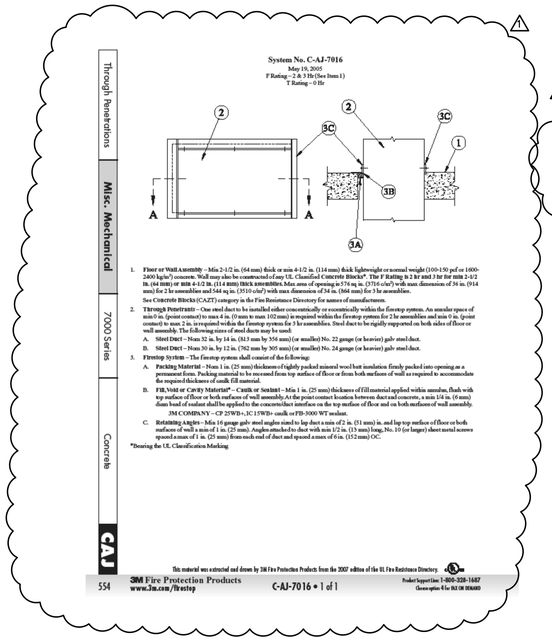

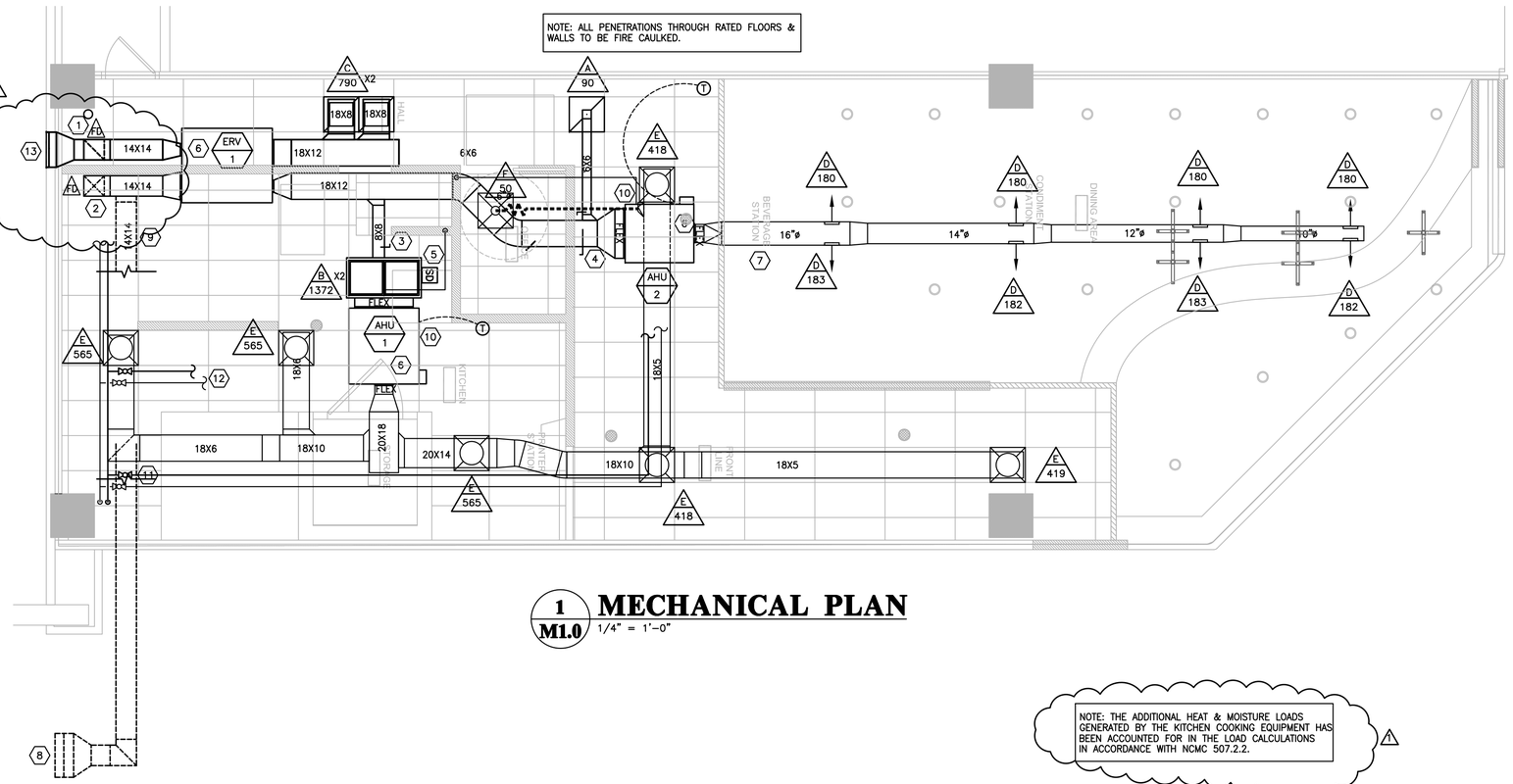

1 MECHANICAL PLAN
M1.0 1/4" = 1'-0"

KEYNOTES

1. TERMINATE ERV DISCHARGE EXHAUST DUCT THROUGH FLOOR INTO PARKING DECK CEILING. COVER OPENING WITH ¼" WIRE SCREEN. PROVIDE FIRE DAMPER WHERE DUCT PENETRATES RATED FLOOR.
2. INSULATE OUTSIDE AIR DUCT FROM FLOOR TO ERV INLET. PROVIDE FIRE DAMPER WHERE DUCT PENETRATES RATED FLOOR.
3. BALANCE TREATED OUTSIDE AIR TO AHU–1 TO 256 CFM.
4. BALANCE TREATED OUTSIDE AIR TO AHU–2 TO 1360 CFM.
5. PROVIDE SMOKE DETECTOR ON RETURN OF AHU–1 BEFORE OUTSIDE AIR CONNECTION. WIRE TO SHUT DOWN UNIT UPON ACTIVATION.
6. SUSPEND ALL MECHANICAL EQUIPMENT FROM OVERHEAD STRUCTURE WITH VIBRATION ISOLATION TYPE HANGERS.
7. SUPPLY DUCT OVER SEATING AREA TO BE GALVANEAL TO BE PAINTED. COLOR SELECTED BY OWNER.
8. 30"x24" INTAKE LOUVER EQUAL TO RUSKIN MODEL ELF375DX. PAINTED BLACK TO MATCH ADJACENT EXTERIOR SURFACE. CONSULT WITH BUILDING ENGINEER BEFORE CUTTING OPENING. KEEP OPENING AS HIGH AS POSSIBLE,
9. RUN OUTSIDE AIR DUCT UNDER FLOOR IN PARKING DECK CEILING AS HIGH AS POSSIBLE.
10. ROUTE ¾" TRAPPED CONDENSATE LINE TO MOP SINK. PROVIDE AIR HANDLING UNIT WITH AUXILARY DRAIN PAN WITH WATER DETECTION SWITCH INTERLOCKED WITH UNIT.
11. REROUTE EXISTING 1–¼" CHWS&R PIPING TO NEW AHU–2. SEE DETAIL ON SHEET M2.0.
12. PROVIDE NEW 1–½" CHWS&R PIPING, VALVES, ETC TO NEW AHU–1. SEE DETAIL ON SHEET M2.0.
13. 24"x24" EXHAUST LOUVER EQUAL TO RUSKIN MODEL ELF375DX. PAINTED TO MATCH ADJACENT EXTERIOR SURFACE. CONSULT WITH BUILDING ENGINEER BEFORE CUTTING OPENING. KEEP OPENING AS HIGH AS POSSIBLE,

NOTE: THE ADDITIONAL HEAT & MOISTURE LOADS GENERATED BY THE KITCHEN COOKING EQUIPMENT HAS BEEN ACCOUNTED FOR IN THE LOAD CALCULATIONS IN ACCORDANCE WITH NCMC 507.2.2.

OUTSIDE AIR CALCULATIONS
(BASED ON TABLE 403.3 OF 2009 NC MECH CODE)

DINING AREA – AHU 2
OCCUPANT LOAD: 64
PER TABLE 403.3 FOR DINING ROOM: 64 PEOPLE X 20 CFM/PERSON= 1280 CFM

KITCHEN AREA – AHU–1
OCCUPANT LOAD: 17.08 (854 SQ FT X 20 OCC/1000 SQ FT)
PER TABLE 403.3 FOR KITCHEN: 17.08 PEOPLE X 15 CFM/PERSON= 256 CFM

SPACE PRESSURIZATION CALCULATION

TOTAL OUTSIDE AIR FOR KITCHEN = 256 CFM
TOTAL OUTSIDE AIR FOR DINING ROOM = 1280 CFM
TOTAL OUTSIDE AIR TO SPACE = 1536 CFM*

TOTAL EXHAUST AIR RESTROOOM= DELETED
TOTAL EXHAUST AIR FROM SPACE THROUGH ERV = 1580 CFM
TOTAL EXHAUST AIR FROM SPACE = 1580 CFM*

*BUILDING OWNER REQUESTED A SLIGHT NEGATIVE PRESSURE IN TENANT SPACE RELATIVE TO CORRIDOR.

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
METHOD OF COMPLIANCE
Prescriptive ☒ Energy Cost Budget ☐

Thermal Zone 7A

Exterior design conditions
winter dry bulb 18°F
summer dry bulb/wet bulb 95°F DB/74°F WB

Interior design conditions
winter dry bulb 70°F
summer dry bulb 75°F
relative humidity 50%

Building Heating Load 57.2 MBH

Building Cooling Load 14 tons

Mechanical Spacing Conditioning System	
Unitary	
description of units	Chilled Water Fan Coil Units with Pretreated Outside Air
heating efficiency (COP) @ 47°F	NA
cooling efficiency (EER)	NA
heat output of unit (mbh)	20,500 Btuh to 41,000 Btuh Range
cooling output of unit (mbh)	67,200 Btuh to 131,800 Btuh Range

List equipment efficiencies: See Above

DESIGNER STATEMENT:
To the best of my knowledge and belief, the design of this building complies with the mechanical systems, service systems and equipment requirements of the North Carolina State Building Code, 2002 Energy.

SIGNED:
NAME: Robin S. McCombs
TITLE: Professional Engineer

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OVERSTREET MALL
CHARLOTTE, NC

101 SOUTH TRYON ST
SUITE 1
CHARLOTTE, NC 28202

REVISION	DATE
1 REVISIONS PER OWNER	7.1.09

DRAWN BY	RSM
CHECKED BY	RSM
CONTRACT DATE	5.15.09
PROJECT NUMBER	

MECHANICAL PLAN

M1.0