GRILLES, REGISTERS, AND DIFFUSERS SCHEDULE TAG SERVICE CFM RANGE FACE SIZE NECK SIZE OBD MANUFACTURER ADDITIONAL PRICE & MODEL SQUARE PLAQUE SUPPLY 0 - 100 SPD 24x24 6"ø NO SUPPLY | 105 - 175 24x24 SQUARE PLAQUE NO SPD 8"ø 10"ø SQUARE PLAQUE SPD SUPPLY 180 - 270 24x24 NO NO SPD 12**"**ø SQUARE PLAQUE SUPPLY | 275 - 425 24x24 14"ø SQUARE PLAQUE SPD SUPPLY | 430 - 700 NO 24x24 NO SPD SUPPLY | 0 - 100 12x12 SQUARE PLAQUE 6"ø SUPPLY | 105 - 250 12x12 8"ø SQUARE PLAQUE NO SPD SUPPLY | 175 - 275 | 24x24 8"x8" MODULAR 4-WAY NO SPD PERFORATED FACE NO PDDR RETURN | 0 - 175 24x24 8"ø PDDR PERFORATED FACE NO | 24x24 10"ø RETURN | 180 – 270 PERFORATED FACE PDDR RETURN | 275 – 400 12"ø NO L 24x24 PERFORATED FACE NO PDDR 14"ø RETURN | 405 – 620 24x24 RETURN | 625 - 1250 16"ø PERFORATED FACE NO PDDR 24x24 PERFORATED FACE NO PDDR RETURN | 0 - 100 16x16 6"ø RETURN | 105 - 210 PDDR PERFORATED FACE NO 16x16 8"ø PDDR 16x16 10"ø PERFORATED FACE NO RETURN | 215 - 330 RETURN | 130 - 350 | 18"x4" 45° DEFL. LVRD FACE, 3/4" SPACING NO 530 D MFG PERFORATED FACE NO PDDR | EXHAUST | 0 - 175 24x24 8"ø PDDR | EXHAUST | 180 - 270 24x24 10"ø PERFORATED FACE NO PDDR PERFORATED FACE | EXHAUST | 275 - 390 | 24x24 12"ø NO PDDR PERFORATED FACE | EXHAUST | 395 - 620 | 24x24 14"ø NO PERFORATED FACE PDDR | EXHAUST | 625 - 1250 | 16"ø NO 24x24 $\langle \overline{F} \rangle$ | EXHAUST | 0 - 100 PDDR PERFORATED FACE NO 16x16 6"ø PDDR EXHAUST | 105 - 210 16x16 8"ø PERFORATED FACE NO ⟨H⟩ | EXHAUST | 215 − 330 | 16x16 NO PDDR PERFORATED FACE

- A: ADJUST FROM HORIZONTAL DISCHARGE TO VERTICAL DISCHARGE. PROVIDE DIFFUSER WITH SQUARE TO ROUND NECK ADAPTOR, MODEL #SR
- B: PROVIDE REGISTER WITH ROUND NECK ADAPTOR WHERE REQUIRED.
- : PROVIDE LINEAR SLOT AND/OR LINEAR BAR GRILLE WITH END CAPS, BORDER SUITABLE FOR INSTALLING ON GYB CEILING/SIDEWALL.
- PROVIDE SPIRAL DUCT GRILLE SIZED TO MATCH DUCT SIZE O.D., END FRAMES TO MATCH DUCT SIZE O.D., CLOSED CELL FOAM GASKET FACTORY COLOR TO MATCH DUCTWORK COLOR, AIR SCOOP ACCESSORY, AND OPPOSED BLADE DAMPER, NO EXCEPTIONS. : PROVIDE LOUVERED FACE GRILLE WITH STEEL OBD, FACTORY INSTALLED.

- ALL DEVICES SHALL BE FINISHED WITH AN ENAMEL FINISH, COLOR BY ARCHITECT. COORDINATE DEVICE COLOR(S) WITH ARCHITECT PRIOR TO ORDERING. COLOR COORDINATION SHALL INCLUDE BUT NOT BE LIMITED TO DIFFUSER FACE, CENTER TEE, FRAME INTERIOR, PATTERN CONTROLLER, ETC.
- ALL DEVICES SHALL BE FURNISHED WITH FRAMES SUITABLE FOR TYPE OF INSTALLATION REQUIRED, NO EXCEPTIONS.

8"ø

- 5. PROVIDE EXTERNAL FOIL—BACK INSULATION, FACTORY INSTALLED FOR ALL DIFFUSER/GRILLE HOUSING.
- 4. ALL LINEAR SLOT DIFFUSERS AND BAR GRILLES SHALL BE FURNISHED WITH END CAPS.
- 5. ALL DEVICES INSTALLED IN HARD CEILINGS, WALLS, OR DIRECTLY ATTACHED TO DUCTS SHALL BE PROVIDED WITH OBD'S. 6. UNLESS OTHERWISE NOTED, ALL LINEAR SLOTS, BAR GRILLES, LOUVERED AND/OR EGGCRATE FACE GRILLES/REGISTERS HALL BE PROVIDED WITH AN INSULATED PLENUM BOX FACTORY INSTALLED BY MANUFACTURER. PLENUM BOX SHALL BE FACTORY INSULATED WITH FIBER FREE FOAM, COLOR BLACK. PROVIDE PLENUM BOX WITH DUCT COLLAR AND WITH
- COORDINATE GRILLES/DIFFUSERS WITH ARCHITECTURAL CEILING AND STRUCTURAL FRAMING LAYOUTS PRIOR TO ORDERING COORDINATION SHALL INCLUDE TYPE OF INSTALLATION, MOUNTING REQUIREMENTS, T-BAR SPACING/SIZE, GYPBOARD FRAMING, INSTALLATION CLEARANCES, ETC.
- . ADJUST PATTERN CONTROLLERS ON ALL LINEAR SLOTS AND LINEAR BAR GRILLES PRIOR TO AIR BALANCE (T&B).
- SEE AIR DEVICE TAG FOR DUCT INLET SIZE. ALL DUCT RUNOUTS TO BE SIZED PER GRD AIR TERMINAL NECK SIZE ON SCHEDULE AND/OR AS INDICATED ON PLANS IN CONJUNCTION WITH REQUIREMENTS BY GRD MANUFACTURER. COORDINATE ALL DUCT SIZES PRIOR TO BIDDING, NO EXCEPTIONS. DUCT SIZE SHALL MATCH GREILLE/LOUVER SIZE IF NO DUCTWORK SIZE INDICATED ON PLANS. CONTRACTOR SHALL REFERENCE DUCTWORK INSULATION SCHEDULE FOR ALL DUCTWORK INSULATION REQUIREMENTS.

CABLE/FACE OPERATED FULL FLOW MANUAL CONTROL DAMPER ACCESSIBLE FROM FACE OF LINEAR SLOT OR BAR GRILLE

-). CONTRACTOR SHALL PAINT ALL VISIBLE SURFACES THROUGH GRD'S FLAT BLACK. PLENUM BOX INSULATION SHALL BE COLOR BLACK FROM FACTORY.
- . PROVIDE TAPERED TRANSITIONS FOR ALL SUPPLY DIFFUSERS WITH NECK SIZES DIFFERENT THAN SUPPLY DUCT RUN-OUT SIZES. . PROVIDE SPIN-IN TAP WITH MANUAL VOLUME DAMPER AT EACH BRANCH TAKE-OFF. SEE DETAILS SHEET AND
- SPECIFICATIONS FOR ADDITIONAL INFORMATION. 13. 9/16" TEE-BAR CEILING GRID IS USED. GENERAL CONTRACTOR SHALL MAKE SURE THE GRILLES/DIFFUSERS/LIGHITING FIXTURES WILL FIT PROPERLY IN THE NARROW GRID.

HVAC SEQUENCE OF OPERATIONS

- MECHANICAL CONTRACTOR SHALL PROVIDE CONTROLS THAT MATCH THE MANUFACTURER'S RECOMMENDATION FOR ALL EQUIPMENT PROVIDED. SEE SPECIFICATIONS FOR ADDITIONAL CONTROLS INFORMATION.
- THE SEQUENCE OF OPERATIONS PROVIDED IN THE CONTRACT DOCUMENTS IS INTENDED TO COMMUNICATE THE GENERAL DESIGN INTENT TO THE CONTROLS SUBCONTRACTOR AND IS NOT INTENDED TO BE FULLY DEVELOPED OR COMPLETE. IN THE CONTROLS SUBMITTAL, THE SUBCONTRACTOR SHALL FULLY DEVELOP THE SEQUENCE OF OPERATIONS FOR ALL SYSTEMS IDENTIFIED AND SHALL PRESENT ALI SETPOINTS, CONTROL PARAMETERS, AND ALARM POINTS. THE CONTROLS SUBCONTRACTOR SHALL INCORPORATE STANDARD FEATURES SUCH AS MINIMUM RUN TIME DELAYS AND DEAD BANDS FROM SETPOINTS TO PREVENT EQUIPMENT FROM SHORT CYCLING AND WHEN HOVERING AROUND SETPOINTS. ALL MONITORED POINTS SHALL INCLUDE EARLY HIGH/LOW ALARM NOTIFICATIONS PRIOR TO HAVING TO TAKE CORRECTIVE ACTIONS OR ÉQUIPMENT SHUTDOWNS. TRANSMITTERS SHALL INCLUDE OUT-OF-RANGE, FAIL-SAFE POSITIONING FOR OPEN CIRCUITS OR LOSS
- OF COMMUNICATION. CONTROL CONTRACTOR SHALL SPECIFY TO FAIL DE-ENERGIZER. HOLD LAST STATE. OR DEFAULT TO A PREDETERMINED SETPOINT. THESE BASIC FEATURES THAT ARE NECESSARY AND ARE PART OF A ROBUST CONTROLS INSTALLATION SHALL BE ASSUMED INCLUDED IN THE SCOPE OF SERVICES FOR DELIVERABLES AT NO ADDITIONAL COSTS TO THE OWNER.
- GENERAL AREAS: THE AHU'S WILL BE FULLY CONTROLLED BY INTERNAL CONTROLS. THE UNITS WILL
- BE PROVIDED WITH STAND-ALONE CONTROLLERS. AHU'S SHALL BE CONTROLLED BY 7-DAY PROGRAMMABLE THERMOSTAT WITH HUMIDISTAT FEATURE OR ZONE SENSORS /W UNIT SENSORS/CONTROLS (SEE PLANS FOR INFORMATION). ROOFTOP UNITS SHALL SWITCH TO OCCUPIED MODE (74° - ADJUSTABLE, ± 4°F) ONE HOUR PRIOR TO BUILDING OCCUPANCY AND SHALL SWITCH TO UNOCCUPIED MODE (85°F COOLING, 68°F HEATING) ONE HOUR AFTER BUILDING OCCUPANCY. OCCUPANCY TIME TO BE DETERMINED BY OWNER. 3-HOUR OVERRIDES SHALL BE PROVIDED AS NEEDED FOR RETAIL PERSONNEL. DUCT MOUNTED HUMIDITY SENSORS SHALL BE INSTALLED IN R.A. DUCTWORK INTERLOCKED WITH 7-DAY PROGRAMMABLE THERMOSTAT WITH BUILT IN HUMIDISTAT FEATURE TO ENERGIZE ROOFTOP UNITS AND CORRESPONDING COMPRESSOR(S) TO MAINTAIN 50% RH WITH ±3°F OCCUPIED AND UNOCCUPIED DEADBAND AND MINIMUM
- OPTIMAL START/STOP THE AHU SYSTEM WILL BE STARTED AND STOPPED AS DEFINED BY OWNER

UNIT RUNTIME OF 15 MINUTES DURING HUMIDITY OVERRIDE

- BUILDING SCHEDULE. THE SYSTEM WILL START/STOP BY SCHEDULED OCCUPANCY
- THE AHU'S TO HAVE AN UNOCCUPIED COOLING SET POINT (85 DEG F, ADJUSTABLE AT EACH AHU). TO MAINTAIN DURING UNOCCUPIED PERIODS. ONCE ENERGIZED, THE RTU WILL PROVIDE COOLING AS SCHEDULED. THE SYSTEM WILL REMAIN ENERGIZED UNTIL SPACE SCHEDULED SET POINTS ARE MET.
- THE AHU'S TO HAVE AN UNOCCUPIED HEATING SET POINT (65 DEG F, ADJUSTABLE AT EACH AHU). TO MAINTAIN DURING UNOCCUPIED PERIODS. ONCE ENERGIZED, THE OUTSIDE AIR DAMPER WILL REMAIN CLOSED AND THE SUPPLY FAN WILL MAINTAIN THE DUCT STATIC PRESSURE SET POINT. THE SYSTEM WILL REMAIN ENERGIZED UNTIL NO ZONES REQUIRE UNOCCUPIED HEATING.

- EACH SYSTEM WILL BE AVAILABLE FOR OCCUPANCY OVERRIDE. DURING UNOCCUPIED MODE, THE UNIT CONTROLLER WILL OVERRIDE THE ASSOCIATED SYSTEM INTO OCCUPIED MODE FOR 3 HOURS (ADJ.).
- SUPPLY FAN CONTROL WHEN THE AHU IS ENERGIZED, THE SUPPLY FAN VFD OR ECM MOTOR, WILL MODULATE TO MAINTAIN THE DUCT STATIC PRESSURE SET POINT (ADJ.). FAN SHALL MODULATE CAPACITY TO MAINTAIN 55° FLAT.
- IF OUTSIDE AIR IS NOT SUFFICIENT TO PROVIDE COOLING. THE DX COMPRESSORS WILL BE TASKED WITH MAINTAINING THE DISCHARGE AIR TEMPERATURE SET POINT WHEN THE SYSTEM IS ENERGIZED AND NOT IN MORNING WARM-UP. STAGES OF DX COOLING WILL BE ENERGIZED AS NEEDED TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SET POINT. COMPRESSOR STAGING CONTROL WILL BE DETERMINED BY THE AHU'S INTERNAL CONTROLS. THE DISCHARGE AIR TEMPERATURE SET POINT SHALL MODULATE TO CONTROL SPACE TEMPERATURE AND/OR HUMIDITY AS
- THE AIR ECONOMIZER WILL BE ENABLED BY A COMPARATIVE ENTHALPY. AHU-12 SHOULD BE PROVIDED WITH AN OUTSIDE AIR TEMP AND HUMIDITY SENSOR AS WELL AS A RETURN AIR TEMP AND HUMIDITY SENSOR. OUTSIDE AIR ENTHALPY AND RETURN AIR ENTHALPY WILL BE CALCULATED. IF THE OUTSIDE ENTHALPY IS LESS THAN THE RETURN AIR ENTHALPY, FREE COOLING IS AVAILABLE AND THE ECONOMIZER WILL BE ENABLED. AFTER BEING ENABLED, INTERNAL TRANE AHU CONTROLS WILL MODULATE THE OUTSIDE AIR AND RETURN AIR DAMPERS TO
- MAINTAIN THE DISCHARGE AIR TEMPERATURE SET POINT. RETURN TEMPERATURE AND HUMIDITY WILL BE MONITORED AT EACH AHU, AND ZONE CONTROLLER LOCATION. IF THE RETURN AND /OR SPACE HUMIDITY RISES ABOVE SE POINT. THE DISCHARGE AIR TEMPERATURE SET POINT WILL RESET AND UNIT FAN SPEED AND CAPACITY SHALL MODULATE AS REQUIRED TO MAINTAIN SPACE HUMIDITY
- MINIMUM OA DAMPER POSITION THE OUTSIDE AIR DAMPER WILL GO TO MINIMUM POSITION DURING SCHEDULED OCCUPIED TIMES IF NOT IN ECONOMIZER MODE. THE MINIMUM POSITION WILL BE DEFINED BY THE TEST AND BALANCE CONTRACTOR AND BE BASED ON OUTDOOR AIR
- INTAKE AS LISTED IN RTU SCHEDULE. DISCHARGE AIR TEMPERATURE RESET IF NOT IN MORNING WARM-UP, MORNING COOL-DOWN, OR HUMIDITY CONTROL, THE DISCHARGE AIR TEMPERATURE SET POINT WILL BE RESET ACCORDING TO THE

DUCT SMOKE DETECTORS:

OUTSIDE AIR TEMPERATURE. (ADJ.):

- CONTRACTOR SHALL PROVIDE SMOKE DETECTORS AS OUTLINED ON PLANS FOR ALL SPLIT SYSTEMS. SEE AHU UNIT SCHEDULE FOR INFORMATION. RESTROOM EXHAUST FANS:
- CEILING MOUNTED RESTROOM EXHAUST FANS ARE TO BE INTERLOCKED WITH LOCAL LIGHTING CIRCUIT TO ACTIVATE UPON RESTROOM OCCUPANCY. ROOF MOUNTED FANS SERVING MULTIPLE SPACES, INCLUDING RESTROOMS, SHALL BE INTERLOCKED WITH A TIME CLOCK AND OPERATE CONTINUOUSLY BUILDING IS IN OPERATION.

EXHAUST SYSTEMS SEQUENCES OF OPERATION

- ALL EXHAUST FANS SERVING REST ROOMS, SHOWER ROOMS, LOCKER ROOMS, ETC. SHALL BE INTERLOCKED WITH
- ASSOCIATED ROOM LIGHTING OCCUPANCY SENSOR FOR CONTROL. ISOLATION ROOM EXHAUST:
- ISOLATION ROOM(S) WILL REQUIRE 100 PERCENT OUTSIDE AIR WHEN IN USE; NO RETURN FROM THIS ROOM. FAN SHALL BE CONTROLLED VIA MANUAL SWITCH ON INTERIOR ROOM WALL. SWITCH SHALL BE PROVIDED WITH A PILOT LIGHT LOCATED ON ADJACENT EXTERIOR OF ROOM FOR VISUAL CONFIRMATION THE FAN IS OPERATING WHEN NEEDED.
- ANIMAL AREAS ROOM EXHAUST: ALL ANIMAL AREAS (E.G. RUNS, WARDS, HOLDING KENNELS, ETC.) SHALL BE PROVIDED WITH AN ENERGY RECOVERY VENTILATOR THAT IS INTERCONNECTED WITH ASSOCIATED HVAC SYSTEM(S) SERVING EXHAUST SPACE. ERV EXHAUST FAN(S) SHALL ENERGIZE AND DE-ENERGIZE WITH THE ACTIVATION AND DE-ACTIVATION OF INTERLOCKED AHU FOR GENERAL SPACE CONDITIONING. MECHANICAL CONTRACTOR SHALL COORDINATE ALL REQUIRED CONTROL(S) SYSTEMS,

WIRING, SWITCHES BETWEEN FAN MANUFACTURER AND RTU MANUFACTURER TO ENSURE INTERCONNECTION IS

- AREAS OF FOCUS THIS PROJECT: CANINE ADOPTION AREAS
- FELINE/CANINE HOLDING AREAS FELINE CONDO AREAS
- REAL LIFE ROOMS CONGREGATION ROOMS

CONCRECY THOR TOOMS
INDOOR PLAY/EXERCISE AREAS
EXOTIC/AVIAN
TREATMENT/RECOVERY AREAS

FAN SCHEDULE ELECTRICAL DATA OPERATING MANUFACTURER SYSTEM SERVED DRIVE TYPE RPM SONES FAN TYPE CFM OPTIONS WEIGHT GREENHECK & MODEL | WATTS | VOLTAGE CEILING EXHAUST 70 | 0.25 DIRECT 900 17.6 | 115V-1ø | A,B,F,S 141 MENS RR 12 LBS SP-A90 CEILING EXHAUST DIRECT 17.6 | 115V-1ø | 12 LBS 70 | 0.25 900 A,B,F,S 142 WOMENS RR SP-A90 CEILING EXHAUST 70 | 0.25 DIRECT 900 17.6 | 115V-1ø | 12 LBS A,B,F,S 162 PUBLIC RR SP-A90 CEILING EXHAUST DIRECT 17.6 | 115V-1ø | 243 MENS RR 70 | 0.25 900 1.1 12 LBS SP-A90 A,B,F,S 17.6 | 115V-1ø 12 LBS 0.25 DIRECT 900 A,B,F,S 249 MENS SHOWER CEILING EXHAUST SP-A90 16.4 | 115V-1ø | 0.25 DIRECT 900 A,B,F,S 223 JANITOR CEILING EXHAUST 1.3 12 LBS SP-A70 17.6 | 115V-1ø 0.25 DIRECT 900 12 LBS A,B,F,S 226 WOMENS SHOWER CEILING EXHAUST SP-A90 CEILING EXHAUST 70 | 0.25 DIRECT 900 17.6 | 115V-1ø | 12 LBS SP-A90 A,B,F,S 242 WOMENS RR 17 CEILING EXHAUST DIRECT 900 A,B,F,Q 155 02 CLOSET 25 | 0.5 115V-1ø 2.0 9 LBS SP-B80 17.6 | 115V-1ø | CEILING EXHAUST DIRECT 30 | 0.25 900 1.1 12 LBS SP-A90 A,B,F,S 173 JANITOR CLOSET DIRECT 1050 1/30 A,B,F,L,Y300 0.25 115V-1ø 4.0 27 LBS 232 FELINE HOLD 2 INLINE EXHAUST SQ-95-VG 1050 1/30 27 LBS A,B,F,L,Y180 0.25 DIRECT 115V-1ø 4.0 SQ-95-VG 116 FELINE CONDOS 1 INLINE EXHAUST DIRECT 1050 1/30 2.8 27 LBS A,B,F,L,Y112 FELINE CONDOS 2 INLINE EXHAUST 120 0.25 115V-1ø SQ-80-VG 17.6 | 115V-1ø | 143 JANITOR CEILING EXHAUST 30 | 0.25 DIRECT 900 1.3 12 LBS SP-A70 A,B,F,S 1050 1/30 150 0.25 DIRECT 27 LBS SQ-95-VG A,B,F,L,Y 171 FELINE HOLD CONDOSI INLINE EXHAUST 115V-1ø | 4.0 l 0.25 ı 1050 1/30 27 LBS A,B,F,L,Y210 DIRECT 115V-1ø 4.0 SQ-95-VG 156/158 ISO AREAS | INLINE EXHAUST

1336 2

<u>OPTIONS</u>

- A: DISCONNECT SWITCH B: BACKDRAFT DAMPER
- C: PREFAB. ROOF CURB D: BIRDSCREEN

F: HANGING BRACKETS

E: SHORT BASE OPTION

WITH VIBRATION ISOLATION

ALL FANS SHALL BE U.L. LABELED.

AUXILIARY CONTACT AND RELAY. STARTER PROVIDED BY M.C.

PROVIDED BY M.C.

RF-1 | ECONOMIZER RELIEF FAN | IN-LINE EXHAUST | 2800 | 1.0 |

G: WALL MOUNTED HAND-OFF-AUTO (HOA) SWITCH WITH MOTOR STARTER/ (200 VOLTS OR HIGHER — 3 PHASES) WITH

H: WALL MOUNTED HAND-OFF-AUTO (HOA)

(120 VOLTS - SINGLE PHASE) AND

SWITCH WITH MAGNESTIC MOTOR STARTER

AUXILIARY CONTACT AND RELAY. STARTER

VARI GREEN

- I: INTERLOCK WITH ASSOCIATED DOAS SYSTEM O: PROVIDE FAN WITH FREE STANDING J: PROVIDE FACTORY FAN SPEED CONTROLLER TO BALANCE FAN
- K: INTERLOCKED WITH LIGHTING FIXTURE SWITCH L: WL, WALL LOUVER DISCHARGE

M: RFC, ROOF CAP (FLAT ROOF)

WITH MANUAL DAMPER

N: MOTORIZED DAMPER - 120V

RL, ROOF CAP (PITCHED ROOF)

- SPRING ISOLATORS AND VIBRATION ISOLATION RAILS, W/ WIND RESTRAINTS P: WASHABLE ALUMINUM FILTERS
 - Q: CONTINUOUS RUN 24/7 R: EXHAUST METAL GRILLE

208V-1ø | 9.7

- W: FOR OUTDOOR INSTALLATION S: INTERLOCKED WITH LIGHTING OCCUPIED SENSOR (PROVIDED BY E.C. - SEE ELEC. DWGS FOR LOCATION)
- T: RUN CONTINUOUSLY DURING OCCUPIED HOUR USE, CONNECTED VIA LIGHTING CONTROL. (CONTROL PROVIDED BY E.C. - SEE ELEC. DWGS FOR LOCATION) U: INTERLOCK WITH CO/N20

SQ-160-VG

MONITORS/DETECTORS

A,B,J,X

X: INTERLOCKED WITH ECONOMIZER/AHU TO ENERGIZE WHEN SYSTEM IN ECONOMIZER MODE; COORDINATE ALL CONTROLS INVOLVED Y: RUN CONTINUOUSLY 24/7 FOR CAT CONDO

V: DISCHARGE SHUTTER (OUTLET DAMPER)

ALL FANS SHALL BE SUPPLIED BY ONE MANUFACTURER UNLESS NOTED OTHERWISE. 3. BACKDRAFT DAMPER ON ROOF SUPPLY FANS SHALL BE MOTORIZED

	ELECTRIC HEATER SCHEDULE										
		HEATER TYPE		ELECTRICAL	. DATA			ADDITIONAL OPTIONS			
TAG	AREA SERVED		KW	AMPS	VOLTAGE	OPERATING WEIGHT	MANUFACTURER MARKEL & MODEL				
EWH-1	FIRE RISER ROOM	WALL	5	24.1	208V-1ø	41 LBS	F3425T	А			
EWH-2,3	STAIRWELL	WALL	3	14.4	208V-1ø	- LBS	F3423T	А			
OPTIONS (ALL UNITS) BUILT—IN THERMOSTAT TAMPER PROOF CONTROLS MOUNTING BRACKETS/HARDWARE					ADDITIONAL OPTIONS (UNITS AS NOTED) A: FLUSH MOUNTING KIT, FULLY RECESSED B: WALL MOUNTED THERMOSTAT /W INSULATED SUB BASE C: WET LISTED FOR USE IN WET ENVIRONMENT D: STAINLESS STEEL FINNED HEATING ELEMENTS						

E: SUSPENDED HEATER SUPPORTS

F: ADJUSTABLE DISCHARGE LOUVERS

NOTES: . ALL HEATERS SHALL BE U.L. LABELED.

- . ALL HEATERS SHALL BE SUPPLIED BY ONE MANUFACTURER UNLESS NOTED OTHERWISE.
- VERIFY MOUNTING HEIGHTS AND EXACT LOCATION WITH THE OWNER/ARCHITECT PRIOR TO INSTALLING UNIT.

- MINI SPLIT SYSTEM/HEAT PUMP SCHEDULE CONDENSING SECTION MIN/MAX WEIGHT ELECTRICAL DATA ELECTRICAL DATA MANUFACTURER ADDITIONAL RATED | MIN/MAX AREA SERVED EFFICIENCY MITSUBISHI & MODEL OPTIONS HEAT (MBH) | (LBS) | MCA | VOLTAGE | MCA | MOCP | VOLTAGE | (LBS) DAH-1/DHP-1 | 154 DOUBLE SURGERY | 550 | 17.2 | 5.8/18.0 | 14.8 5.4/20.9 | 28 | 1 | 208V-1ø | 10 | 15 | 208V-1ø | 81 | 16 SEER/3.1 COP | MSZ-WR18NA/MUZ-WR18NA ADDITIONAL OPTIONS (UNITS AS NOTED) OPTIONS (ALL UNITS) 4" THICK PREFABRICATED PAD WALL MOUNTED 7-DAY PROGRAMMABLE A: CONDENSATE PUMP, DIVERSITECH CP-22 120V/10 F: UV LIGHT EQUAL TO ULTRAVATION DIGITAL THERMOSTAT OR CONCRETE PAD FOR MODEL 'UVPHOTOMAX' MOUNTED IN B: 24V MOTORIZED O.A. DAMPER OUTDOOR UNIT CONDENSATE DRAIN PAN OVERFLOW C: 120V/1ø MOTORIZED O.A. DAMPER PRE—CHARGED REFRIGERANT D: STAINLESS STEEL DRAIN PAN SINGLE POINT ELECTRICAL CONNECTION GALVANIZED CONDENSATE DRAIN PAN • MANUFACTURER MINIMUM E: OUTDOOR UNIT WIND RESTRAINTS INTEGRAL CONDENSATE PUMP CLEARANCES
- I. ALL UNITS SHALL BE U.L. LABELED. 2. ALL UNITS SHALL HAVE R-410A REFRIGERANT.
- ALL UNITS SHALL BE SUPPLIED BY ONE MANUFACTURER UNLESS NOTED OTHERWISE.
- 4. INDOOR UNIT POWERED BY OUTDOOR UNIT, SINGLE POINT ELECTRICAL CONNECT AT OUTDOOR UNIT ONLY. DISCONNECT SWITCH REQUIRED BY ELECTRICAL CONTRACTOR AT BOTH INDOOR AND OUTDOOR UNIT LOCATION.
- 5. CONTRACTOR SHALL VERIFY EQUIPMENT SUPPLIER EXACT ROUTING AND SIZE OF INSULATED REFRIGERANT PIPING. INSTALL PER MANUFACTURER RECOMMENDATIONS

	INTAKE LOUVER SCHEDULE											
TAG	AREA SERVED	AIR FLOW (CFM)	LOUVER FUNCTION	THROAT VELOCITY (FT/MIN)	WIDTH (IN)	HEIGHT (IN)	DEPTH (IN)	FREE AREA (%)	MANUFACTURER RUSKIN & MODEL	OPERATING WEIGHT	ADDITIONAL OPTIONS	
IL-1	212 MECH 1	5795	INTAKE	703	60	36	WALL	55	ELF6375DX	155 LBS	A,B,C	
IL-2	215 MECH 2	5770	INTAKE	703	60	36	WALL	55	ELF6375DX	155 LBS	A,B,C	
IL-3	230 MECH 3	9370	INTAKE	678	72	48	WALL	58	ELF6375DX	213 LBS	A,B,C	
	ALL LOUVERS) DARD CONSTRUCTION	I	COMBINA	ATION LOUVER/	DAMPER	1	ADDITIONAL OPTIONS (UNITS AS NOTED) A: PAINTED /W BAKED ENAMEL FINISH (COORD. COLOR W/ ARCHITECT)					

B: EXTENDED SILL

- STANDARD CONSTRUCTION BIRD/INSECT SCREEN
 - COMBINATION LOUVER/DAMPER

2. LOUVER DAMPER TO CLOSE WHEN INTERLOCKED FAN NOT IN OPERATION.

- INTERLOCKED WITH EXHAUST FAN PAINTED TO MATCH ADJ. SURFACES • ALL WELDED CONSTRUCTION BACKDRAFT DAMPER
 - C: HINGED FRAME D: FILTER RACKS ARCH. STYLE HIDDEN MULLIONS E: SECURITY BARS
- DRAINABLE BLADES . ALL LOUVERS SHALL BE SUPPLIED BY ONE MANUFACTURER UNLESS NOTED OTHERWISE.

	FAN FILTER UNIT SCHEDULE											
			FAN FILTER IN	FORMATION		ELECTR	CAL INFORMA	TION				
	AREA SERVED	NOMINAL UNIT SIZE	ACTIVE FILT. FACE AREA (SQ.FT.)	MAXIMUM CFM	DESIGN CFM	WATTS AT MAXIMUM CFM	FLA	VOLTAGE	MANUFACTURER ENVIRCO & MODEL	ADDITIONAL OPTIONS		
-1	154 DBL. SURG.	2x4 RSRE	5.3	610	300	300	1.5	208V-1PH	MAC-10-LAF	A,B,C,D		

			FAN FILTER IN	FORMATION		ELECTR	ICAL INFORMA	TION			
TAG AREA SERVED		NOMINAL UNIT SIZE	ACTIVE FILT. FACE AREA (SQ.FT.)	MAXIMUM CFM	DESIGN CFM	WATTS AT MAXIMUM CFM	FLA	VOLTAGE	MANUFACTURER ENVIRCO & MODEL	ADDITION OPTIONS	
FFU-1	154 DBL. SURG.	2x4 RSRE	5.3	610	300	300	1.5	208V-1PH	MAC-10-LAF	A,B,C,D	
A: RSRE (B: AIRFLO' C: SOLID	OPTIONS (UNITS AS OPTION FOR ROOM S WINDICATOR LIGHT STATE SPEED CONTI REPLACEMENT INDIC	SIDE MAINTENA ROL	ANCE ON FILTE	EMBLY	FOR CONTINU	JNITS SHALL E JOUS RUN 24/ TO HAVE TAG	E WIRED DIRECTLY TO 7. COORDINATE WITH 5-OUT-LOCK-OUT PRO RE MAINTENANCE.	ELECTRICAL			

	EXHAUST LOUVER SCHEDULE											
TAG	AREA SERVED	AIR FLOW (CFM)	LOUVER FUNCTION	THROAT VELOCITY (FT/MIN)	WIDTH (IN)	HEIGHT (IN)	DEPTH (IN)	FREE AREA (%)	MANUFACTURER RUSKIN & MODEL	OPERATING WEIGHT	ADDITIONAL OPTIONS	
E-1	212 MECH 1	5795	EXHAUST	706	60	36	WALL	55	ELF6375DX	155 LBS	A,B,C	
EL-2	215 MECH 2	5770	EXHAUST	706	60	36	WALL	55	ELF6375DX	155 LBS	A,B,C	
EL-3	230 MECH 3	9370	EXHAUST	678	72	48	WALL	58	ELF6375DX	213 LBS	A,B,C	
OPTIONS (A	LL LOUVERS)					ADDITIO	NAL OPTIONS	(UNITS AS N	OTED)			
STANDARD CONSTRUCTION COMBINATION LOUVER/DAMPER							IE COATED /\	`				
BIRD/INSECT SCREEN INTERLOCKED WITH EXHAUST FAN							ENDED SILL					
PAINTED TO MATCH ADJ. SURFACES ALL WELDED CONSTRUCTION							C: HINGED FRAME					
BACKE	RAFT DAMPER		ARCH. S	STYLE HIDDEN M	IULLIONS	D: FILTI	ER RACKS					

E: SECURITY BARS

-	<u>NO</u>	<u>TES:</u>
	1.	ALL LOUVERS SHALL BE SUPPLIED BY ONE MANUFACTURER UNLESS NOTED OTHERWISE.
	2.	LOUVER DAMPER TO CLOSE WHEN INTERLOCKED FAN NOT IN OPERATION.

DRAINABLE BLADES

BDA DSGN. REV BDA TECH REV

071324

PROJECT NO.: 23077 DRAWN: 07/08/2024