

DRAWING LIST - MECHANICAL			SHEET NUMBER	
DRAWING NUMBER	DRAWING TITLE	INDEX	TOTAL	
M-0-1	MECHANICAL LEGENDS AND ABBREVIATIONS	1	35	
M-0-2	MECHANICAL GENERAL NOTES	2	35	
M-0-3	MECHANICAL ZONING PLAN	3	35	
M-0-4	MECHANICAL ZONING PLAN	4	35	
M1-1-0	MECHANICAL LOWER LEVEL FLOOR PLAN - AREA C	6	35	
M1-1-0D	MECHANICAL LOWER LEVEL FLOOR PLAN - AREA D	6	35	
M1-1-1A	MECHANICAL FIRST FLOOR PLAN - AREA A	7	35	
M1-1-1B	MECHANICAL FIRST FLOOR PLAN - AREA B	8	35	
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M1-1-2A	MECHANICAL SECOND FLOOR PLAN - AREA A	11	35	
M1-1-2B	MECHANICAL SECOND FLOOR PLAN - AREA B	12	35	
M1-1-2C	MECHANICAL SECOND FLOOR PLAN - AREA C	13	35	
M1-1-2D	MECHANICAL SECOND FLOOR PLAN - AREA D	14	35	
M1-1-3A	MECHANICAL THIRD FLOOR PLAN - AREA A	15	35	
M1-1-3B	MECHANICAL THIRD FLOOR PLAN - AREA B	16	35	
M1-1-3C	MECHANICAL THIRD FLOOR PLAN - AREA C	17	35	
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M1-1-4A	MECHANICAL FOURTH FLOOR PLAN - AREA A	19	35	
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M1-1-4B	MECHANICAL CONVERSION BUILDING PLAN	21	35	
M1-1-4B	MECHANICAL LOCKER BUILDING PLAN	22	35	
M1-1-4B	MECHANICAL MAINTENANCE BUILDING PLAN	23	35	
M1-2-1A	MECHANICAL ROOF PLAN - AREA A	24	35	
M1-2-1B	MECHANICAL ROOF PLAN - AREA B	25	35	
M1-2-1C	MECHANICAL ROOF PLAN - AREA C	26	35	
M1-2-1D	MECHANICAL ROOF PLAN - AREA D	27	35	
M2-0-1	MECHANICAL VRF SYSTEM DIAGRAMS SHEET #1	28	35	
M2-0-2	MECHANICAL VRF SYSTEM DIAGRAMS SHEET #2	29	35	
M2-0-3	MECHANICAL VRF SYSTEM DIAGRAMS SHEET #3	30	35	
M2-0-4	MECHANICAL AIR RISER DIAGRAMS	31	35	
M3-0-1	MECHANICAL DETAILS SHEET #1	32	35	
M3-0-2	MECHANICAL DETAILS SHEET #2	33	35	
M4-0-1	MECHANICAL SCHEDULES SHEET #1	34	35	
M4-0-2	MECHANICAL SCHEDULES SHEET #2	35	35	

MECHANICAL PIPING LEGEND	
	(BD) BLOW DOWN
	(BF) BOILER FEED
	(CA) COMPRESSED AIR
	(CD) CONDENSATE DRAIN
	(CF) CHEMICAL FEED
	(CHWR) CHILLED WATER RETURN
	(CHWS) CHILLED WATER SUPPLY
	(CLD) CONDUIT TANK LEAK
	(COND) CONDENSATE
	(CTR) COOLING TOWER RETURN
	(CTS) COOLING TOWER SUPPLY
	(CW) COLD WATER CITY WATER MAKE UP
	(CWR) CONDENSER WATER RETURN
	(CWS) CONDENSER WATER SUPPLY
	(D) DRAIN
	(DTR) DUAL TEMP RETURN
	(DTS) DUAL TEMP RETURN
	(ED) PIPING TO BE REMOVED
	(E) EXISTING PIPING
	(FGG) FUEL OIL GAUGE
	(FOR) FUEL OIL RETURN
	(FOS) FUEL OIL SUPPLY
	(FOV) FUEL OIL VENT
	(GR) GREASE WATER RETURN
	(GVG) GYLOO WATER SUPPLY
	(HGR) HEATING HOT GAS
	(HPS) HIGH PRESS STEAM COND RETURN
	(HPS) HIGH PRESS STEAM SUPPLY
	(HPWR) HEAT PUMP WATER RETURN
	(HPWS) HEAT PUMP WATER SUPPLY
	(HWR) HOT WATER RETURN
	(HWS) HOT WATER SUPPLY
	(LPR) LOW PRESS COND RETURN
	(LPS) LOW PRESS STEAM SUPPLY
	(MPR) MED PRESS COND RETURN
	(MPS) MED PRESS STEAM SUPPLY
	(NPW) NON POTABLE WATER
	(PC) PUMPO CONDENSATE
	(PSC) PUMPO STEAM CONDENSATE
	(PHWR) PRIMARY HOT WATER RETURN
	(PHWS) PRIMARY HOT WATER SUPPLY
	(RL) REFUG LIQUID
	(RSR) REFRIG SUCTION
	(SCWR) SECONDARY CHILLED WATER RETURN
	(SCWS) SECONDARY CHILLED WATER SUPPLY
	(SHWR) SECONDARY HOT WATER RETURN
	(SHWS) SECONDARY HOT WATER SUPPLY
	(TSTAT) THERMOSTAT
	(V) VENT

MECHANICAL PIPING LEGEND	
	(BD) BLOW DOWN
	(BF) BOILER FEED
	(CA) COMPRESSED AIR
	(CD) CONDENSATE RETURN
	(CF) CHEMICAL FEED
	(CHWR) CHILLED WATER RETURN
	(CHWS) CHILLED WATER SUPPLY
	(CLD) CONDUIT TANK LEAK
	(CND) CONDENSATE
	(CTR) COOLING TOWER RETURN
	(CTS) COOLING TOWER SUPPLY
	(CW) COLD WATER CITY WATER MAKE UP
	(CWR) CONDENSER WATER RETURN
	(CWS) CONDENSER WATER SUPPLY
	(D) DRAIN
	(DTR) DUAL TEMP RETURN
	(DTS) DUAL TEMP RETURN
	PIPING TO BE REMOVED
	EXISTING PIPING
	(FOG) FUEL OIL GAUGE
	(FOR) FUEL OIL RETURN
	(FOS) FUEL OIL SUPPLY
	(FOV) FUEL OIL VENT
	(GR) GALVANIZED WATER RETURN
	(GVO) GYLOX WATER SUPPLY
	(HGR) HEATING HOT GAS
	(HPR) HIGH PRESS STEAM COND RETURN
	(HPS) HIGH PRESS STEAM SUPPLY
	(HPWR) HEAT PUMP WATER RETURN
	(HPWS) HEAT PUMP WATER SUPPLY
	(HWR) HOT WATER RETURN
	(HWS) HOT WATER SUPPLY
	(LPR) LOW PRESS COND RETURN
	(LPS) LOW PRESS STEAM SUPPLY
	(MPR) MED PRESS COND RETURN
	(MPS) MED PRESS STEAM SUPPLY
	(NPW) NON POTABLE WATER
	(PC) PUMPED CONDENSATE
	(PSC) PUMPED STEAM CONDENSATE
	(PHWR) PRIMARY HOT WATER RETURN
	(PHWS) PRIMARY HOT WATER SUPPLY
	(RL) REFUEL LIQUID
	(RS) REFRIG LIQUID
	(SCWR) SECONDARY CHILLED WATER RETURN
	(SCWS) SECONDARY CHILLED WATER SUPPLY
	(SHWR) SECONDARY HOT WATER RETURN
	(SHWS) SECONDARY HOT WATER SUPPLY
	(TSTAT) THERMOSTAT
	(V) VENT

DUCTWORK SYMBOLS DOUBLE LINE

	RECTANGULAR DUCTWORK - FIRST DIMENSION IS SIZE SHOWN (IN)
	ROUND DUCTWORK DIAMETER (IN)
	FLAT OVAL DUCT
	CAPPED DUCT
	EXISTING DUCTWORK
	EXISTING DUCTWORK TO BE REMOVED
	CAPPED ACOUSTICALLY LINED DUCTWORK
	DOUBLE-WALL DUCTWORK
	SUPPLY/OUTSIDE AIR DUCTWORK UP
	SUPPLY/OUTSIDE AIR DUCTWORK DOWN
	RETURN AIR DUCTWORK UP
	RETURN AIR DUCTWORK DOWN
	EXHAUST AIR DUCTWORK UP
	EXHAUST AIR DUCTWORK DOWN
	FLEXIBLE EQUIPMENT CONNECTION
	FLEXIBLE DUCT
	CHANGE OF ELEVATION IN DIRECTION OF AIR FLOW R=RISE & D=DROP
	RECTANGULAR TO RECTANGULAR TRANSITION
	RECTANGULAR TO ROUND TRANSITION
	MITERED ELBOW WITH TURNING VANES
	MITERED ELBOW
	RADIUSED ELBOW
	SPIN COLLAR
	90° SPLIT TEE WITH TURNING VANES
	BELL MOUTH BRANCH DUCT TAKE OFF
	BELL MOUTH BRANCH DUCT TAKE OFF WITH DAMPER
	BRANCH DUCT TAKE OFF
	BACK DRAFT DAMPER
	COMBINATION FIRE SMOKE DAMPER WITH SMOKE DETECTOR
	FIRE DAMPER
	MOTORIZED DAMPER
	SMOKE DAMPER WITH SMOKE DETECTOR
	VOLUME DAMPER
	DUCT MOUNTED SMOKE DETECTOR
	SIDE WALL MOUNTED SUPPLY REGISTER
	SIDE WALL MOUNTED RETURN / EXHAUST REGISTER / GRILLE
	ELEVATION VIEW SIDE WALL MOUNTED EXHAUST REGISTER / GRILLE
	ELEVATION VIEW SIDE WALL MOUNTED RETURN REGISTER / GRILLE
	ELEVATION VIEW SIDE WALL MOUNTED SUPPLY REGISTER
	TRANSFER DUCT WITH ACOUSTICAL LINING
	SUPPLY / INTAKE OR DOOR UNDERCUT PRESSURIZATION EXHAUST / RETURN / TRANSFER
	LOUVERED DOOR PRESSURIZATION
	SUPPLY DIFFUSER 4 - WAY THROW
	SUPPLY DIFFUSER 3 - WAY THROW
	SUPPLY DIFFUSER 2 - WAY THROW
	SUPPLY DIFFUSER 2 - WAY THROW 90 °
	SUPPLY DIFFUSER 1 - WAY THROW
	RETURN REGISTER / GRILLE
	EXHAUST REGISTER / GRILLE
	SUPPLY AIR DIFFUSER BELOW DUCT
	RETURN AIR DIFFUSER BELOW DUCT
	EXHAUST AIR DIFFUSER BELOW DUCT
	LINEAR DIFFUSER
	ACCESS DOOR IN CEILING
	DUCT MOUNTED ACCESS DOOR - ACCESS PANEL

INSTRUMENTATION SYMBOLS	
	CARBON DIOXIDE SENSOR
	CARBON DIOXIDE SENSOR DUCT MOUNTED
	CARBON MONOXIDE SENSOR
	CARBON MONOXIDE SENSOR DUCT MOUNTED
	COMBINATION TEMPERATURE AND CARBON DIOXIDE SENSOR
	CURRENT SENSOR
	FLOW SENSOR
	FREEZE STAT
	LEAK DETECTOR
	HUMIDITY SENSOR
	HUMIDITY SENSOR DUCT MOUNTED
	HYDROGEN SENSOR
	REFRIGERANT LEAK SENSOR
	REFRIGERANT LEAK SENSOR DUCT MOUNTED
	SMOKE DETECTOR
	SMOKE DETECTOR DUCT MOUNTED
	STATIC PRESSURE SENSOR
	TEMPERATURE SENSOR
	TEMPERATURE SENSOR DUCT MOUNTED
	COMBINATION TEMPERATURE RELATIVE HUMIDITY SENSOR
	COMBINATION TEMPERATURE RELATIVE HUMIDITY SENSOR DUCT MOUNTED
	EMERGENCY POWER REQUIRED
	SWITCH
	PACKAGED STARTER BY MECHANICAL
	LOOSE STARTER BY ELECTRICAL
	VARIABLE FREQUENCY DRIVE
	FLOW MEASURING STATION
MISC. LEGEND / TAGS	
	DIFFUSER, REGISTER, GRILLE DESIGNATION
	NECK SIZE OR LENGTH IF LINEAR DIFFUSER
	AIR QUANTITY - CFM
	SCHEDULED EQUIPMENT TYPE (WITHOUT MOTOR)
	SCHEDULED REFERENCE NUMBER
	SCHEDULED EQUIPMENT TYPE (WITH MOTOR)
	SCHEDULED REFERENCE NUMBER
	EQUIPMENT TYPE
	EQUIPMENT LENGTH
	EQUIPMENT CAPACITY - MBH/KW
	SECTION SYMBOL
	SECTION ON DESIGNATION
	DRAWING NUMBER LOCATION
	DETAIL NUMBER
	DRAWING NUMBER LOCATION
	POWERED DAMPER
	DAMPER TYPE (FSD OR SD)
	ASSOCIATED FAN SYSTEM
	NORMAL (DAMPER NON-ENERGIZED) POSITION
	CONNECT NEW TO EXISTING
	LIMIT OF REMOVAL
	DISTANCE TO FINISH FLOOR (FEET & INCHES) FROM BOTTOM OF DUCT OR PIPE
	RISE R DESIGNATION TYPE NUMBER
	DEMOLITION SHEET NOTE NUMBER X
	NEW WORK SHEET NOTE NUMBER X
	REVISION NUMBER X

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MSBA DESIGN DEVELOPMENT SUBMISSION August 4th, 2022	
PROJECT NORTH 	MAGNETIC NORTH 
MECHANICAL LEGENDS AND ABBREVIATIONS	
cale: 1/2" = 1'-0" Job No.: 20202 Drawn By: DRA ate: August 4th, 2022	M0-0-1

GENERAL NOTES	MECHANICAL GENERAL NOTES	MECHANICAL GENERAL NOTES
1. THE WORK TO BE DONE UNDER THESE SPECIFICATIONS AND THE DRAWINGS CONSISTS OF PROVIDING ALL EQUIPMENT, MATERIALS, LABOR AND SERVICES AND PERFORMING ALL OPERATIONS TO COMPLETE THE CONSTRUCTION WORK FOR THIS PROJECT. ANY WORK NOT SPECIFICALLY COVERED BY THESE SPECIFICATIONS OR INDICATED ON THE CONTRACT DRAWINGS, BUT NECESSARY TO COMPLETE OR PERFECT ANY PART OF THIS INSTALLATION IN A SUBSTANTIAL MANNER, SHALL BE PROVIDED WITHOUT EXTRA COST TO THE OWNER. 2. THE WORK SHALL CONFORM TO THE MORE STRINGENT OF ALL APPLICABLE CODES & REGULATIONS, UL (AND FMJ GUIDELINES), (LEED REQUIREMENTS), MANUFACTURER'S LITERATURE AND RECOMMENDATIONS, (BUILDING OPERATOR'S REQUIREMENTS), AND TO THE REQUIREMENTS OF FEDERAL, STATE AND LOCAL REGULATORY AGENCIES AND AUTHORITIES HAVING JURISDICTION. 3. THE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND INDICATE THE EXTENT, GENERAL CHARACTER, LOCATION AND ARRANGEMENT OF THE WORK UNDER THIS CONTRACT. EXACT LOCATIONS OF ALL COMPONENTS ARE TO BE DETERMINED IN THE FIELD AND BY THE ACTUAL BUILDING CONDITIONS. WHERE JOB CONDITIONS REQUIRE MINOR CHANGES OR ADJUSTMENTS IN THE INDICATED LOCATIONS OR ARRANGEMENT OF THE WORK, SUCH CHANGES SHALL BE PROVIDED WITHOUT EXTRA COST. THE CONTRACTOR SHALL RE-INSTALL EQUIPMENT THAT HAS INADEQUATE OR UNSAFE ACCESSIBILITY. 4. INSTALLATION OF WORK SHALL PROVIDE REASONABLE ACCESSIBILITY FOR OPERATION, INSPECTION AND MAINTENANCE OF EQUIPMENT AND ACCESSORIES. PROVIDE CLEARANCES REQUIRED BY MANUFACTURERS AND APPLICABLE CODES. ALL CEILING MOUNTED EQUIPMENT SHALL BE INSTALLED IN SUCH A MANNER THAT LIGHTS, PIPING, AND DUCTWORK DO NOT BLOCK ACCESS TO EQUIPMENT AND RELATED ACCESSORIES. 5. THE TERM "TURNS" SHALL MEAN TO OBTAIN AND SUPPLY TO THE JOB SITE. THE TERM "INSTALL" SHALL MEAN TO FIX IN POSITION AND CONNECT FOR USE. THE TERM "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL. THE TERM "MECHANICAL WORK," "ELECTRICAL WORK," "PLUMBING WORK," ETC. SHALL MEAN ALL LABOR, MATERIAL, EQUIPMENT, SCAFFOLDING, RIGGING, TOOLS, SUPERVISION, SERVICES AND OTHER INCIDENTALS NECESSARY FOR COMPLETE AND OPERABLE INSTALLATION. 6. THE CM/SG SHALL MAKE SETS OF THE BID DOCUMENTS CONSISTING OF COMPLETE SETS OF DRAWINGS AND SPECIFICATIONS, AND ISSUE THEM TO EACH OF THE PRIME AND SUB-CONTRACTORS. EVERY PRIME AND SUB-CONTRACTOR ON EACH BIDDING TEAM SHALL RECEIVE COMPLETE SETS OF DRAWINGS AND SPECIFICATIONS. THERE ARE NOTES AND CROSS REFERENCES FOR VARIOUS TRADE CONTRACTORS IN MULTIPLE TRADE OR DISCIPLINE DRAWINGS AND SPECIFICATIONS. THE BIDDING CONTRACTOR IS TO RECEIVE COMPLETE SETS OF THE BID DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THESE DRAWINGS FROM CM/SG. EACH CONTRACTOR IS RESPONSIBLE FOR THEIR WORK AS NOTED ON THE OTHER DISCIPLINE DOCUMENTS. BIDDERS ARE RESPONSIBLE FOR ALL COSTS FOR EACH SET OF BID DOCUMENTS REQUESTED. 7. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A FULL COORDINATION EFFORT IN ORDER TO CREATE A FINALIZED COORDINATED LAYOUT OF ALL EQUIPMENT, SYSTEMS, DUCTWORK, PIPING AND ALL OTHER ITEMS WITHIN THEIR RESPECTIVE SCOPE. THE CONTRACTOR SHALL INCLUDE COORDINATED INFORMATION FROM ALL OTHER TRADE CONTRACTORS INVOLVED IN THE PROJECT SCOPE IN ORDER TO PROVIDE COORDINATION BETWEEN TRADES AND ALL EXISTING CONDITIONS. ALL ERRORS MADE AS A RESULT OF A LACK OF COORDINATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND CORRECTED AT NO ADDITIONAL COST TO THE PROJECT. MINOR RELOCATIONS AND SHIFTS OF EQUIPMENT, DUCTWORK, AND PIPING WHICH DO NOT CHANGE THE DESIGN INTENT INDICATED ON THE CONTRACT DOCUMENTS, REQUIRED TO ACCOMMODATE FIELD CONDITIONS ARE AT THE CONTRACTORS DISCRETION AND DO NOT REQUIRE ENGINEER APPROVAL. 8. CONTRACTOR SHALL ARRANGE AND OBTAIN ALL PERMITS, INSPECTIONS AND APPROVALS, AND PAY ALL RELATED FEES. 9. THE DRAWINGS INDICATE APPROXIMATE LOCATIONS BASED UPON INFORMATION OBTAINED WITHOUT REMOVING CEILING, TILES OR WALLS. THEREFORE, THE CONTRACTOR SHALL INCLUDE IN THEIR BID CONTINGENCY COSTS TO ADDRESS CONFLICTS BETWEEN DESIGN AND EXISTING CONDITIONS. ANY CHANGES AND/OR MODIFICATIONS MUST BE REVIEWED AND APPROVED BY THE ENGINEER AND/OR OWNERS REPRESENTATIVE PRIOR TO CONSTRUCTION. 10. FOR ANY DISCREPANCY BETWEEN DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL BASE THEIR BID UPON THE MOST STRINGENT REQUIREMENT (QUALITY, QUANTITY, SIZE, ETC.). THE CONTRACTOR SHALL IDENTIFY DISCREPANCIES AS PART OF THEIR BID. 11. PRIOR TO DEMOLITION, THE CONTRACTOR SHALL LOG ALL EXISTING EQUIPMENT AND TRACE ELECTRICAL, FIRE ALARM, AND CONTROL CIRCUITS THAT SERVE SUCH EQUIPMENT. 12. ALL SERVICES TO EXISTING BUILDINGS SHALL BE MAINTAINED DURING CONSTRUCTION UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL COORDINATE ALL SYSTEM SHUT DOWNS AND TIMING WITH OWNER. 13. THE CONTRACTOR SHALL EFFECTIVELY PROTECT ALL MATERIALS AND EQUIPMENT FROM ENVIRONMENTAL AND PHYSICAL DAMAGE UNTIL FINAL ACCEPTANCE. CLOSE AND PROTECT ALL OPENINGS DURING CONSTRUCTION. PROVIDE NEW MATERIALS AND EQUIPMENT TO REPLACE ITEMS DAMAGED. 14. EXISTING EQUIPMENT THAT INTERFERES WITH NEW ARRANGEMENT SHALL BE REMOVED, REINSTALLED, RELOCATED, REROUTED, EXTENDED OR ABANDONED AS REQUIRED, TO SUIT THE NEW ARRANGEMENT. 15. WHERE BEAMS ARE INDICATED TO BE PENETRATED WITH DUCTWORK AND/OR PIPING, CAREFULLY COORDINATE SIZES AND LOCATIONS OF THE ELEMENTS BEFORE FABRICATION. COORDINATE WITH FINAL LOCATION OF BEAM PENETRATIONS AND SHEAR WALL PENETRATIONS. 16. CONTRACTOR SHALL COORDINATE LOCATION OF ALL WALL, FLOOR AND ROOF OPENINGS WITH STRUCTURAL AND OTHER TRADES. 17. PROVIDE CUTTING AND PATCHING AS REQUIRED AND WHERE NECESSARY TO ACCOMMODATE NEW WORK AND THE REPAIR OF EXISTING WORK. 18. WHEN WORK INVOLVES CONTACT WITH MATERIALS CONTAINING ASBESTOS, PCB, OR OTHER TOXIC MATERIALS, NOTIFY OWNER, WHO WILL ESTABLISH PROCEDURES FOR REMEDIATION AND REMOVAL. 19. CONTRACTOR SHALL SCHEDULE THE WORK UNDER THIS CONTRACT WITH WORK OF OTHER TRADES AS NOT TO DELAY THE OVERALL PROGRESS OF THE PROJECT. 20. CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY CONFLICTS PRIOR TO PURCHASING EQUIPMENT AND PRIOR TO CUTTING OPENINGS. 21. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS PER SPECIFICATIONS PRIOR TO PURCHASING OR INSTALLING EQUIPMENT AND SYSTEMS INDICATED ON CONTRACT DOCUMENTS. PRIOR TO SUBMITTAL, CONTRACTOR SHALL VERIFY THAT ADEQUATE SPACE EXISTS FOR THE SUBMITTED EQUIPMENT. SHOP DRAWINGS MUST BE REVIEWED BY ARCHITECT/ENGINEER. 22. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED BY OTHER TRADES DUE TO SUBSTITUTION OF OTHER THAN SCHEDULED EQUIPMENT. WHEN EQUIPMENT FURNISHED IS DIFFERENT THAN INDICATED, THE COST OF ADDITIONAL ELECTRICAL SERVICE, STRUCTURAL, AND RELATED WORK SHALL BE PAID BY THIS CONTRACTOR. 23. ALL WORK SHALL BE EXECUTED IN A NEAT AND WORKMANLIKE MANNER AND SHALL BE DONE IN ACCORDANCE WITH GOOD TRADE PRACTICE AND IN CONFORMANCE WITH APPLICABLE MANUFACTURER'S RECOMMENDATIONS. 24. CONTRACTOR SHALL REMOVE ALL TRASH, DEBRIS AND DEMOLITION MATERIAL FROM PREMISES AT THE END OF EACH DAY. 25. RESTORE ALL SURFACES (WALLS, CEILINGS, FLOORS AND ROOFS) THAT ARE DAMAGED BY THE WORK OF THIS CONTRACT TO THEIR ORIGINAL CONDITION AT NO EXTRA COST TO THE OWNER. 26. PRIOR TO EQUIPMENT STARTUP, CONTRACTOR SHALL PERFORM THE SPECIFIED STARTUP AND COMMISSIONING PROCEDURES. 27. IN THE ABSENCE OF OTHER SPECIFIC INSTRUCTIONS, ALL WORK AND MATERIALS SUPPLIED SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF THEIR ACCEPTANCE BY THE OWNER. 28. BALA CONSULTING ENGINEERS, INC. (BALA) WILL PROVIDE CONTRACTOR WITH ELECTRONIC CAD FILES OF THE ENGINEERING DESIGNS, AT A COST OF \$88.00 PER DRAWING SHEET/FILE, FOR THE SOLE USE IN EXPEDITING SHOP DRAWINGS. BALA'S FILES SHALL NOT BE DIRECTLY COPIED AND ISSUED AS SHOP DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD COORDINATION, DIMENSIONING AND ADHERENCE TO THE SHOP DRAWING REQUIREMENTS AS NOTED IN THE SPECIFICATIONS. SHOULD THE SHOP DRAWINGS SUBMITTED PROVE TO BE A DIRECT COPY OF OUR FILES WITHOUT THE NECESSARY FIELD COORDINATION, DIMENSIONING AND ADHERENCE TO THE SHOP DRAWING REQUIREMENTS AS NOTED IN THE SPECIFICATIONS, THESE SHOP DRAWINGS WILL BE RETURNED AS REJECTED. BALA CONSULTING ENGINEERS, INC. (BALA) WILL PROVIDE CONTRACTOR WITH ELECTRONIC CAD FILES OF THE ENGINEERING DESIGNS, AT A COST OF \$88.00 PER DRAWING SHEET/FILE, FOR THE SOLE USE IN EXPEDITING SHOP DRAWINGS. BALA'S FILES SHALL NOT BE DIRECTLY COPIED AND ISSUED AS SHOP DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD COORDINATION, DIMENSIONING AND ADHERENCE TO THE SHOP DRAWING REQUIREMENTS AS NOTED IN THE SPECIFICATIONS. SHOULD THE SHOP DRAWINGS SUBMITTED PROVE TO BE A DIRECT COPY OF OUR FILES WITHOUT THE NECESSARY FIELD COORDINATION, DIMENSIONING AND ADHERENCE TO THE SHOP DRAWING REQUIREMENTS AS NOTED IN THE SPECIFICATIONS, THESE SHOP DRAWINGS WILL BE RETURNED AS REJECTED. BALA'S ELECTRONIC FILES ARE SAVED IN VERSION (REVIT, AUTOCAD) (2016, 2017, 2018) AND ARE COMPATIBLE WITH ALL VERSIONS AFTER THAT. BALA MAKES NO REPRESENTATION AS TO THE COMPATIBILITY OF THESE FILES WITH THE CONTRACTOR'S HARDWARE OR THEIR SOFTWARE. DATA CONTAINED ON THESE ELECTRONIC FILES ARE PART OF BALA'S "INSTRUMENTS OF SERVICE" AND ARE COPYRIGHTED. CONTRACTOR'S USE OF FILES IS FOR THE SOLE PURPOSE AS A CONVENIENCE IN THE PREPARATION OF DRAWINGS FOR THE REFERENCED PROJECT. ANY OTHER USE OR REUSE BY CONTRACTOR IS UNLAWFUL.	1. MECHANICAL CONTRACTOR SHALL EXAMINE THE DRAWINGS OF ALL TRADES AND COORDINATE THEIR WORK PRIOR TO ANY INSTALLATIONS TO AVOID INTERFERENCE WITH STRUCTURE, AND ALL EQUIPMENT ABOVE AND BELOW THE CEILING. THE MECHANICAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND FIELD CONDITIONS AT THE SITE PRIOR TO BID AND PURCHASE OF EQUIPMENT/MATERIALS. THE CONTRACTOR SHALL PROVIDE VALUE FOR SAME IN THEIR BID. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY FIELD CONDITIONS AT THE SITE AND NOTIFY THE OWNER, ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING WITH THE WORK. 2. FOR ANY DISCREPANCY BETWEEN DRAWINGS AND/OR SPECIFICATIONS, THE MECHANICAL CONTRACTOR SHALL BASE THEIR BID UPON THE MOST STRINGENT REQUIREMENT (QUALITY, QUANTITY, SIZE, ETC.). THE CONTRACTOR SHALL IDENTIFY DISCREPANCIES AS PART OF THEIR BID. 3. THE MECHANICAL CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING OF EXISTING CONSTRUCTION REQUIRED BY THEIR WORK. ALL FINISHES SHALL MATCH EXISTING. STRUCTURAL MEMBERS SHALL NOT BE CUT UNLESS APPROVED BY OWNERS REPRESENTATIVE. PAINTING SHALL BE BY GENERAL CONTRACTOR. WHERE EQUIPMENT IS REMOVED, CONTRACTOR TO REFRESH AREA TO MATCH EXISTING. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING INTEGRITY OF ALL STRUCTURAL ELEMENTS. 4. THE MECHANICAL CONTRACTOR SHALL EFFECTIVELY PROTECT ALL MATERIALS AND EQUIPMENT FROM ENVIRONMENTAL AND PHYSICAL DAMAGE UNTIL FINAL ACCEPTANCE. CLOSE AND PROTECT ALL OPENINGS DURING CONSTRUCTION. PROVIDE NEW MATERIALS AND EQUIPMENT TO REPLACE ITEMS DAMAGED. 5. EXISTING MECHANICAL EQUIPMENT THAT INTERFERES WITH NEW ARRANGEMENT SHALL BE REMOVED, REINSTALLED, RELOCATED, REROUTED, EXTENDED OR ABANDONED AS REQUIRED, TO SUIT THE NEW ARRANGEMENT. 6. ALL MATERIALS, EQUIPMENT AND INSTALLATIONS SHALL BE IN STRICT ACCORDANCE WITH SMACNA AND ASHRAE GUIDELINES, UNLESS OTHERWISE NOTED. 7. EQUIPMENT INDICATED ON THE DRAWINGS, TOGETHER WITH ITS BASE AND/OR SUPPORT, DUCTWORK CONNECTIONS, SERVICE CLEARANCES, WALL, FLOOR AND ROOF PENETRATIONS, AND ELECTRICAL REQUIREMENTS IS BASED ON THE MODEL INDICATED IN THE SCHEDULES. IF CONTRACTOR FURNISHES AN EQUIVALENT SUBSTITUTION, THE CONTRACTOR SHALL MAKE THE REQUIRED MODIFICATIONS IN THE WORK WITHOUT CHANGE IN CONTRACT AMOUNT. 8. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL COSTS RELATED TO REMOVING AND REPLACING ALL CEILING AS REQUIRED FOR THE MECHANICAL WORK ON THIS PROJECT. PROVIDE SELECTIVE CEILING DEMOLITION TO PLACE NEW DUCTWORK AND DIFFUSERS. REPLACE DAMAGED CEILING TILES AND GRIDS RESULTING FROM DEMOLITION. NEW CEILING TILES SHALL MATCH WITH EXISTING. 9. COORDINATE MECHANICAL SYSTEM INSTALLATION WITH EXISTING CONDITIONS. VISIT SITE PRIOR TO BID AND INVESTIGATE REQUIREMENTS FOR MECHANICAL SYSTEM INSTALLATION. SEE THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. 10. COORDINATE LOCATION OF ALL WALL, FLOOR AND ROOF OPENINGS WITH STRUCTURAL AND OTHER TRADES 11. COORDINATE LOCATION OF NEW DUCTWORK, AIR DEVICES AND EQUIPMENT WITH LIGHT FIXTURES, SPRINKLER PIPING AND HYDRONIC PIPING. 12. COORDINATE THE LOCATIONS OF ALL EQUIPMENT AND REGISTERS WITH THE LATEST ARCHITECTURAL DRAWINGS PRIOR TO PERFORMING AND ROUGH-IN WORK FOR THE UTILITIES. 13. COORDINATE THERMOSTATS WITH FINAL DIFFUSER LOCATIONS. THERMOSTATS SHALL NOT BE MOUNTED IN THE THROW PATTERN OF DIFFUSERS. 14. FIELD VERIFY THE ACTUAL LOCATIONS AND EXACT DIMENSIONS OF ALL EQUIPMENT, CASEWORK, DEVICES, FIXTURES, SWITCHES, SENSORS, STRUCTURAL ELEMENTS, ETC. DURING FIELD VISITS AND PRIOR TO PERFORMING ANY ROUGH-IN WORK FOR DUCTWORK, PIPING AND ALL UTILITIES/SCOPE. MINOR CHANGES TO EQUIPMENT LOCATIONS OR DUCTWORK AND PIPING ROUTING AND DUCTWORK ASPECT RATIO, BASED ON THE FINAL COORDINATION EFFORT, ARE TO BE COMPLETED BY THE CONTRACTOR. REPORT DISCREPANCIES IMMEDIATELY TO ARCHITECT AND/OR ENGINEER. 15. PROVIDE TEMPORARY CONSTRUCTION FILTERS ON ALL RECIRCULATING HVAC EQUIPMENT USED FOR HEATING, COOLING, EXHAUST OR VENTILATION DURING CONSTRUCTION. PROVIDE REGULARLY SCHEDULED FILTER CHANGES DURING CONSTRUCTION. PROVIDE FRESH FILTERS PRIOR TO BALANCING. PRIOR TO TURN OVER TO OWNER, PROVIDE FRESH FILTERS IN ALL EQUIPMENT. 16. EFFECTIVELY PROTECT ALL MATERIALS AND EQUIPMENT FROM DUST, DIRT AND DAMAGE UNTIL FINAL ACCEPTANCE. CLOSE ALL DUCT AND EQUIPMENT OPENINGS DURING CONSTRUCTION WITH SUITABLE PROTECTIVE COVERING BEFORE, DURING AND FOLLOWING INSTALLATION. 17. UNLESS OTHERWISE NOTED, INSTALL DUCTWORK AND PIPING OVERHEAD, TIGHT TO UNDERSIDE OF STRUCTURE OR SLAB, WITH ADEQUATE SPACE FOR INSULATION AND GAP TO PREVENT TRANSMISSION OF VIBRATION TO STRUCTURE. 18. WHERE CONNECTING TO EXISTING DUCTWORK AND PIPING SYSTEMS, INSPECT FOR DEFECTS. NOTIFY OWNER IF EXISTING DUCTWORK, PIPING AND INSULATION IS FOUND TO HAVE DAMAGE/DEFECTS AND TO DETERMINE IF REPLACEMENT IS REQUIRED. 19. MECHANICAL WORK THAT IS TO REMAIN WHEN STRUCTURE ON WHICH IT IS INSTALLED IS TO BE MODIFIED OR REMOVED SHALL BE PROPERLY SUBMITTED IN PLACE UNTIL WORK OF ALL TRADES IS COMPLETED. REINSTALL MECHANICAL WORK ON NEW STRUCTURE. 20. ALL MATERIALS AND EQUIPMENT INSTALLED IN RETURN AIR PLENUMS SHALL BE NON-COMBUSTIBLE AND UL APPROVED FOR USE IN A RETURN AIR PLENUM SPACE. ALL WIRING SHALL BE NON-COMBUSTIBLE OR SHALL BE ENCLOSED IN METAL CONDUIT OR PROTECTED BY A SHEET METAL COVER SECURED WITH METAL FASTENERS. 21. PROVIDE ALL OFFSETS, FITTINGS, DOUBLE ELBOWS, RISES, DROPS, DUCTWORK, PIPING, INSULATION AND ALL DUCTWORK OR PIPING AROUND EXISTING CONDITIONS. DUCTWORK, PIPING, EXISTING STEEL, NEW CONSTRUCTION AND ALL OTHER TRADE WORK, COORDINATE WORK WITH ALL OTHER WORK AND ALL OTHER TRADE CONTRACTORS TO VERIFY LOCATIONS REQUIRING CHANGES IN ELEVATION. 22. VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. VERIFY AND PROVIDE DUCT AND PIPE TRANSITIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DIMENSIONS BEFORE FABRICATION. 23. INSTALL PIPING SUCH THAT ALL VALVES, STRAINERS, UNIONS, TRAPS, AND OTHER ACCESSORIES ARE ACCESSIBLE. 24. PROVIDE ACCESS PANELS AS REQUIRED FOR ALL VALVES, DAMPERS, CONTROLS, OR OTHER EQUIPMENT. PROVIDE ACCESS PANELS IN NON-FRAY-IN-CEILING FOR SERVICE AND MAINTENANCE OF ALL CONCEALED EQUIPMENT AND DEVICES, SUCH AS HEAT PUMPS, ELECTRIC DUCT HEATERS, COILS, SMOKE DETECTORS, BALANCING DAMPERS AND FIRE DAMPERS. 25. [CLEAN EXISTING AND RELOCATED AIR DEVICES THOROUGHLY WITH WARM SOAPY WATER. REPAIR AND RE-PAINT ALL DAMAGED AIR DEVICES TO BE REUSED. CLEAN ALL AIR DEVICES AFTER CONSTRUCTION IS COMPLETED.] 26. CONTRACTOR SHALL NOT CONCEAL ANY WORK UNTIL INSPECTED BY MECHANICAL INSPECTOR AND/OR ARCHITECT/ENGINEER. CONTRACTOR SHALL NOTIFY A/E OF A SCHEDULED INSPECTION TIME WITHIN 72 HOURS. GENERAL CONTRACTOR SHALL NOT CONCEAL WORK UNTIL APPROVED, REGARDLESS OF SCHEDULE. 27. REMOVE ALL TRASH, DEBRIS AND DEMOLITION MATERIAL FROM PREMISES AT THE END OF EACH DAY. 28. PROVIDE ALL ROOFING OPENINGS, FLASHING, CURBS, COUNTER FLASHING, ETC. REQUIRED FOR THE INSTALLATION OF ROOF MOUNTED EQUIPMENT OR CURBS. COORDINATE OPENING WITH ROOFING CONTRACTOR AND CM/SG. ALL ROOFING WORK SHALL BE PERFORMED BY AUTHORIZED ROOFING CONTRACTOR TO MAINTAIN ROOF WARRANTY. 29. ALL DUCT DIMENSIONS ARE INSIDE CIRCLE DIMENSIONS. 30. SHEETMETAL FITTINGS SHOWN SHALL BE PROVIDED. NO SUBSTITUTES WILL BE ALLOWED WITHOUT PRIOR CONSENT FROM ENGINEER. 31. PROVIDE BALANCING DAMPERS IN ALL DUCT BRANCHES AND TO AIR DEVICES. 32. PROVIDE COMBINATION FIRE/SMOKE DAMPERS AND SMOKE DAMPERS IN DUCTS PASSING THROUGH FIRE OR SMOKE RATED ASSEMBLIES AS INDICATED ON THE ARCHITECTURAL DRAWINGS. 33. DUCTWORK SHALL NOT BE ROUTED ABOVE ELECTRICAL PANELS. COORDINATE WITH ELECTRICAL CONTRACTOR. DUCTWORK SHALL NOT COVER OR LIMIT ACCESS TO EXISTING LOWERS. 34. PROVIDE HEAVY DUTY FLEXIBLE CONNECTIONS AT ALL FANS INLET AND OUTLET CONNECTIONS.	36. PROVIDE ACOUSTICALLY LINED DUCTWORK: 16 FEET DOWNSTREAM OF ALL FANS, FAN COIL UNITS, FAN POWERED BOXES AND VAV BOXES. [PROVIDE DOUBLE WALLED DUCTWORK 20 FEET DOWNSTREAM OF ALL AIR HANDLING UNITS.] 37. MECHANICAL CONTRACTOR SHALL BLANK OFF ALL UNUSED SECTIONS OF LOUVER AREA WITH 16 GAUGE GALVANIZED STEEL PANELS AND INSULATE WITH 1" THICK FIBERGLASS BOARD INSULATION.] 38. [PROVIDE MINIMUM 2" HIGH DRAIN IN EACH OUTSIDE AIR INTAKE PLENUM. PITCH BOTTOM OF PLENUM TOWARDS DRAIN. ROUTE DRAIN TO NEAREST FLOOR DRAIN.] 39. ALL OPEN-ENDED DUCTS IN CEILING PLENUMS OR EXPOSED SHALL BE UNINSTRUCTED FOR A MINIMUM DISTANCE OF 24 INCHES FROM THE OPENING TO ALLOW FREE FLOW OF AIR. UNLESS OTHERWISE NOTED, EACH OPENING SHALL TERMINATE WITH 1/2" WIRE MESH SCREEN. 40. LOCATE CEILING DIFFUSERS, GRILLES AND REGISTERS AS SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLANS. 41. UNLESS OTHERWISE NOTED, ALL HYDRONIC PIPING RUNOUTS AND CONDENSATE DRAIN PIPING SHALL BE 1/2". STEAM AND STEAM CONDENSATE PIPING RUNOUTS SHALL BE 1/2". 42. PROVIDE ISOLATION VALVES AT EACH FLOOR TAKEOFF AND EACH TERMINAL EQUIPMENT. FOR HYDRONIC, STEAM AND STEAM CONDENSATE PIPING, PROVIDE SHUTOFF VALVE ON HYDRONIC SUPPLY, STEAM AND STEAM CONDENSATE PIPING. PROVIDE COMBINATION BALANCING AND SHUTOFF VALVE ON HYDRONIC RETURN PIPING. 43. [PRIOR TO OPENING NATURAL GAS PIPING SYSTEM, THE ENTIRE SECTION OF NATURAL GAS PIPING SYSTEM AFFECTED BY SCOPE SHALL BE ISOLATED AND PURGED IN ACCORDANCE WITH THE APPLICABLE FUEL GAS CODE. UPON COMPLETION OF NATURAL GAS PIPING SYSTEM SCOPE WORK, PLACE SYSTEM INTO OPERATION IN ACCORDANCE WITH APPLICABLE FUEL GAS CODE.] 44. CONTRACTOR SHALL PROVIDE FIRE STOPPING WHERE EQUIPMENT, DUCTWORK AND PIPING PENETRATE FIRE AND SMOKE RATED BARRIERS/PARTITIONS. INSTALL FIRE STOPPING IN ACCORDANCE WITH UL RATED ASSEMBLY REQUIREMENTS AFTER EQUIPMENT, DUCTWORK AND PIPING HAVE BEEN INSTALLED. 45. PROVIDE ALL MISCELLANEOUS STEEL, THREADED RODS, REINFORCEMENT, VIBRATION ISOLATORS, TURNBUCKLES, ETC. TO SUPPORT MECHANICAL EQUIPMENT ON OR FROM BUILDING STRUCTURE. ALL SUPPORTS AND ASSOCIATED ANCHORS SHALL BE SIZED BASED ON THE WEIGHT OF THE RESPECTIVE EQUIPMENT BEING SUPPORTED. 46. SUPPORT ALL EQUIPMENT, PIPING AND DUCTWORK FROM BUILDING STRUCTURE TO PROVIDE A VIBRATION FREE INSTALLATION. OTHERWISE ADHERE TO THE DETAILS IN THE CONTRACT DOCUMENTS. NOTIFY ARCHITECT AND/OR STRUCTURAL ENGINEER OF ALL WEIGHTS AND METHODS OF SUPPORT. PROVIDE DETAILS TO COORDINATE CONCRETE PADS AND STEEL PLATFORMS REQUIRED FOR MECHANICAL WORK. 47. PROVIDE VIBRATION ISOLATION FOR ROTATING, REVOLVING OR RECIPROCATING EQUIPMENT, INCLUDING DUCTWORK CONNECTIONS TO THE EQUIPMENT TO PREVENT TRANSMISSION OF NOISE AND VIBRATION TO BUILDING STRUCTURE AND OCCUPIED SPACES. VIBRATION ISOLATION DEVICES SHALL INCLUDE SPRING, VIBRATION ISOLATORS, NEOPRENE PADDING AND DUCT/PIPE FLEXIBLE CONNECTIONS. 48. CONTROL WIRE AND CONDUIT SHALL COMPLY WITH NEC, INTERNATIONAL BUILDING CODES AND ELECTRICAL SPECIFICATIONS. PLENUM RATED CABLE SHALL BE PROVIDED IN ALL PLENUM CEILINGS. CONTRACTOR TO COORDINATE LOCATION OF ALL PLENUM CEILINGS. 49. ALL WALL MOUNTED CONTROL DEVICES SHOWN ON DRAWINGS ARE DIAGRAMMATIC IN LOCATION AND SHOWN FOR GENERAL WIRING PURPOSES ONLY. ALL DEVICES SHALL BE MOUNTED 48" ABOVE FINISHED FLOOR. DEVICES INDICATED TO BE INSTALLED IN THE SAME LOCATIONS WITH DIFFERENT ELEVATIONS SHALL BE ALIGNED VERTICALLY AND HORIZONTALLY. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING DETAILS OF SWITCHES, OUTLETS, FIRE ALARM STROBES, AUDIBLE AND VISUAL DEVICES, FIRE ALARM PULL STATION, CLOCKS, SECURITY DEVICES, CARD READERS, THERMOSTATS, SENSORS, ETC. COORDINATE FINAL LOCATIONS WITH EQUIPMENT, FURNITURE, TENANT, AND ARCHITECT PRIOR TO INSTALLATION. 50. REMOVE TEMPORARY AIR FILTERS AND PROVIDE NEW FILTERS IN ALL AIR CONDITIONING EQUIPMENT WITHIN THE SCOPE OF WORK UPON COMPLETION OF CONSTRUCTION AND BEFORE BALANCING.

DRA

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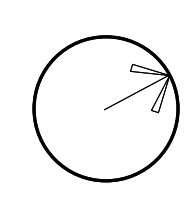
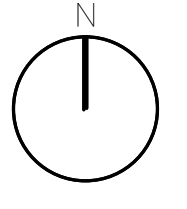
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August 4th, 2022

PROJECT NORTH

MAGNETIC NORTH



MECHANICAL
GENERAL
NOTES

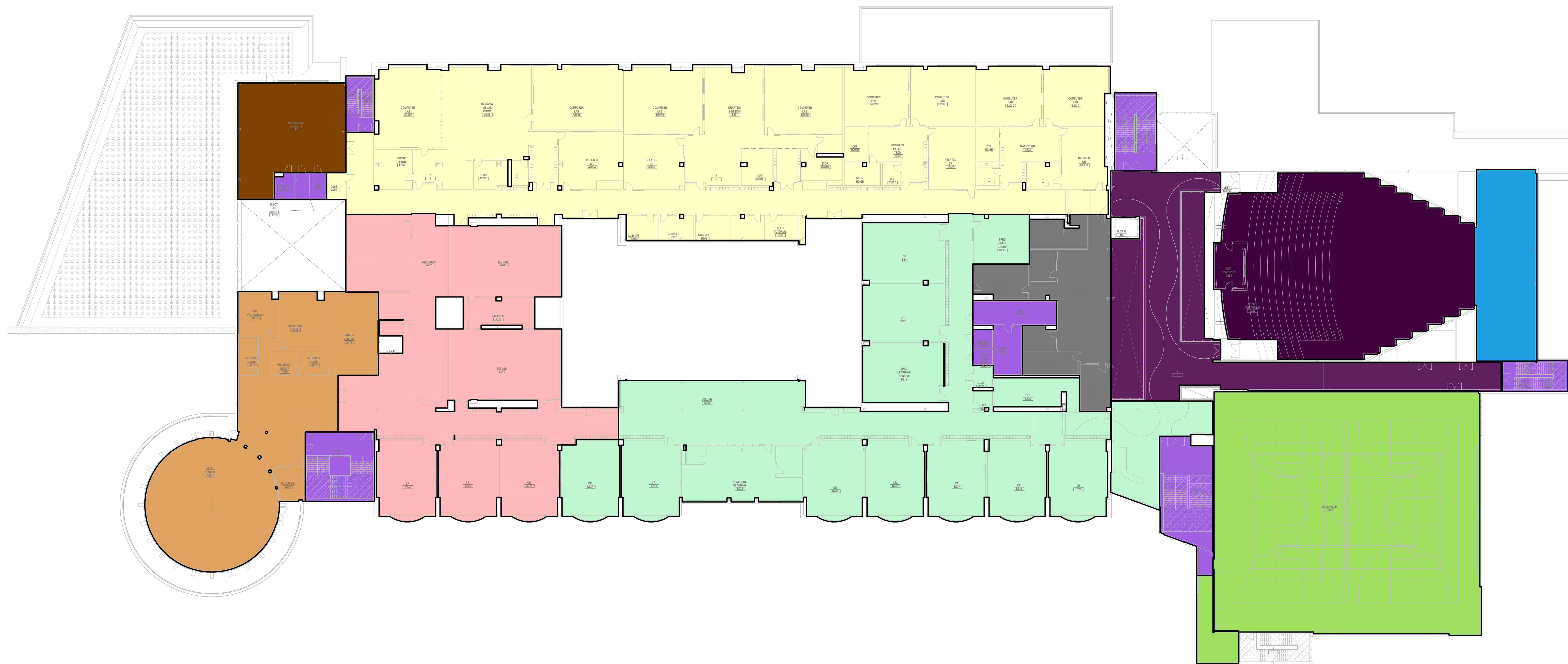
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Job No.: 20022
Drawn By: DRA
Date: August 4th, 2022

M0-0-2



① HVAC Level 0 Zoning Plan
3/64" = 1'-0"

② HVAC Level 1 Zoning Plan
3/64" = 1'-0"



③ HVAC Level 2 Zoning Plan
3/64" = 1'-0"

Zoning Plan Key

- AHU-1
- AHU-2
- AHU-3
- AHU-4
- AHU-5
- AHU-6
- AHU-7
- AHU-8
- AHU-9
- AHU-10
- AHU-11
- ERV-1
- ERV-2
- ERV-3
- ERV-4
- EXHAUST ONLY
- HRU-1
- HRU-2
- HRU-3
- HRU-4
- RTU-1
- RTU-2
- RTU-3
- MAU-1
- MAU-2
- SPLIT AC OR VRF
- HEATING AND VENTILATING ONLY



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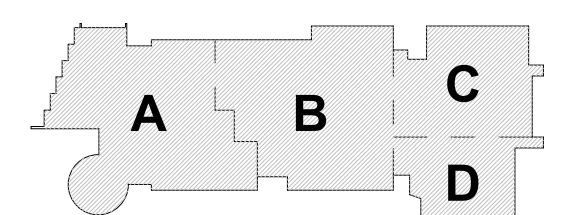
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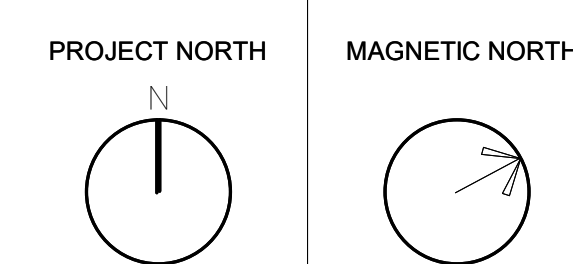
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August 4th, 2022



KEY PLAN



MECHANICAL ZONING PLAN

Scale: 3/64" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022

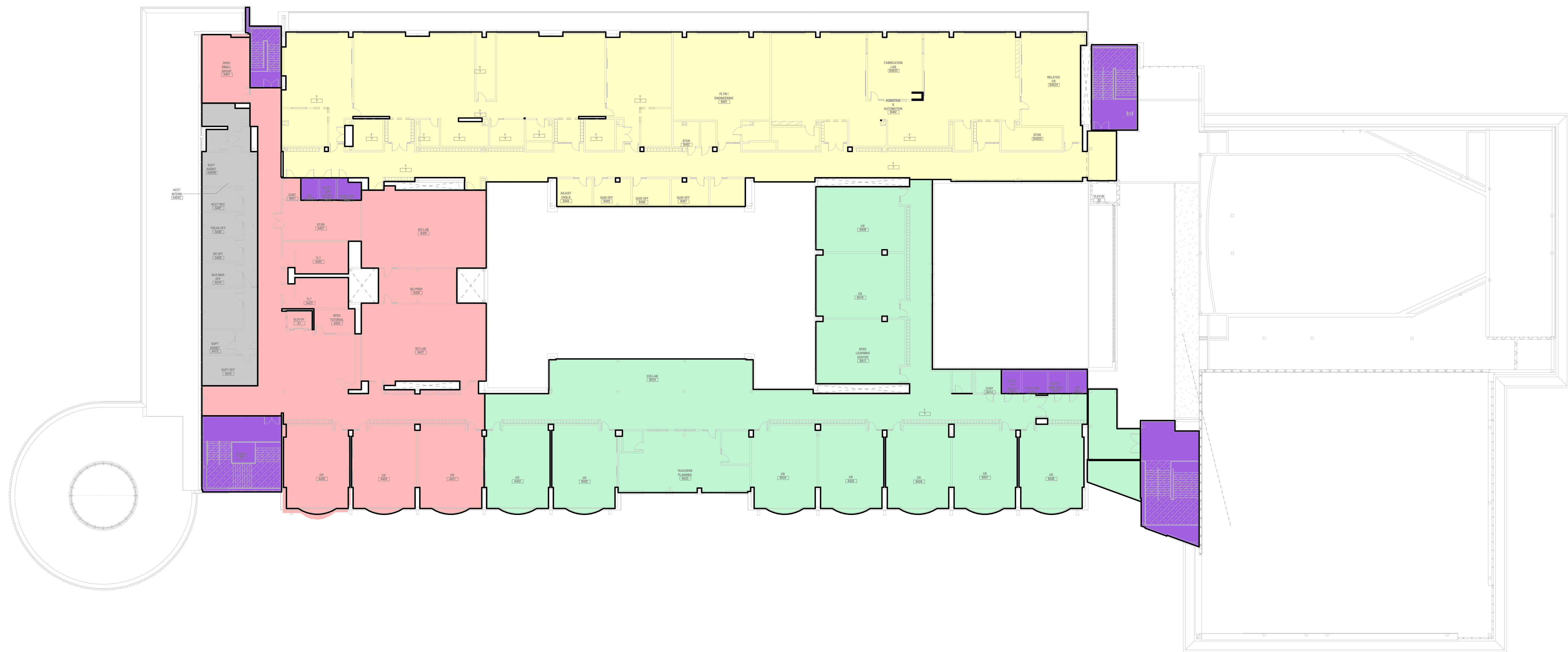
M0-0-3



Zoning Plan Key

- AHU-1
- AHU-2
- AHU-3
- AHU-4
- AHU-5
- AHU-6
- AHU-7
- AHU-8
- AHU-9
- AHU-10
- AHU-11
- ERV-1
- ERV-2
- ERV-3
- ERV-4
- EXHAUST ONLY
- HRU-1
- HRU-2
- HRU-3
- HRU-4
- RTU-1
- RTU-2
- RTU-3
- MAU-1
- MAU-2
- SPLIT AC OR VRF
- HEATING AND VENTILATING ONLY

① HVAC Level 3 Zoning Plan
3/64" = 1'-0"



② HVAC Level 4 Zoning Plan
3/64" = 1'-0"



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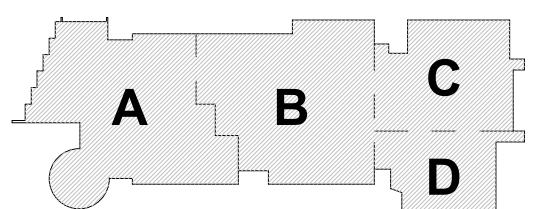
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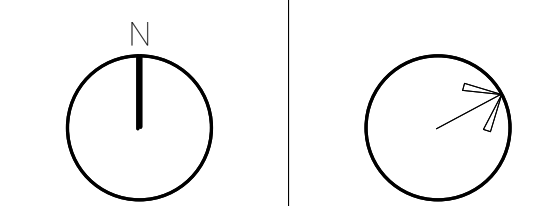
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August 4th, 2022



PROJECT NORTH
MAGNETIC NORTH



MECHANICAL
ZONING PLAN

Scale: 3/64" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022
M0-0-4

HVAC DRAWING NOTES

1. PROVIDE REFRIGERANT LINE SET FROM AC UNIT TO ASSOCIATED CONDENSING UNIT ON ROOF. INTEGRAL CONDENSATE PUMP, AND CONDENSATE DRAIN PIPING TO NEAREST CONDENSATE RECEPTOR. CONDENSATE RECEPTOR BY DW. 22.
2. REFER TO VRF PIPING DIAGRAMS ON THE M2 SERIES DRAWINGS FOR REFRIGERANT PIPING DISTRIBUTION. PROVIDE A CONDENSATE DRAIN FROM THE FAN COIL UNIT TO THE NEAREST CONDENSATE RECEPTOR. CONDENSATE RECEPTOR BY DW. 22.
3. PROVIDE DUCT DISTRIBUTION TO BOOTHS AND EQUIPMENT REQUIRING EXHAUST. REFER TO EQUIPMENT DRAWINGS FOR EQUIPMENT AND EXHAUST REQUIREMENTS.
4. PROVIDE AN EXHAUST TERMINAL UNIT TO SERVE SPACE(S). PROVIDE AN EXHAUST GRILLE IN SPACE(S) WITH DUCT DISTRIBUTION FROM TERMINAL UNIT. PROVIDE MEDIUM PRESSURE DUCTWORK FROM TERMINAL UNIT TO HRU-4 EXHAUST MAIN.
5. PROVIDE RETURN DUCT TO FILTER RETURN GRILLE AND SUPPLY DUCTWORK TO DIFFUSERS DISTRIBUTED THROUGHOUT CORRIDOR. PROVIDE A SUPPLY TERMINAL UNIT DUCTED TO FCU RETURN DUCT. PROVIDE MEDIUM PRESSURE DUCTWORK FROM HRU-4 SUPPLY MAIN TO TERMINAL UNIT.

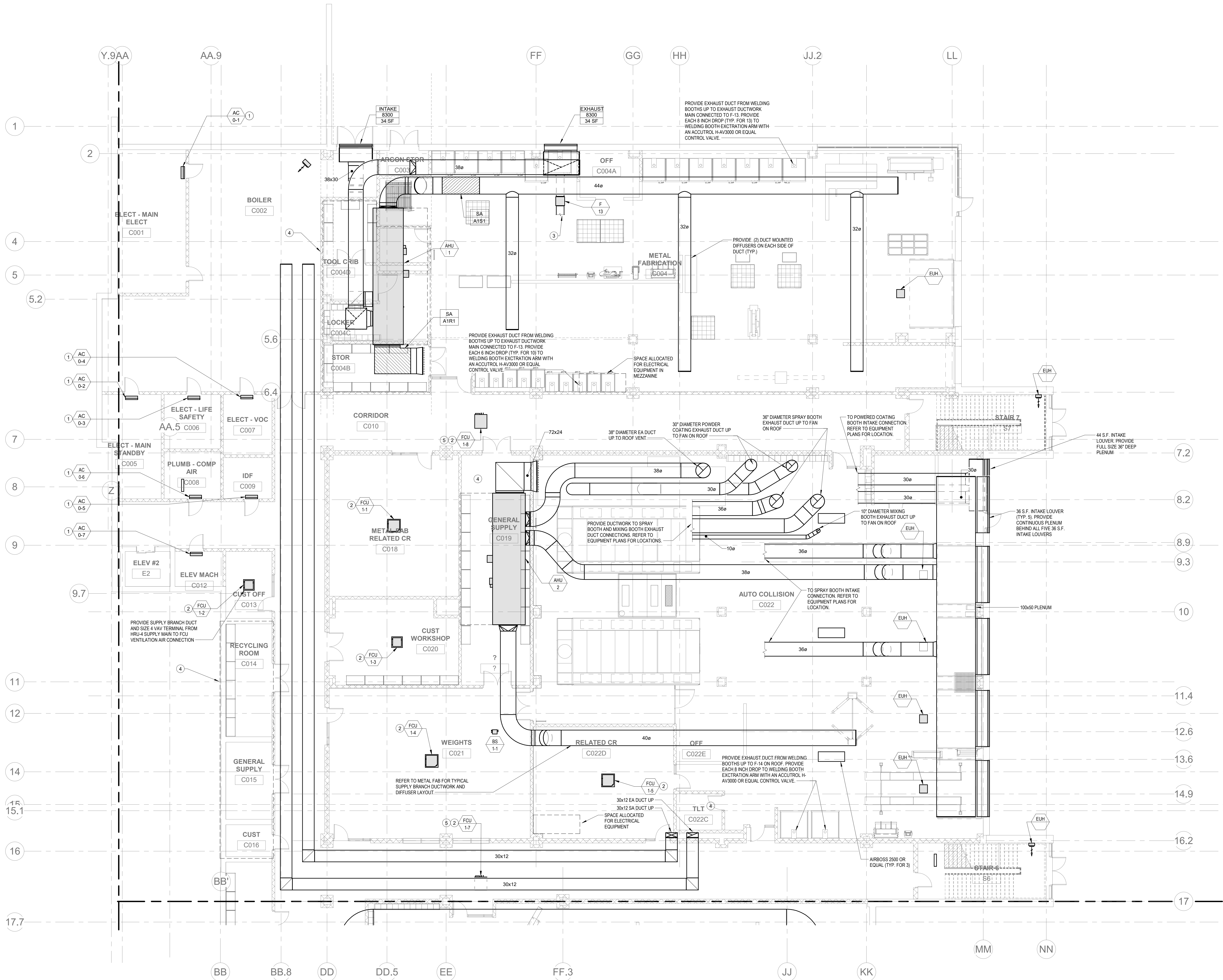
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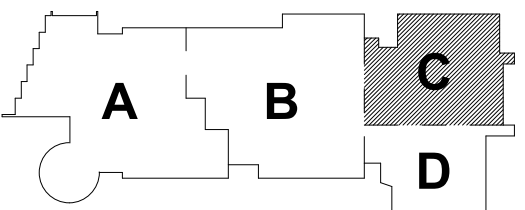
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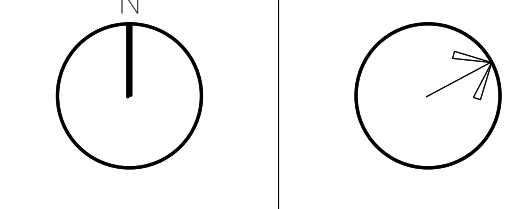
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August 4th, 2022



KEY PLAN

PROJECT NORTH
MAGNETIC NORTH



MECHANICAL
LOWER LEVEL
FLOOR PLAN -
AREA C

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022

M1-1-0C

HVAC DRAWING NOTES

1. REFER TO VRF PIPING DIAGRAMS ON THE M2 SERIES DRAWINGS FOR REFRIGERANT PIPING DISTRIBUTION. PROVIDE A CONDENSATE DRAIN FROM THE FAN COIL UNIT TO THE NEAREST CONDENSATE RECEPTOR OR CONDENSATE RECEPTOR BY DIV. 22.
2. PROVIDE AN EXHAUST TERMINAL UNIT TO SERVE SPACE(S). PROVIDE AN EXHAUST GRILLE IN SPACE(S) WITH DUCT DISTRIBUTION FROM TERMINAL UNIT. PROVIDE MEDIUM PRESSURE DUCTWORK FROM TERMINAL UNIT TO HRA-4 EXHAUST MAIN.
3. PROVIDE EXHAUST DUCT FROM FAN UP TO GRAVITY EXHAUST VENT ON ROOF NEAR LOCATED NEAR F-6. EXHAUST DUCT FROM FAN DISCHARGE CONNECTION SHALL BE EQUIVALENT IN SIZE TO DUCT ON INLET SIDE OF FAN.

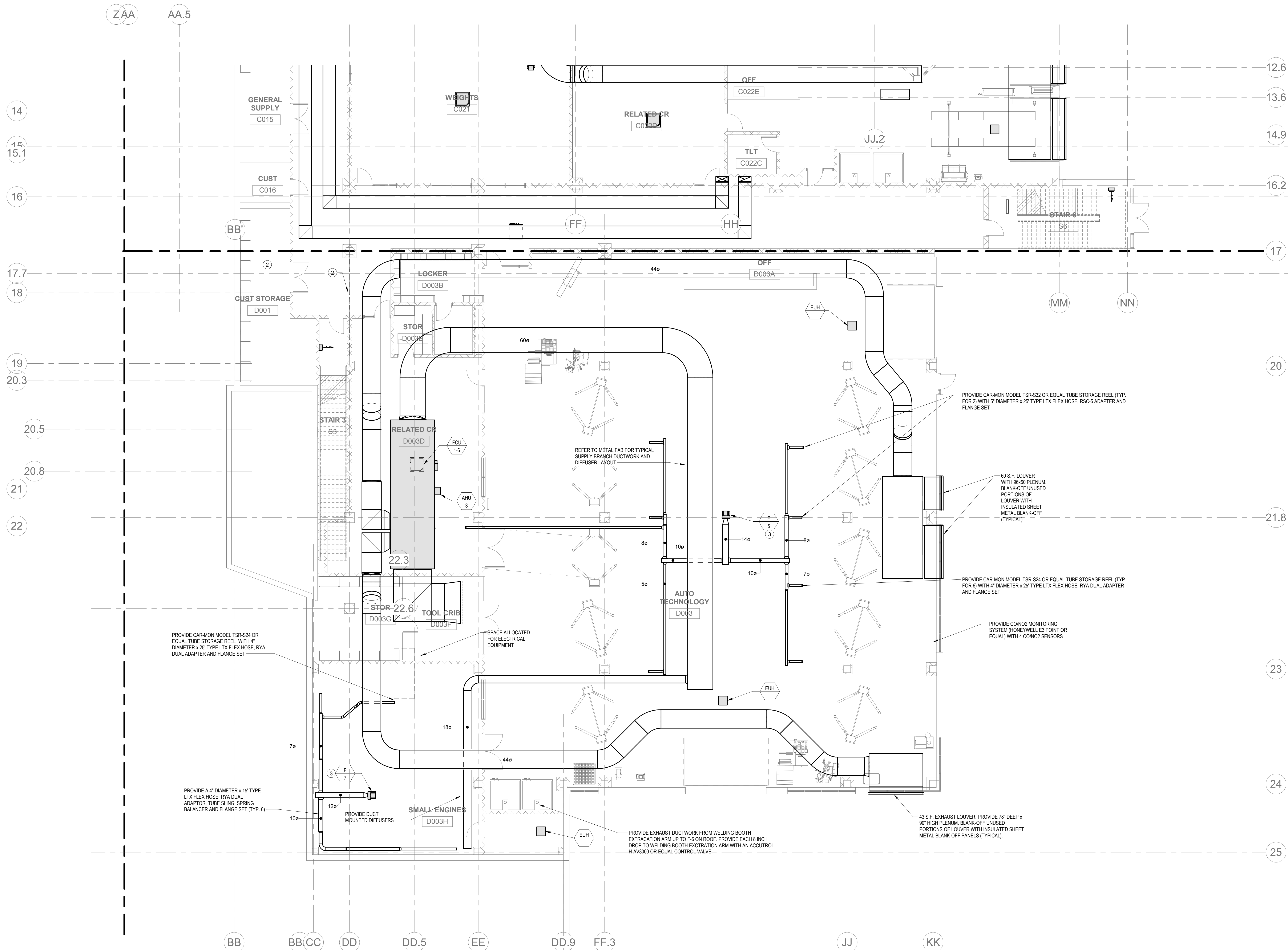
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PROVIDE CAR-MON MODEL TSR-S24 OR EQUAL TUBE STORAGE REEL, WITH 4" DIAMETER X 25' TYPE LTX FLEX HOSE, RYA DUAL ADAPTER AND FLANGE SET.

PROVIDE A 4" DIAMETER X 15' TYPE LTX FLEX HOSE, RYA DUAL ADAPTER, TUBE SLING, SPRING BALANCER AND FLANGE SET (TYP. 6).

SMALL ENGINES

D003H

PROVIDE EXHAUST DUCTWORK FROM WELDING BOOTH EXTRICATION ARM UP TO F-6 ON ROOF. PROVIDE EACH 8 INCH DROP TO WELDING BOOTH EXTRICATION ARM WITH AN ACCUTROL HAV1000 OR EQUAL CONTROL VALVE.

43 S.F. EXHAUST LOUVER. PROVIDE 78" DEEP X 90" HIGH PLENUM. BLANK-OFF UNUSED PORTIONS OF LOUVER WITH INSULATED SHEET METAL BLANK-OFF PANELS (TYPICAL).

PROVIDE CAR-MON MODEL TSR-S24 OR EQUAL TUBE STORAGE REEL, (TYP. FOR 6) WITH 4" DIAMETER X 25' TYPE LTX FLEX HOSE, RYA DUAL ADAPTER AND FLANGE SET.

PROVIDE CONO2 MONITORING SYSTEM (HONEYWELL E3 POINT OR EQUAL) WITH 4 CONO2 SENSORS.

PROVIDE CAR-MON MODEL TSR-S32 OR EQUAL TUBE STORAGE REEL, (TYP. FOR 2) WITH 5" DIAMETER X 25' TYPE LTX FLEX HOSE, RSC-5 ADAPTER AND FLANGE SET.

60 S.F. LOUVER WITH 86x50 PLENUM. BLANK-OFF UNUSED PORTIONS OF LOUVER WITH INSULATED SHEET METAL BLANK-OFF (TYPICAL).

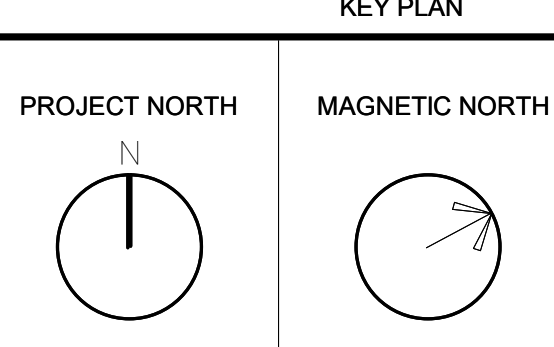
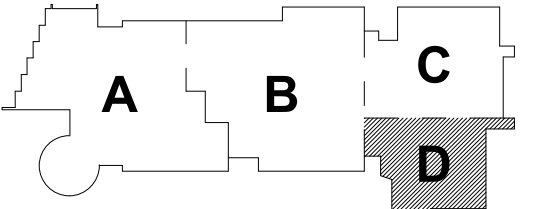
REFER TO METAL FAB FOR TYPICAL SUPPLY BRANCH DUCTWORK AND DIFFUSER LAYOUT.

SPACE ALLOCATED FOR ELECTRICAL EQUIPMENT.

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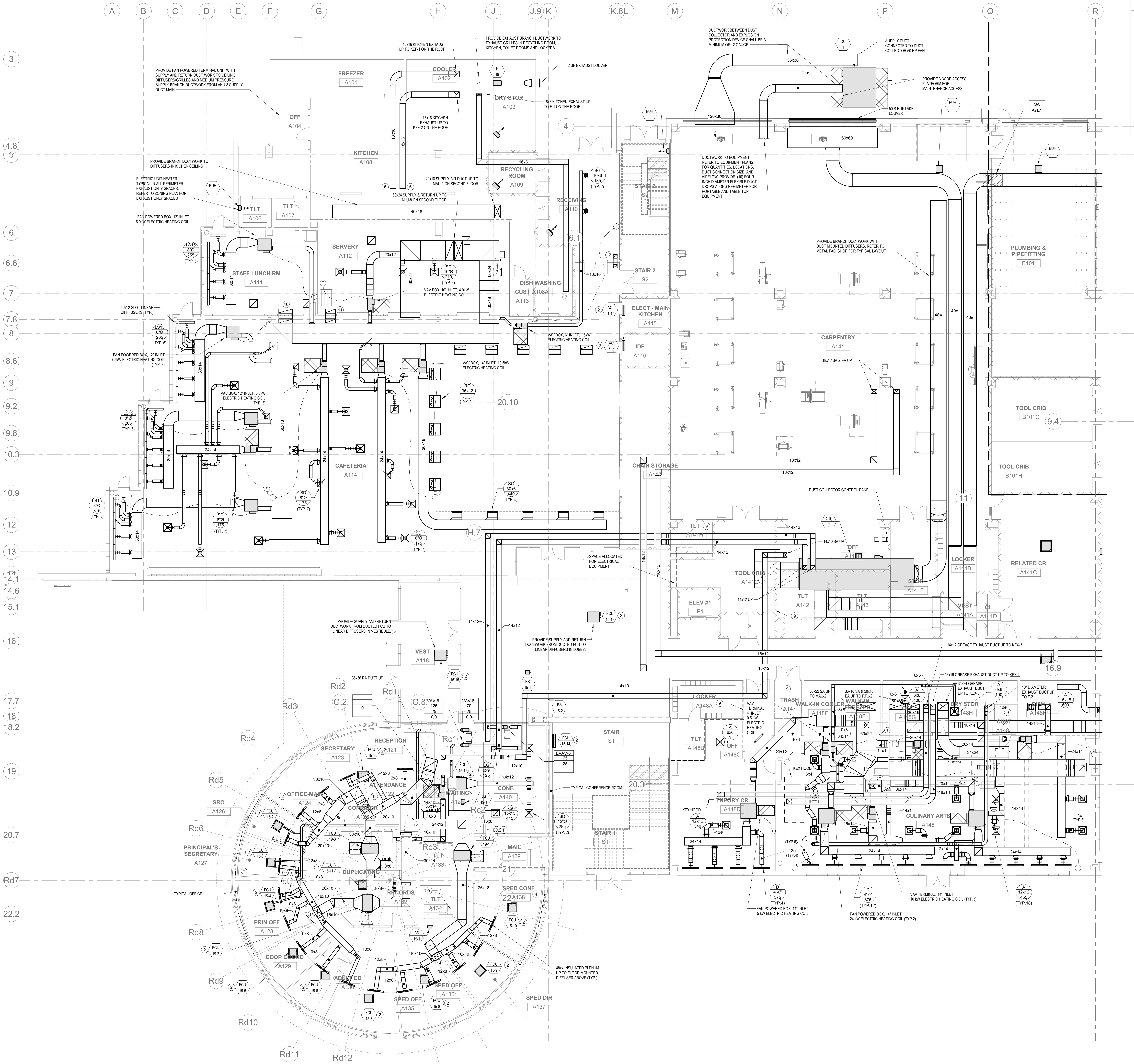
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August 4th, 2022



MECHANICAL
LOWER LEVEL
FLOOR PLAN -
AREA D

Scale: 1/8" = 1'-0"
Job No.: 20022
Drawn By: DRA
Date: August 4th, 2022

M1-1-0D



HVAC DRAWING NOTES

1. REFER TO VRF PIPING DIAGRAMS ON THE M2 SERIES DRAWINGS FOR REFRIGERANT PIPING DISTRIBUTION. PROVIDE A CONDENSATE DRAIN FROM THE FAN COIL UNIT TO THE NEAREST CONDENSATE RECEPTOR. CONDENSATE RECEPTOR BY DIV. 22.
2. PROVIDE REFRIGERANT LINE SET FROM AC UNIT TO ASSOCIATED CONDENSING UNIT ON ROOF. INTEGRAL CONDENSATE PUMP AND CONDENSATE DRAIN PIPING TO NEAREST CONDENSATE RECEPTOR. CONDENSOR RECEPTOR BY DIV. 22.
3. REFER TO PRINCIPAL'S OFFICE, 12 FOR TYPICAL OFFICE LAYOUT.
4. REFER TO CONF 180 ON DWG M1-1-1A FOR TYPICAL CONFERENCE ROOM LAYOUT.
5. REFER TO CIVIL ON DWG M1-1-1A FOR TYPICAL CLASSROOM LAYOUT.
6. 18x18 KITCHEN EXHAUST TO KITCHEN EXHAUST HOOD.
7. 18x18 EXHAUST TO DISHWASHER.
8. PROVIDE VAV TERMINAL WITH ELECTRIC REHEAT COIL. PROVIDE BRANCH DUCTWORK FROM RTU2 MAIN TO VAV TERMINAL UNIT AND SUPPLY DUCTWORK FROM VAV DISCHARGE TO CEILING DIFFUSER.
9. PROVIDE EXHAUST BRANCH DUCTWORK FROM NEAREST HRU EXHAUST MAIN TO VAV EXHAUST TERMINAL AND EXHAUST DUCTWORK FROM A CEILING GRILLE IN EACH SPACE TO VAV TERMINAL.
10. 40x12 ACoustically LINED TRANSFER DUCT.
11. 30x12 ACoustically LINED TRANSFER DUCT.
12. 12x10 ACoustically LINED TRANSFER DUCT.
13. 30x18 SA DUCT UP INTO INTERSTITIAL SPACE. PROVIDE FIRE DAMPER IN VERTICAL WHERE DUCT PENETRATES SLAB.
14. 26x18 SA DUCT UP INTO INTERSTITIAL SPACE. PROVIDE FIRE DAMPER IN VERTICAL WHERE DUCT PENETRATES SLAB.

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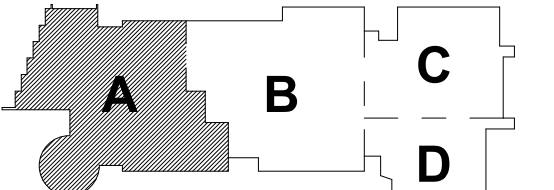
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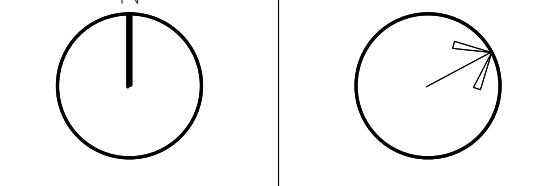
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KEY PLAN

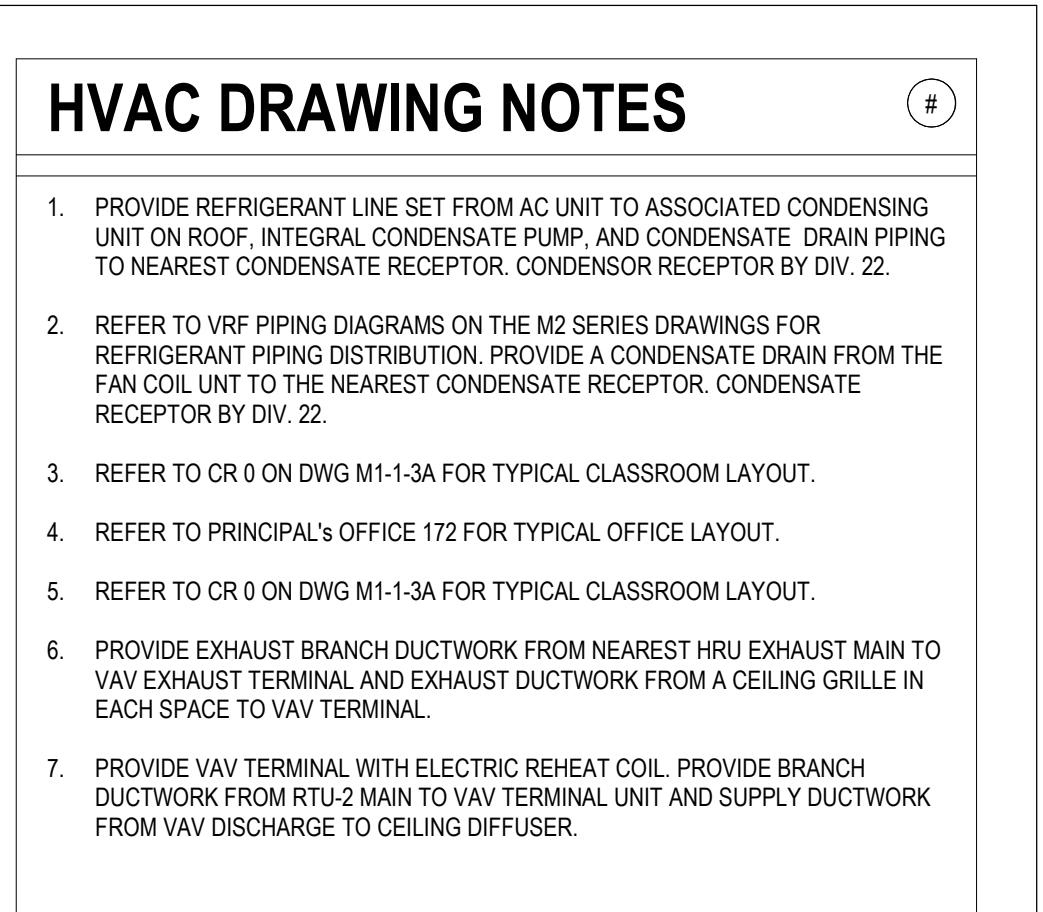
PROJECT NORTH MAGNETIC NORTH



MECHANICAL
FIRST FLOOR
PLAN - AREA A

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022

M1-1-1A



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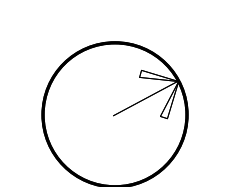
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A diagram of a four-room house. The house is divided into four rooms labeled A, B, C, and D. Room C is shaded gray. The layout shows room A on the left, room B in the middle, room C on the right, and room D below room C.

PROJECT NORTH	MAGNETIC NORTH
---------------	----------------

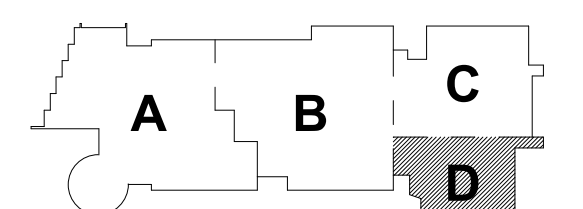


M1-1-1C

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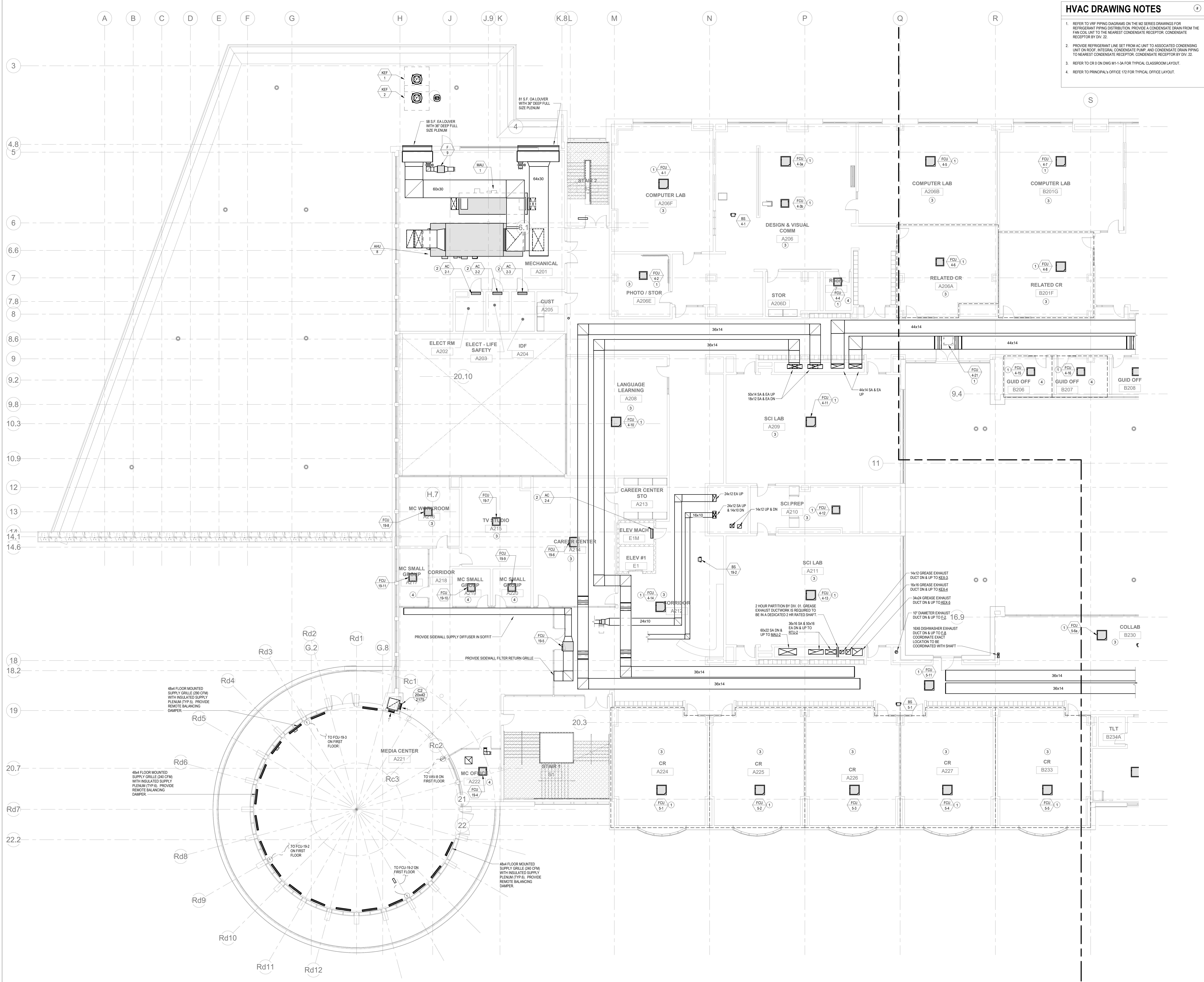
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PROJECT NORTH	MAGNETIC NORTH
---------------	----------------



M1-1-1C



- ### HVAC DRAWING NOTES
1. REFER TO VRF PIPING DIAGRAMS ON THE M2 SERIES DRAWINGS FOR REFRIGERANT PIPING DISTRIBUTION. PROVIDE A CONDENSATE DRAIN FROM THE FAN COIL UNIT TO THE NEAREST CONDENSATE RECEPTOR. CONDENSATE RECEPTOR BY DIV. 22.
 2. PROVIDE REFRIGERANT LINE SET FROM AC UNIT TO ASSOCIATED CONDENSING UNIT ON ROOF. INTEGRAL CONDENSATE PUMP AND CONDENSATE DRAIN PIPING TO NEAREST CONDENSATE RECEPTOR. CONDENSATE RECEPTOR BY DIV. 22.
 3. REFER TO CR 0 ON DWG M1-1-3A FOR TYPICAL CLASSROOM LAYOUT.
 4. REFER TO PRINCIPAL'S OFFICE 172 FOR TYPICAL OFFICE LAYOUT.

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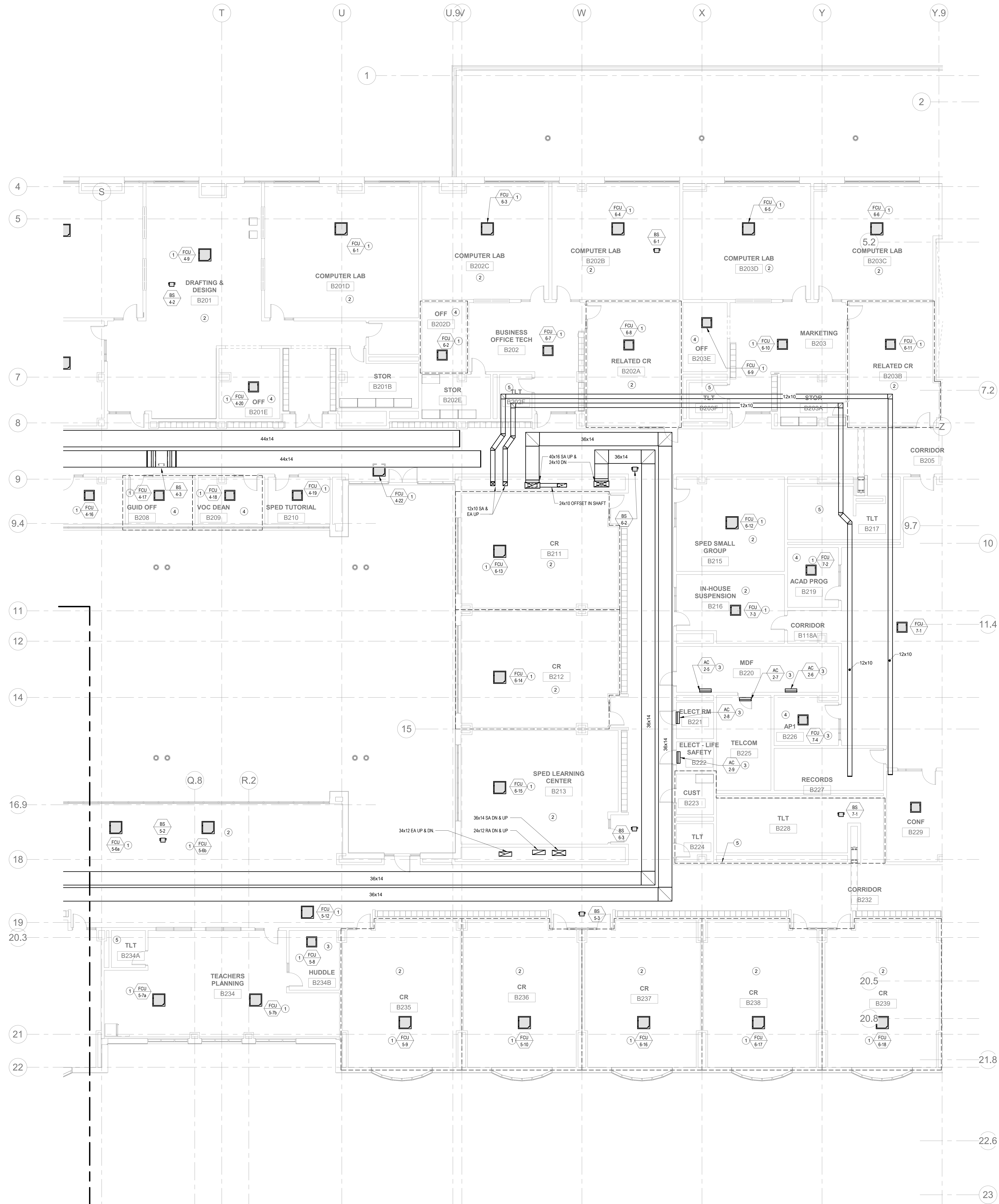
KEY PLAN

PROJECT NORTH
MAGNETIC NORTH

**MECHANICAL
SECOND FLOOR
PLAN - AREA A**

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022

M1-1-2A



HVAC DRAWING NOTES

1. REFER TO VRF PIPING DIAGRAMS ON THE M2 SERIES DRAWINGS FOR REFRIGERANT PIPING DISTRIBUTION. PROVIDE A CONDENSATE DRAIN FROM THE FAN COIL UNIT TO THE NEAREST CONDENSATE RECEPTOR. CONDENSATE RECEPTOR BY DIV. 22.
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4. REFER TO PRINCIPAL'S OFFICE 172 FOR TYPICAL OFFICE LAYOUT.
5. PROVIDE AN EXHAUST VAV TERMINAL UNIT WITH EXHAUST BRANCH DUCTWORK FROM NEAREST THRU MAIN AND FROM TERMINAL UNIT TO CEILING GRILLE IN EACH SPACE.

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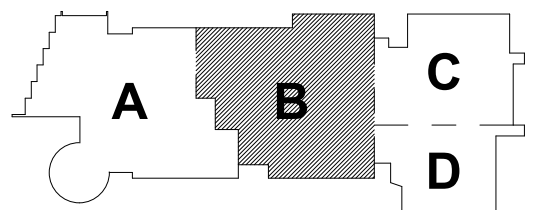
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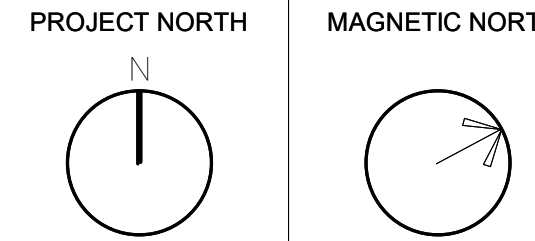
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August 4th, 2022



KEY PLAN



MECHANICAL SECOND FLOOR PLAN - AREA B

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022

M1-1-2B

④

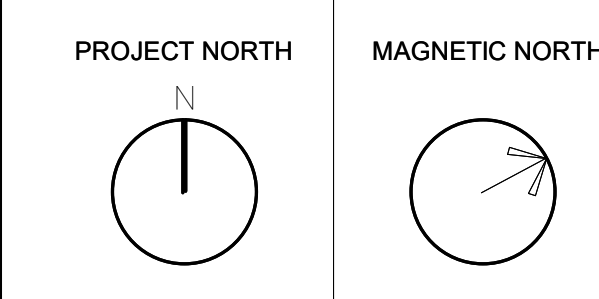
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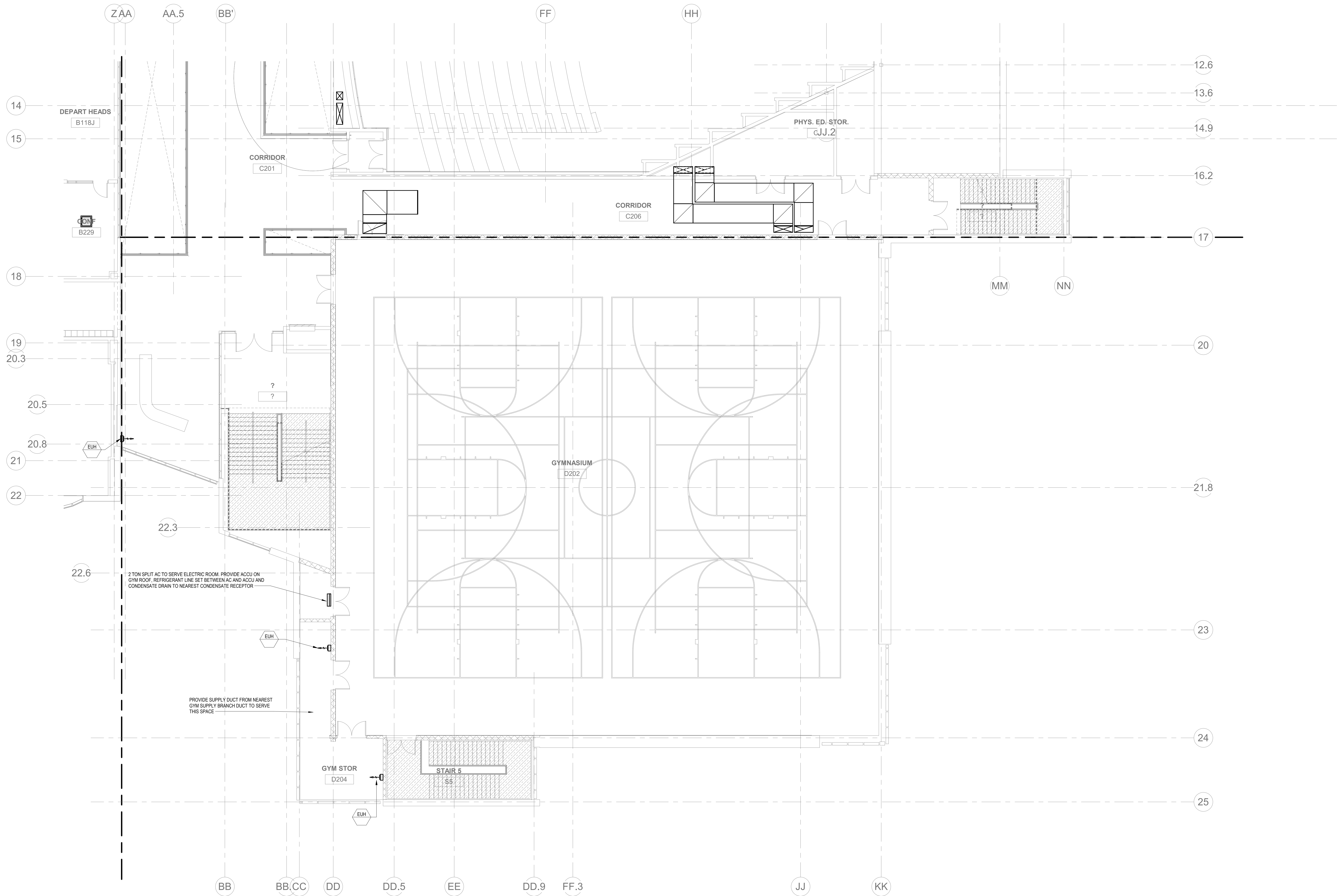


Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022

M1-1-20

HVAC DRAWING NOTES

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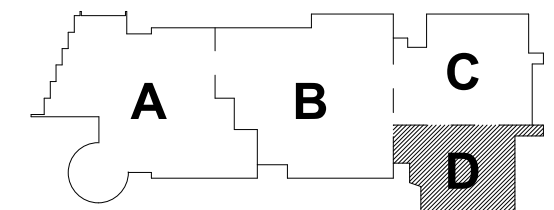


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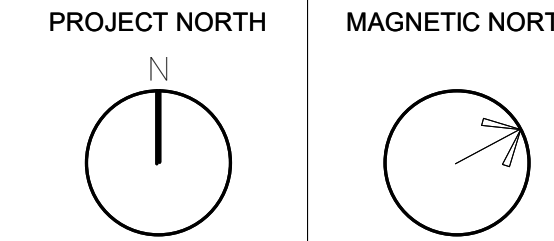
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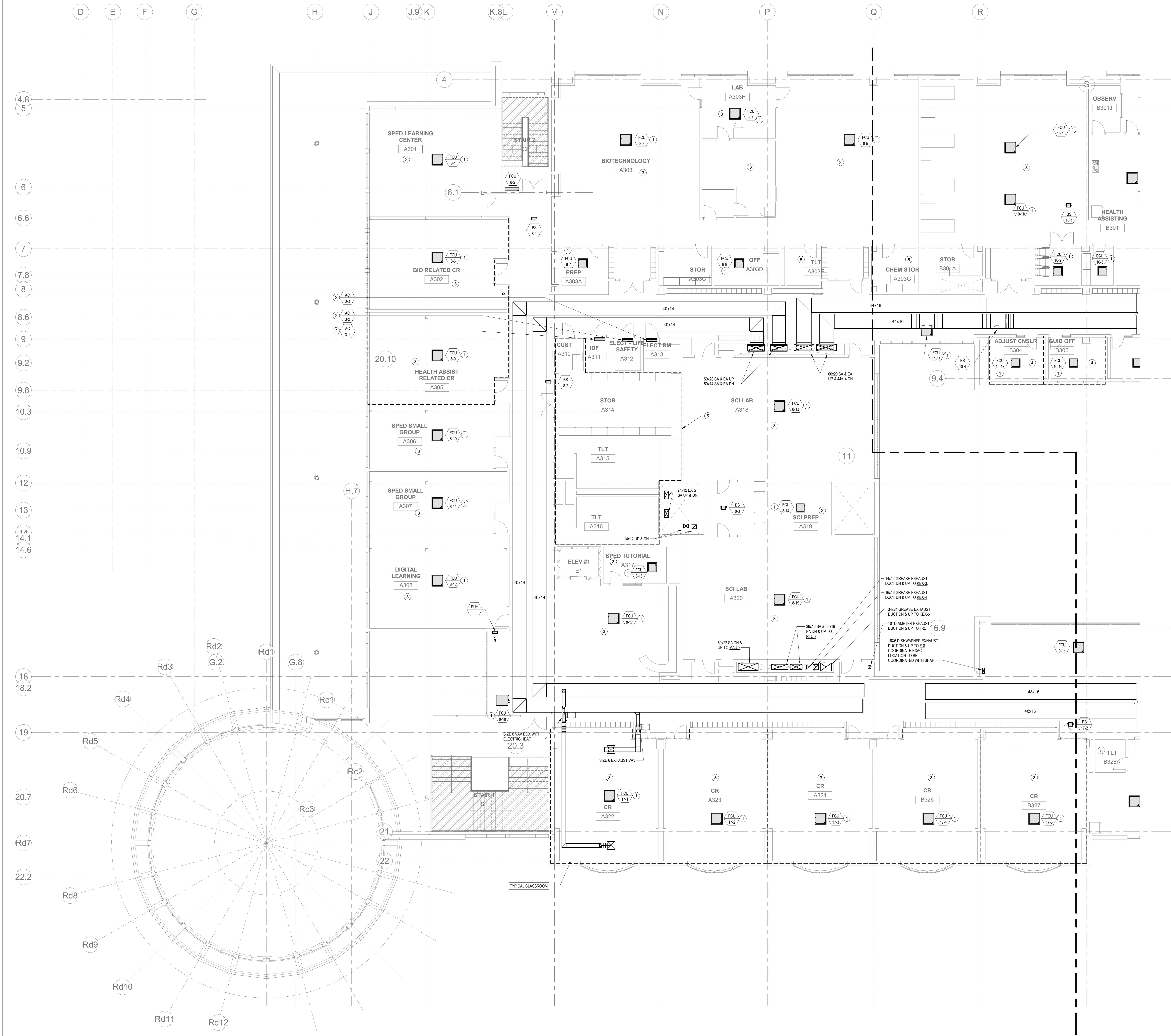
KEY PLAN



MECHANICAL
SECOND FLOOR
PLAN - AREA D

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022

M1-1-2D



HVAC DRAWING NOTES

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3. REFER TO CR 0 ON DWG M1-1-3A FOR TYPICAL CLASSROOM LAYOUT.
4. REFER TO PRINCIPAL'S OFFICE 172 FOR TYPICAL OFFICE LAYOUT.
5. PROVIDE EXHAUST VAV TERMINAL UNIT WITH BRANCH DUCTWORK FROM NEAREST HSI EXHAUST MAIN AND DUCTWORK FROM VAV TERMINAL TO EXHAUST GRILLE IN EACH SPACE.

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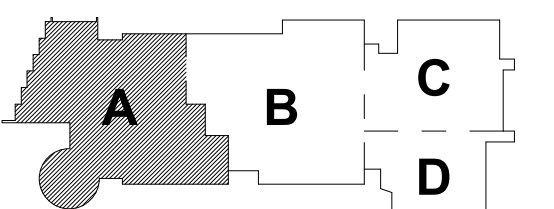
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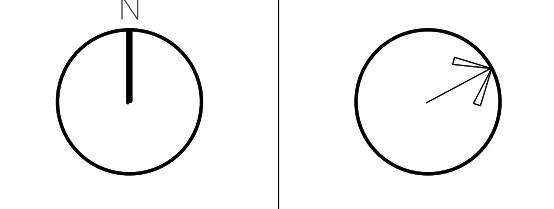
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SUBMISSION
August 4th, 2022



KEY PLAN

PROJECT NORTH
MAGNETIC NORTH



MECHANICAL
THIRD FLOOR
PLAN - AREA A

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022
M1-1-3A

HVAC DRAWING NOTES

1. REFER TO VRF PIPING DIAGRAMS ON THE M2 SERIES DRAWINGS FOR REFRIGERANT PIPING DISTRIBUTION. PROVIDE A CONDENSATE DRAIN FROM THE FAN COIL UNIT TO THE NEAREST CONDENSATE RECEPTOR. CONDENSATE RECEPTOR BY DIV. 22.
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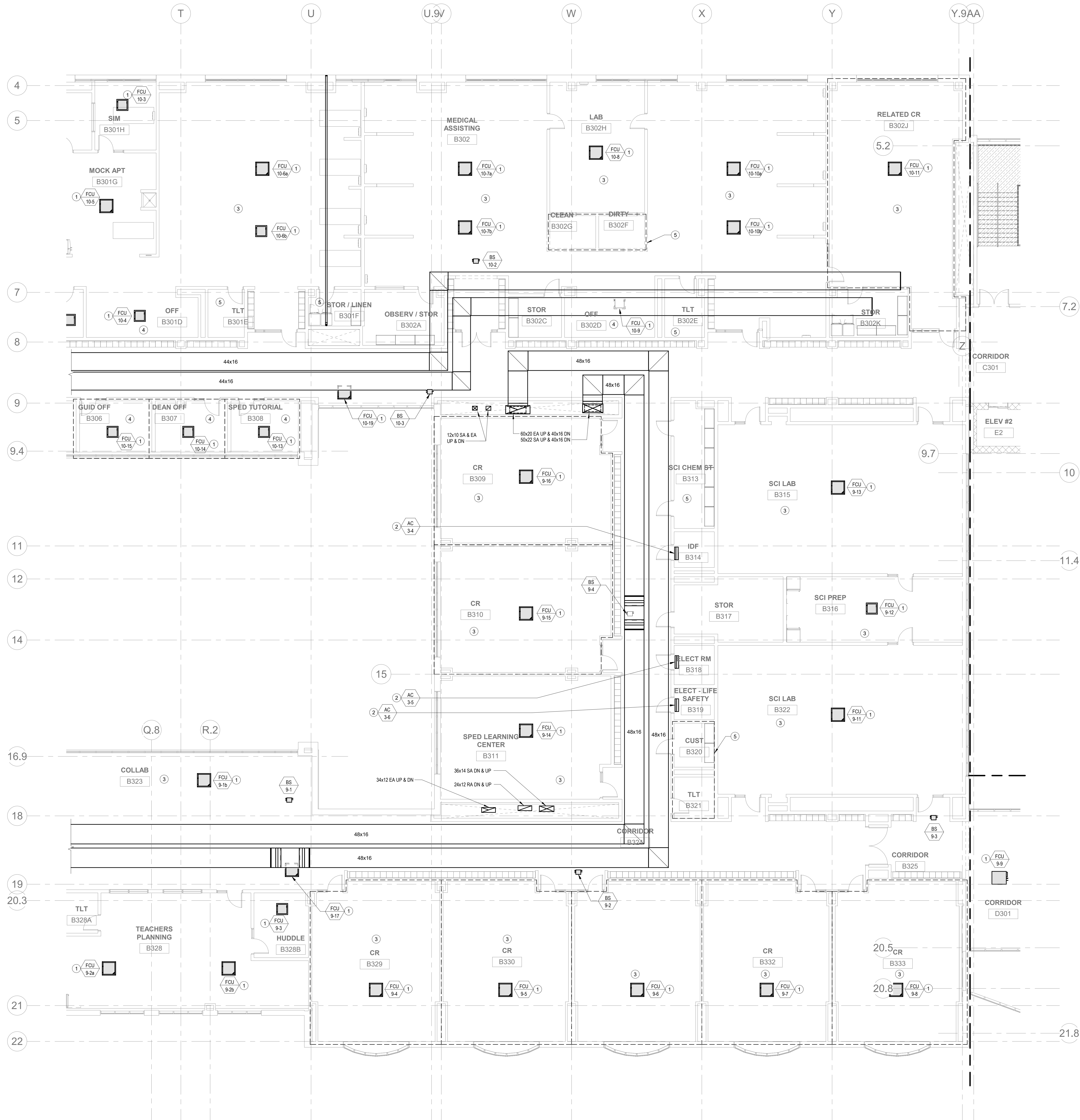
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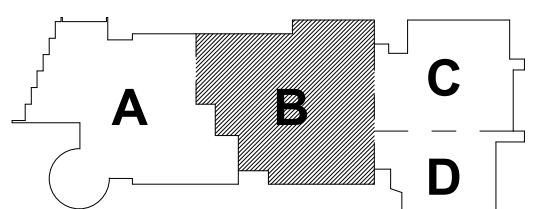
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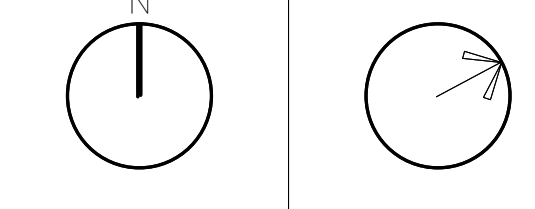
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KEY PLAN

PROJECT NORTH MAGNETIC NORTH



MECHANICAL
THIRD FLOOR
PLAN - AREA B

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022

M1-1-3B

HVAC DRAWING NOTES

1. REFER TO VRF PIPING DIAGRAMS ON THE M2 SERIES DRAWINGS FOR REFRIGERANT PIPING DISTRIBUTION. PROVIDE A CONDENSATE DRAIN FROM THE FAN COIL UNIT TO THE NEAREST CONDENSATE RECEPTOR. CONDENSATE RECEPTOR BY DIV. 22.
2. PROVIDE REMOTE OPERATED BALANCING DAMPER. REFER TO DETAIL XX ON DWG XX.

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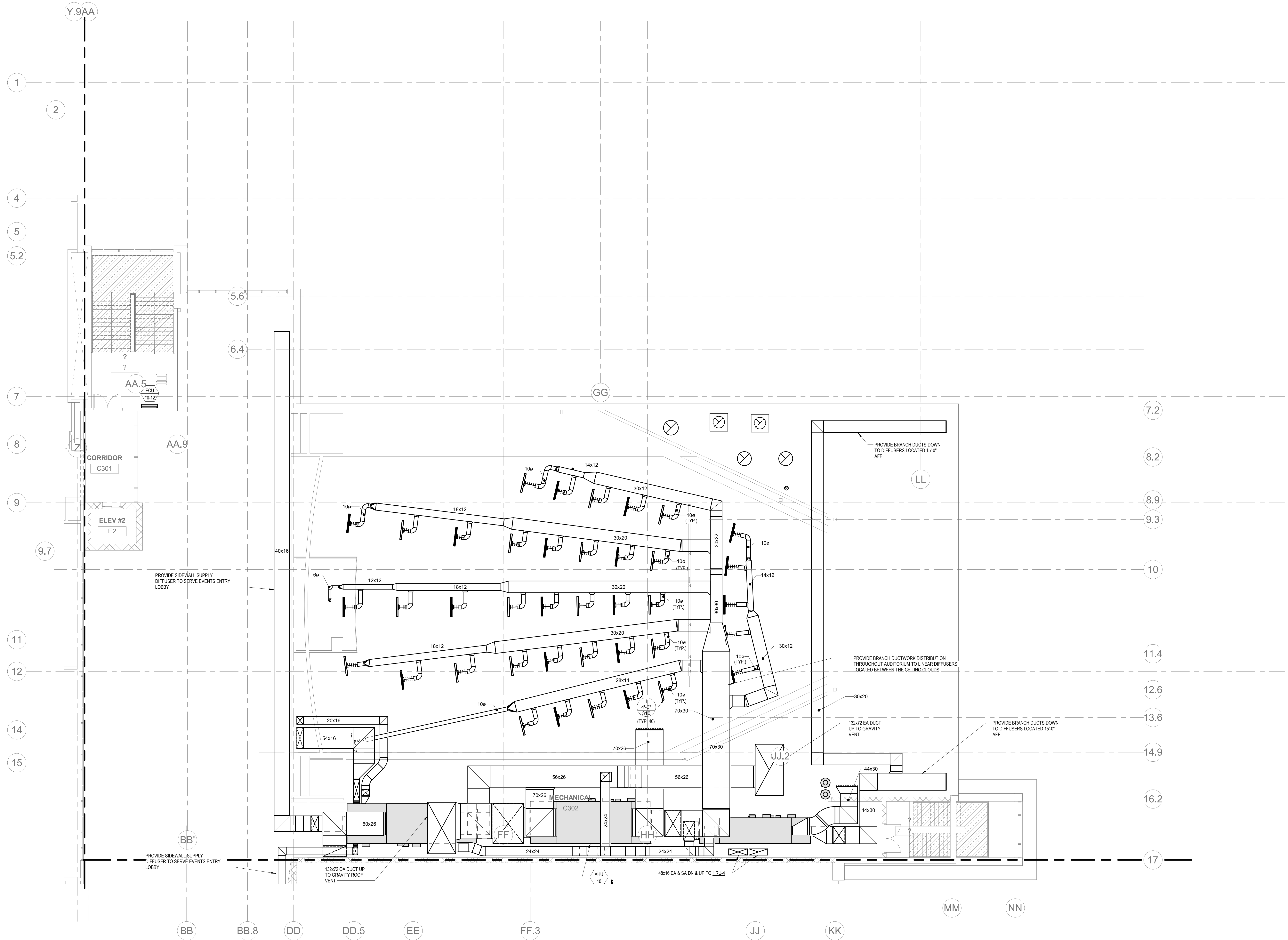
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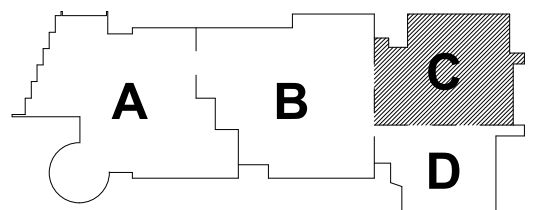
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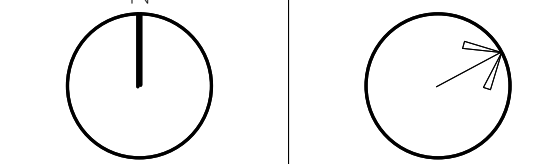
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KEY PLAN

PROJECT NORTH
MAGNETIC NORTH



MECHANICAL
THIRD FLOOR
PLAN - AREA C

Scale: 1/8" = 1'-0"
Job No.: 20022
Drawn By: DRA
Date: August 4th, 2022

M1-1-3C

HVAC DRAWING NOTES

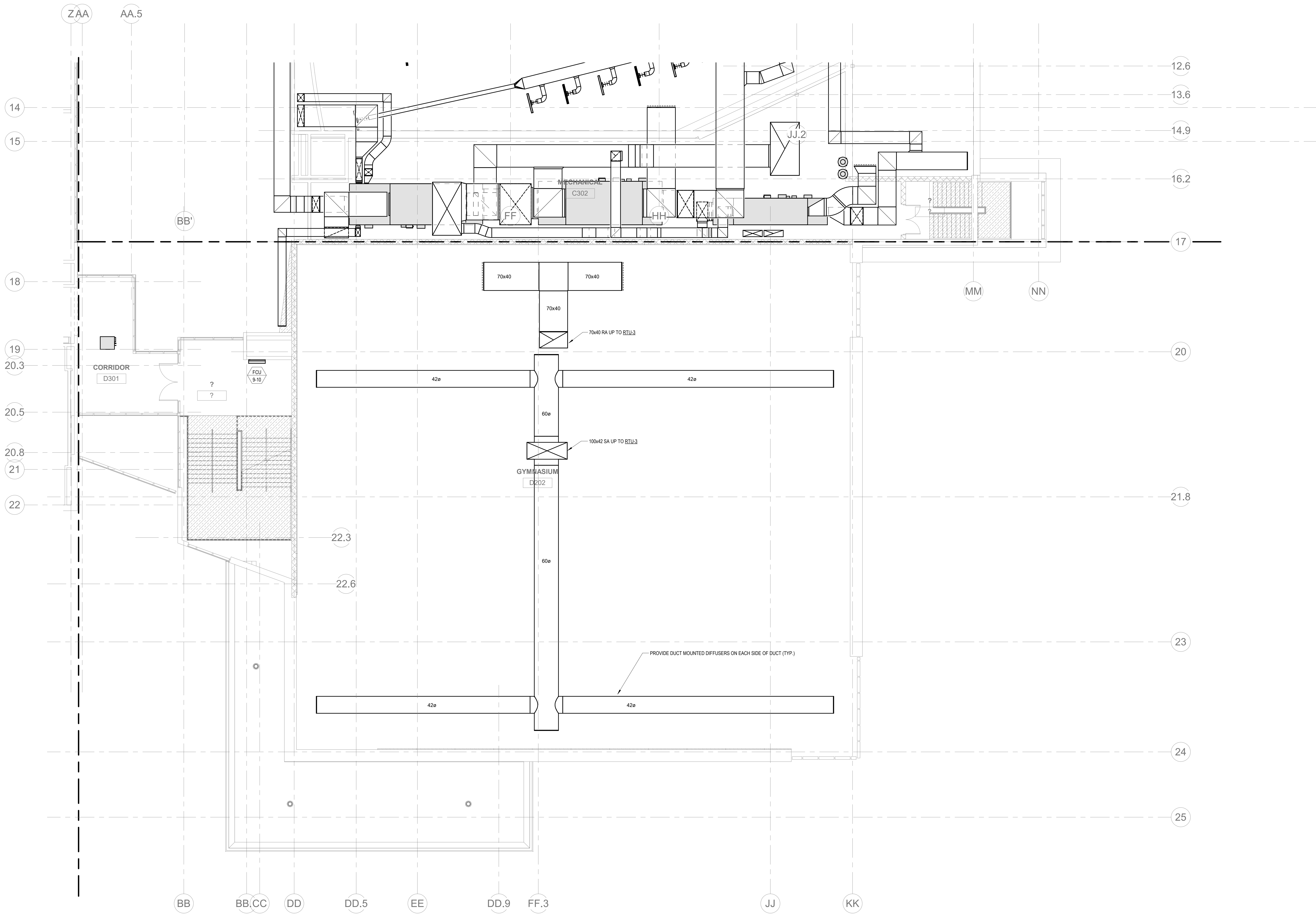
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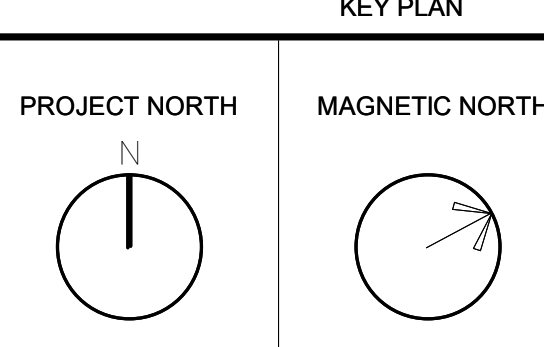
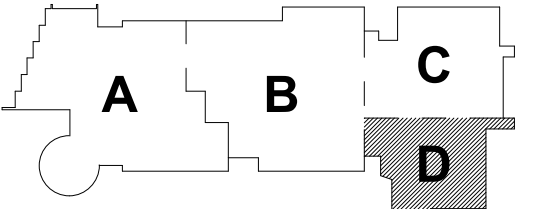
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MECHANICAL
THIRD FLOOR
PLAN - AREA D

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022

M1-1-3D

HVAC DRAWING NOTES

1. REFER TO VRF PIPING DIAGRAMS ON THE M2 SERIES DRAWINGS FOR REFRIGERANT PIPING DISTRIBUTION. PROVIDE A CONDENSATE DRAIN FROM THE FAN COIL UNIT TO THE NEAREST CONDENSATE RECEPTOR. CONDENSATE RECEPTOR BY DIV. 22.
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3. REFER TO CR 0 ON DWG M1-1-3A FOR TYPICAL CLASSROOM LAYOUT.
4. REFER TO PRINCIPAL'S OFFICE 172 FOR TYPICAL OFFICE LAYOUT.
5. REFER TO CONF 180 ON DWG M1-1-1A FOR TYPICAL CONFERENCE ROOM LAYOUT.
6. PROVIDE EXHAUST VAV TERMINAL UNIT WITH BRANCH DUCTWORK FROM NEAREST HRU EXHAUST MAIN AND DUCTWORK FROM VAV TERMINAL TO EXHAUST GRILLE IN EACH SPACE.

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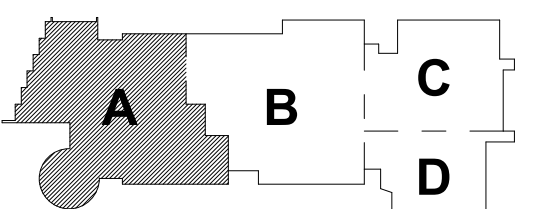
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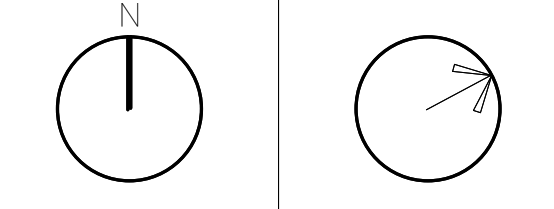
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KEY PLAN

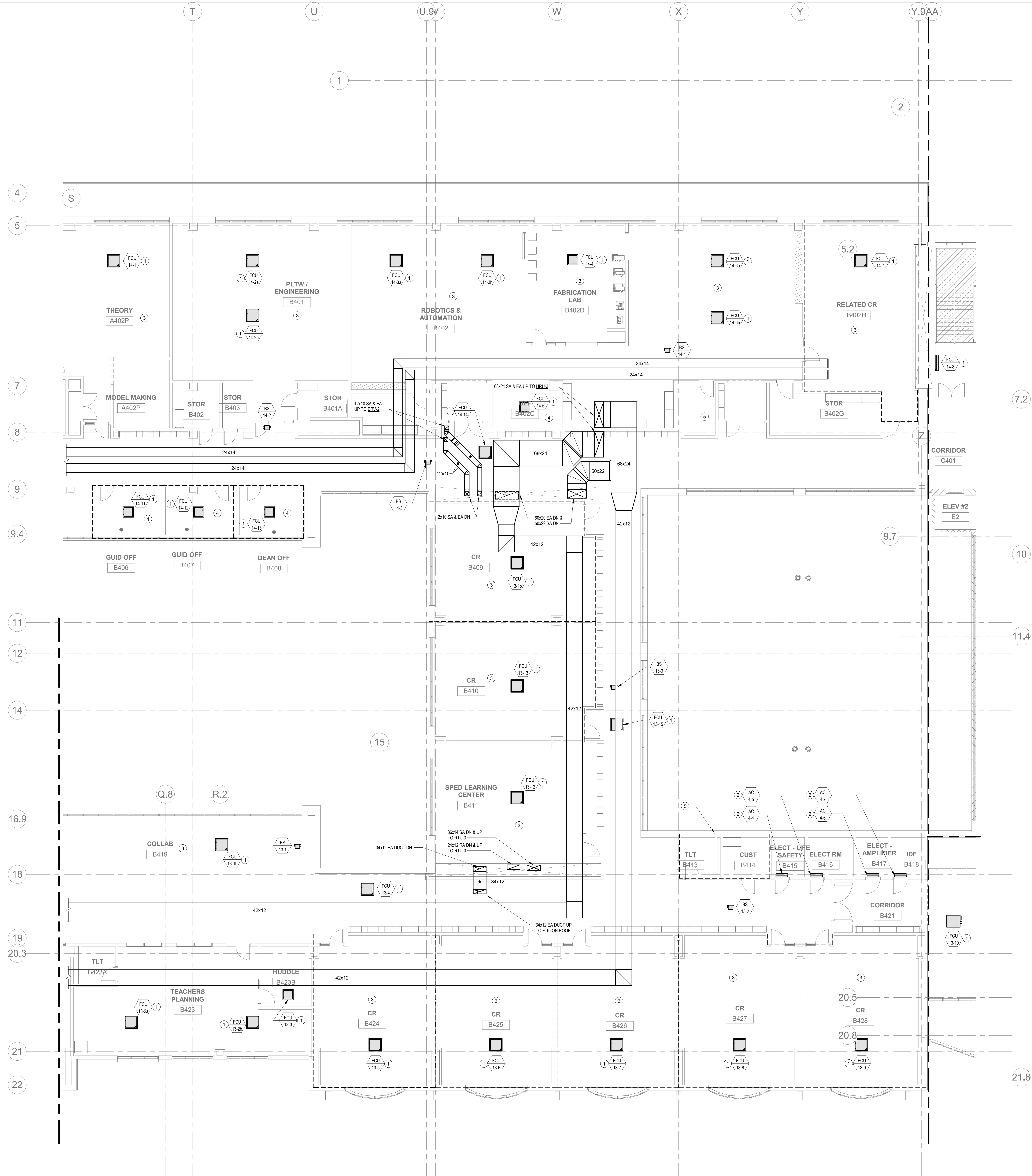
PROJECT NORTH MAGNETIC NORTH



MECHANICAL
FOURTH FLOOR
PLAN - AREA A

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022

M1-1-4A



HVAC DRAWING NOTES

1. REFER TO VRF PIPING DIAGRAMS ON THE M2 SERIES DRAWINGS FOR REFRIGERANT PIPING DISTRIBUTION. PROVIDE A CONDENSATE DRAIN FROM THE FAN COIL UNIT TO THE NEAREST CONDENSATE RECEPTOR. CONDENSATE RECEPTOR BY DIV. 22.
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4. REFER TO PRINCIPAL'S OFFICE 172 FOR TYPICAL OFFICE LAYOUT.
5. PROVIDE EXHAUST VAV TERMINAL UNIT WITH BRANCH DUCTWORK FROM NEAREST HSI EXHAUST MAIN AND DUCTWORK FROM VAV TERMINAL TO EXHAUST GRILLE IN EACH SPACE.



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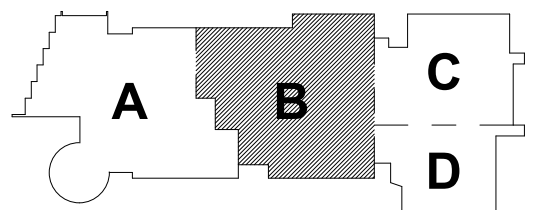
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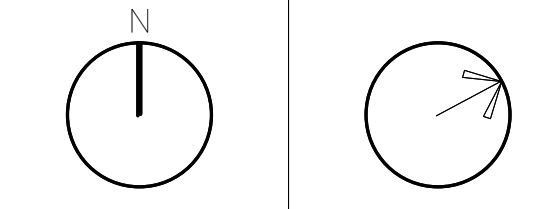
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PROJECT NORTH
MAGNETIC NORTH



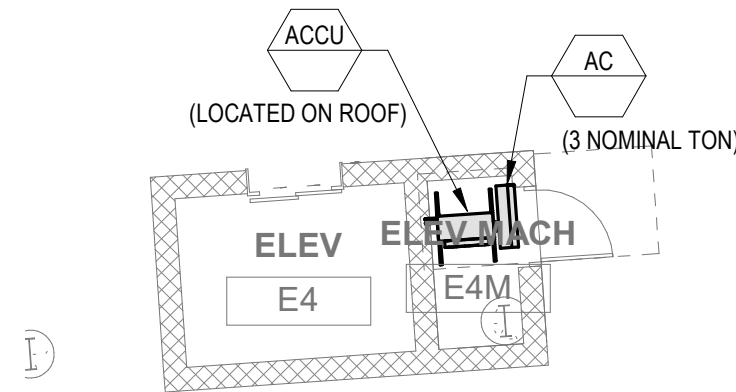
MECHANICAL
FOURTH FLOOR
PLAN - AREA B

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022

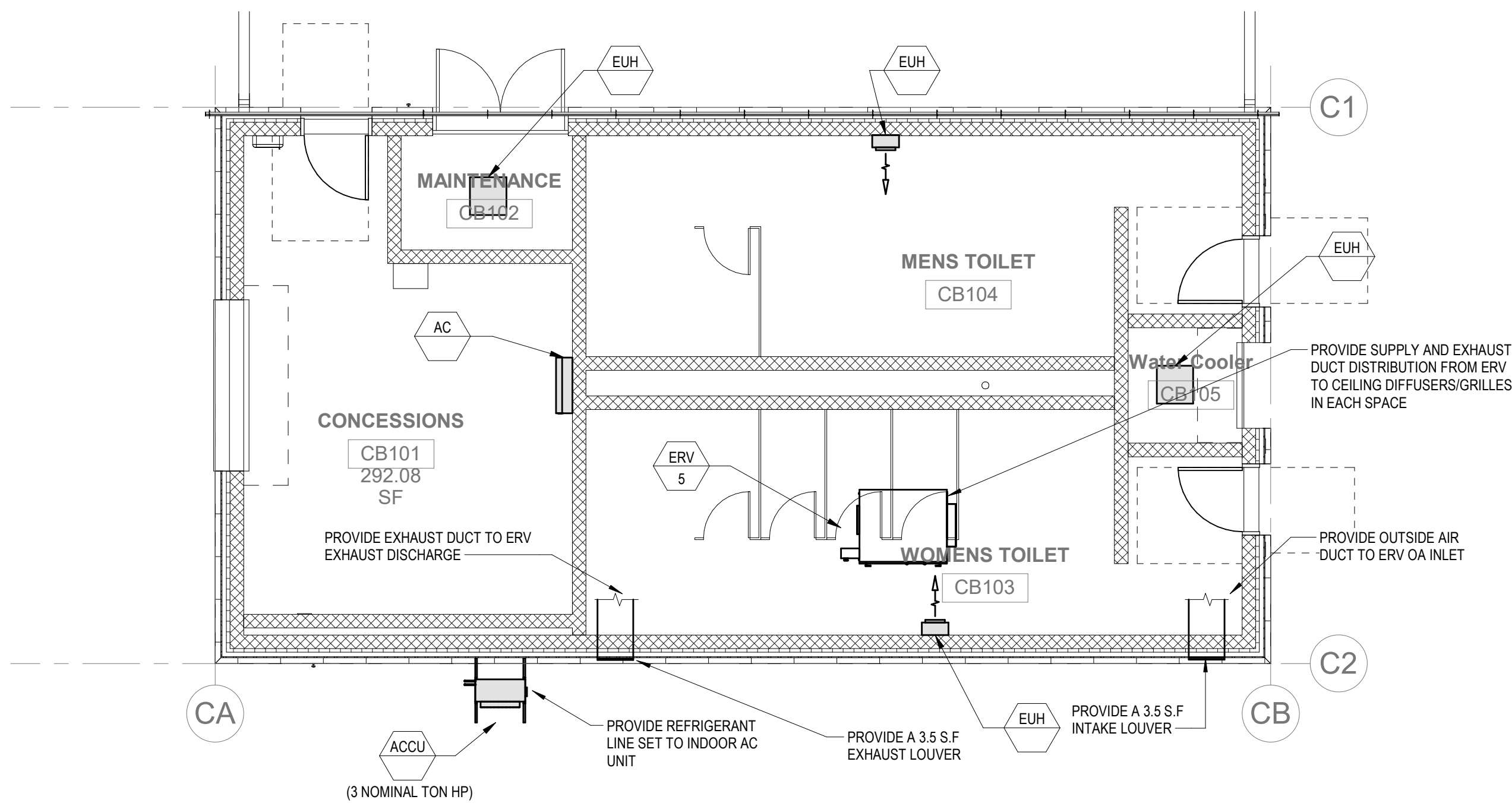
M1-1-4B

HVAC DRAWING NOTES

1.



2 MECHANICAL Stadium Elevator
1/8" = 1'-0"



1 MECHANICAL Concessions Building
3/16" = 1'-0"



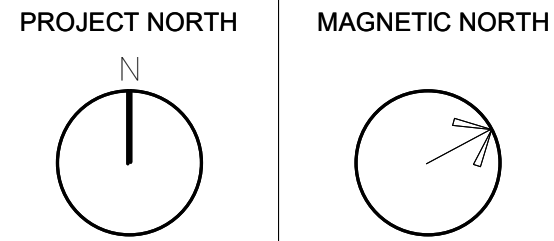
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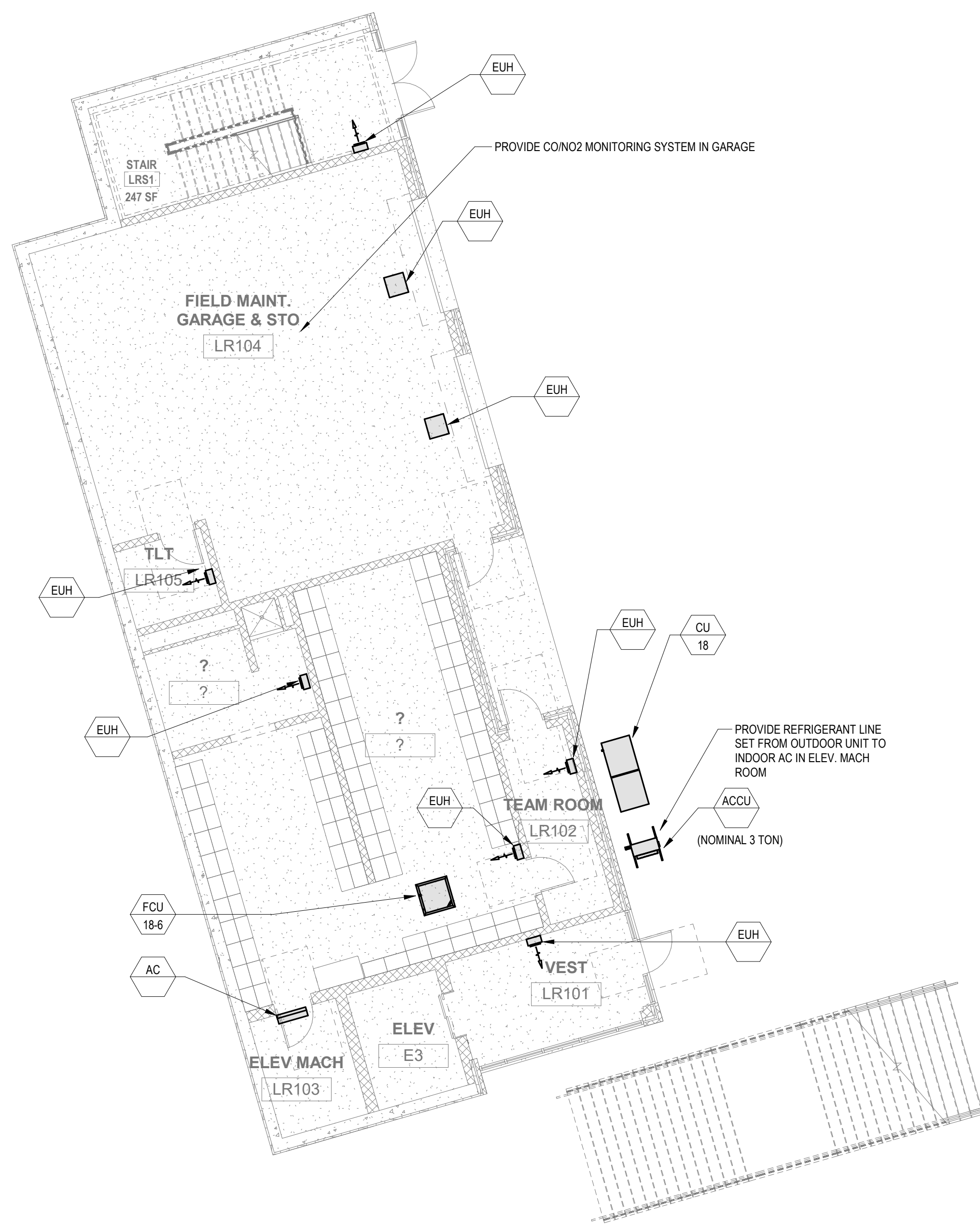
MECHANICAL
CONCESSION
BUILDING PLAN

Scale: As indicated
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022
M1-1-CB

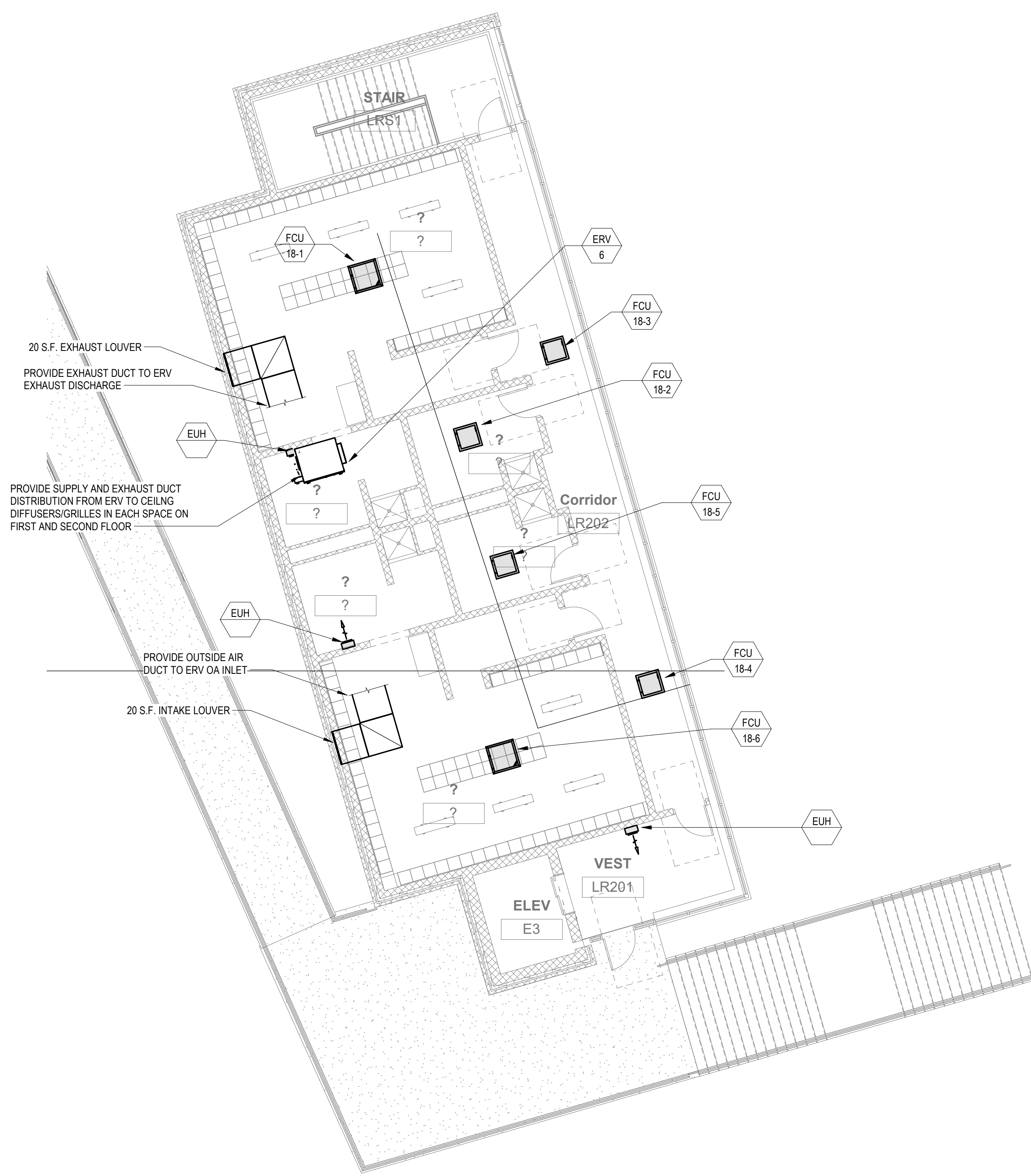
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HVAC DRAWING NOTES

1.



MECHANICAL Locker Building First Floor



MECHANICAL Locker Building Second Level

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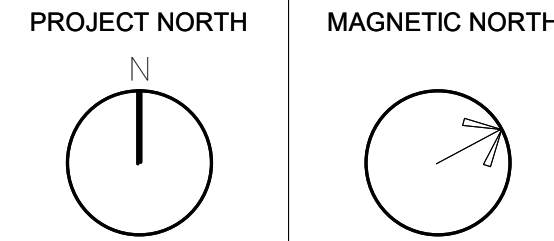
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MECHANICAL
LOCKER
BUILDING PLAN

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022

M1-1-LB

HVAC DRAWING NOTES

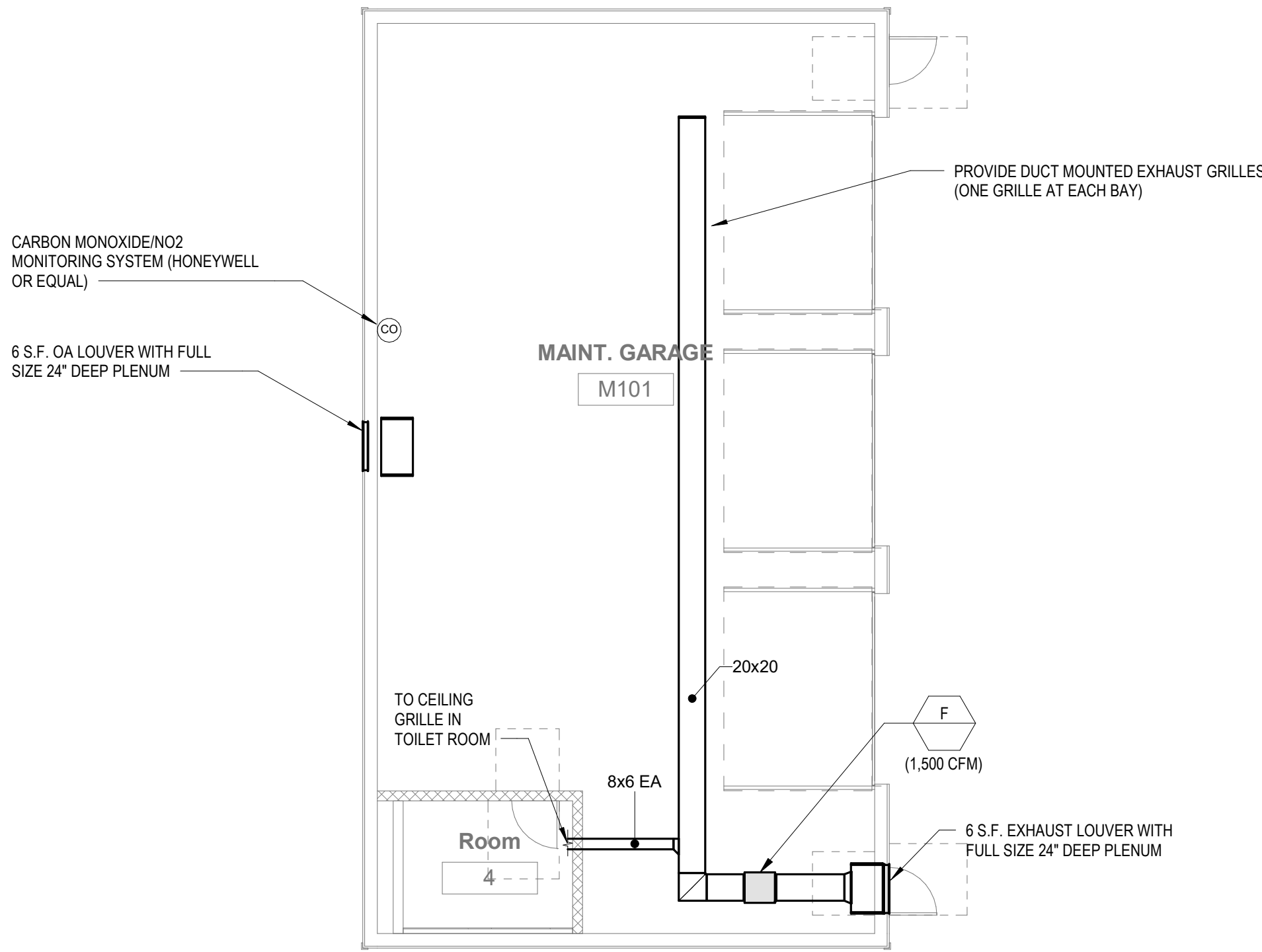
1. REFER TO VRF PIPING DIAGRAMS ON THE M2 SERIES DRAWINGS FOR REFRIGERANT PIPING DISTRIBUTION. PROVIDE A CONDENSATE DRAIN FROM THE FAN COIL UNIT TO THE NEAREST CONDENSATE RECEPTOR. CONDENSATE RECEPTOR BY DIV. 22.

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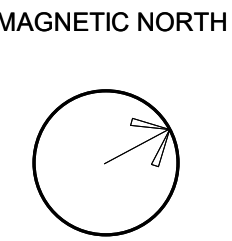
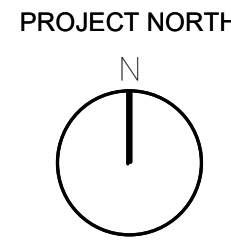


MECHANICAL Maintenance Building Plan
1/8" = 1'-0"

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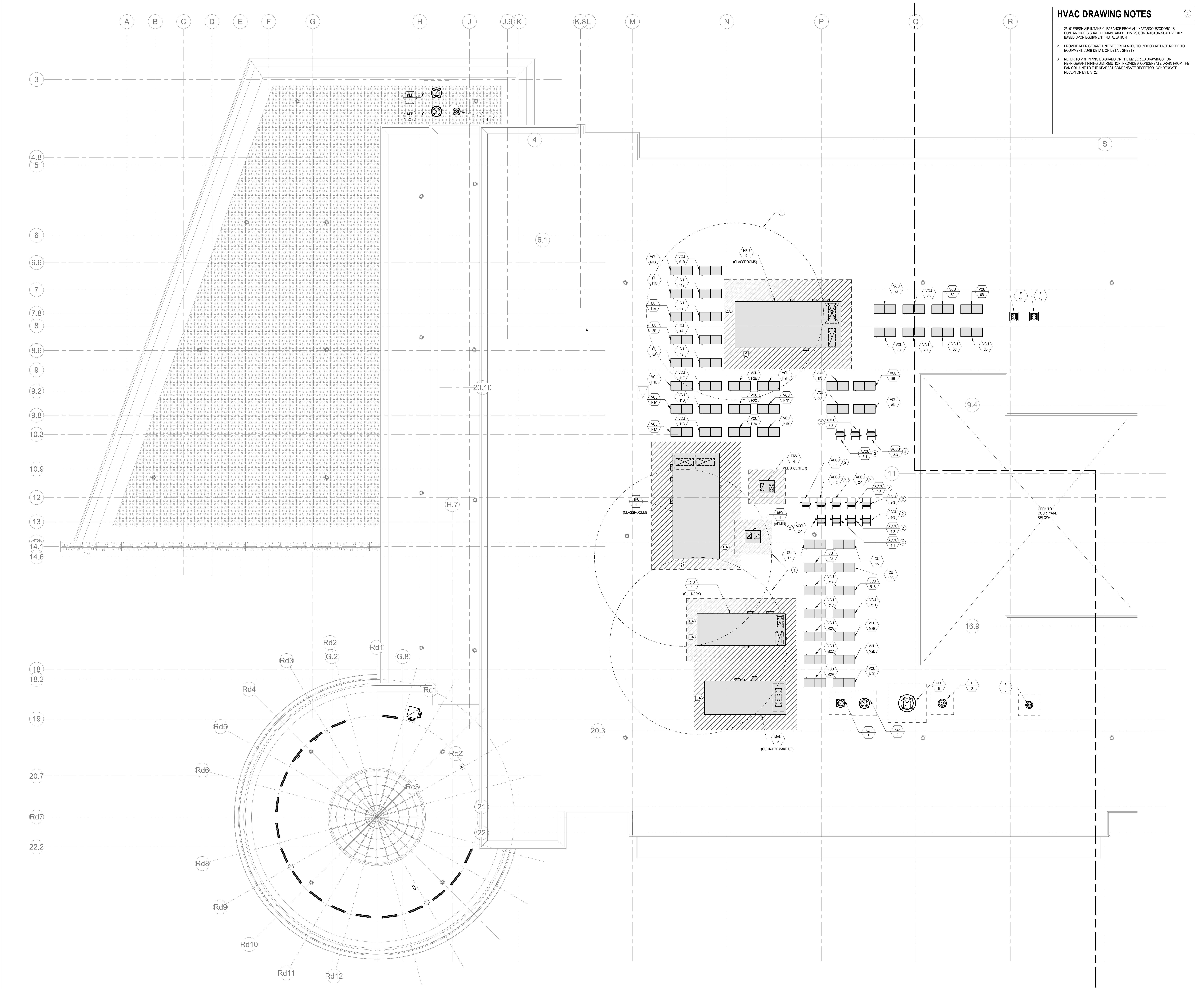
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MECHANICAL
MAINTENANANCE
BUILDING PLAN

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022

M1-1-MB



HVAC DRAWING NOTES

1.

25'-0" FRESH AIR INTAKE CLEARANCE FROM ALL HAZARDOUS/ODOROUS CONTAMINATES SHALL BE MAINTAINED. DIV. 23 CONTRACTOR SHALL VERIFY BASED UPON EQUIPMENT INSTALLATION.

2.

PROVIDE REFRIGERANT LINE SET FROM ACCU TO INDOOR AC UNIT. REFER TO EQUIPMENT CURB DETAIL ON DETAIL SHEETS.

3.

REFER TO VRF PIPING DIAGRAMS ON THE M2 SERIES DRAWINGS FOR REFRIGERANT PIPING DISTRIBUTION. PROVIDE A CONDENSATE DRAIN FROM THE FAN COIL UNIT TO THE NEAREST CONDENSATE RECEPTOR. CONDENSATE RECEPTOR BY DIV. 22.

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KEY PLAN

PROJECT NORTH
MAGNETIC NORTH

MECHANICAL ROOF PLAN - AREA A

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022

M1-2-1A

④

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A diagram of a cell with four regions labeled A, B, C, and D. Region B is shaded.

KEY PLAN

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022

M1-2-1B

HVAC DRAWING NOTES

1. REFER TO VRF PIPING DIAGRAMS ON THE M2 SERIES DRAWINGS FOR REFRIGERANT PIPING DISTRIBUTION. PROVIDE A CONDENSATE DRAIN FROM THE FAN COIL UNIT TO THE NEAREST CONDENSATE RECEPTOR. CONDENSATE RECEPTOR BY DW. 22.
2. PROVIDE REFRIGERANT LINE SET FROM ACCU TO INDOOR AC UNIT. REFER TO EQUIPMENT CURB DETAIL TO DETAIL SHEETS.

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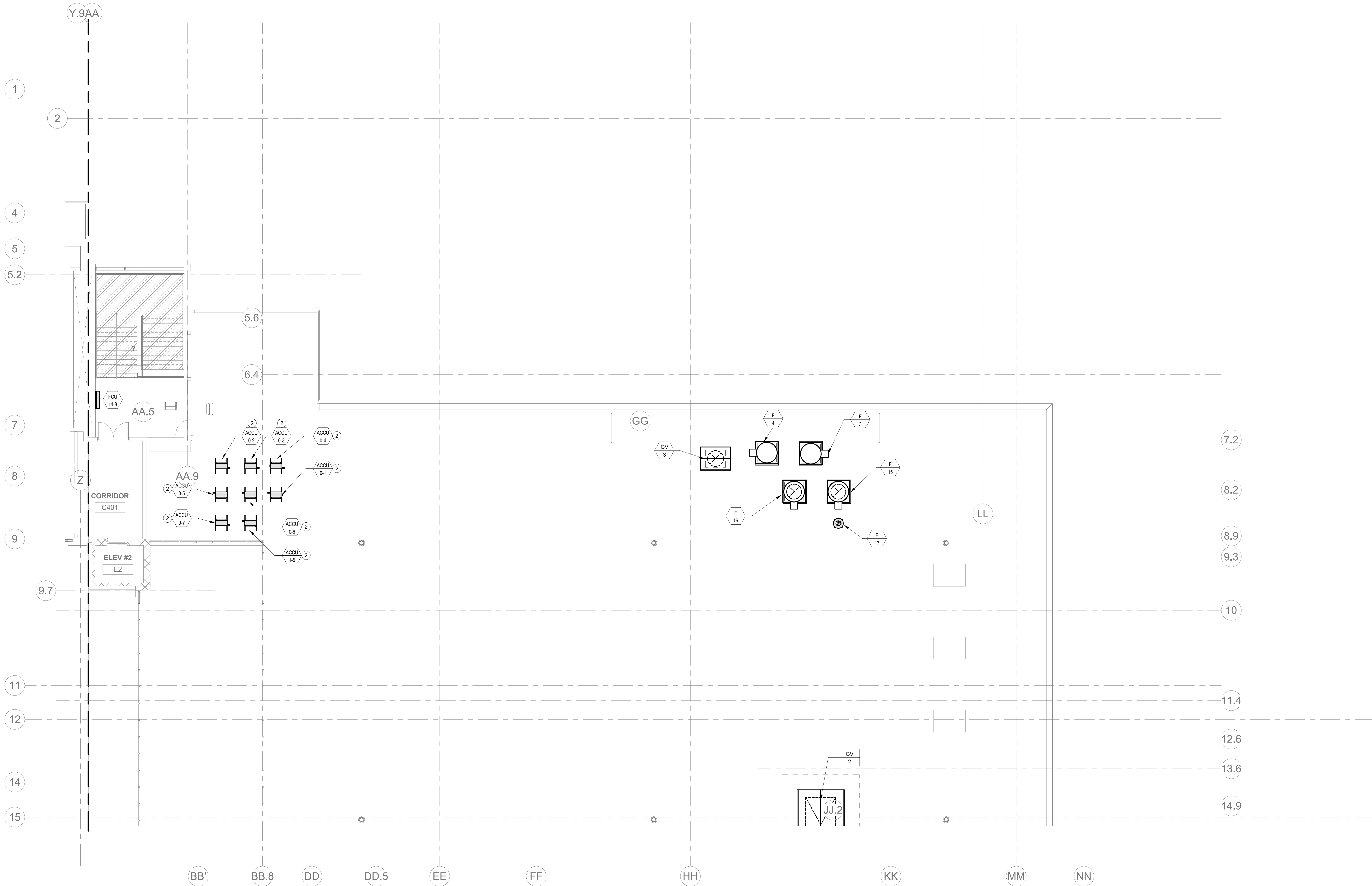
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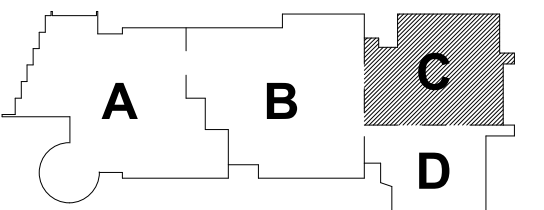
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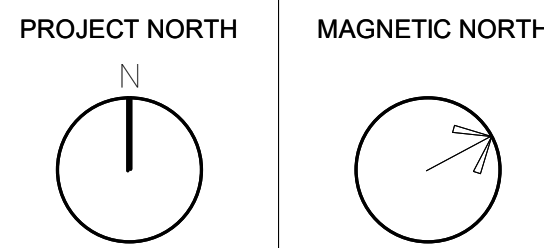
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KEY PLAN



**MECHANICAL
ROOF PLAN -
AREA C**

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022

M1-2-1C

④

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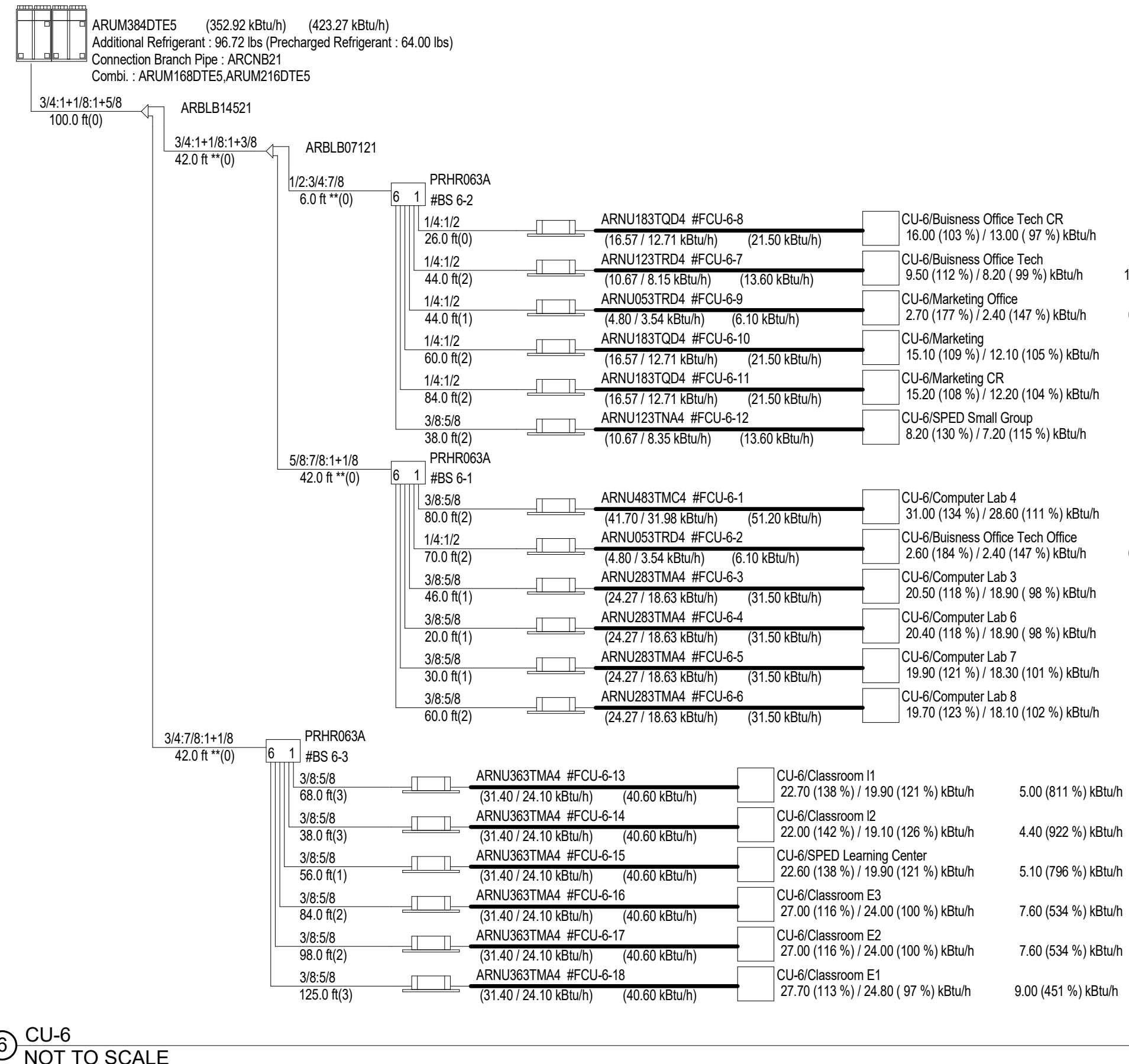
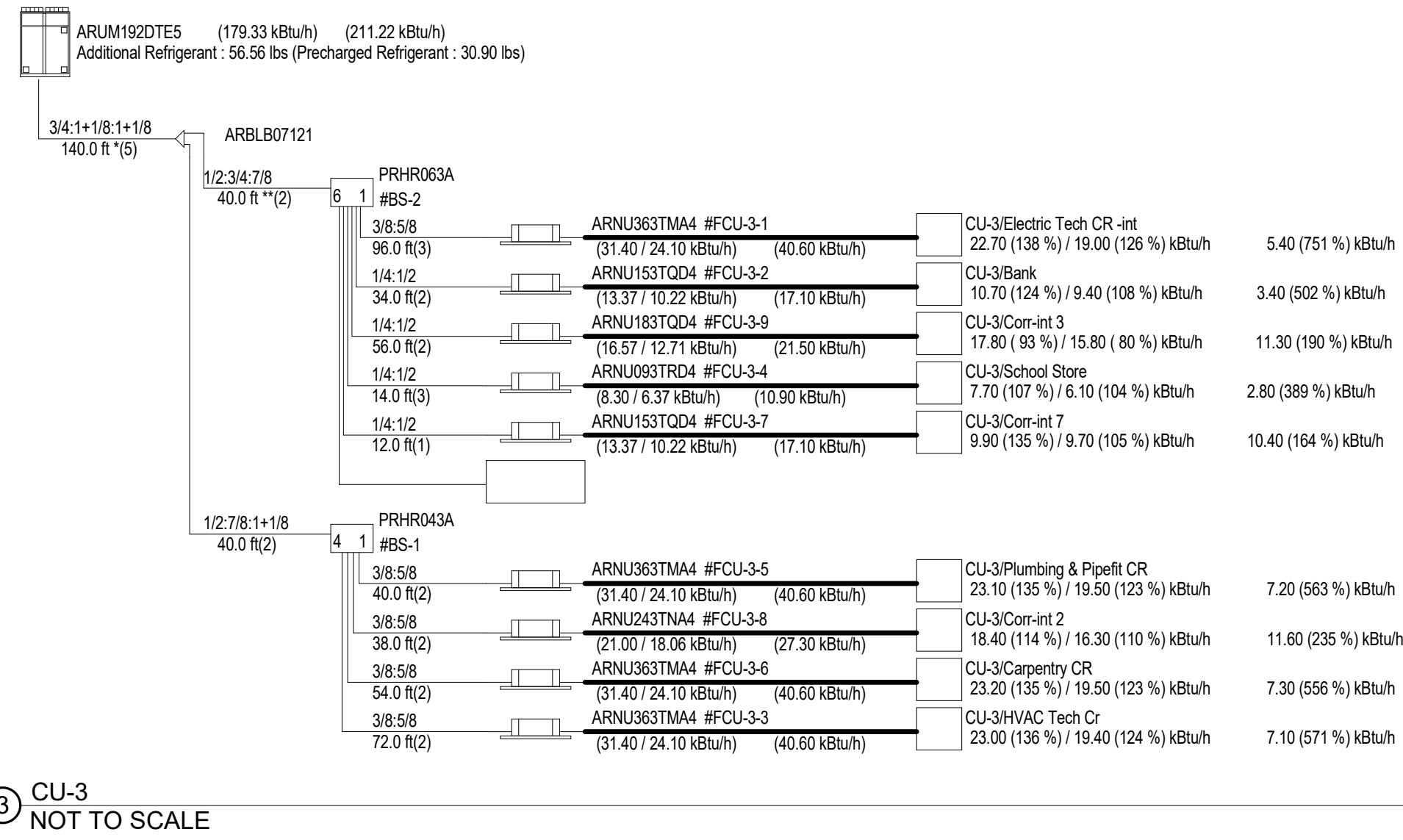
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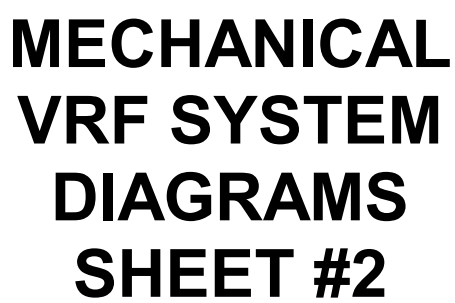
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Date: August 4th, 2022

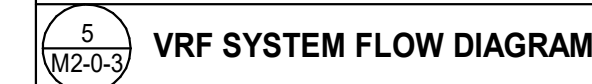
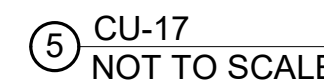
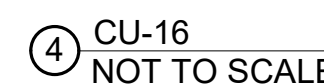
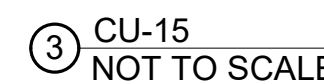
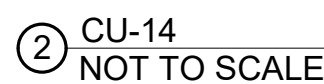
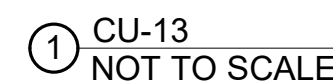
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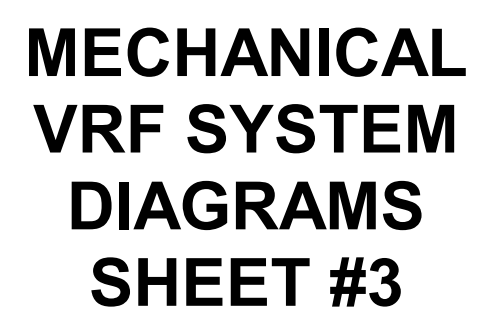
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VRV SYSTEM DIAGRAM NOTES

1. PIPING SIZES AND OVERALL LENGTHS AS SHOWN IN THESE DIAGRAMS SHALL BE FIELD VERIFIED BY THE HVAC CONTRACTOR AND THE COORDINATOR SHALL BE NOTIFIED BY THE HVAC CONTRACTOR AND THE VRV SYSTEM EQUIPMENT MANUFACTURER PRIOR TO THE START OF THE INSTALLATION BY THE HVAC CONTRACTOR.
2. YBRANCH PIPING KIT, FURNISHED BY EQUIPMENT MANUFACTURER (TYPICAL).
3. MODEL AND PART NUMBERS ARE BASED UPON YORK.
4. HVAC CONTRACTOR SHALL NOTE THAT THE LOCATION OF THE YBRANCH PIPING DOWNSTREAM OF THE PIPING SYSTEM DOWNSTREAM OF EACH AIR-COOLED CONDENSING UNIT IS CRITICAL TO THE PROPER OPERATION OF THE SYSTEM. THE YBRANCH SHALL BE ADHERED TO AS SHOWN ON THE DRAWINGS. THE HVAC CONTRACTOR SHALL CLOSELY COORDINATE THE INSTALLATION OF THE VRV SYSTEMS WITH THE VRV SYSTEM MANUFACTURER.
5. ALL IN-LINE SYSTEM EQUIPMENT ARRANGEMENTS AND INSTALLATIONS SHALL STRICTLY ADHERE TO THESE SYSTEM DIAGRAMS, UNLESS OTHERWISE DIRECTED BY THE VRV SYSTEM MANUFACTURER.

PROJECT NORTH	MAGNETIC NORTH
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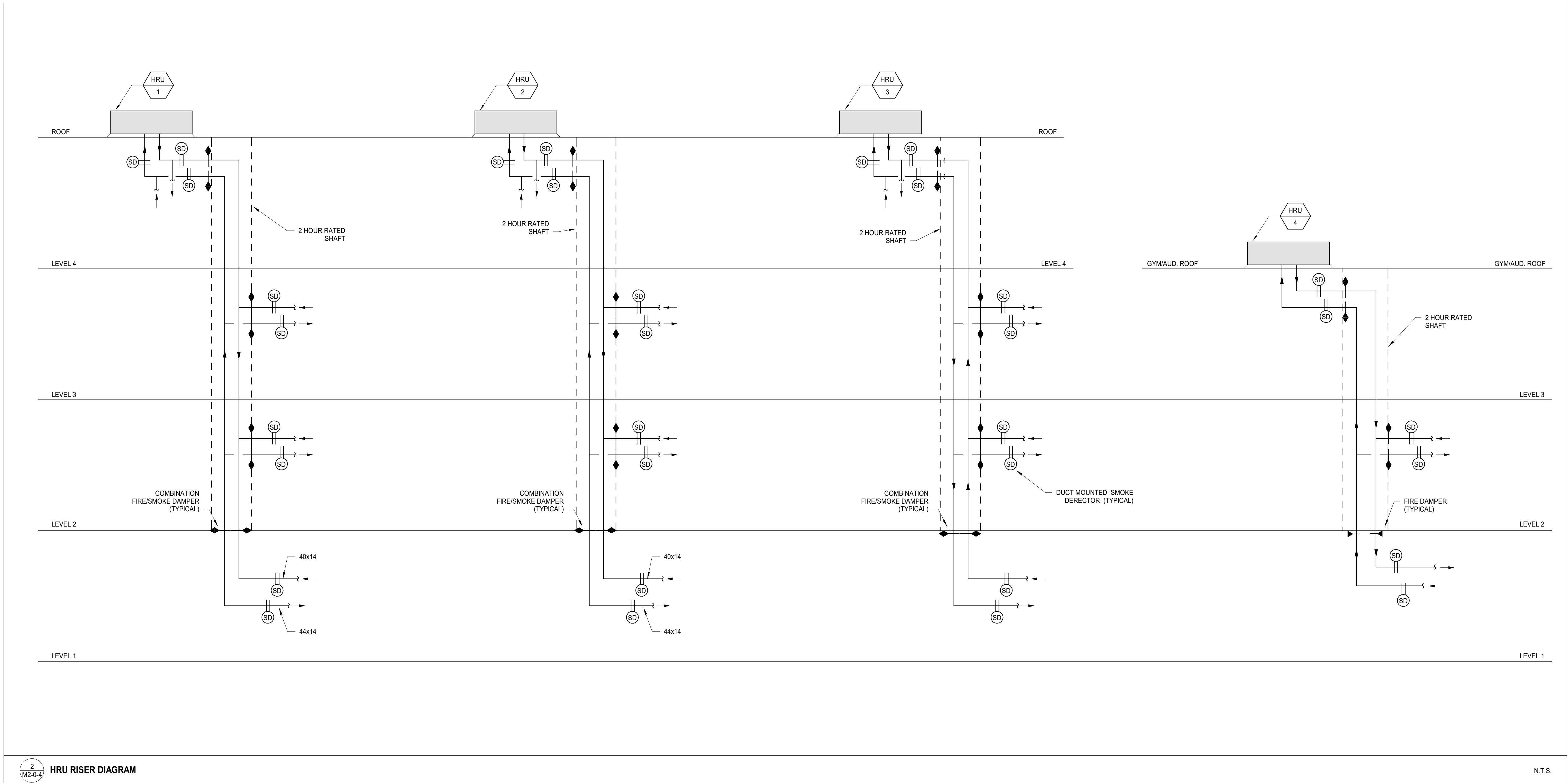
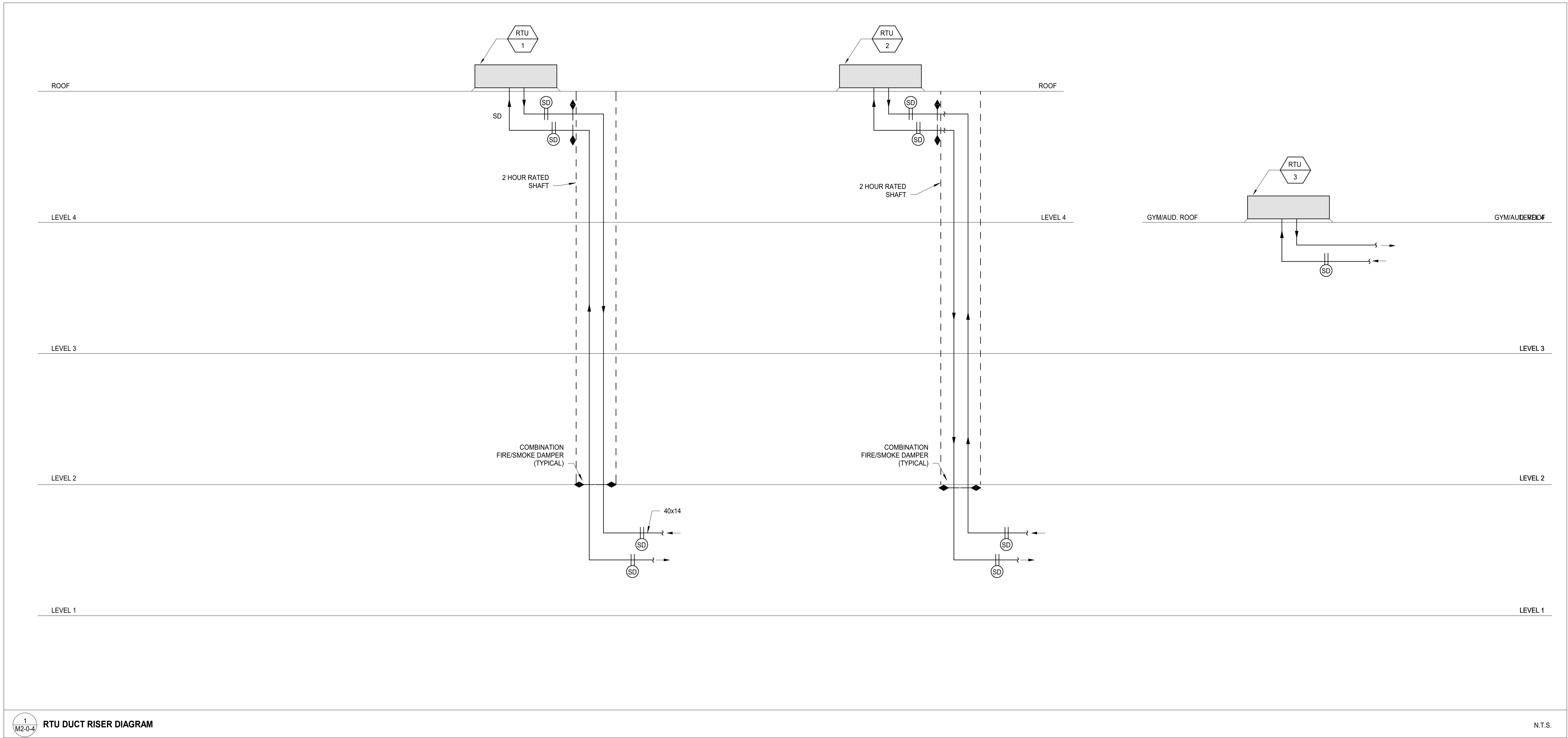
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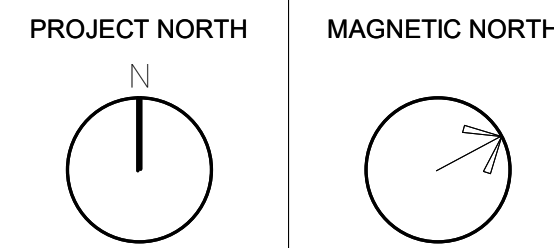
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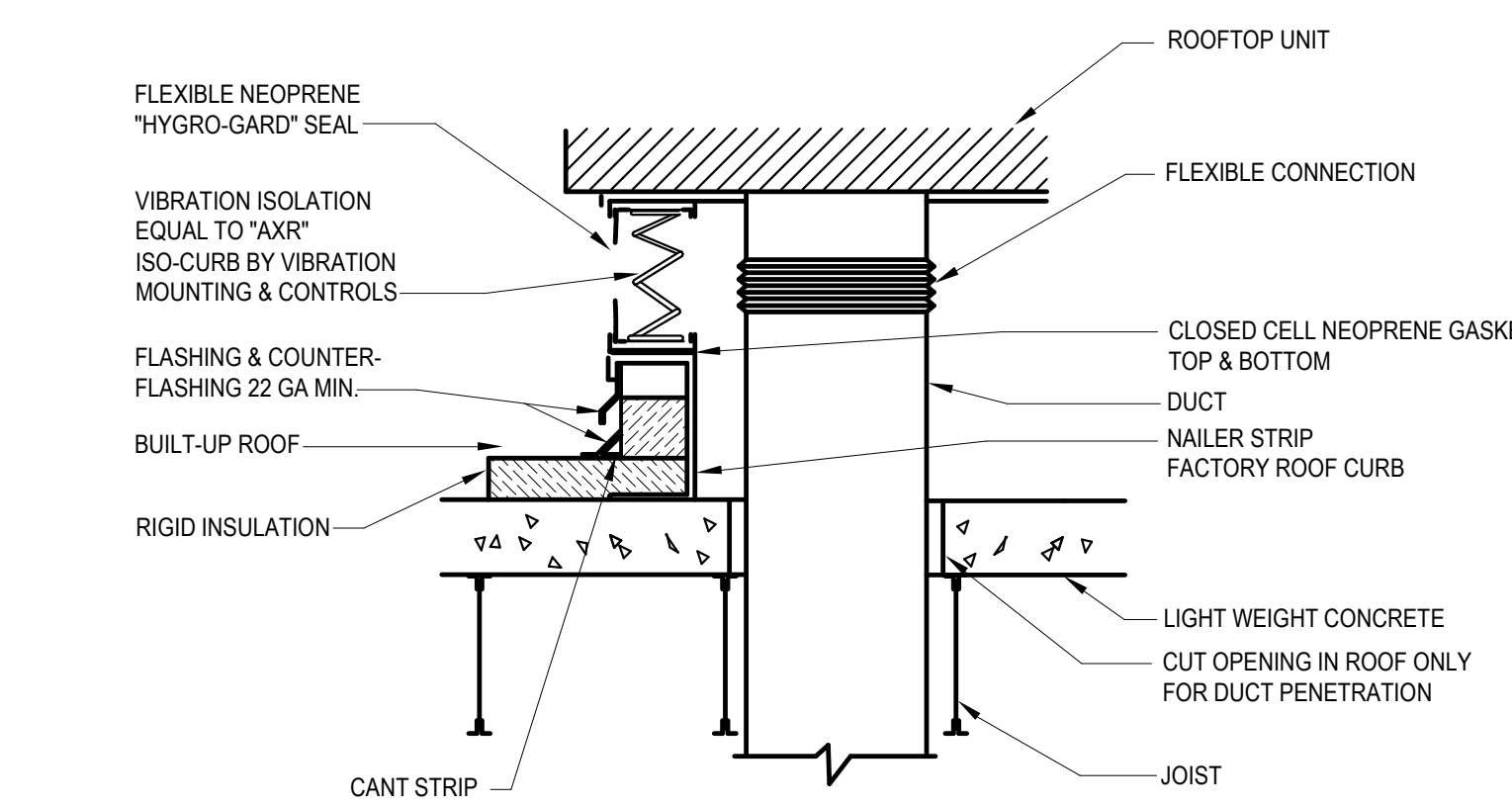
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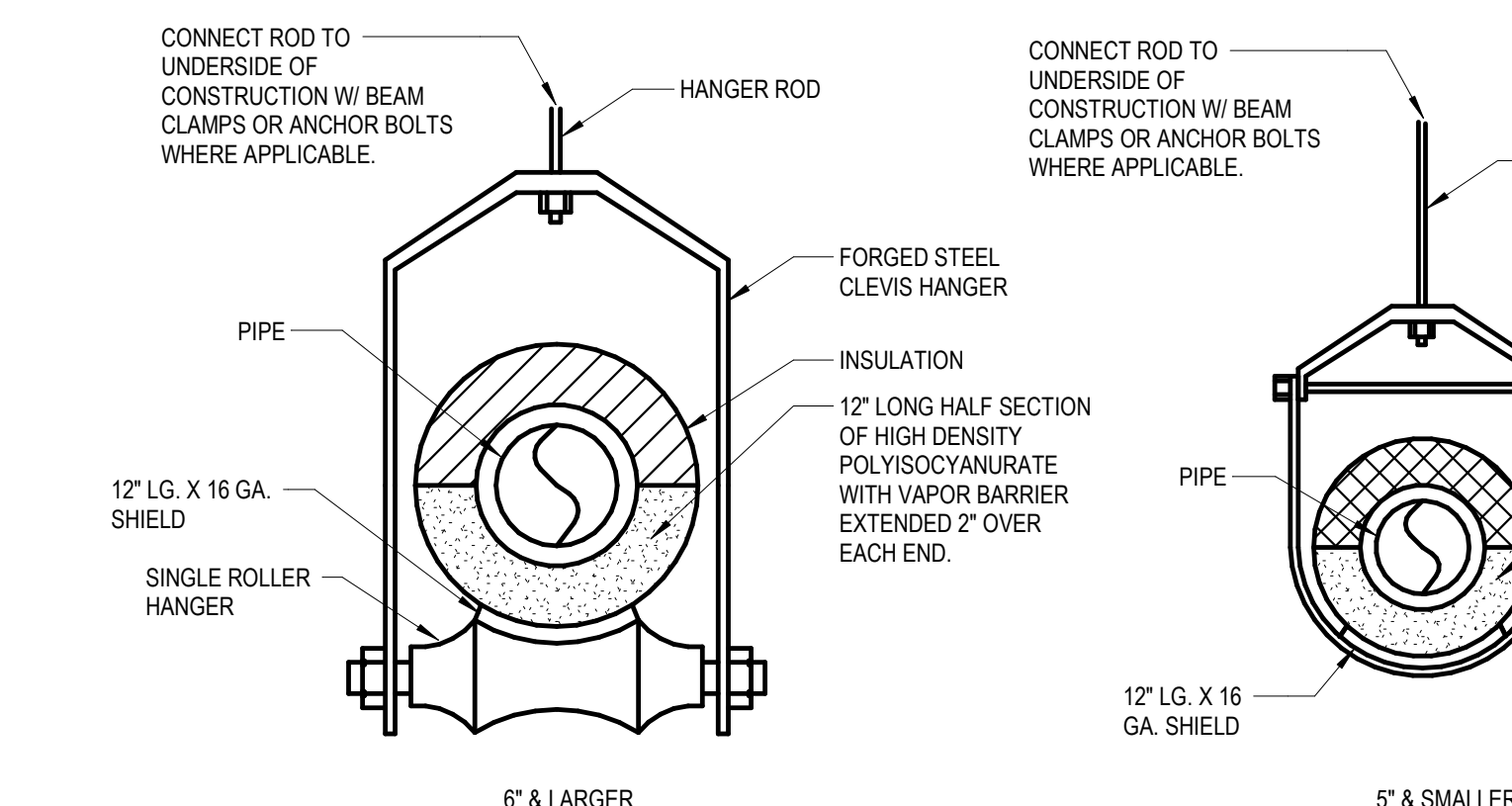


**MECHANICAL
AIR RISER
DIAGRAMS**

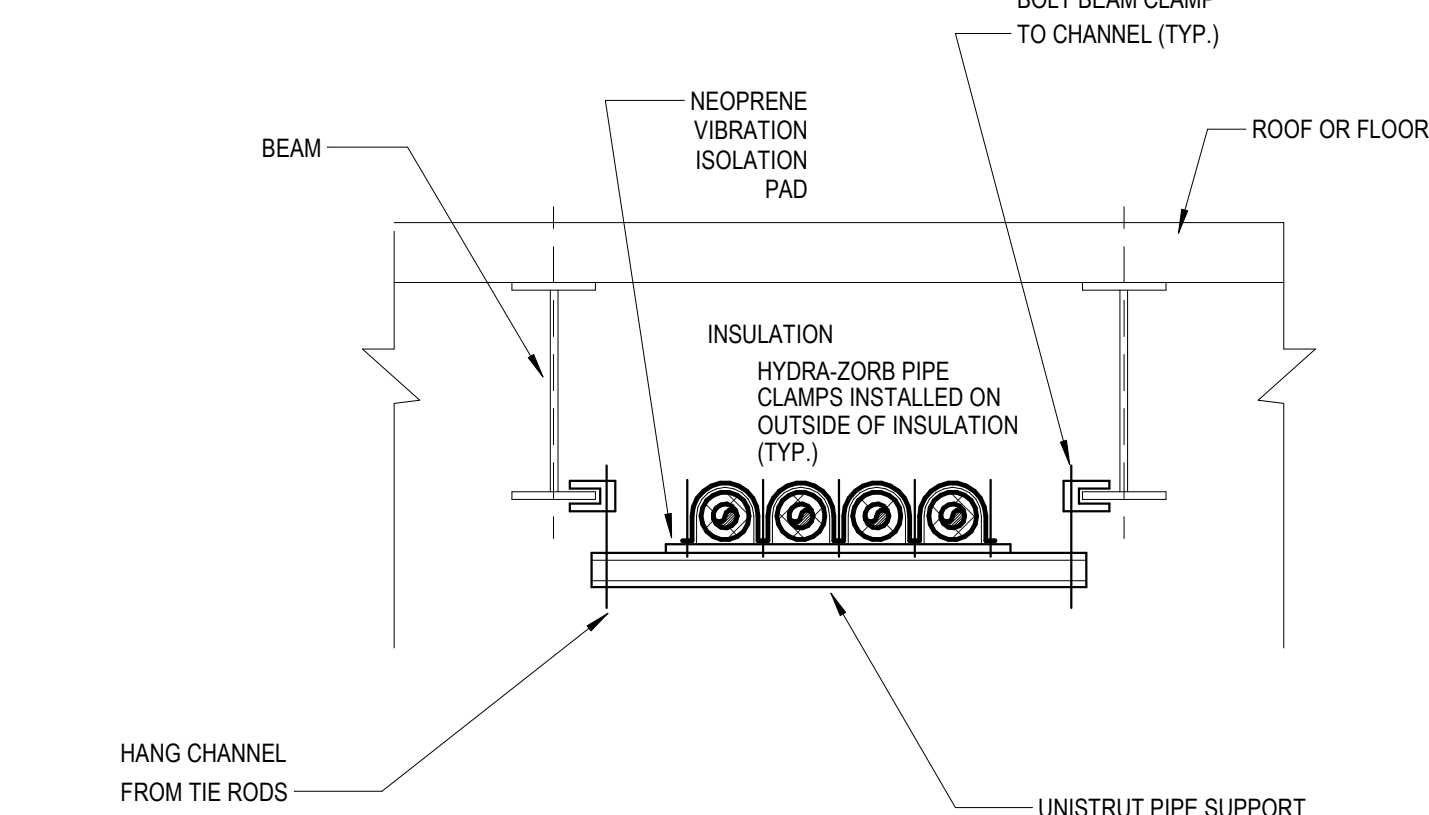
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Drawn By: DRA
Date: August 4th, 2022
M2-0-4



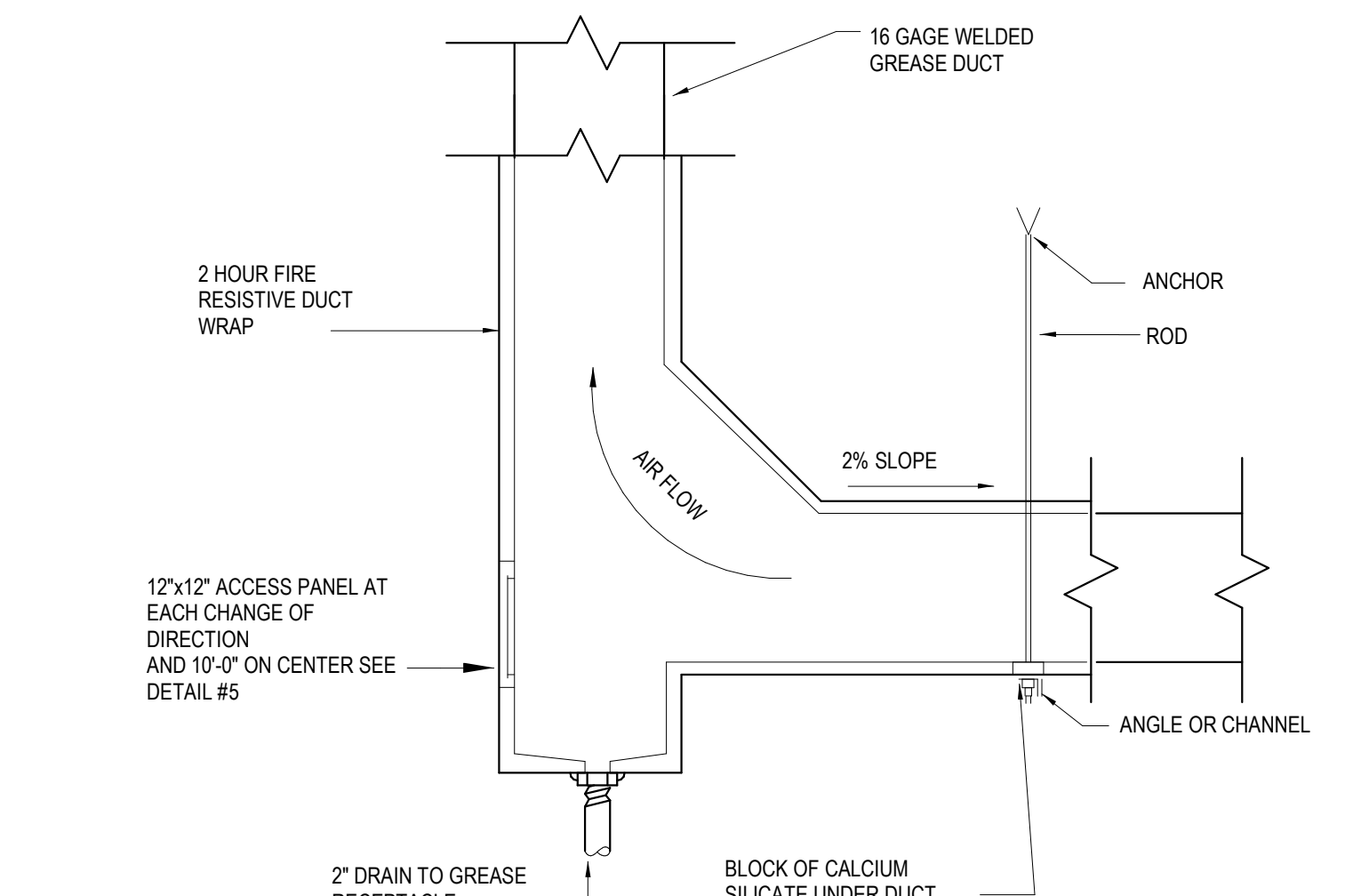
1 3-ROOF CURB AND VIBRATION ISOLATION (III)
M3-0-1 NOT TO SCALE



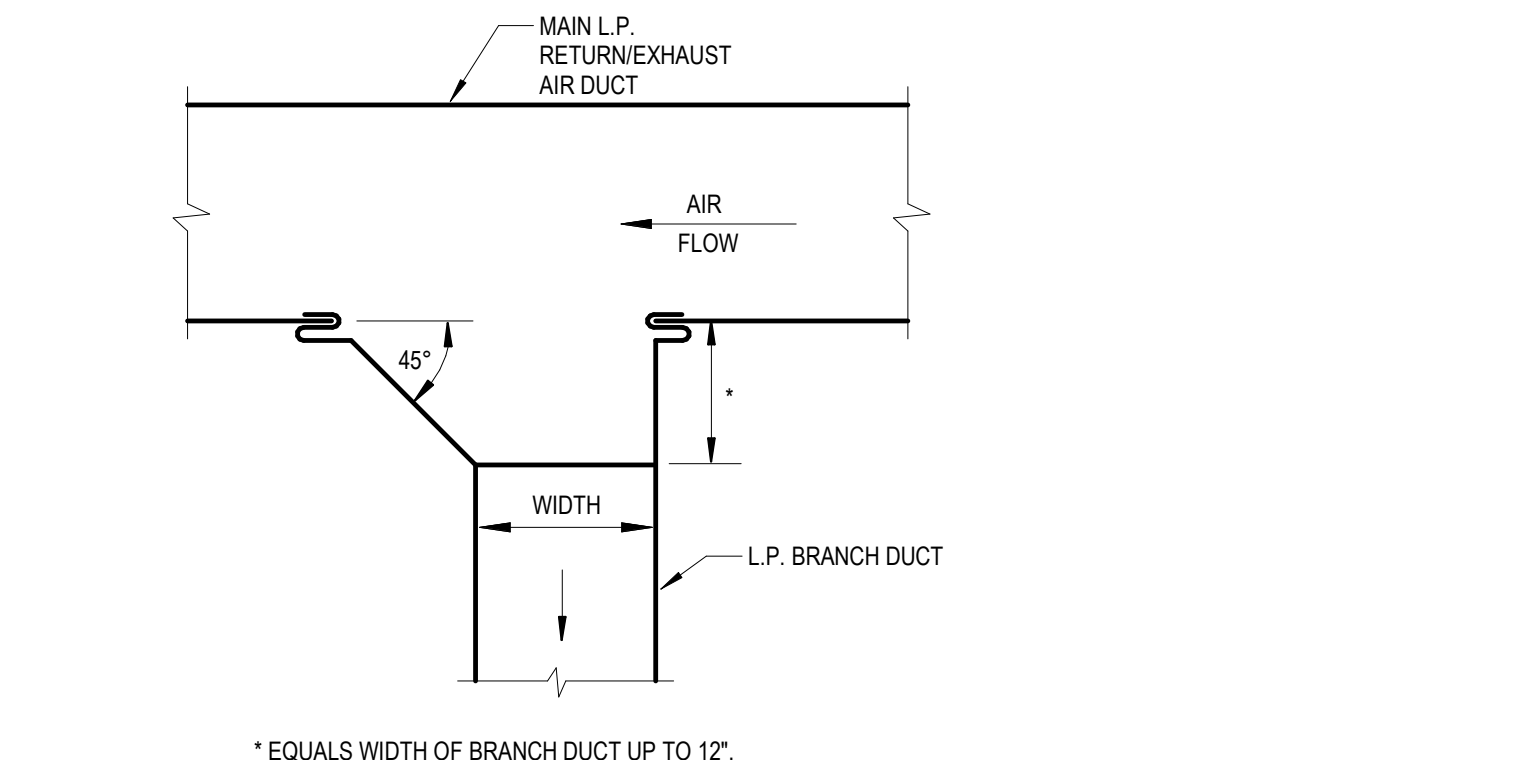
2 1 & 2-PIPE HANGER DETAILS
M3-0-1 NOT TO SCALE



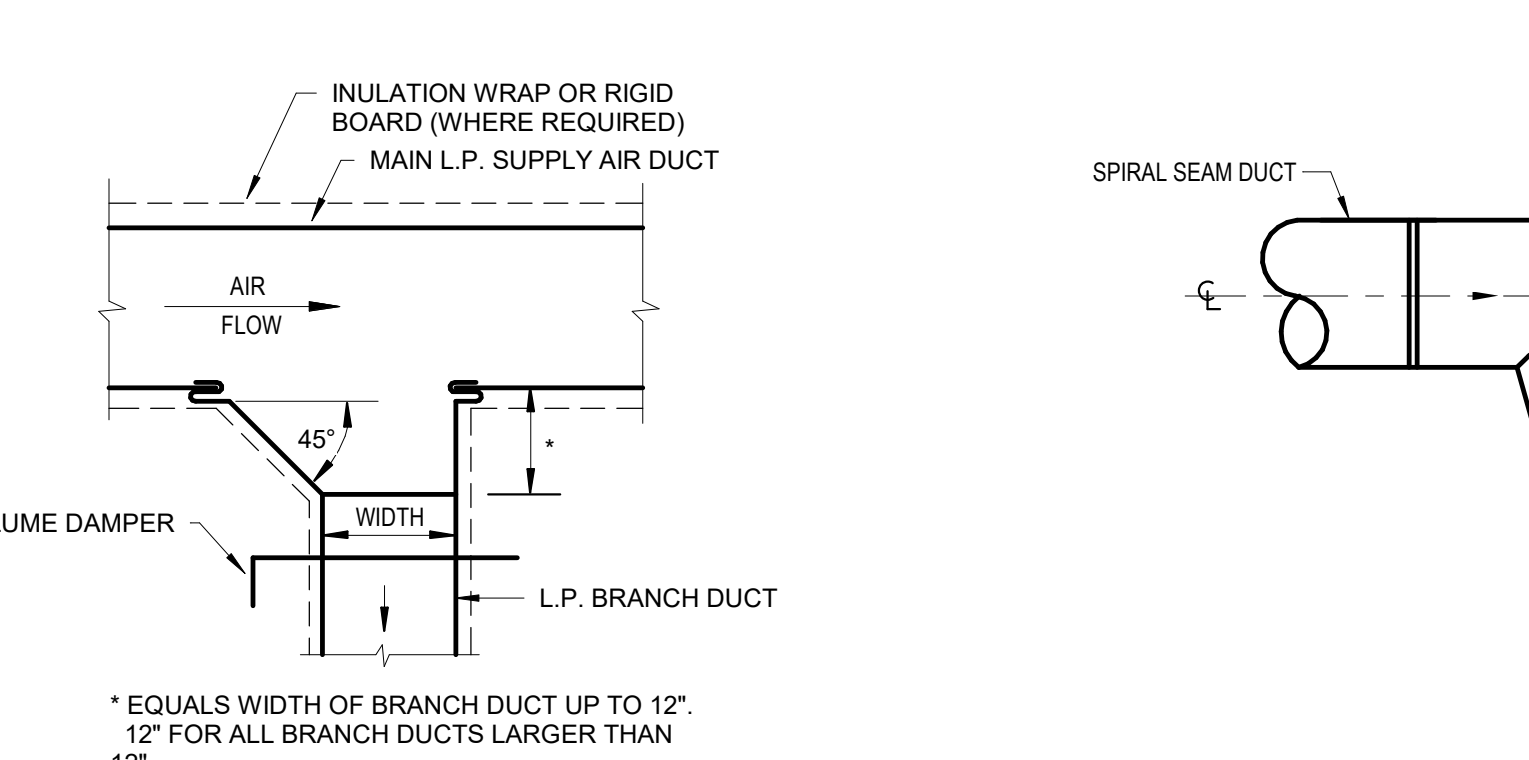
3 3-PIPE SUPPORT (ABOVE CEILING)
M3-0-1 NOT TO SCALE



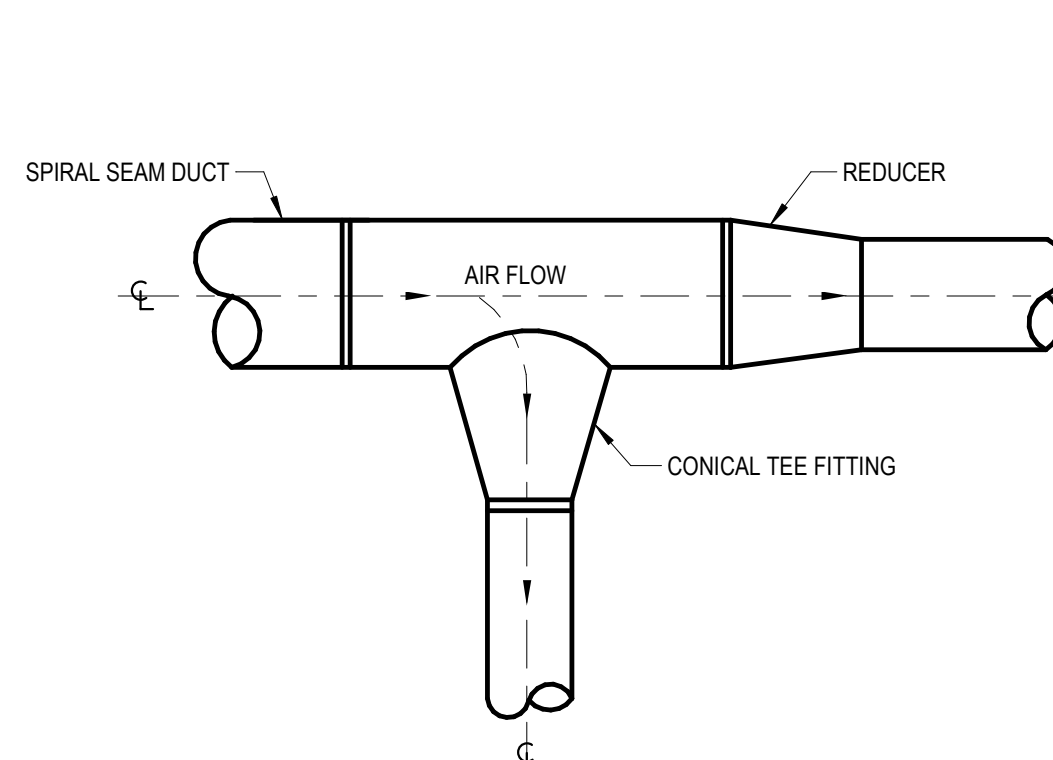
NOTE:
1. RISER AND HANGER SUPPORT ANGLES AND FASTENERS SHALL BE ARRANGED IN ACCORDANCE WITH SMACNA STANDARDS.
4 ARRANGEMENT AT BASE OF GREASE DUCT RISER
M3-0-1 12" ± 1"



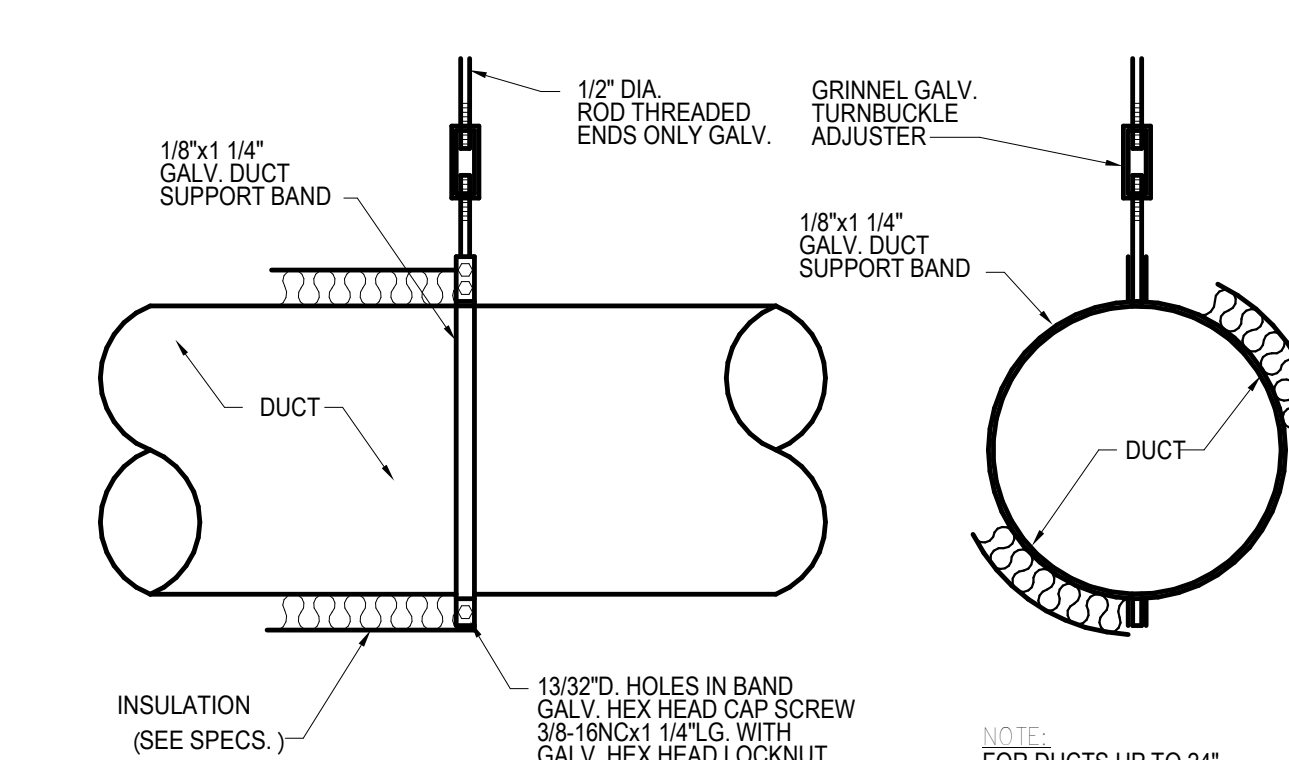
* EQUALS WIDTH OF BRANCH DUCT UP TO 12". 12" FOR ALL BRANCH DUCTS LARGER THAN 12".
5 L.P. BRANCH DUCT TAKE-OFF DETAIL (RETURN/EXHAUST)
M3-0-1 NOT TO SCALE



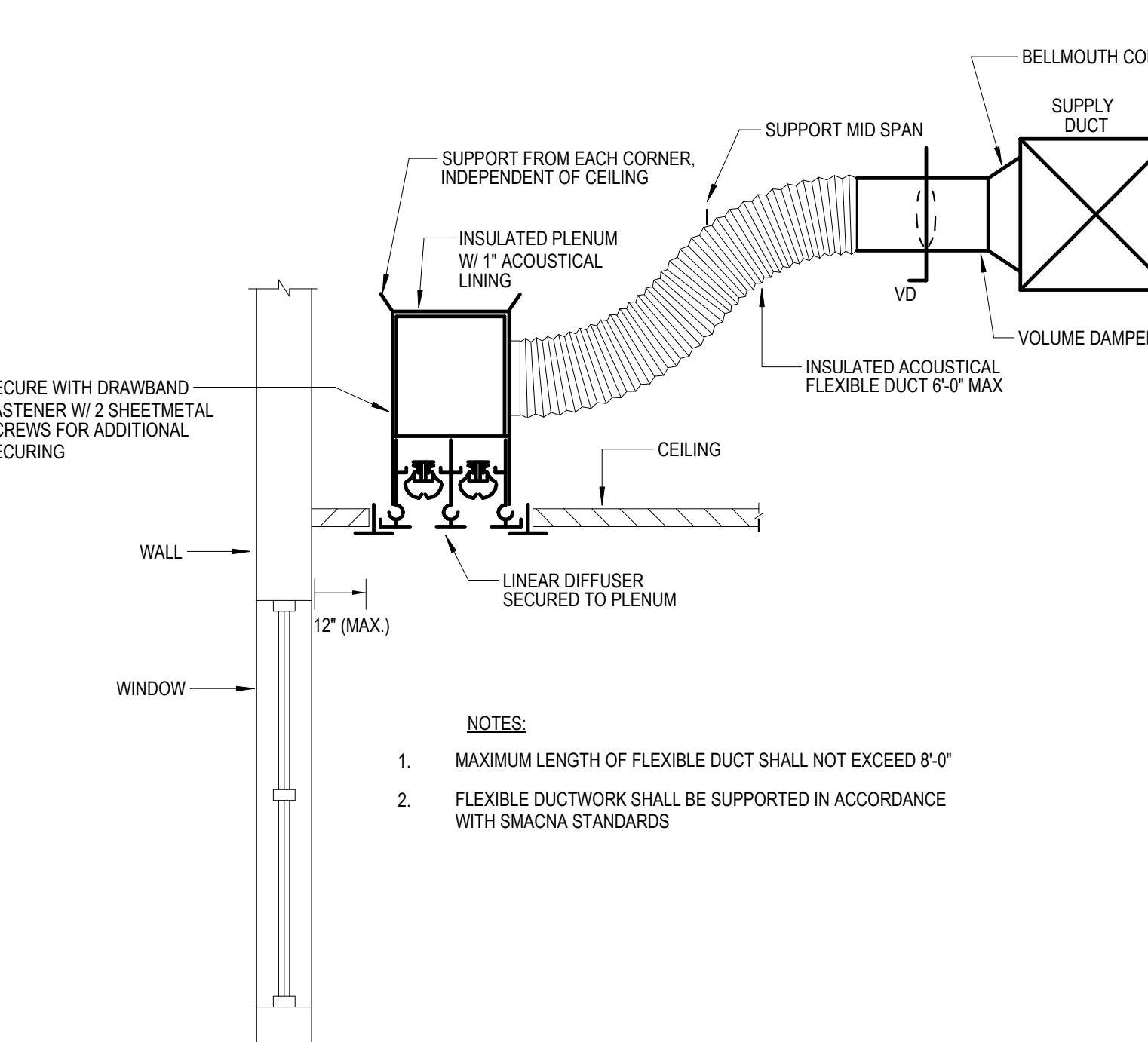
* EQUALS WIDTH OF BRANCH DUCT UP TO 12". 12" FOR ALL BRANCH DUCTS LARGER THAN 12".
6 SUPPLY L.P. BRANCH DUCT DETAIL
M3-0-1 NOT TO SCALE



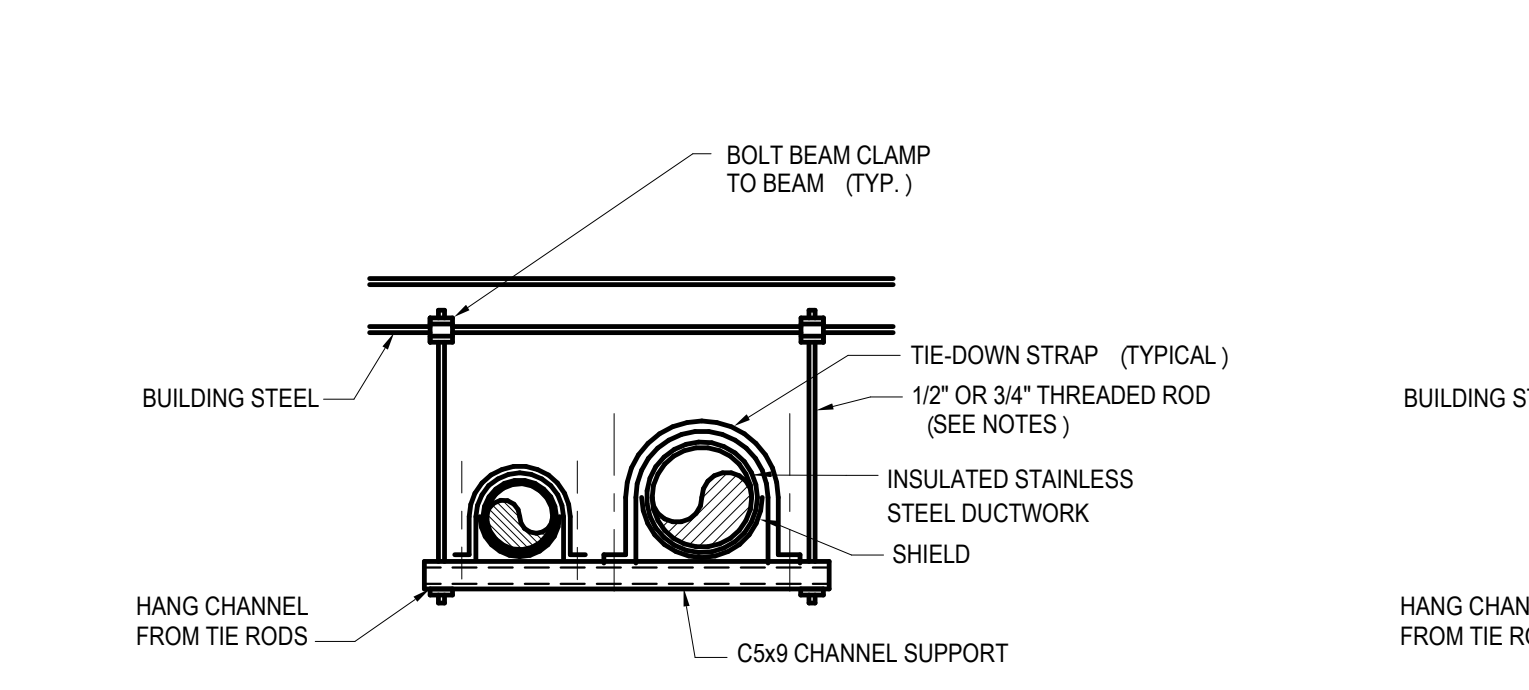
7 1-HP BRANCH CONNECTION & REDUCER DETAIL
M3-0-1 NOT TO SCALE



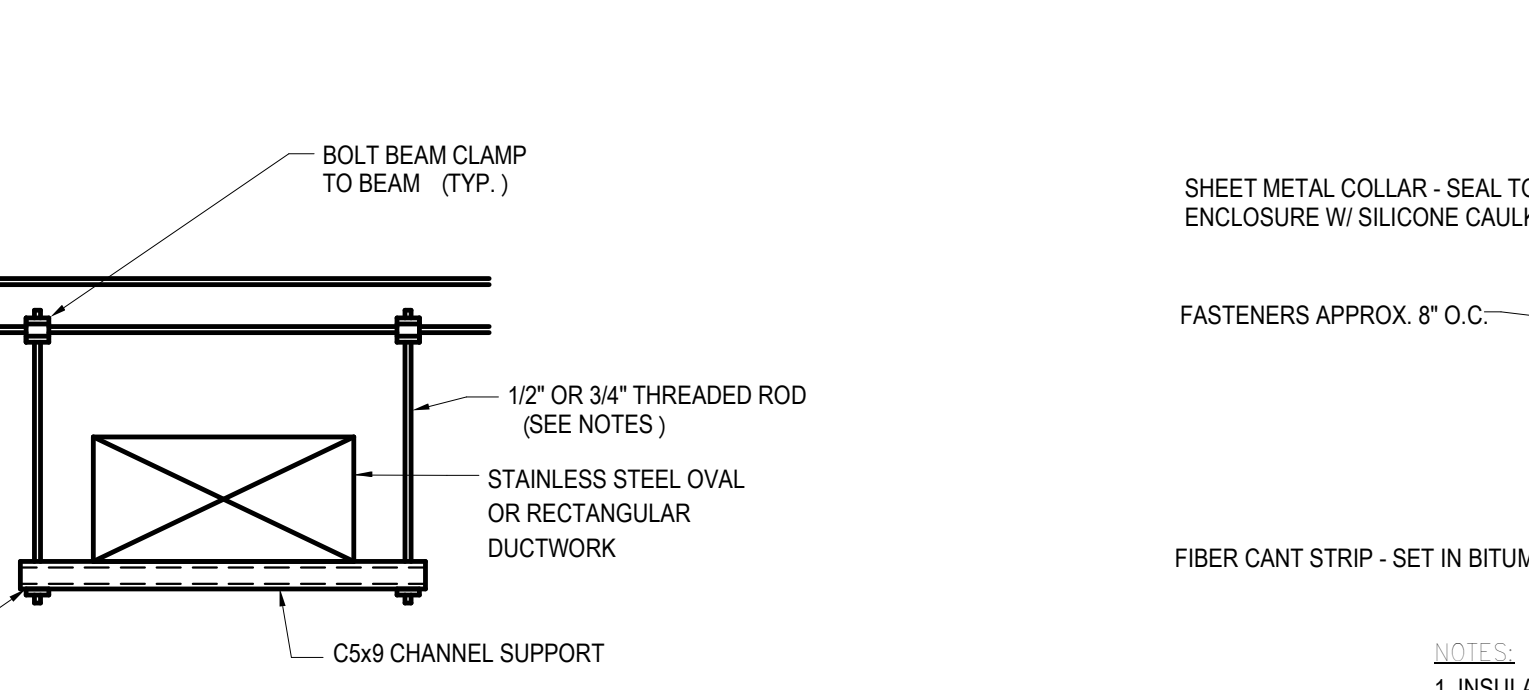
NOTE: FOR DUCTS UP TO 24"
8 10-ROUND DUCT HANGER (UNDER 24")
M3-0-1 NOT TO SCALE



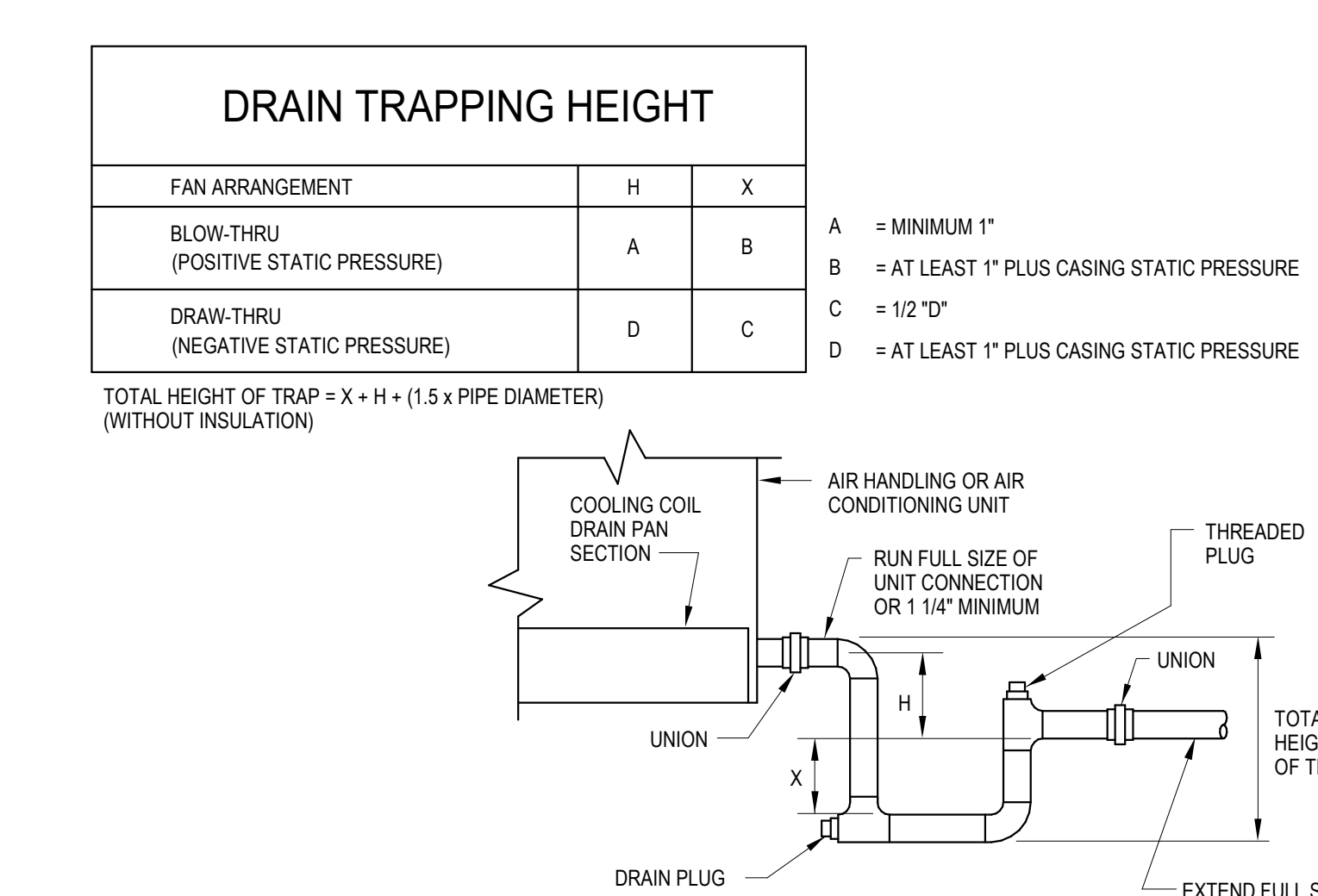
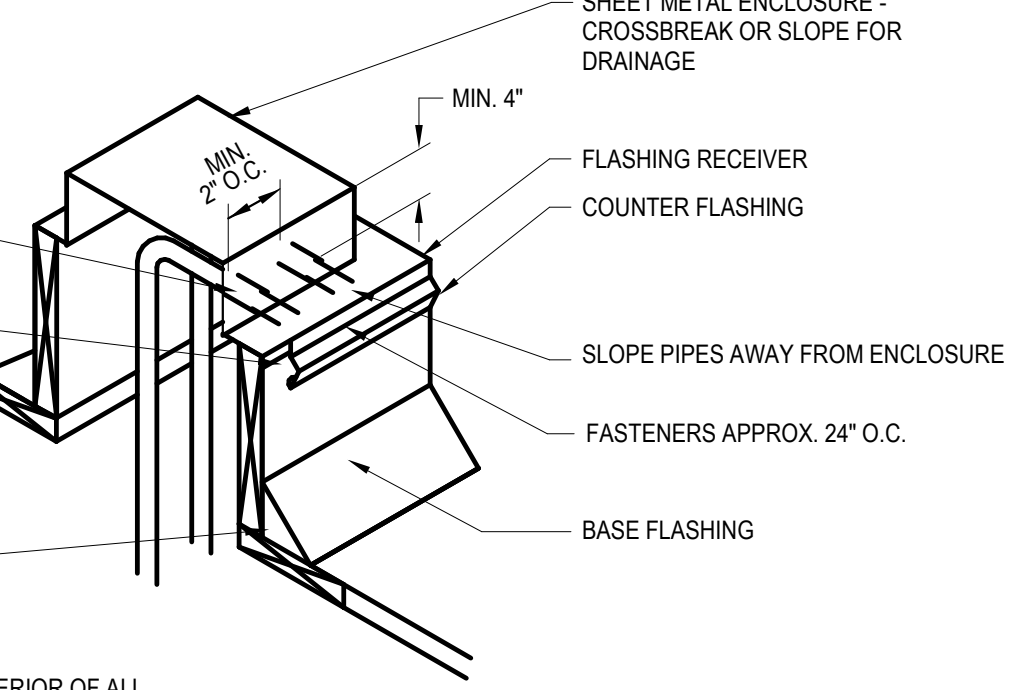
NOTES:
1. MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL NOT EXCEED 8'-0"
2. FLEXIBLE DUCTWORK SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA STANDARDS
9 2-LINEAR DIFFUSER
M3-0-1 NOT TO SCALE



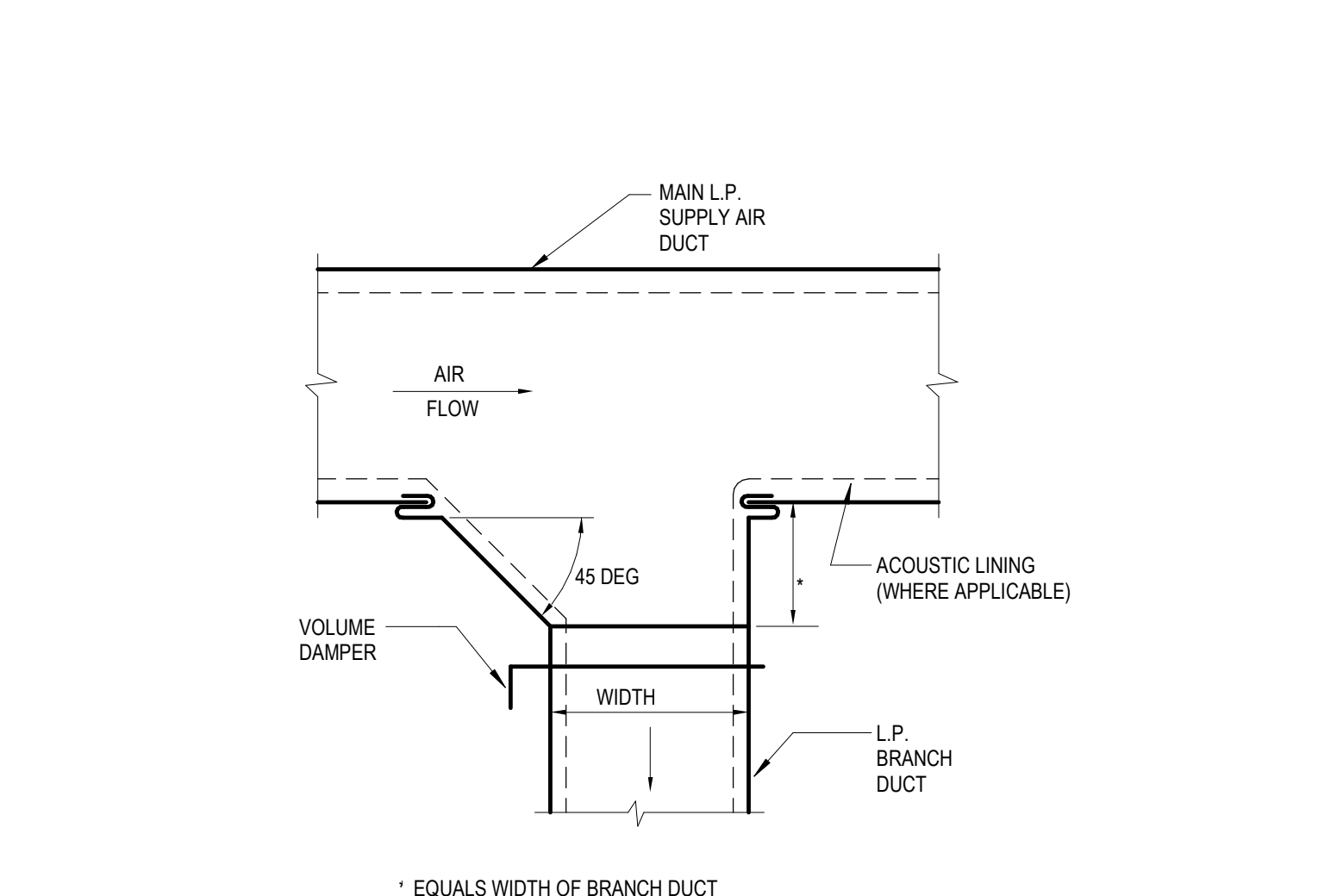
NOTE:
1. USE 3/4" THREADED RODS FOR 1000 LBS. OR GREATER OF A LOAD ON HORIZONTAL SUPPORT.
2. USE 1/2" THREADED RODS FOR LESS THAN 1000 LBS. OF A LOAD ON HORIZONTAL SUPPORT.
3. PROVIDE VIBRATION ISOLATORS WHERE REQUIRED BY SPECIFICATIONS.
10 PIPING AND DUCTWORK SUPPORT
M3-0-1 NOT TO SCALE



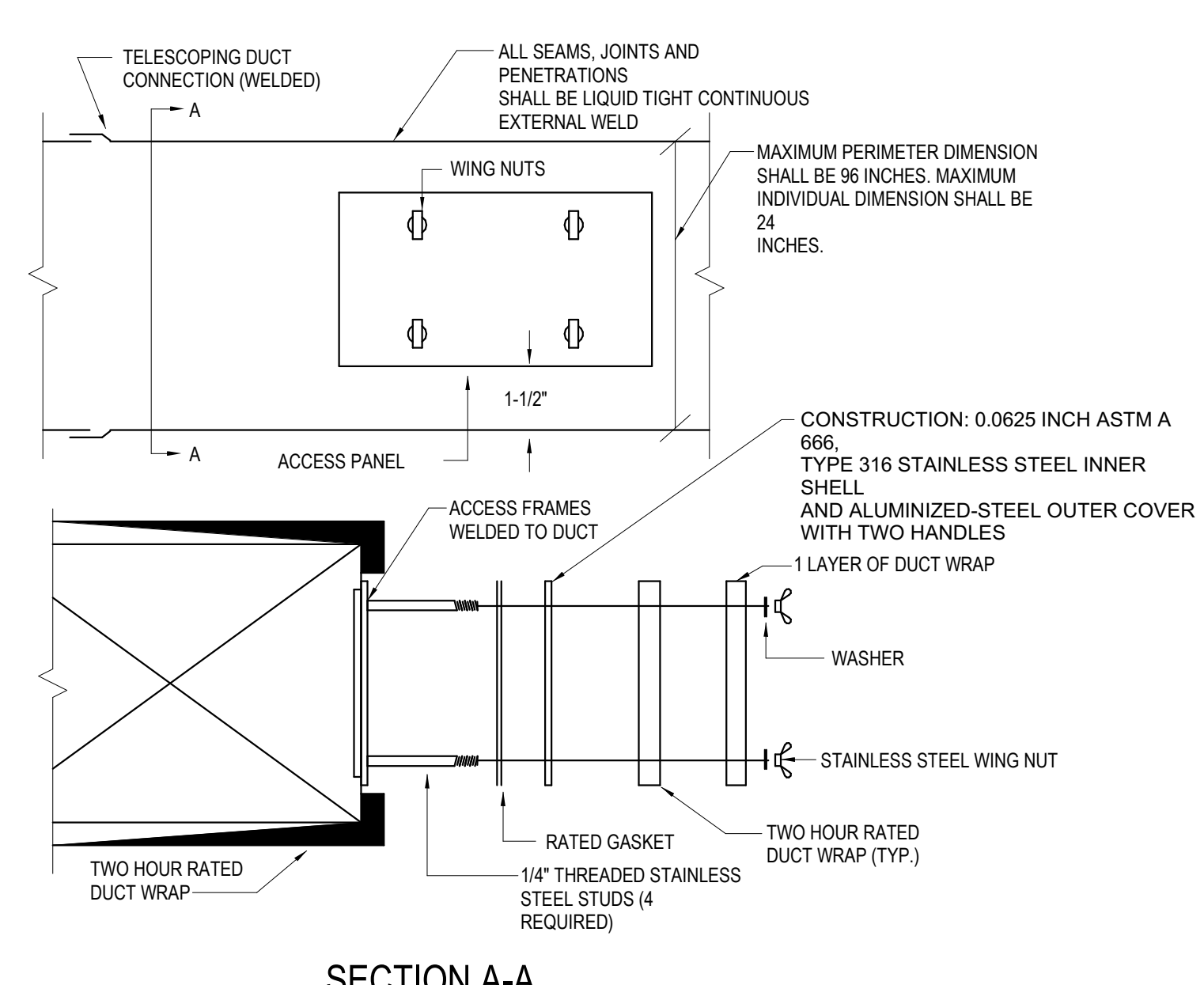
NOTE:
1. INSULATE THE INTERIOR OF ALL METAL WORK W/ 1" RIGID INSULATION
2. CURB SHALL HAVE A MIN. HEIGHT OF 18" ABOVE ROOF SURFACE
3. CURB FRAMING SHALL BE EITHER FABRICATED FROM PRESSURE TREATED LUMBER OR GALV. STEEL, MIN. 14 GA.
11 12-ROOF PIPE CURB
M3-0-1 NOT TO SCALE



1 1-CONDENSATE DRAIN DETAIL
M3-0-1 NOT TO SCALE



* EQUALS WIDTH OF BRANCH DUCT UP TO 12". 12" FOR ALL BRANCH DUCTS LARGER THAN 12".
13 4-L.P. BRANCH DUCT TAKE-OFF DETAIL (SUPPLY)
M3-0-1 NOT TO SCALE



NOTES:
1. ACCESS PANELS SHALL BE OF THE SAME MATERIAL AND THICKNESS AS DUCT. PANELS SHALL HAVE GASKET OR SEALANT RATED FOR 150°F AND BE LIQUID TIGHT.
2. SECURE ACCESS PANELS TO OPENINGS WITH STAINLESS STEEL STUDS, LATCHES, AND WING NUTS WELDED TO DUCT BUT NOT PENETRATING DUCT WALLS.
3. ACCESS OPENINGS (1"x7") SHALL BE PROVIDED AT 20 FT INTERVALS AND NOT FURTHER THAN 10 FOOT FROM CHANGE IN DIRECTION OF DUCT.
4. ON VERTICAL DUCTWORK, PROVIDE AN ACCESS OPENING ON EACH FLOOR.
5. DUCTS SHALL BE 16 GAUGE CARBON STEEL. ALL SEAMS, JOINTS AND CONNECTIONS SHALL BE LIQUID TIGHT WITH CONTINUOUS EXTERNAL WELD.
6. OVERLAPPING DUCT CONNECTIONS SHALL BE AS OUTLINED IN NFPA 96.
12 ARRANGEMENT AT ACCESS PANEL - GREASE DUCT
M3-0-1 12" ± 1/2"

DRAIN TRAPPING HEIGHT			
FAN ARRANGEMENT	H	X	
BLOW-THRU (POSITIVE STATIC PRESSURE)	A	B	
DRAW-THRU (NEGATIVE STATIC PRESSURE)	D	C	

TOTAL HEIGHT OF TRAP = X + H + (1.5 x PIPE DIAMETER) (WITHOUT INSULATION)

A = MINIMUM 1"
B = AT LEAST 1" PLUS CASING STATIC PRESSURE
C = 1/2" D
D = AT LEAST 1" PLUS CASING STATIC PRESSURE

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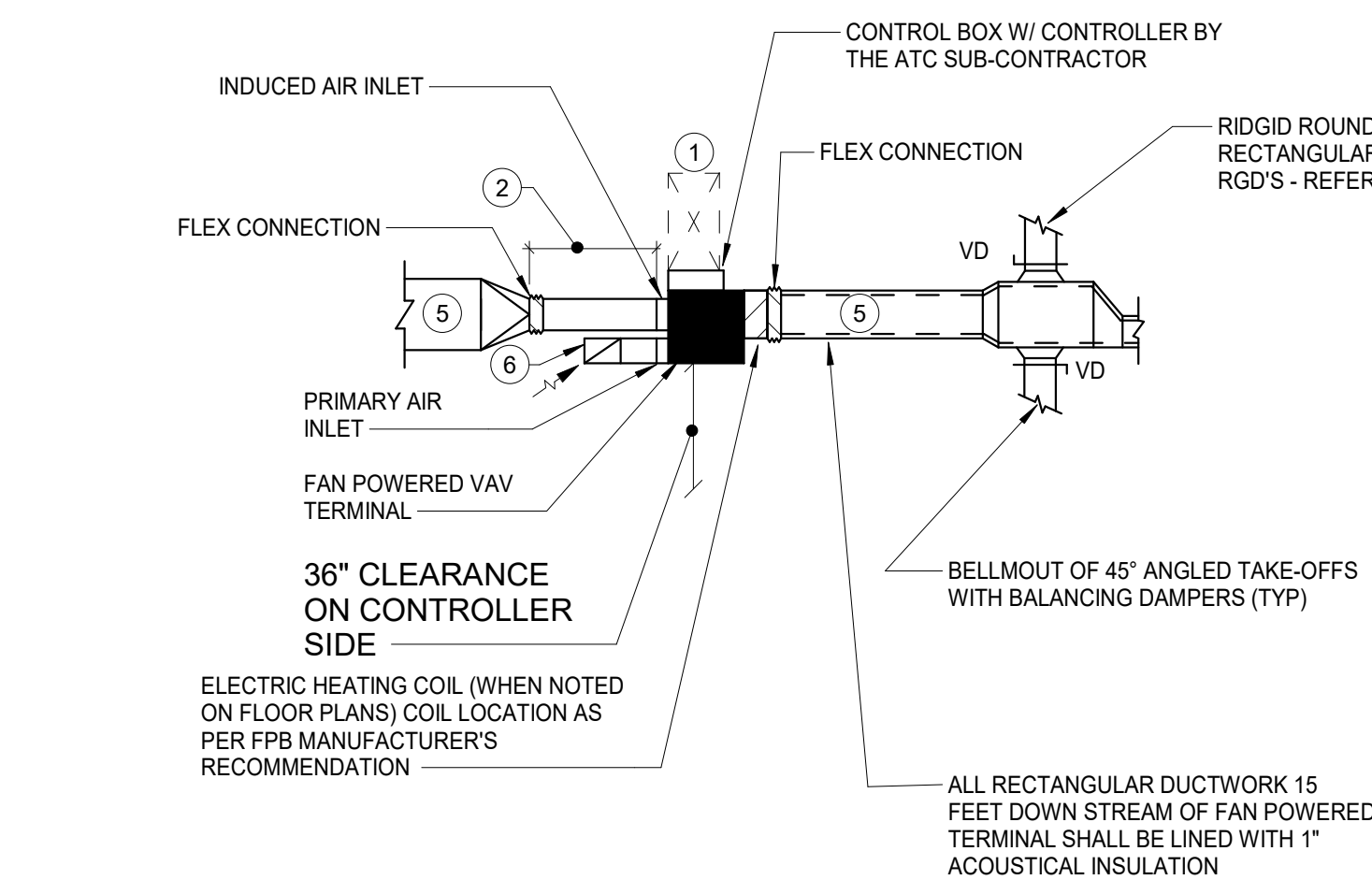
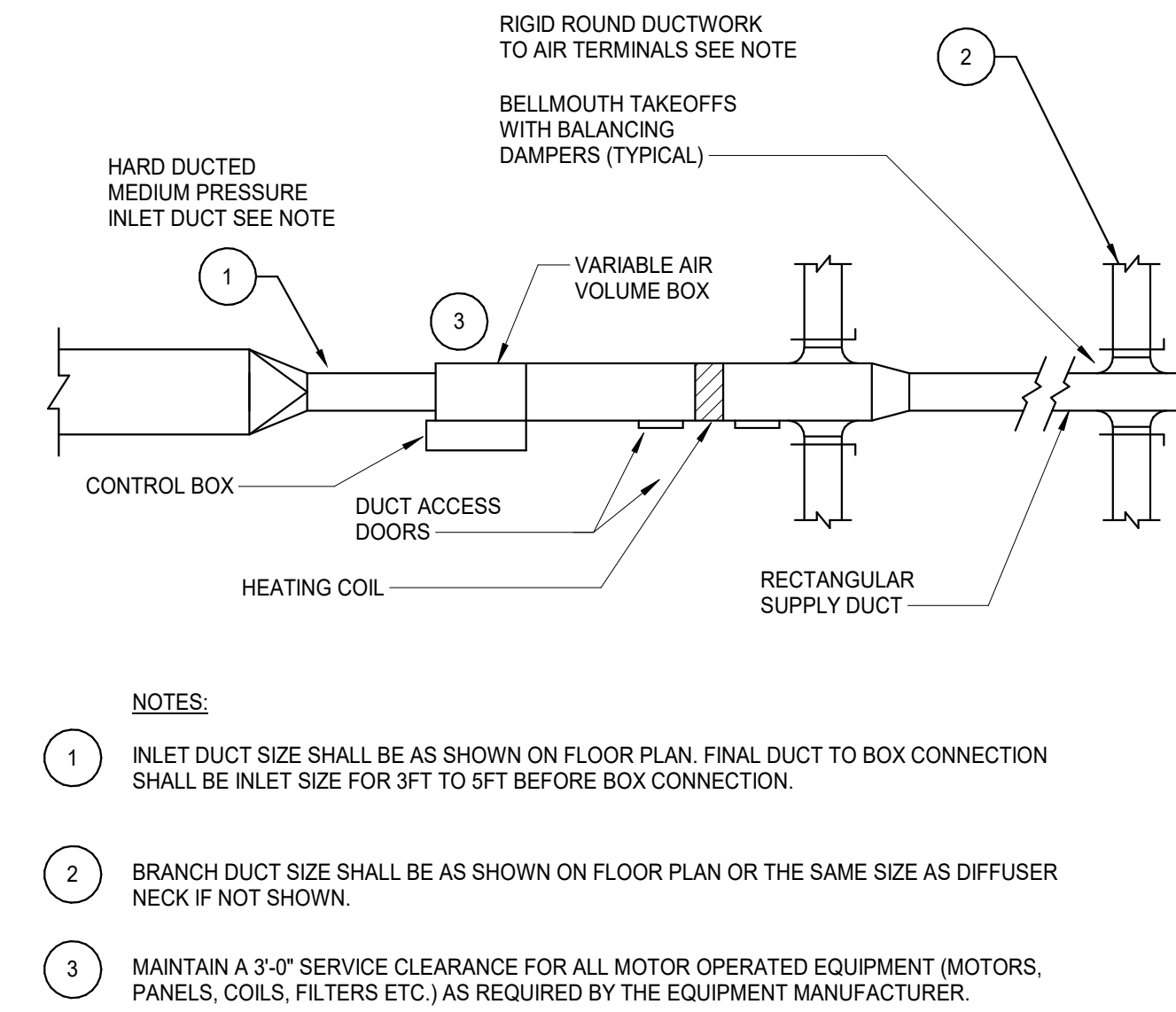
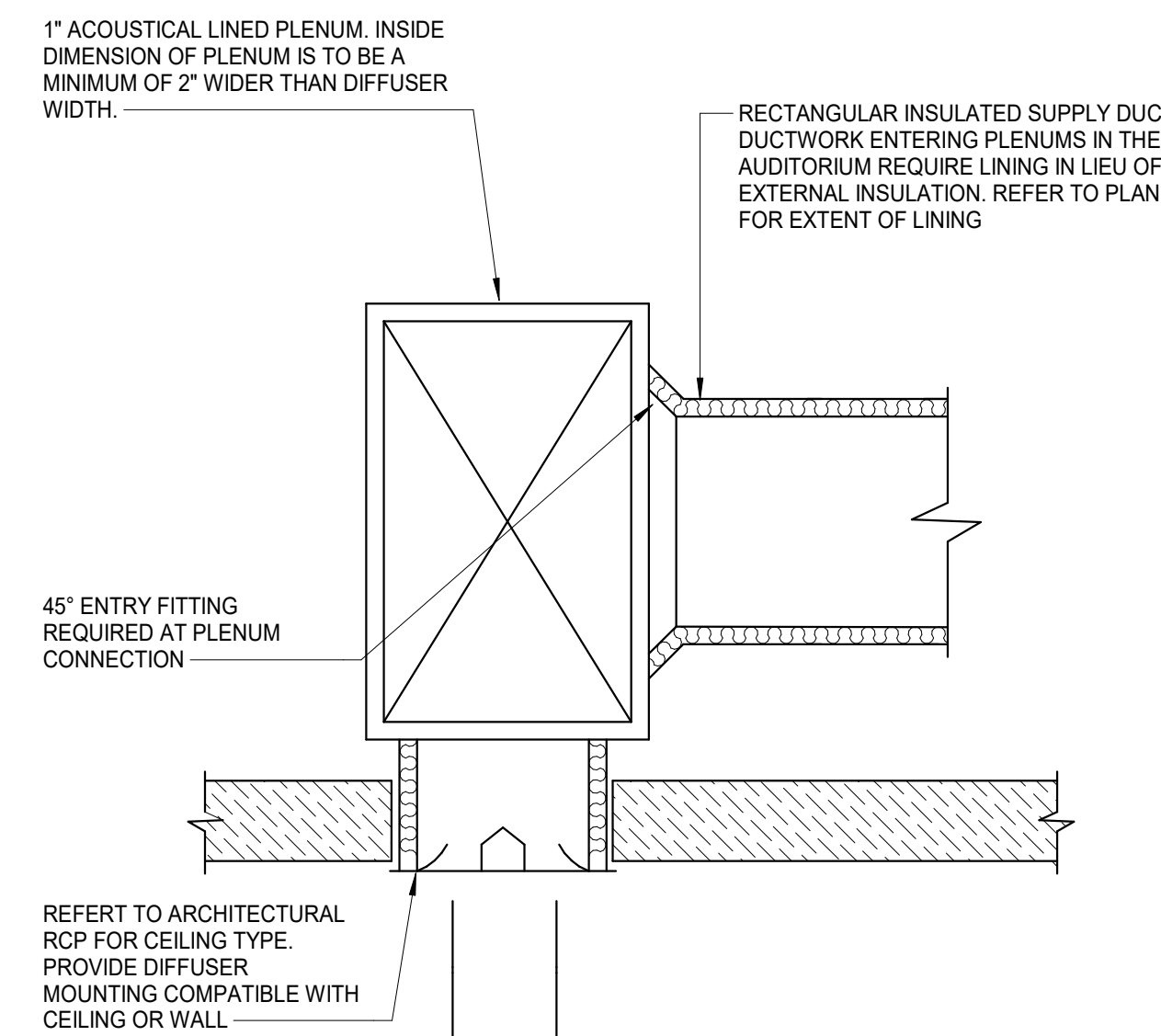
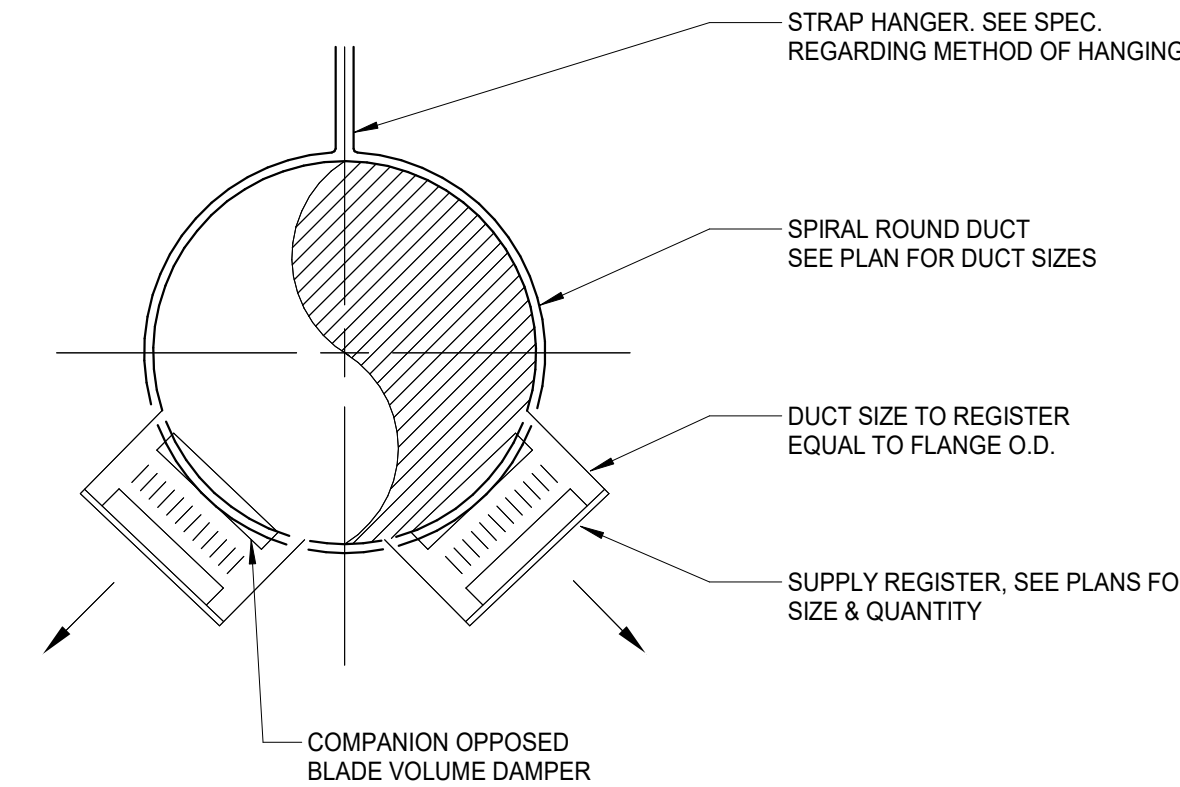
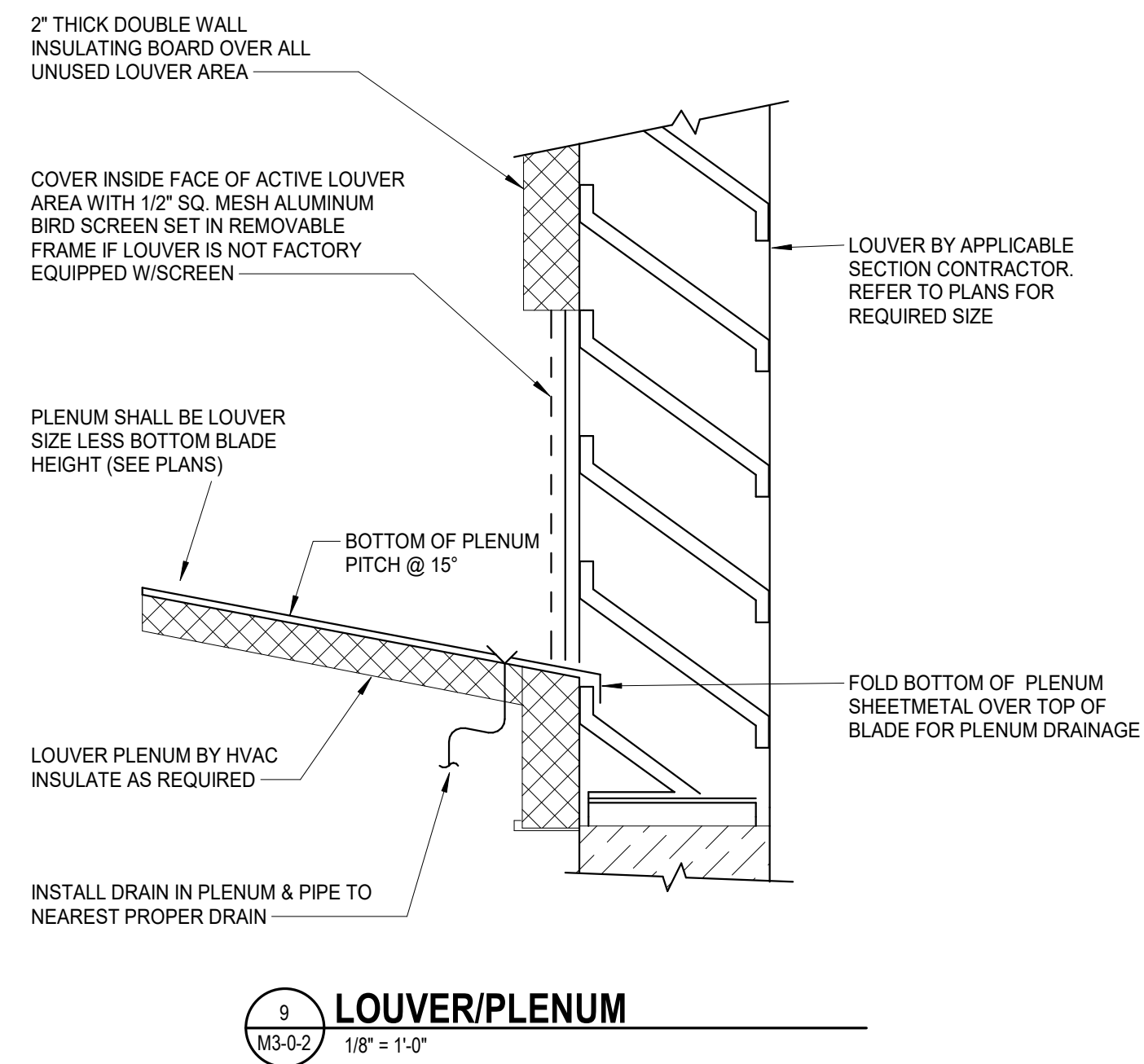
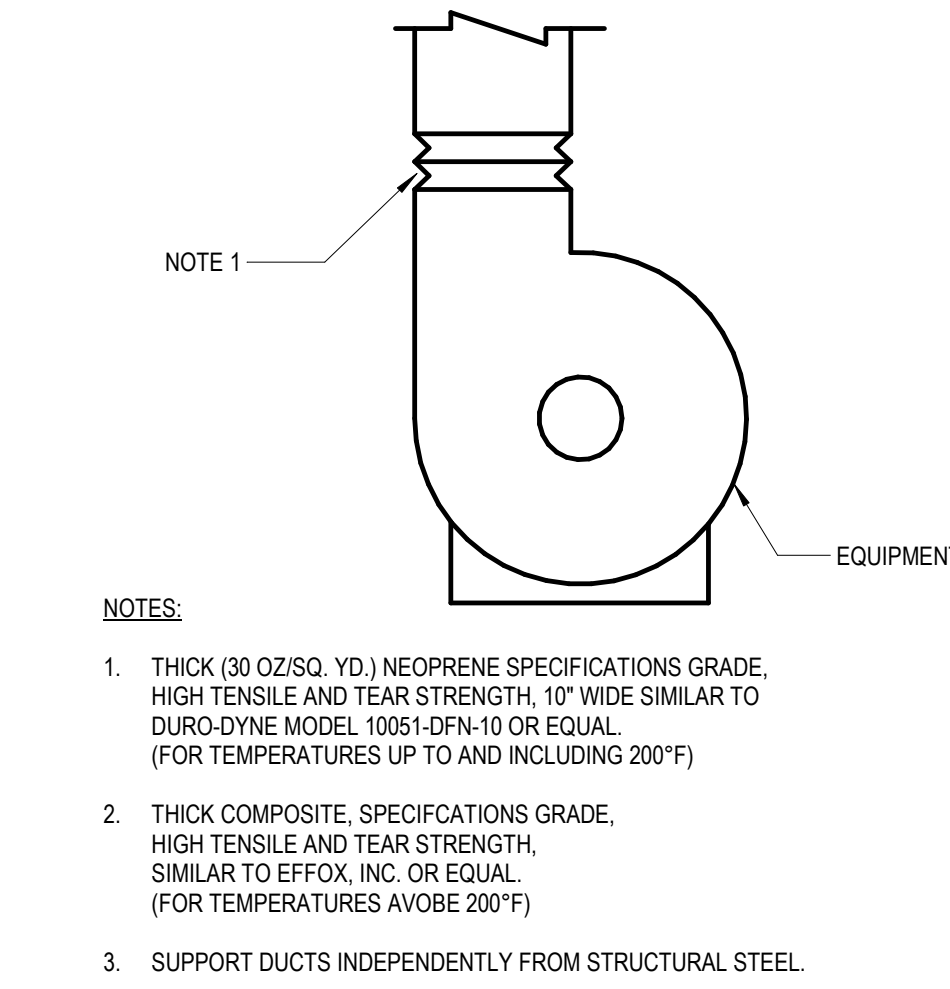
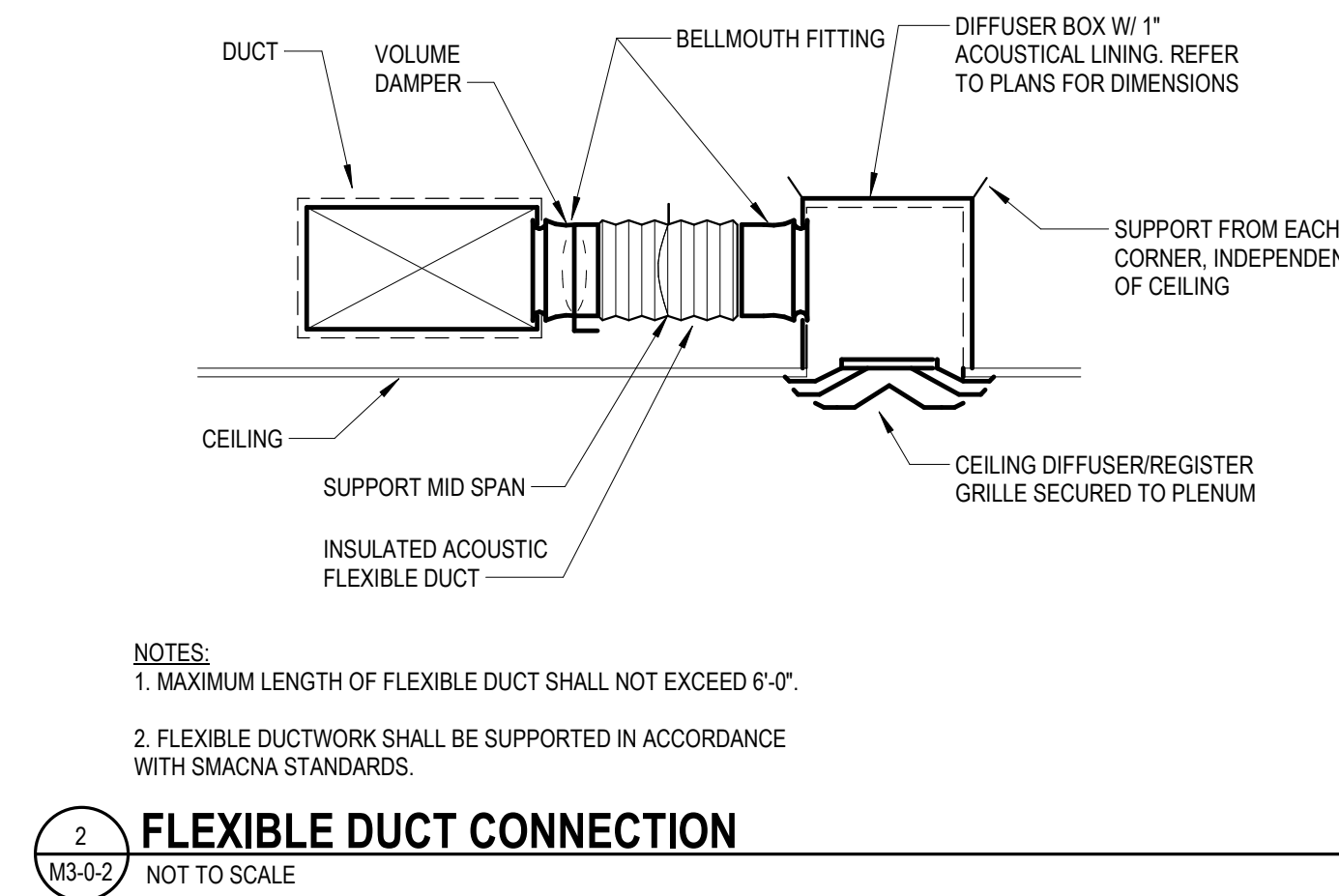
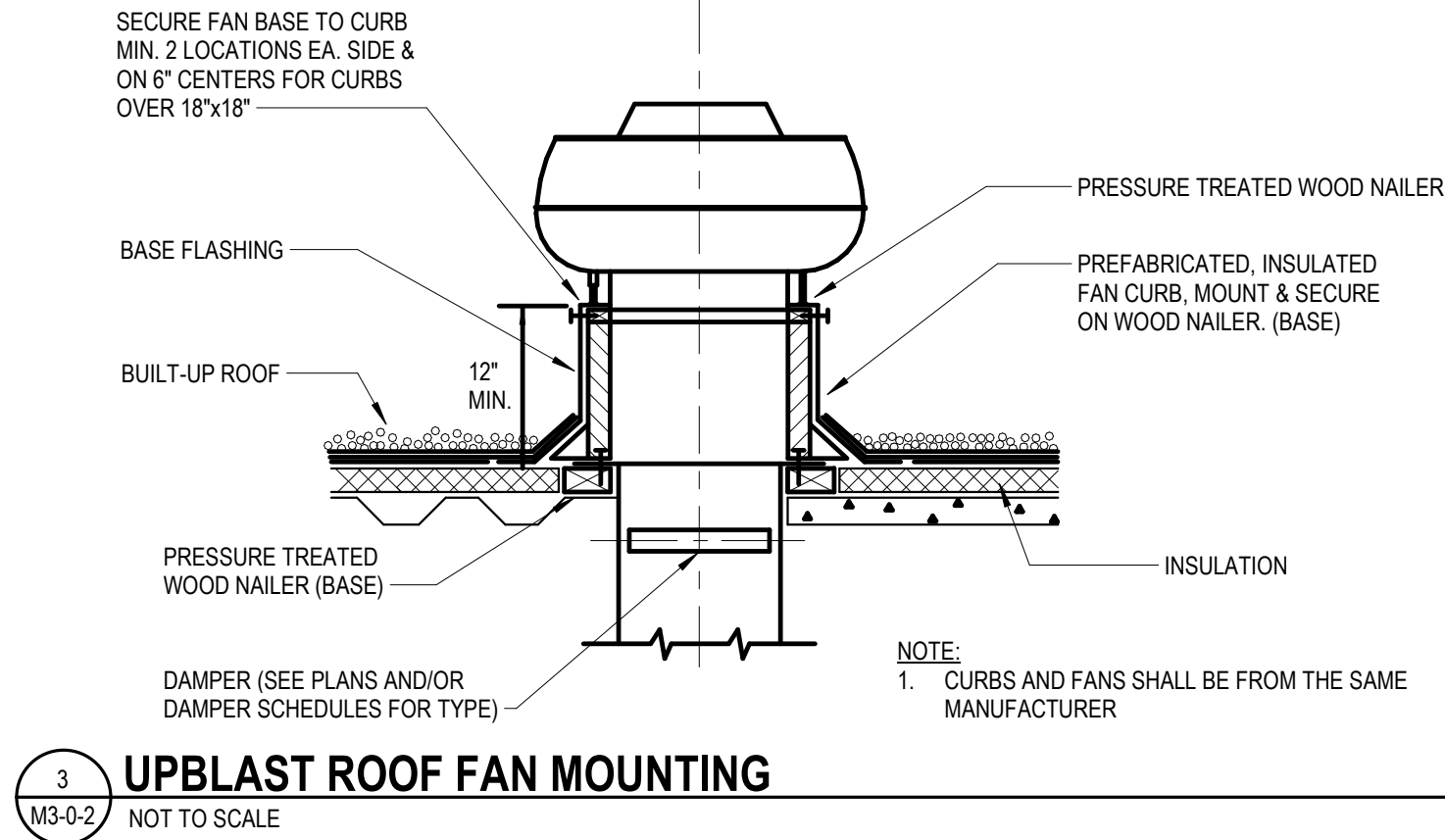
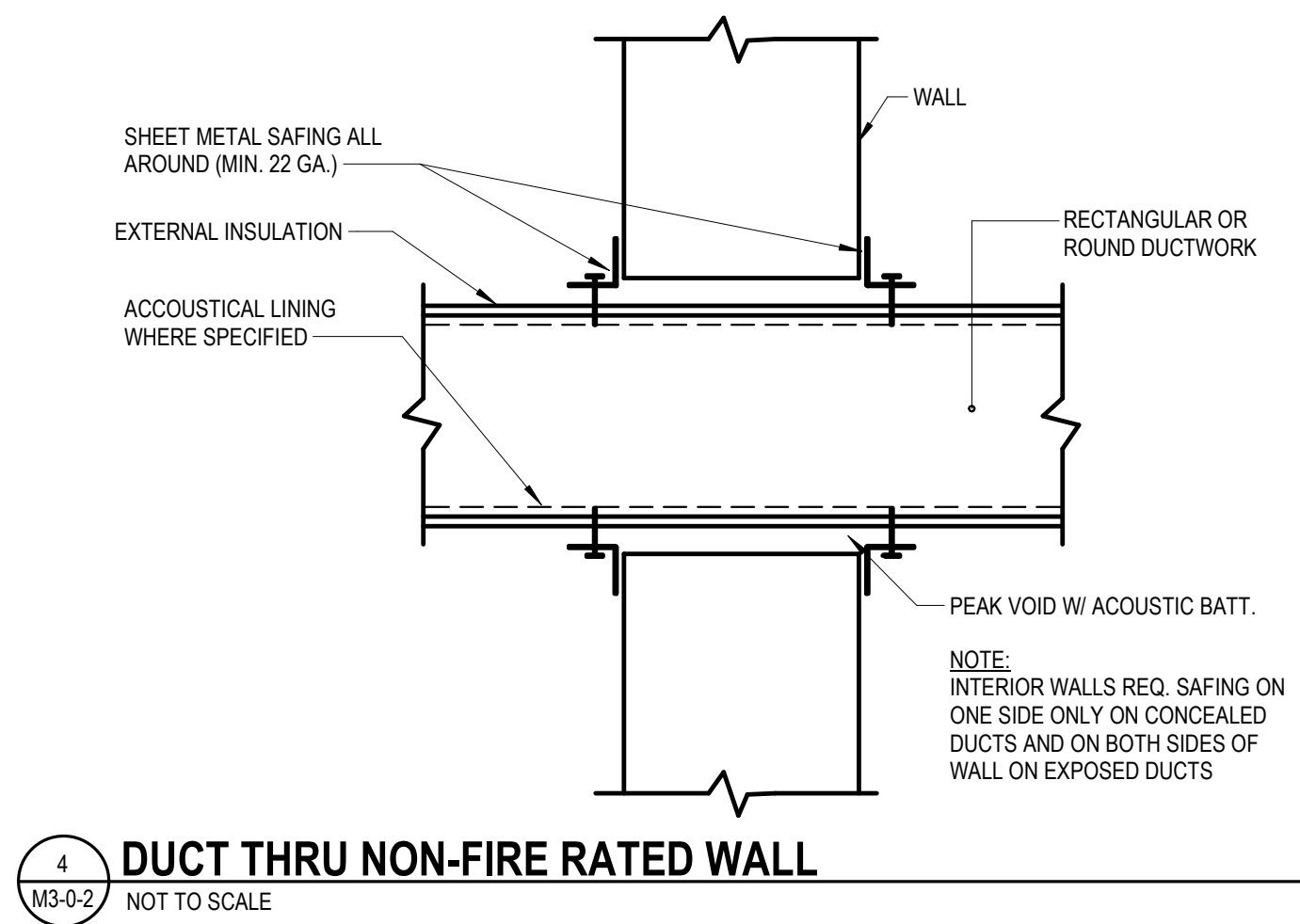
PROJECT NORTH

MAGNETIC NORTH

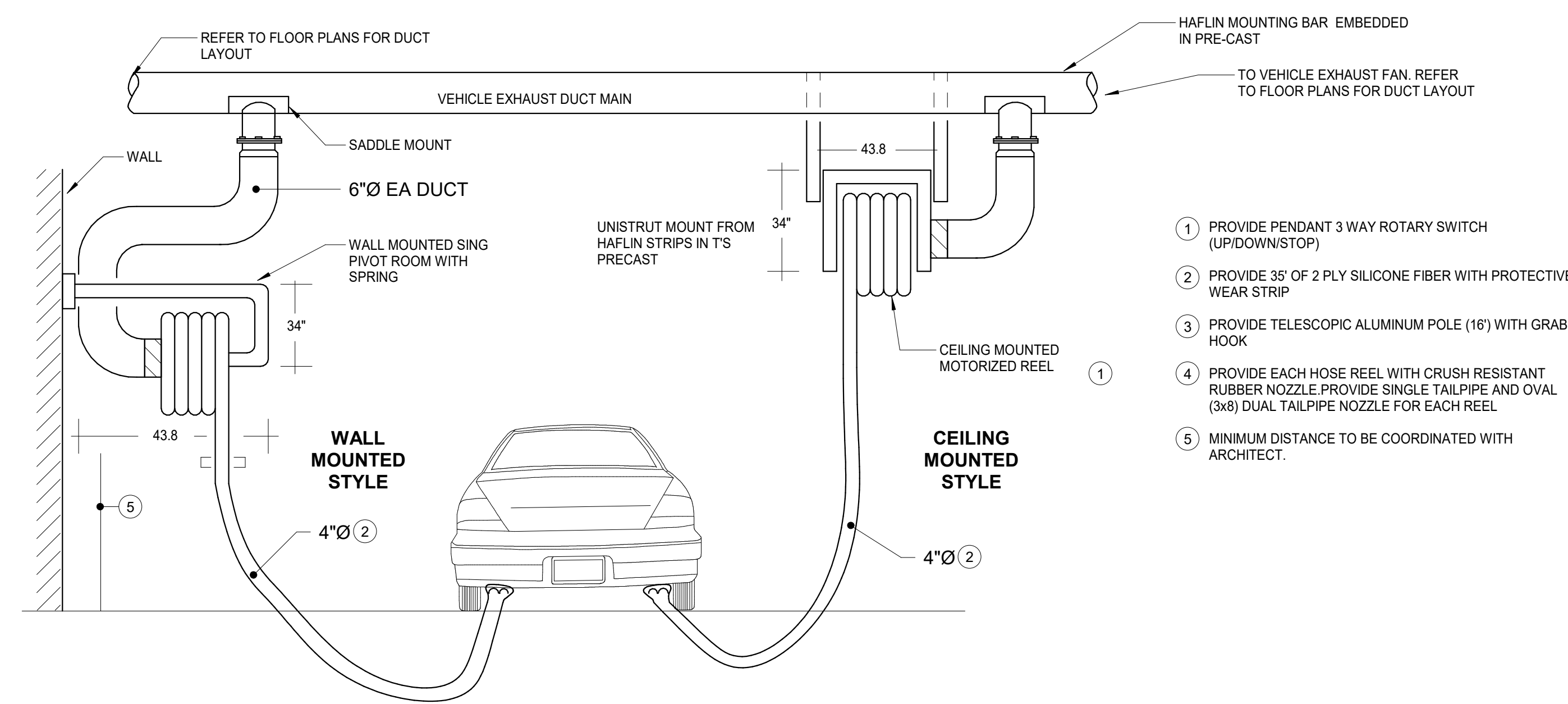
MECHANICAL DETAILS SHEET #1

Scale: NOT TO SCALE
Job No.: 20202
Drawn By: DRA
Date: August 4th, 2022

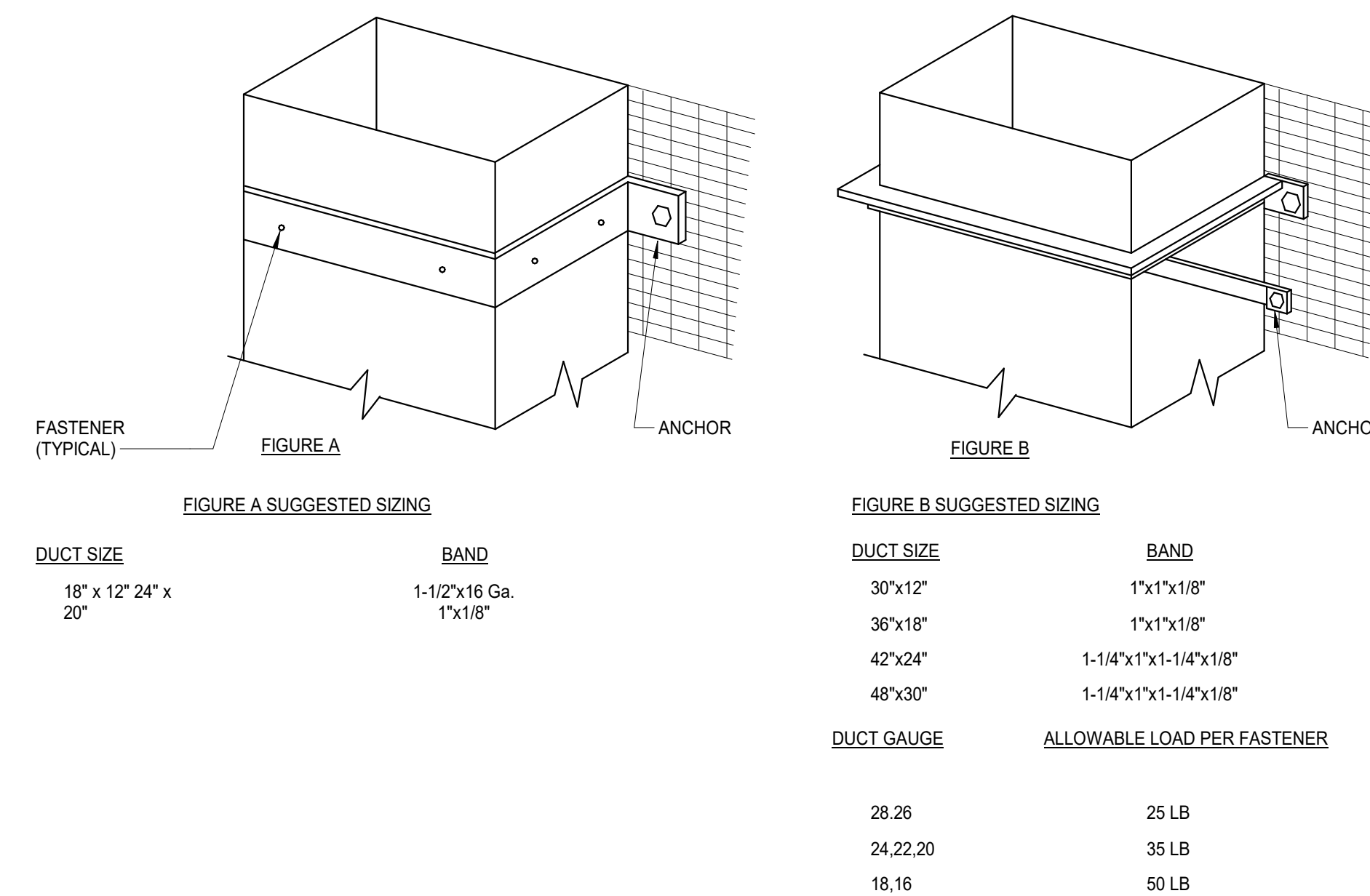
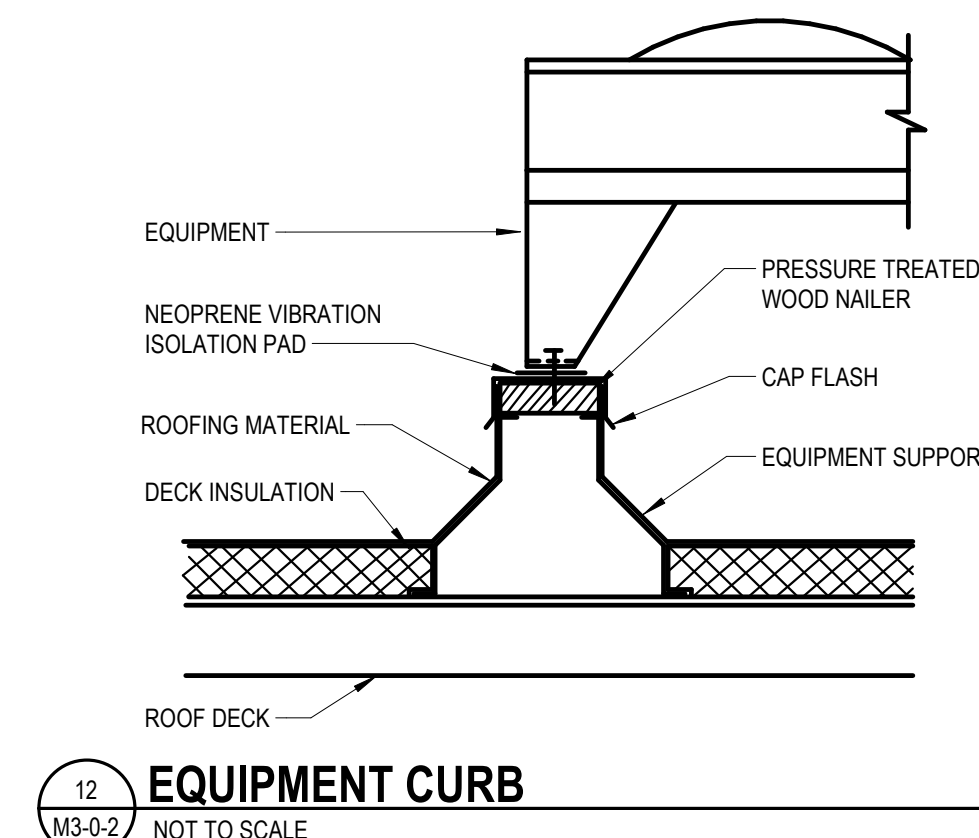
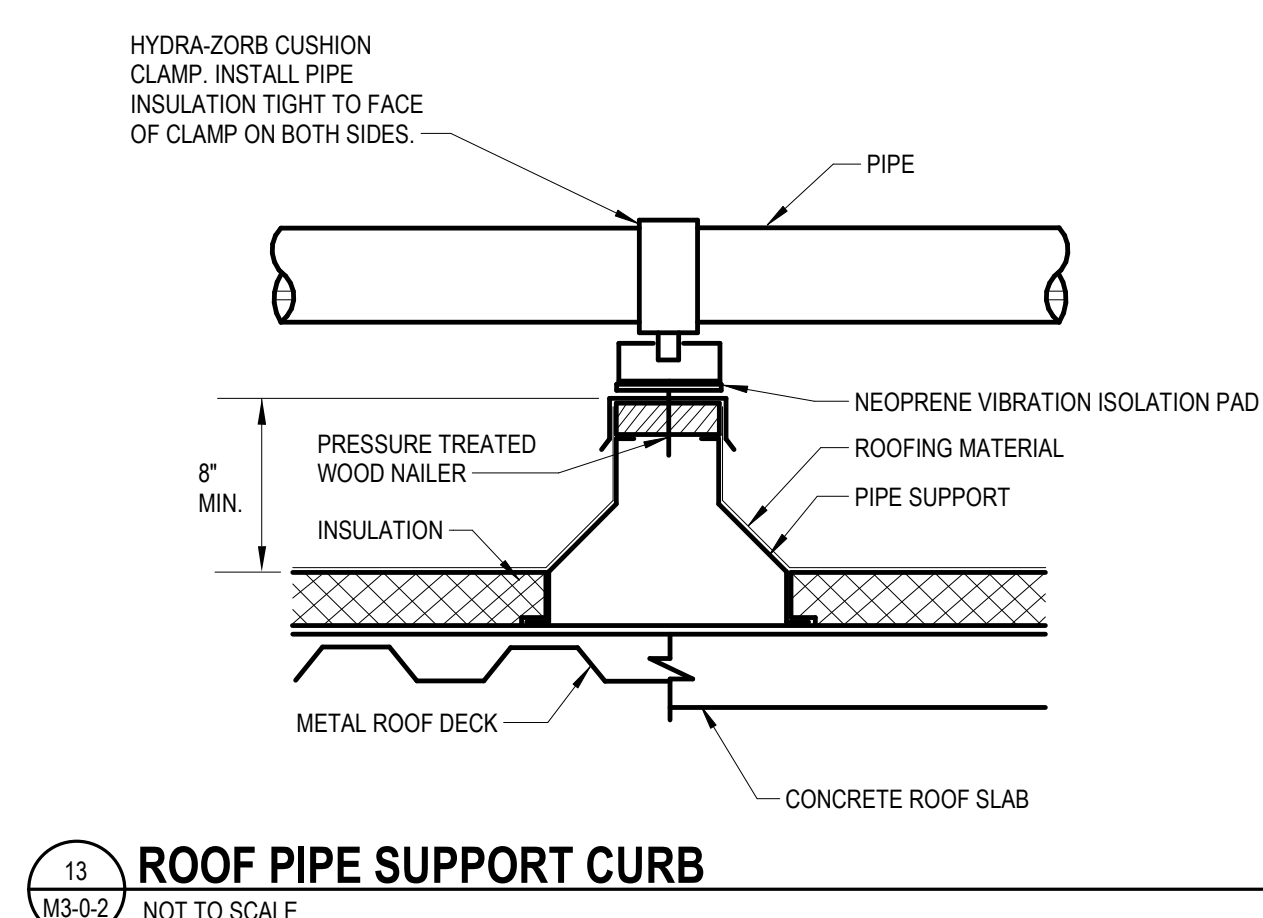
M3-0-1



- NOTES:**
1. PROVIDE A MINIMUM OF 36" CLEARANCE IN FRONT OF THE ELECTRIC CONTROL PANEL(S) AS PER THE NATIONAL ELECTRIC CODE/NEC PIPING, DUCTWORK, BUILDING STRUCTURE, ETC. SHALL BE IN THIS MAINTENANCE ZONE-COORDINATE WITH ALL TRADES. INSTALL BOX W/ REQUIRED MANUFACTURER'S CLEARANCES ALL AROUND.
 2. 24" MINIMUM LENGTH OF INLET-SIZE STRAIGHT DUCTWORK FROM TERMINAL CONNECTION TO DUCTWORK TRANSITION AT THE RECTANGULAR PRESSURE.
 3. ALL BOXES SHALL BE INSTALLED PER THIS DETAIL.
 4. BRANCH DUCT SIZE SHALL BE AS SHOWN ON FLOOR PLAN OR SHALL BE THE SAME SIZE AS DIFFUSER NECK IF NOT INDICATED.
 5. DUCT SIZE TO BE AS SHOWN ON PLANS. TRANSITION TO BOX CONNECTION INLET/DISCHARGE SIZES AS REQUIRED.
 6. LINED SOUND DEFLECTION RA DUCT BOOT/TAPERED UP AT ANGLE W/ OPENING AT TOP PROVIDED BY BOX MFR. DUCT BOOT SIZE TO MATCH BOX RA OPENING SIZE. PROVIDE MIN. 4" HORIZ. RUN.
 7. FRB TO BE WRAPPED IN MASS-LOADED VINYL (SOUNDSEAL 8-10 OR EQUAL) W/ MIN. SURFACE DENSITY OF 1.0 LB/SQ FT AND A 1" QUILTED INSULATING UNDERLAY. SERVICE ACCESS PANELS TO BE MAINTAINED BY VELCRO ATTACHMENT OF WRAP TO PANELS.



- NOTES:**
1. PROVIDE PENDANT 3 WAY ROTARY SWITCH (UP/DOWN/STOP).
 2. PROVIDE 30' OF 2 PLY SILICONE FIBER WITH PROTECTIVE WEAR STRIP.
 3. PROVIDE TELESCOPIC ALUMINUM POLE (16") WITH GRAB HOOK.
 4. PROVIDE EACH HOSE REEL WITH CRUSH RESISTANT RUBBER NOZZLE. PROVIDE SINGLE TAILPIPE AND OVAL CHW DUAL TAILPIPE NOZZLE FOR EACH REEL.
 5. MINIMUM DISTANCE TO BE COORDINATED WITH ARCHITECT.



AIR COOLED VRF CONDENSING UNIT (VCU)											
UNIT NO	SYSTEM	LOCATION	NOMINAL CAPACITY (TONS)	MODULE A			SOUND RATING (DB)	MANUFACTURER	MODEL	NOTES	
				V	PH	MCA	TOTAL MOP				
VCU-1A	AHU-1	ROOF AREA C	18	460	3	38.3	50	LG	ARUM160TES		
VCU-1B	AHU-1	ROOF AREA C	18	460	3	38.3	50	LG	ARUM160TES		
VCU-2A	AHU-2	ROOF AREA C	20	460	3	41.4	50	LG	ARUM160TES		
VCU-2B	AHU-2	ROOF AREA C	20	460	3	41.4	50	LG	ARUM160TES		
VCU-3A	AHU-3	ROOF AREA D	14	460	3	38.3	50	LG	ARUM160TES		
VCU-3B	AHU-3	ROOF AREA D	14	460	3	28.5	35	61	LG	ARUM160TES	
VCU-3C	AHU-3	ROOF AREA D	14	460	3	28.5	35	61	LG	ARUM160TES	
VCU-3D	AHU-3	ROOF AREA D	14	460	3	28.5	35	61	LG	ARUM160TES	
VCU-4A	AHU-4	ROOF AREA B	18	460	3	38.3	50	LG	ARUM160TES		
VCU-4B	AHU-4	ROOF AREA B	18	460	3	38.3	50	LG	ARUM160TES		
VCU-4C	AHU-4	ROOF AREA B	18	460	3	38.3	50	LG	ARUM160TES		
VCU-4D	AHU-4	ROOF AREA B	14	460	3	28.5	35	61	LG	ARUM160TES	
VCU-5A	AHU-5	ROOF AREA B	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-5B	AHU-5	ROOF AREA B	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-5C	AHU-5	ROOF AREA B	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-5D	AHU-5	ROOF AREA B	8	460	3	16.4	25	0	LG	ARUM060TES	
VCU-6A	AHU-6	ROOF AREA A	14	460	3	28.5	35	61	LG	ARUM160TES	
VCU-6B	AHU-6	ROOF AREA A	8	460	3	16.4	25	0	LG	ARUM060TES	
VCU-6C	AHU-6	ROOF AREA A	14	460	3	28.5	35	61	LG	ARUM160TES	
VCU-6D	AHU-6	ROOF AREA A	8	460	3	16.4	25	0	LG	ARUM060TES	
VCU-7A	AHU-7	ROOF AREA A	12	460	3	26.4	35	0	LG	ARUM140TES	
VCU-7B	AHU-7	ROOF AREA A	12	460	3	26.4	35	0	LG	ARUM140TES	
VCU-7C	AHU-7	ROOF AREA A	12	460	3	26.4	35	0	LG	ARUM140TES	
VCU-7D	AHU-7	ROOF AREA A	12	460	3	26.4	35	0	LG	ARUM140TES	
VCU-8A	AHU-8	ROOF AREA A	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-8B	AHU-8	ROOF AREA A	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-8C	AHU-8	ROOF AREA A	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-8D	AHU-8	ROOF AREA A	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-9A	AHU-9	ROOF AREA D	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-9B	AHU-9	ROOF AREA D	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-9C	AHU-9	ROOF AREA D	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-9D	AHU-9	ROOF AREA D	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-10A	AHU-10	ROOF AREA D	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-10B	AHU-10	ROOF AREA D	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-10C	AHU-10	ROOF AREA D	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-10D	AHU-10	ROOF AREA D	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11A	AHU-11	ROOF AREA D	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11B	AHU-11	ROOF AREA D	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11C	AHU-11	ROOF AREA D	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11D	AHU-11	ROOF AREA D	16	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11A	HRU-1	ROOF AREA A	10	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11B	HRU-1	ROOF AREA A	10	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11C	HRU-1	ROOF AREA A	8	460	3	16.4	25	0	LG	ARUM060TES	
VCU-11D	HRU-1	ROOF AREA A	10	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11E	HRU-1	ROOF AREA A	8	460	3	16.4	25	0	LG	ARUM060TES	
VCU-11F	HRU-1	ROOF AREA A	10	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11G	HRU-1	ROOF AREA A	8	460	3	16.4	25	0	LG	ARUM060TES	
VCU-11H	HRU-1	ROOF AREA A	10	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11I	HRU-1	ROOF AREA A	8	460	3	16.4	25	0	LG	ARUM060TES	
VCU-11J	HRU-1	ROOF AREA A	10	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11K	HRU-1	ROOF AREA A	8	460	3	16.4	25	0	LG	ARUM060TES	
VCU-11L	HRU-1	ROOF AREA A	10	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11M	HRU-1	ROOF AREA A	8	460	3	16.4	25	0	LG	ARUM060TES	
VCU-11N	HRU-1	ROOF AREA A	10	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11O	HRU-1	ROOF AREA A	8	460	3	16.4	25	0	LG	ARUM060TES	
VCU-11P	HRU-1	ROOF AREA A	10	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11Q	HRU-1	ROOF AREA A	8	460	3	16.4	25	0	LG	ARUM060TES	
VCU-11R	HRU-1	ROOF AREA A	10	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11S	HRU-1	ROOF AREA A	8	460	3	16.4	25	0	LG	ARUM060TES	
VCU-11T	HRU-1	ROOF AREA A	10	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11U	HRU-1	ROOF AREA A	8	460	3	16.4	25	0	LG	ARUM060TES	
VCU-11V	HRU-1	ROOF AREA A	10	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11W	HRU-1	ROOF AREA A	8	460	3	16.4	25	0	LG	ARUM060TES	
VCU-11X	HRU-1	ROOF AREA A	10	460	3	35.7	50	62	LG	ARUM160TES	
VCU-11Y	HRU-1	ROOF AREA A	8	460	3	16.4	25	0	LG	ARUM060TES	
VCU-11Z	HRU-1	ROOF AREA A	10	460	3	35.7	50	62	LG	ARUM160TES	

- NOTES:
- REFER TO SPECIFICATIONS SECTION 20000 FOR ALTERNATE MANUFACTURERS FOR PRODUCTS/SYSTEMS LISTED UNDER THIS SCHEDULE.
 - VOID CONSISTS OF (2) UNITS THINED TOGETHER. MECHANICAL SUB-CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL EQUIPMENT, WIRING, AND PIPING TO PROVIDE A COMPLETE VRF SYSTEM.
 - PROVIDE LOW AMBIENT CONTROL CAPABLE OF OPERATION AT -14 DEGREES F.
 - PROVIDE AHU AND EXHAUSTS FOR EACH CIRCUIT.
 - MECHANICAL CONTRACTOR SHALL COORDINATE A SEPARATE DISCONNECT SWITCH PROVIDED BY THE ELECTRICAL CONTRACTOR.
 - EACH MODULE REQUIRES A SEPARATE ELECTRICAL POWER CONNECTION.
 - PROVIDE FRAME CONNECTOR Y-BRANCH ACCESSORY.
 - PROVIDE HAIL GUARD.

ENERGY RECOVERY VENTILATOR - ELECTRIC HEATING COIL (ERV)											
UNIT NO	SERVICE	LOCATION	AIR FLOWS (CFM)	O.A. EXH	V	PH	FLA	MCA	MOP	MANUFACTURER	MODEL
ERV-1	ADMIN. DEPARTMENT HEADS	ROOF AREA A	1160	960	460	3	41.1	45	GREENHECK	ERV-40-30C	PS
ERV-2	EARLY CHILDHOOD	ROOF AREA B	460	460	208	1	8.9	15	RENEWAIRE	ERV-10-20L-VG	PS
ERV-3	EARLY CHILDHOOD	ROOF AREA A	1300	950	208	3	11.9	15	RENEWAIRE	HE2XKNH	PS
ERV-4	MEDIA CENTER CONCESSIONS BUILDING	ROOF AREA A	1420	1115	460	3	41.1	45	GREENHECK	RV-40-30D	PS
ERV-5	LOCKER BUILDING	LOCKER BUILDING	1500	1300	208	3	11.9	15	RENEWAIRE	HE4XKNH	PS

DEDICATED OUTDOOR AIR ROOFTOP UNITS - DXCOOLING/HEATING WITH ELECTRIC PRE-HEAT (HRU)

UNIT NO.	LOCATION	SERVICE	OUTDOOR AIR FLOW (CFM)	SUPPLY FAN MAX AIRFLOW W (CFM)	RETURN FAN MAX AIRFLOW (CFM)	COOLING COIL CAP (MBH)	ELECTRIC PRE-HEAT COIL	ELECTRICAL					WEIGHT	MANUFACTURER	MODEL	REMARKS
HRU-1	ROOF AREA A	CLASSROOMS	17000	17000	16600	822.0	80	V	PH	FLA	MCA	OPD				SEE NOTES
HRU-2	ROOF AREA A	CLASSROOMS	17000	17000	16600	822.0	80	480	3	155	169.6	175	17000.00	YORK	YCO-11848	SEE NOTES
HRU-3	ROOF AREA B	CLASSROOMS	18500	17600	16800	822.0	80	480	3	155	169.6	175	17000.00	YORK	YCO-11848	SEE NOTES
HRU-4	ROOF AREA D	LOCKERSHOWER	7900	7900	7900	414.0	40	480	3	73.6	91.9	110	9000.00	YORK	YCO	SEE NOTES

NOTES:

- REFER TO SPECIFICATIONS SECTION 20000 FOR ALTERNATE MANUFACTURERS FOR PRODUCTS/SYSTEMS LISTED UNDER THIS SCHEDULE.
- REFER TO ENERGY RECOVERY WHEEL SCHEDULE.
- THE BREAK HORSEPOWER LISTED HERE IS THE MAXIMUM ALLOWABLE WHICH SHALL INCLUDE ALL UNIT SPECIFIC SYSTEM EFFECTS AND COMPONENT PRESSURE DROPS.
- PROVIDE MERV-8 PRE-FILTER AND MERV-13 FINAL FILTER FOR SUPPLY AIR FLOW. PROVIDE MERV-8 FILTERS FOR THE RETURN/EXHAUST AIRFLOW UPSTREAM OF TOTAL ENERGY WHEEL.
- ALLOW FOR 1" W.C. FILTER DRAIN ON THE SUPPLY AND 0.5" W.C. FILTER DRAIN ON THE EXHAUST AIR STREAMS.
- PROVIDE 2" INCH HIGH FULL PERMITTER SPRING ROOF CURB WITH 30" DEFLECTION - TYPE PC-4CIS
- PROVIDE DIRECT DRIVE PLAIN FANS WITH AIRFOIL SHAPED BLADES.
- PROVIDE REFRIGERANT PIPING BETWEEN HRU AND RUC CONDENSING UNIT.

- NOTES:
- REFER TO SPECIFICATIONS SECTION 20000 FOR ALTERNATE MANUFACTURERS FOR PRODUCTS/SYSTEMS LISTED UNDER THIS SCHEDULE.
 - REFER TO ENERGY RECOVERY WHEEL SCHEDULE.
 - THE BREAK-HORSEPOWER LISTED HERE IS THE MAXIMUM ALLOWABLE WHICH SHALL INCLUDE ALL UNIT SPECIFIC SYSTEM EFFECTS AND COMPONENT PRESSURE.
 - PROVIDE MERV-8 PRE-FILTER AND MERV-13 FINAL FILTER FOR SUPPLY AIR FLOW. PROVIDE MERV-8 FILTERS FOR THE RETURN/EXHAUST AIRFLOW UPSTREAM OF TOTAL ENERGY WHEEL.
 - ALLOW FOR 1" W.C. FILTER LOADING ON THE SUPPLY AND 0.5" W.C. FILTER LOADING ON THE EXHAUST AIR STREAMS.
 - PROVIDE 2" INCH HIGH RISE R-10 FORMER SPRING ROOF CURB WITH 2-INCH DEFLECTION - TYPE PC-AC3.
 - PROVIDE DIRECT DRIVE PLENUM FANS WITH AIRPOL SHAPED BLADES.
 - PROVIDE REFRIGERANT PIPING BETWEEN HRU AND VCU CONDENSING UNIT.

ROOFTOP AIR HANDLING UNIT - DX COOLING/HEATING WITH ELECTRIC PRE-HEAT (RTU)

			OUTDOOR AIRFLOW		SUPPLY FAN		RETURN FAN		COOLING COIL																
UNIT NO.	LOCATION	SERVICE	MIN	MAX	CFM (MAX)	CFM (MAX)	CFM (MAX)	ENERGY RECOVERY TYPE	TOTAL CAP (MBH)	PH	FLA	MCA	OPD	WEIGHT	MANUFACTURER	MODEL	REMARKS								
RTU-2	ROOF AREA A	COSMETOLOGY	2200	5000	5000	4700	COMPOSITE WITH SILICA GEL COATING	251.0	460	3	47	59.0	60	6300.00	YORK	YCO-47455	SEE NOTES								
RTU-2	ROOF AREA D	GYMNASIUM	8400	21000	20000		COMPOSITE WITH SILICA GEL COATING	1076.0	460	3	719	216.9	225	22500.00	YORK	YCO-94x120	SEE NOTES								
NOTES:																									
1. REFER TO SPECIFICATIONS SECTION 200000 FOR ALTERNATE MANUFACTURERS FOR PRODUCTS/SYSTEMS LISTED UNDER THIS SCHEDULE.																									
2. REFER TO ENERGY RECOVERY WHEEL SCHEDULE.																									
3. PROVIDE 2 INCH MERV 13 FILTER FOR OUTDOOR AIR.																									
4. PROVIDE OUTSIDE AIR INTAKE HOOD.																									
5. PROVIDE 2 INCH MERV 8 EXHAUST FILTER.																									
6. MAXIMUM FILTER VELOCITY TO BE 400 FPM.																									
7. PROVIDE SINGLE POINT POWER CONNECTION.																									
8. PROVIDE CONVENIENCE OUTLET POWERED BY DEDICATED 120V/10AMP FEED (BY DIN 26).																									
9. PROVIDE FROST CONTROL.																									
10. PROVIDE REFRIGERANT PIPING BETWEEN RTU AND VCU CONDENSING UNIT.																									

- NOTES:
- REFER TO SPECIFICATIONS SECTION 20000 FOR ALTERNATE MANUFACTURERS FOR PRODUCTS/SYSTEMS LISTED UNDER THIS SCHEDULE.
 - REFER TO ENERGY RECOVERY WHEEL SCHEDULE.
 - PROVIDE 2 INCH MERV-13 FILTER FOR OUTDOOR AIR.
 - PROVIDE OUTSIDE AIR INTAKE HOOD.
 - PROVIDE 2 INCH MERV-8 EXHAUST FILTER.
 - MAXIMUM FILTER VELOCITY TO BE 400 FPM.
 - PROVIDE SINGLE POINT POWER CONNECTION.
 - PROVIDE CONVENIENCE OUTLET PROVIDED BY DEDICATED 120V/PH20AMP FEED (BY DIV. 26).
 - PROVIDE FROST CONTROL.
 - PROVIDE REFRIGERANT PIPING BETWEEN RTU AND VCU CONDENSING UNIT.

MAKE-UP AIR UNIT - DX COOLING/HEATING WITH ELECTRIC PRE-HEAT (MAU)

UNIT NO	LOCATION	SERVICE	MAX AIRFLOW (CFM)	SUPPLY FAN AIRFLOW (CFM)	TOTAL CAP (MBH)	ELECTRIC PRE-HEAT COIL	ELECTRICAL						WEIGHT	MANUFACTURER	MODEL	REMARKS
							COOL NO COIL	PH	FLA	MCA	OPD					
MAU-1	MECHANICAL 2B1	KITCHEN	6000	18000	0.0	30	102.3	460	3	46	57.9	60	7000.00	YORK	YCI-48x72	SEE NOTES
MAU-2	ROOF AREA A	CULINARY KITCHEN	16000	18000	0.0	331	1129.0	460	3	0	0.0	500	19000.00	YORK	YCO-84x144	SEE NOTES

- NOTES:
- REFER TO SPECIFICATIONS SECTION 20000 FOR ALTERNATE MANUFACTURERS FOR PRODUCTS/SYSTEMS LISTED UNDER THIS SCHEDULE.
 - INCLUDES UP TO 1" W.C. OF DIRTY FILTER LOADING ALLOWANCE.
 - PROVIDE SEPARATE ELECTRICAL FEED, 20 AMPS, 120V, 1 PH FOR SERVICE OUTLET AND EXHAUST AIR LINE.
 - PROVIDE 2 INCH SPRING ROOF CURB.
 - PROVIDE REFRIGERANT PIPING BETWEEN MAU AND VCU CONDENSING UNIT.

INDOOR AIR HANDLING UNIT - DX COOLING/HEATING WITH ELECTRIC PRE-HEAT (AHU)

UNIT NO.	LOCATION	SERVICE	MIN	OUTDOOR	SUPPLY	RETURN	ENERGY RECOVERY	COOLING COIL		ELECTRICAL				WEIGHT	MANUFACTURER	MODEL	REMARKS
				FAN	FAN	FAN		TOTAL	V	PH	FLA	MCA	OPD				
				MAX AIRFLOW (CFM)	MAX AIRFLOW (CFM)	MAX AIRFLOW (CFM)		CAP (MBH)									
AHU-1	METAL FABRICATION MEZZANINE	METAL FABRICATION MEZZANINE	3000	8300	7800		NONE	417.0	460	3	70	87.6	90	9600.00	YORK	YCI-66x78	SEE NOTES
AHU-2	AUTO COLLISION MEZZANINE	AUTO COLLISION	3500	9100	8600		NONE	464.0	460	3	72	90.5	100	10000.00	YORK	YCI-66-84	SEE NOTES
AHU-3	AUTO TECHNOLOGY MEZZANINE	AUTO TECHNOLOGY	5300	15000	14200		NONE	749.0	460	3	66	82.7	90	16000.00	YORK	YCI-75x105	SEE NOTES
AHU-4	ELECTRICAL TECHNOLOGY MEZZANINE	ELECTRICAL TECHNOLOGY	4000	15000	14200		NONE	749.0	460	3	66	82.7	90	16000.00	YORK	YCI-75x105	SEE NOTES
AHU-5	HVAC TECHNOLOGY MEZZANINE	HVAC TECHNOLOGY	3000	10800	10200		NONE	548.0	460	3	98	106.10	110	11500.00	YORK	YCI-69x87	SEE NOTES
AHU-6	PLUMBING & PIPFITTING MEZZANINE	PLUMBING & PIPFITTING MEZZANINE	3000	11000	9500		NONE	518.0	460	3	92	99.5	110	11000.00	YORK	YCI-69x87	SEE NOTES
AHU-7	CARPENTRY MEZZANINE	CARPENTRY	3100	12000	11400		NONE	624.0	460	3	108	115.7	125	13000.00	YORK	YCI-69x96	SEE NOTES
AHU-8	MECHANICAL 281	CAFETERIA	5000	13500	15060		COMPOSITE WITH SILICA GEL COATING	675.0	460	3	74	91.9	110	14000.00	YORK	YCI-65x111	SEE NOTES
AHU-9	MECHANICAL 639	EVENTS ENTRY	6000	13000	15060		COMPOSITE WITH SILICA GEL COATING	671.0	460	3	131	141.9	150	14000.00	YORK	YCI-65x102	SEE NOTES
AHU-10	MECHANICAL 639	AUDITORIUM	5500	14000	15060		COMPOSITE WITH SILICA GEL COATING	707.0	460	3	133	144.1	150	15000.00	YORK	YCI-65x108	SEE NOTES
AHU-11	MECHANICAL 639	STAGE	1600	4500	15060		COMPOSITE WITH SILICA GEL COATING	222.0	460	3	43	53.5	60	5000.00	YORK	YCI-45x66	SEE NOTES

VRF BRANCH CIRCUIT SELECTOR SCHEDULE (BS)						
UNIT NO	V	PH	MANUFACTURER	MODEL	NOTES	
BS-1-1	208	1	LG	PRHR030A		
BS-2a	208	1	LG	PRHR030A		
BS-2b	208	1	LG	PRHR030A		
BS-2c	208	1	LG	PRHR030A		
BS-2d	208	1	LG	PRHR030A		
BS-3-1	208	1	LG	PRHR030A		
BS-3-2	208	1	LG	PRHR030A		
BS-4-1	208	1	LG	PRHR030A		
BS-4-2	208	1	LG	PRHR030A		
BS-4-3	208	1	LG	PRHR030A		
BS-5-1	208	1	LG	PRHR030A		
BS-5-2	208	1	LG	PRHR030A		
BS-5-3	208	1	LG	PRHR030A		
BS-6-1	208	1	LG	PRHR030A		
BS-6-2	208	1	LG	PRHR030A		
BS-6-3	208	1	LG	PRHR030A		
BS-7-1	208	1	LG	PRHR030A		
BS-8-1	208	1	LG	PRHR030A		
BS-8-2	208	1	LG	PRHR030A		
BS-8-3	208	1	LG	PRHR030A		
BS-9-1	208	1	LG	PRHR030A		
BS-9-2	208	1	LG	PRHR030A		
BS-9-3	208	1	LG	PRHR030A		
BS-9-4	208	1	LG	PRHR030A		
BS-10-1	208	1	LG	PRHR030A		
BS-10-2	208	1	LG	PRHR030A		
BS-10-3	208	1	LG	PRHR030A		
BS-10-4	208	1	LG	PRHR030A		
BS-11-1	208	1	LG	PRHR030A		
BS-12-1	208	1	LG	PRHR030A		
BS-12-2	208	1	LG	PRHR030A		
BS-13-1	208	1	LG	PRHR030A		
BS-13-2	208	1	LG	PRHR030A		
BS-13-3	208	1	LG	PRHR030A		
BS-14-1	208	1	LG	PRHR030A		
BS-14-2	208	1	LG	PRHR030A		
BS-15-1	208	1	LG	PRHR030A		
BS-15-2	208	1	LG	PRHR030A		
BS-16-1	208	1	LG	PRHR030A		
BS-16-2	208	1	LG	PRHR030A		
BS-17-1	208	1	LG	PRHR030A		
BS-17-2	208	1	LG	PRHR030A		
BS-18-1	208	1	LG	PRHR030A		
BS-19-2	208	1	LG	PRHR030A		

VRF FAN COIL UNIT (FCU)										
UNIT NO	TYPE	LOCATION	VRF CONDENSING UNIT	RA1 NOMINAL TONS	V PH	MOCP	MAX SOUND RATING (DBA)HML	MANUFACTURER	MODEL	NOTES
FCU-1-1	3x3 CEILING CASSETTE	METAL FAB CR	CU-1	2.5	208	1	0	0	LG	ARNV243TNM4
FCU-1-2	2x2 CEILING CASSETTE	CLUST OFF	CU-1	0.5	208	1	0	0	LG	ARNV3053TRD4
FCU-1-3	2x2 CEILING CASSETTE	CUST WORKSHOP	CU-1	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-1-4	3x3 CEILING CASSETTE	WEIGHTS	CU-1	4.0	208	1	0	0	LG	ARNV4833TRD4
FCU-1-5	3x3 CEILING CASSETTE	AUTO COLL CR	CU-1	1.5	208	1	0	0	LG	ARNV1833TNM4
FCU-1-6	3x3 CEILING CASSETTE	AUTO TECH CR	CU-1	3.0	208	1	0	0	LG	ARNV3033TRM4
FCU-1-7	CEILING CONCEALED - DUCTED	CORRIDOR @ SOUTH	CU-1	2.0	208	1	0	0	LG	ARNV3033TRD4
FCU-1-8	CEILING CONCEALED - DUCTED	CORRIDOR ST NORTH	CU-1	2.0	208	1	0	0	LG	ARNV2433TNM4
FCU-2-1	2x2 CEILING CASSETTE	NURSE WAIT	CU-2	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-2-2	2x2 CEILING CASSETTE	NURSE OFFICE	CU-2	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-2-3	2x2 CEILING CASSETTE	NURSE OFFICE	CU-2	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-2-4	2x2 CEILING CASSETTE	EXAM	CU-2	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-2-5	2x2 CEILING CASSETTE	EXAM	CU-2	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-2-6	2x2 CEILING CASSETTE	EXAM	CU-2	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-2-7	2x2 CEILING CASSETTE	RESTING	CU-2	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-2-8	3x3 CEILING CASSETTE	HEALTH CR	CU-2	3.0	208	1	0	0	LG	ARNV4833TRM4
FCU-2-9a	3x3 CEILING CASSETTE	FITNESS	CU-2	4.0	208	1	0	0	LG	ARNV4833TRM4
FCU-2-9b	3x3 CEILING CASSETTE	FITNESS	CU-2	4.0	208	1	0	0	LG	ARNV4833TRM4
FCU-2-10	2x2 CEILING CASSETTE	COACH OFF	CU-2	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-2-11	2x2 CEILING CASSETTE	PE INSTR. OFF	CU-2	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-2-12	2x2 CEILING CASSETTE	TRAINER	CU-2	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-2-13	2x2 CEILING CASSETTE	ATH. DR. OFF	CU-2	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-2-14	2x2 CEILING CASSETTE	PE INSTR. OFF	CU-2	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-2-15	2x2 CEILING CASSETTE	COACH OFF	CU-2	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-2-16a	3x3 CEILING CASSETTE	GRS LOCKER	CU-2	2.0	208	1	0	0	LG	ARNV3033TRM4
FCU-2-17	2x2 CEILING CASSETTE	TEAM LOCKER	CU-2	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-2-18	2x2 CEILING CASSETTE	TEAM LOCKER	CU-2	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-2-19	2x2 CEILING CASSETTE	TEAM LOCKER	CU-2	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-2-20	2x2 CEILING CASSETTE	TEAM LOCKER	CU-2	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-2-21	2x2 CEILING CASSETTE	TEAM LOCKER	CU-2	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-2-22	2x2 CEILING CASSETTE	TEAM LOCKER	CU-2	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-2-23a	3x3 CEILING CASSETTE	BOYS LOCKER	CU-2	2.0	208	1	0	0	LG	ARNV2433TNM4
FCU-2-23b	3x3 CEILING CASSETTE	BOYS LOCKER	CU-2	2.3	208	1	0	0	LG	ARNV2833TRM4
FCU-2-24	2x2 CEILING CASSETTE	FITNESS	CU-2	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-2-25	2x2 CEILING CASSETTE	FITNESS	CU-2	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-2-26	2x2 CEILING CASSETTE	REFEREE	CU-2	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-3-1	3x3 CEILING CASSETTE	RELATED CR 518	CU-3	3.0	208	1	0	0	LG	ARNV3033TRD4
FCU-3-2	2x2 CEILING CASSETTE	BANK 160	CU-3	1.3	208	1	0	0	LG	ARNV1533TQD4
FCU-3-3	3x3 CEILING CASSETTE	RELATED CR 504	CU-3	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-3-4	2x2 CEILING CASSETTE	SCHOOL STORE 159	CU-3	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-3-5	3x3 CEILING CASSETTE	RELATED CR 503	CU-3	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-3-6	3x3 CEILING CASSETTE	RELATED CR 496	CU-3	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-3-7	2x2 CEILING CASSETTE	CORRIDOR 577	CU-3	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-3-8	3x3 CEILING CASSETTE	CORRIDOR 5	CU-3	2.0	208	1	0	0	LG	ARNV3033TRD4
FCU-3-9	2x2 CEILING CASSETTE	CORRIDOR 0	CU-3	1.5	208	1	0	0	LG	ARNV1833TQD4
FCU-4-1	3x3 CEILING CASSETTE	COMPUTER LAB 416	CU-4	3.5	208	1	0	0	LG	ARNV4233TM4
FCU-4-2	2x2 CEILING CASSETTE	PHOTO STORAGE	CU-4	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-4-3a	3x3 CEILING CASSETTE	DESIGN & VISUAL COMM 0	CU-4	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-4-3b	2x2 CEILING CASSETTE	DESIGN & VISUAL COMM 0	CU-4	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-4-4	2x2 CEILING CASSETTE	OFFICE	CU-4	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-4-5	3x3 CEILING CASSETTE	COMPUTER LAB 417	CU-4	4.0	208	1	0	0	LG	ARNV4833TRM4
FCU-4-6	2x2 CEILING CASSETTE	RELATED CR 418	CU-4	1.5	208	1	0	0	LG	ARNV1833TQD4
FCU-4-7	3x3 CEILING CASSETTE	COMPUTER LAB 410	CU-4	3.5	208	1	0	0	LG	ARNV4233TM4
FCU-4-8	3x3 CEILING CASSETTE	RELATED CR 411	CU-4	2.0	208	1	0	0	LG	ARNV2433TNM4
FCU-4-9	3x3 CEILING CASSETTE	CORRIDOR	CU-4	4.0	208	1	0	0	LG	ARNV4833TRM4
FCU-4-10	3x3 CEILING CASSETTE	LANGUAGE LEARNING 0	CU-4	2.0	208	1	0	0	LG	ARNV3033TRD4
FCU-4-11	3x3 CEILING CASSETTE	SCIENCE LAB 29	CU-4	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-4-12	2x2 CEILING CASSETTE	SCI PREP	CU-4	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-4-13	3x3 CEILING CASSETTE	SCIENCE LAB 0	CU-4	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-4-14	3x3 CEILING CASSETTE	CORRIDOR 440	CU-4	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-4-15	2x2 CEILING CASSETTE	GUIDANCE OFFICE 138	CU-4	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-4-16	2x2 CEILING CASSETTE	GUIDANCE OFFICE 138	CU-4	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-4-17	2x2 CEILING CASSETTE	GUIDANCE OFFICE 140	CU-4	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-4-18	2x2 CEILING CASSETTE	VOC DEAN 188	CU-4	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-4-19	2x2 CEILING CASSETTE	SPED TUTORIAL 81	CU-4	1.5	208	1	0	0	LG	ARNV3033TRD4
FCU-4-20	2x2 CEILING CASSETTE	OFFICE 413	CU-4	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-4-21	3x3 CEILING CASSETTE	CORRIDOR	CU-4	2.0	208	1	0	0	LG	ARNV2433TNM4
FCU-4-22	3x3 CEILING CASSETTE	CORRIDOR	CU-4	2.0	208	1	0	0	LG	ARNV2433TNM4
FCU-5-1	3x3 CEILING CASSETTE	CR 0	CU-5	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-5-2	3x3 CEILING CASSETTE	CR 0	CU-5	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-5-3	3x3 CEILING CASSETTE	CR 0	CU-5	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-5-4	3x3 CEILING CASSETTE	CR 0	CU-5	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-5-5	3x3 CEILING CASSETTE	CR 0	CU-5	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-5-6a	3x3 CEILING CASSETTE	COLLAB 50	CU-5	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-5-6b	3x3 CEILING CASSETTE	COLLAB 50	CU-5	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-5-7a	3x3 CEILING CASSETTE	TEACHERS PLANNING 0	CU-5	2.3	208	1	0	0	LG	ARNV2833TRM4
FCU-5-7b	3x3 CEILING CASSETTE	TEACHERS PLANNING 0	CU-5	2.3	208	1	0	0	LG	ARNV2833TRM4
FCU-5-8	2x2 CEILING CASSETTE	HIDDLE 636	CU-5	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-5-9	3x3 CEILING CASSETTE	CR 0	CU-5	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-5-10	3x3 CEILING CASSETTE	CR 0	CU-5	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-5-11	3x3 CEILING CASSETTE	CORRIDOR	CU-5	2.0	208	1	0	0	LG	ARNV2433TNM4
FCU-5-12	3x3 CEILING CASSETTE	CORRIDOR	CU-5	2.0	208	1	0	0	LG	ARNV2433TNM4
FCU-6-1	3x3 CEILING CASSETTE	COMPUTER LAB 409	CU-6	4.0	208	1	0	0	LG	ARNV4833TRM4
FCU-6-2	2x2 CEILING CASSETTE	OFFICE 405	CU-6	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-6-3	3x3 CEILING CASSETTE	COMPUTER LAB 398	CU-6	2.3	208	1	0	0	LG	ARNV2833TRM4
FCU-6-4	3x3 CEILING CASSETTE	COMPUTER LAB 397	CU-6	2.3	208	1	0	0	LG	ARNV2833TRM4
FCU-6-5	3x3 CEILING CASSETTE	COMPUTER LAB 398	CU-6	2.3	208	1	0	0	LG	ARNV2833TRM4
FCU-6-6	3x3 CEILING CASSETTE	COMPUTER LAB 399	CU-6	2.3	208	1	0	0	LG	ARNV2833TRM4
FCU-6-7	2x2 CEILING CASSETTE	BUSINESS OFFICE TECH 0	CU-6	1.0	208	1	0	0	LG	ARNV1233TRD4
FCU-6-8	2x2 CEILING CASSETTE	RELATED CR 404	CU-6	1.5	208	1	0	0	LG	ARNV1833TQD4
FCU-6-9	2x2 CEILING CASSETTE	OFFICE 401	CU-6	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-6-10	2x2 CEILING CASSETTE	MARKETING 414	CU-6	1.5	208	1	0	0	LG	ARNV1833TQD4
FCU-6-11	2x2 CEILING CASSETTE	RELATED CR 400	CU-6	1.5	208	1	0	0	LG	ARNV1833TQD4
FCU-6-12	3x3 CEILING CASSETTE	SPED SMALL GROUP 79	CU-6	1.0	208	1	0	0	LG	ARNV1233TRD4
FCU-6-13	3x3 CEILING CASSETTE	CR 0	CU-6	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-6-14	3x3 CEILING CASSETTE	CR 0	CU-6	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-6-15	3x3 CEILING CASSETTE	SPED LEARNING CENTER	CU-6	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-6-16	3x3 CEILING CASSETTE	CR 68	CU-6	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-6-17	3x3 CEILING CASSETTE	CR 69	CU-6	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-6-18	3x3 CEILING CASSETTE	CR 75	CU-6	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-7-1	2x2 CEILING CASSETTE	DEPT HEADS	CU-7	1.5	208	1	0	0	LG	ARNV1833TQD4
FCU-7-2	2x2 CEILING CASSETTE	ACAD PROG 167	CU-7	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-7-3	2x2 CEILING CASSETTE	IN-HOUSE SUSPENSION 289	CU-7	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-7-4	2x2 CEILING CASSETTE	APT 166	CU-7	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-7-5	2x2 CEILING CASSETTE	CONF 256	CU-7	0.6	208	1	0	0	LG	ARNV3033TRD4
FCU-8-1	3x3 CEILING CASSETTE	SPED LEARNING CENTER	CU-8	3.5	208	1	0	0	LG	ARNV4233TM4
FCU-8-2	WALL MOUNTED	STAR 1 665	CU-8	1.5	208	1	0	0	LG	ARNV0853SA4
FCU-8-3	3x3 CEILING CASSETTE	BIO TECHNOLOGY 249	CU-8	3.5	208	1	0	0	LG	ARNV4233TM4
FCU-8-4	3x3 CEILING CASSETTE	LAB 479	CU-8	2.0	208	1	0	0	LG	ARNV2433TNM4
FCU-8-5	3x3 CEILING CASSETTE	BIO TECHNOLOGY 249	CU-8	4.0	208	1	0	0	LG	ARNV4833TRM4
FCU-8-6	3x3 CEILING CASSETTE	BIO LAB 479	CU-8	2.0	208	1	0	0	LG	ARNV4233TM4
FCU-8-7	2x2 CEILING CASSETTE	PREP 474	CU-8	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-8-8	2x2 CEILING CASSETTE	STORAGE 475	CU-8	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-8-9	3x3 CEILING CASSETTE	HEALTH CR RELATED CR	CU-8	3.0	208	1	0	0	LG	ARNV3833TRM4
FCU-8-10	3x3 CEILING CASSETTE	SPED GROUP SMALL 78	CU-8	2.0	208	1	0	0	LG	ARNV2433TNM4
FCU-8-11	3x3 CEILING CASSETTE	SPED GROUP SMALL 77	CU-8	2.0	208	1	0	0	LG	ARNV2433TNM4
FCU-8-12	3x3 CEILING CASSETTE	DIGITAL LEARNING 163	CU-8	3.5	208	1	0	0	LG	ARNV4233TM4
FCU-8-13	3x3 CEILING CASSETTE	SCIENCE LAB 0	CU-8	3.5	208	1	0	0	LG	ARNV4233TM4
FCU-8-14	2x2 CEILING CASSETTE	SCI PREP 28	CU-8	0.8	208	1	0	0	LG	ARNV3033TRD4
FCU-8-15	3x3 CEILING CASSETTE	SCIENCE LAB 0	CU-8	3.5	208	1	0	0	LG	ARNV4233TM4
FCU-8-16	2x2 CEILING CASSETTE	SPED TUTORIAL 84	CU-8	0.5	208	1	0	0	LG	ARNV3033TRD4
FCU-8-17	2x2 CEILING CASSETTE	CORRIDOR	CU-8	2.0	208	1	0	0	LG	ARNV2433TNM4
FCU-8-18										