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PROJECT

MAYO EMPLOYEES  
FEDERAL CREDIT UNION

NEW BUILDING  
605 WEST AVE S.  
LA CROSSE, WI

ISSUED SET 2026-03-27

REVISIONS

DATE NO

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota

Reg No. Date



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7705 Sun Lake Road  
Edina, MN 55425  
(952) 930-0050 | www.epcinc.com

MECHANICAL TITLE SHEET

Drawn By: JM Checked By: JH

MO.0

3392.0002  
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MECHANICAL ABBREVIATIONS table with columns for symbol and description, including items like AREA DRAIN, ABOVE FINISHED FLOOR, AIR HANDLING UNIT, etc.

MECHANICAL ABBREVIATIONS table with columns for symbol and description, including items like LIQUID, LEAVING AIR TEMPERATURE, LAVATORY, etc.

MECHANICAL SYMBOL LEGEND table with columns for PLUMBING, MISC. PIPING, HVAC, MEDICAL GAS, FIRE PROTECTION, REFRIGERATION, MISC. REFRIGERATION, MISC. FIRE PROTECTION, and MISC. GRAPHICS.

MECHANICAL SHEET INDEX table listing sheet numbers and titles, such as MO.0 MECHANICAL TITLE SHEET, MO.1 MECHANICAL GENERAL NOTES & SITE PLAN, etc.

## MECHANICAL PROJECT GENERAL NOTES

(NOTES APPLY TO ALL SHEETS)

- WORK TO BE ACCOMPLISHED ON THESE DRAWINGS AND THE ACCOMPANYING SPECIFICATIONS INCLUDES THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY FOR THE PROPER COMPLETION OF ALL MECHANICAL WORK.
- EXISTENCE OF ANY WIRES, CONDUITS, PIPES, DUCTS, OR OTHER FACILITIES ARE SHOWN IN A GENERAL WAY ONLY. IT WILL BE THE DUTY OF THE CONTRACTOR TO VISIT THE SITE AND MAKE EXACT DETERMINATION OF THE EXISTENCE OF ANY SUCH FACILITIES PRIOR TO THE SUBMISSION OF HIS BID. IT IS UNDERSTOOD THAT HE WILL BE RESPONSIBLE FOR MAKING THE EXACT DETERMINATION OF THE LOCATION AND CONDITION OF SUCH FACILITIES.
- ALL REQUIRED FEES, PERMITS, AND INSPECTIONS SHALL BE OBTAINED AND/OR ARRANGED FOR BY THE CONTRACTOR UNDER THE SECTION OF THE SPECIFICATIONS FOR WHICH THEY ARE REQUIRED.
- REGULAR INSPECTIONS SHALL BE ARRANGED BY THE CONTRACTOR AS REQUIRED BY ANY AND ALL REGULATIONS. ALL CHARGES FROM REGULATING AGENCIES FOR INSPECTIONS OR REVIEW OF PLANS AND SPECIFICATIONS SHALL BE PAID BY THE CONTRACTOR.
- CERTIFICATE OF FINAL INSPECTION. UNDER EACH APPLICABLE SECTION OF THE SPECIFICATIONS, CONTRACTOR SHALL, UPON COMPLETION OF THE WORK UNDER THAT SECTION, FURNISH A CERTIFICATE OF FINAL INSPECTION TO THE ENGINEER FROM THE INSPECTION DEPARTMENT HAVING JURISDICTION.
- ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL CURRENT AND APPLICABLE CODES, SPECIFICATIONS, ORDINANCES, LAWS, REGULATIONS, INDUSTRY STANDARDS, AND UTILITY COMPANY REGULATIONS.
- IN CASE OF DIFFERENCE AMONG BUILDING CODES, SPECIFICATIONS, STATE LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS, AND UTILITY COMPANY REGULATIONS AND THE CONTRACT DOCUMENTS, THE MOST STRINGENT SHALL GOVERN. CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER IN WRITING OF ANY SUCH DIFFERENCE.
- ALL APPLICABLE FEDERAL, STATE, LOCAL LAWS, ORDINANCES, AND LOCAL CODE AMENDMENTS SHALL BE ADHERED TO THROUGHOUT THE CONSTRUCTION PROJECT. THE TOTAL INSTALLATION SHALL COMPLY WITH ANY AND ALL REQUIREMENTS OF THE LEGALLY CONSTITUTED AUTHORITIES HAVING JURISDICTION INCLUDING THE APPLICABLE BUILDING CODE, THE APPLICABLE MECHANICAL CODE, AND THE APPLICABLE PLUMBING CODE.
- NON-COMPLIANCE. SHOULD THE CONTRACTOR PERFORM ANY WORK THAT DOES NOT COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE BUILDING CODES, STATE LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS, AND UTILITY COMPANY REGULATIONS, HE SHALL BEAR ALL COSTS ARISING TO CORRECT THE DEFICIENCIES.
- CONTRACTOR SHALL INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY PRECAUTIONS REQUIRED FOR HIS WORK, INCLUDING REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
- DRAWINGS ARE TO SCALE AS NOTED, BUT THE CONTRACTOR SHALL REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR EXACT LOCATION OF PARTITIONS, WALLS, BEAMS, SHAFTS, EQUIPMENT, ETC.
- EACH TRADE SHALL OBTAIN DRAWINGS AND SPECIFICATIONS OF ALL OTHER TRADES AND COORDINATE HIS WORK WITH ALL OTHER TRADES.
- DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, AND APPURTENANCES AND SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND WORK OF OTHER TRADES WILL PERMIT. MECHANICAL WORK SHALL CONFORM TO THE REQUIREMENTS SHOWN ON ALL OF THE DRAWINGS. ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER MECHANICAL DRAWINGS, BECAUSE OF THE SMALL SCALE OF THE MECHANICAL DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, AND ACCESSORIES THAT MAY BE REQUIRED.
- DISCREPANCIES DISCOVERED BEFORE OR AFTER WORK HAS STARTED SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY, AND THE ENGINEER RESERVES THE RIGHT TO REQUIRE MINOR CHANGES IN THE WORK OF ANY CONTRACTOR TO ELIMINATE SUCH DISCREPANCIES WITH NO CHANGE IN CONTRACT COST.
- PLANS AND SPECIFICATIONS ARE COMPLEMENTARY, AND WHAT IS CALLED FOR IN EITHER ONE SHALL BE AS BINDING AS IF CALLED FOR IN BOTH.
- WHERE A DISAGREEMENT EXISTS BETWEEN THE PLANS AND SPECIFICATIONS, THE ITEM OR ARRANGEMENT OF BETTER QUALITY, GREATER QUANTITY, OR HIGHER COST SHALL BE INCLUDED IN THE BID.
- ALL MATERIALS AND EQUIPMENT SHALL BE STORED IN SUCH A PLACE AND IN SUCH A MANNER THAT A MINIMUM OF CONGESTION WILL RESULT. THE PLACING OF SUCH MATERIALS AND EQUIPMENT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
- EACH CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES IN THE INSTALLATION OF EQUIPMENT, PIPING, CONDUIT, AND DUCTWORK.
- CONTRACTORS SHALL SOLVE ALL COORDINATION CONFLICTS AMONG THEMSELVES WHEN POSSIBLE. ENGINEER WILL ARBITRATE WHEN NECESSARY, AND HIS JUDGMENT WILL STAND, WITH NO ADDITIONAL COST TO THE OWNER.
- ACCESS PANELS SHALL BE FURNISHED BY THE TRADE REQUIRING THEM AND DELIVERED TO THE GENERAL CONTRACTOR FOR INSTALLATION.
- EACH TRADE SHALL PERFORM ALL REMOVING, CUTTING, PATCHING, AND REPLACEMENT OF ALL BUILDING STRUCTURE, SURFACES, AND FINISHES NECESSARY IN ORDER TO PERFORM THE WORK. UNLESS SUCH WORK HAS BEEN DELEGATED TO THE GENERAL CONTRACTOR/ANOTHER TRADE. HOWEVER, SPECIAL PERMISSION SHALL BE OBTAINED FROM THE ENGINEER BEFORE CUTTING STRUCTURAL MEMBERS OR FINISHED MATERIALS. ALL PATCHING SHALL BE PERFORMED IN SUCH MANNER AS TO LEAVE NO VISIBLE TRACE AND TO RETURN THE PART AFFECTED TO THE CONDITION OF UNDISTURBED WORK. PATCHING WORK SHALL BE PERFORMED BY PERSONS EXPERIENCED, SKILLED, AND LICENSED FOR THE PARTICULAR TYPE OF WORK INVOLVED. INFERIOR WORK WILL NOT BE ACCEPTED. ALL HOLES IN MASONRY SHALL BE DRILLED WITH ROTARY DRILLS. IMPACT TOOLS SHALL NOT BE USED.
- EACH TRADE SHALL BEAR THE EXPENSE OF ALL CUTTING, PATCHING, REPAIRING, OR REPLACING OF THE WORK OF OTHER TRADES REQUIRED BECAUSE OF HIS FAULT, ERROR, OR TARDINESS OF BECAUSE OF ANY DAMAGE DONE BY HIM.
- EACH TRADE SHALL PROVIDE ALL HOLES AND OPENINGS REQUIRED FOR HIS WORK. UNLESS SUCH HOLES AND OPENINGS ARE SHOWN TO BE PROVIDED ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS.
- EACH TRADE SHALL PERIODICALLY CLEAR AWAY ALL DEBRIS, SURPLUS MATERIALS, ETC., RESULTING FROM HIS WORK OR OPERATIONS, LEAVING THE JOB AND THE EQUIPMENT FURNISHED UNDER ANY OR ALL CONTRACTS IN A CLEAN CONDITION.
- EACH TRADE SHALL TEST THE EQUIPMENT PROVIDED AND/OR INSTALLED UNDER THE SPECIFICATION AND SHALL DEMONSTRATE ITS PROPER OPERATION TO THE OWNER'S OPERATING ENGINEER.
- EACH TRADE SHALL FURNISH, WITHOUT ADDITIONAL EXPENSE TO THE OWNER, THE SERVICES OF COMPETENT INSTRUCTORS, WHO WILL GIVE FULL INSTRUCTION IN THE CARE, ADJUSTMENT, AND OPERATION AND MAINTENANCE OF ALL PARTS OF THE EQUIPMENT TO THE OWNER'S PERMANENT EMPLOYEES WHO ARE TO HAVE CHARGE OF THE EQUIPMENT.
- ALL WOOD NAILERS AND OTHER LUMBER WHICH IS INSTALLED IN CONTACT WITH METAL, CONCRETE, OR MASONRY SHALL BE PRESSURE TREATED AGAINST DECAY (UNLESS OTHERWISE NOTED).
- MATERIAL EXPOSED WITHIN RETURN AIR PLENUM CEILINGS SHALL COMPLY WITH APPLICABLE CODE.
- PLANS DO NOT INCLUDE ALL OFFSETS FOR COORDINATION WITH DUCT, PIPING, LIGHTING, AND STRUCTURAL SYSTEMS. PROVIDE ALLOWANCES FOR REQUIRED OFFSETS. PROVIDE OFFSETS AS REQUIRED.
- BEFORE SUBMITTING A PROPOSAL ON THE WORK SHOWN ON THESE DRAWINGS AND ACCOMPANYING SPECIFICATIONS, EACH BIDDER SHALL EXAMINE THE SITE, CHECK AS TO THE MEANS OF MAKING CONNECTIONS TO SERVICES, AND SHALL BECOME FAMILIAR WITH ALL THE EXISTING CONDITIONS AND LIMITATIONS. NO EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTOR'S MISUNDERSTANDING AS TO THE AMOUNT OF WORK INVOLVED OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITIONS WHICH MAY AFFECT HIS WORK. ANY APPARENT VARIANCE OF THE PLAN OR SPECIFICATION FROM EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER DURING THE BID PERIOD SO CLARIFICATION CAN BE MADE BY ADDENDUM.
- NORMAL USE OF THE FACILITY SHALL NOT BE DISTURBED, EXCEPT WITHIN THE IMMEDIATE CONSTRUCTION AREA. ALL WALKS, DRIVEWAYS, AND ENTRANCES SHALL BE KEPT CLEAR AND FREE OF ALL CONTRACTOR'S EQUIPMENT, MATERIAL, AND DEBRIS AT ALL TIMES.
- CONTRACTOR SHALL THOROUGHLY EXAMINE THE EXISTING BUILDING WITH REGARD TO WHAT TEMPORARY MEASURES HE MUST TAKE IN ORDER TO PERMIT THE OWNER TO OCCUPY SPECIFIC AREAS OF THE BUILDING DURING THE VARIOUS CONSTRUCTION PHASES. REFER TO DIVISION 1, SECTION 010, "SUMMARY OF WORK" FOR CONSTRUCTION SEQUENCING SCHEDULE. IN GENERAL, SYSTEMS MUST REMAIN IN USE IN THOSE DESIGNATED AREAS TO PERMIT THE OWNER TO FUNCTION IN A PRE-CONSTRUCTION MANNER.
- EACH TRADE SHALL REMOVE EXISTING WORK THAT IS SHOWN, SPECIFIED, OR OBVIOUSLY NECESSARY FOR COMPLETION OF HIS WORK. OWNER SHALL HAVE THE OPTION OF RETAINING ANY ITEM OR MATERIAL REMOVED UNDER THIS CONTRACT. ITEMS OR MATERIALS NOT RETAINED BY OWNER SHALL BECOME THE PROPERTY OF THE TRADE AND SHALL BE REMOVED FROM THE PREMISES.

## HVAC GENERAL NOTES

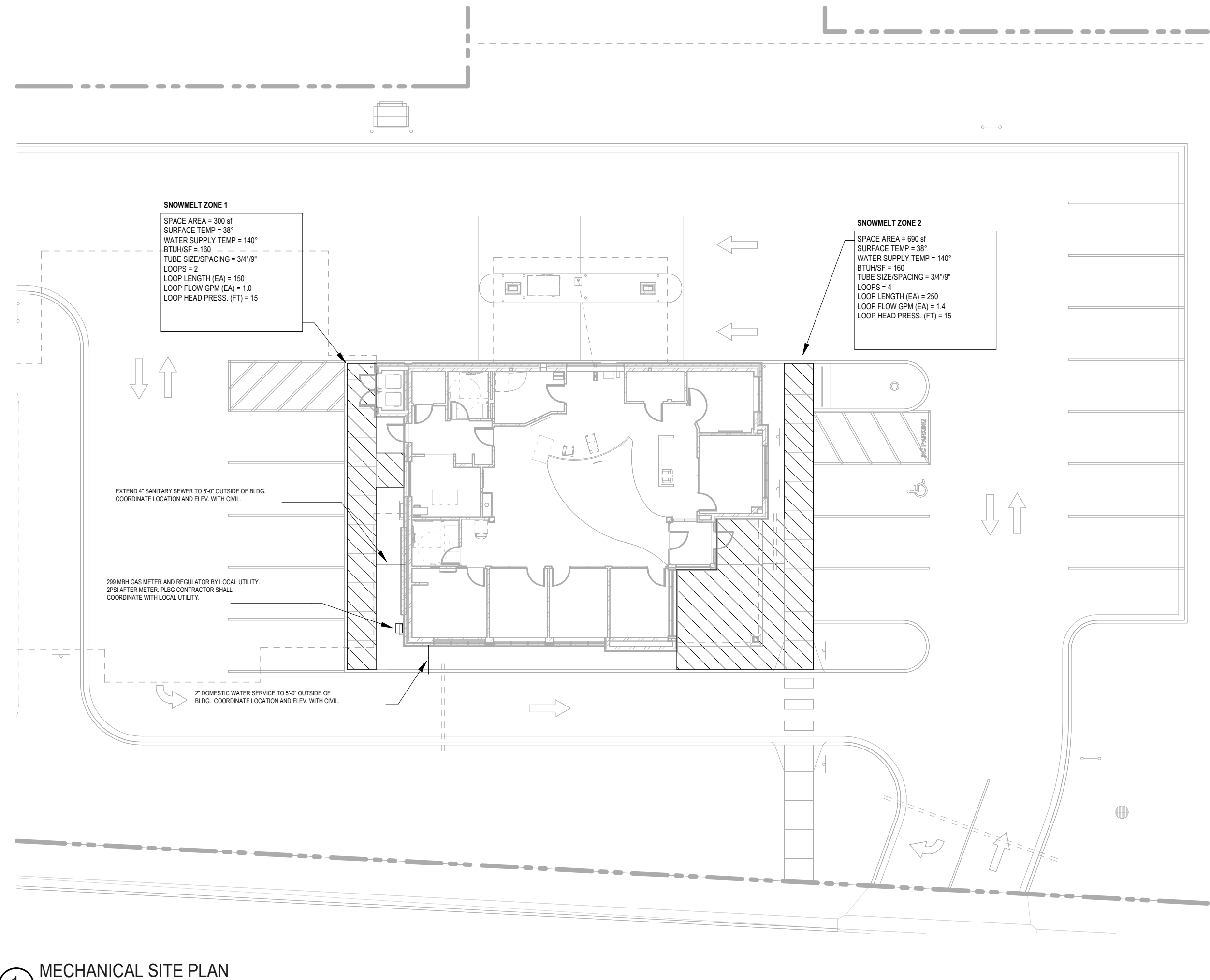
- HVAC/SHEET METAL CONTRACTOR SHALL INITIATE THE COORDINATION PROCESS BY PROVIDING REPRODUCIBLE PLAN DRAWINGS SHOWING DUCTWORK AND EQUIPMENT. DRAWINGS WILL BE FORWARDED TO THE PIPING CONTRACTOR AND ELECTRICAL CONTRACTOR FOR INCLUSION OF THEIR SYSTEMS WORK.
- ALL FLEX DUCT MUST BE INSTALLED PER THE ACC (AIR DIFFUSION COUNCIL) INSTALLATION STANDARDS (MOST CURRENT EDITION), INCLUDING A BEND RADIUS OF ONE DUCT DIAMETER OR GREATER, PROPERLY SEALED AND SECURED WITH 2 INCH BEADED COLLARS, PROPERLY SUPPORTED AND FULLY EXTENDED DUCT. FAN CALCULATIONS FOR THIS PROJECT WERE SIZED FOR A 4 FOOT MAXIMUM FLEX DUCT INSTALLED PER THE ACC INSTALLATION STANDARDS. FLEX DUCT SHOWN ON PLANS IS FOR SCHEMATIC PURPOSES ONLY AND SHALL IN NO INSTANCE EXCEED 4 FEET.
- HVAC CONTRACTOR SHALL LINE THE INSIDE OF ALL RETURN/RELIEF/EXHAUST PLENUM BOXES PER SPECIFICATIONS. IF NO LINING IS REQUIRED, HVAC CONTRACTOR SHALL PAINT THE INSIDE FLAT BLACK.
- HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR TESTED AND RATED FIRE STOP SYSTEMS FOR ALL THRU PENETRATIONS OF THE WALLS, FLOORS, AND ROOF ASSEMBLIES RESULTING FROM PIPING AND OTHER WORK UNDER HIS CONTRACT. REFER TO SPECIFICATION SECTION 07041 - FIRESTOPPING FOR REQUIREMENTS.
- ALL DUCT SIZES ARE INTERNAL DIMENSIONS. CONTRACTOR SHALL INCREASE SHEET METAL SIZE IF DUCT RECEIVES INTERNAL LINER. SEE SPECIFICATIONS FOR INSULATION REQUIREMENTS.
- DUCT ROOF PENETRATION SIZES TO ROOF/TOP UNITS ARE SAME AS DUCT MAIN, UNLESS NOTED OTHERWISE. TRANSITION TO UNIT CONNECTION SIZES WITHIN ROOF CURBS.
- LOCATIONS OF ORIFICES/VENTS FOR FABRIC DUCTS ARE ORIENTED WHEN FACING THE DIRECTION OF AIRFLOW.
- MAINTAIN A MINIMUM OF 10'-0" HORIZONTAL DISTANCE FROM ANY INTAKE TO EXHAUST OUTLET.
- HVAC CONTRACTOR SHALL CLOSELY COORDINATE WITH GENERAL CONTRACTOR FOR EXACT FIRE AND FIRE/SMOKE DAMPER PENETRATION SIZES IN WALLS AND FLOORING. FLOOR OPENINGS PROVIDED BY PRECAST MANUFACTURER ARE OVERSIZED AND M.C. MUST RELAY EXACT (NOT NOMINAL) OPENING SIZE MEETING U.I. LISTING TO CONCRETE INSTALLER FOR FRAMING OUT FLOOR OPENING. FLOOR OPENING SHALL HAVE 0.5" FREE SPACE AROUND ALL FOUR SIDES OF DAMPER AT ANY TIME TO ALLOW FOR EXPANSION, NO EXCEPTIONS. INSTALL MOUNTING ANGLE ON ALL FOUR SIDES OF FIRE DAMPERS, ANGLES SHALL NOT BE SECURED TO FLOOR OR WALL. FIRE CALKING AROUND DAMPERS IS STRICTLY PROHIBITED. REFER TO STANDARDS UL555 & UL555S AND DAMPER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

## PLUMBING GENERAL NOTES

- COORDINATE UNDERGROUND PIPING WITH GENERAL CONTRACTOR TO ENSURE PROPER FOOTING DEPTH CLEARANCE.
- PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PLUMBING SYSTEM AS INDICATED ON THE DRAWINGS, AS SPECIFIED, AND AS REQUIRED BY CODE.
- STORM DRAIN AND ALL VENT PIPING AT 1/8" PER FOOT SLOPE UNLESS NOTED OTHERWISE. ALL WASTE PIPING AT 1/4" PER FOOT SLOPE.
- ELEVATIONS SHOWN ARE TO THE INVERT OF ALL PIPING BASED ON ARCHITECTURAL FINISHED FLOOR ELEVATION (FFE) OF 100'-0", UNLESS NOTED OTHERWISE.
- ADJUST SEWER INVERTS TO KEEP BOTTOM OF PIPES IN LINE WHERE PIPE SIZES CHANGE.
- PROVIDE SHUTOFF VALVES IN ALL WATER PIPING SYSTEM BRANCHES IN WHICH BRANCH PIPING SERVES TWO OR MORE FIXTURES (NOT SHOWN FOR CLARITY) AND WHERE SHOWN ON PLAN AND RISERS.
- INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES, AND OTHER ACCESSORIES REQUIRING ACCESS ARE ACCESSIBLE.
- UNIONS AND/OR FLANGES SHALL BE INSTALLED AT EACH PIECE OF EQUIPMENT, IN BYPASSES, AND IN LONG RUNS (OVER 100') TO PERMIT DISASSEMBLY FOR ALTERATION AND REPAIRS.
- ALL VALVES SHALL BE ADJUSTED FOR SMOOTH AND EASY OPERATION.
- ALL VALVES (EXCEPT CONTROL VALVES) AND STRAINERS SHALL BE FULL SIZE OF PIPE BEFORE REDUCING SIZE TO MAKE CONNECTIONS TO EQUIPMENT AND CONTROLS.
- PROVIDE CLEANOUTS IN SANITARY AND STORM DRAINAGE SYSTEMS AT THE ENDS OF RUNS, AT CHANGES IN DIRECTION, NEAR THE BASE OF STACKS, EVERY 100' IN 4" AND LARGER HORIZONTAL RUNS, EVERY 50' IN 3" AND SMALLER HORIZONTAL RUNS, WHERE NOTED ON PLANS, AND WHERE REQUIRED BY CODE.
- ALL VALVES SHALL BE INSTALLED SO THAT THE VALVE REMAINS IN SERVICE WHEN EQUIPMENT OR PIPING ON EQUIPMENT SIDE OF VALVE IS REMOVED.
- SEE PLUMBING RISERS FOR SIZING NOT SHOWN ON PLAN SHEETS (FOR CLARITY) AND SEE PLUMBING FIXTURE SCHEDULE FOR FIXTURE CONNECTIONS AND RUNOUT SIZES.
- CONTRACTOR TO ENSURE THAT CLEANOUTS (FCO, WCO, CO) LOCATIONS DO NOT REST BELOW OR BEHIND CASEWORK.
- PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL REMOVING, CUTTING, PATCHING, AND REPLACEMENT OF ALL BUILDING STRUCTURE, SURFACES, AND FINISHES REQUIRED TO COMPLETE WORK STATED IN THE CONTRACT DOCUMENTS.
- PLUMBING CONTRACTOR TO COORDINATE COUNTER OPENINGS FOR NEW SINKS/LAVS WITH GENERAL CONTRACTOR PRIOR TO ORDERING MATERIALS.
- PIPES SHOWN SPREAD APART ON PLANS FOR CLARITY. CONTRACTOR TO INSTALL PIPES TIGHT TOGETHER.
- ALL UNDERGROUND DOMESTIC WATER PIPING SHALL BE SEAMLESS TYPE 'K' COPPER PIPING WITH NO JOINTS. SEE SPECIFICATIONS.
- GAS PIPING SUPPORTS TO BE EVERY 5 FEET.
- SEE ARCHITECTURAL ROOF PLAN FOR ROOF SLOPE AND SCUPPER SIZES/LOCATIONS.
- REDUCED PRESSURE ZONE BACKFLOW PREVENTER (RPZ) SHALL BE INSTALLED AT AN ELEVATION BETWEEN 3'-0" AFF AND 6'-0" AFF AND LABELED INDICATING EQUIPMENT SERVED. RPZ'S SHALL BE INSPECTED AND TESTED ANNUALLY OR AT A RATE PER LOCAL CODES.
- PIPING MATERIAL FOR SANITARY WASTE, PLUMBING VENTS, AND STORM SEWER SHALL BE CAST IRON WHERE PIPING RUNS THROUGH A RETURN AIR PLENUM. REFERENCE APPLICABLE MECHANICAL CODE, WITH LOCAL AMENDMENTS. WHERE PIPING MATERIAL MUST BE PVC THE PIPE SHALL BE WRAPPED WITH 3M FIRE BARRIER WRAP AS DESCRIBED IN MECHANICAL SPECIFICATION.
- FIRE CALK ALL FLOOR PENETRATIONS AND WHERE PIPING PENETRATES RATED WALLS.
- ALL PLUMBING INSTALLATION SHALL CONFORM TO STATE PLUMBING CODE WITH LOCAL AMENDMENTS.
- WHERE NOT SPECIFICALLY INDICATED OTHERWISE, ALL GAS PIPING AND EQUIPMENT SHALL BE SUPPORTED PER THE SMACNA GUIDELINES FOR SEISMIC RESTRAINT AND CURRENT APPLICABLE STATE BUILDING CODE.
- THE TOTAL INSTALLATION SHALL COMPLY WITH ANY AND ALL REQUIREMENTS OF THE LEGALLY CONSTITUTED AUTHORITIES HAVING JURISDICTION INCLUDING STATE BUILDING CODE, THE STATE MECHANICAL CODE, AND THE STATE PLUMBING CODE.
- PLUMBING CONTRACTOR IS RESPONSIBLE TO REMOVE ALL SHAVINGS IN PVC/CPVC/ABS PIPING IN DOMESTIC WATER, SANITARY SEWER, AND STORM SEWER PIPING PRIOR TO LEAVING SITE.
- PLUMBING CONTRACTOR IS RESPONSIBLE TO PURGE DOMESTIC WATER SYSTEM, INCLUDING BUT NOT LIMITING, ALL C/W/H/W/H/W PIPING, WATER HEATERS, VALVING, AND PLUMBING FIXTURES, OF ALL DELETERIOUS MATTER AND DISINFECT ENTIRE SYSTEM PRIOR TO UTILIZATION, AS DEFINED AND DESCRIBED IN APPLICABLE PLUMBING CODE.

## FIRE PROTECTION GENERAL NOTES

- COORDINATE UNDERGROUND PIPING WITH GENERAL CONTRACTOR TO ENSURE PROPER FOOTING DEPTH CLEARANCE.
- PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE FIRE PROTECTION SYSTEM AS INDICATED ON THE DRAWINGS, AS SPECIFIED, AND AS REQUIRED BY CODE.
- INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES, AND OTHER ACCESSORIES REQUIRING ACCESS ARE ACCESSIBLE.
- UNIONS AND/OR FLANGES SHALL BE INSTALLED AT EACH PIECE OF EQUIPMENT, IN BYPASSES, AND IN LONG RUNS (OVER 100') TO PERMIT DISASSEMBLY FOR ALTERATION AND REPAIRS.
- ALL VALVES SHALL BE ADJUSTED FOR SMOOTH AND EASY OPERATION.
- ALL VALVES (EXCEPT CONTROL VALVES) AND STRAINERS SHALL BE FULL SIZE OF PIPE BEFORE REDUCING SIZE TO MAKE CONNECTIONS TO EQUIPMENT AND CONTROLS.
- FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR ALL REMOVING, CUTTING, PATCHING, AND REPLACEMENT OF ALL BUILDING STRUCTURE, SURFACES, AND FINISHES REQUIRED TO COMPLETE WORK STATED IN THE CONTRACT DOCUMENTS.
- PIPES SHOWN SPREAD APART ON PLANS FOR CLARITY. CONTRACTOR TO INSTALL PIPES TIGHT TOGETHER.
- FIRE CALK ALL FLOOR PENETRATIONS AND WHERE PIPING PENETRATES RATED WALLS.



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## NEW BUILDING

605 WEST AVE S.  
LA CROSSE, WI

ISSUED SET 2026-03-27

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DATE NO

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota

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MECHANICAL GENERAL  
NOTES & SITE PLAN

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Checked By: JH

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## MAIN LEVEL & BELOW FLOOR PLAN - PLUMBING

Drawn By: JB & DM Checked By: JH

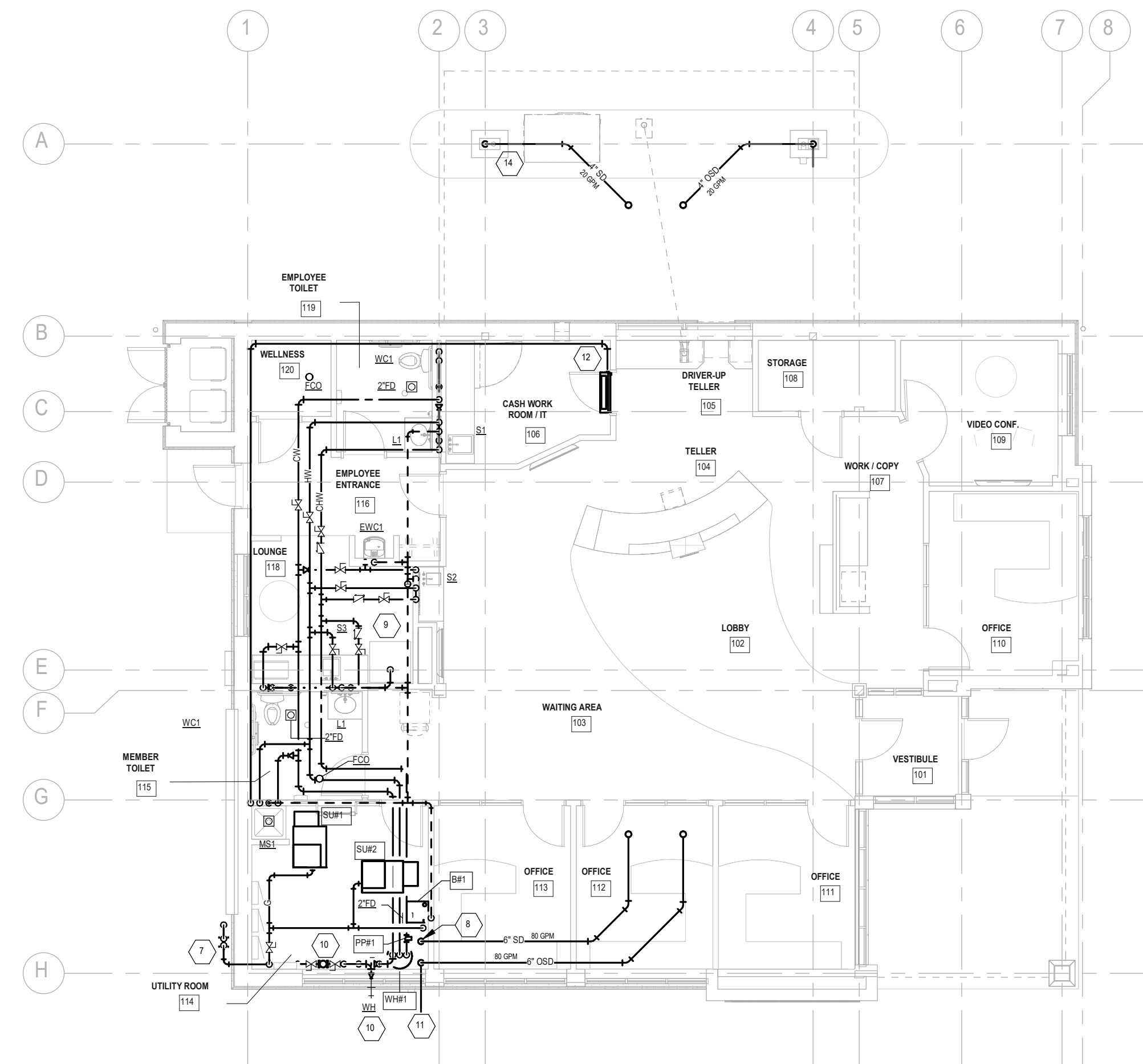
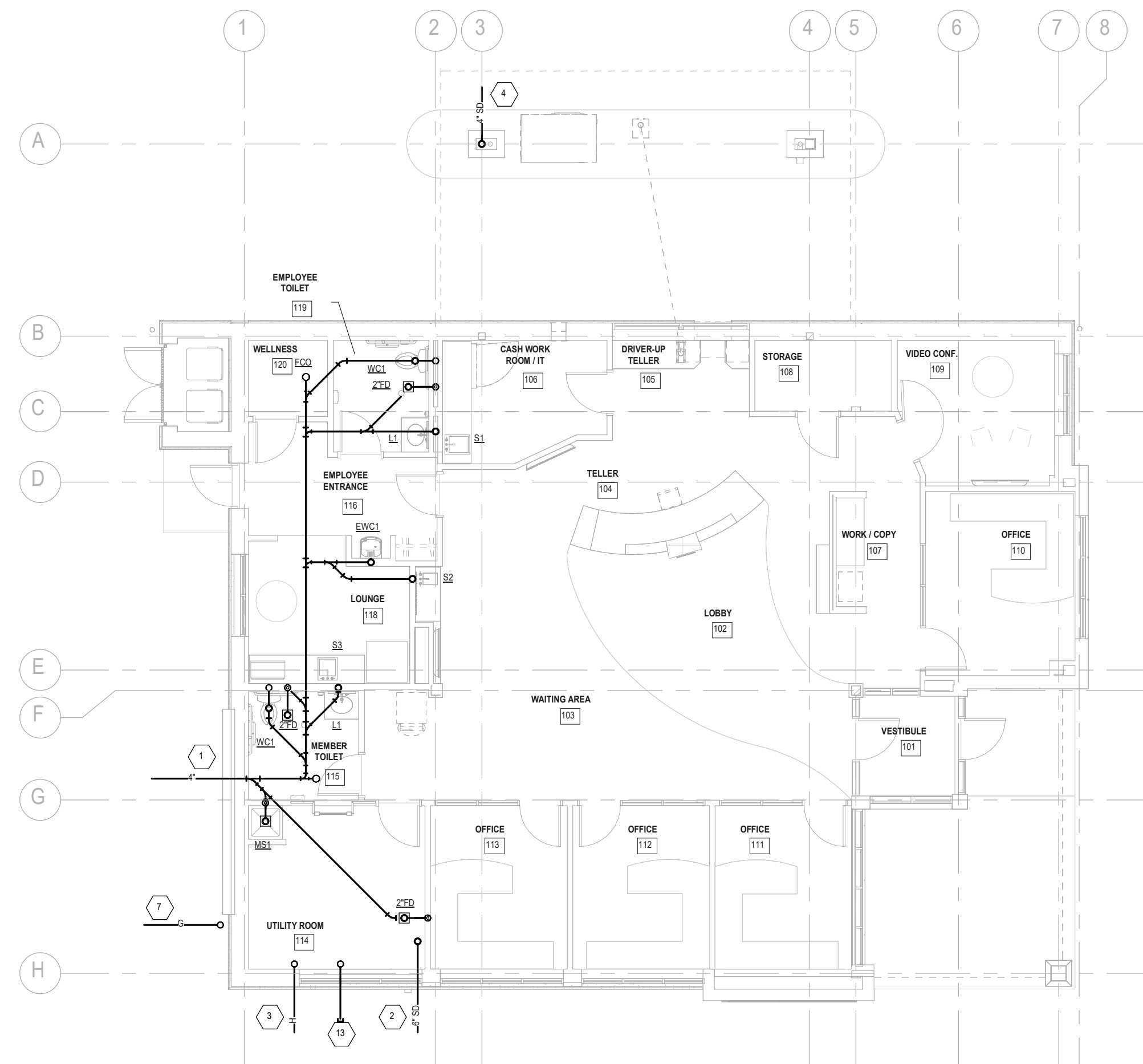
# M1.1

### GENERAL NOTES:

A. SEE SHEET M0.1 FOR GENERAL NOTES

### KEY NOTES:

- EXTEND 4" SANITARY TO 5' OUTSIDE BUILDING WITH FLOOR CLEANOUT. COORDINATE EXACT LOCATION WITH CIVIL.
- EXTEND 6" STORM TO 5' OUTSIDE BUILDING WITH FLOOR CLEANOUT. COORDINATE EXACT LOCATION WITH CIVIL.
- EXTEND 2" DOMESTIC WATER SERVICE FROM 5' OUTSIDE BUILDING INTO BUILDING.
- EXTEND 4" STORM TO 5' OUTSIDE BUILDING WITH WALL CLEANOUT. COORDINATE EXACT LOCATION WITH CIVIL.
- PROVIDE ROUGH IN FOR FUTURE WATER SOFTENER WITH BYPASS LINE AND SHUTOFF VALVES.
- MOUNT WATER HEATER ON WALL WITH BOTTOM AT 6" ABOVE FLOOR. SEE DETAIL.
- GAS METER & REGULATOR BY LOCAL UTILITY. EXTEND 3/4" @20' AFTER METER. PROVIDE BUILDING SHUT OFF IMMEDIATELY WHEN ENTERING BUILDING.
- DROP STORM PIPING DOWN ALONG WALL TO BELOW GRADE. PROVIDE WITH CLEANOUT IN VERTICAL PIPING PRIOR TO FLOOR PENETRATION.
- VENT UP TO 4" VENT THRU ROOF.
- MOUNT WALL HYDRANT AT 18" ABOVE GRADE. PROVIDE SHUT OFF VALVE FOR WINTER SHUTDOWN.
- DROP OVERFLOW STORM DOWN WALL AND DISCHARGE AT 18" ABOVE GRADE. SEE DETAIL 4MS2.
- EXTEND CONDENSATION DRAIN LINE AS HIGH AS POSSIBLE AND THROUGH WALL TO UTILITY 114. DISCHARGE CONDENSATE DRAIN INTO MOP SINK IN UTILITY 114.
- EXTEND 1-1/2" IRRIGATION FROM MAIN BELOW GRADE OUTSIDE BUILDING. ROUTE TO GREEN SPACE AND CAP FOR IRRIGATION CONTRACTOR. PROVIDE WATER METER IN IRRIGATION LINE.
- DROP STORM PIPING IN PIER TO BELOW GRADE. PROVIDE WITH WALL CLEANOUT IN PIER PRIOR TO BELOW GRADE TRANSITION.



**1** BELOW FLOOR PLAN - PLUMBING  
 SCALE: 1/8" = 1'-0"

**2** MAIN LEVEL PLAN - PLUMBING  
 SCALE: 1/8" = 1'-0"

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## MAIN LEVEL PLAN - HVAC

Drawn By: JB & DM Checked By: JH

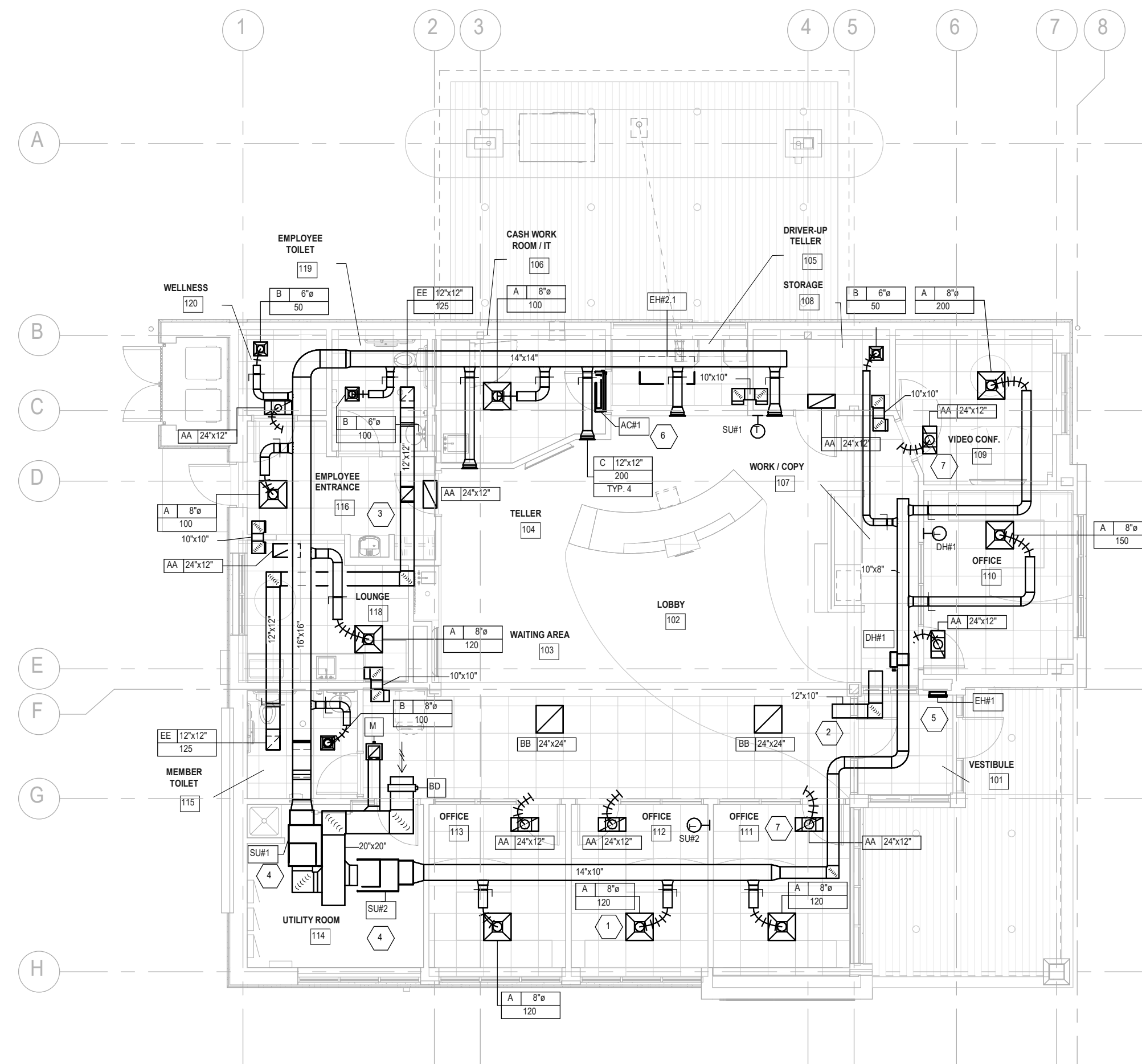
# M2.1

### GENERAL NOTES:

- SEE SHEET M0.1 FOR GENERAL NOTES
- ALL HVAC SYSTEMS TO BE BALANCED PER SECTION 6.7.3.1 OF ASHRAE 90.1-2019
- ALL DUCTS TO BE SEAL CLASS A AT 2 INCH W.G. PRESSURE CLASS RATING.

### KEY NOTES:

- SUPPLY DIFFUSER (TYPICAL) SEE DETAIL 14M.1
- PROVIDE LINED TRANSFER DUCT SEE DETAIL 14M.1
- EXTEND EXHAUST AIR UP THROUGH ROOF AND CONNECT TO ROOF EXHAUST FAN SEE DETAIL 34M.1
- INSTALL FURNACE HUNG FROM STRUCTURE AS HIGH AS POSSIBLE AND SUPPORT FROM STRUCTURE WITH VIBRATION ISOLATORS. EXTEND FUELE AND COMBUSTION AIR FROM FURNACE THROUGH ROOF. USE AND INSTALL PER MANUFACTURERS INSTRUCTIONS. TYP.
- INSTALL WALL MOUNTED ELECTRIC HEATER WITH HEATING ONLY LINE VOLTAGE WALL THERMISTAT. PROVIDE RELAY AND INTERLOCK WITH OUTDOOR AIR TEMPERATURE SENSOR. OUTDOOR AIR TEMPERATURE SENSOR TO BE LOCATED WITHIN CONCEALED WEATHER PROOF EXTERIOR ENCLOSURE. COORDINATE FINAL LOCATION WITH ARCHITECT PRIOR TO INSTALL.
- MOUNT INDOOR COOLING UNIT WITH BOTTOM 8" ABOVE DOOR. EXTEND REFRIGERANT PIPING UP THROUGH ROOF TO OUTDOOR UNIT. SIZE AND INSTALL PER MANUFACTURERS INSTRUCTIONS.
- PROVIDE RETURN GRILLE PLENUM BOX AND FLEX DUCT WHERE SHOWN. SEE DETAIL 24M.1



1 MAIN LEVEL PLAN - HVAC  
 SCALE: 1/8" = 1'-0"

## PROJECT

**MAYO EMPLOYEES  
 FEDERAL CREDIT UNION**

NEW BUILDING

605 WEST AVE S.  
 LA CROSSE, WI

ISSUED SET 2026-03-27

REVISIONS

DATE NO

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota

Reg No. Date



Emanuelson-Podas, Inc.  
 7705 Bush Lake Road  
 Eden, WI 53521  
 (920) 930-0050 | www.epcinc.com

## MAIN LEVEL PLAN - PIPING

Drawn By: JB & DM Checked By: JH

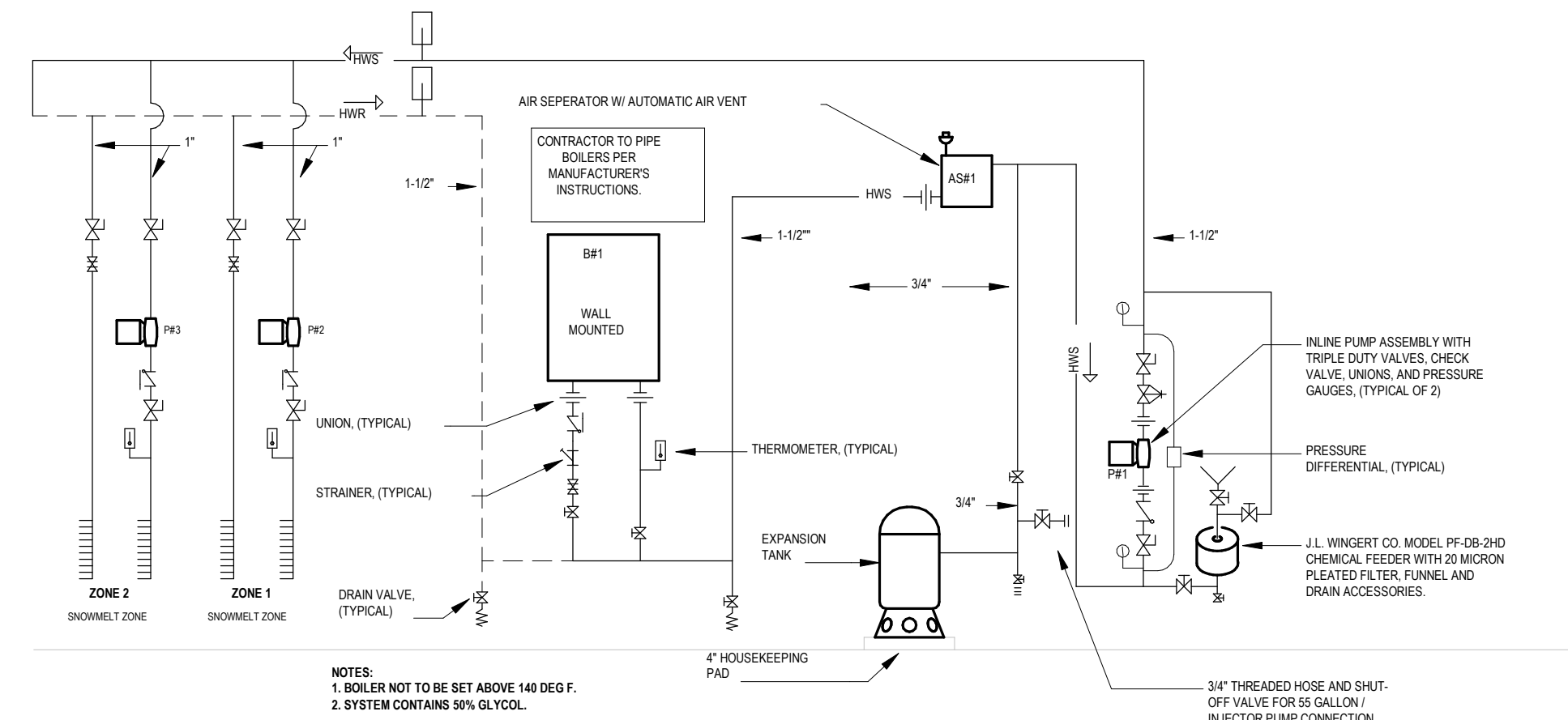
# M3.1

### GENERAL NOTES:

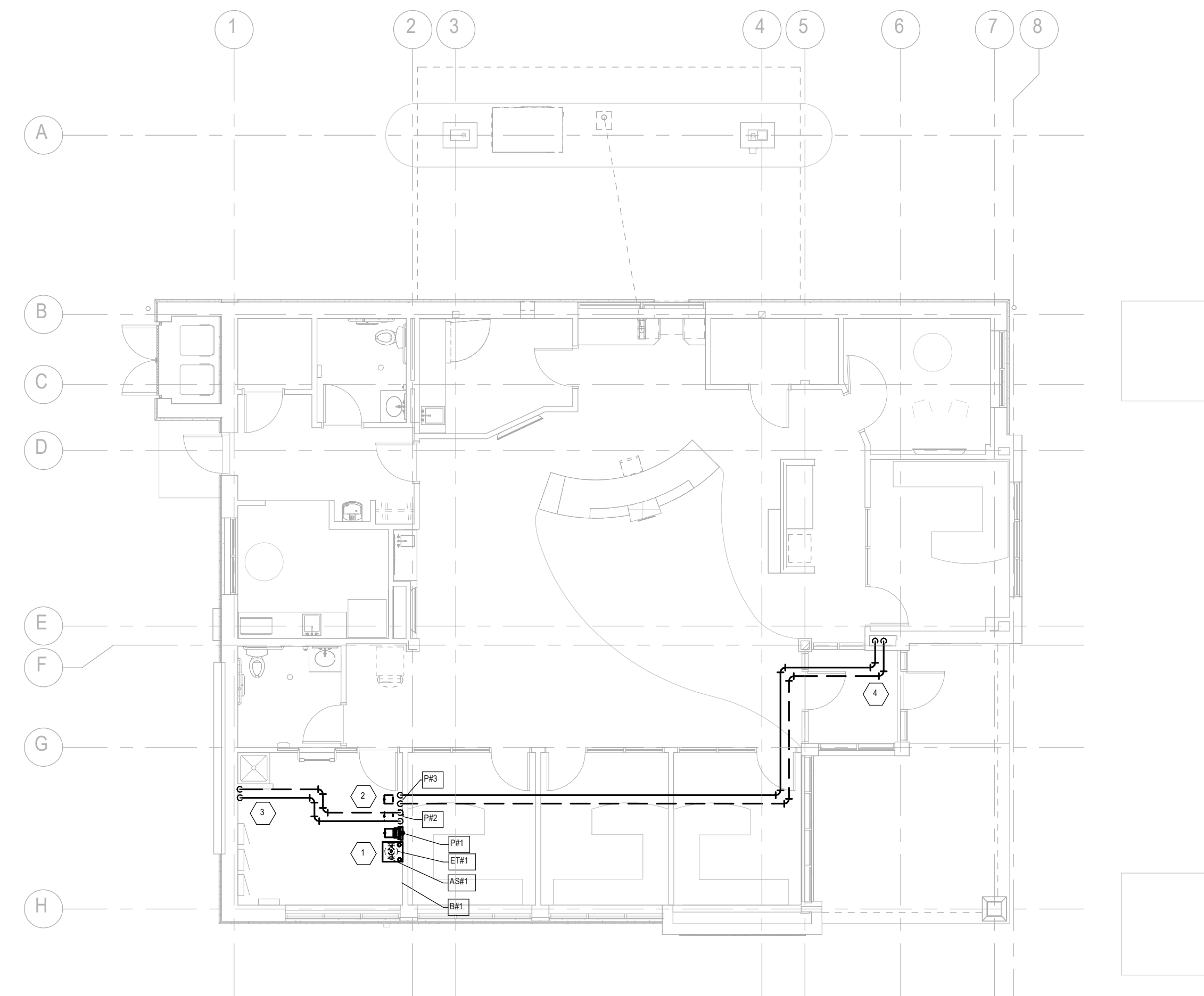
- A. SEE SHEET M0.1 FOR GENERAL NOTES
- B. ALL HVAC SYSTEMS TO BE BALANCED PER SECTION 6.7.3.1 OF ASHRAE 90.1-2019

### KEY NOTES:

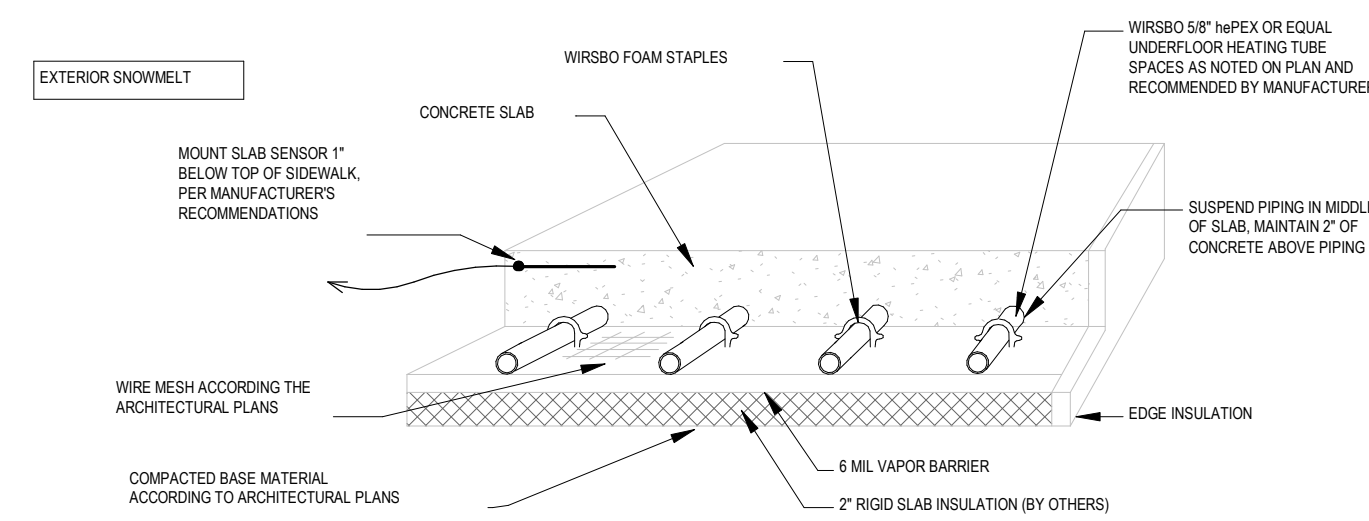
- 1. EXTEND BOILER FLEE AND COMBUSTION AIR PIPING THROUGH ROOF. INSTALL PER MANUFACTURER'S INSTRUCTIONS. DO NOT ROUTE IN PLENUM RETURN.
- 2. INSTALL BOILERS ON WALL, MOUNT PUMPS AND ACCESSORIES ON WALL. MOUNT EXPANSION TANK 1" ABOVE MOUNTING FRAME. SEE DIMS 1 FOR PIPING DIAGRAM AND PIPE SIZES.
- 3. DROP HOT WATER PIPING TO MANIFOLD ON WALL. EXTEND PIPING TO SNOW MELT ZONE 1, SEE DIM 1. TUBING TO BE INSTALLED IN SLAB. SEE DETAIL SMS.1. SNOW MELT TUBING TO BE INSULATED WITH BELOW GRADE RATED CLOSED CELL FOAM PIPE INSULATION BETWEEN BUILDING FOUNDATION AND EXTERIOR SLAB.
- 4. DROP HOT WATER PIPING TO MANIFOLD IN CHASE. EXTEND PIPING TO SNOW MELT ZONE 2, SEE DIM 1. TUBING TO BE INSTALLED IN SLAB. SEE DETAIL SMS.1. SNOW MELT TUBING TO BE INSULATED WITH BELOW GRADE RATED CLOSED CELL FOAM PIPE INSULATION BETWEEN BUILDING FOUNDATION AND EXTERIOR SLAB.



2 BOILER PIPING SCHEMATIC  
 NO SCALE



1 MAIN LEVEL PLAN - HVAC  
 SCALE: 1/8" = 1'-0"



3 RADIANT PIPING (INTERIOR AND EXTERIOR) DETAIL  
 NO SCALE



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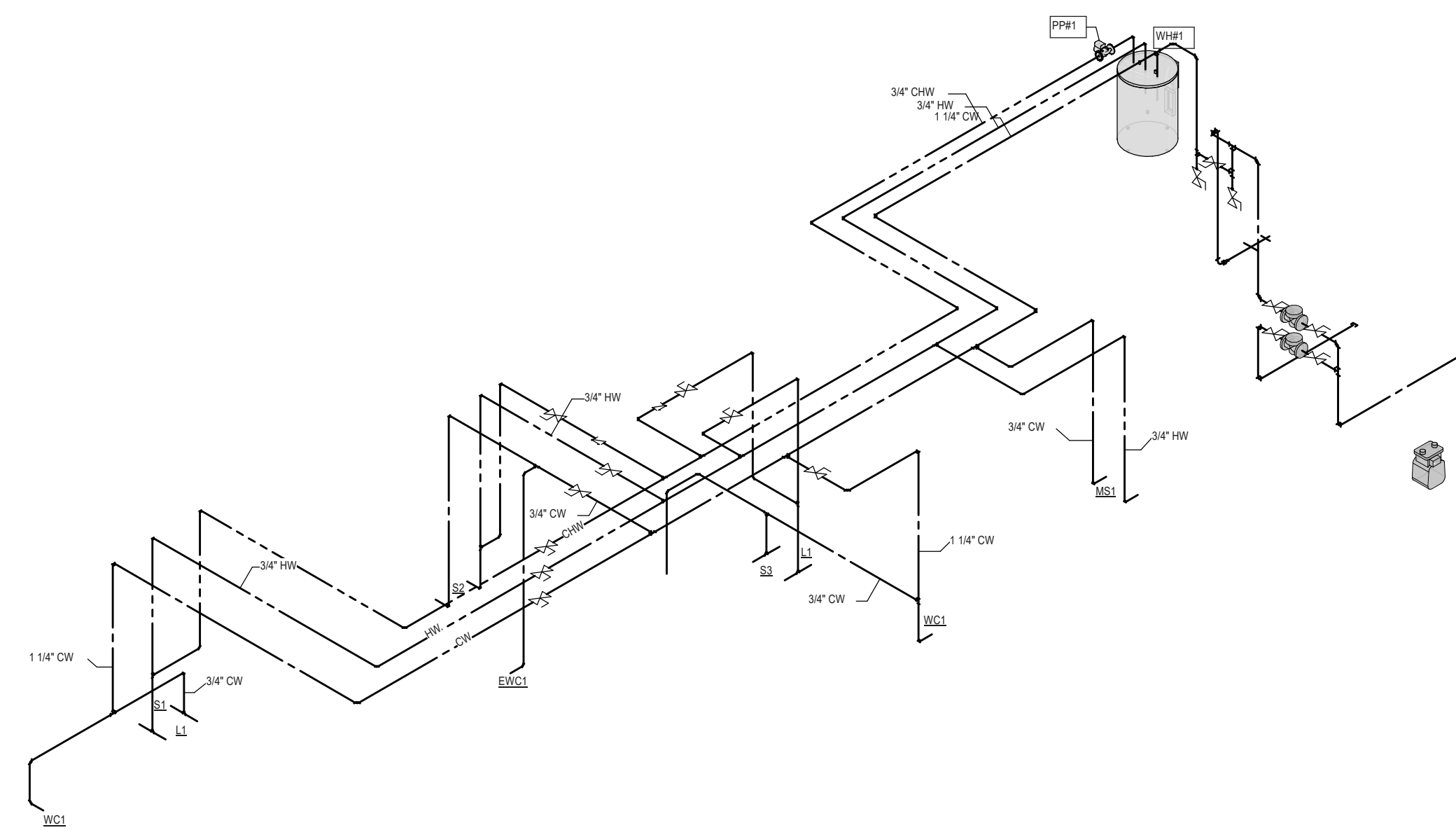
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 (952) 930-0050 | www.epinc.com

**PLUMBING RISER DIAGRAMS**

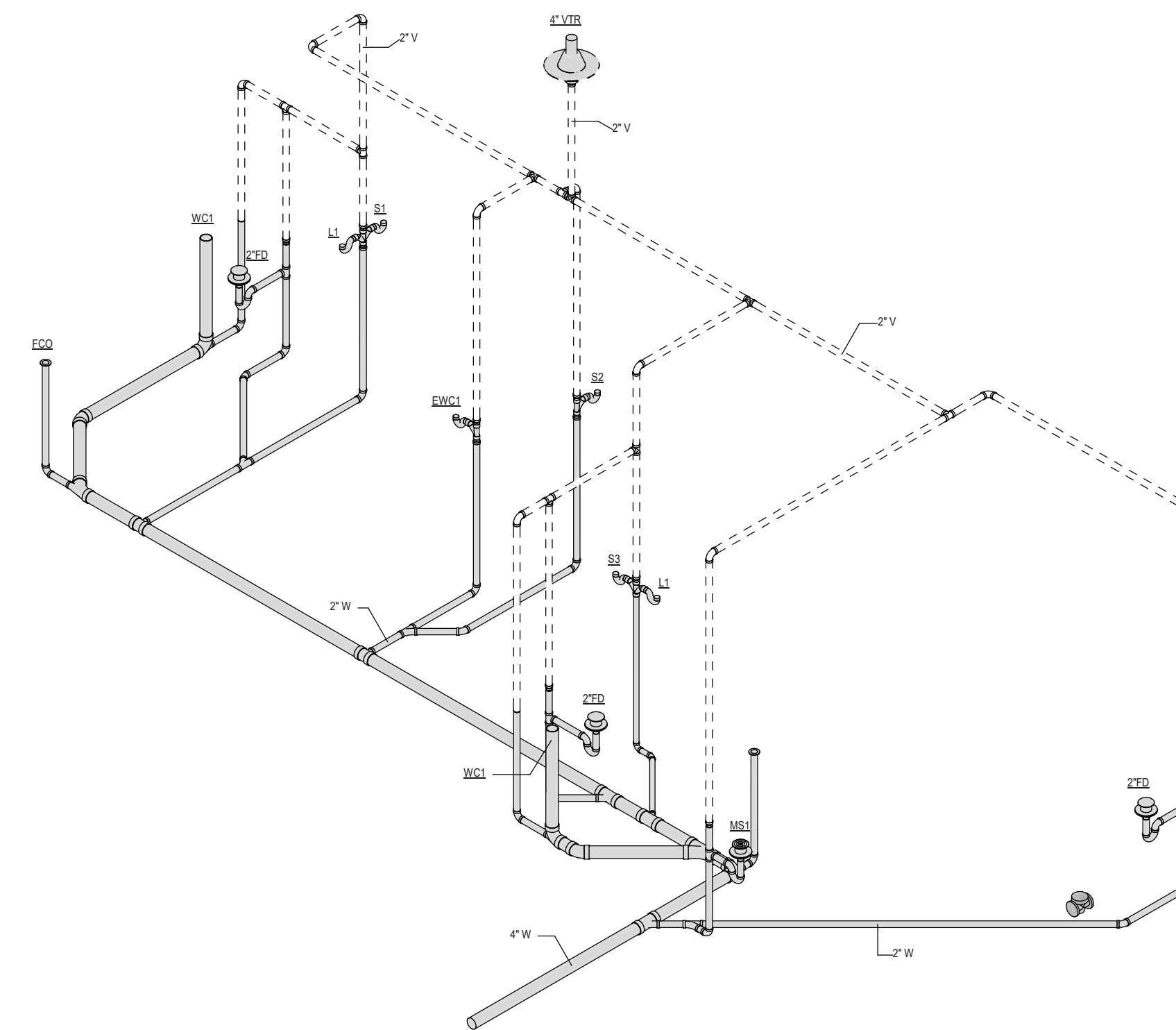
Drawn By: JB & DM Checked By: JH

**M5.1**

SEE PLUMBING FIXTURE SCHEDULE FOR ADDITIONAL PIPE AND FIXTURE CONNECTION SIZES  
 PLUMBING RISER DIAGRAMS ARE FOR REFERENCE OF GENERAL PIPE ROUTING AND PIPE SIZES AND ARE NOT FOR ACTUAL PIPING INSTALLATION. ALL PIPING SHALL BE INSTALLED PER CODE.  
 PROVIDE WATER HAMMER ARRESTORS ON ALL FLUSH VALVE AND SENSOR OPERATED FIXTURES. SIZE AND INSTALL PER MANUFACTURERS INSTRUCTIONS.



**2 PLUMBING RISER - DOMESTIC**  
 NO SCALE



**1 PLUMBING RISER - SANITARY**  
 NO SCALE

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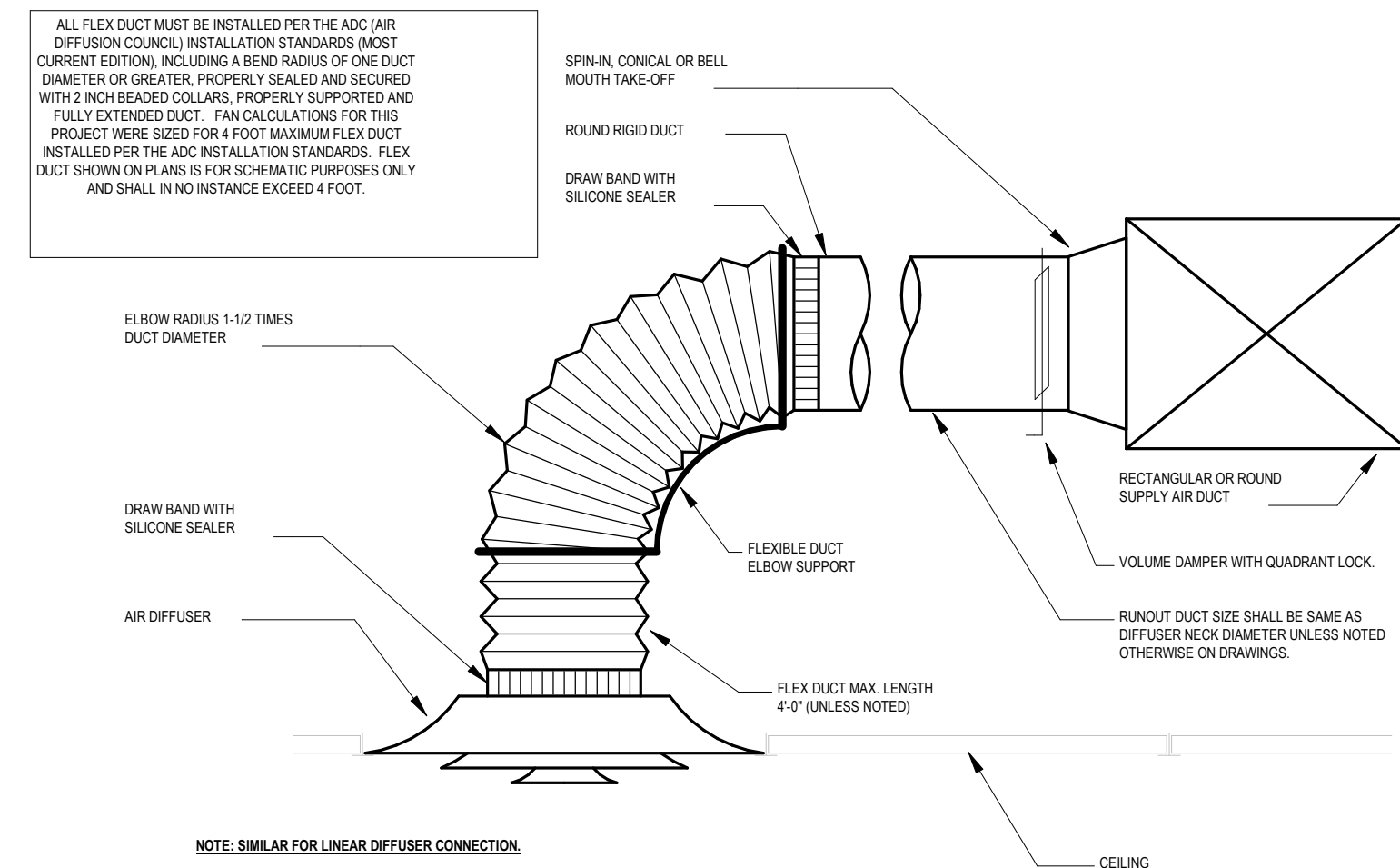
## MECHANICAL DETAILS

Drawn By: JB & DM Checked By: JH

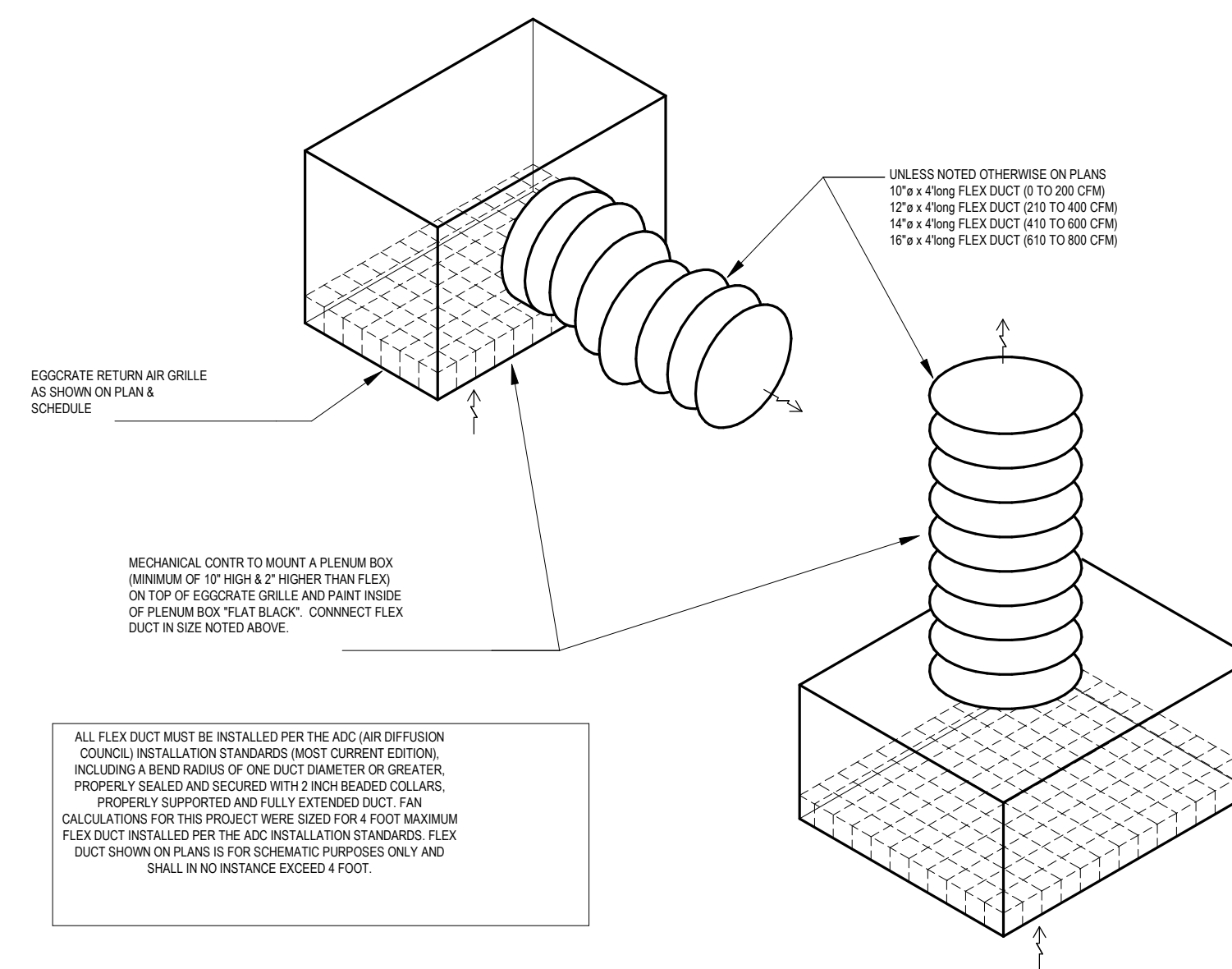
# M6.1

3392.0002

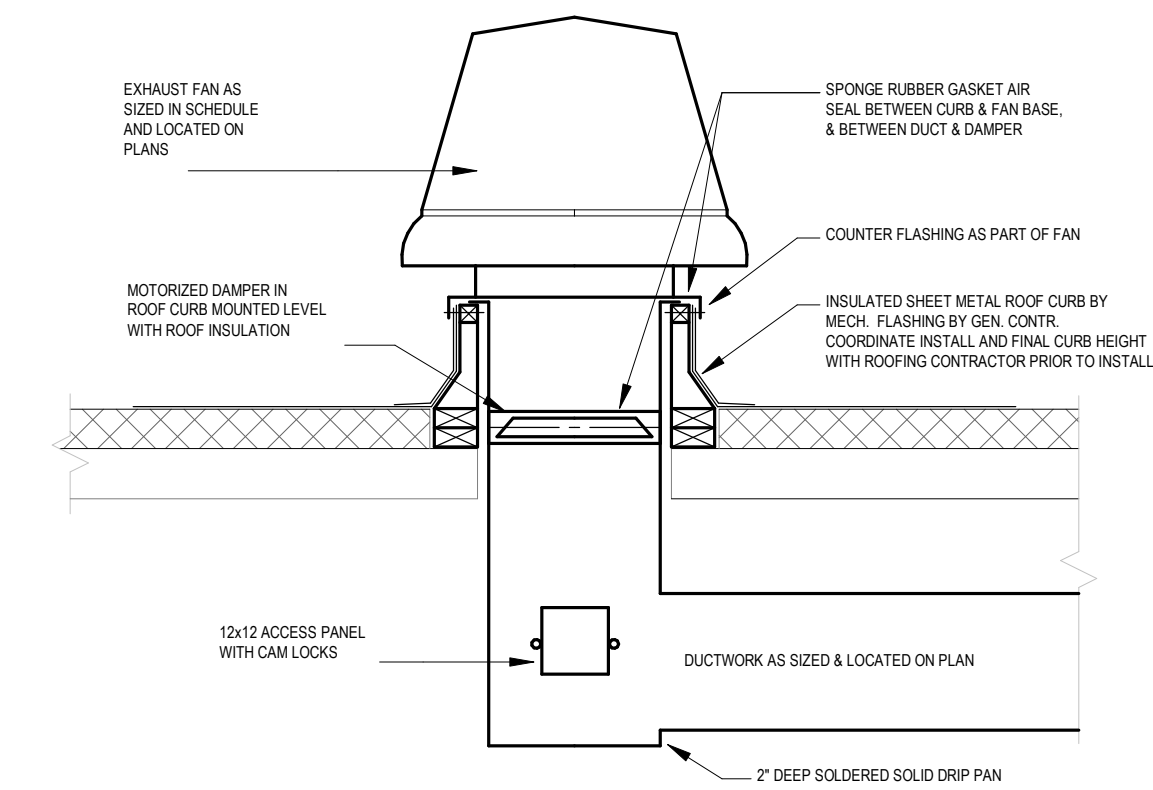
COPYRIGHT © HTG ARCHITECTS



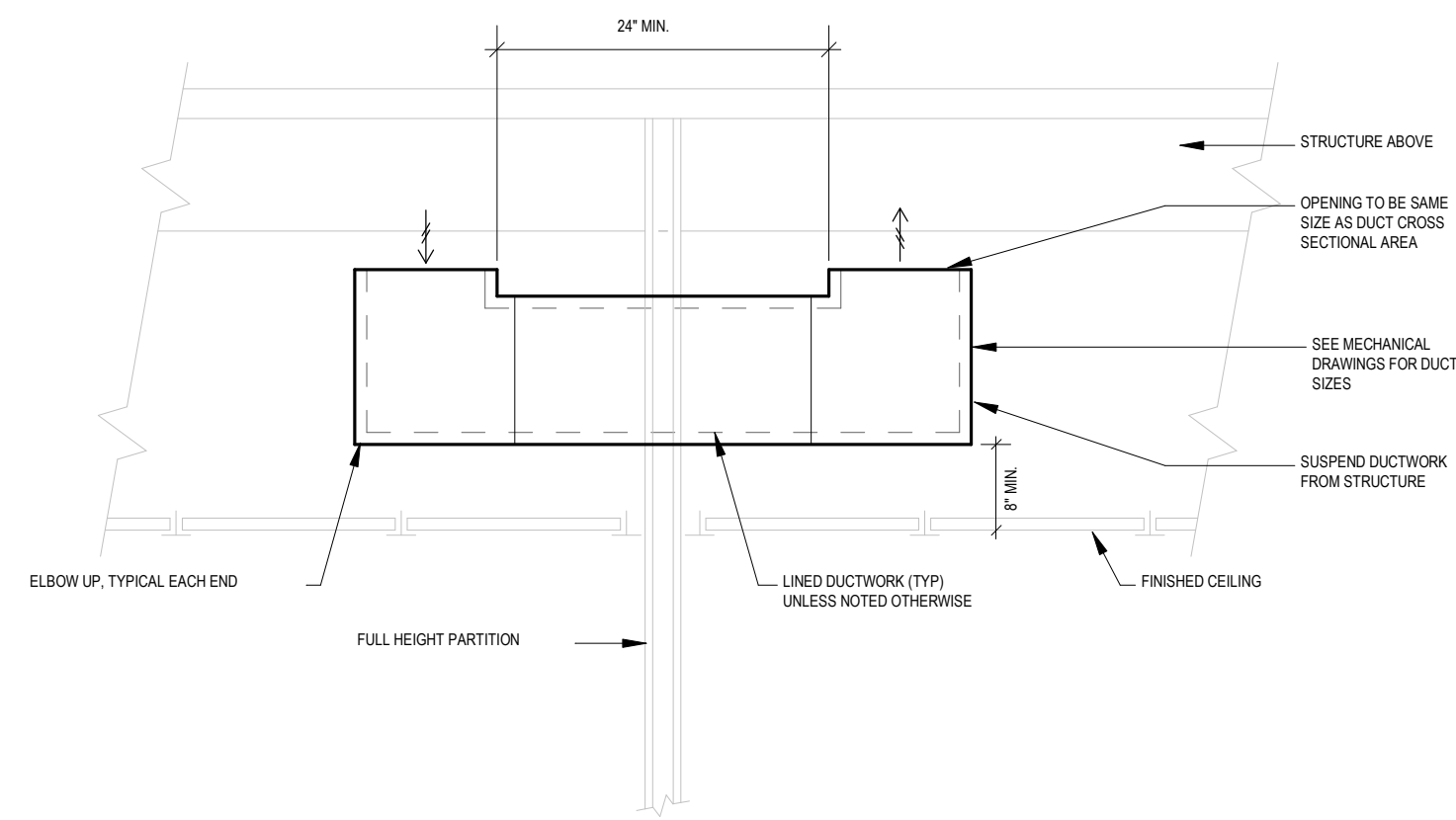
1 TYPICAL DIFFUSER CONNECTION  
 NO SCALE



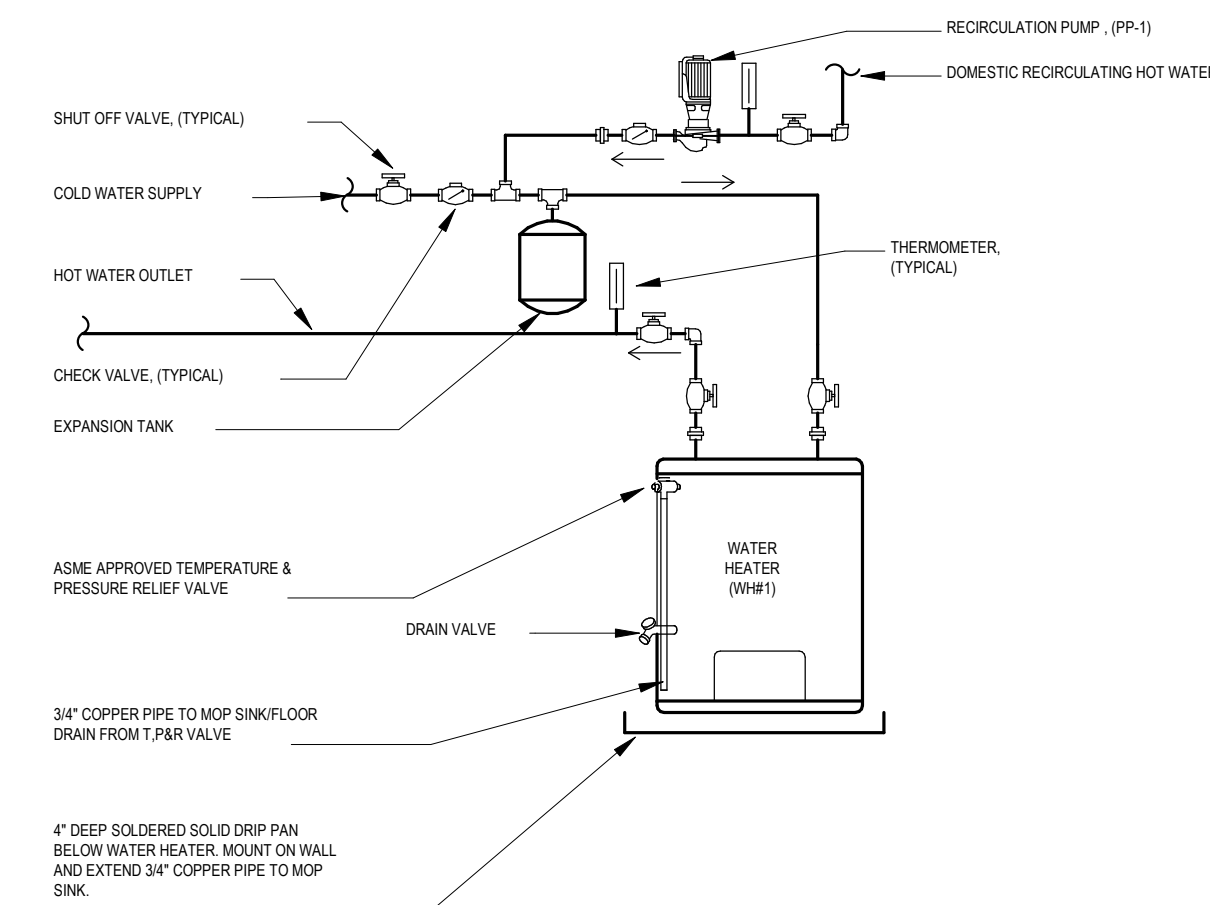
2 RETURN GRILLE PLENUM DETAIL  
 NO SCALE



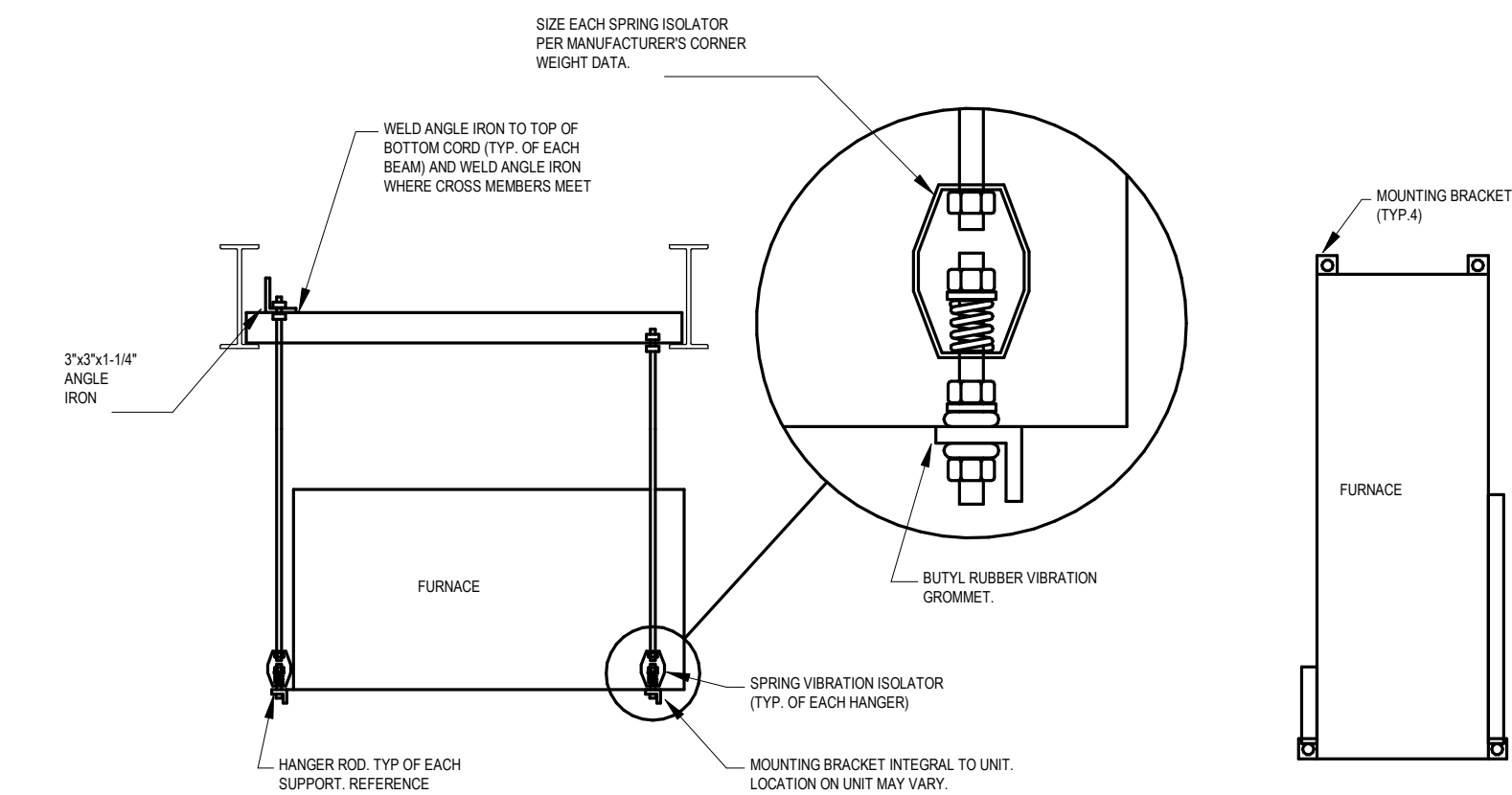
3 ROOF EXHAUST FAN DETAIL  
 NO SCALE



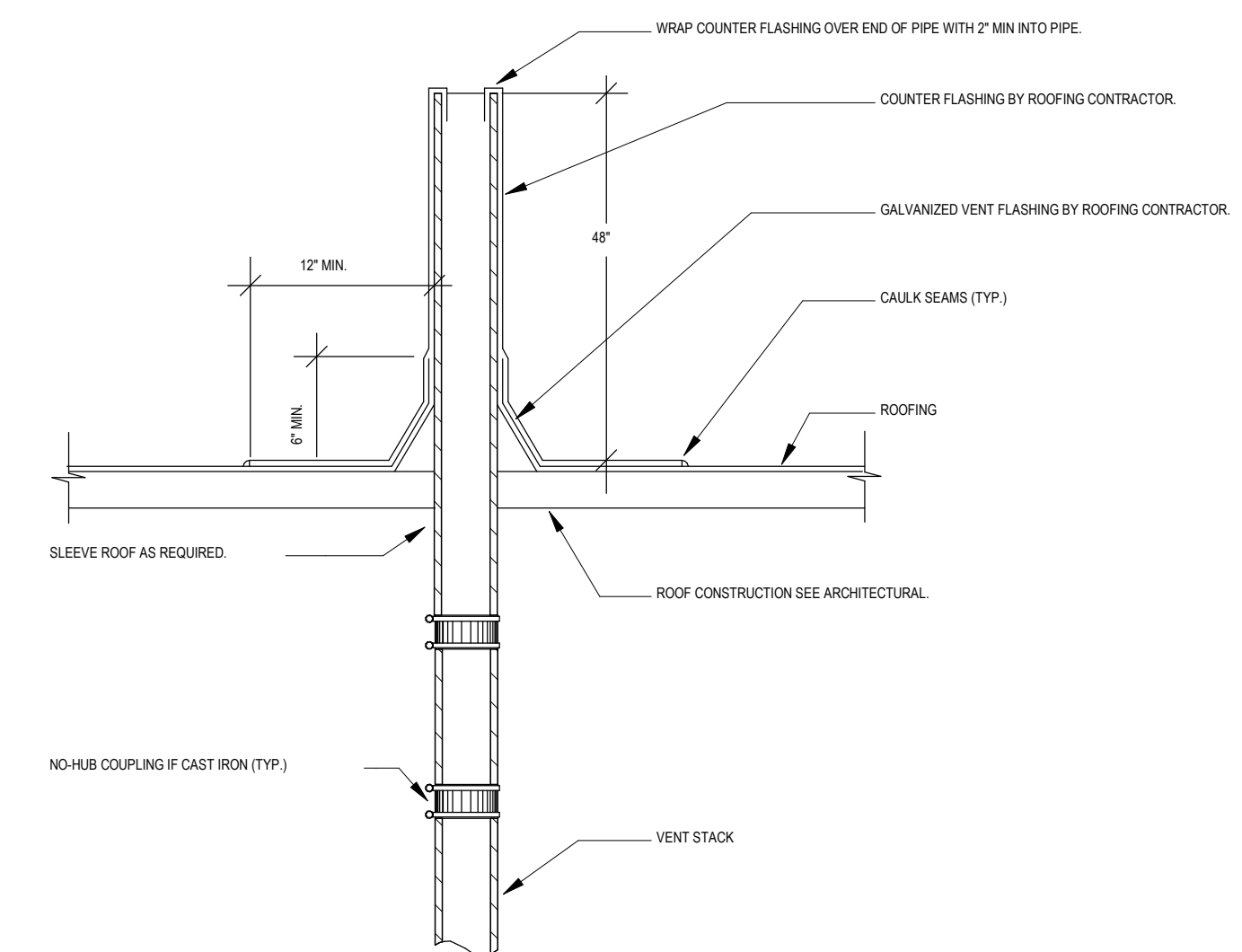
4 LINED TRANSFER AIR DUCT DETAIL  
 NO SCALE



5 ELECTRIC WATER HEATER W/CIRC PUMP DETAIL  
 NO SCALE



6 EQUIPMENT HANGING DETAIL  
 NO SCALE



7 VENT THRU ROOF (VTR) DETAIL  
 NO SCALE



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MECHANICAL CONTROLS

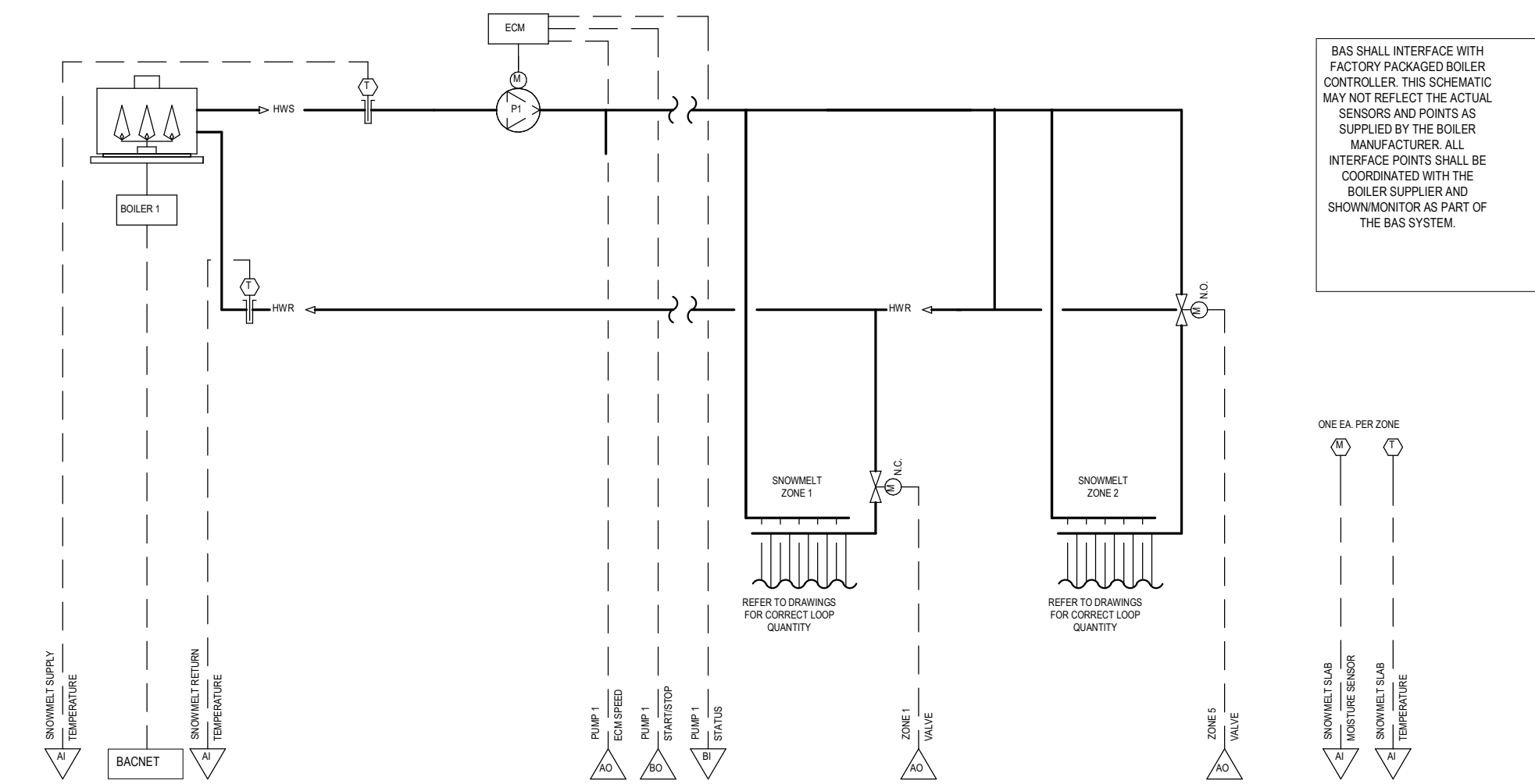
Drawn By: JB & DM Checked By: JH

M8.1

SEQUENCE OF OPERATION:  
 11 SNOWMELT SYSTEM

- A. BAS SHALL INTERFACE WITH FACTORY PROVIDED BOILER CONTROLLER THROUGH BACNET COMMUNICATION TO MONITOR SYSTEM.
- B. BOILERS: B-1
  - 1. BOILERS SHALL OPERATE, AND SEQUENCE BASED ON CONTROLS PROVIDED WITH BOILERS. BUILDING CONTROL SYSTEM SHALL ENABLE/DISABLE BOILER SYSTEM, SET SUPPLY WATER TEMPERATURES, MONITOR AND DISPLAY ALARMS, COORDINATE BAS CONTROLS INSTALLATION WITH BOILER SUPPLIED CONTROLS.
  - 2. INPUT DEVICES:
    - a. OUTSIDE AIR TEMPERATURE SENSOR.
    - b. SLAB MOISTURE SENSOR.
    - c. SLAB TEMPERATURE SENSOR.
    - d. SNOWMELT SUPPLY WATER TEMPERATURE SENSORS.
    - e. SNOWMELT RETURN WATER TEMPERATURE SENSORS.
  - 3. ACTION:
    - a. ENABLE BOILER SYSTEM WHEN OUTSIDE AIR TEMPERATURE AND THE SLAB TEMPERATURE ARE BELOW 35°F (ADJ.)
    - b. IF SNOW/MOISTURE IS DETECTED FROM ANY ZONE SLAB MOISTURE SENSOR, PUMP SHALL RUN CONTINUOUSLY. OPEN THE AFFECTED ZONE CONTROL VALVE.
    - c. THE BOILER SHALL MODULATE THE OUTPUT TO MAINTAIN SUPPLY WATER TEMPERATURE OF 110°F (ADJ.) IN THE SNOW MELT LOOP UNTIL SLAB MOISTURE SENSOR IS SATISFIED.
    - d. ONCE THE ZONE SLAB MOISTURE SENSOR IS SATISFIED CLOSE THE ZONE CONTROL VALVE.
- C. BUILDING CIRCULATING PUMPS, P-1:
  - 1. PUMP CONTROL (VARIABLE SPEED):
    - a. ACTIVATE LEAD PUMP AT MINIMUM SPEED WHENEVER A BOILER SYSTEM IS ACTIVATED.
    - b. PUMP SHALL MODULATE FROM INTERNAL PUMP CURVES PRE-PROGRAMMED AT FACTORY-SET PUMP OPERATION TO CONSTANT PRESSURE CURVE. INTERNAL CONTROLS SHALL MODULATE ECM OUTPUT TO MAINTAIN DIFFERENTIAL PRESSURE. CONTROLLER SHALL MONITOR PUMP SPEED AND DISPLAY ON GRAPHICS.
    - c. ACTIVATE STANDBY PUMP UPON A FAILURE OF PRIMARY PUMP STATUS AND ALARM ON THE BAS.
- D. HYDRONIC FLUSHING
  - 1. BAS SHALL HAVE THE FOLLOWING COMMANDS:
    - a. CLOSE ALL TERMINAL EQUIPMENT (NON-AHU) CONTROL VALVES
    - b. OPEN ALL TERMINAL EQUIPMENT (NON-AHU) CONTROL VALVES
    - c. RELINQUISH ALL TERMINAL EQUIPMENT (NON-AHU) CONTROL VALVE
- E. ALARMS:
  - 1. BOILER FAILURE: BOILER IS COMMANDED ON BUT IS OFF
  - 2. BOILER RUNNING IN HAND: BOILER IS COMMANDED OFF BUT IS ON
  - 3. HIGH SUPPLY WATER TEMPERATURE: >10°F (ADJ.) ABOVE SETPOINT
  - 4. LOW SUPPLY WATER TEMPERATURE: >10°F (ADJ.) BELOW SETPOINT
  - 5. PUMP FAILURE: PUMP IS COMMANDED ON BUT IS OFF
  - 6. PUMP RUNNING IN HAND: PUMP IS COMMANDED OFF BUT IS ON
  - 7. ZONE VALVE FAILURE: VALVE IS COMMANDED OPEN BUT IS CLOSED
  - 8. ZONE VALVE IN HAND: VALVE IS COMMANDED CLOSED BUT IS OPEN

POINT NAME	HARDWARE POINTS				SOFTWARE POINTS						SHOW ON GRAPHIC	
	AI	AO	BI	BO	AV	BV	BACNET	LOOP	SCHED	TREND		ALARM
HOT WATER RETURN TEMPERATURE	X									X	X	X
HOT WATER SUPPLY TEMPERATURE	X									X	X	X
HOT WATER DIFFERENTIAL PRESSURE	X									X	X	X
SLAB MOISTURE SENSOR	X									X	X	X
SLAB TEMPERATURE	X									X	X	X
PUMP 1 ECM SPEED		X								X		X
ZONE 1 VALVE		X								X		X
ZONE 2 VALVE		X								X		X
PUMP 1 STATUS			X							X	X	X
PUMP 1 START / STOP				X						X		X
DIFFERENTIAL PRESSURE SETPOINT					X					X		X
OUTSIDE AIR TEMPERATURE					X					X	X	X
SLAB TEMPERATURE SET POINT					X					X	X	X
SUPPLY WATER TEMPERATURE SETPOINT					X					X		X
CURRENT MODE						X		X		X		X
BOILER						X				X		X
BOILER FAILURE												X
BOILER RUNNING IN HAND												X
PUMP 1 FAILURE												X
PUMP 1 RUNNING IN HAND												X
ZONE VALVE 1-2 FAILURE												X
ZONE VALVE 1-2 IN HAND												X
HIGH HOT WATER SUPPLY TEMPERATURE												X
LOW HOT WATER SUPPLY TEMPERATURE												X
BOILER INTERFACE MONITOR: CURRENT BOILER STATUS AND OPERATING CONDITIONS WILL BE MONITORED THROUGH ITS COMMUNICATIONS INTERFACE PORT. THE BACNET INTERFACE WILL MONITOR AND TREND THE POINTS AS SHOWN ON THE POINTS LIST.												
BURNER CYCLES										X		X
HOT WATER RETURN TEMP										X		X
HOT WATER SUPPLY TEMP										X		X
HOT WATER SUPPLY TEMP SETPOINT										X		X
OPERATING HOURS										X		X
OPERATING PRESSURE										X		X
OPERATING TEMP										X		X
BOILER STATUS										X		X
HOT WATER FLOW STATUS		X								X		X



1 CONTROL DIAGRAM: SNOW MELT - HYDRONIC  
 NO SCALE