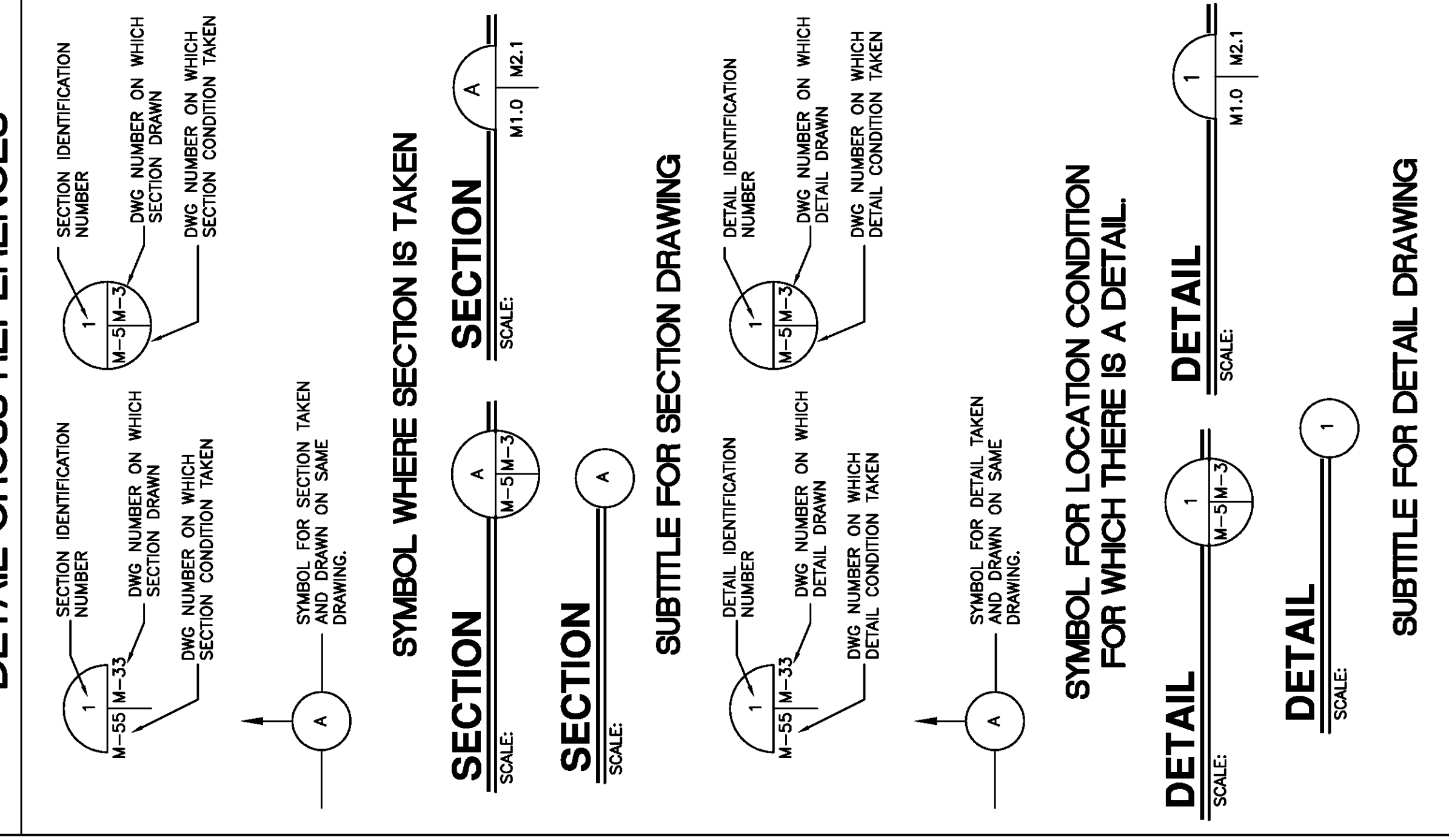


PIPING SYMBOLS

BB	BOILER BLOW-OFF	DU	DUCT UNDER POSITIVE PRESSURE
BS	FUEL OIL SUPPLY	DN	DUCT UNDER NEGATIVE PRESSURE
FO	FUEL OIL RETURN	ND	NEW DUCTWORK
FD	FUEL OIL FILL	SU	SUPPLY DUCT UP
FN	NATURAL GAS	SD	SUPPLY DUCT DOWN
F & T	F & T TRAP	RU	RETURN DUCT UP
CT	THERMOSTATIC TRAP	RD	RETURN DUCT DOWN
CCA	CONTROL COMPRESSED AIR	RE	RECTANGULAR DUCT 90 DEG ELBOW
RL	REFRIGERANT LIQUID	RE	ELBOW WITH TURNING VANES
RD	REFRIGERANT DISCHARGE	RE	RECTANGULAR DUCT 45 DEG ELBOW
RS	REFRIGERANT SUCTON	RE	ELBOW LESS TURNING VANES
RV	REFRIGERANT VENT	RE	RECTANGULAR DUCT TRANSITION
CWS	CHILLED WATER SUPPLY	RE	1 SIDES SLOPED
CR	CHILLED WATER RETURN	RE	2 SIDES SLOPED
CHS	SECONDARY CHILLED WATER SUPPLY	RE	DUCT WITH FLEXIBLE CONNECTION
CHR	SECONDARY CHILLED WATER RETURN	RE	RECTANGULAR DUCT TEE WITH SPLITTER DAMPER AND TURNING VANES
CDWS	CONDENSER WATER SUPPLY	RE	RECTANGULAR DUCT TRANSITION
CDWR	CONDENSER WATER RETURN	RE	1 SIDES SLOPED
CB	BALANCE VALVE	RE	2 SIDES SLOPED
CO	SHUT-OFF VALVE NORMALLY OPEN	RE	DUCT WITH ACCESS DOOR
CO	SHUT-OFF VALVE NORMALLY CLOSED	RE	RECTANGULAR DUCT TO ROUND DUCT
CV	GATE VALVE	RE	ROUND DUCTWORK
FO	BUTTERFLY VALVE	RE	ROUND DUCTWORK
FO	FLOAT OPERATED VALVE	RE	ROUND DUCT WITH ELBOW
FO	MOTOR OPERATED VALVE	RE	ROUND DUCT WITH ELBOW
FO	PRESSURE REDUCING VALVE	RE	ROUND DUCT UP
FO	2-WAY CONTROL VALVE	RE	ROUND DUCT DOWN
FO	3-WAY CONTROL VALVE	RE	ROUND DUCT
FO	ANGLE VALVE	RE	ROUND DUCT
FO	TEMP. & PRESS. RELIEF VALVE	RE	ROUND DUCT
FO	PRESS. RELIEF VALVE	RE	ROUND DUCT
FO	PLUG VALVE	RE	ROUND DUCT
FO	VALVE IN VERTICAL LINE	RE	ROUND DUCT
FO	ANCHOR	RE	ROUND DUCT
FO	THERMOMETER	RE	ROUND DUCT
FO	THERMOMETER WALL	RE	ROUND DUCT
FO	PRESSURE GAUGE WITH GAUGE COCK	RE	ROUND DUCT
FO	SIGHT GLASS	RE	ROUND DUCT
FO	AUTOMATIC AIR VENT	RE	ROUND DUCT
FO	MANUAL AIR VALVE	RE	ROUND DUCT
FO	STRAINER	RE	ROUND DUCT
FO	TEMPERATURE POINT	RE	ROUND DUCT
FO	ELBOW - 90 DEG.	RE	ROUND DUCT
FO	ELBOW - 45 DEG.	RE	ROUND DUCT
FO	ELBOW - TURNED UP	RE	ROUND DUCT
FO	ELBOW - TURNED DOWN	RE	ROUND DUCT
FO	PIPE RISER	RE	ROUND DUCT
FO	PIPE SLOPE DOWN	RE	ROUND DUCT
FO	CROSS	RE	ROUND DUCT
FO	LATERAL	RE	ROUND DUCT
FO	TEE - OUTLET UP	RE	ROUND DUCT
FO	TEE - OUTLET DOWN	RE	ROUND DUCT
FO	EXPANSION JOINT	RE	ROUND DUCT
FO	CAP	RE	ROUND DUCT
FO	PLUG	RE	ROUND DUCT
FO	UNION	RE	ROUND DUCT
FO	BUTTERFLY VALVE	RE	ROUND DUCT
FO	GAUGE COCK	RE	ROUND DUCT
FO	VENTURI FLOW MEASUREMENT DEVICE	RE	ROUND DUCT
FO	AIR PRESSURE SWITCHED	RE	ROUND DUCT
FO	BALL VALVE	RE	ROUND DUCT
FO	SHUT-OFF VALVE NORMALLY CLOSED	RE	ROUND DUCT
FO	PIPE GUIDE	RE	ROUND DUCT
FO	DIRECTION OF FLOW	RE	ROUND DUCT
FO	FLEXIBLE PIPE CONNECTIONS	RE	ROUND DUCT
FO	PRESSURE / TEMPERATURE	RE	ROUND DUCT

DETAIL CROSS REFERENCES



GENERAL NOTES:

- GENERAL MECHANICAL NOTES HERE ARE TYPICAL FOR ALL FLOOR PLANS. SEE INDIVIDUAL FLOOR PLANS FOR ADDITIONAL NOTES.
- DUCTWORK DIMENSIONS GIVEN ARE INSIDE CLEAR.
- IF NO SIZE IS SHOWN FOR DUCT SERVING DIFFUSER OR TERMINAL BOX, REFER TO DIFFUSER AND GRILLE SCHEDULE FOR BRANCH DUCT SIZE.
- SIZE DUCT RUNOUTS BY THESE SCHEDULES UNLESS NOTED OTHERWISE ON PLANS.
- REFER TO MECHANICAL SCHEDULE SHEET FOR EQUIPMENT, DIFFUSER AND GRILLE SCHEDULES.
- PROVIDE FLANGE TYPE CEILING OUTLETS IN SPACES WITH GYPSUM, PLASTER, HARD CEILINGS, OR NON-LAY-IN GRID TYPE CEILINGS REFER TO ARCHITECTURAL REFLECTED CEILING PLANS.
- INSTALL TRANSITION PIECES FROM SUPPLY OUTLET OF EQUIPMENT TO DUCT SIZE INDICATED ON PLANS. CONSULT EQUIPMENT MANUFACTURER FOR OUTLET SIZE.
- ALL DUCT ELBOWS SHALL BE PROVIDED WITH SINGLE THICKNESS TURNING VANES OR RADIUS ELBOWS.
- FURNISH OPPOSED BLADE VOLUME DAMPERS (OBD) INTEGRAL WITH DIFFUSERS MOUNTED IN IMACCESSIBLE CEILINGS (FOR AIR BALANCE) DO NOT FURNISH OBD'S WITH DIFFUSERS MOUNTED IN LAY-IN TYPE CEILINGS.
- PROVIDE AND INSTALL MANUAL VOLUME DAMPERS IN THE BRANCH DUCTS SERVING LAY-IN DIFFUSERS GRILLES AND REGISTERS FOR AIR BALANCE.
- PROVIDE FLEX DUCT CONNECTIONS INLET AND OUTLET OF ALL ROTATING EQUIPMENT.
- PROVIDE SOLID NEOPRENE ISOLATORS FOR ALL EQUIPMENT. CORK PAD IS NOT ALLOWED UNLESS UNIT IS INTERNALLY ISOLATED.
- REFER TO PLUMBING DRAWINGS FOR FLOOR DRAIN LOCATIONS.
- REFER TO HVAC SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- REFER TO ELECTRICAL AND PLUMBING DRAWINGS FOR COORDINATION WITH MECHANICAL DRAWINGS.
- EQUIPMENT SIZES AND SERVICE SPACE REQUIREMENTS VARY AMONG MANUFACTURERS. CONSULT SUBMITTED AND APPROVED MANUFACTURER FOR SPACE REQUIREMENTS & VERIFY SPACE ADEQUACY.
- DO NOT BLOCK TUBE PULL, FILTER PULL, COIL PULL, SAFETY OR SERVICE CLEARANCE SPACE ON EQUIPMENT WITH PIPING, DUCTWORK, ETC. FLANGED OR REMOVABLE SECTIONS MAY BE USED IN SOME INSTANCES WHERE TIGHT CLEARANCES EXIST. (VERIFY WITH ENGINEER IN SUCH CASES).
- SEE ARCHITECTURAL DRAWINGS FOR COORDINATION OF MECHANICAL WITH REFLECTED CEILING PLAN.
- SEAL ALL WALLS, ROOF, AND FLOOR PENETRATIONS SMOKE TIGHT AS REQUIRED.
- PROVIDE ESCUTCHEONS AT ALL EXPOSED LOCATIONS WHERE PIPE PENETRATES WALL.
- ROOM NUMBERS AND NAMES ON THE CONSTRUCTION DOCUMENTS ARE FOR CONSTRUCTION PURPOSES ONLY. FINAL ROOM NAMES AND NUMBERS TO BE PROVIDED BY THE ARCHITECT.
- SEE DETAILS ON SHEETS FOR BRANCH TAKE-OFF REQUIREMENTS FOR LOW PRESSURE SUPPLY AND RETURN TAPS (SHOWN ON DRAWINGS AS SINGLE LINE BRANCH TAKE-OFFS FROM MAIN) AND BRANCH RUNOUT TO TERMINAL BOX.
- WHERE CONCEALED BY IMACCESSIBLE FINISHES, PROVIDE ACCESS DOORS TO ALL VALVE BOXES, VALVES, DUCT STATIC PRESSURE SENSORS, MANUAL VOLUME DAMPERS, FIRE/SMOKE CONTROLS, AIR VENTS, DRAIN CONNECTIONS & ALL OTHER ITEMS REQUIRING PERIODIC MAINTENANCE. ACCESS DOORS SHALL BE PROVIDED WITH 3-POUND DENSITY FIBERGLASS INSULATION TO THE ADJACENT PIPING INSULATION AND COVERED WITH PREMOULDED 25/50 RATED PVC FITTING, VAPOR SEALED WITH CHILDERS CP-30 VAPOR BARRIER MASTIC. INSULATION SHALL BE 1" THICK.
- CHILLED WATER PIPING, VALVES AND FITTINGS SHALL BE INSULATED WITH CELLULAR GLASS, ASTM C552, TYPE II, CLASS 2. NO SUBSTITUTES WILL BE CONSIDERED. REFER TO SPECIFICATIONS FOR ADDITIONAL INSULATION REQUIREMENTS.
- EQUIPMENT SHALL HAVE FACTORY PROVIDED NAMEPLATE BEARING THE MANUFACTURER'S NAME, ADDRESS, MODEL NUMBER, AND SERIAL NUMBER. SECURELY AFFIXED IN A CONSPICUOUS PLACE, THE NAMEPLATE OF THE DISTRIBUTING AGENT WILL NOT BE ACCEPTABLE.
- NATURAL GAS REGULATING VALVES ON ALL DEVICES TO BE PROPERLY VENTED TO OUTDOORS MAINTAINING NECESSARY CLEARANCE TO OUTSIDE OR COMBUSTION AIR INTAKES.
- ALL EQUIPMENT SHALL MEET THE INSTALLATION AND OPERATION REQUIREMENTS OF THE EQUIPMENT MANUFACTURER. EQUIPMENT INSTALLATION AND OPERATION SHALL MEET ALL CODES AND REGULATIONS IN EFFECT IN THE AREA WHERE WORK IS DONE.
- ALL FLOOR MOUNTED EQUIPMENT SHALL HAVE 4" (MIN.) HIGH HOUSEKEEPING PADS. HOUSEKEEPING PADS SHALL EXTEND 6" (MIN.) BEYOND EQUIPMENT FOOTPRINT.
- ALL PIPES PENETRATING CONCRETE/MASONRY WALLS/FLOORS AND CEILING/ROOFS SHALL HAVE SCHEDULE 40 STEEL SLEEVES. SLEEVES SHALL BE LARGE ENOUGH TO ACCOMMODATE ALL PIPING INSULATION.
- ALL MOTORIZED VOLUME DAMPERS SHALL BE RUSKIN ODBO OR PRIOR APPROVED EQUAL. DAMPERS SHALL INCLUDE JAMB AND BLADES SEALS.
- DISCHARGE OPENING AT UNIT SHALL BE CLEAR OF ANY OBSTRUCTIONS DUE TO LINED DUCT INSULATION OR FLANGE CONNECTIONS SO THAT THE FREE FLOW OF AIR FROM FAN IS NOT RESTRICTED. SIMILAR AT RETURN AIR INLET OF THE UNIT.
- PUT HIGH POINT MANUAL AIR VENTS AT ALL CHILLED WATER AND HOT WATER AHU COILS AND PIPING TO CHILLED WATER AND HOT WATER PUMPS TO FACILITATE MANUAL AIR VENTING AS REQUIRED.
- THERE SHALL BE NO DUCTWORK AND/OR PIPING INSTALLED OVER ELECTRICAL PANELS AND/OR THROUGH ELECTRICAL ROOMS.
- PROVIDE FULL SIZE CONDENSATE LINE TO FLOORING/HUB DRAIN. ELEVATE UNIT TO ACCOMMODATE P-TRAP. PIPE SHALL NOT POSE A TRIPPING HAZARD.
- PROVIDE 18 GA. S.S. ALL WELDED PAN FOR ALL AIR HANDLING UNITS, BLOWER COIL UNITS, ETC. SIDES SHALL BE MIN. 2" WITH 1/4" HEMMA PAN SHALL EXTEND 6" BEYOND ALL SIDES OF UNIT AND COIL PIPING CONNECTIONS. PROVIDE MIN. 1" CONDENSATE LINE TO FLOOR DRAIN. PIPE SHALL NOT POSE A TRIPPING HAZARD.
- ALL VENDOR FURNISHED CONTROLS SHALL BE MOUNTED, WIRED & ADJUSTED BY CONTROLS CONTRACTOR.
- ALL SAFETY RELIEF VALVE SETTINGS TO BE DETERMINED BY THE MANUFACTURER. CONTRACTOR SHALL SUBMIT SAFETY RELIEF VENT SIZING CALCULATIONS INCLUDING, BUT NOT LIMITED TO, CHILLER, BOILER, PRESSURE TANKS, ETC.
- ALL VENDOR FURNISHED EQUIPMENT SHALL BE INSTALLED AND ADJUSTED TO MEET THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS AND TO MEET THE MANUFACTURER'S REQUIREMENTS.

DESIGN INDOOR TEMPERATURE CRITERIA	
COOLING (DB)	74°F
HEATING (DB)	68°F
1. INDOOR DESIGN RELATIVE HUMIDITY (RH) 60%.	
2. WINTER DESIGN RH SHALL BE BASED UPON OUTSIDE AMBIENT CONDITIONS.	
3. BUILDING WINTER INSIDE SPACE TEMPERATURE CANNOT BE LOWER THAN 55°F FOR THE PURPOSE OF PROTECTING SPRINKLER SYSTEM (PIPING).	

AIR BALANCE SCHEDULE	
EXHAUST (CFM)	OUTSIDE AIR (CFM)
EF-1 75	2,000
EF-2 150	
EF-3 150	
EF-4 50	
EF-5 50	
EF-6 75	
EF-7 400	
EF-8 400	
EF-9 400	
TOTAL 1,750	2,000
TOTAL NET POSITIVE PRESSURE 15%	

THIS IS A TYPICAL SHEET. ALL ABBREVIATIONS, SYMBOLS AND NOTES ARE NOT NECESSARILY IN USE ON THIS PROJECT.

ABBREVIATIONS

ABV	ABOVE	FT	FEET
ACC	AIR COOLED CHILLER	GPM	GALLONS PER MINUTE
AD	AIR DEVICE	HC	HEATING COIL
AFF	ABOVE FINISHED FLOOR	HMS	HOT WATER RETURN
AFR	ABOVE FINISHED ROOF	HWS	HOT WATER SUPPLY
AHU	AIR HANDLING UNIT	KWT	KILOWATT
AV	AUTOMATIC AIR VENT	LAB	LABORATORY
BD	BACKDRIFT DAMPER	LAB	LABORATORY
BTU	BRITISH THERMAL UNIT	LWB	LEAVING WET BULB TEMPERATURE
BTU/H	BRITISH THERMAL UNIT PER HOUR	LWT	LEAVING WATER TEMPERATURE
CC	COOLING COIL	MAX	MAXIMUM
CFM	CUBIC FEET PER MINUTE	MBH	ONE THOUSAND BTUH
CFR	CHILLED WATER RETURN	MER	MER MECHANICAL EQUIPMENT ROOM
CHS	CHILLED WATER SUPPLY	MFG	MOTOR MANUFACTURER
CLG	CEILING	MIP	MOTOR HORSEPOWER
CONC	CONCRETE	MIN	MINIMUM
CONC	CONCRETE	NC	NORMALLY CLOSED
CONV	CONVERSION	NO	NORMALLY OPEN
CONT	CONTINUATION	OA	OUTSIDE AIR

HUSEMAN & Associates
MECHANICAL ELECTRICAL PLUMBING FIRE PROTECTION
Down By ME
Job No. 080003
Designed By J. Checked By CWB

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1			
2			
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JEFFERSON PARISH SHERIFF'S OFFICE
4TH DISTRICT SUBSTATION
JEFFERSON PARISH, LOUISIANA

HVAC GENERAL NOTES

FILE NAME	08000601M100.dwg	DRAWING NUMBER
PROJECT NUMBER	51122.03	
DATE	10-07-09	
TITLE	M100	
DATE		
PHASE	CD	