FOR

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ANIC

MECH,

2309D

Commission Number M402

BLOWER COIL UNIT SCHEDULE MOTOR DATA REMARKS AREA SERVED DX REFRIGERANT COOLING COIL RE-HEATING WATER COIL **FAN DATA** DESIG. MFR/MDL A.P.D. ROW/FIN FACE APD EAT/LAT EWT/LWT GPM W.P.D. MBH ROW/FIN VELOCITY APD BHP HP VOLT/PH (NOTES) CFM CFM ESP/TSP TYPE LAT | MBH | MBH EAT (1) (2) (3) (4) (5) 78.0° d.b. 55.7° d.b. 65.6° w.b. 54.2° w.b. SECOND LEVEL IEC / BCU-1 COURTROOM 3400 83.4 82.4 MINIMUM 1,700 HEATING CFM. PROVIDE WITH 640 1.0"/---" 110.2 4R/10 FPI | 329.8 FPM | 60.3°/82.3° 150°/122.3° 1R/10 FPI VERT. MECH. ROOM **VBA 40** THREE-WAY HEATING CONTROL VALVE. (1) (2) (3) (4) (5) SECOND LEVEL 78.0° d.b. 55.7° d.b. 4R/10 FPI | 329.8 FPM | ---" 110.2 83.4 82.4 BCU-2 COURTROOM 3400 1.0"/---" 60.3°/82.3° 150°/122.3° 1.3' 1R/10 FPI | 329.8 FPM | MINIMUM 1,700 HEATING CFM. PROVIDE WITH VERT. **VBA 40** MECH. ROOM 65.6° w.b. 54.2° w.b. THREE-WAY HEATING CONTROL VALVE.

(1) PROVIDE PIPING AND WIRING CONNECTIONS AND INSULATED ACCESS DOORS ON SIDE OF UNIT THAT WILL ALLOW GREATEST ACCESSIBILITY. SEE PLANS FOR UNIT ORIENTATIONS (2) PROVIDE PREMIUM EFFICIENCY DIRECT DRIVE MOTOR FOR SUPPLY FAN WITH MODULATING FAN CONTROL. MAINTAIN MINIMUM AIRFLOW LISTED IN REMARKS FOR HEATING MODE.

(3) PROVIDE WITH 4" MERV 13 FILTERS. BLOWER COIL UNIT SHALL NOT BE OPERATED AT ANY TIME WITHOUT FILTER MEDIA INSTALLED AS RECOMMENDED BY UNIT MANUFACTURER.

(4) PROVIDE WITH UV LIGHT PACKAGE IN COOLING COIL SECTION. REFER TO UV LIGHT PACKAGE SCHEDULE FOR REQUIREMENTS.

(5) PROVIDE WITH SUPPLY AND RETURN SMOKE DETECTORS.

I	EXHAUST FAN SCHEDULE														
DESIG.	MFR/MDL	SERVES	LOCAT.	TYPE	FAN DATA MOTOR DATA							REMARKS			
					CFM	S.P.	RPM	DRIVE	TYPE	SONES	RPM	BHP	HP	VOLT/PH	
EF-1	GREENHECK / G-099-VG	TOILETS	ROOF	CENTRIFUGAL DOWNBLAST	660	0.87"	1548	DIRECT	CENT.	9.9	1725	0.18	1/4	120V / 1Ø	PROVIDE WITH ECM MOTOR, BACKDRAFT DAMPER, FACTORY SEISMIC ROOF CURB, AND FACTORY DISCONNECT.
EF-2	GREENHECK / G-095-VG	TOILETS	ROOF	CENTRIFUGAL DOWNBLAST	280	0.85"	1709	DIRECT	CENT.	10.9	1725	0.12	1/6	120V / 1Ø	PROVIDE WITH ECM MOTOR, BACKDRAFT DAMPER, FACTORY SEISMIC ROOF CURB, AND FACTORY DISCONNECT.
EF-3	GREENHECK / G-097-VG	TOILET	ROOF	CENTRIFUGAL DOWNBLAST	75	0.378"	962	DIRECT	CENT.	3.2	1725	0.02	1/4	120V / 1Ø	PROVIDE WITH ECM MOTOR, BACKDRAFT DAMPER, FACTORY SEISMIC ROOF CURB, AND FACTORY DISCONNECT.
EF-4	GREENHECK / G-097-VG	TOILET	ROOF	CENTRIFUGAL DOWNBLAST	75	0.378"	962	DIRECT	CENT.	3.2	1725	0.02	1/4	120V / 1Ø	PROVIDE WITH ECM MOTOR, BACKDRAFT DAMPER, FACTORY SEISMIC ROOF CURB, AND FACTORY DISCONNECT.
EF-5	GREENHECK / SQ-100	REFRIGERANT RELIEF	SECOND FLR. MECH. ROOM	HORIZONTAL IN-LINE	1,000	0.646"	1,725	DIRECT	CENT.	10.6	1725	0.24	1/4	120V / 1Ø	PROVIDE WITH EXP MOTOR, BACKDRAFT DAMPER, FLANGED INLET / OUTLET, SPARK PROOF CONSTRUCTION, AND FACTORY DISCONNECT.

VAR	VARIABLE FREQUENCY DRIVE SCHEDULE										
DESIGNATION	SERVES	MFR./MDL.	TYPE	APPLICATION	RATED HORSEPOWER	VOLTAGE	PHASE	AMPS	MINIMUM EFFICIENCY	REMARKS	
VFD-BCU-1	BCU-1 SUPPLY FAN	ABB ACH-580	WALL-MOUNTED	VARIABLE TORQUE PWM	1.5	208	3	6.6	96%	FURNISH WITH MANUAL VERTICAL BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, AND EMS INTERFACE.	
VFD-BCU-2	BCU-2 SUPPLY FAN	ABB ACH-580	WALL-MOUNTED	VARIABLE TORQUE PWM	1.5	208	3	6.6	96%	FURNISH WITH MANUAL VERTICAL BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, AND EMS INTERFACE.	
VFD-CHP-1	CHWP-1 PUMP - CHILLED WATER	ABB ACH-580	WALL-MOUNTED	VARIABLE TORQUE PWM	7.5	208	3	24.2	96%	FURNISH WITH MANUAL VERTICAL BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, AND EMS INTERFACE.	
VFD-HWP-1	HWP-1 PUMP - HEATING WATER	ABB ACH-580	WALL-MOUNTED	VARIABLE TORQUE PWM	3	208	3	10.6	96%	FURNISH WITH MANUAL VERTICAL BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, AND EMS INTERFACE.	

	PUMP SC	HEDU	JLE									
DESIG. MFR/MDL SERVES LOCAT TYPE GPM HEAD EFF. MOTOR DATA									R DATA		REMARKS	
DESIG.	MFR/MDL		LOCAT.	TYPE	GPM	HEAD ,	- (-, ' , ' , ' , ' , ' , ' , ' , ' , ' ,	BHP	<u>HP</u>	RPM	VOLT/PH	
CHWP-1	ARMSTRONG SERIES 4300 2x2x10	CHILLED WATER	MECH. RM.	SP. COUP. VERTICAL IN-LINE	165	80'	54.2%	6.1	7.5	1,760	208/3ø	CHILLED WATER PRIMARY - VARIABLE VOLUME. PROVIDE WITH SUCTION GUIDE WITH START-UP AND PERMANENT STRAINERS.
HWP-1	ARMSTRONG SERIES 4300 1.5X1.5X6	HEATING WATER	MECH. RM.	SP. COUP. VERTICAL IN-LINE	60	70'	50.9%	2.1	3	3,345	208/3ø	HEATING WATER SECONDARY - VARIABLE VOLUME. PROVIDE WITH SUCTION GUIDE WITH START-UP AND PERMANENT STRAINERS.

	ELECTRI	C HEA	TER S	SCHE	EDUL	Ε.			
DESIG.	MFR/MDL	SERVES	TYPE	ÇFM	KW.	ATING BTU/HR	ELECTRIC VOLT/PHASE	AL AMPS	REMARKS
UH-1	MARKEL / 5100 SERIES	MECH. ROOM	WALL MOUNTED	400	3.3	11,200	208V/3∅	9.2	PROVIDE WALL MOUNTING BRACKET, WALL MOUNTED THERMOSTAT, SUMMER FAN SWITCH, & DISCONNECT SWITCH

	GRAVITY VENTILATOR SCHEDULE								
DESIG.	MFR./MDL.	TYPE	SERVES	CFM	S.P.	SIZE	VELOCITY FPM	FINISH	REMARKS
GV-1	GREENHECK / GRSI	ROUND ALUMINUM	OSA INTAKE	1275	0.04"	24"ø DUCT	393.5	COLOR PER ARCHITECT	PROVIDE WITH BIRD / INSECT SCREEN AND FACTORY SEISMIC ROOF CURB. COORDINATE NEW ROOF CURB INSTALLATION WITH BONDED ROOFING CONTRACTOR.
GV-2	GREENHECK / GRSR	ROUND ALUMINUM	REFRIGERANT RELIEF	1000	0.04"	18"ø DUCT	546.4	COLOR PER ARCHITECT	PROVIDE WITH BIRD / INSECT SCREEN AND FACTORY SEISMIC ROOF CURB. COORDINATE NEW ROOF CURB INSTALLATION WITH BONDED ROOFING CONTRACTOR.

	HOT WA	TER B	OILE	ER SC	HEDU	LE					
DESIG.	MFR/MDL.	TYPE	FUEL	INPUT MBH	OUTPUT MBH	- EWT -	LWT,	GPM_	P.D.	VOLT / PHASE / AMPS	REMARKS
B-1	LOCHINVAR / FTX-725	SEALED COMBUSTION	NATURAL GAS	725 MBH	705 MBH	120°	150°	53	4.0'	120 / 1Ø / 6	PROVIDE WITH FACTORY CIRCULATOR PUMP. SEE SPECIFICATONS.
B-2	LOCHINVAR / FTX-725	SEALED COMBUSTION	NATURAL GAS	725 MBH	705 MBH	120°	150°	53	4.0'	120 / 1Ø / 6	PROVIDE WITH FACTORY CIRCULATOR PUMP. SEE SPECIFICATONS.

		AIR DI	EVICE S	CHEDU	JLE			
(DESIG.	MFR./MDL.	TYPE	FACE SIZE	FINISH	FREE	ACCESS.	REMARKS
	CD-1	TITUS TDC-AA	LOUVER FACE CEILING SUPPLY	SEE PLANS	FINISH PER ARCHITECT		OPPOSED BLADE DAMPER	SQUARE NECK, PROVIDE WITH SQUARE-TO-ROUND ADAPTER AS REQUIRED.
	CR-1	TITUS PAR	PERF. FACE CEILING RETURN	SEE PLANS	FINISH PER ARCHITECT		OPPOSED BLADE DAMPER	SQUARE NECK, PROVIDE WITH SQUARE-TO-ROUND ADAPTER AS REQUIRED.
	SG-1	TITUS 300 RL	SIDEWALL LINEAR BAR SUPPLY	SEE PLANS	FINISH PER ARCHITECT		OPPOSED BLADE DAMPER	3/4" BLADE SPACING, DOUBLE DEFLECTION.
	ER-1	TITUS PAR	PERF. FACE CEILING EXHAUST	SEE PLANS	FINISH PER ARCHITECT		OPPOSED BLADE DAMPER	SQUARE NECK, PROVIDE WITH SQUARE-TO-ROUND ADAPTER AS REQUIRED.

	LEGE	<u>N D</u>	
\boxtimes	CEILING DIFFUSER	S TH TA	AIR VENT (AUTO/HAND)
	RETURN AIR GRILLE (RA)		BUTTERLFLY VALVE AUTOMATIC CONTROL VALVE
	EXHAUST REGISTER (ER)		(3-WAY) AUTOMATIC CONTROL VALVE
624 CD-1 100 CFM	SIZE - DESIGNATION CUBIC FEET PER MINUTE	\$ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	CHECK VALVE FLEXIBLE CONNECTOR (BRAIDED)
}	FLEXIBLE DUCT CONNECTOR		GATE VALVE
	TURNING VANES	_	GLOBE VALVE (STRAIGHT)
	SPLITTER DAMPER (TEE)		PLUG VALVE PRESSURE GAUGE (W/COCK)
-v-	INTERNALLY INSULATED DUCTWORK	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	PRESSURE GAUGE PRESSURE RELIEF VALVE
M.D.	MANUAL DAMPER		PRESSURE AND TEMPERATURE TAP
FD FD/A	ND FIRE DAMPER (FD), FIRE DAMPER / ACCESS DOOR (FD/AD)	\$\$	REDUCER (CONCENTRIC) REDUCER (ECCENTRIC)
	OPPOSED BLADE DAMPER	S	STRAINER (WITH BLOW DOWN VALVE)
φ	DIAMETER	\$ \$	THERMOMETER
Θ	SPIRAL OVAL		TO FLOOR DRAIN UNION (FLANGED, SCREWED)
\bigcirc_{5}	THERMOSTAT / HUMIDISTAT (WITH UNIT NUMBER)	>	VALVE IN RISER
\bigoplus	HUMIDISTAT	> — CHS →	CHILLED WATER SUPPLY
P	PRESSURE SENSOR	> — CHR →	CHILLED WATER RETURN
1 M-1		∫ HWS ─ ∫	HEATING WATER SUPPLY
DETAIL (TOP NUMBER REFERS TO THE DETAIL NUMBER. BOTTOM NUMBER REFERS TO THE SHEET WHERE DETAIL IS SHOWN	,	HEATING WATER RETURN REFRIGERANT SUCTION /
M-2 SECTION		> —RS/RL → > —D →	REFRIGERANT LIQUID DRAIN
SECTION	DUCT SMOKE DETECTOR	•	
\otimes	CONNECT TO EXISTING		
	DEMOLITION TERMINATION		

GENERAL NOTES

- DUE TO THE SMALL SCALE OF THIS DRAWING, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, AND ACCESSORIES WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND SHALL COORDINATE AND ARRANGE HIS WORK ACCORDINGLY.
- ROUND BRANCH DUCT RUNOUTS SHALL BE SAME SIZE AS DIFFUSER THROAT UNLESS OTHERWISE NOTED.
- FLEXIBLE DUCT MAY BE USED FOR FINAL CONNECTIONS TO DIFFUSERS. A MAXIMUM LENGTH OF THREE FEET (3') SHALL BE
- 4. ALL CEILING-MOUNTED SUPPLY DIFFUSERS SHALL HAVE FOUR-WAY (4-WAY) PATTERN UNLESS OTHERWISE INDICATED.
- WHERE MANUAL DAMPERS ARE INSTALLED IN EXTERNALLY INSULATED DUCTWORK, PROVIDE STAND-OFF BRACKET TO PREVENT COMPRESSION OF INSULATION BY DAMPER OPERATOR HANDLE.
- 6. PROVIDE TURNING VANES IN ALL 90-DEGREE ELBOWS.
- PROVIDE SLEEVES THROUGH WALLS AND FLOORS. SEAL EXCESS OPENING WITH WATER-PROOF SEALANT. COORDINATE LOCATIONS AND SIZES OF SLEEVES WITH GENERAL CONTRACTOR. SLEEVES SHALL PROVIDE A MAXIMUM OF 1" CLEARANCE BETWEEN DUCT OR PIPE AND SLEEVE. SEAL PENETRATION IN FIRE/SMOKE RATED WALLS AND FLOOR WITH AN APPROVED FIRE/SMOKE BLOCK SEALANT.
- EXTERNALLY INSULATE SUPPLY, RETURN, RELIEF, AND OUTSIDE AIR DUCTWORK UNLESS NOTED OTHERWISE. INTERNALLY LINED DUCT IS SHOWN CROSSHATCHED ON THE FLOOR PLAN.
- 9. EXHAUST DUCTWORK SHALL BE UN-INSULATED, UNLESS NOTED OTHERWISE.
- 10. EXTERNALLY INSULATE LOW-VELOCITY ROUND RUNOUT DUCTWORK.
- 11. INSULATE THE TOP OF ALL SUPPLY AIR DIFFUSERS WITH A MINIMUM OF 1/2" THICK FIBERGLASS DUCT WRAP.
- 12. MOUNT THERMOSTATS AT 48" A.F.F. OR MATCH LIGHT SWITCH 13. ARRANGE PIPING TO ALLOW FOR PROPER SERVICE AND
- ACCESS TO EQUIPMENT. INSTALL UNIONS AND ISOLATION VALVES TO ALLOW FOR REMOVAL OF EQUIPMENT WITHOUT DISTURBING MAINS.
- 14. REFER TO REFLECTED CEILING PLAN FOR EXACT DIFFUSER LOCATIONS.
- 15. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF FIRE AND SMOKE RATED PARTITIONS.
- 16. COORDINATE LOCATION OF DUCTS AND DIFFUSERS WITH STRUCTURAL FRAMING MEMBERS. OFFSET DUCTS AS
- REQUIRED TO CLEAR STRUCTURAL MEMBERS. 17. COORDINATE LOCATIONS AND ELEVATION OF DUCT RUNS WITH PLUMBING, SPRINKLER, AND ELECTRICAL CONTRACTORS.
- 18. PROVIDE ACCESS DOORS IN DUCTS FOR ALL FIRE DAMPERS. PROVIDE CEILING ACCESS DOORS FOR DAMPERS ABOVE GYP. BOARD CEILINGS. PROVIDE WALL ACCESS DOORS FOR DAMPERS AT CHASES AS WHERE DAMPER INSTALLED AT FLOOR LEVEL AND NOT ACCESSIBLE FOR SERVICE FROM
- 19. DUCT DIMENSIONS ARE REQUIRED FREE AREA AND DO NOT ACCOUNT FOR INTERNAL INSULATION THICKNESS. INCREASE DUCT SIZES WHERE INTERNAL INSULATION IS SHOWN TO ACHIEVE THE REQUIRED FREE AREA.

BELOW.

20. MAINTAIN A MINIMUM OF 10'-0" BETWEEN ALL OUTSIDE AIR INTAKES AND ALL EXHAUST VENT LOCATIONS AS REQUIRED BY CODE AND AHJ.

♥/PETTIT & PETTIT\` CONSULTING \ ENGINEERS, No. 78 PETTIT & PETTIT

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