R³ Engineering, Inc.
520 East Street
Suite 101
Charlotte, NC 28202
Phone (704) 362-5100
Fax (704) 362-3604
Email r3er3engineering.com

ASHRAE 62.89 CALCULATIONS

BASED ON ACTUAL SEATING

	PEOPLE
AREA	28
BAR	164
DINING	192
TOTAL	

OUTSIDE AIR PER ASHRAE 62.89

BAR
30 CFM / PERSON: 28 @ 30 = 840

DINING
20 CFM / PERSON: 164 @ 20 = 3280
TOTAL 4120 CFM

AIR BALANCE SUMMARY

UNIT	EXHAUST	MAKEUP	OUTSIDE AIR
EF-1	2,400	-	-
EF-2	2,400	-	-
EF-3	3,600	-	-
EF-4	4,350	-	-
EF-5	1,000	-	-
EF-6	640	-	-
SF-1	-	3,700	-
SF-2	-	5,600	-
RTU-1	-	-	1,500
RTU-2	-	-	1,380
RTU-3	-	-	825
RTU-4	-	-	765
RTU-5	-	-	1195
TOTALS	14,390	9,200	5,375

** HOODS WILL BE PROVIDED & INSTALLED BY THIS CONTRACTOR.

CONTROL NOTES:

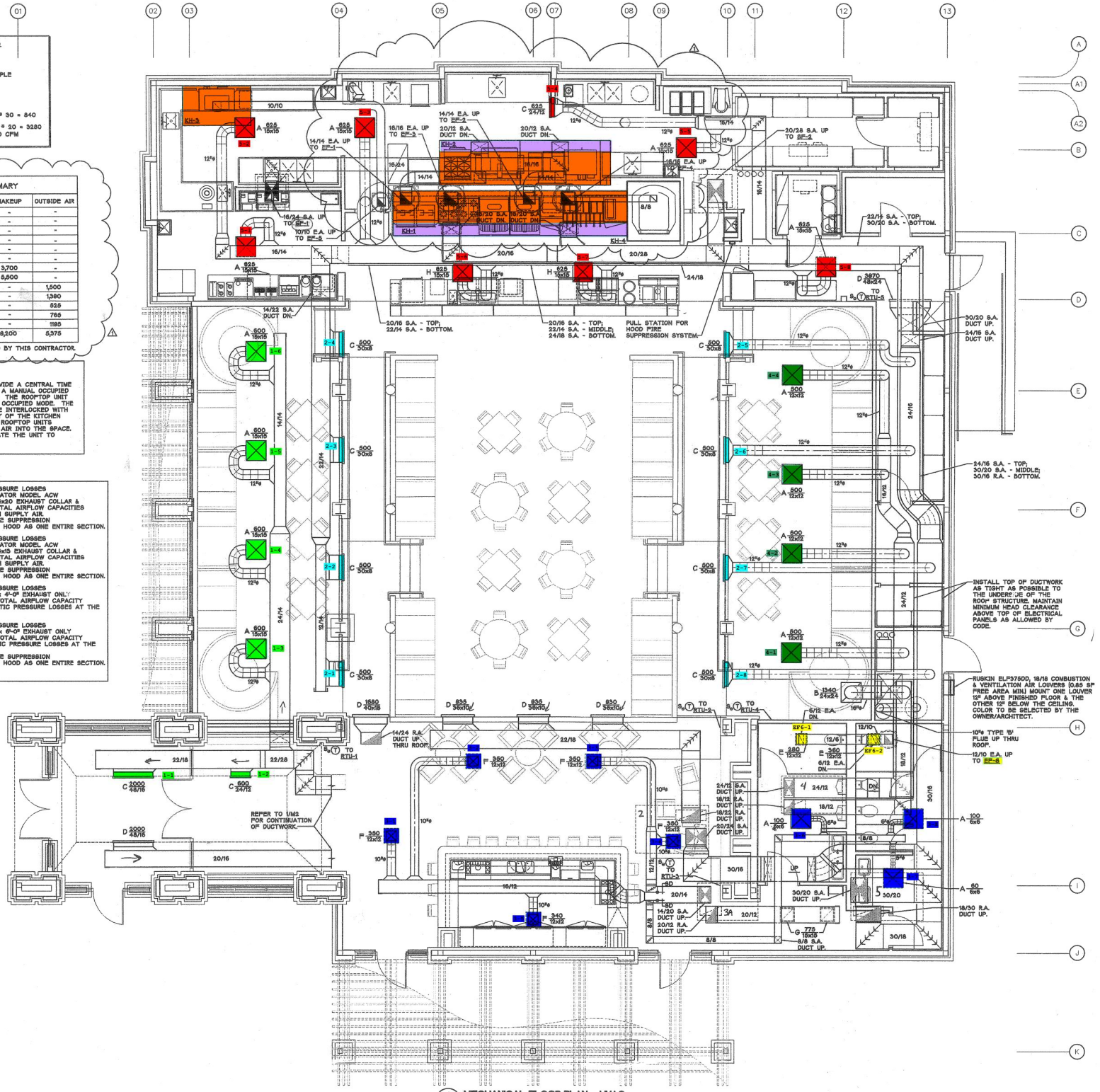
THE CONTROLS CONTRACTOR SHALL PROVIDE A CENTRAL TIME CLOCK IN THE MANAGER'S OFFICE WITH A MANUAL OCCUPIED SWITCH TO START THE ROOFTOP UNITS. THE ROOFTOP UNIT FANS SHALL RUN CONTINUOUSLY DURING OCCUPIED MODE. THE KITCHEN HOOD EXHAUST FANS SHALL BE INTERLOCKED WITH THEIR RESPECTIVE SUPPLY FAN. IF ANY OF THE KITCHEN HOOD SYSTEMS IS OPERATING, ALL THE ROOFTOP UNITS SHALL OPERATE TO INTRODUCE MAKEUP AIR INTO THE SPACE. THE SPACE THERMOSTAT SHALL MODULATE THE UNIT TO MAINTAIN SETPOINT.

KH-1 KITCHEN HOOD AIR VOLUMES & STATIC PRESSURE LOSSES
BASED ON (3) 11'-9" x 4'-0" SECTIONS, AEROLATOR MODEL ACW SELF-COMPENSATING WALL HOOD WITH (1) 14x20 EXHAUST COLLAR & (1) 12X28 SUPPLY COLLAR EACH SECTION. TOTAL AIRFLOW CAPACITIES SHALL BE 7,200 CFM EXHAUST & 5,400 CFM SUPPLY AIR. PROVIDE COMPLETE ANSUL R-102 LIQUID FIRE SUPPRESSION SYSTEM & CONTROLS TO OPERATE EXHAUST HOOD AS ONE ENTIRE SECTION.

KH-2 KITCHEN HOOD AIR VOLUMES & STATIC PRESSURE LOSSES
BASED ON (3) 8'-0" x 4'-0" SECTIONS, AEROLATOR MODEL ACW SELF-COMPENSATING WALL HOOD WITH (1) 14x15 EXHAUST COLLAR & (1) 12X20 SUPPLY COLLAR EACH SECTION. TOTAL AIRFLOW CAPACITIES SHALL BE 4,800 CFM EXHAUST & 3,600 CFM SUPPLY AIR. PROVIDE COMPLETE ANSUL R-102 LIQUID FIRE SUPPRESSION SYSTEM & CONTROLS TO OPERATE EXHAUST HOOD AS ONE ENTIRE SECTION.

KH-3 KITCHEN HOOD AIR VOLUMES & STATIC PRESSURE LOSSES
BASED ON A AEROLATOR MODEL ADH 7'-0" x 4'-0" EXHAUST ONLY WALL HOOD WITH 10x10 EXHAUST COLLAR. TOTAL AIRFLOW CAPACITY SHALL BE 1,000 CFM EXHAUST. DESIGN STATIC PRESSURE LOSSES AT THE EXHAUST COLLAR WERE BASED ON .25".

KH-4 KITCHEN HOOD AIR VOLUMES & STATIC PRESSURE LOSSES
BASED ON A AEROLATOR MODEL ASW 5'-3" x 6'-0" EXHAUST ONLY WALL HOOD WITH 10x10 EXHAUST COLLAR. TOTAL AIRFLOW CAPACITY SHALL BE 750 CFM EXHAUST. DESIGN STATIC PRESSURE LOSSES AT THE EXHAUST COLLAR WERE BASED ON .25". PROVIDE COMPLETE ANSUL R-102 LIQUID FIRE SUPPRESSION SYSTEM & CONTROLS TO OPERATE EXHAUST HOOD AS ONE ENTIRE SECTION.



1 / M1 MECHANICAL FLOOR PLAN - HVAC
SCALE: 1/4" = 1'-0"