

MECHANICAL ABBREVIATIONS

ADJ	ADJUSTABLE
AC	AIR CONDITIONING
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT
AMP	AMPERE
AO	ANALOG OUTPUT
AP	ACCESS PANEL
ATM	ATMOSPHERE
BAS	BUILDING AUTOMATION SYSTEM
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
CD	CONDENSATE DRAIN
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CH	CHILLED OR CHILLER
CHW	CHILLED WATER
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CL	CONDENSATE LEVEL
CO	CARBON MONOXIDE
COIN	COINTEGRATION
CSR	CURRENT SENSING RELAY
CTD	Cooling Tower Drive
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
D	DRAIN
DB	DRY BULB (TEMPERATURE)
DEG	DEGREE
DDC	DIRECT DIGITAL CONTROL
DI	DIGITAL INPUT
DIA	DIAMETER
DO	DIGITAL OUTPUT
DP	DIFFERENTIAL PRESSURE
DPS	DIFFERENTIAL PRESSURE SWITCH
EA	EACH OR EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EMER	EMERGENCY
ES	END SWITCH
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWT	ENTERING WATER TEMPERATURE
EX, EXIST	EXISTING
EXH	EXHAUST
EXT	EXTERNAL
EXP	EXPANSION
F	FAHRENHEIT
FA	FREE AREA OR FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FC	FAIL CLOSE UPON LOSS OF POWER SOURCE
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FMS	FLOW MEASURING STATION
FO	FAIL OPEN UPON LOSS OF POWER SOURCE
FT	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOAT SWITCH
FSO	COMBINATION FIRE AND SMOKE DAMPER
G	GAS
GA	GAUGE
GAL	GALLONS
GALV	GALVANIZED
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HD	HEAD
HI	HIGH STATIC SAFETY
HP	HORSEPOWER OR HIGH POINT
HR	HOUR
HZ	HERTZ (CYCLES PER SECOND)
ID	INSIDE DIAMETER
IN	INCHES
KW	KILOWATT
KWH	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE
LB	POUND
LF	LINEAR FEET
LRA	LOCKED ROTOR AMPS
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	1,000 BTUH
MCA	MINIMUM CIRCUIT AMPACITY
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MIN	MINIMUM, MINUTE
MUA	MAKE-UP AIR
NC	NOISE CRITERIA OR NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
OS	OCCUPANCY SENSOR
PSF	POUNDS PER SQUARE FOOT
PD	PRESSURE DROP
PH	PHASE
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SENSOR
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH (ABSOLUTE)
PSIG	POUNDS PER SQUARE INCH (GAUGE)
PVC	POLYVINYL CHLORIDE
RA	RETURN AIR
RET	RETURN
RH	RELATIVE HUMIDITY
RL	REFRIGERANT LINE, REFRIGERANT LINESET
RLA	RUNNING LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
SA	SUPPLY AIR
SD	SMOKE DETECTOR OR SMOKE DAMPER
SEN	SENSIBLE
SFD	COMBINATION SMOKE / FIRE DAMPER
SL	SUCTION LINE
SP	STATIC PRESSURE
SS	STAINLESS STEEL
TEMP	TEMPERATURE, THERMOSTAT
TON	TONS OF REFRIGERATION
TPS	POINT TEMPERATURE SENSOR
TS	TEMPERATURE SENSOR
TSA	AVERAGING TEMPERATURE SENSOR
TSP	TOTAL STATIC PRESSURE
TSTAT	THERMOSTAT
TYP	TYPICAL
V	VOLTS
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VEL	VELOCITY
VFD	VARIABLE FREQUENCY DRIVE
VP	VELOCITY PRESSURE
VRF	VARIABLE REFRIGERANT FLOW
VRV	VARIABLE REFRIGERANT VOLUME
WB	WET BULB TEMPERATURE
WC	WATER COLUMN
WG	WATER GAUGE

GENERAL MECHANICAL NOTES

GENERAL REQUIREMENTS

1. ALL WORK ON THIS PROJECT SHALL CONFORM TO THE LATEST ADOPTED EDITION OF THE STATE MECHANICAL CODE AND ALL APPLICABLE LOCAL CODES AND ORDINANCES. IF A CONFLICT IS FOUND TO EXIST BETWEEN APPLICABLE CODES THE MORE STRINGENT SHALL APPLY.
2. THE SPECIFICATIONS ARE AS BINDING ON THE CONTRACTOR AS THE DRAWINGS. THE CONTRACTOR SHALL READ THE SPECIFICATIONS AND SHALL INCLUDE ALL ITEMS REQUIRED BY THE SPECIFICATIONS BEFORE SUBMITTING A BID.
3. THE SUBMISSION OF A PROPOSAL WILL BE CONSIDERED EVIDENCE THAT THE CONTRACTOR IS FAMILIAR WITH THE DRAWINGS, SPECIFICATIONS, BUILDING SITE, AND OTHER INFORMATION PRESENTED FOR THE CONSTRUCTION OF THIS PROJECT. CLAIMS MADE SUBSEQUENT TO THE PROPOSAL, FOR MATERIALS AND LABOR BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED, IF THEY COULD HAVE BEEN FORESEEN HAD A COMPLETE AND THOROUGH EXAMINATION HAD BEEN MADE.
4. THE EQUIPMENT ROUGH-IN ITEMS AND THEIR DIMENSIONED LOCATIONS FOR ALL CONNECTIONS ARE ACCURATE TO THE BEST OF OUR KNOWLEDGE. IN SOME INSTANCES, THE OWNER OR SUPPLIER MAY MAKE SUBSTITUTIONS OR THE EQUIPMENT ITEMS MAY VARY FROM WHAT IS SHOWN ON THE DRAWINGS. THEREFORE, THESE ITEMS AND DIMENSIONS SHALL BE VERIFIED WITH THE EQUIPMENT SUPPLIER, OWNER AND/OR EQUIPMENT ROUGH-IN DRAWINGS. THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED PRIOR TO CONSTRUCTION OF ANY DEVIATIONS OF THAT SHOWN OR IMPLIED ON THESE DRAWINGS. FAILURE OF THE APPROPRIATE CONTRACTOR TO VERIFY ROUGH-INS OR LOCATIONS SHALL PLACE THE RESPONSIBILITY FOR ANY SUBSEQUENT RELOCATION AND/OR ADDITIONAL ROUGH-INS DIRECTLY UPON THE CONTRACTOR.
5. DO NOT SCALE DIRECTLY FROM THESE DRAWINGS. REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONAL INFORMATION.
6. THE CONTRACTOR SHALL GUARANTEE ALL WORK FOR WHICH MATERIALS ARE FURNISHED, FABRICATED OR FIELD ERECTED. ALL FACTORY ASSEMBLED EQUIPMENT FOR WHICH NO SPECIFIC MANUFACTURER GUARANTEE IS FURNISHED AND ALL WORK IN CONNECTION WITH THE INSTALLATION OF MANUFACTURER GUARANTEED EQUIPMENT. THIS CONTRACTOR'S GUARANTEE SHALL EXIST FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL OWNER ACCEPTANCE OF THE WORK AND SHALL APPLY TO ALL DEFECTS IN MATERIALS AND/OR WORKMANSHIP OF ANY KIND.
7. ALL PERMITS AND FEES REQUIRED FOR THE WORK SHALL PAID FOR AND SECURED BY THE CONTRACTOR AND SHALL BE INCLUDED IN THE BID PRICE.
8. ALL EQUIPMENT AND MATERIAL SHALL BE NEW AND UNUSED AND SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURER RECOMMENDATIONS AND INSTRUCTIONS. PROVIDE COMPLETE WITH ALL FITTINGS, OFFSETS, AND OTHER ITEMS AS NEEDED BUT NOT NECESSARILY INDICATED ON THE DRAWINGS.
9. ALL EQUIPMENT, FIXTURES, DEVICES, ETC. SHALL BE AS SPECIFIED OR APPROVED EQUAL. SUBSTITUTIONS SHALL MEET ALL CRITERIA (PERFORMANCE, WARRANTY, ETC.) OF THE SPECIFIED ITEMS.
10. WHERE JOB CONDITIONS REQUIRE CHANGES FROM THE CONTRACT DOCUMENTS THAT DO NOT CHANGE THE SCOPE OR NATURE OF THE WORK REQUIRED, THE CONTRACTOR SHALL MAKE SUCH CHANGES WITHOUT ADDITIONAL COST TO THE OWNER. NO OTHER CHANGES WILL BE MADE WITH THE EXPRESSED WRITTEN CONSENT OF THE OWNER.
11. THE CONTRACTOR SHALL SUPPLY TO THE ENGINEER DIGITAL COPIES OF MANUFACTURER'S SHOP DRAWING INFORMATION FOR APPROVAL SO THE QUALITY OF INTENDED MATERIALS OR EQUIPMENT CAN BE REVIEWED PRIOR TO INSTALLATION.
12. ALL CHANGES MADE IN THE FIELD SHALL BE RECORDED BY THE CONTRACTORS ON AS-BUILT DRAWINGS, SHOP DRAWINGS, AND IN MAINTENANCE MANUALS.
13. DRAWINGS ARE DIAGRAMMATIC IN NATURE. COORDINATE EXACT LOCATION OF ALL EQUIPMENT MOUNTED IN CEILING CAVITY SO ALL SERVICEABLE COMPONENTS CAN BE EASILY ACCESSED BY REMOVING CEILING TILES ONLY. REMOVAL OR RELOCATION OF LIGHTING FIXTURES FOR SERVICE ACCESS IS NOT ACCEPTABLE. THE CONTRACTOR SHALL REINSTATE ALL EQUIPMENT THAT HAS INADEQUATE OR UNSAFE ACCESSIBILITY. LOCATE ALL EQUIPMENT WITH MANUFACTURER RECOMMENDED ACCESS FOR OPERATION AND MAINTENANCE.

COORDINATION

1. IN MOST CASES, THE SPACE ABOVE THE CEILING, IN CHASES, AND IN OTHER CONCEALED SPACES IS EXTREMELY LIMITED. THE CONTRACTOR SHALL FULLY COORDINATE THEIR WORK WITH ALL TRADES.
2. ALL MECHANICAL WORK MUST BE INSTALLED AS HIGH AS POSSIBLE SO AS TO MAINTAIN THE MAXIMUM POSSIBLE CLEARANCE ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
3. PROVIDE ACCESS PANELS AND/OR DOORS IN DUCTWORK, WALLS, AND CEILINGS WHERE REQUIRED FOR OPERATION, BALANCING, INSPECTION, AND MAINTENANCE OF ALL EQUIPMENT. INSTALL ACCESS PANELS AND/OR DOORS IN ACCORDANCE WITH ALL APPLICABLE CODES.
4. ALL BARE METAL SURFACES SHALL BE PRIMED AND PAINTED AS DIRECTED BY THE ARCHITECT TO PREVENT ANY RUST, INCLUDING, BUT NOT LIMITED TO: ANGLE FRAMING, UNIT SUPPORTS, MOUNTING HARDWARE, ETC.
5. SEAL ALL ROOF AND WALL PENETRATIONS. FLASH AND COUNTER-FLASH ALL ROOF PENETRATIONS. MINIMUM ACCEPTABLE HEIGHT OF FLASHING IS TWELVE (12) INCHES ABOVE ROOF.
6. GRAVITY DRAINAGE SYSTEMS HAVE PRIORITY OVER OTHER SYSTEMS WITH RESPECT TO ROUTING. CEILING MOUNTED SPRINKLER, LIGHTING, AND ELECTRICAL ITEMS HAVE PRIORITY OVER CEILING MOUNTED MECHANICAL ITEMS. SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING GRID AND LIGHTING LAYOUT FOR COORDINATION OF FINAL AIR DEVICE LOCATIONS.
7. NO OTHER TRADES ARE ALLOWED TO BE SUPPORTED FROM MATERIALS, EQUIPMENT OR DEVICES INSTALLED BY THE MECHANICAL TRADES. LIKEWISE, ALL WORK INSTALLED BY THE MECHANICAL TRADES MUST BE SUPPORTED FROM THE STRUCTURE ABOVE, FROM WALLS, OR FROM THE FLOOR UNLESS OTHERWISE NOTED.
8. CONTRACTOR SHALL VERIFY THE VENTING REQUIREMENTS OF ALL EQUIPMENT AND APPLIANCES. PROVIDE VENT DUCTWORK, FANS, AND TERMINATIONS AS NECESSARY.

AIR TERMINALS

1. ALL GRILLES, REGISTERS, AND DIFFUSERS INSTALLED IN A CEILING GRID SHALL BE EASILY REMOVABLE FOR CLEANING.
2. ALL FRESH AIR AND COMBUSTION AIR INTAKE LOUVERS AND ROOF CAPS SHALL INCLUDE STAINLESS STEEL, GALVANIZED, OR ALUMINUM INSECT SCREENS. SCREENS SHALL BE REMOVABLE FOR CLEANING.
3. ALL EXTERIOR LOUVERS SHALL MATCH THE BUILDING COLOR SCHEME. COORDINATE WITH ARCHITECTURAL DRAWINGS AND SUBMIT SAMPLES FOR APPROVAL PRIOR TO ORDERING ANY LOUVERS.
4. PROVIDE TYPE B FLUE SYSTEMS THRU THE ROOF AT ALL GAS BURNING APPLIANCES. VERIFY FLUE TYPE WITH EQUIPMENT MANUFACTURER. PROVIDE DECORATIVE FLUE CAP AND PAINT ALL FLUE MATERIAL ABOVE THE ROOF TO MATCH THE ROOF COLOR.
5. FOR GAS BURNING EQUIPMENT WITH AN EFFICIENCY OF GREATER THAN 92% OR WHERE THE EXHAUST GAS TEMPERATURE IS 105 DEGREES F OR LESS, THE CONTRACTOR MAY USE SCHEDULE 40 PVC FLUE MATERIALS AS DIRECTED BY MANUFACTURER LITERATURE. TERMINATE WITH MANUFACTURER APPROVED FLUE CAP.

DUCTS

1. ALL RECTANGULAR, ROUND, AND FLEXIBLE DUCTS SHALL BE SIZED AS INDICATED ON THE DRAWINGS. MINIMUM INTERNAL FREE AREA DIMENSIONS ARE GIVEN. ADJUST SIZES FOR LINER THICKNESS WHERE APPLICABLE OR WHERE SHOWN.
2. ALL DUCTS MUST BE MOUNTED AS HIGH AS POSSIBLE EXCEPT AS REQUIRED TO AVOID CONFLICTS WITH INTERSECTING DUCTS. DIAGONALLY OFFSET ALL DUCTS IMMEDIATELY BEFORE AND AFTER PASSING UNDER INTERSECTING DUCTS OR LARGE STRUCTURAL MEMBERS TO MAINTAIN MAXIMUM HEIGHT ABOVE FINISHED FLOOR.
3. ALL SUPPLY, RETURN, EXHAUST AND OUTSIDE AIR DUCTS SHALL BE INSULATED WITH CLASS 1 INSULATION WRAP, 2 INCHES THICK AND 34 POUND PER CUBIC FOOT DENSITY. BACKING SHALL BE FOIL TYPE WITH REINFORCEMENT. INTERNAL DUCT LINER SHALL ONLY BE USED WHERE SPECIFICALLY REQUIRED. INSULATE THE METAL BACKS OF ALL GRILLS, DIFFUSERS AND PLENUM BOXES.
4. ALL FLEXIBLE ROUND DUCT SHALL HAVE 2 INCH THICK FIBERGLASS INSULATION ENCASED IN A VAPOR BARRIER OR SEAMLESS, NON-COMBUSTIBLE, COPOLYMER PLASTIC. INSTALL METAL FLEX CLASS 1 TYPE 506 AIR DUCT OR UL LISTED AND ENGINEER APPROVED EQUAL. FLEXIBLE DUCTS SHALL BE CONNECTED TO TRUNK OR BRANCH DUCTS WITH A MINIMUM OF THREE SHEET METAL SCREWS AT EACH CONNECTION AND CLAMPED (ZIP TIE OR EQUAL) AND DUCT TAPED FOR AN AIRTIGHT SEAL.
5. MAXIMUM LENGTH OF FLEX DUCT IS 4 FEET UNLESS NOTED OTHERWISE. FLEX DUCT SHALL BE SUPPORTED USING 1 INCH WIDE METAL STRAPS SECURED TO THE STRUCTURE ABOVE WITH APPROPRIATE HARDWARE. MAXIMUM BEND IN FLEXIBLE DUCT IS 90 DEGREES OVER THE ENTIRE LENGTH OF DUCT.
6. ALL FABRICATED DUCTWORK SHALL BE MANUFACTURED AND INSTALLED ACCORDING TO THE MOST RECENTLY PUBLISHED ASHRAE AND SMACNA STANDARDS. ALL FABRICATED DUCTS SHALL BE METAL, 26 GAUGE OR THICKER.
7. INSTALL DOUBLE WALL TURNING VANES AT ALL 90 DEGREE ELBOWS AND TEES LARGER THAN 100 SQUARE INCHES.
8. INSTALL ADJUSTABLE AIR VOLUME DAMPERS AT ALL DUCT TEES AND AT ALL BRANCH TAKE-OFFS.
9. PROVIDE FIRE DAMPERS WHERE INDICATED ON THE DRAWINGS AND IN ALL RATED ASSEMBLIES. REFER TO ARCHITECTURAL DRAWINGS FOR DESCRIPTION AND LOCATION OF ALL RATED ASSEMBLIES. INSTALL FIRE DAMPERS IN ACCORDANCE WITH APPLICABLE CODES AND PER MANUFACTURER AND NFPA REQUIREMENTS. RATING OF ALL FIRE DAMPERS SHALL BE DETERMINED BY ASSEMBLY RATING.
10. PROVIDE FLEXIBLE VIBRATION ABSORPTION FITTING ON ALL SUPPLY AND RETURN DUCT CONNECTIONS AT EACH PIECE OF EQUIPMENT.
11. ALL AIR SYSTEMS SHALL BE BALANCED TO THE FLOW NUMBERS INDICATED ON THE DRAWINGS PLUS OR MINUS FIVE PERCENT. A COMPLETE TABULATION OF ALL TEST RESULTS SHALL BE PROVIDED TO THE ENGINEER UPON COMPLETION OF THE PROJECT.
12. LOCATE ALL FRESH AIR INTAKES A MINIMUM OF 25 FEET CLEAR FROM ALL PLUMBING VENTS AND EXHAUST AIR DISCHARGE LOCATIONS.

EQUIPMENT

1. PRIOR TO ORDERING OR FABRICATING ANY NEW EQUIPMENT OR DUCT, THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CLEARANCES AND REPORT ANY DISCREPANCIES BETWEEN THE INFORMATION ON THE DRAWING AND ACTUAL FIELD CONDITIONS TO THE ENGINEER. MANUFACTURER'S MINIMUM CLEARANCE RECOMMENDATIONS SHALL BE MAINTAINED ON ALL EQUIPMENT AND DUCT WORK.
2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL POWER WIRING AND CONDUIT AND SHALL MAKE ALL FINAL ELECTRICAL CONNECTIONS TO ALL MECHANICAL EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL CONDUIT AND JUNCTION BOXES REQUIRED FOR THE MECHANICAL CONTROL SYSTEM. THE MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL CONTROL WIRING AND SHALL MAKE ALL FINAL CONTROL CONNECTIONS. CONTRACTOR SHALL VERIFY EXACT THERMOSTAT LOCATIONS PRIOR TO INSTALLATION. COORDINATE WITH MILLWORK AND ARCHITECTURAL FINISHES.
3. ALL MECHANICAL EQUIPMENT SHALL HAVE A MEANS OF ELECTRICAL DISCONNECT COMPLETELY ACCESSIBLE TO SERVICE PERSONNEL. COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR LOCATION.
4. ALL INTERIOR AND EXTERIOR REFRIGERANT COILS SHALL INCLUDE A CONDENSATE PAN AS A PART OF THE EQUIPMENT. PROVIDE PRIMARY AND EMERGENCY CONDENSATE DRAINS FROM ALL PANS TO INTERIOR FLOOR OR HUB DRAIN OR EXTERIOR GUTTER OR SUMP PIT. CONDENSATE PIPE SHALL BE SCHEDULE 40 PVC AND SLOPED AT A MINIMUM OF 1/4 INCH PER FOOT. PROVIDE CLEAN OUTS ON EACH LINE AND AS REQUIRED TO COMPLETELY CLEAN THE CONDENSATE SYSTEM. THE EMERGENCY (SECONDARY) CONDENSATE PAN SHALL HAVE A FLOAT SWITCH THAT DE-ENERGIZES THE EQUIPMENT IN CASE OF A BLOCKAGE. THE FLOAT SWITCH SHALL HAVE AN AUDIBLE ALARM.
5. ALL GROUND MOUNTED EQUIPMENT SHALL SET ON A 4 INCH THICK CONCRETE HOUSEKEEPING PAD. HOUSEKEEPING PADS SHALL EXTEND A MINIMUM OF 6" BEYOND THE FOOTPRINT OF THE EQUIPMENT ON ALL FOUR SIDES. EXACT DIMENSIONAL REQUIREMENTS OF ALL PADS MUST BE VERIFIED WITH THE ACTUAL EQUIPMENT TO BE INSTALLED. COORDINATE WITH STRUCTURAL DRAWINGS.
6. ALL ROOF MOUNTED EQUIPMENT SHALL BE SET ON A CURB TO MATCH ROOF CONDITIONS. REFER TO ARCHITECTURAL DRAWINGS FOR ROOF TYPE AND STRUCTURAL CONDITIONS.
7. ALL EXHAUST FANS AND EXHAUST LOUVERS SHALL INCLUDE GRAVITY OR POWERED BACK DRAFT DAMPERS AND BIRD SCREEN AT THE EXTERIOR OUTLET. REFER TO DRAWINGS AND DETAILS FOR EXACT CONFIGURATION.
8. DO NOT SUPPORT INTERIOR EXHAUST FANS, GRILLS, DIFFUSERS, DUCT OR OTHER EQUIPMENT FROM CEILINGS. SUPPORT EQUIPMENT FROM STRUCTURE ABOVE WITH APPROPRIATE HARDWARE.
9. THE CONTRACTOR SHALL PROVIDE VIBRATION ISOLATION FOR ALL MOTORIZED EQUIPMENT. OBJECTIONABLE NOISE AND VIBRATION SHALL BE COMPLETELY ELIMINATED.

CONTROLS

1. ALL WIRING INSTALLED FOR CONTROLS, POWER, INTERLOCKS, ETC. WHICH ARE TO BE INSTALLED MUST BE INSTALLED IN CONDUIT UNLESS OTHERWISE INDICATED. ALL SUCH INSTALLATIONS MUST MEET NFPA AND NEC REQUIREMENTS AND LOCAL CODES.
2. PROVIDE PROGRAMMABLE THERMOSTATS WHERE INDICATED ON THE DRAWINGS. COORDINATE FINAL PLACEMENT WITH OWNER. PROVIDE CLEAR ACRYLIC LOCKING COVER OVER EACH THERMOSTAT WHERE ACCESSIBLE TO THE PUBLIC. WHERE INDICATED PROVIDE REMOTE TEMPERATURE SENSING BULB AND CONNECT CONTROL WIRING TO THERMOSTAT ASSEMBLY.
3. ALL LOW VOLTAGE INTERLOCKING OF HVAC EQUIPMENT SHALL BE BY THE CONTROLS CONTRACTOR. ALL LINE VOLTAGE CONTROLS SHALL BE BY THE ELECTRICAL CONTRACTOR AND SHALL BE IN CONDUIT.
4. WHERE INDICATED ON THE DRAWINGS AND WHERE REQUIRED BY APPLICABLE CODE PROVIDE AND INSTALL RETURN DUCT MOUNTED SMOKE DETECTORS EQUAL TO ESL 800 SERIES. UNIT SHALL OPERATE ON 24 VOLT POWER FROM EQUIPMENT POWER CIRCUIT. PROVIDE CONTRACTOR FOR CONNECTION TO FIRE ALARM OR OTHER TYPE OF MONITORING SYSTEM. SAMPLING TUBE SHALL EXTEND ACROSS THE ENTIRE LENGTH OF THE RETURN DUCT. PROVIDE ACCESS DOOR TO SAMPLING TUBE FOR SERVICE AND INSPECTION. CONNECT DETECTOR AUXILIARY CONTACT LEADS TO AUTOMATICALLY SHUT DOWN SUPPLY FAN WHEN THE PRESENCE OF COMBUSTION PRODUCTS ARE SENSED WITHIN THE DUCT. SHUT DOWN DELAY RELAYS PROVIDED FOR RESIDUAL HEAT REMOVAL OR ANY OTHER REASON. MANUAL RESET IS REQUIRED. PROVIDE KEYED TEST SWITCH IN AN ACCESSIBLE LOCATION PER LOCAL AUTHORITY HAVING JURISDICTION. INSTALL PER NFPA 101.
5. PLENUM RATED WIRE SHALL BE NEATLY BUNDLED IN GROUPS AND SHALL BE COMBINED WHERE APPLICABLE TO FOLLOW A SINGULAR PATH BETWEEN DEVICES. BUNDLES SHALL BE SUPPORTED WITH APPROPRIATE STRAPS (ZIP TIES AT THE STRUCTURE) OR INSTALLED IN CABLE TRAYS. AT RATED WALL ASSEMBLY PENETRATIONS, PROVIDE A METAL CONDUIT SLEEVE TO EXTEND A MINIMUM OF ONE FOOT BEYOND THE WALL ON EACH SIDE. SEAL CONDUIT ENDS WITH UL LISTED FIRE SEALANT UPON COMPLETION OF WIRE INSTALLATION.

MECHANICAL SYMBOLS

HVAC SYMBOLS

A — SD-3	AIR DEVICE TAG
B — 400	A. MARK (SEE SCHEDULE)
	B. AIR FLOW IN CFM
CU-1	EQUIPMENT TAG. SEE SCHEDULE
	POINT OF NEW CONNECTION
	SUPPLY AIR DEVICE
	RETURN OR TRANSFER AIR DEVICE
	EXHAUST AIR DEVICE
	SIDEWALL OR DUCT MOUNTED AIR DEVICE
	DUCT SIZE. SIZE SHOWN IS INTERNAL CLEAR DIMENSION INCREASE SIZE AS REQUIRED FOR INTERNAL LINER OR INSULATION
	RECTANGULAR ELBOW WITH TURNING VANES. NUMBER OF VANES DETERMINED BY DUCT SIZE NOT SYMBOL. REF. SMACNA.
	MANUAL BALANCING DAMPER
	MOTORIZED BALANCING DAMPER
	FIRE DAMPER (FD) FIRE/SMOKE DAMPER (FSD)
	DUCT MOUNTED SENSOR H - HUMIDITY S - SMOKE DETECTOR T - TEMPERATURE
	THERMOSTAT # INDICATES UNIT SERVED
	HUMIDISTAT
	FAN CONTROLLER



KEY ARCHITECTURE INC.

NEW ARCADE MEDICAL OFFICE BUILDING
2709 Massard Rd
FT. SMITH, AR 72903

ARcare
117 S. 2ND ST.
AUGUSTA, AR 72006

P.O. BOX 748 FAYETTEVILLE, ARKANSAS 72702
PH: 479.444.6066 FAX: 479.444.1445

FOR PERMIT & CONSTRUCTION

Revision Schedule

Rev. #	Date	Description

DATE 06-15-2026
PROJECT # 2517
DRAWN BY CO
CHECKED BY JT

SHEET
M000
NOTES AND SYMBOLS

310 W. MAIN ST. SUITE C
RUSSELLVILLE, AR 72801
PHONE (479) 595-6777
WWW.TERRELLENG.COM
AR FIRM # 3434