AND SIZES AND NOTIFY THE OWNER'S REPRESENTATIVE IN WRITING OF ANY VARIATION OF THE ELEVATIONS BEFORE BEGINNING ANY SEWER AND BUILDING DRAIN WORK.
 - 3. DRAWINGS AND DIAGRAMS SHOW SIZE AND APPROXIMATE LOCATION OF PIPING. THE DRAWINGS SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION. PROVIDE ADDITIONAL OFFSETS TO COORDINATE WITH INSTALLATION REQUIREMENTS OF OTHER SYSTEMS.
 - 4. ROUTE ABOVE GROUND PIPING IN ORDERLY MANNER, PARALLEL TO BUILDING STRUCTURE. OFFSET PIPE CONNECTIONS AT EQUIPMENT TO ALLOW FOR SERVICE, SUCH AS REMOVAL OF THE EQUIPMENT.
 - 5. INSTALL PIPING TO CONSERVE BUILDING SPACE AND NOT INTERFERE WITH USE OF SPACE AND OTHER WORK. GROUP PIPING WHENEVER PRACTICAL AT COMMON ELEVATIONS.
 - 6. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT WITH RESPECT TO THE BUILDING AND PLUMBING SYSTEM.
 - 7. PROVIDE CLEARANCE FOR INSTALLATION OF INSULATION AND ACCESS TO VALVES.
 - 8. DO NOT ROUTE PIPING ABOVE TRANSFORMERS, PANELBOARDS, SWITCHBOARDS OR OTHER ELECTRICAL DISTRIBUTION EQUIPMENT.
 - 9. PROVIDE NON-CONDUCTING DIELECTRIC CONNECTIONS WHEREVER JOINTING DISSIMILAR METALS.
 - 10. PROVIDE NO-HUB ADAPTER ON PVC PIPE WHERE USING NO-HUB COUPLINGS.
 - 11. SLOPE SANITARY PIPE 2" AND SMALLER 1/4" PER FOOT; 3" AND LARGER PIPING 1/8" PER FOOT.
 - 12. RUN ALL DRAIN LINES FROM EQUIPMENT OVERFLOW RECEIVERS, ETC. TO FLOOR / HUB DRAINS. DRAIN LINES SHALL BE HARD DRAWN COPPER INSTALLED WITH A MINIMUM OF 1/8" PER FOOT SLOPE. NO DRAIN LINE SHALL BE SMALLER THAN 3/4". INSTALL A TEE AT EACH ELBOW OF CONDENSATE DRAIN PIPING WITH A CLEANOUT PLUG ON THE BLIND TEE.
- B. SANITARY DRAIN PIPING TESTING: TEST DRAIN AND VENT PIPING PER CODE REQUIREMENTS.
- C. AIR ADMITTANCE VALVES NOT PERMITTED.

22 15 00 COMPRESSED AIR PIPING

- A. PIPING INSTALLATION
 - 1. DRAWINGS AND DIAGRAMS SHOW SIZE AND APPROXIMATE LOCATION OF PIPING. THE DRAWINGS SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION. PROVIDE ADDITIONAL OFFSETS TO COORDINATE WITH INSTALLATION REQUIREMENTS OF OTHER SYSTEMS.
 - 2. ROUTE PIPING IN ORDERLY MANNER, PARALLEL TO BUILDING STRUCTURE. OFFSET PIPE CONNECTIONS AT EQUIPMENT TO ALLOW FOR SERVICE, SUCH AS REMOVAL OF THE EQUIPMENT.
 - 3. INSTALL PIPING TO CONSERVE BUILDING SPACE AND NOT INTERFERE WITH USE OF SPACE AND OTHER WORK. GROUP PIPING WHENEVER PRACTICAL AT COMMON ELEVATIONS.
 - 4. PROVIDE CLEARANCE FOR ACCESS TO VALVES AND FITTINGS.
 - 5. PROVIDE NON-CONDUCTING DIELECTRIC CONNECTIONS WHEREVER JOINTING DISSIMILAR METALS.
 - 6. USE ONLY NEW MATERIAL, FREE OF DEFECTS, RUST AND SCALE, AND MEETING THE LATEST REVISION OF THE ASTM SPECIFICATIONS.
 - 7. PREPARE EXPOSED UNFINISHED PIPE, FITTINGS, SUPPORTS, AND ACCESSORIES FOR FINISH PAINTING.
 - 8. SLOPE PIPING AND ARRANGE SYSTEMS TO DRAIN AT LOW POINTS.
 - 9. ALL TAKEOFFS SHALL BE FROM THE TOP OF THE PIPING.
 - 10. USE ECCENTRIC FITTINGS FOR CHANGES IN HORIZONTAL PIPE SIZES TO MAINTAIN BOTTOM OF PIPE LEVEL. CONCENTRIC FITTINGS MAY BE USED FOR CHANGES IN VERTICAL PIPE SIZES.
 - 11. INSTALL VALVE STEM BETWEEN THE VERTICAL (UPRIGHT) OR HORIZONTAL POSITION.
 - 12. DO NOT SUPPORT WEIGHT OF PIPING ON VALVE.
- B. PIPING PRESSURE TESTS
 - 1. EACH TEST MUST BE WITNESSED BY THE OWNER'S REPRESENTATIVE. IF LEAKS ARE FOUND, REPAIR THE AREA WITH NEW MATERIALS AND REPEAT THE TEST.
 - 2. TEST THE SYSTEM WITH AIR TO THE PRESSURE SETTING OF THE RELIEF VALVE FOR AN 8 HOUR DURATION.
 - 3. WHERE MULTIPLE NEW PIPE BRANCHES ARE EXTENDED FROM AN EXISTING MAIN, TEST THE EXISTING MAIN AND NEW BRANCHES AT 1.5 TIMES THE SYSTEM OPERATING PRESSURE IN LIEU OF THE PRESSURE ABOVE.
 - 4. WHERE NEW PIPING IS AN EXTENSION OF THE EXISTING SYSTEM, TEST THE NEW PIPING PRIOR TO CONNECTION TO THE EXISTING SYSTEM.
 - 5. REMOVE RELIEF VALVE DURING TESTS.
 - 6. RELIEVE PRESSURE IN SYSTEM AFTER PRESSURE TESTS.
- C. UNIONS AND FLANGES
 - 1. COPPER PIPE 2" AND SMALLER: BRONZE, SOLDERED JOINTS.
- D. VALVES
 - 1. MANUFACTURERS: NIBCO, APOLLO, HAMMOND, MILWAUKEE, KEYSTONE, CENTERLINE, DEZURIK, CRANE, MUELLER, POWELL, AND GRINNELL.
 - 2. MAIN PIPING
 - a. BALL VALVES 2" AND SMALLER:
 - 1). NIBCO MODEL T-585-70
 - 2). TWO PIECE, FULL PORT, THREADED ENDS, BRONZE BODY.
 - 3). CHROME PLATED BRASS BALL, TEFLON SEATS AND STUFFING BOX RING, LEVER HANDLE; 600 PSI WOG.
 - 3. VALVES TO EQUIPMENT
 - a. TWO PIECE, FULL PORT, THREADED ENDS BRONZE BODY.
 - b. CHROME PLATED BRASS BALL, TEFLON SEATS AND STUFFING BOX RING, LEVER HANDLE, SAFETY VENT FOR PRESSURE RELIEF OF DOWNSTREAM PIPING TO EQUIPMENT; 600 PSI WOG.
 - c. BALL VALVES 1" AND SMALLER: NIBCO MODEL T-585-70-SV

22 40 00 PLUMBING FIXTURES

- A. FIXTURES
 - 1. SEE SCHEDULES FOR ADDITIONAL INFORMATION.
 - 2. LIKE FIXTURE TYPE (FAUCETS, WATER CLOSETS, LAVS) SHALL BE THE PRODUCT OF THE SAME MANUFACTURER.
 - 3. SAFETY COVERS OVER EXPOSED WASTE AND SUPPLY PIPING AT ADA ACCESSIBLE FIXTURES SHALL BE LAV-GUARD BY TRUEBRO OR EQUIVALENT.
- B. INSTALLATION
 - 1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 - 2. PROVIDE CHROME PLATED RIGID SUPPLIES TO FIXTURES WITH STOPS, REDUCERS, AND ESCUTCHEONS UNLESS OTHERWISE NOTED IN SCHEDULES AND DETAILS.
 - 3. SEAL FIXTURES TO WALL AND FLOOR SURFACES WITH MILDEW-RESISTANT SILICONE SEALANT, COLOR TO MATCH FIXTURE.
 - 4. INSTALL BARRIER-FREE FIXTURES IN COMPLIANCE WITH LOCAL CODES AND FEDERAL ADA ACCESSIBILITY GUIDELINES.
 - 5. EXPOSED TRAPS, PIPING, AND ESCUTCHEONS SHALL BE CHROME PLATED BRASS UNLESS OTHERWISE NOTED IN SCHEDULES AND DETAILS.
 - 6. ADJUST LAVATORY THERMOSTATIC MIXING VALVE TO 105 DEG F MAXIMUM OUTLET TEMPERATURE.

PIPE SCHEDULE

SERVICE	LOCATION	COPPER						PEX			PVC			CAST IRON		STEEL															
		C12200 TUBE	FITTINGS	JOINTS	PIPE	FITTINGS	JOINTS	PIPE	FITTINGS	JOINTS	PIPE	FITTINGS	JOINTS	PIPE & FITTINGS	JOINTS	PIPE	FITTINGS	JOINTS													
		ASTM B42 TYPE L HARD DRAWN	ASTM B88 TYPE L HARD DRAWN	ASTM B42 TYPE K ANNEALED TUBING	ASTM B88 TYPE K ANNEALED TUBING	ASTM B819 TYPE K MEDICAL GAS TUBING	ANSI B16.15, B16.18, B16.22, B16.23, B16.26, B16.29, B16.32	ANSI B16.22 WROUGHT COPPER AND BRONZE	LEAD FREE SOLDER	ASTM B32 AWS A5.8 BCUP SILVER BRAZE (1)	ASTM B32 GRADE 957A SOLDER	ASTM F876, F877, F2023	NSF P171 CL-R	ASTM F2023	ASTM F1807	PER MFR REQUIREMENTS (1)	SCH. 40 PRESSURE RATED ASTM D1785	SCH. 40 NON-PRESS. RATED ASTM D1784... DWV NON-PRESS. RATED ASTM F891	ASTM D2665	ASTM F1866	ASTM D2466	ASTM D2467	ASTM F656 SOLVENT WELD, ASTM D2564 SOLVENT CEMENT	HUBLESS ASTM A886, CSPI 301	BELL AND SPIGOT ASTM A74 SERVICE WEIGHT	ASTM C1277, CSPI 310 STD. 5.5 CLAMP & SHIELD, ASTM C564 RUBBER GASKET.	BLACK STEEL	ANSI B16.3 MALLEABLE IRON, CLASS 150	COLD PRESS MECHICAL JOINT	THREADED	
WATER	ABOVE GROUND	X	X			X		X			X	X			X	X															
SANITARY, SEWER, DRAIN, WASTE AND VENT	BELOW GROUND		X	X		X			X		X		X		X																
	ABOVE GROUND																	X	X	X	X		X	X	X						
	UNDER BUILDING																														
AIR	ABOVE GROUND	X						X		X																					
	BELOW GROUND			X				X		X																					
VACUUM	INSIDE BUILDING																X	X		(2)	(2)	X							X	X	(4)
GAS	ABOVE GROUND																										X	X			X

- ALL MATERIALS SHALL COMPLY WITH LATEST VERSION OF LISTED STANDARD. ALL IMPORTED MATERIAL SHALL BE CERTIFIED BY A DOMESTIC THIRD PARTY FOR COMPLIANCE WITH STANDARD.

- (1) NO JOINTS PERMITTED UNDERGROUND
- (2) PROVIDE PRESSURIZED DEEP SOCKET LONG SWEEP AND WYE TYPE PATTERN FITTINGS. NO SHORT SWEEP 90'S OR TEES PERMITTED.
- (4) VIEGA MEGAPRESS FITTING COMPLYING WITH ASTM A420 OR ASME B16.3. EPDM SEAL FOR WATER APPLICATIONS; HNBR SEAL FOR GAS.
- 10 YEAR WARRANTY IN MATERIAL AND WORKMANSHIP. INSTALL PER MFR INSTALLATION INSTRUCTIONS.

INSULATION SCHEDULE

SERVICE	LOCATION	INSULATION TYPE (1)	JACKET	PIPE SIZE	
				<1.5"	=>1.5"
CW	GENERAL BUILDING	RIGID F.G. OR ELAST. FOAM (10)	NR	1/2"	1/2"
CW	IN WALLS	ELASTOMERIC FOAM	NR	1/2"	1/2"
CW (PEX AND CPVC)	ALL	NR	NR	NR	NR
HW, HWR	GENERAL BUILDING	RIGID F.G. OR ELAST. FOAM (10)	NR	1"	1 1/2"
HW NOT ON RECIRC. LOOP	GENERAL BUILDING	RIGID F.G. OR ELAST. FOAM (10)	NR	1"	1"
HW BRANCH	IN WALLS	ELASTOMERIC FOAM	NR	1/2"	1/2"

- NR = NOT REQUIRED
- COLD WATER = HARD, SOFT, IRRIGATION, HOSE STATION, ETC. AT ALL PRESSURES.
- HOT WATER = WATER SYSTEMS OPERATING AT TEMPERATURES GREATER THAN 105 DEG F AT ALL PRESSURES.
- (1) WHERE INSULATION IS PROVIDED ON PIPING INSULATE METERS, VALVES, BACKFLOW PREVENTERS AND ALL INLINE EQUIPMENT.
- (10) INSULATION NOT REQUIRED FOR EXPOSED FINAL PIPING CONNECTIONS TO FIXTURES.

NOTE:

- P.C. SHALL PROVIDE PRODUCT SUBMITTALS TO ADMI FOR REVIEW AND APPROVAL IF PEX PIPE IS USED IN LIEU OF COPPER.



Always a Better Plan

100 Camelot Drive
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COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES

SHEET ISSUE JULY 12, 2023

REVISIONS

JOB NUMBER

230264900

SHEET NUMBER

P0.2

STRUCTURAL COORDINATION NOTE:

- CLOSELY COORDINATE THE PLUMBING INSTALLATION WITH THE STRUCTURE, OTHER TRADES, AND CORRESPONDING OBSTRUCTIONS. SET INVERT ELEVATIONS OF ALL BRANCH LINES, LAYOUT EXACT RUNS, AND DETERMINE FINAL PITCH ADJUSTMENTS FOR UNDERFLOOR PIPING AS NECESSARY TO ACCOMMODATE FOUNDATION WALLS, PIERS, AND FOOTINGS. ADJUST PIPING AS NEEDED TO AVOID CONFLICT IN THE FIELD. CLOSELY COORDINATE ALL UNDERFLOOR PIPING LAYOUTS WITH THE GENERAL CONTRACTOR PRIOR TO CONSTRUCTION. VERIFY ALL PIPE ROUTING THROUGH OR BENEATH THE FOUNDATION WALLS WITH THE STRUCTURAL ENGINEER TO ENSURE PROPER PLACEMENT. DO NOT PIERCE, PENETRATE, OR OTHERWISE MODIFY ANY STRUCTURAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.

SOIL TESTING NOTE:

- G.C. SHALL HIRE A SOIL TESTING AGENCY TO PERFORM A COMPACTION TEST OF LANDLORD DELIVERED PAD DURING & AFTER UNDERGROUND UTILITY INSTALLATION. G.C. SHALL NOT INSTALL UNDERGROUND UTILITIES IN LANDLORD DELIVERED PAD UNTIL COMPACTION REPORTS HAVE BEEN RECEIVED FROM THE LANDLORD, AND PROPER COMPACTION HAS BEEN MET. ALL REPORTS SHALL BE SUBMITTED TO ADMI.

DENTAL EQUIPMENT COORDINATION:

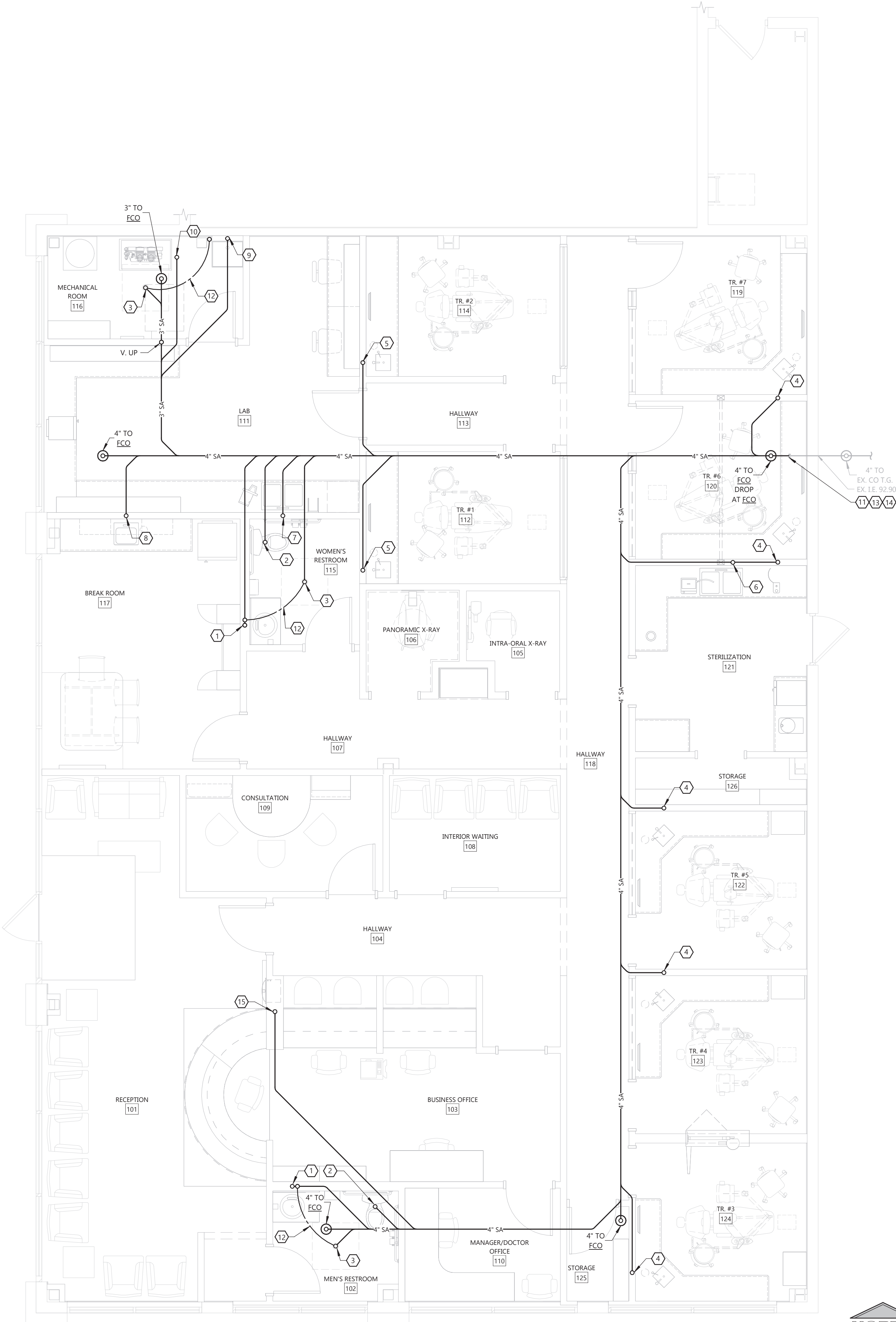
- PLUMBING CONTRACTOR SHALL VERIFY TYPE AND LOCATION OF ALL DENTAL EQUIPMENT, ROUGH-IN DIMENSIONS, AND REQUIRED PLUMBING CONNECTIONS. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL FLOOR FIXTURES, FLOOR DRAINS, HUB DRAINS, WATER CLOSETS, LAVATORIES AND FLOOR SINKS. DENTAL EQUIPMENT SUPPLIER SHALL FURNISH AND INSTALL ALL FIXTURES IDENTIFIED ON THEIR PLANS (WITH THE EXCEPTION OF THOSE IDENTIFIED ABOVE). DENTAL EQUIPMENT SUPPLIER SHALL INSTALL ALL DENTAL EQUIPMENT AND PROVIDE ALL FIXTURE TRAPS, SUPPLIES AND STOPS, ISOLATION VALVES, MIXING VALVES, ETC. AND MAKE FINAL CONNECTIONS TO DENTAL EQUIPMENT. PLUMBING CONTRACTOR SHALL MAKE FINAL CONNECTION TO AIR COMPRESSOR AND VACUUM SYSTEM. VERIFY ALL EQUIPMENT CONNECTIONS WITH ADMI AND DENTAL EQUIPMENT SUPPLIER PRIOR TO INSTALLATION. PROVIDE ADDITIONAL CONNECTIONS AS REQUIRED. COORDINATE ALL WORK ACCORDINGLY.

GENERAL NOTES:

- REFER TO SHEET U1.1 PRIOR TO ROUGH-IN OF FIXTURES.
- P.C. SHALL VERIFY RIM ELEVATION OF SANITARY MANHOLE UPSTREAM OF BUILDING SEWER CONNECTION TO THE MAIN IS BELOW FLOOR ELEVATION OF TENANT BUILDING. IF RIM IS ABOVE FLOOR ELEVATION, PROVIDE PRICE TO ADD A BACKWATER VALVE AND NOTIFY EXCEL ENGINEERING.
- NO DOUBLE WYE OR DOUBLE SANITARY TEE SHALL BE PERMITTED IN HORIZONTAL POSITION FOR SANITARY DRAINAGE APPLICATION.

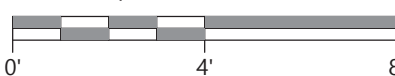
KEYNOTES:

- ROUTE 2" UNDERFLOOR SANITARY UP TO LAVATORY (L-1).
- ROUTE 4" UNDERFLOOR SANITARY UP TO WATER CLOSET (WC-1H).
- ROUTE 3" UNDERFLOOR SANITARY UP TO FLOOR DRAIN (FD-1). TAPER FLOOR TOWARDS DRAIN.
- ROUTE 2" UNDERFLOOR SANITARY UP TO TREATMENT SINK (S-1).
- ROUTE 2" UNDERFLOOR SANITARY UP TO TREATMENT SINK (S-2).
- ROUTE 2" UNDERFLOOR SANITARY UP TO STERILIZATION SINK (S-3).
- ROUTE 2" UNDERFLOOR SANITARY UP TO LABORATORY SINK (S-4).
- ROUTE 2" UNDERFLOOR SANITARY UP TO BREAKROOM SINK (S-5).
- ROUTE 2" UNDERFLOOR SANITARY UP TO SERVICE SINK (S-1).
- ROUTE 3" UNDERFLOOR SANITARY UP TO A HEIGHT OF 18" FOR VACUUM WASTE. PROVIDE UNDERFLOOR TRAP. SEE RAM-VAC DETAIL SHEET P1.2 FOR MORE INFORMATION.
- PROVIDE UNDERFLOOR SANITARY WASTE CONNECTIONS TO THE EXISTING SANITARY SERVICE (PROVIDED BY LANDLORD). FIELD VERIFY EXISTING UNDERGROUND PIPING LOCATION, DEPTH AND SIZE AT POINT OF NEW CONNECTION PRIOR TO INSTALLATION OF ANY UNDERGROUND PIPING.
- TRAP PRIMER PIPING.
- P.C. SHALL PROVIDE A RECORDING OF CAMERA INSPECTION OF ON-SITE SANITARY UTILITY SERVICE TO ADMI PRIOR TO COMMENCING NEW WORK INSTALLATION AND ONCE PROJECT IS COMPLETE. P.C. SHALL ESTABLISH THE EXACT LOCATION AND SIZE OF UTILITY SERVICES PRIOR TO BUILDING ROUGH-IN. COORDINATE LOCATION OF BUILDING SERVICE ENTRANCES AND SYSTEM PIPE ROUTING WITH UTILITY SERVICE MAINS ON SITE AND ADJUST FOR SPECIFIC SITE FEATURES AND FIELD CONDITIONS ENCOUNTERED. NOTIFY ADMI AND EXCEL ENGINEERING OF ANY ABNORMALITIES.
- PROVIDE FCO WITHIN 5' OF EXTERIOR WALL IF A CLEANOUT DOES NOT EXIST WITHIN 5' OF EXTERIOR WALL, EITHER INSIDE OR OUTSIDE.
- ROUTE 2" UNDERFLOOR SANITARY UP TO BOTTLE FILLING STATION (BFS-1).



UNDERGROUND PLAN

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



PLUMBING UNDERGROUND PLAN

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES

SHEET ISSUE JULY 12, 2023

REVISIONS

JOB NUMBER

230264900

SHEET NUMBER

P1.1

DENTAL EQUIPMENT COORDINATION:

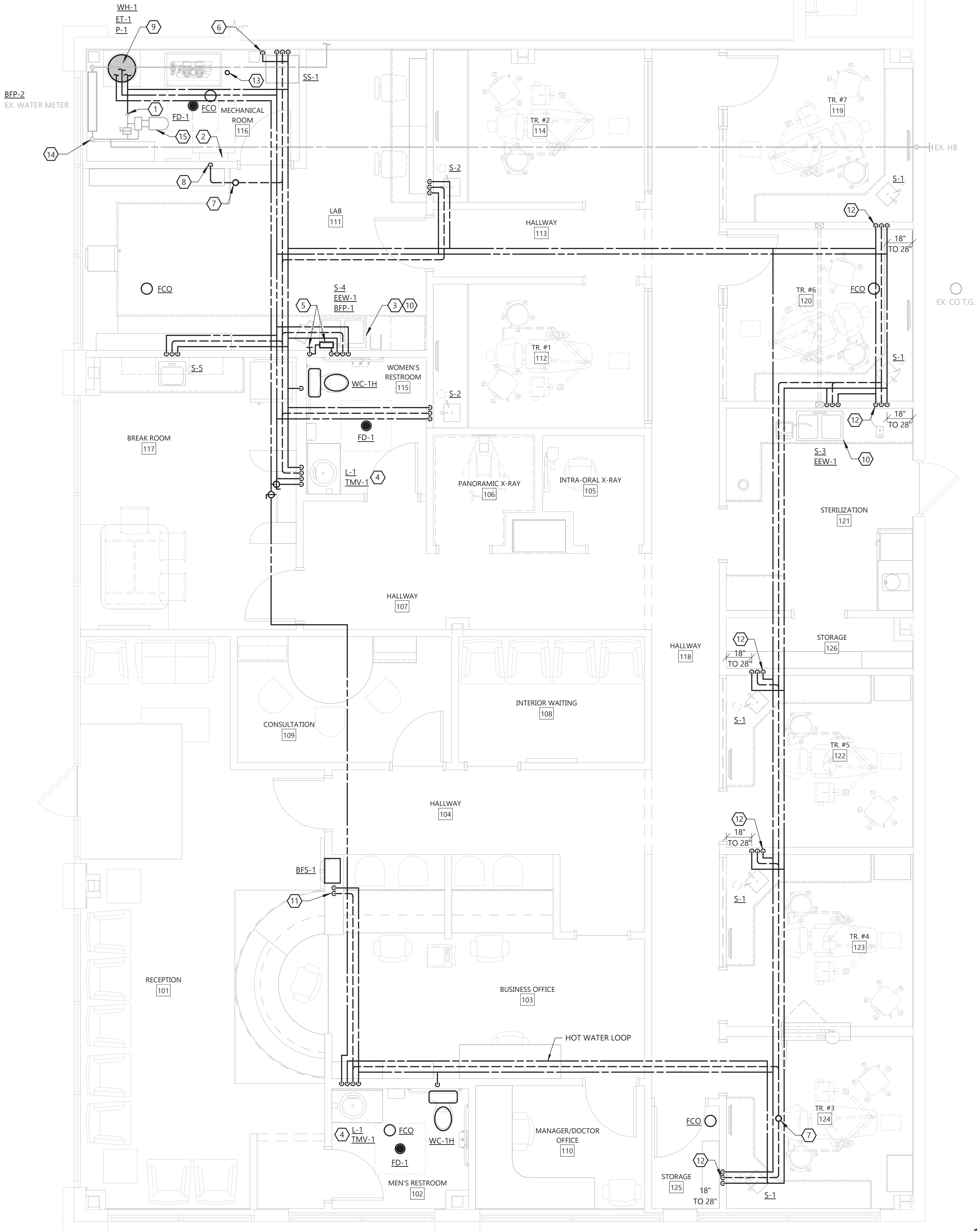
- PLUMBING CONTRACTOR SHALL VERIFY TYPE AND LOCATION OF ALL DENTAL EQUIPMENT, ROUGH-IN DIMENSIONS, AND REQUIRED PLUMBING CONNECTIONS. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL FLOOR FIXTURES, FLOOR DRAINS, HUB DRAINS, WATER CLOSETS, LAVATORIES AND FLOOR SINKS. DENTAL EQUIPMENT SUPPLIER SHALL FURNISH AND INSTALL ALL FIXTURES IDENTIFIED ON THEIR PLANS (WITH THE EXCEPTION OF THOSE IDENTIFIED ABOVE). DENTAL EQUIPMENT SUPPLIER SHALL INSTALL ALL DENTAL EQUIPMENT AND PROVIDE ALL FIXTURE TRAPS, SUPPLIES AND STOPS, ISOLATION VALVES, MIXING VALVES, ETC. AND MAKE FINAL CONNECTIONS TO DENTAL EQUIPMENT. PLUMBING CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO AIR COMPRESSOR AND VACUUM SYSTEM. VERIFY ALL EQUIPMENT CONNECTIONS WITH ADMI AND DENTAL EQUIPMENT SUPPLIER PRIOR TO INSTALLATION. PROVIDE ADDITIONAL CONNECTIONS AS REQUIRED. COORDINATE ALL WORK ACCORDINGLY.

GENERAL NOTES:

- PROVIDE ADDITIONAL BFP'S AS REQUIRED AT EQUIPMENT CONNECTIONS NOT SHOWN. FIELD VERIFY LOCATIONS AND REQUIREMENTS WITH EQUIPMENT CUT SHEETS.
- SINK FAUCETS SHALL BE INSTALLED WITH CONTROL AT THE LEFT, AND SPRAYER AT THE RIGHT OF THE SPOUT.
- REFER TO SHEET U1.1 PRIOR TO ROUGH-IN OF FIXTURES.
- PIPE SIZES PROVIDED BY LANDLORD SHALL MATCH ISOMETRIC OF THESE DOCUMENTS. FIELD VERIFY AND COORDINATE WORK.
- ALL PIPING IS TO BE CONCEALED. IF BUILDING CONSTRUCTION DOES NOT PERMIT CONCEALING PIPING, LOCATIONS AND ROUTING ARE TO BE APPROVED BY ARCHITECT/OWNER PRIOR TO INSTALLATION.

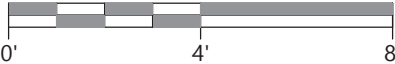
KEYNOTES:

- CONNECT NEW DOMESTIC WATER TO EXISTING DOMESTIC COLD WATER TERMINATION AS PROVIDED BY LANDLORD. FIELD VERIFY EXACT ROUTING FROM EXISTING METER TERMINATION. G.C. SHALL SET UP ACCOUNT WITH LOCAL UTILITY & INSTALL UTILITY METER. ACCOUNT SHALL BE TRANSFERRED TO ADMI AT A LATER DATE.
- COORDINATE WITH ELECTRICAL CONTRACTOR TO MAINTAIN CODE REQUIRED CLEARANCES AROUND ELECTRICAL EQUIPMENT.
- PLASTER TRAP ASSEMBLY FURNISHED BY SULLIVAN-SCHNEID AND INSTALLED BY THE PLUMBING CONTRACTOR ON THE SINK WASTE LINE. USE THREADED FITTINGS FOR DRAIN ASSEMBLY. SEE DETAIL 1/A5.4.
- ROUTE 1/2" CW FROM COLD WATER STOP UNDER LAVATORY TO AUTOMATIC TRAP PRIMER (TP-2) VALVE. ROUTE 1/2" CW FROM VALVE INTO WALL AND ROUTE UNDERFLOOR TO FLOOR DRAIN CONNECTIONS. SEE DETAIL 4/P3.0.
- PIPE 1/2" CW SUPPLY FROM SINK TO BFP-1 INSIDE CABINET BELOW SINK. PIPE IN WALL FROM BFP TO 44" A.F.F. FOR CONNECTION TO MODEL TRIMMER. TERMINATE WITH 3/8" COMPRESSION STOP. INSTALL IN ACCORDANCE WITH LOCAL CODES. PROVIDE 2" HUB DRAIN (HD) INSIDE CABINET. DISCHARGE BFP TO HD VIA AIR GAP. ELIMINATE BFP AND HD IF PERMITTED BY AUTHORITY HAVING JURISDICTION. SEE DETAILS 2/A5.4 & 5/P3.0.
- 1/2" CW PIPING TO TRAP PRIMER (TP-1). ROUTE 1/2" CW PIPING DOWN WALL TO UNDERFLOOR. CONNECT PIPING UNDERFLOOR TO FLOOR DRAIN ASSEMBLY. SEE TRAP PRIMER DETAIL 5/P3.0.
- EXTEND 3" VENT UP TO VTR. COORDINATE VTR LOCATION WITH MECHANICAL CONTRACTOR AND EXISTING EQUIPMENT SERVING ADJACENT TENANT SPACE. ADJUST VTR LOCATION AS REQUIRED TO MAINTAIN A MINIMUM OF 20" CLEARANCE.
- ROUTE 3" VENT UP FROM SANITARY DRAIN SERVING CIRCUIT VENT AND CONNECT TO VENT PIPING ABOVE CEILING. VENT SHALL SERVE AS BUILDING MAIN VENT.
- SEE WATER HEATER DETAIL 7/P3.0.
- INSTALL EEW-1 IN THIRD HOLE OF SINK. SEE EEW DETAIL 9/P3.0.
- PROVIDE HUB DRAIN CONNECTION AT 16" A.F.F. AND WATER VALVE 20" A.F.F. OUT OF BFS-1. ROUGH IN CLEARANCE AREA. SEE BOTTLE FILLING STATION DETAIL 9/A5.0 FOR MORE INFORMATION.
- EXTEND WATER SUPPLY PIPING MINIMUM 6" INSIDE CABINET. TERMINATE WITH SUPPLY STOP. EXPOSED PIPING SHALL BE COPPER.
- CONNECT RAM-VAC TO 3" TRAPPED WASTE FROM UNDERGROUND.
- PROVIDE BALL VALVE AT 5' A.F.F.. NO FIXTURES SHALL CONNECT TO CW UPSTREAM OF THIS VALVE. PROVIDE SIGN WHICH READS "WATER SHUTOFF".
- PRESSURE BOOSTER PUMP W/ EXPANSION TANK ABOVE CEILING PROVIDED BY LANDLORD PER MINIMUM 60 PSIG WORK LETTER REQUIREMENT. P.C. SHALL FIELD VERIFY OUTLET PRESSURE SETTING AND ADJUST AS REQUIRED TO MATCH WATER CALCULATIONS ON SHEET P2.0.



FIRST FLOOR PLAN

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



PLUMBING FIRST FLOOR PLAN

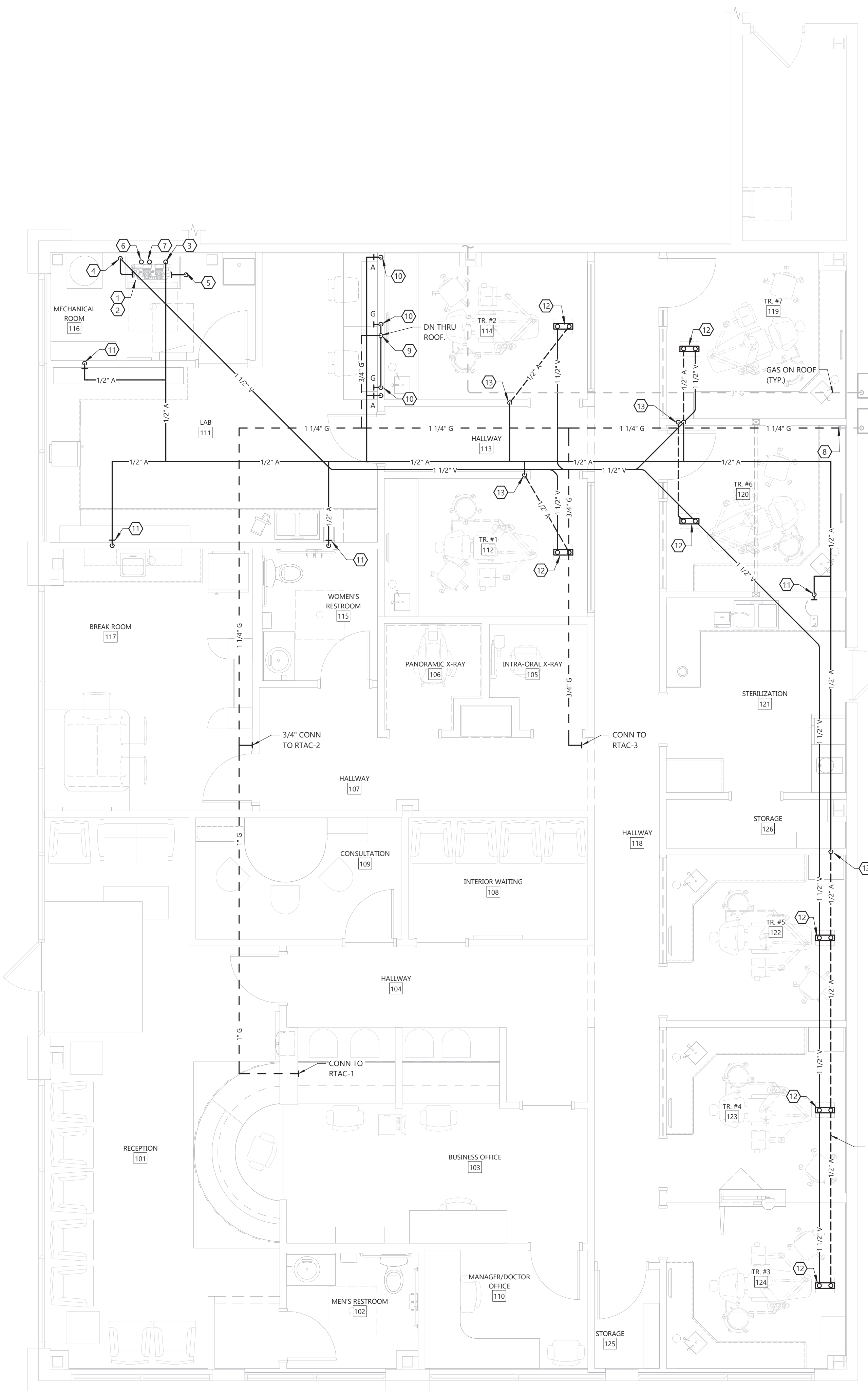
DENTAL EQUIPMENT COORDINATION:

- PLUMBING CONTRACTOR SHALL VERIFY TYPE AND LOCATION OF ALL DENTAL EQUIPMENT, ROUGH-IN DIMENSIONS, AND REQUIRED PLUMBING CONNECTIONS. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL FLOOR FIXTURES, FLOOR DRAINS, HUB DRAINS, WATER CLOSETS, LAVATORIES AND FLOOR SINKS. DENTAL EQUIPMENT SUPPLIER SHALL FURNISH AND INSTALL ALL FIXTURES IDENTIFIED ON THEIR PLANS (WITH THE EXCEPTION OF THOSE IDENTIFIED ABOVE). DENTAL EQUIPMENT SUPPLIER SHALL INSTALL ALL DENTAL EQUIPMENT AND PROVIDE ALL FIXTURE TRAPS, SUPPLIES AND STOPS, ISOLATION VALVES, MIXING VALVES, ETC. AND MAKE FINAL CONNECTIONS TO DENTAL EQUIPMENT. PLUMBING CONTRACTOR SHALL MAKE FINAL CONNECTION TO AIR COMPRESSOR AND VACUUM SYSTEM. VERIFY ALL EQUIPMENT CONNECTIONS WITH ADMI AND DENTAL EQUIPMENT SUPPLIER PRIOR TO INSTALLATION. PROVIDE ADDITIONAL CONNECTIONS AS REQUIRED. COORDINATE ALL WORK ACCORDINGLY.

GENERAL NOTES:

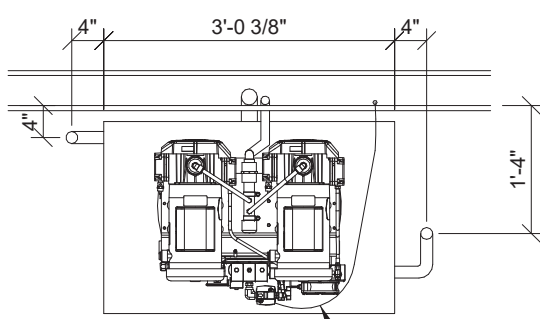
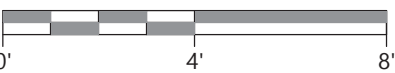
- ALL VACUUM LINES SHALL BE INSTALLED BELOW SLAB UNLESS OTHERWISE NOTED.
- TERMINATE COMPRESSED AIR LINES PER DENTAL EQUIPMENT DETAILS.
- COMPRESSED AIR SHALL BE INSTALLED ABOVE CEILING UNLESS OTHERWISE NOTED.
- FINAL CONNECTIONS TO AIR COMPRESSOR AND VACUUM SYSTEM BY PLUMBING CONTRACTOR.
- REFER TO SHEET U1.1 PRIOR TO ROUGH-IN OF FIXTURES.
- TERMINATION OF 1 1/2" VACUUM LINES TO BE REDUCED TO 1/2" FEMALE THREAD TYPICAL. FOR ALL UTILITY CENTERS, TERMINATION OF 1/2" AIR LINES TO BE 1/2" MALE THREAD WITH 3/8" COMPRESSION FITTING TYPICAL. ALL PLUMBING AND ELECTRICAL FOR UTILITY CENTER SHALL BE CONTAINED WITHIN 12" X 12" AREA IN FLOOR. SEE DENTAL EQUIPMENT DRAWINGS FOR FURTHER INFORMATION.
- ALL PIPING IS TO BE CONCEALED. IF BUILDING CONSTRUCTION DOES NOT PERMIT CONCEALING PIPING, LOCATIONS AND ROUTING ARE TO BE APPROVED BY ARCHITECT/OWNER PRIOR TO INSTALLATION.
- PAINT EXTERIOR GAS PIPING NOT LOCATED ON ROOF WITH TWO (2) COATS OF RUST RESISTANT PAINT, COLOR TO MATCH ADJACENT SURFACE. SEE SPECIFICATION SECTION 22 11 23 NATURAL GAS PIPING AND ACCESSORIES FOR MORE INFORMATION.

GAS LOAD SUMMARY		
ITEM	MBH INPUT	REQUIRED PRESSURE
RTAC-1	150	7" W.C.
RTAC-2	67	7" W.C.
RTAC-3	67	7" W.C.
LAB	2.4	7" W.C.
Total	286.4	
- GAS PRESSURE AT METER = 7" W.C.		



FLOOR PLAN - AIR AND VACUUM PIPING

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



PLAN VIEW

1" FRESH AIR INTAKE

SUSP. CEILING

STUD WALL FRAMING

FLEXIBLE AIR LINE CONNECT TO MAIN COPPER SUPPLY LINE

1" FRESH AIR INTAKE TO ABOVE CEILING

2" SCHEDULE 80 PVC VENT, THRU ROOF

CONDENSATE LINE, CONNECT TO DRAIN LINE

3" DRAIN LINE CONNECT TO 3" WASTE FROM UNDERGROUND

1 1/2" VACUUM LINE

UNDERGROUND AIR PIPE (TYP.)

7'-0"

1'-4"

3'-10"

1'-4"

1'-4"

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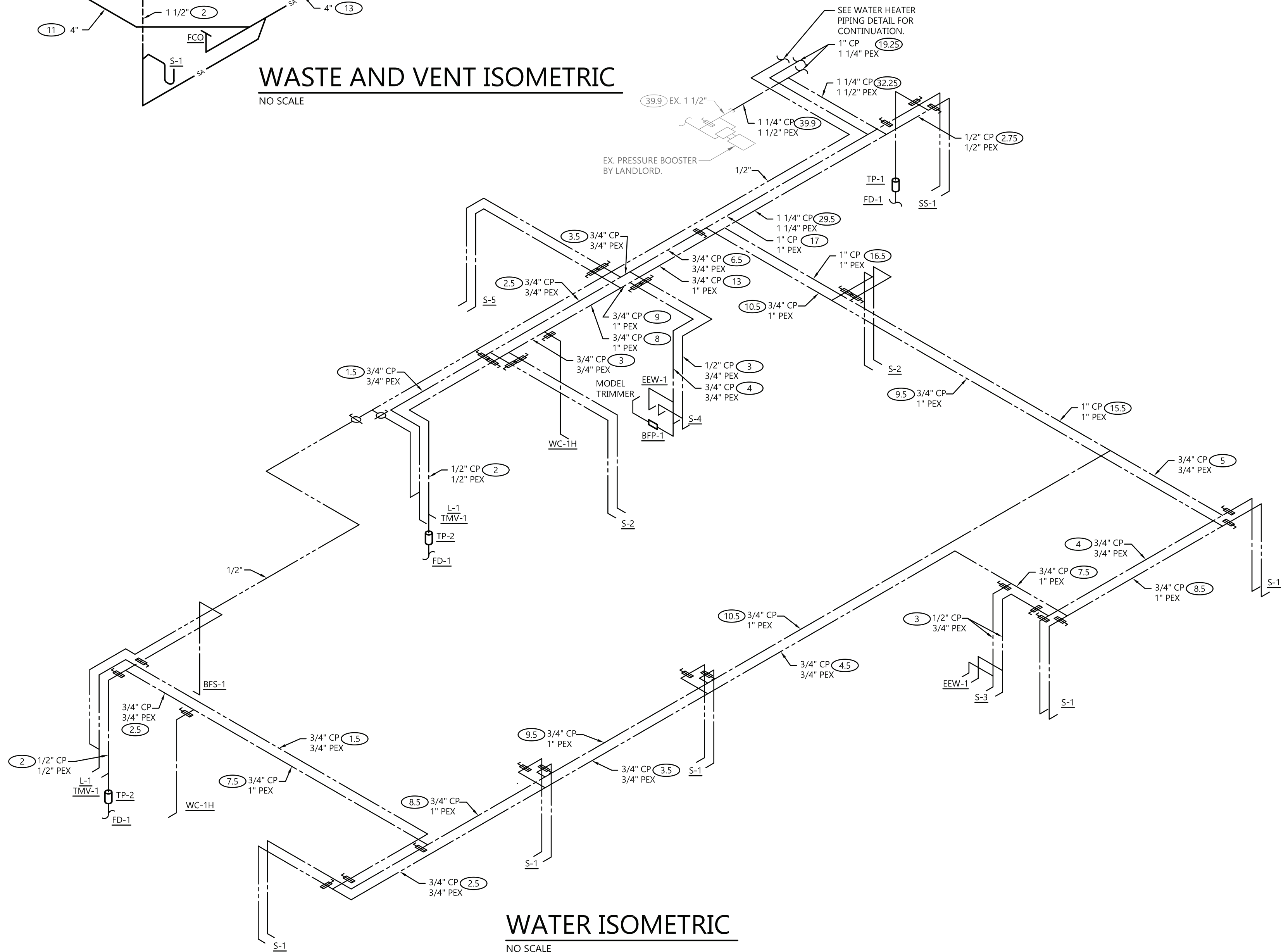
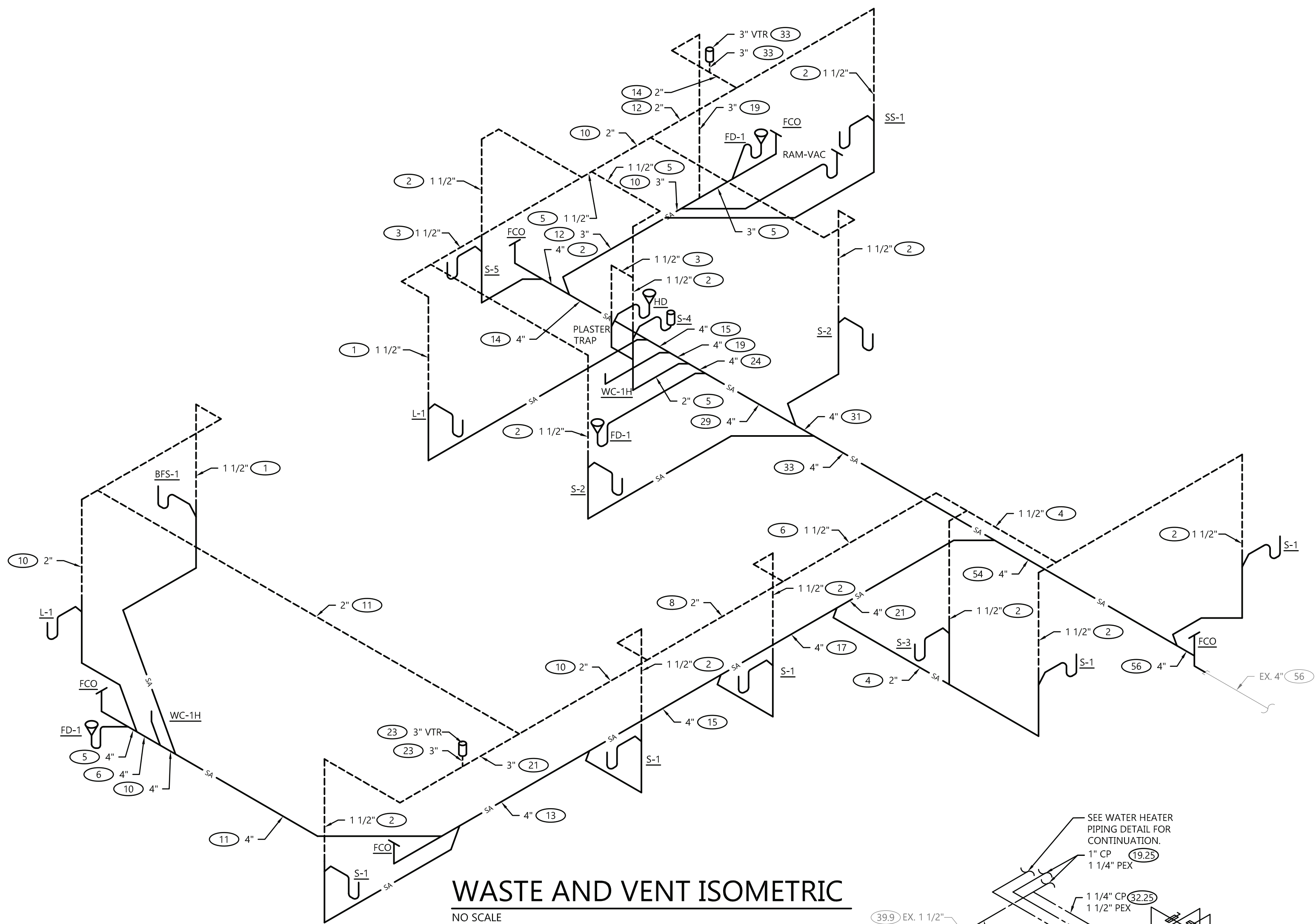
1'-4"

1'-4"

RAM-VAC DETAIL

NOT TO SCALE

PLUMBING FLOOR PLAN - AIR AND VACUUM PIPING



WATER CALCULATIONS

WATER PRESSURE DATA

1	ASSUMED STATIC PRESSURE AT MAIN	60 PSIG
2	ASSUMED RESIDUAL PRESSURE AT MAIN	50 PSIG
3	ASSUMED RESIDUAL FLOW AT MAIN	1000 GPM
4	BUILDING FIXTURE UNITS	39.9 F.U.
5	PREDOMINATE FLUSH TYPE	TANK
6	CONTINUOUS FLOW GPM	0 GPM
7	BUILDING DEMAND	23.6 GPM
8	RESIDUAL PRESSURE AT BUILDING DEMAND	60.0 PSIG
9	SAFETY FACTOR	5 PSIG
10	PRESSURE AVAILABLE FOR DOMESTIC USE	55.0 PSIG

WATER SERVICE AND DISTRIBUTION SIZING DATA

11	ELEVATION OF RESIDUAL TEST HYDRANT	100.00 FEET
12	ELEVATION OF WATER METER	105.00 FEET
13	ELEVATION DIFFERENCE TEST HYDRANT TO METER	5.00 FEET
14	WATER METER SIZE	1 INCHES
15	DEVELOPED LENGTH MAIN TO METER	35 FEET
16	WATER SERVICE SIZE	1 1/2 INCHES

PRESSURE AVAILABLE AFTER METER

17	PRESSURE DROP BETWEEN MAIN AND METER	2.19 PSIG/100'
18	FRICTION PRESSURE LOSS BETWEEN MAIN AND METER	0.8 PSIG
19	ELEVATION PRESSURE LOSS BETWEEN MAIN AND METER	2.2 PSIG
20	SERVICE/METER PRESSURE LOSS	20 PSIG
21	BACKFLOW PREVENTER PRESSURE LOSS	14 PSIG
22	PRESSURE AVAILABLE AFTER METER	18.4 PSIG
23	ADDITIONAL PRESSURE DUE TO BOOSTER PUMP	50 PSIG
25	AVAILABLE BUILDING WATER PRESSURE	68.4 PSIG

WATER DISTRIBUTION SIZING - COLD WATER

A	AVAILABLE BUILDING WATER PRESSURE	68.4 PSIG
B	START POINT TAG (SEE ISOMETRIC FOR TAG LOCATION)	METER
C	DIST. PREVIOUS START POINT TO THIS START POINT	
D	UNIFORM LOSS PREV. START POINT TO THIS START POINT	
E	PIPE PRESSURE DROP FROM METER TO START POINT	
F	CONTROLLING FIXTURE:	IDEW-1
	ROOM NAME & NO.	STERILIZATION 121
	PRESSURE REQUIRED	30 PSIG
G	ELEV. DIFF. BETW. METER AND CONTROLLING FIXTURE	3 FEET
H	PRESSURE LOSS DUE TO WATER SOFTENER	0 PSIG
I	PRESSURE LOSS DUE TO MIXING VALVE	0 PSIG
J	PRESSURE AVAILABLE FOR PIPING PRESSURE DROP	37.1 PSIG
K	DEVELOPED LENGTH START PT. TO CONTR. FIXTURE	75 FEET
L	EQUIVALENT LENGTH START PT. TO CONTR. FIXTURE	113 FEET
M	PRESSURE AVAILABLE FOR UNIFORM LOSS	32.93 PSIG/100'

	Pipe size	Flush tank	WSFU	PEX tank	WSFU	A	Flush tank	WSFU	PEX tank	WSFU
	1/2	5	3	3	3	0 FT	5	3	3	3
	3/4	16.5	6	6	6	32.93 PSIG/100'	16.5	6	6	6
	1	31	20.5	20.5	20.5	0.0 PSIG	31	20.5	20.5	20.5
	1 1/4	58	34	34	34	3 FEET	58	34	34	34
	1 1/2	107	55	55	55	0 PSIG	107	55	55	55
	2	260	135	135	135	0 PSIG	260	135	135	135
	2 1/2	469				42.1 PSIG	469			
	3	752				130 FEET	752			
	4	1792				195 FEET	1792			
						21.56 PSIG/100'				

WATER DISTRIBUTION SIZING - HOT WATER

A	AVAILABLE BUILDING WATER PRESSURE	68.4 PSIG
B	START POINT TAG (SEE ISOMETRIC FOR TAG LOCATION)	METER
C	DIST. PREVIOUS START POINT TO THIS START POINT	
D	UNIFORM LOSS PREV. START POINT TO THIS START POINT	
E	PIPE PRESSURE DROP FROM METER TO START POINT	
F	CONTROLLING FIXTURE:	IDEW-1
	ROOM NAME & NO.	STERILIZATION 121
	PRESSURE REQUIRED	30 PSIG
G	ELEV. DIFF. BETW. METER AND CONTROLLING FIXTURE	3 FEET
H	PRESSURE LOSS DUE TO WATER SOFTENER	0 PSIG
I	PRESSURE LOSS DUE TO MIXING VALVE	0 PSIG
J	PRESSURE AVAILABLE FOR PIPING PRESSURE DROP	37.1 PSIG
K	DEVELOPED LENGTH START PT. TO CONTR. FIXTURE	90 FEET
L	EQUIVALENT LENGTH START PT. TO CONTR. FIXTURE	135 FEET
M	PRESSURE AVAILABLE FOR UNIFORM LOSS	27.44 PSIG/100'

	Pipe size	Flush tank	WSFU	PEX tank	WSFU	A	Flush tank	WSFU	PEX tank	WSFU
	1/2	5	3	3	3	80 FT	5	3	3	3
	3/4	16.5	6	6	6	27.44 PSIG/100'	16.5	6	6	6
	1	31	20.5	20.5	20.5	22.0 PSIG	31	20.5	20.5	20.5
	1 1/4	58	34	34	34	8 PSIG	58	34	34	34
	1 1/2	107	55	55	55	3 FEET	107	55	55	55
	2	260	135	135	135	0 PSIG	260	135	135	135
	2 1/2	469				8 PSIG	469			
	3	752				95 FEET	752			
	4	1792				143 FEET	1792			
						20.42 PSIG/100'				

FIXTURE UNITS

NO.	FIXTURE	WASTE			COLD WATER			HOT WATER			TOTAL WATER	
		UNITS	TOTAL	TRAP SIZE	UNITS	TOTAL	BRANCH SIZE	UNITS	TOTAL	BRANCH SIZE	UNITS	TOTAL
1	BOTTLING STATION	1	1	1 1/4"	0.5	0.5	1/2"				0.5	0.5
3	FLOOR DRAIN- 3"	5	15	3"								
1	HUB OUTLET- 2"	3	3	2"								
1	RAM-VAC	5	5	3"								
2	LAV	1	2	1 1/4"	1.5	3	1/2"	1.5	3	1/2"	2	4
7	SINK- S-1 & 2	2	14	1 1/2"	1	7	1/2"	1	7	1/2"	1.5	10.5
2	SINK- S-3 & 4	2	4	1 1/2"	3	6	1/2"	3	6	1/2"	4	10.5
1	SINK- S-5	2	2	1 1/2"	1	1	1/2"				1.4	1.4
1	SINK- SERVICE- 2"	2	2	2"	2.25	2.25	1/2"	2.25	2.25	1/2"	3	3
2	WATER CLO- TANK	4	8		5	10	1/2"				5	10
3	TRAP PRIMER				0.5	1.5	1/2"				0.5	1.5
1	MODEL TRIMMER	1	1		1	1	1/2"				1	1
25	TOTAL		56			32.25			19.25			39.9

GENERAL NOTES:

- SEE UNDERGROUND PLAN AND FIXTURE UNIT SCHEDULE FOR RUNOUT TRAP SIZE TO FIXTURE.
- SEE FIXTURE UNIT SCHEDULE THIS SHEET FOR RUNOUT PIPING SIZE TO FIXTURE.
- AIR ADMITTANCE VALVES NOT PERMITTED (I.E. STUODOR VENT).
- IF PEX IS USED IN LIEU OF COPPER, P.C. SHALL PROVIDE COMPLETE MATERIAL SUBMITTALS (PIPE, FITTINGS, ETC.) TO ASPEN DENTAL MANAGEMENT INC. FOR APPROVAL PRIOR TO INSTALLATION.
- P.C. SHALL PERFORM FIRE HYDRANT FLOW TEST TO VERIFY WATER PRESSURE INFORMATION PRIOR TO INSTALLATION OF ANY WATER PIPING. PROVIDE FLOW TEST INFORMATION TO EXCEL ENGINEERING AND ASPEN DENTAL MANAGEMENT INC. FOR EVALUATION.



Always a Better Plan

100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES

SHEET ISSUE JULY 12, 2023

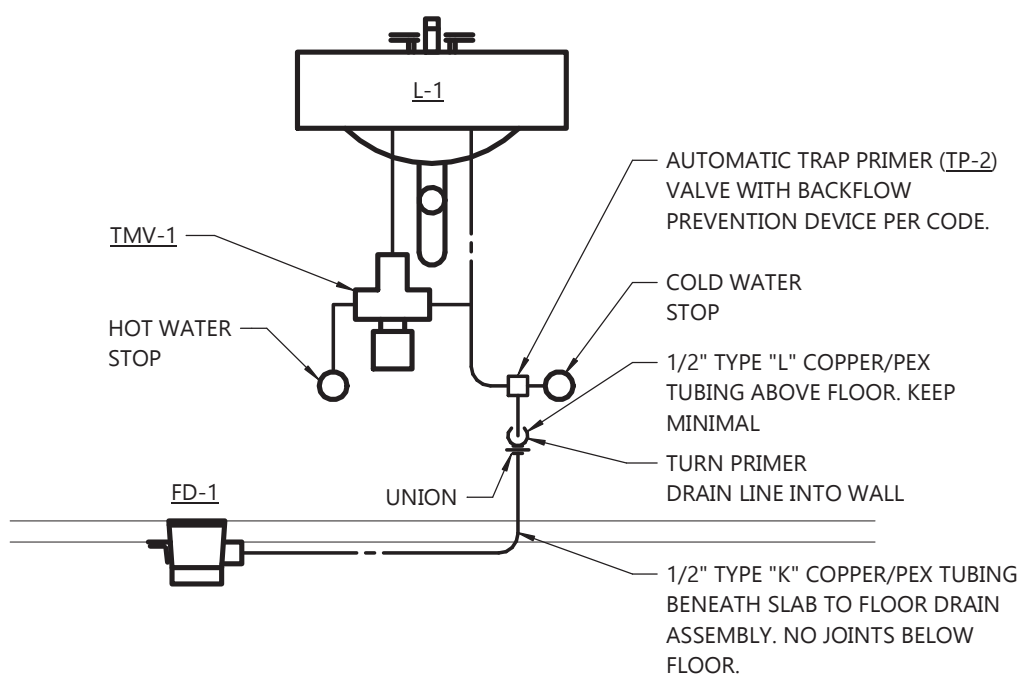
REVISIONS

JOB NUMBER

230264900

SHEET NUMBER

P2.0



4
P3.0
NOT TO SCALE

TRAP PRIMER-2 DETAIL

PIPE SIZE	STEEL					COPPER					MIN. ROD	
	WATER	VAPOR	NAT. GAS	WATER	VAPOR	WATER	VAPOR	PVC	PEX		METAL PIPE	PLASTIC PIPE
1/4" - 1/2"	7"	8"	6"	5"	6"	7"	8"	4"	3/4"	3/8"	3/8"	3/8"
3/4"	7"	9"	8"	5"	7"	4"	3/4"	3/8"	3/8"	3/8"	3/8"	3/8"
1"	7"	9"	8"	6"	8"	4"	3/4"	3/8"	3/8"	3/8"	3/8"	3/8"
1 1/4"	7"	9"	10"	7"	9"	4"	3/4"	3/8"	3/8"	3/8"	3/8"	3/8"
1 1/2"	9"	12"	10"	8"	10"	4"	3/4"	3/8"	3/8"	3/8"	3/8"	3/8"
2"	10"	12"	10"	8"	11"	4"	3/4"	3/8"	3/8"	3/8"	3/8"	3/8"
2 1/2"	11"	12"	10"	9"	12"	4"	3/4"	3/8"	3/8"	3/8"	3/8"	3/8"
3"	12"	12"	10"	10"	12"	4"	3/4"	3/8"	3/8"	3/8"	3/8"	3/8"
4"	12"	12"	10"	12"	12"	4"	-	3/8"	3/8"	3/8"	3/8"	3/8"
6"	12"	12"	10"	12"	12"	4"	-	3/8"	3/8"	3/8"	3/8"	3/8"
8"	12"	12"	-	-	-	4"	-	1/2"	3/8"	3/8"	3/8"	3/8"
10"	12"	12"	-	-	-	4"	-	1/2"	3/8"	3/8"	3/8"	3/8"
12"	12"	12"	-	-	-	4"	-	5/8"	3/8"	3/8"	3/8"	3/8"
14"	12"	12"	-	-	-	4"	-	5/8"	3/8"	3/8"	3/8"	3/8"
16"	12"	12"	-	-	-	4"	-	3/4"	3/8"	3/8"	3/8"	3/8"
MAX VERT. (1)	15'	15'	-	10'	10'	10'	4'	-	-	-	-	-

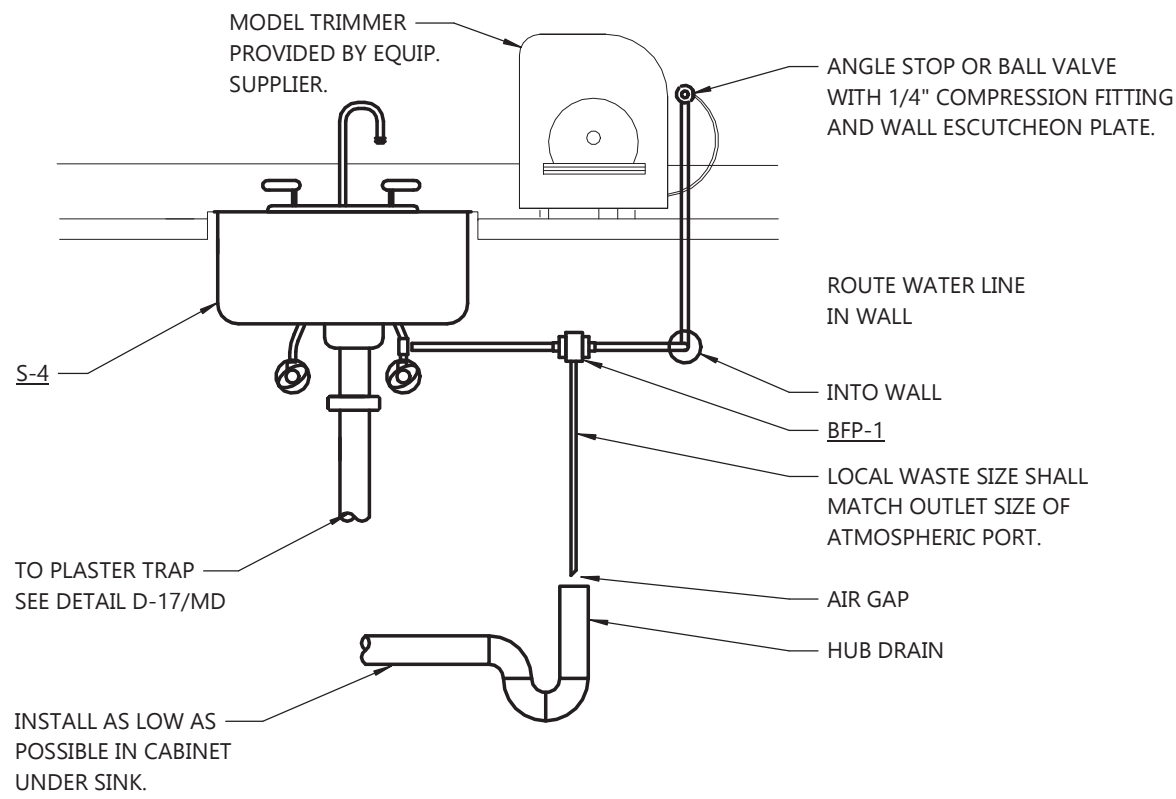
(1) SUPPORT AT MINIMUM EVERY FLOOR LEVEL OR SPACING LISTED.
MSS = MANUFACTURER'S STANDARDIZATION SOCIETY
- INSTALL ADDITIONAL HANGERS WITHIN 12" OF ELBOWS AND TEES AND AT CONCENTRATED LOADS, INCLUDING VALVES, FLANGES AND STRAINERS 2 1/2" AND LARGER.

MAX. HANGER ROD CAPACITY	MAX. LOAD (1)
3/8"	600#
1/2"	1,100#
5/8"	1,800#
3/4"	2,700#

(1) MAX. LOAD IS WEIGHT ALLOWED PER EACH ROD.

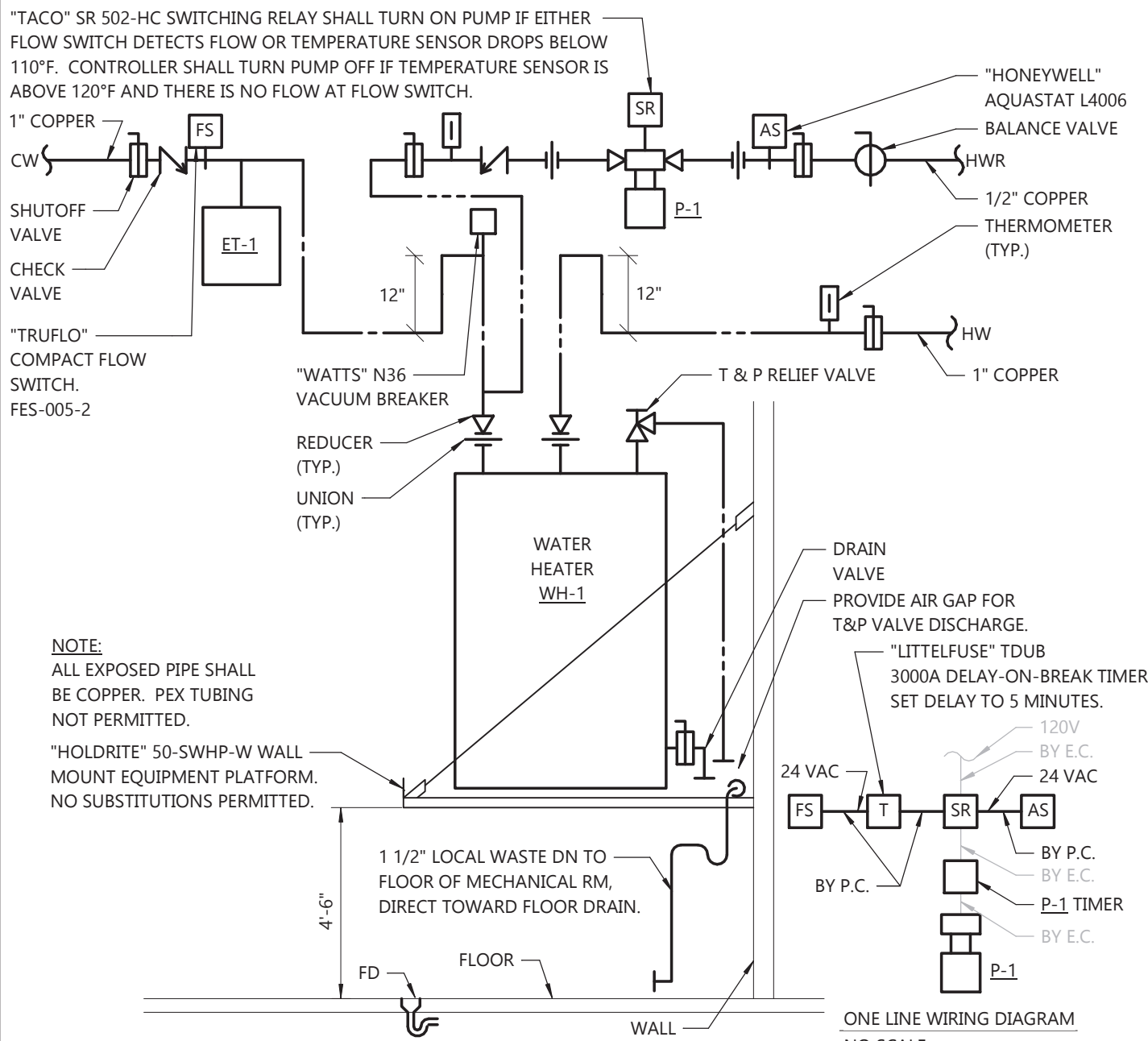
3
P3.0
NOT TO SCALE

PIPE SUPPORT AND HANGER ROD SCHEDULE



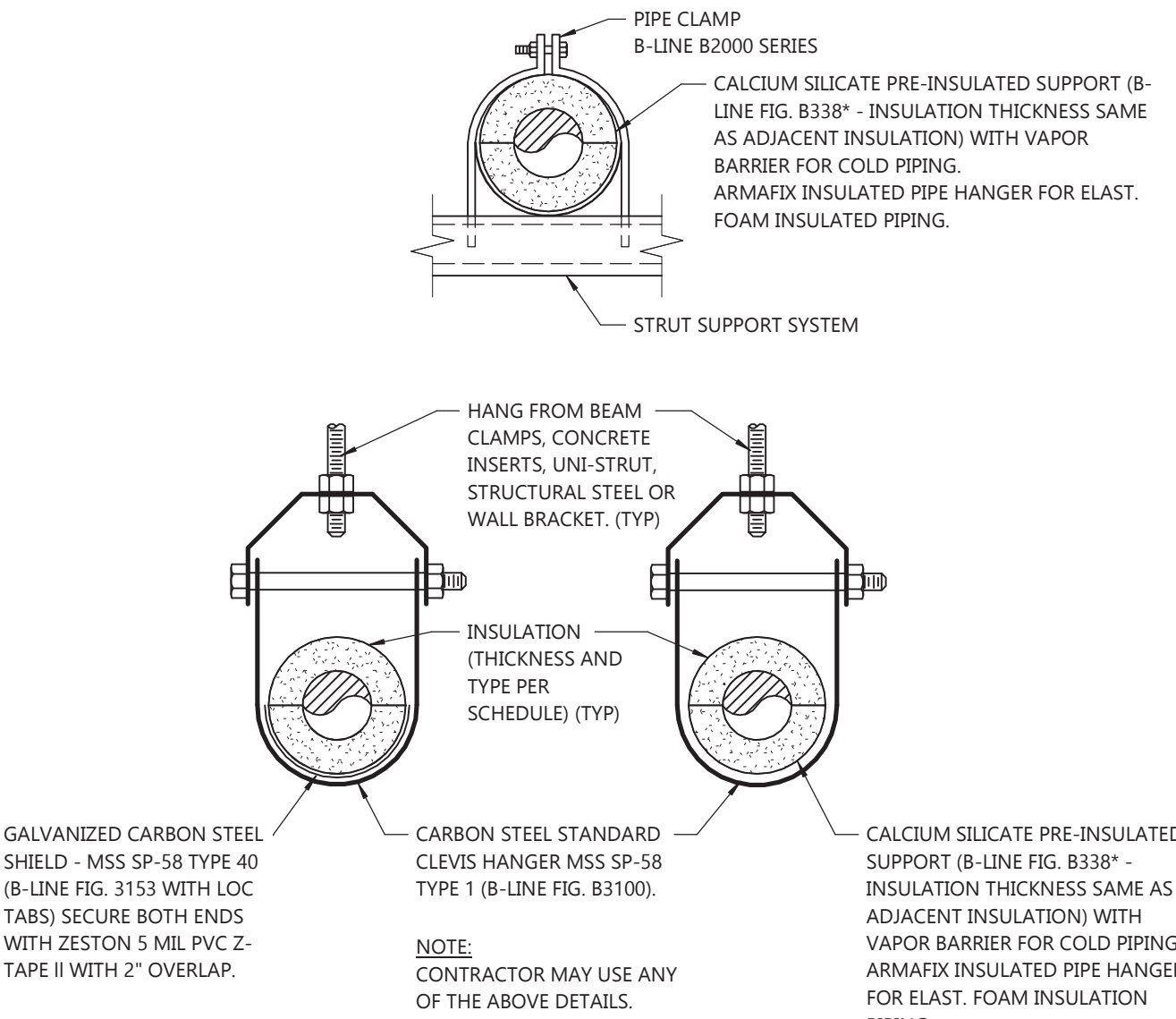
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MODEL TRIMMER PIPING DETAIL



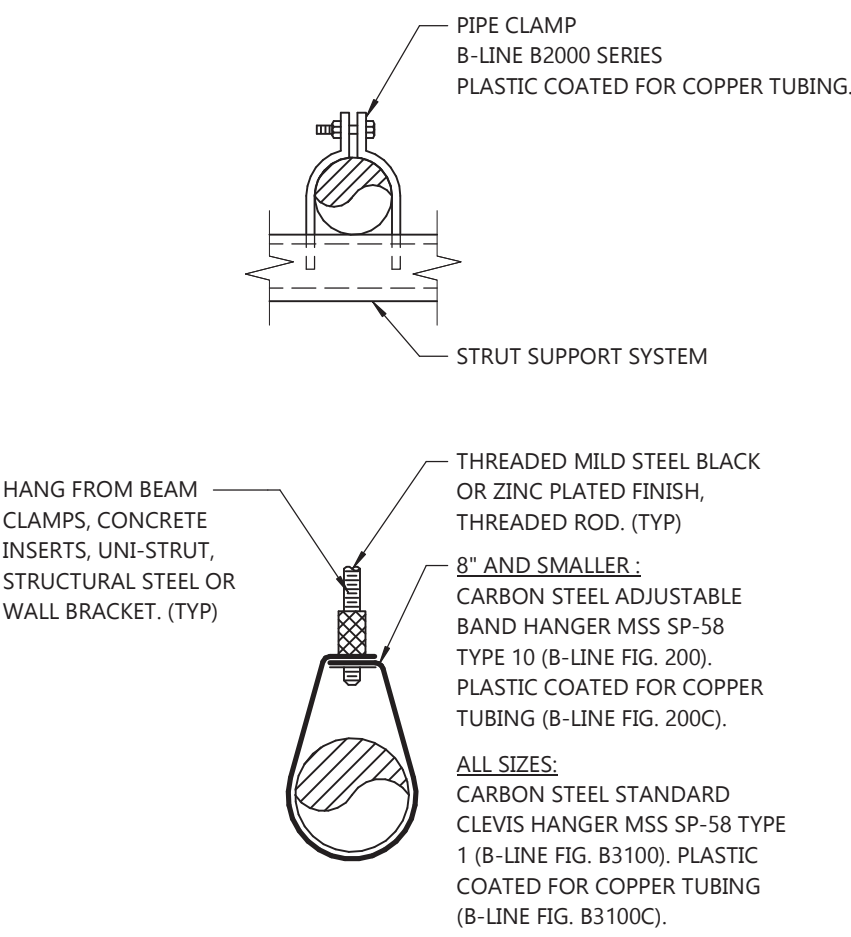
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P3.0
NOT TO SCALE

WATER HEATER PIPING DETAIL



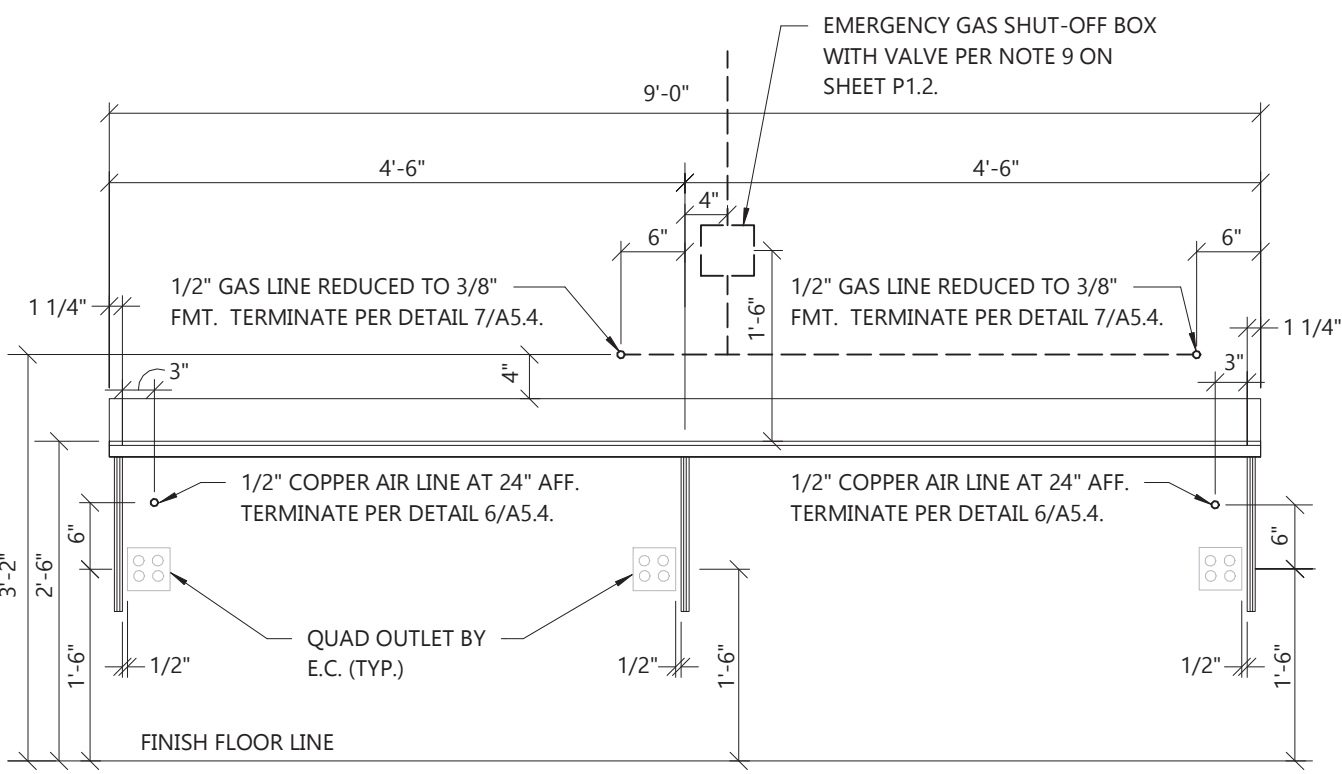
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INSULATED PIPE HANGER DETAILS



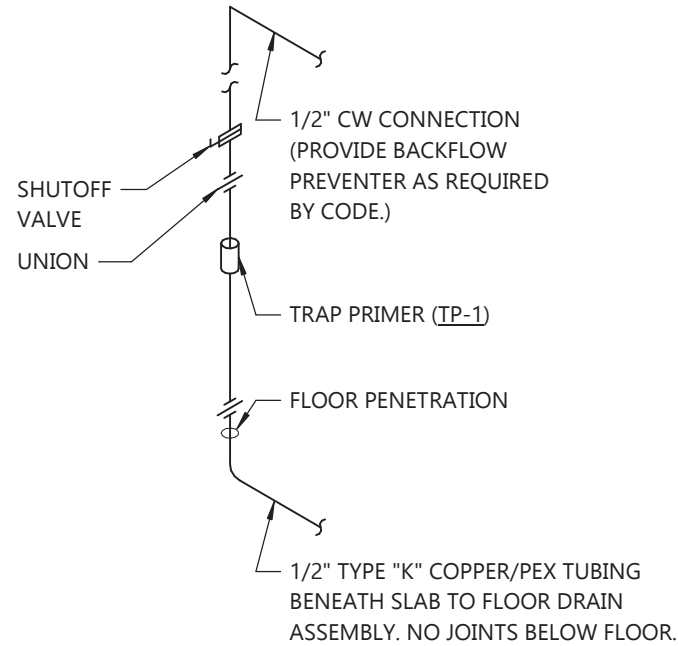
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P3.0
NOT TO SCALE

UNINSULATED PIPE HANGER DETAIL



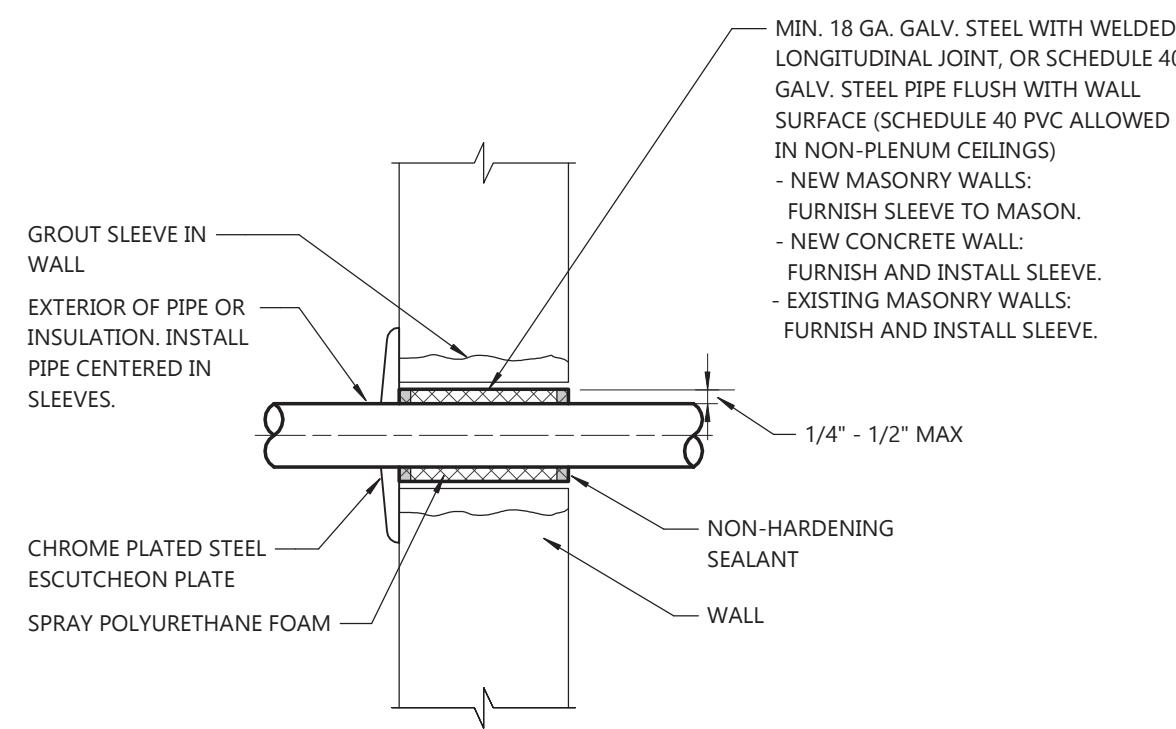
6
P3.0
NOT TO SCALE

LAB WORK STATION ELEVATION



5
P3.0
NOT TO SCALE

TRAP PRIMER-1 DETAIL

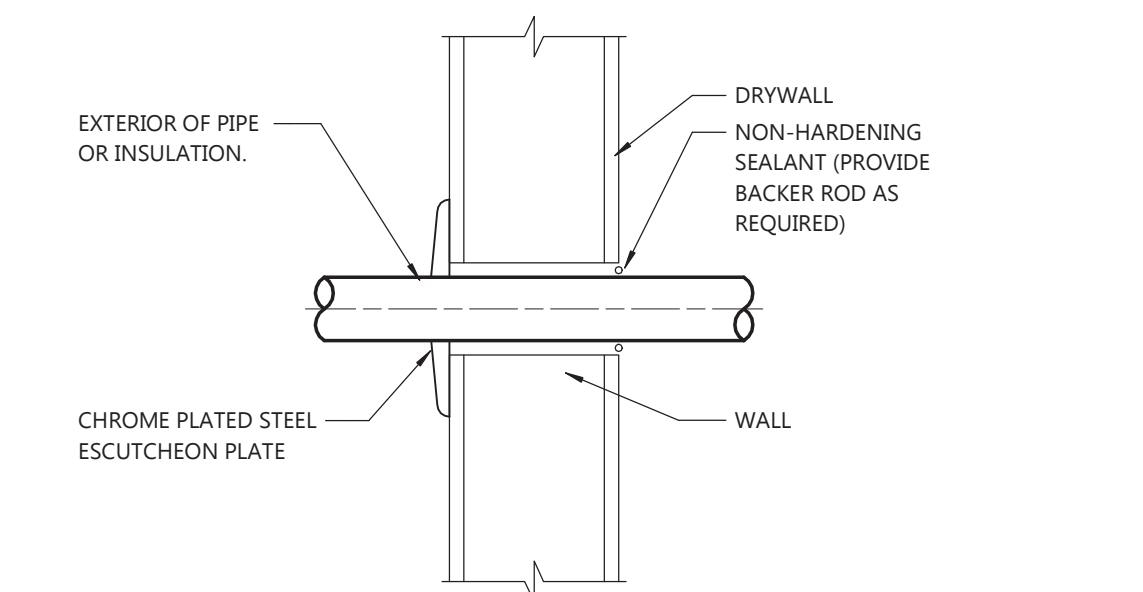


EXPOSED IN FINISHED ROOMS

CONCEALED SIDE OF WALL, EXPOSED IN MECH. EQUIP. ROOM, OR OUTDOORS

12
P3.0
NOT TO SCALE

PIPE PENETRATION THRU MASONRY OR CONCRETE WALL

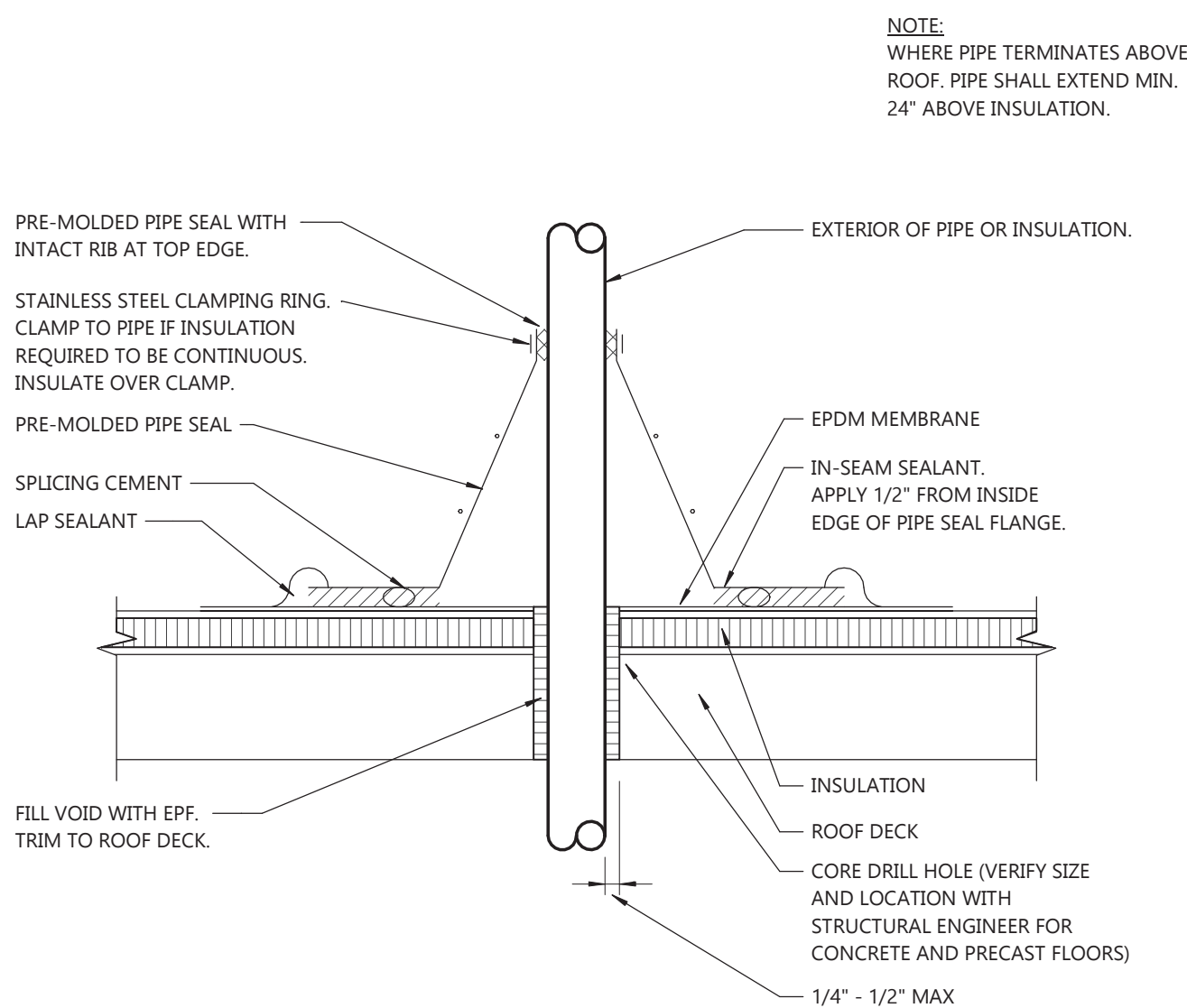


EXPOSED IN FINISHED ROOMS

CONCEALED SIDE OF WALL, EXPOSED IN MECH. EQUIP. ROOM, OR OUTDOORS

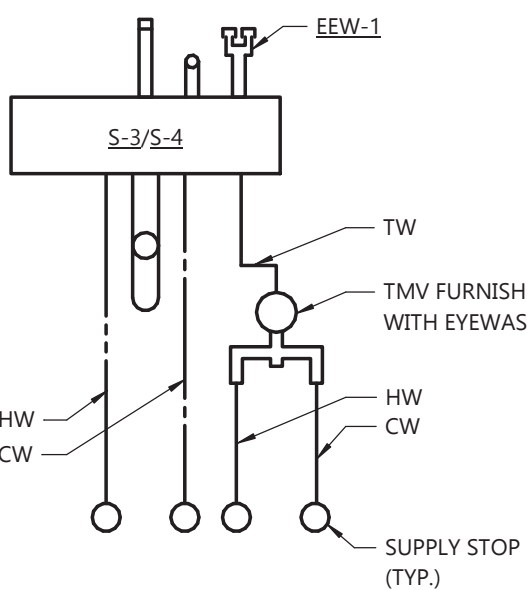
11
P3.0
NOT TO SCALE

PIPE PENETRATION THRU STUD WALL



10
P3.0
NOT TO SCALE

ROOF PIPE BOOT PENETRATION DETAIL



9
P3.0
NOT TO SCALE

EEW DETAIL

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES

SHEET ISSUE JULY 12, 2023

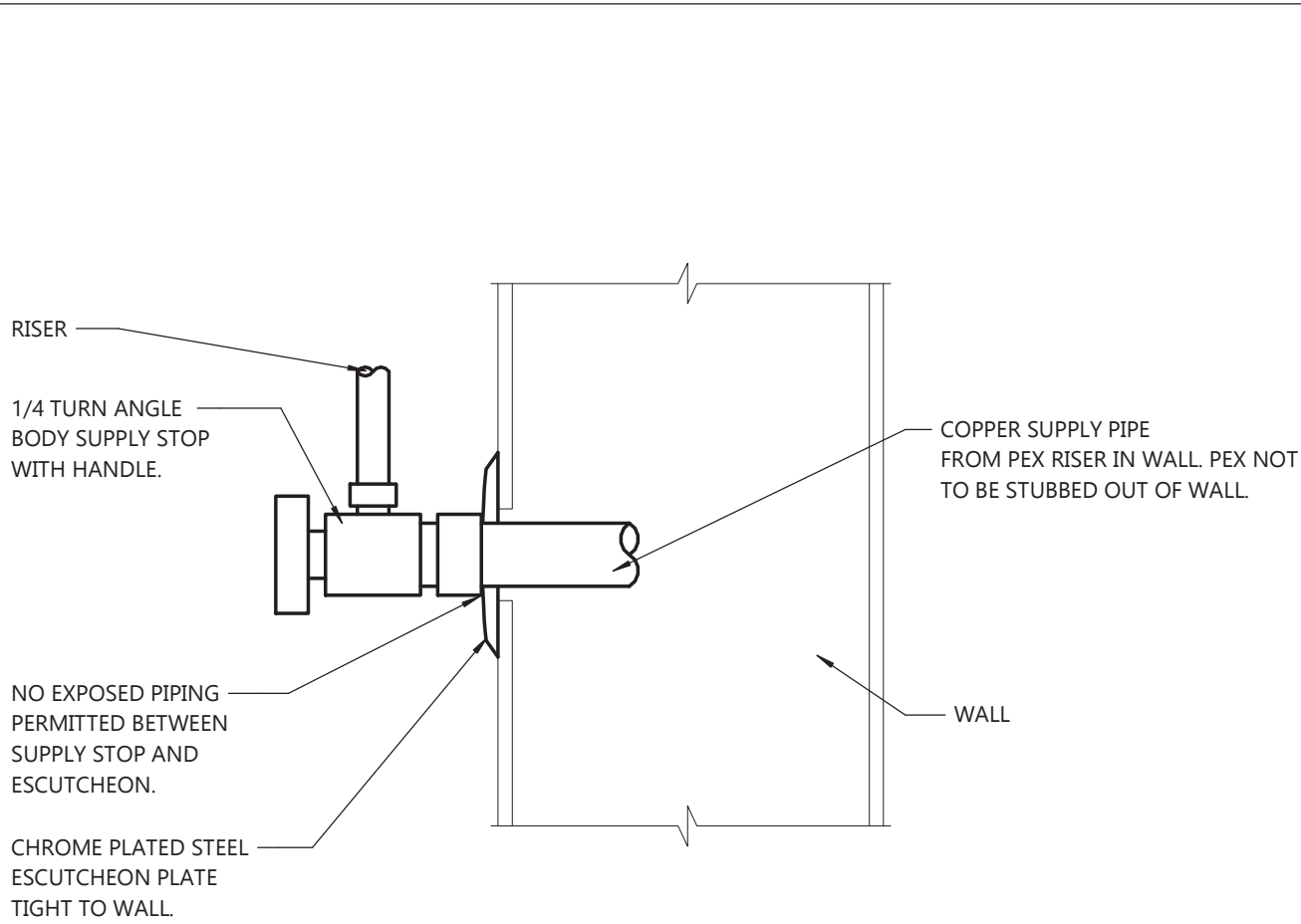
REVISIONS

JOB NUMBER

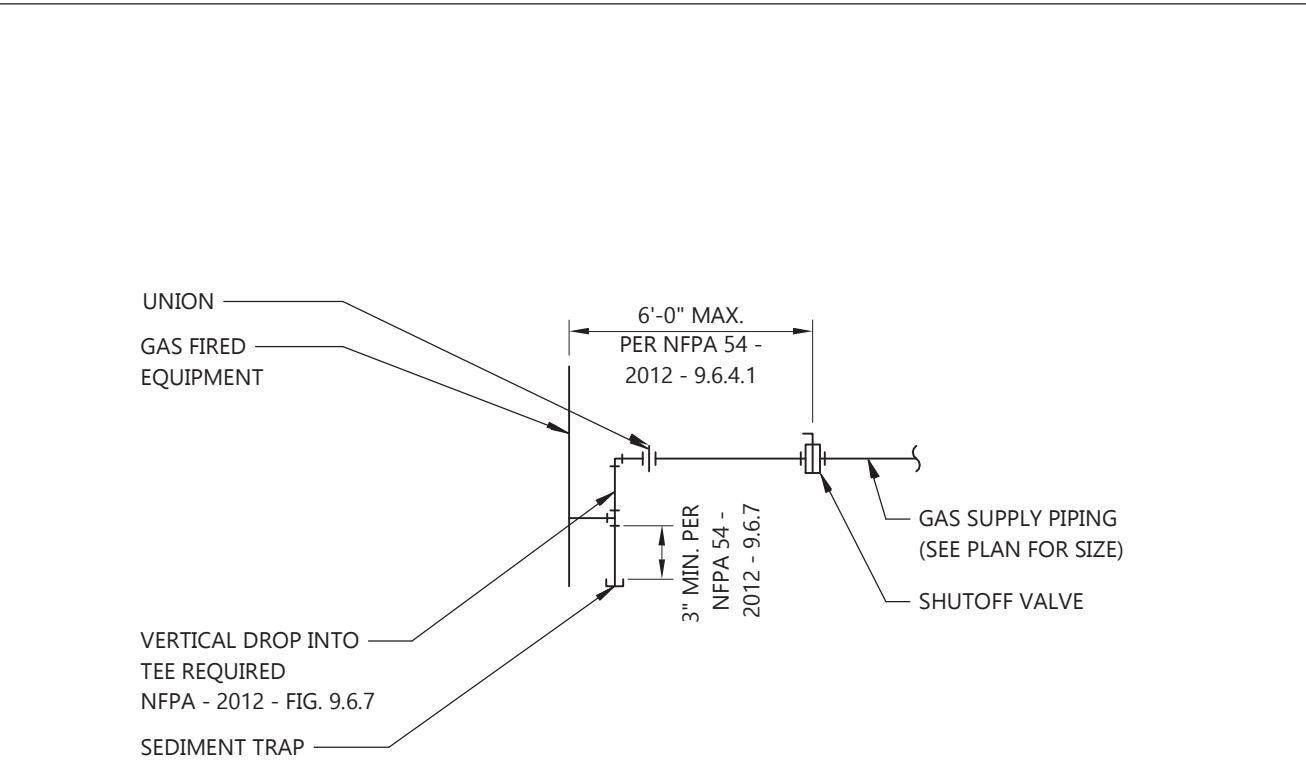
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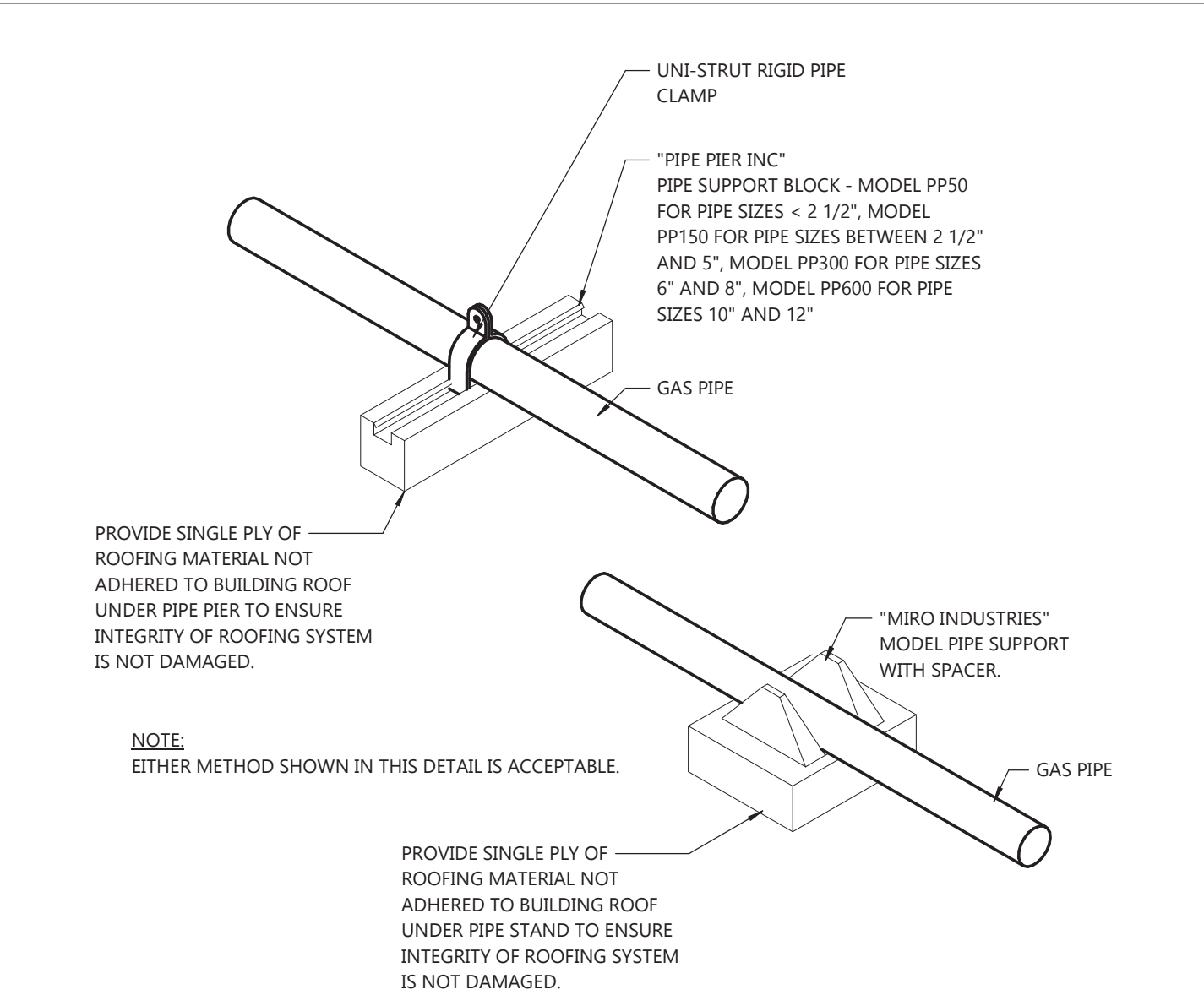
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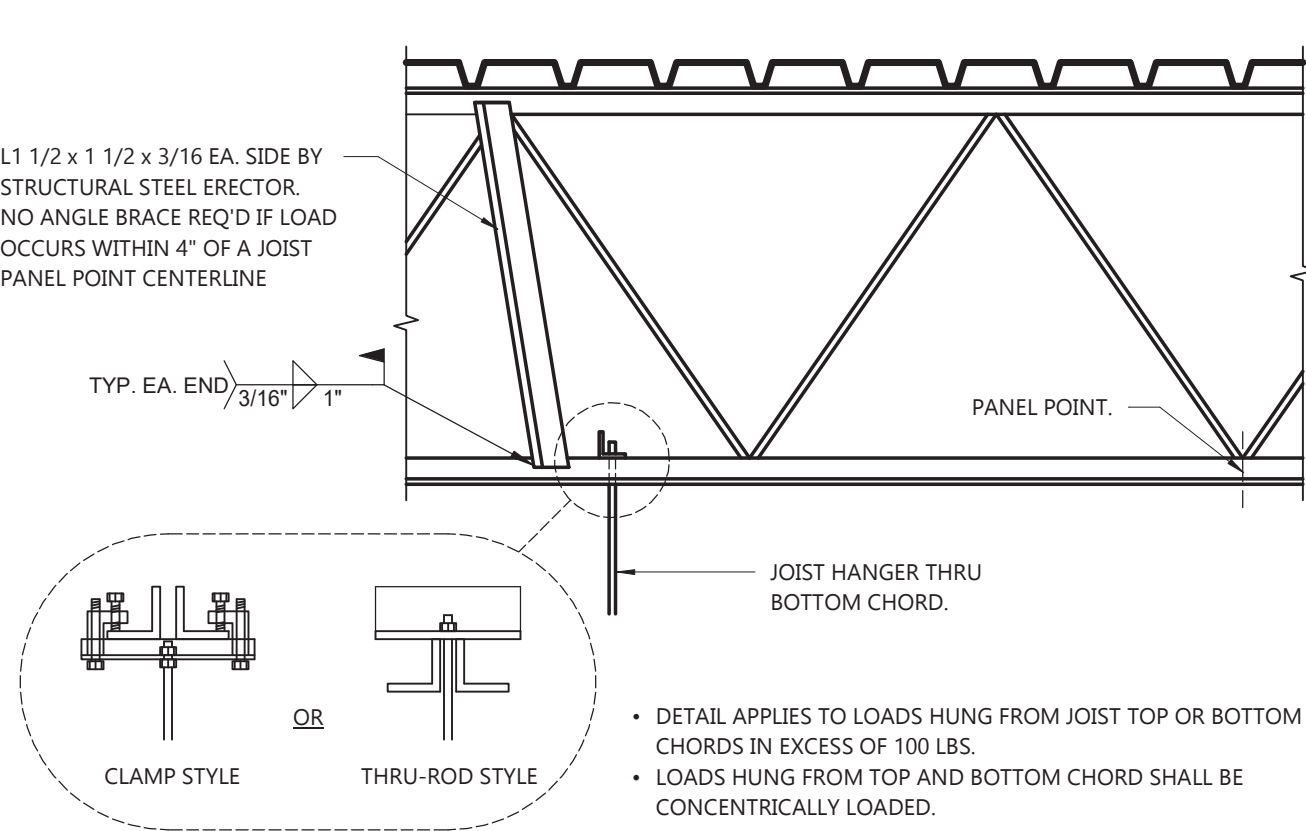
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P3.1
ANGLE STOP DETAIL
NOT TO SCALE



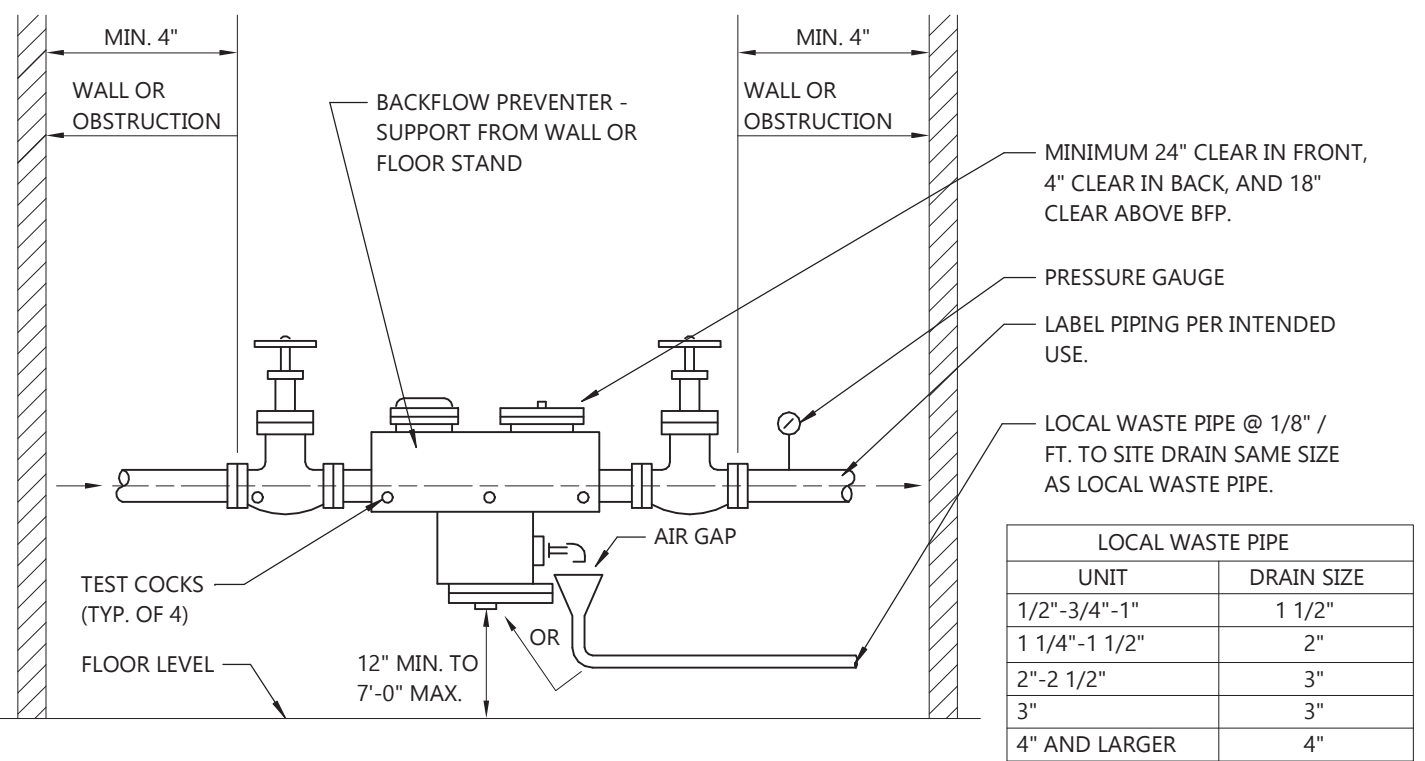
2
P3.1
GAS PIPE CONNECTION DETAIL
NOT TO SCALE



1
P3.1
GAS PIPE SUPPORT ON ROOF DETAIL
NOT TO SCALE



7
P3.1
JOIST HANGER CONNECTION DETAIL
NOT TO SCALE



6
P3.1
BACKFLOW PREVENTER DETAIL
NOT TO SCALE

TRAP PRIMER SCHEDULE (T.P.)					
NO.	LOCATION	CONN. SIZE	MODEL	REMARKS	SUPPLIED BY
1	MECH.	1/2"	P2-500	*PRECISION PLUMBING PRODUCTS*	TENANT G.C.
2	TOILET	3/8"	PRO1-ULP500	*PRECISION PLUMBING PRODUCTS*	TENANT G.C.

WATER CLOSET SCHEDULE (W.C.)

NO.	MT'G	FLUSH TYPE	GPF	MFR/MODEL	BOWL RIM HT. A.F.F.	PIPING CONNECTION	FLUSH VALVE TYPE	FLUSH VALVE/ SUPPLY STOP MFR/MODEL	SEAT	SUPPLIED BY
1H	FLOOR	TANK	1.28	MANSFIELD 137-3173	16-1/2"	HANDLE STOP	-	BRASSCRAFT OCR1912AZX C	CHURCH 94005SCT	TENANT P.C.

- ACCEPTABLE MANUFACTURERS:
- SUPPLY STOPS: BRASSCRAFT, CHICAGO, KOHLER, DEARBORN, KEENEY, MCGUIRE.
- WATER SAVING 1.6 GPF, SIPHON JET ELONGATED VITREOUS CHINA WATER CLOSET BOWL WITH WHITE SOLID PLASTIC OPEN FRONT SEAT WITH SELF-SUSTAINING CHECK HINGE.
- TANK WATER CLOSETS: CLOSE-COUPLED WITH VITREOUS CHINA TANK AND COVER, FLUSH ASSEMBLY AND ANGLE SUPPLY.
- FLOOR SET WATER CLOSETS WITH BOLT CAPS.
- CONTROLS FOR ADA ACCESSIBLE FIXTURES SHALL BE ON THE OPEN SIDE.

CLEANOUT SCHEDULE

SYM.	LOCATION	SIZES	BODY MAT'L	PLUG MAT'L	ACCESS COVER		FIGURE	REMARKS	SUPPLIED BY
					MAT'L	MISC.			
FCO	FINISHED ROOMS W/O CARPET (1)	2" - 6"	C.I.	PVC	N.B.	-	Z-1400	"ZURN"	TENANT G.C.
FCO	FINISHED ROOMS WITH CARPET (1)	2" - 6"	C.I.	PVC	N.B.	CARPET MARKER	Z-1400-CM	"ZURN"	TENANT G.C.

- RECESSED TAPER THREAD PLUG WITH SLOTTED RECESS.
(1) FINISHED ROOMS ARE ROOMS WITH CARPET OR FLOOR TILE OR ROOMS ACCESSIBLE BY A DOOR LESS THAN 42" WIDE.

DRAIN SCHEDULE

SYM.	TYPE	APPLICATION	OUTLET SIZE	BODY MAT'L	STRAINER/TOP		MISC.	MODEL	REMARKS	SUPPLIED BY
					MAT'L	SIZE				
FD-1	FLOOR	PEDESTRIAN TRAFFIC	2"-3" (1)	CAST IRON	N. B.	"TYPE 5"	5" DIA	TRAP PRIMER CONN.	ZN-415-S-DP-P	TENANT G.C.
HD	HUB DRAIN	INDIRECT WASTE	(1)	-	-	-	STUB 2" A.F.F.	-	-	TENANT G.C.

(1) AS NOTED ON DRAWINGS
(2) DECORATIVE POLISHED TOP NOT REQUIRED IN MECHANICAL ROOM.

BACKFLOW PREVENTER / VACUUM BREAKER SCHEDULE (B.F.P.)

SYM.	LOC.	GPM	MAX. P.D. (PSI)	SIZE	TYPE	MAX. HAZ.	BFP/VB PRESS.	APPLICATION	ASSE STD.	MODEL	REMARKS	SUPPLIED BY
BFP-1	LAB	2.0	4.0	1/2"	BFP W/ INT. ATM. VENT	LOW	CONTIN.	MODEL TRIMMER	1012	9D (1)	"WATTS"	TENANT G.C.
BFP-2	MECH	24.0	13.0	1 1/4"	REDUCED PRESS. PRINCIPLE BFP	HIGH	CONTIN.	WATER SERVICE	1013	LF009	"WATTS"	TENANT G.C.

- ACCEPTABLE MANUFACTURERS: WATTS, CONBRACO, AMES.
(1) P.C. SHALL VERIFY SCHEDULED BFP IS ADEQUATE FOR HAZARD LEVEL WITH PLUMBING INSPECTOR. USE SCHEDULED BFP UNLESS PLUMBING INSPECTOR CLASSIFIES AS HIGHER OR LOWER HAZARD. P.C. SHALL INSTALL BFP IN ACCORDANCE WITH MFRS RECOMMENDATIONS AND CODE CLEARANCE REQUIREMENTS. RELOCATE/REROUTE AS REQUIRED IF LOCATION SHOWN ON PLAN DOES NOT MEET REQUIREMENTS. PROVIDE ALL NECESSARY DRAIN PIPING, ETC. FOR A COMPLETE INSTALLATION.

ELECTRICAL/STARTER/DISCONNECT SCHEDULE

SYM.	LOCATION	ELECTRICAL DATA				STARTER			DISCONNECT		REMARKS	SUPPLIED BY
		HP	KW	AMPS	VOLT	PH.	TYPE	LOCATION	FURN. BY	ACCESS-ORIES		
BFS-1	SEE DWG	-	-	5.0	120	1	INTEG	INTEGRAL	EM	-	REC.	TENANT G.C.
WH-1	MECH.	-	3.0	-	208	1	INTEG	INTEGRAL	EM	-	-	TENANT G.C.
P-1	MECH.	-	0.04	-	120	1	(1)	MECH RM	PC	-	-	TENANT G.C.

STARTER TYPE:
INTEG = INTEGRAL: PROVIDED INTEGRAL WITH EQUIPMENT.
RELAY = UL LISTED MOTOR RATED RELAY WITH SEPARATE ENTRANCES FOR INPUT AND OUTPUT CONTACTS, AND LED STATUS INDICATOR.

FURNISHED BY:
EM = EQUIPMENT MANUFACTURER
PC = PLUMBING CONTRACTOR
EC = ELECTRICAL CONTRACTOR
HC = HEATING CONTRACTOR

DISCONNECT:
NR = NOT REQUIRED
R = REQUIRED

REMARKS:
REC.=RECEPTACLE

- ACCEPTABLE MANUFACTURERS: ALLEN BRADLEY, CUTLER HAMMER, SQUARE D, GENERAL ELECTRIC.
- VERIFY VOLTAGE AND PHASE WITH ELECTRICAL CONTRACTOR BEFORE ORDERING EQUIPMENT.
(1) SWITCHING RELAY AND TIMER. SEE ONE LINE WIRING DIAGRAM ON SHEET P3.0 FOR ADDITIONAL INFORMATION.

BOTTLE FILLING STATION SCHEDULE (B.F.S.)

NO.	RECESS	CAP. (GPH)	BARRIER FREE	NUMBER OF BASINS	CONTROL	RATED WATTS	FULL LOAD AMPS	MODEL	REMARKS	SUPPLIED BY
1	YES	8.0	YES	-	SENSOR	370	5.0	LZW5M8K	ELKAY	TENANT G.C.

- PROVIDE WITH 1-1/4" WITH C.O. PLUG (MCGUIRE 8872), AND ANGLE WATER STOP WITH HANDLE (BRASSCRAFT OCR192X C).
- CAPACITY BASED ON 50 DEGREE F WATER IN AMBIENT TEMPERATURE OF 90 DEGREES F.

WATER HEATER SCHEDULE (W.H.)

NO.	LOC.	TYPE	MOUNTING	SIZE DIA. X HT.	COMM. TANK WARR.	KW	VOLTAGE/ PHASE	AMPS	REC. GPH	TANK SIZE GAL.	MODEL	REMARKS	SUPPLIED BY
1	MECH	COMM.	PLATFORM	17.75" x 45.5"	3 YR (2)	3.0/3.0 (1)	208/1	14.4	12.0	30	ELD30	"RHEEM"	TENANT G.C.

- RECOVERY BASED ON 100 DEGREE F TEMPERATURE RISE, GLASS LINING, 100 PSIG T&P RELIEF VALVE SETTING, 150 PSIG WORKING PRESSURE.
(1) ELEMENTS WIRED FOR NON-SIMULTANEOUS OPERATION
(2) P.C. SHALL BE RESPONSIBLE FOR REGISTRATION OF WATER HEATER FOR WARRANTY PURPOSES.

CIRCULATING PUMP SCHEDULE (P.)

NO.	SERVICE	FLUID TEMP F	GPM	HEAD (FT)	RPM	MOTOR H.P.	TYPE	MODEL	REMARKS	SUPPLIED BY
1	HOT WATER CIRC	120	3	5	2800	.39 WATT	IN-LINE	NBF-8	"B & G" (1)	TENANT G.C.

- LEAD FREE BRONZE BODY.
(1) PROVIDE "INTERMATIC" MODEL ST01 DIGITAL 7-DAY SWITCH TIMER TO CONTROL PUMP OPERATION.
SET TIMER TO PROVIDE POWER TO PUMP 30 MINUTES BEFORE OFFICE OPENING, AND REMOVE POWER 60 MINUTES AFTER OFFICE CLOSING.

EMERGENCY EYE WASH SCHEDULE (E.E.W.)

NO.	MOUNTING	THERMOSTATIC MIXING VALVE	OPERATION	BACKFLOW PREVENTER	VALVE & TRIM MAT'L	MODEL	REMARKS	SUPPLIED BY
1	SINK	(1)	HAND	(2)	BRASS	EW1022BP-TMV	WATER SAVER	TENANT G.C.

- DECK MOUNTED EMERGENCY EYEWASH WITH DUST COVERS, HAND OPERATED, 8" UNDERCOUNTER HOSE.
(1) AP3600 TMV FURNISHED BY P.C.. TMV MEETS ANSI Z358.1.
(2) IN LINE DUAL CHECK BACKFLOW PREVENTER FURNISHED BY MANUFACTURER.

EXPANSION TANK SCHEDULE (E.T.)

NO.	MOUNTING	TANK TYPE	CONN. SIZE	TANK CAP. (GAL.)	ACCEP. CAPACITY (GAL.)	PRECHARGE PRESSURE (PSIG)	WORKING PRESS (PSIG)	DIA.	HEIGHT	WEIGHT FILLED (LBS.)	MODEL	REMARKS	SUPPLIED BY
1	PIPE	DIAPHRAGM	3/4"	2.1	1.0	(1)	150	9"	12"	16	WH 8	"FLEXCON"	TENANT G.C.

(1) VERIFY WATER PRESSURE PRIOR TO INSTALLATION. SET PRECHARGE PRESSURE TO STATIC PRESSURE IN STREET.

LAVATORY SCHEDULE (L.)

NO.	MOUNTING	OVERALL SIZE	FAUCET CENTERS	LAV MODEL	DRAIN (1)		SUPPLY STOP		FAUCET		SUPPLIED BY
					TYPE	MODEL	TYPE	MODEL	TYPE	MODEL	
1	(2)	(2)	4"	(2)	(2)		HANDLE	BRASSCRAFT OCR1912AZX C	WRIST BLADE	AM. STD. 7500.175	TENANT G.C.

- ACCEPTABLE MANUFACTURERS:
- DRAINS AND TRAPS: KOHLER, DEARBORN, KEENEY, MCGUIRE, BRASSCRAFT.
- STOPS AND SUPPLIES: KOHLER, BRASSCRAFT, DEARBORN, KEENEY, MCGUIRE.
- CARRIERS AND SUPPORTS: ANCON, JOSAM, SMITH, WADE, ZURN.
- ALL MODEL NUMBERS BASED ON KOHLER UNLESS INDICATED OTHERWISE
- VITREOUS CHINA LAVS, 1-1/4" 17 GAUGE "P" TRAP WITH CLEANOUT PLUG (MCGUIRE 8872), BUSHING ON END OF OUTLET TUBE, WALL FLANGE.
- WALL HUNG LAVS WITH BACKSPASH.
- FAUCETS WITH VANDAL RESISTANT AERATOR.
(1) PROVIDE TRUEBRO MODEL #102 INSULATION KIT.
(2) BASIN, STRAINER AND TAILPIECE FURNISHED BY MILLWORK CONTRACTOR, INSTALLED BY P.C..

SERVICE SINK SCHEDULE (S.S.)

NO.	MOUNTING	BASIN MAT'L	SIZE	RIM GUARD	MODEL	PIPING EXPOSURE	FAUCET		MFR/MODEL	SUPPLIED BY
							BACKFLOW PREVENTER	WATTS N9-CD (2)		
1	WALL	POLYPROPYLENE	23x25x15	-	MUSTEE 14CP	DECK MOUNT			(1)	TENANT G.C.

(1) FAUCET, SUPPLY HOSES AND P-TRAP FURNISHED WITH BASIN BY MANUFACTURER.
(2) ASSE 1052 LISTED.

SINK SCHEDULE (S.)

NO.	SINK		OVERALL SIZE	MODEL	NO. HOLES	FAUCET			MODEL	SUPPLIED BY		
	COMPARTMENT NO.	DEPTH				REACH	SPOUT HEIGHT	HANDLE			FINISH	SPRAY
1	1	(4)	(4)	(4)	2	5"	10"	SINGLE	CHROME	NO	DELTA 1903-DST	TENANT G.C.
2	1	(4)	(4)	(4)	2	5"	10"	SINGLE	CHROME	NO	DELTA 1903-DST	TENANT G.C.
3	2	(4)	(4)	(4)	3	8"	8.875"	SINGLE	CHROME	YES	KOHLER K-7508	TENANT G.C.
4	2	(4)	(4)	(4)	3	8"	8.875"	SINGLE	CHROME	YES	KOHLER K-7508 (1)	TENANT G.C.
5	1	(4)	(4)	(4)	2	5"	10"	SINGLE	CHROME	NO	DELTA 1903-DST (3)	TENANT G.C.

- ACCEPTABLE MANUFACTURERS:
- STOPS AND SUPPLIES: KOHLER, BRASSCRAFT, DEARBORN, KEENEY, MCGUIRE.
- DRAINS AND TRAPS: KOHLER, DEARBORN, KEENEY, MCGUIRE, BRASSCRAFT.
- SELF-RIMMING 20 GA. 302 S.S. SINK. ANGLE SUPPLIES WITH HANDLE STOPS (BRASSCRAFT OCR1912AZX C. PROVIDE EACH COMPARTMENT WITH STAINLESS STEEL STRAINER AND TAILPIECE (ELKAY LK-55B), AND 1-1/2" 17 GAUGE "P" TRAP W/ CLEANOUT (MCGUIRE 8912).
- VERIFY SINK CUTOUT SIZE WILL FIT IN COUNTERTOP WITH CABINET SHOP DRAWINGS PRIOR TO ORDERING.
(1) INSTALL PLASTER TRAP FURNISHED BY SULLIVAN-SCHIEIN.
(3) PROVIDE TRUEBRO MODEL #102 INSULATION KIT.
(4) BASIN FURNISHED BY MILLWORK CONTRACTOR, INSTALLED BY P.C..

THERMOSTATIC MIXING VALVE SCHEDULE (T.M.V.)

NO.	SERVICE	INLETS	OUTLET	ACT. P.D. (PSI)	MAX. FLOW (GPM)	ACTUAL FLOW (GPM)	TEMP. SETTING (°F)	MODEL	REMARKS	SUPPLIED BY
1	LAVATORY	3/8"	3/8"	25	4.0	1.5	105	LFUSG-B-M2	"WATTS" (1)	TENANT G.C.

- ACCEPTABLE MANUFACTURERS: SYMMONS, WATTS, POWERS, ZURN.
- PROVIDE WITH CHECK STOPS, REMOVABLE CARTRIDGE WITH STRAINER, STAINLESS STEEL PISTON, AND SOLID WAX HYDRAULIC PRINCIPLE THERMOSTAT.
(1) LISTED FOR ASSE 1070 USE.



Always a Better Plan

100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

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SHEET DATES

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