	ELECTRICAL SYMBOLS LIGHTING & POWER
_A O _E	DOWNLIGHT (RECESSED OR SURFACE) (FIXTURE TYPE A, CIRCUIT NO. 3)
<u>c</u>	FLUORESCENT TUBE FIXTURE (FIXTURE TYPE C, CIRCUIT NO. 2)
	FIXTURE ON NIGHT LIGHT OR EMERG. CKT.
⊗ xa	EXIT SIGN (TYPE "XA")
O Q	JUNCTION BOX, SIZE PER N.E.C.
<u> </u>	JUNCTION BOX (GRID SYSTEM)
Ŏ 🗖	INDICATES WALL OR BRACKET MOUNTED FIXTURE DUPLEX RECEPTACLE 20A, 125V, GROUNDING
	DUPLEX RECEPTACLE 20A,125V, GREY COLOR
	DUPLEX RECEPTACLE 20A, 125V, HALF SWITCHED
δ	SIMPLEX RECEPTACLE 20A (U.N.O.)
ф ^{зо}	POWER RECEPTACLE 250 VOLT SINGLE PHASE AMPS NOTED (30)
•	QUADPLEX RECEPTACLE, 20A, 125V, GROUNDING
50 ⊘ I	THREE PHASE RECEPTACLE, AMPS NOTED(50)
	TELEPHONE OUTLET, DATA OUTLET, COMBINED OUTLE
₹ \varTheta	SPEAKER, FLUSH MOUNTED IN CEILING UNLESS NOTED OTHERWISE; "F" INDICATES FIRE ALARM
<u> </u>	MICROPHONE OUTLET
<u> </u>	FLOOR BOX WITH DUPLEX RECEPT. ("F"=FLUSH)
<u> </u>	FLOOR BOX FOR TELEPHONE ("F"=FLUSH) CONCEALED SERVICE MULTI-USE FLOOR BOX
<u> </u>	
<u>ш</u>	TELEVISION OUTLET BELL
	F/A HORN, HORN WITH LIGHT ASSEMBLY, LIGHT ONLY
(P)	F/A SMOKE DETECTOR (D=DUCT)
H	F/A HEAT DETECTOR
E	F/A MANUAL FIRE ALARM PULL STATION
© H	CLOCK RECEPTACLE
<u> </u>	SINGLE POLE SWITCH
<u> </u>	TWO POLE SWITCH
58	THREE WAY SWITCH
84	DIMMER SWITCH
<u>පුර</u> පුච	SWITCH WITH PILOT LIGHT
<u> </u>	"K" INDICATES KEY OPERATED SWITCH
94	SINGLE THROW THERMAL SWITCH
Ø	MAGNETIC MOTOR STARTER
	DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
<u> </u>	THERMOSTAT
(PUSHBUTTON START-STOP PUSHBUTTON
6 0	H.O.A. SWITCH
	MOTOR
— 	WIRING SYMBOLS-SWITCH, HOT, NEUTRAL, GRND
	CONDUIT CONCEALED ABOVE CEILING
	CONDUIT CONCEALED IN OR BELOW FLOOR
	EXPOSED CONDUIT
	MULTIOUTLET ASSEMBLY
	TELEPHONE CONDUIT WITH PULL WIRE
	PANELBOARD (250 VOLT AND BELOW)
7///	PANELBOARD (480 OR 600 VOLT)
<i>///</i> //	DRY-TYPE TRANSFORMER
Par	TELEPHONE CABINET OR BACKBOARD DUCT SMOKE DETECTOR FOR SMOKE/FIRE DAMPER

PLUMBING	SYMBOL LEGEND
	SANITARY SEMER (SS)
	SANITARY VENT (V)
so	STORM DRAIN (SD)
	STORM OVERFLOW DRAIN (OD)
6W	GREASE WASTE (GW)
AW	ACID WASTE (AW)
	ACID VENT (AV)
	DOMESTIC COLD WATER (CW)
	DOMESTIC HOT WATER (110'F HW)
	DOMESTIC HOT WATER (MOT HW)
	DOMESTIC HOT WATER RETURN (RECIRC)
	DOMESTIC HOT WATER RETURN (140'F RECIRC
—— F ———	FIRE LINE (F)
	NATURAL GAS (G)
A	COMPRESSED AIR (A)
O ₂	OXYGEN
v	VACUUM
N ₂	NITROGEN (N)
N ₂ 0	NITROUS OXIDE (NO)
G+	RISER DOWN (ELBOW)
O l	RISER UP (ELBOW)
	BRANCH-BOTTOM CONNECTION
	BRANCH-TOP CONNECTION
.+	TEE CONNECTION
+1	40° ELBON
	CAP ON END OF PIPE
	UNION
	FLOOR CLEANOUT
	CLEANOUT PLUG
	BALL VALVE
X	PRESSURE REDUCING VALVE
	CHECK VALVE
	FLOW CONTROL VALVE
	GAS COCK
	TEMPERATURE-PRESSURE RELIEF VALVE
P A	
	THERMOMETER PRESSURE GAUGE WITH GAUGE COCK
	DIRECTION OF SLOPE
	DIRECTION OF FLOW
	OUTLET (SPECIFY TYPE)
⊗ G+	COMPRESSED AIR OUTLET
, N.F.W.H.	NON-FREEZE WALL HYDRANT
, н.в.	HOSE BIBB
702	FLOOR SINK
0	FLOOR DRAIN
∅ H.D.	HUB DRAIN
Ø R.D.	ROOF DRAIN
⊚ <u>o</u> .d.	OVERFLOW DRAIN
- X X X	EXISTING PIPING TO BE REMOVED
0 -	NEW CONNECTION TO EXISTING

NOTE: NOT ALL SYMBOLS SHOWN ARE NECESSARILY USED.

LINE	DESCRIPTION	LINE	
	90' ELBOM DOWN	<u></u>	
<u> </u>	90° ELBOM UP	6	
	OFFSET TO CHANGE ELEVATION (AT 30° WHEN POSSIBLE ARROW SLOPES DN.)	ണ	
	ROUND RADIUS ELBOW		
	45° ELBOW		Ç
	90° STRAIGHT TEE		ROUND (4) OR OVAL
	90° CONICAL TEE		(e) QNO
	45° BRANCH		\$
	45° CONICAL TEE		
	SIZE TRANSITION		
	SHAPE TRANSITION		
	ROUND FLEXIBLE DUCT		
── ⊠	90° ELBOW DOWN W/ TURNING VANES (U.N.O.)	 	
——M	90° ELBOW UP W/ TURNING VANES (U.N.O.)		
<u> </u>	TEE WITH SPLITTER & TURNING VANES IN VERTICAL	\$M\$	
	OFFSET TO CHANGE ELEVATION (AT 30° WHEN POSSIBLE ARROW SLOPES DN.)	 	
	RECTANGULAR RADIUS ELBOW	# T	
	RECTANGULAR ELBOW WITH TURNING VANES		
	SPLIT BRANCH TAKE-OFF WITH SQUARE ELBOW AND SPLITTER DAMPER.	£ + + + + + + + + + + + + + + + + + + +	GULAR
<u></u>	SPLIT BRANCH TAKE-OFF WITH RADIUS ELBOW AND SPLITTER DAMPER.	£ 4 1 4	RECTANGULAR
	BRANCH TAKE-OFF WITHOUT AIR BALANCING DAMPER.	<u>+ 1</u>	
<u>+</u>	BRANCH TAKE-OFF WITH AIR BALANCING DAMPER. (SCOOP DAMPER)	 	
	TEE WITH SPLITTER DAMPER	<u> </u>	
	SPIN-IN TAP WITH DAMPER	£ #	
	SQUARE NECK CLG. DIFFUSER 4-WAY DIRECTIONAL THROW UNLESS INDICATED OTHERWISE.	F 🖾	
	SQUARE NECK CLG. DIFFUSER 4-WAY DIRECTIONAL THROW UNLESS INDICATED OTHERWISE.	 	
	SIDEWALL SUPPLY GRILLE OR REGISTER WITH O.B.D.	± +	
	SUPPLY DUCT RISER	M	
	RETURN, EXHAUST OR OUTSIDE AIR DUCT RISER.		-
→	CEILING RETURN AIR GRILLE OR REGISTER	□→\ -	
/ -	DOOR GRILLE	+	
+	VOLUME DAMPER	#	
+0	FIRE DAMPER	#	NEOUS
	MOTORIZED DAMPER		MISCELLANEOUS
+	GRAVITY BACKDRAFT DAMPER	1	
+ 5	AUTO SMOKE DAMPER		
® +	DUCT MOUNTED SMOKE DETECTOR		
2-0	SMOKE/FIRE DAMPERS (CLASS II MIN.)		
Ð	THERMOSTAT OR TEMPERATURE SENSOR	Ð	
⊕ / ©	ROOM HUMIDISTAT / CARBON DIOXIDE SENSORS	H/C	
ALL SYMBOL THIS JOB.	s on this list are not necessa	KILT USED ON	ı

HVAC LEGEND

DESCRIPTION

DOUBLE LINE

	ABBREVIATIONS
ABV.	ABOVE ALTERNATING CURRENT
A/C AFC	ABOVE FINISHED CEILING
AFF AFG	ABOVE FINISHED FLOOR ABOVE FINISHED GRADE
AG AHAP	ABOVE GRADE AND GFI AS HIGH AS POSSIBLE
AHU ALT.	AIR HANDLING UNIT
AMB. AMP.	AMBIENT TEMPERATURE ('F) AMPERE
APPROX. ARCH.	APPROXIMATELY ARCHITECTURAL
AVG. B	AVERAGE BOILER
B.G.	BELOW GRADE BUILDING MANAGEMENT SYSTEM
BMS	BAROMETRIC RELIEF DAMPER
BTU CD	BRITISH THERMAL UNIT CONSTRUCTION DOCUMENTS
CFH CFM	CUBIC FEET PER HOUR CUBIC FEET PER MINUTE
CH. CHEM.	CHILLER CHEMICAL
CHP CKT.	CHILLED WATER PUMP
CLG. CMPR.	CEILING COMPRESSOR
CHP	COOLING TOWER CONDENSER WATER PUMP
CU DB	CONDENSING UNIT DRY BULB
DEFL. DEG. F	DEFLECTION DEGREES FAHRENHEIT
DET.	DETAIL DESIGN DEVELOPMENT
DIA. DISC.	DIAMETER DISCONNECT SWITCH
DIM.	DIMENSION EXHAUST AIR
EDB EF	ENTERING DRY BULB EXHAUST FAN
ELEC.	ELECTRICAL ELEVATION
EMCS.	ENERGY MGMT. CONTROL SYSTEM
E.S.P. EWB	EXTERNAL STATIC PRESS. (IN. W.G.) ENTERING WET BULB
EXH.	ENTERING WATER TEMPERATURE EXHAUST
EXIST.	FREE AREA OPENING (SQ. FT.)
FHP	FAN COIL UNIT FRACTIONAL HORSE POWER
FLR.	FLOOR COIL FINS PER INCH.
FPM FPS	FEET PER MINUTE FEET PER SECOND
FT.	FOOT OR FEET GROUND FAULT INTERRUPTER
GPM HD.	GALLONS PER MINUTE
HOA HP	HANDS/OFF/AUTO. MOTOR STARTER HORSE POWER
HPU HR.	HEAT PUMP UNIT
HT. HTG.	HEIGHT HEATING
HTR.	HEATER
HVAC	HEAT, VENT AND AIR CONDITIONING HOT WATER PUMP
HX HZ.	HEAT EXCHANGER FREQUENCY (HERTZ)
ID IN.	INSIDE DIAMÈTER OR DIMENSION INCHES
KWH	KILOWATT KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE LEAVING WATER TEMPERATURE
MAX.	MAXIMUM MINIMUM CURRENT AMPS.
MOCP	MAX. OVER CURRENT PROTECTION 1000 BTU PER HOUR
MECH. MFR.	MECHANICAL MANUFACTURER
MIN. MVD	MINIMUM MANUAL VOLUME DAMPER
N/A NC	NOT APPLICABLE NOISE CRITERIA
NIC NK	NOT IN CONSTRUCTION NECK DIMENSION
NO.	NUMBER
OA OAR	OUTSIDE AIR OWNERS AUTHORIZED REPRESENTATIVE
OBD OD	OPPOSED BLADE DAMPER OUTSIDE DIAMETER
ORIG. P.D.	ORIGINAL PRESSURE DROP (FT)
PH. PMB	PHASE POWERED MIXING BOX
PLBG. PNL.	PLUMBING PANEL
PRESS.	PRESSURE RETURN AIR
RAG RD.	RETURN AIR GRILLE RADIUS
RE. RPM	REFERENCE REVOLUTIONS PER MINUTE
S/S	ROOF TOP UNIT SINGLE SPEED MOTOR
S/S/S SA	START/STOP/STATUS SUPPLY AIR
SAG	SUPPLY AIR GRILLE STAND ALONE DIGITAL CONTROLLER
SEER SENS.	SEASON ENERGY EFFICIENCY RATIO
SP SQ.	STATIC PRESSURE SQUARE
STR. TEMP.	MOTOR STARTER TEMPERATURE
T.S.P.	TOTAL STATIC PRESSURE (IN. W.G.)
UNO	UNLESS NOTED OTHERWISE
VAV	VARIABLE AIR VALVE
VEL.	VELOCITY WATT
W/ W/O	WITHOUT
W.G. WB	WATER GUAGE WET BULB
WP.	WEATHERPROOF WATER PRESSURE DROP
WPG XFMR.	WEATHERPROOF GFI TRANSFORMER

1
ANY PENETRATIONS OF A ONE OR TWO HOUR FIRE
RATED WALL BY ANY MECHANICAL AND PLUMBING
PIPING, DUCTWORK (WITHOUT FD/SD), CONTROLS
CONDUIT OR CABLE MUST BE FIRE SEALED PER
U.L. DETAILS ON THIS SHEET. REFER TO ARCH
CODE REVIEW PLAN SHEET FOR EXACT LOCATIONS
OF FIRE RATED WALLS.
OF FIRE RATED MALLS.
\
Var

PRODUCT SUBSTITUTIONS TRADE COORDINATION NOTE:

MECHANICAL CONTRACTOR SHALL BEAR ALL EXPENSES THAT OTHER TRADES INCUR AS A RESULT OF PHYSICAL MODIFICATIONS REQUIRED BY APPROVED ALTERNATE MECHANICAL EQUIPMENT OTHER THAN ORIGINALLY SPECIFIED OR SCHEDULED.

40	SOIL OR WASTE
	VENT
	COLD WATER
	HOT WATER
	HOT WATERRECIRCULATION
	GAS
CHS/R	CHILLED WATER SUPPLY/RETURN
Pals/R	PRODUCTION CHILLED WATER SUPPLY/RETURN
HWS/R—	HOT WATER SUPPLY/RETURN CONDENSER WATER SUPPLY/RETURN
CS/R	REFRIGERANT SUCTION AND LIQUID LINES
cp	CONDENSATE DRAIN LINE
	LOW PRESSURE STEAM CONDENSATE MEDIUM PRESSURE STEAM CONDENSATE
//	HIGH PRESSURE STEAM CONDENSATE
	LOW PRESSURE STEAM SUPPLY (0 TO 15 PSIG)
	MEDIUM PRESSURE STEAM SUPPLY (15 TO 100 PSIG
	HIGH PRESSURE STEAM (ABOVE 100 PSIG)
<u> </u>	FLOAT AND THERM. TRAP
	BUCKET STEAM TRAP
<u>————</u>	GATE VALVE
	BALANCING VALVE (WITH PETE'S PLUG EITHER SIDE
	FLOOR CLEAN OUT
	CLEAN OUT FIRE LINE
	BRANCH LINE WITH SPRINKLER HEADS
0	FLOOR DRAIN
<u> </u>	HUB DRAIN
D.S.	DOWN SPOUT
F.H.C.	FIRE HOSE CABINET
O v.t.r.	VENT THRU ROOF
O R.D.	ROOF DRAIN
	CHECK VALVE OS & Y VALVE
	GLOBE VALVE
X	BUTTERFLY VALVE
_ i _	BALL VALVE
×	SOLENOID VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
<u> </u>	CONTROL, 2 WAY VALVE
	CONTROL, 3 WAY VALVE STRAINER & BLOW OFF VALVE
- 7k ₊	PRESSURE GAUGE & COCK
	UNION OR COMPANION FLANGES
	PLUG VALVE
	THERMOMETER
	PRESSURE & TEMPERATURE TAP (PETES PLUG)
O	THERMOSTAT
₩	HUMIDISTAT
	FLOW METER
_ <u>×</u>	ANCHOR (PIPE)
<u>~~</u>	EXPANSION JOINT
<u></u>	MANUAL AIR VENT AUTOMATIC AIR VENT
<u> </u>	HOSE END DRAIN
-	HOSE BIBB
i	THERMOMETER & WELL
Φ,	TEMPERATURE SENSOR
PF	FLOW SWITCH
	PRESSURE SENSOR

PRODUCT SUBMITTAL DATA NOTE.

THIS CONTRACTOR SHALL PREPARE AND PROVIDE ALL EQUIPMENT SUBMITTALS 30 DAYS

UPON RECEIPT OF THE SUBMITTAL DATA (THROUGH NORMAL CHANNELS), THE ENGINEER SHALL HAVE TEN (10) WORKING DAYS TO REVIEW THE DATA FOR COMPLIANCE.
MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL MOUNTING AND SERVICE CLEARANCES WITH ARCHITECTURAL/ENGINEER DOCUMENTS PRIOR TO SUBMISSION OF ANY PRODUCT SUBMITTED OTHER THAN SCHEDULED MANUFACTURER.

PRODUCT SUBSTITUTIONS NOTE:

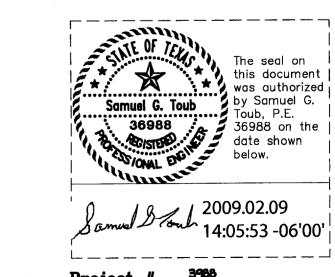
REQUEST FOR SUBSTITUTIONS OF PRODUCTS NOT LISTED IN THE SCHEDULES OR SPECIFICATIONS WILL ONLY BE CONSIDERED DURING THE PERIOD OF PRIOR TO IEN (10) DAYS BEFORE THE BID DATE. SUBSEQUENT REQUESTS WILL BE CONSIDERED ONLY IN CASE OF PRODUCT UNAVAILABILITY OR OTHER CONDITIONS BEYOND CONTROL OF THE CONTRACTOR, MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL MOUNTING AND SERVICE CLEARANCES WITH ARCHITECTURAL/ENGINEER DOCUMENTS PRIOR TO SUBMISSION OF ANY PRODUCT SUBSTITUTION REQUEST.

MEP GENERAL NOTES: (TYPICAL FOR PROJECT)

- THE CONTRACTOR SHALL VISIT THE PREMISES TO THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL DETAILS OF THE WORK, WORKING CONDITIONS, AND VERIFY ALL DIMENSIONS IN THE FIELD. ALSO, THE CONTRACTOR SHALL ADVISE THE ARCHITECT, ENGINEER AND THE OWNER OF ANY DISCREPANCY BEFORE PERFORMING ANY WORK.
- 2. MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE CONTRACT DOCUMENTS AND APPLICABLE CODES AND STANDARDS AS DICTATED BY THE AUTHORITY HAVING JURISDICTION. SHOULD THE CONTRACTOR PERFORM ANY WORK THAT DOES NOT COMPLY WITH THE REQUIREMENTS OF APPLICABLE CODES AND STANDARDS, THE CONTRACTOR SHALL BEAR ALL COSTS ARISING IN CORRECTING SUCH DEFECT. APPLICABLE CODES AND STANDARDS SHALL INCLUDE ALL ORDINANCES, UTILITY COMPANY REGULATIONS, AND APPLICABLE REQUIREMENTS OF NATIONAL, STATE, LOCAL CODES, AND STANDARDS.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL CONTROLS THAT WILL COMPLETELY ACCOMPLISH THE IMPLIED OR INTENDED FUNCTIONS OF THE CONTROL SYSTEM AS SHOWN ON PLANS OR INDICATED IN THE SPECIFICATIONS.
- 4. CONNECTIONS TO AND SHUTDOWNS ON EXISTING SYSTEMS SHALL BE COORDINATED WITH OWNER TO ALLOW MINIMUM INTERFERENCE WITH OWNER'S OPERATION AND DOWNTIME OF EXISTING SERVICES. CONTRACTOR SHALL SUBMIT TO OWNER FOR REVIEW AND APPROVAL THE PROPOSED PHASING PLAN FOR CONNECTING NEW SERVICES TO EXISTING SERVICES.
- 5. ALL EXISTING SYSTEMS EQUIPMENT AND MATERIALS WITHIN REMODEL AREA OF BUILDING, EXCEPT WHERE NOTED ON MEP DOCUMENTS TO CHANGE, SHALL BE LEFT INTACT AND OPERATIONAL.
- 6. PATCH FLOORS, WALLS, CEILINGS, ETC. TO MATCH EXISTING CONDITIONS WHERE CUTTING IS REQUIRED.

MEP GENERAL NOTES: (TYPICAL FOR PROJECT)

- 7. IN AREAS WHERE EXISTING CONSTRUCTION IS REMOVED AND NO ADDITIONAL CONSTRUCTION IS INDICATED, PATCH EXISTING ADJACENT CONSTRUCTION TO
- 8. AN INDEPENDENT CERTIFIED BALANCING OF WATER AND AIR SYSTEMS SHALL BE PROVIDED UNDER THIS CONTRACT FOR ALL SYSTEMS WITHIN DEMOLITION/NEW CONSTRUCTION BOUNDARIES AND ADJACENT AREAS THAT MAY BE AFFECTED BY BALANCING FOR THE PROJECT.
- INDICATES EXISTING DUCTWORK, PIPING AND EQUIPMENT TO BE
- INDICATES CONNECT NEW TO EXISTING.
- indicates existing to remain.
- INDICATES NEW DUCTWORK, PIPING, AND EQUIPMENT TO BE ADDED.
- INDICATES NEW DUCTWORK, PIPING AND EQUIPMENT ON ROOF, BELOW SLAB OR BELOW GRADE.
- INDICATES EXISTING EQUIPMENT WHICH IS RELOCATED TO A NEW POSITION AND REUSED.
- INDICATES A CONNECTION POINT OF NEW DUCTWORK, PIPING, ETC. TO AN EXISTING SYSTEM. ALL EXISTING SYSTEM LOCATIONS SHALL BE FIELD VERIFIED.
- 16. The indicates existing duct or taps which shall be capped AIRTIGHT AND FLUSH (I.E.: MASTIC SEALED INSULATED GALVANIZED SHEET METAL DUCT PATCH) TO EXISTING DUCTWORK.
- 17. ALL DUCTWORK IS SHOWN IN SCHEMATIC FORM. DUCT RISES AND DROPS ARE NOT SHOWN. PROVIDE OFFSETS AS REQUIRED TO MEET SPACE REQUIREMENTS AND TO AVOID INTERFERENCE WITH OTHER TRADES. EACH TRADE SHALL BE RESPONSIBLE FOR COORDINATION WITH OTHER TRADES.
- 18. PIPING IS SHOWN IN SCHEMATIC FORM. ROUTE PIPING AS REQUIRED FOR CLEARANCE WITH STRUCTURAL CONDITIONS. COORDINATE WITH OTHER TRADES AS REQUIRED. PIPING SHALL BE INSTALLED WITH ADEQUATE SLOPE AS REQUIRED FOR EACH PARTICULAR SYSTEM, AND PARRELLED OR PERPENDICULAR TO BUILDING LINES.
- 19. FIRE PROTECTION SHALL BE PER NFPA 13 AND ALL OTHER APPLICABLE SECTIONS. FP PIPE SHALL NOT BE ROUTED BENEATH SUSPENDED MECH.
- 20. PROVIDE VIBRATION ISOLATOR FOR MOTOR-DRIVEN MECHANICAL EQUIPMENT.
- 21. PROVIDE FLEXIBLE DUCTWORK CONNECTIONS AT EQUIPMENT
- 22. DUCTWORK AND ITS CONSTRUCTION WILL BE GALVANIZED G-90 SHEET METAL AND CONSTRUCTED ACCORDING TO THE LATEST SMACNA STANDARDS.
- 23. ROUND FLEXIBLE SUPPLY DUCTWORK TO DIFFUSERS SHALL NOT EXCEED 5'-0" IN LENGTH.
- 24. DUCTWORK SIZES SHOWN ON PLANS ARE CLEAR AIR STREAM DIMENSIONS.
- 25. PROVIDE RIGID METAL DUCT (WITH NO EXCEPTION) WHERE FIRE WALLS ARE PENETRATED. PROVIDE APPROVED FIRE CAULK EITHER SIDE OF WALL.
- 26. PROVIDE PROBE SMOKE DETECTORS IN THE SUPPLY AIR DUCTWORK AND RETURN AIR DUCTWORK PRIOR TO MIXING WITH THE OUTSIDE AIR FOR ALL AIR HANDLING EQUIPMENT. HARDWIRE TO THE MOTOR STARTER AUXILIARY CONTACTS TO SHUT DOWN THE UNIT UPON DETECTION
- 27. MECHANICAL CONTRACTOR SHALL COORDINATE DUCT RUN OUTS EXACTLY OVER THE TOP OF THE SA/RA/EA AIR DEVICES (I.E.: WITHOUT ANY FLEX CRIMPS OR RADICAL TRANSITIONS) WITH THE ARCHITECT'S REFLECTIVE CEILING PLAN, GRIDS, AND THE CEILING SUPPLIER.
- 28. ALL NON-ACTIVE PORTIONS OF CONTINUOUS SLOTS SHALL REMAIN OPEN (WITH RETURN AIR BOOT) TO CEILING PLENUM FOR RETURN AIR BOOT.
- 29. PROVIDE DOUBLE WALL TURN VANES FOR ALL 90 DEGREE DUCT FITTINGS AND SINGLE WALL TURN VANES FOR DUCT FITTINGS LESS THAN 90 DEGREE AND GREATER THAN 30 DEGREE OR VARIED INTAKE/DISCHARGE AREAS. (SUPPLY, RETURN, OUTSIDE, EXHAUST, RELIEF, HORIZONTAL AND FITTINGS.) NO TURN VANES WITHIN GREASE HOOD EXHAUST DUCTWORK FITTINGS.
- 30. FINISH ALL EXPOSED TO VIEW DUCTWORK AND WALL LOUVERS PER ARCHITECTS RECOMMENDATIONS.
- PROVIDE MANUAL VOLUME DAMPERS WITH YOUNG REGULATORS AND CONCEALED OPERATOR COVERS FOR GYPSUM BOARD OR NON ACCESSIBLE CEILINGS. PAINT COVERS TO MATCH THE CEILING.
- 32. PROVIDE 1" ACOUSTIC (3 P.C.F.) DENSITY INTERNAL DUCT LINER (15'-0" MINIMUM) DOWNSTREAM OF AC UNIT IN SUPPLY AND RETURN AIR DUCTWORK. INSULATE EXTERNALLY ALL LINED AND UNLINED DUCTS (NEW OR EXISTING) WITH 2" (3/4 P.C.F.) DENSITY GLASS FIBER WRAP WITH HEAVY DUTY FOIL -SCRIM KRAFT FACING.
- 33. THERMOSTAT, TEMPERATURE SENSOR, SWITCH LOCATIONS AND WALL ELEVATIONS SHALL BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION.
- CONDENSATE PIPING DOWN TO A PLUMBING FIXTURE SHALL BE FULLY INSULATED WITHIN WALL. PROVIDE ESCUTCHEON PLATE AT WALL. PIPING SHALL NOT BE ROUTED EXPOSED TO VIEW.
- 35. PRESSURIZED LIQUID, GAS, AIR SYSTEM PIPE AND ELECTRICAL CONDUIT SHALL NOT BE ROUTED BENEATH ANY SUSPENDED EQUIPMENT. FIRE PROTECTION, ELECTRICAL AND MECHANICAL CONTRACTORS SHALL COORDINATE TRADES.
- 36. ALL REMOTE MOUNTED DISCONNECT SWITCHES FOR MECHANICAL EQUIPMENT SHALL HAVE ENGRAVED PHONETIC PLASTIC I.D. NAME PLATES.
- 37. PIPING ON ROOF CONTRACTOR SHALL PROVIDE ROOF PIPE SUPPORTS ON 10'-0" CENTERS, EACH CHANGE IN DIRECTION, EACH ROOFTOP UNIT AND EACH PIPE PENETRATION THROUGH ROOF.
- 38. EQUIPMENT ROOF CURBS SHALL BE CONSTRUCTED TO MATCH ROOF SLOPE AND MAINTAIN A LEVEL NAILER AT EQUIPMENT PLACEMENT SURFACE. MC SHALL VERIFY THAT THE ROOFTOP EQUIPMENT IS LEVEL.



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architects

PRODUCTIVE RESIDENCE

PERIODIANY 9, 2009 MINNEY MANAGE MOTES, SYMBOLS

ANNEVIATION