

ROOFTOP UNIT SCHEDULE																				
ID	LOCATION	SERVES	SUPPLY			MOTOR			HEATING			COOLING		GROSS COOL		SENS. COOL		FILTER		REMARKS
			FAN CFM	DRIVE	MIN. AIR CFM	OUTDOOR AIR CFM	ESP IN WG	HP	VOLTS/PH	MEDIUM	INPUT CAPACITY MBH	OUTPUT CAPACITY MBH	MEDIUM	MBH	MBH	SIZE/NUMBER	EFFICIENCY	MANUFACTURER		
RTU-1	ROOF	SALES FLOOR	8,575	DIRECT	2,005	1.0	7.5	208/3	GAS	270.0	218.7	R-410A	284.3	176.8	16X20X2 - 9	MERV 7	CES-MPU-025-RH-0003	(1)(2)(3)(4)(5)(6)		

- PROVIDE 14" HIGH INSULATED ROOF CURB & BURGLAR BARS ON SUPPLY AND RETURN OPENINGS. RTU-1 ROOF CURB IS BY AES INDUSTRIES CONTACT GEORGE LASHER T(800)786-0402 X 216. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR PURCHASING THE ROOF CURB DIRECTLY FROM AES INDUSTRIES.
- PROVIDE WITH THROUGH THE BASE SINGLE POINT ELECTRICAL CONNECTION, DISCONNECT, VFD 2-SPEED OPERATION, O/A HOOD, PROOF AIRFLOW SWITCH, CLOGGED FILTER SWITCH, STAINLESS STEEL DRAIN PAN, 120V CONVENIENCE OUTLET, REHEAT COIL & DEHUMIDIFICATION CONTROL.
- UNIT SUPPLIED BY OWNER, RECEIVED, RIGGED AND INSTALLED BY MECHANICAL CONTRACTOR.
- ROOFTOP UNIT CONTROLLER IS FACTORY INSTALLED IN THE CES MULTI-PATH MPU. SPACE TEMPERATURE, SUPPLY AIR TEMPERATURE & SPACE HUMIDITY SENSORS ARE SUPPLIED BY CD CONTROLS AND SHIPPED TO REFRIGERATION CONTRACTOR FOR FIELD INSTALLATION.
- CES MULTI-PATH MPU IS MANUFACTURED BY AAO INC. (PRODUCTION 10 - 12 WEEKS) TO COORDINATE MPU SHIPPING OR FOR TECHNICAL SUPPORT CONTACT CES INC T(866)706-2647 X222. ALDIORDERS@CESINC.CA
- MECHANICAL CONTRACTOR TO REVIEW AND CONFIRM RTU SETPOINTS/STORE HOURS WITH ALDI DIRECTOR OF REAL ESTATE AND SIEMENS ENERGY MANAGEMENT USER GUIDE.

FAN POWERED VAV BOX WITH ELECTRIC REHEAT SCHEDULE													
ID	TYPE	SERVES	FAN DATA				ELECTRICAL		REHEAT				REMARKS
			MAX CFM	MIN CFM	ESP IN WG	HP	VOLTAGE	INLET SIZE INCHES	OUTLET SIZE INCHES	CAPACITY KW	VOLTAGE	MANUFACTURER/MODEL NUMBER	
VAV-1	SERIES	CONF. AREA	575	575	0.5	1/3	120/1	8"Ø	14"X12.5"	5.0	208/3	PRICE FDC5/1/16005/2008/FLD/CFM/115-ECM/575/115-24V/EC/5.0/208-3/1/AFS/FG75/BASV/HB/CXYA6699	(1)(2)(3)(4)

- PROVIDE 0-10VDC ECM FAN MOTOR & AIRFLOW SWITCH, ELECTRICAL DISCONNECT PROVIDED & INSTALLED BY ELECTRICIAN.
- PROVIDE THREADED ROD HANGER BRACKETS.
- PROVIDE 3/4" FIBERGLASS ACOUSTICAL LINER.
- PROVIDE 0-10VDC MODULATING VAV DAMPER, MAKE/MODEL - KMC/MEP-4002 PER CXYA6699. DAMPER TO BE CONTROLLED VIA CONTROLLER LOCATED IN CES UNIT.

DUCTLESS SPLIT FAN COIL UNIT SCHEDULE																
ID	LOCATION	SERVES	SUPPLY FAN			COOLING COIL			HEATING COIL			FILTER		REMARKS		
			FAN CFM	MIN. AIR CFM	ESP IN WG	FAN RPM	MOTOR MCA	MOTOR VOLTS/PH	TOTAL CAPACITY BTUH	SENS. CAPACITY BTUH	MEDIUM	BTUH	SIZE		EFFICIENCY	MANUFACTURER
FCU-1	OFFICE	OFFICE	300	30	-	-	-	208/1	9,900	-	R-410A	12,100	-	MERV 8	LG - LCN097HV4	(1)(2)(3)(4)

- PROVIDE WITH DRY CONTACT (INSTALLED BY REFRIGERATION CONTRACTOR) FOR INTEGRATION WITH SIEMENS BMS. CONTROLLED BY WALL MOUNTED TEMPERATURE SENSOR PROVIDED AND INSTALLED BY SIEMENS.
- COORDINATE REFRIGERANT LINE SIZING PER MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE WITH MATCHING AIR COOLED HEAT PUMP SCHEDULED.
- PROVIDE VENTILATION KIT PTVK430, INLINE BOOSTER FAN (S&P USA TD100), CASSETTE GRILLE & CONDENSATE PUMP.

AIR COOLED HEAT PUMP SCHEDULE															
ID	LOCATION	SERVES	TOTAL COOLING CAPACITY MBH	OUTDOOR TEMP DB	TOTAL HEATING CAPACITY MBH	REFRIGERANT	COMPRESSORS NUMBER	SEER	REFRIGERANT CIRCUITS	CONDENSER FAN NUMBER	VOLTS/PH	MCA	MOCF	MANUFACTURER	REMARKS
HP-1	ROOF	FCU-1	9.9	95	12.1	R-410A	1	20.2	1	1	208/1	11.9	15.0	LG - LUU097HV	(1)

- PROVIDE WITH MATCHING DUCTED SPLIT FAN COIL.

VENTILATION RATE SCHEDULE									
INTERNATIONAL MECHANICAL CODE 2009 - TABLE 403.3 - SUPERMARKETS									
IMC CATEGORY	GROSS AREA (SQ. FT.)	NET OCCUPIABLE AREA (SQ. FT.)	OCCUPANTS PER 1000 SQ. FT.	TOTAL OCCUPANTS	CFM PER PERSON	CFM PER SQ. FT.	VENTILATION EFFECTIVENESS	EXHAUST PROVIDED (CFM)	CFM
SUPERMARKET	12,106	11,501	8	92	7.5	0.06	0.80	-	1,725
WAREHOUSE	3,171	-	-	-	0.80	0.06	0.80	-	238
OFFICE	556	389	5	2	5	0.06	0.80	-	41
CORRIDOR	133	-	-	-	-	0.06	0.80	-	10
TOILET	168	-	-	-	-	-	0.80	250	0
TOTAL OA REQUIRED									2,005
TOTAL OA PROVIDED									2,005

**DUCT SMOKE DETECTOR SYSTEM SPECIFICATION**  
 DUCT SMOKE DETECTOR SHALL BE SYSTEM SENSOR MODEL D4120 SERIES 4 WIRE, 120V PHOTOELECTRIC HOUSING SHALL BE UL LISTED PER UL268A. PROVIDE REMOTE TEST STATION WITH KEY, RTS151KEY AND REMOTE ANNUNCIATOR, RA1002. MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL THE DUCT MOUNTED SMOKE DETECTOR.

EXHAUST & DESTRATIFICATION FAN SCHEDULE											
ID	SERVES	LOCATION	TYPE	DRIVE	CFM	EXT. SP IN. WG.	FAN RPM	HP	VOLTAGE	MANUFACTURER	REMARKS
EF-2	BACKROOM	ROOF	CENT.	DIRECT	1,200	0.4	1,633	1/4	120/1	GREENHECK G-103-A	(2)(3)(4)
EF-3	TOILET	ROOF	CENT.	DIRECT	300	0.4	1,519	1/20	120/1	GREENHECK G-080-D	(2)(3)(4)
DF-1	SALES FLOOR	ROOF JOIST	CENT.	DIRECT	1,061	-	1,550	31 W	120/1	AIR-ROW F-18	(5)(6)(7)
DF-2	SALES FLOOR	ROOF JOIST	CENT.	DIRECT	1,061	-	1,550	31 W	120/1	AIR-ROW F-18	(5)(6)(7)

- CONTROLLED FROM WALL SWITCH PROVIDED AND WIRED BY DIVISION 16.
- PROVIDE SPEED CONTROLLER MOUNTED ON EXHAUST DUCT ABOVE CEILING.
- PROVIDE WITH 14" HIGH INSULATED ROOF CURB, DAMPER TRAY AND BACKDRAFT DAMPER.
- CONTROLLED BY SIEMENS ENERGY MANAGEMENT SYSTEM.
- FAN PROVIDED AND INSTALLED BY THE MECHANICAL CONTRACTOR. SUPPORT FAN FROM BUILDING STRUCTURE WITH BEAM CLIPS AND AIRCRAFT CABLE. INSTALL AT 1'-0" BELOW ROOF DECK AND PER MANUFACTURER'S RECOMMENDATIONS.
- FAN SHALL RUN CONTINUOUSLY. WIRING PROVIDED BY DIVISION 16. FACTORY SHALL PRESET FAN SPEED TO 100%.
- FAN TO BE FIELD PAINTED TO MATCH BUILDING STRUCTURE. PROTECT ALL MOVING PARTS PRIOR TO PAINTING.

DIFFUSER/REGISTER/GRILLE SCHEDULE										
ID	SERVES	TYPE	FACE SIZE	NECK SIZE	CONST. MATERIAL	CEILING MOUNTING	MAX. NC	MANUFACTURER	REMARKS	
D-1	SUPPLY	DIFFUSER	24X24	SEE PLANS	STEEL	T-BAR	20	TITUS TMSA	(1)	
D-2	SUPPLY	6-WAY	30X12	SEE PLANS	STEEL	THREADED ROD	20	TITUS TMSA	(2)	
R-1	RETURN	PERF.	24X24	12X12	STEEL	T-BAR	20	TITUS PAR	(1)	
R-2	TRANSFER	GRILLE	48X24	48X24	STEEL	GWB	20	TITUS 350 RL	(3)	
R-3	TRANSFER	GRILLE	18X10	18X10	STEEL	GWB	20	TITUS 350RL	(3)	
R-4	RETURN	PERF.	24X24	12X12	STEEL	T-BAR	20	TITUS PAR	(1,3)	
E-1	EXHAUST	PERF.	12X12	12X12	STEEL	T-BAR	20	TITUS PAR	(1)	

- COORDINATE CEILING TYPE WITH ARCHITECTURAL CEILING PLAN.
- MODEL: SPINNAKER INDUSTRIES, INC. 1177 OR EQUAL BY ADAPTABLE AIR PRODUCTS, AES INDUSTRIES OR UNITED ENERTECH.
- PAINT TO MATCH WALL COLOR.

GAS FIRED UNIT HEATER SCHEDULE										
ID	LOCATION	TYPE	INPUT CAP. MBH	OUTPUT CAP. MBH	CFM	HP	VOLTAGE	MANUFACTURER	REMARKS	
UH-1	BACKROOM	POWER VENT	75.0	60.0	950	1/8	120/1	LENNOX LF24-75A	(1)	
UH-2	BACKROOM	POWER VENT	75.0	60.0	950	1/8	120/1	LENNOX LF24-75A	(1)	

- CONTROLLED BY THE SIEMENS ENERGY MANAGEMENT SYSTEM. THE TEMPERATURE SETPOINT SHALL BE 60°F.

ELECTRIC CABINET HEATER							
ID	TYPE	SERVES	FAN DATA		ELECTRICAL		REMARKS
			CFM	VOLTAGE	HEATING CAPACITY KW	VOLTAGE	
ECH-1	IN-CEILING	VESTIBULE	160	208/1	3.0	208/1	OULET OACF4000 (1)

- PROVIDE T-BAR CEILING ADAPTER, BUILT-IN THERMOSTAT & DIS 20 DISCONNECT.

SYMBOLS & ABBREVIATIONS			
	DUCT UP		12X12 SHEETMETAL ACCESS DOOR
	DUCT DOWN		FIRE DAMPER WITH ACCESS DOOR
	TEMPERATURE SENSOR		ROUND CONCENTRIC TAKEOFF
	HUMIDISTAT		BELL MOUTH TAKEOFF
	SMOKE DUCT DETECTOR		BOD BOTTOM OF DUCT
	DISCHARGE AIR TEMPERATURE SENSOR		EF EXHAUST FAN
	SINGLE BLADE VOLUME DAMPER		RTU ROOFTOP UNIT
	OPPOSED BLADE VOLUME DAMPER		UH UNIT HEATER
	DUCTWORK WITH 1" INTERNAL LINING		VAV VARIABLE AIR VOLUME
			FCU FAN COIL UNIT
			HP AIR COOLED HEAT PUMP

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D	

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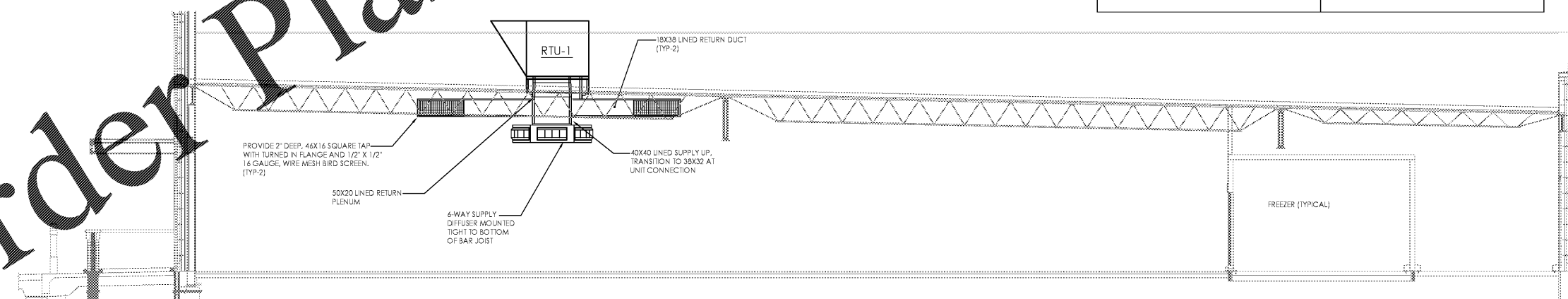
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1 HVAC Section  
 SCALE: 3/16"=1'-0"