

4 FLOOR PLAN - MECHANICAL

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

PROVIDE (2) 30"x12" LOUVERED COMBUSTION. AIR DUCTED OPENINGS: (1) OPENING WITHIN 12" OF FLOOR AND (1) OPENING WITHIN 12" OF CEILING OR STRUCTURE.
(1) 199,000 BTUH/1000 BTUH PER SQUARE INCH ASSUME 50% FREE AREA OF LOUVER.
30X12 = 360 SQUARE INCHES X 2 = 720 SQUARE IN.
50% REQUIRED EACH LOUVER SIZE = 2 X 360 SQUARE IN.
TOTAL FREE AREA 360 SQ. IN.

3 COMBUSTION AIR CALCULATIONS

OUTSIDE AIR VENTILATION CALCULATION	
PER 2006 UNIFORM MECHANICAL CODE AND ASHRAE	
TOTAL CONDITIONED SPACE - DEMERIS BARBECUE	443.5 S.F.
TOILET/VENTILY EXHAUST FANS	
TEF-1	100 CFM
TEF-2	100 CFM
TEF-3	100 CFM
TOTAL	300 CFM
KITCHEN EXHAUST AND SUPPLY FANS	
EF-1	HOOD #1 TYPE I 1875 CFM
EF-2	HOOD #2 TYPE I 1800 CFM
EF-3	HOOD #3 TYPE II 525 CFM
TOTAL KITCHEN EXHAUST	4200 CFM
SF-1	BOX OF EF-1 1500 CFM
SF-2	BOX OF EF-2 1440 CFM
TOTAL KITCHEN SUPPLY	2940 CFM
NET MAKE UP TEMPERED AIR	1260 CFM
OUTSIDE AIR REQUIRED FOR OCCUPANCY	
KITCHEN	
DINING	0.30 X 1167 S.F. 350.1 CFM
DINING	0.25 X 2623 S.F. 655.8 CFM
STORAGE	0.05 X 119 S.F. 6.0 CFM
BAR/LOUNGE	1.00 X 128 S.F. 128.0 CFM
OFFICE	0.08 X 46 S.F. 3.7 CFM
TOTAL OUTSIDE AIR REQUIRED	1143 CFM
MAKE UP AIR FROM HVAC UNITS	
RTU-1	12.5 TON 1000 CFM
RTU-2	10 TON 700 CFM
RTU-3	7.5 TON 450 CFM
TOTAL PROVIDED MAKE UP AIR	2150 CFM
POSITIVE AIR	590 CFM

NOTE:
PRIOR TO OCCUPANCY, AIR SYSTEM BALANCING AND HYDRONIC SYSTEM BALANCING SHALL BE PERFORMED

2 VENTILATION CALCULATION

1. ROUTING WITH STRUCTURE: PROVIDE DRAIN-THRU TYPE F-TRAP AT RTU. REFER TO MECHANICAL SPECIFICATIONS FOR DRAIN LINE. MECHANICAL CONTRACTOR TO ROUTE PIPING IN CEILING CAVITY. ROUTE CONDENSATE DRAIN LINE TO DISCHARGE TO FLOOR SINK AT 2 ROOM/APPARTMENT SINK. CONDENSATE DRAIN LINE TO BE SLOPE A MINIMUM OF 1/4" PER FOOT.
2. TAP VOLUME AIR DAMPER, TYPICAL FOR SUPPLY AIR. REFER TO DETAIL.
3. AIR GRILL MOUNTED IN LAY-IN CEILING. COORDINATE LOCATION WITH LIGHTING AND ARCHITECTURAL REFLECTED CEILING PLAN.
4. SUSPEND SUPPLY TRUNK FROM STRUCTURE. REFER TO DETAILS
5. PROVIDE IONIZATION DETECTOR MOUNTED IN SUPPLY AIR PLENUM. UPON DETECTION OF SMOKE UNIT SHALL BE SHUT DOWN.
6. PROVIDE AND INSTALL PROGRAMMABLE THERMOSTAT. REFER TO MECHANICAL SPECIFICATIONS. INSTALL REMOTE SENSOR IN RETURN AIR PLENUM.
7. KITCHEN HOOD EXHAUST DUCT AND SUPPLY DUCT UP TO FANS. REFER TO MECHANICAL SPECIFICATIONS FOR DUCT SIZES AND PRESSURE LOSSES AND KITCHEN HOOD CALCULATIONS. ALL KITCHEN HOOD DUCTS AND FANS AND KITCHEN HOOD PROVIDED AND INSTALLED BY KITCHEN EQUIPMENT VENDOR/ CONTRACTOR.

1 VENTILATION CALCULATION

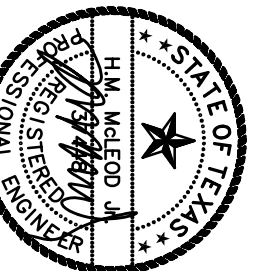
ISSUE	DATE	DESCRIPTION
	06/29/11	PERMIT / CONSTRUCTION
	10/13/11	PERMIT / CONSTRUCTION
	11/16/11	CITY COMMENTS

PROJECT:

CONSTRUCTION FOR
Demeris Barbecue

1702 West Loop North
Houston, Texas 77092

ENGINEER



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THIS SEAL WAS AFFIXED
THIS DATE: 11/16/11
BY: H.M. McLeod, P.E.
I, H.M. McLeod, P.E., do hereby certify that I am the Engineer of Record for the project described herein and that I am duly licensed as a Professional Engineer in the State of Texas. I further certify that the design and construction of the project described herein comply with the applicable provisions of the Texas Building Code and the Texas Mechanical Code. I understand that any false statement or omission in this certificate shall be cause for revocation of my license and may be subject to criminal and civil penalties.

MECHANICAL
PLAN

SHEET NUMBER:

M-1