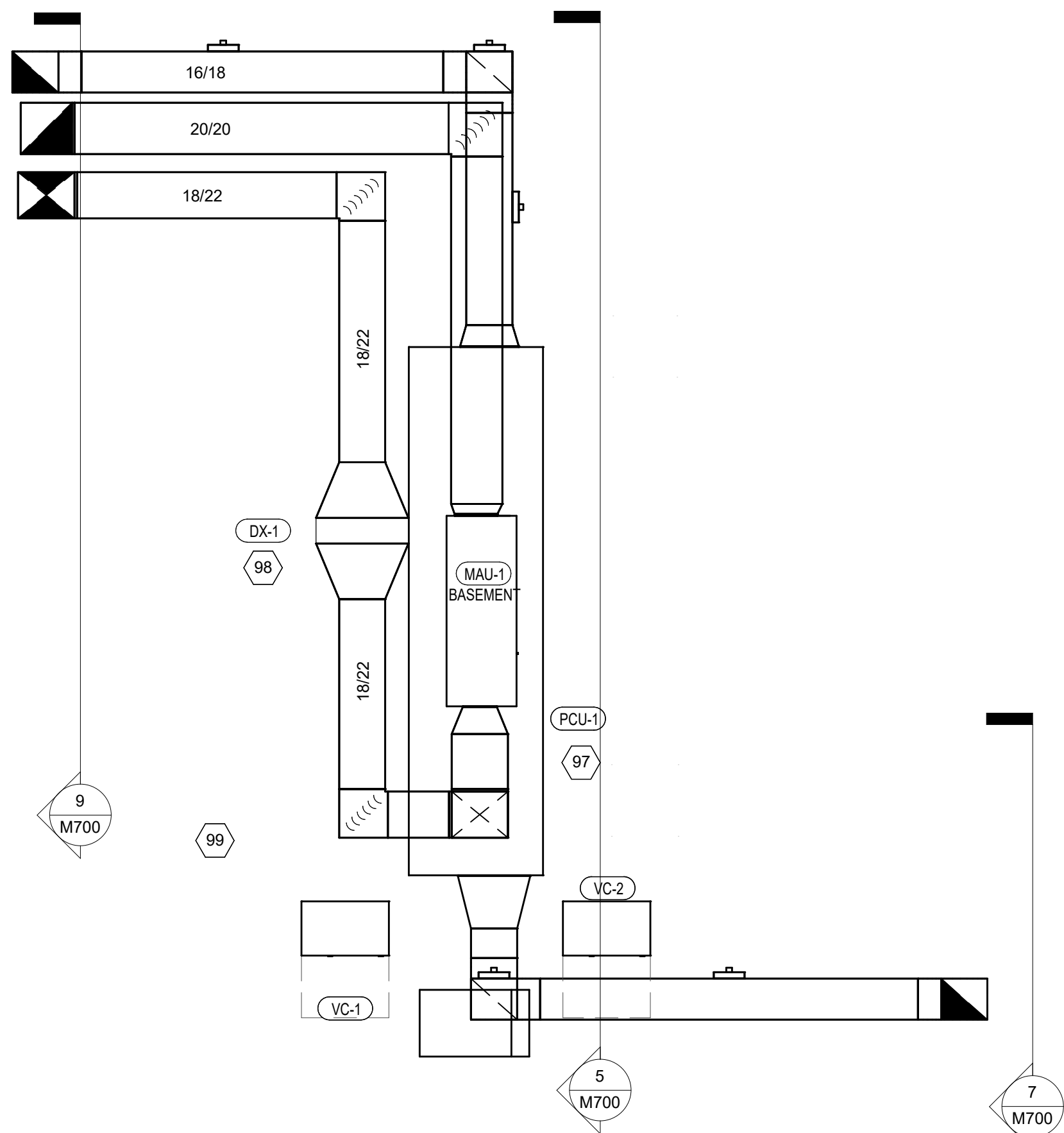
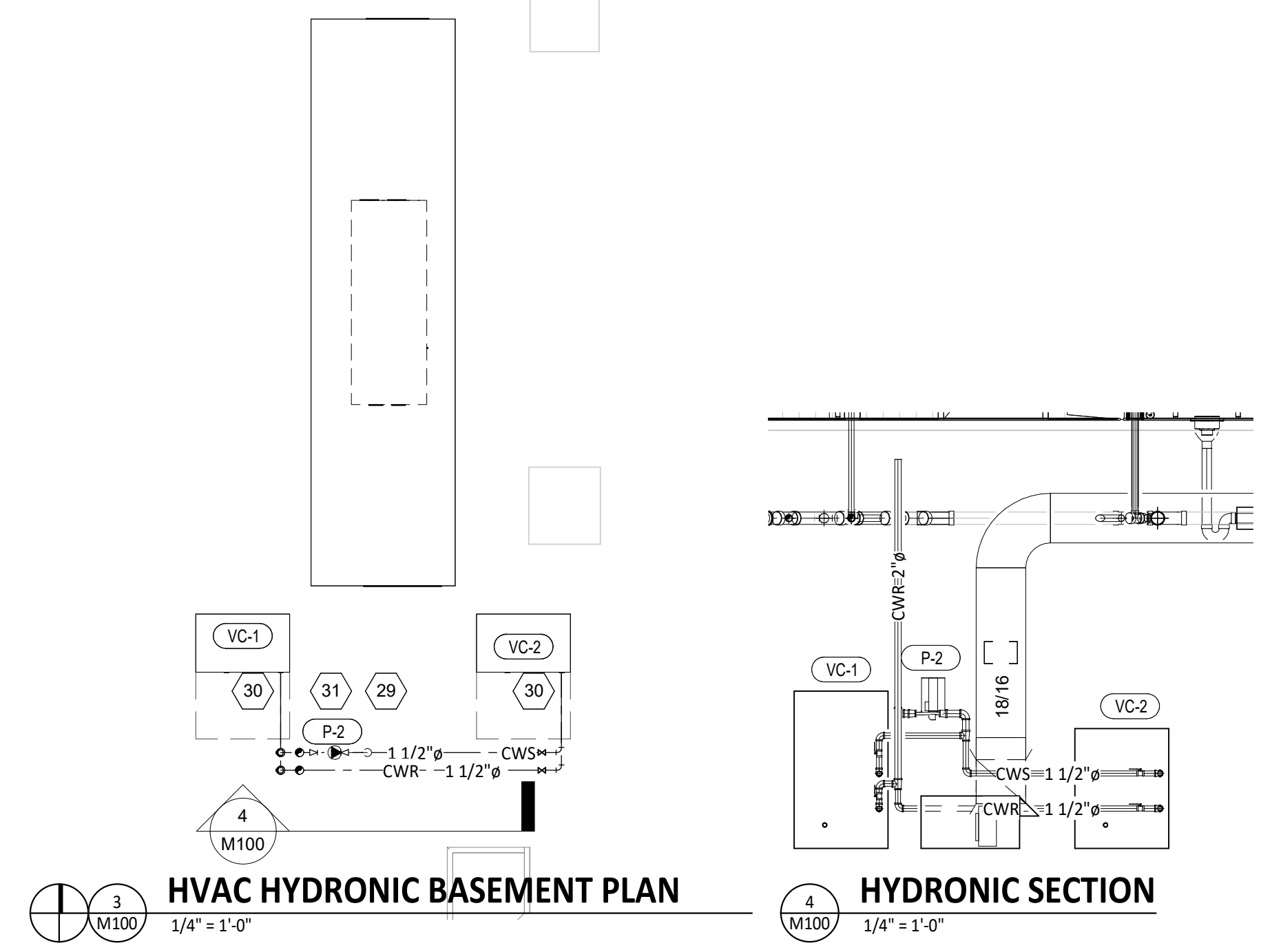


HVAC PLAN NOTES

- 1 SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR CEILING MOUNTED EQUIPMENT LOCATION. TYPICAL.
- 2 PAINT DUCTWORK VISIBLE THROUGH DINING ROOM SUPPLY REGISTERS AND RETURN GRILL BLACK. TYPICAL.
- 3 REFER TO ARCHITECTURAL SHEETS FOR SUPPLY REGISTER ELEVATIONS AND LOCATIONS.
- 4 32/12 FRESH AIR INTAKE ROUTED TO BASEMENT LEVEL.
- 8 18/22 DUCT DN THROUGH FLOOR. TRANSITION TO MAU-1 SUPPLY CONNECTION.
- 9 30/10 DUCT FROM THE REAR OF THE HOOD DN TO 18/16, THROUGH THE FLOOR TO PCU-1 COMPLIANT WITH NFPA 96. PROVIDE RADIUS ELBOWS WITH AN INSIDE RADIUS OF 0.5W AT ELBOWS IN GREASE DUCT.
- 10 8/14 DUCT UP THROUGH 2ND FLOOR TO PLENUM AT THE REAR OF LV-2.
- 13 INSTALL TRANE CONTROLS FURNISHED BY HES AT THIS LOCATION AT 48" AFF. COORDINATE WITH ELECTRICAL SWITCHING IN THIS AREA.
- 14 INSTALL GRIDPOINT ZONE SENSOR MODULE FURNISHED BY TEMS FOR KITCEHN AT THIS LOCATION 60" AFF DIRECTLY TO WALL (NO JUNCTION BOX). COORDINATE LOCATION WITH EQUIPMENT. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- 15 INSTALL GRIDPOINT ZONE SENSOR MODULE FURNISHED BY TEMS FOR DINING RM AT THIS LOCATION 60" AFF DIRECTLY TO WALL (NO JUNCTION BOX). COORDINATE LOCATION WITH EQUIPMENT. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- 16 INSTALL GRIDPOINT SUPPLY PROBE FURNISHED BY TEMS FOR MAU-1 IN THE SUPPLY DUCTWORK UPSTREAM FROM THE FIRST BRANCH CONNECTION. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- 18 INSTALL REMOTE TEMPERATURE SENSOR FOR HOOD HD-1 AT THIS LOCATION 60" AFF. COORDINATE LOCATION WITH EQUIPMENT. PROVIDE (2) #18 G. THERMISTOR CABLE FROM TEMPERATURE SENSOR TO HOOD CONTROL PANEL.
- 19 INSTALL KITCHEN HOOD, HD-1. SUPPORT HOOD PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL HOOD ACCORDING TO THE REQUIREMENTS OF ITS LISTING, IN COMPLIANCE WITH NFPA 96, THE BUILDING CODE, AND AUTHORITIES HAVING JURISDICTION. HOOD SHALL HAVE AN INTEGRAL DUCT COLLAR TEMPERATURE SENSOR TO AUTOMATICALLY ENERGIZE THE EXHAUST AND MAKEUP AIR FANS IF COOKING TEMPERATURES ARE DETECTED. EXHAUST DUCT SYSTEM TO BE WELDED OR FACTORY-MANUFACTURED WATER AND AIR TIGHT. INSTALL CLEANOUTS PER CODE AND AS SHOWN. INSTALL HOOD PER DETAILS 2 AND 4/M700. CHIPOTLE WILL PROVIDE AN INDEPENDENT TESTING AGENCY FOR TESTING THE INTEGRITY OF THE GREASE DUCT SYSTEM.
- 25 PROVIDE AUDIO/VISUAL REMOTE SMOKE DETECTOR ANNUNCIATOR WITH REMOTE KEY OPERATED RESET. WIRE A UNIT BACK TO EACH SMOKE DETECTOR. MOUNT UNIT 60" AFF. TYPICAL.
- 29 REFER TO DETAIL 1/M710 FOR THE INLINE PUMP
- 30 REFER TO DETAIL 2/M710 FOR THE CONNECTIONS OF HYDRONIC PIPING TO THE VRF OUTDOOR UNITS.
- 31 REFER TO DETAIL 1/M710 FOR THE INLINE PUMP
- 97 INSTALL PCU AND MAU PER CAPTIVEAIRE'S INSTRUCTIONS.
- 98 PROVIDE CONDENSATE DRAIN FROM DX-1 TO THE NEAREST FLOOR DRAIN. PROVIDE TRAP IN DRAIN.
- 99 INSTALL REMOTE CONDENSER FOR ICE MACHINE ON ROOF AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL REFRIGERANT LINE SET, THERMOSTATIC EXPANSION VALVE, SOLENOID VALVE, TEMPERATURE CONTROL, SIGHT GLASS, FILTER DRIER, PRESSURE CONTROL, LOW AMBIENT CONTROLS, AND WEATHERPROOF HOUSING. TRAP AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. SEAL PIPING PENETRATIONS THROUGH ROOF. INSTALLATION SHALL COMPLY WITH ASHRAE/ANSI STANDARD 15. INSTALL THE REFRIGERANT LINE SET UNDER THE ROOF DECK TO WITHIN 3' OF THE REMOTE CONDENSER. IF REFRIGERANT PIPING TO ICE MAKER IS EXPOSED TO PUBLIC VIEW CONCEAL WITHIN A STAINLESS STEEL SHROUD AS SHOWN IN THE ARCHITECTURAL DRAWINGS. INSTALL RETURN GRILL IN TOP OF JOIST SHELF, FACING THE DECK SO CONCEALED FROM VIEW FROM THE DINING ROOM.

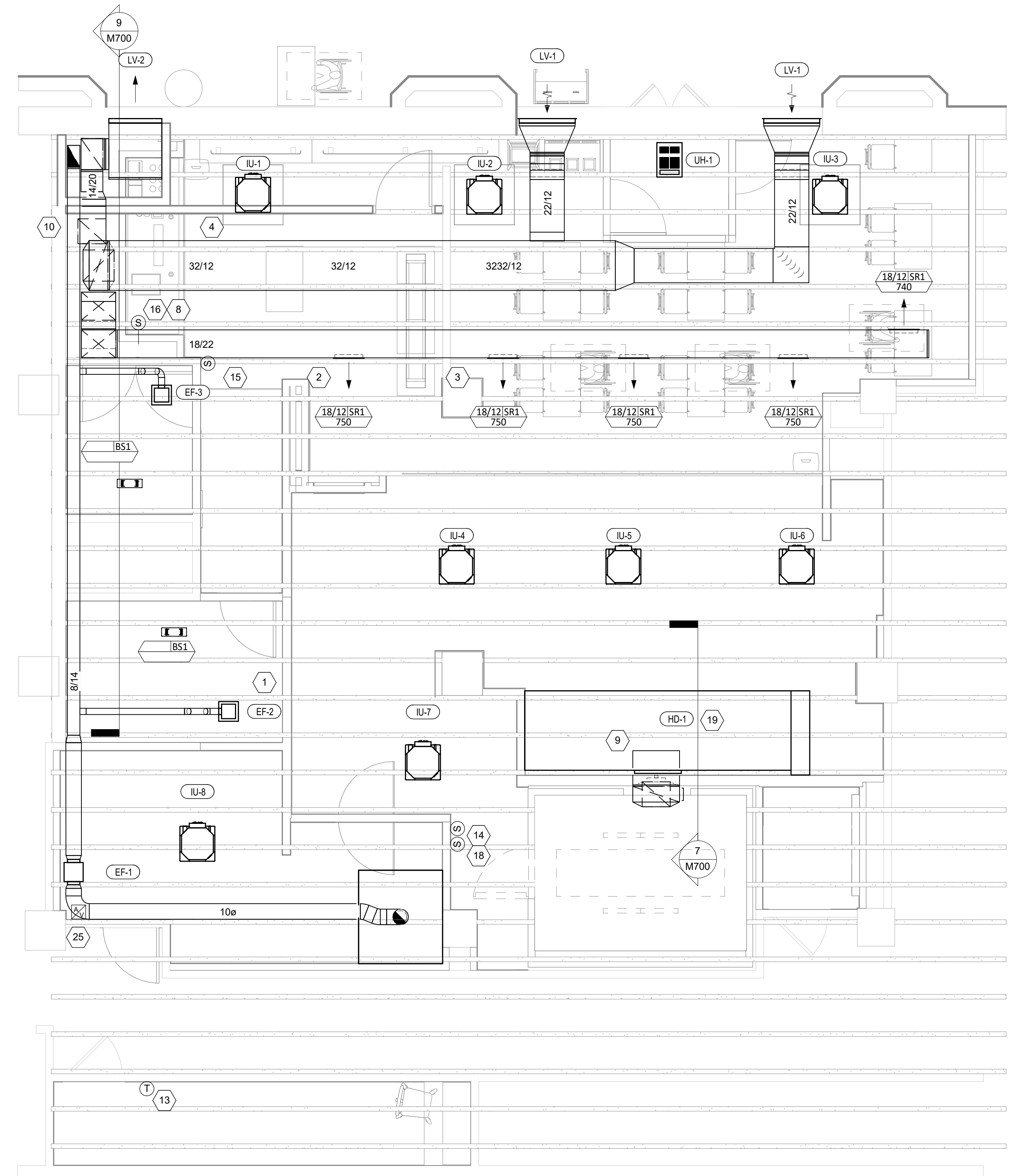


HVAC PARTIAL BASEMENT PLAN
 1/4" = 1'-0"



HVAC HYDRONIC BASEMENT PLAN
 1/4" = 1'-0"

HYDRONIC SECTION
 1/4" = 1'-0"



HVAC FLOOR PLAN
 1/4" = 1'-0"

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Contents:
 HVAC PLAN

M100

UNIT HEATER SCHEDULE										
TAG	DESCRIPTION	MOUNTING	ELECTRICAL		FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS	
			POWER	V/P/H			MANUFACTURER	MODEL		
UH-1	CEILING-MOUNTED UNIT HEATER	CEILING	3 kW	208/1/60	HES	GC	INDEECO	931U04000V		

GRILLS, REGISTERS, AND DIFFUSERS SCHEDULE										
TAG	DESCRIPTION	FACE SIZE	MATERIAL	FINISH	MOUNTING	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		NOTES
								MANUFACTURER	MODEL	
BS1	BATHROOM AIR PURIFICATION UNIT	5.44" X 16"	ALUMINUM	STAINLESS STEEL	GYP CEILING	TUV	GC	RGF ENVIRONMENTAL GROUP	BRU ASSEMBLY	SEE ELECTRICAL SHEETS FOR CONNECTION INFORMATION
SR1	DOUBLE DEFLECTION SUPPLY REGISTER	SEE NECK SIZE	ALUMINUM	MILL	DUCT	GC	GC	NAILOR	51DH	PROVIDE INTEGRAL OBD

LOUVER SCHEDULE												
TAG	DESCRIPTION	SIZE	FREE AREA	FLOW	PRESSURE DROP	MATERIAL	FINISH	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
										MANUFACTURER	MODEL	
LV-1	DRAINABLE OA INTAKE LOUVER	18" X 36"	2.07 SF	3740 CFM	0.17 in-wg	ALUMINUM	To Match Storefront	HES	GC	RUSKIN	ELF6375DX	WITH BIRD SCREEN & MOUNTING SYSTEM COMPATIBLE WITH WALL
LV-2	DRAINABLE EXHAUST LOUVER	12" X 34"	0.86 SF	3940 CFM	0.04 in-wg	ALUMINUM	To Match Storefront	HES	GC	RUSKIN	ELF6375DX	WITH BIRD SCREEN & MOUNTING SYSTEM COMPATIBLE WITH WALL

FAN SCHEDULE											
TAG	DRIVE TYPE	EXHAUST FLOW [CFM]	E.S.P. [in W.C.]	WEIGHT [lbs]	ELECTRICAL		FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
					MOTOR POWER	V/P/H			MANUFACTURER	MODEL	
EF-1	DIRECT	450 CFM	0.80 in-wg	50	0.42 HP	120/1/60	THS	GC	CAPTIVE-AIRE	CFA700CA	WITH DISCONNECT, VARIABLE SPEED CONTROLLER, BACKDRAFT DAMPER, AND INLINE ADAPTER KIT
EF-2	DIRECT	180 CFM	0.80 in-wg	15	0.042 HP	120/1/60	THS	GC	CAPTIVE-AIRE	CFA250CA	WITH DISCONNECT, VARIABLE SPEED CONTROLLER, BACKDRAFT DAMPER, AND INLINE ADAPTER KIT
EF-3	DIRECT	110 CFM	0.80 in-wg	15	0.042 HP	120/1/60	THS	GC	CAPTIVE-AIRE	CFA250CA	WITH DISCONNECT, VARIABLE SPEED CONTROLLER, BACKDRAFT DAMPER, AND INLINE ADAPTER KIT

DIRECT EXPANSION COIL SCHEDULE												
TAG	DESCRIPTION	TOTAL [CFM]	DUCT SIZE		COOLING			FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
			DUCT WIDTH	DUCT HEIGHT	TOTAL [MBH]	SENSIBLE [MBH]	EAT-DB			EAT-WB	MANUFACTURER	
DX-1	MAKEUP AIR COOLING COIL	3740 CFM	36"	30"	135	134	91°F	67°F	HES	GC	TRANE	DFDB30036G0D

VRF AIR HANDLING UNITS														
TAG	QTY	DESCRIPTION	NOMINAL CAPACITY [TONS]	COOLING CAPACITY		HEATING CAPACITY		APPROXIMATE WEIGHT [lbs]	ELECTRICAL			BASIS FOR DESIGN		REMARKS
				TOTAL [MBH]	HEATING CAPACITY [MBH]	MOCP	FLA		V/P/H	MANUFACTURER	MODEL			
IU-1	1	2x2 VRF 4-WAY CEILING CASSETTE	.75	8	9	45	15 A	0.3 A	208/1/60	Mitsubishi Electric	PLFY-P08NCMU-E			
IU-2	1	2x2 VRF 4-WAY CEILING CASSETTE	1	12	13	50	15 A	0.4 A	208/1/60	Mitsubishi Electric	PLFY-P12NCMU-E			
IU-3	1	2x2 VRF 4-WAY CEILING CASSETTE	.75	8	9	45	15 A	0.3 A	208/1/60	Mitsubishi Electric	PLFY-P08NCMU-E			
IU-4	1	2x2 VRF 4-WAY CEILING CASSETTE	1.25	15	17	50	15 A	0.4 A	208/1/60	Mitsubishi Electric	PLFY-P15NCMU-E			
IU-5	1	2x2 VRF 4-WAY CEILING CASSETTE	.75	8	9	45	15 A	0.3 A	208/1/60	Mitsubishi Electric	PLFY-P08NCMU-E			
IU-6	1	2x2 VRF 4-WAY CEILING CASSETTE	1.25	15	17	50	15 A	0.4 A	208/1/60	Mitsubishi Electric	PLFY-P15NCMU-E			
IU-7	1	2x2 VRF 4-WAY CEILING CASSETTE	.75	8	9	45	15 A	0.3 A	208/1/60	Mitsubishi Electric	PLFY-P08NCMU-E			
IU-8	1	2x2 VRF 4-WAY CEILING CASSETTE	.75	8	9	45	15 A	0.3 A	208/1/60	Mitsubishi Electric	PLFY-P08NCMU-E			

POLLUTION CONTROL UNIT SCHEDULE										
TAG	DESCRIPTION	AIRFLOW		ELECTRICAL		APPROXIMATE WEIGHT [LBS]	BASIS FOR DESIGN		REMARKS	
		EXHAUST FLOW [CFM]	E.S.P. [IN. WC]	MOTOR POWER	V/P/H		MANUFACTURER	MODEL		
PCU-1	POLLUTION CONTROL UNIT	3200	3.00	7.5 HP	208/3/60	2010	Captive-Aire	KB18-PCU	COMBINATION FAN AND POLLUTION CONTROL UNIT WITH 4-STAGE FILTRATION AND ODOR CONTROL. SUPPLY UNIT W/ROOF CURB, DISCONNECT SWITCH, AND FIRE SUPPRESSION.	

MAKEUP AIR UNIT SCHEDULE															
TAG	DESCRIPTION	AIRFLOW		HEATING CAPACITY			APPROXIMATE WEIGHT [lbs]	ELECTRICAL		FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS	
		SUPPLY FLOW [CFM]	E.S.P. [in. W.C.]	INPUT [MBH]	OUTPUT [MBH]	MAXIMUM TURNDOWN		EAT	MOTOR POWER			V/P/H	MANUFACTURER		MODEL
MAU-1	MAKEUP AIR UNIT	3740	0.80	225	220	12.5:1	-6°F	650	2 HP	208/3/60	THS	GC	CAPTIVE-AIRE	A1-D.250-G10	INDOOR SIDE DISCHARGE, FURNISHED WITH DISCONNECT, UNISTRUT BASE, AND WASHABLE ALUMINUM FILTERS

CONDENSING UNIT SCHEDULE															
TAG	DESCRIPTION	NOMINAL CAPACITY [TONS]	NUMBER OF COMPRESSORS	NUMBER OF CIRCUITS	REFRIGERANT TYPE	REFRIGERANT CHARGE	WEIGHT	ELECTRICAL			FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
								MOCP	FLA	V/P/H			MANUFACTURER	MODEL	
CU-1	WALK-IN COOLER REMOTE CONDENSING UNIT	--	1	1	R-448A	14.4 LBS	260	20 A	16.2 A	208/3/60	WCS	GC	NORLAKE	NASD150RL3	FURNISHED WITH WALK-IN COOLER

VRF CONDENSING UNIT SCHEDULE																			
TAG	DESCRIPTION	CAPACITY			NUMBER OF COMPRESSORS	NUMBER OF CIRCUITS	EVAPORATOR		REFRIGERANT TYPE	REFRIGERANT CHARGE	WEIGHT	ELECTRICAL			FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
		NOMINAL [Tons]	COOLING [Btu/h]	HEATING [Btu/h]			PRESSURE DROP WPD	FLOW				MOCP	FLA	V/P/H			MANUFACTURER	MODEL	
VC-1	MAKEUP AIR CONDENSING UNIT	12	144000	160000	1	1	6.38 psi	32 GPM	R410A	13.2	474	60 A	35.0 A	208/3/60	HES	GC	TRANE	TQHYP1443AL41AN	
VC-2	VRF HEAT RECOVERY UNIT	6	72000	80000	1	1	3.58 psi	25 GPM	R410A	11.1	382	20 A	13.0 A	208/3/60	HES	GC	TRANE	TQHYP0723AL41AN	

KITCHEN HOOD SCHEDULE																					
TAG	DESCRIPTION	MAX COOKING TEMP.	AIRFLOW [CFM]	SP [in. W.C.]	EXHAUST PLENUM				PERFORATED SUPPLY PLENUMS						NUMBER OF LIGHT FIXTURES	APPROXIMATE WEIGHT [lbs]	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
					DUCT COLLARS				MAU PLENUM			AC PLENUM							MANUFACTURER	MODEL	
					NO.	WIDTH	LENGTH	LENGTH	WIDTH	SP [in. W.C.]	SUPPLY PLENUM LENGTH	SUPPLY PLENUM WIDTH	AIRFLOW [CFM]	NO.							
HD-1	Type I Canopy Hood	600°F	3200	0.83	1	10"	30"	14' - 3"	4' - 3"	0.1	15' - 3"	22"	0	1	12"	24"	10	1000	Captive-Aire	5424 ND-2-F	MAT'L: 18 GA. TYPE 430 SS. PROVIDE WITH (10) 20" X 16" HE SS FILTERS, INTEGRAL UTILITY CABINET, ANSUL SYSTEM, (1) QUARTER END PANEL, (1) NARROW VERTICAL END PANEL, DUCT COLLAR TEMPERATURE SENSOR & PREWIRE PACKAGE
HD-2	TYPE II CANOPY HOOD	N/A	450	0.08	1												250		CAPTIVE-AIRE	6024 VHB-G-ND	MAT'L: 18 GA. TYPE 430 SS

VENTILATION SCHEDULE													
ROOM NAME	ROOM PURPOSE (per Table 403.3)	FLOOR AREA	ORDINANCE REQUIREMENTS				ACTUAL PROVIDED				EQUIPMENT		REMARKS
			NATURAL LIGHT AND VENTILATION (SF)	MECHANICAL VENTILATION (CFM)	NATURAL LIGHT & VENTILATION (SF)	MECHANICAL VENTILATION (CFM)	TAG OF EQUIPMENT SUPPLYING THE ROOM	TAG OF EQUIPMENT EXHAUSTING THE ROOM					
DINING ROOM	PUBLIC DINING ROOMS - NO COOKING EQUIPMENT	934	--	--	1,401	1,401	--	--	3,740	*3,740	MAU-1	--	*TRANSFER AIR/LEAKAGE
KITCHEN	KITCHENS, PUBLIC	370	--	--	444	1,480	--	--	3,450	3,650	MAU-1	PCU-1 EF-1	3,200 CFM EXHAUSTED THROUGH PCU-1, 450 CFM EXHAUSTED FROM EF-3; 512 VENTILATION AIR AND 1950 CFM MAKEUP AIR
UNISEX 1 RESTROOM	TOILET ROOMS	54	--	--	0	108	--	--	0	110	MAU-1	EF-3	EXHAUSTED THROUGH EF-3 SUPPLY IS VIA TRANSFER AIR FROM DINING
ADA UNISEX 2 RESTROOM	TOILET ROOMS	86	--	--	0	172	--	--	0	180	MAU-1	EF-2	EXHAUSTED THROUGH EF-2 SUPPLY IS VIA TRANSFER AIR FROM DINING
HOOD EXHAUST CALCULATIONS			TOTAL	1,871	3,146			3,950	3,910				

HD-1: TYPE 1 HOOD
 Q = LENGTH OF HOOD X CFM/LINEAR FOOT (600 DEG. COOKING WITH END PANELS)
 Q = 14.25' X 170 CFM/FT = 2,423 CFM
 Q + 20% = 2,907 CFM REQUIRED | 3,200 CFM PROVIDED

CONTROL FUNCTIONS

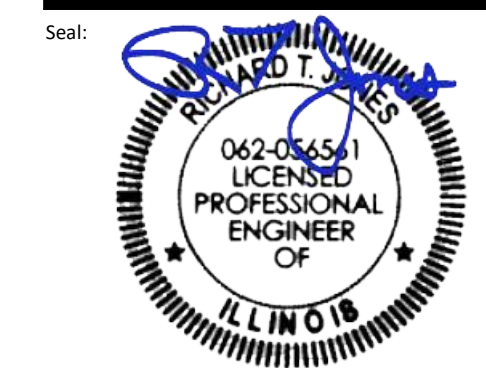
A. THE MAIN COOKING EXHAUST FAN AND MAKE-UP AIR UNIT SHALL BE INTERLOCKED TO OPERATE TOGETHER. THIS CONTROL CIRCUIT IS ACTIVATED BY A SWITCH AND INCLUDES A FIRE PROTECTION OVERRIDE.

B. THE TEMPERATURE IN EACH ZONE IS CONTROLLED BY SPACE TEMPERATURE SENSORS CONNECTED TO THE THERMOSTATS LOCATED IN THE OFFICE. ALL ZONES SHALL OPERATE WITH CONTINUOUS FAN OPERATION DURING OCCUPIED TIMES AND INTERMITTENTLY AS NEEDED TO MAINTAIN SET POINTS DURING UNOCCUPIED TIMES. OUTSIDE AIR DAMPERS SHALL BE OPEN CONTINUOUSLY WHEN EITHER IN OCCUPIED MODE OR WHEN THE HOOD SYSTEM IS ON AND SHALL BE CLOSED DURING UNOCCUPIED PERIODS.

C. THE THERMOSTATS SHALL DETERMINE OCCUPIED/UNOCCUPIED STATUS BASED ON THE SCHEDULE IN THE ENERGY MANAGEMENT SYSTEM.

AIR BALANCE SCHEDULE				
Tag	Supply Flow [CFM]	Return Flow [CFM]	Exhaust Flow [CFM]	Subtotal [CFM]
EF-1	0	0	450	-450
EF-2	0	0	180	-180
EF-3	0	0	110	-110
MAU-1	3740	0	0	3740
PCU-1	0	0	3200	-3200
VC-2				
Net Pressurization [CFM]				-200

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