

### HVAC SEQUENCE OF OPERATIONS

M.C. SHALL SET THERMOSTAT "OCCUPIED" AND "UNOCCUPIED" MODES TO OWNER'S OPERATION SCHEDULE. EVAPORATOR FANS SHALL BE SET TO "ON" UNDER NORMAL CONDITIONS. RTU-1, 2, AND 3, WHEN SIGNALLED BY THE HOOD SYSTEM, SHALL FORCE EVAPORATOR FAN TO RUN.

**NORMAL OPERATION (OCCUPIED)**  
 EF-1, EVAPORATOR FANS, AND ECONOMIZERS (IF INSTALLED) ON RTU-1, 2, AND 3 SHALL OPERATE CONTINUOUSLY UPON ACTIVATION OF KITCHEN HOOD SWITCH. INTERLOCK RELAY FIELD PROVIDED. NORMALLY OPEN CONTACTS FOR THIS ARE INCLUDED INTERNALLY IN THE HOOD ELECTRICAL CONTROL PANEL. SEE DETAILS THIS SHEET AND HOOD SHEETS.

UPON DEACTIVATION OF THE KITCHEN HOOD CONTROL PANEL, ALL AIR HANDLING UNITS SHALL BE CONTROLLED VIA INDIVIDUAL SENSORS AND THERMOSTATS.

THE TEMPERATURE SCHEDULE SET POINTS SHALL BE SPECIFIC FOR EACH RTU AND SHALL BE FIELD ADJUSTABLE.  
 SPACE TEMPERATURE SET POINTS: RTU-2, EX. RTU-3: 74°F COOLING, 70°F HEATING  
 RTU-1: 78°F COOLING, 68°F HEATING

SPACE HUMIDITY SET POINTS: NONE

ALL RTU'S COOLING/HEATING SWITCH/OVER SHALL BE AUTOMATIC BASED ON THE SPACE DEMAND. EVAPORATOR FANS SHALL BE SET TO RUN CONTINUOUSLY(ON) DURING "OCCUPIED" PERIODS. OUTSIDE AIR INTAKE ON ECONOMIZERS OR DAMPERS SHALL BE IN MINIMUM OPEN POSITION TO DELIVER CFM'S INDICATED IN AIR BALANCE SCHEDULE ON SHEET M-2.0 OR SHALL FOLLOW THE ECONOMIZER OPERATION DESCRIBED BELOW.

**FRESH AIR TEMPERING**  
 M.C. SHALL PROGRAM FRESH AIR TEMPERING SETPOINT VIA TSTAT OR CONTROL BOARD INSIDE RTU.

**ECONOMIZER OPERATION (IF APPLICABLE)**  
 THE RTU'S EQUIPPED WITH ECONOMIZERS (SEE UNITS SCHEDULE ON SHEET M1) SHALL UTILIZE "FREE COOLING" AS THE FIRST STAGE OF COOLING. WHEN OUTDOOR AIR ENTHALPY IS LOWER THAN THE MIXED AIR ENTHALPY, OUTSIDE AIR INTAKE DAMPERS SHALL MODULATE FROM MIN. TO MAX. OPEN POSITION AND SPACE RETURN AIR DAMPERS SHALL MODULATE FROM MAX. TO MIN. RELIEF DAMPERS SHALL BE CONTROLLED RESPECTIVELY VIA INTEGRAL RTU CONTROL. IF THE OUTSIDE AIR ALONE CANNOT SATISFY THE SPACE COOLING DEMAND, THE COMPRESSORS SHALL BE ENERGIZED IN STAGES. WHEN OUTDOOR AIR ENTHALPY IS HIGHER THAN MIXED AIR ENTHALPY, OR WHEN THE LOW LIMIT SENSOR LOCATED IN DISCHARGE AIR REACHES ITS SET POINT (55°F -ADJ.), THEN OUTDOOR AIR AND RETURN AIR DAMPERS SHALL BE SET TO DELIVER MINIMUM O.A. CFM'S INDICATED IN THE AIR BALANCE SCHEDULE.

**NIGHT SETBACK OPERATION (UNOCCUPIED)**  
 SPACE TEMPERATURE SET POINTS: RTU-1, 2, AND 3: 85°F COOLING, 55°F HEATING, AND RH SETPOINTS ABOVE.

ALL RTU'S EVAPORATOR FANS, COMPRESSORS AND HEATER SHALL RUN ON DEMAND ONLY(AUTO) ANY MOTORIZED OUTSIDE AIR DAMPERS SHALL BE IN CLOSED POSITION. M.C. SHALL VERIFY REQUIREMENT FOR AUTOMATIC SETBACK CONTROL WITH LOCAL AUTHORITIES AND COORDINATE WITH EQUIPMENT SUPPLIER.

**FIRE PROTECTION GLOBAL SHUTDOWN**  
 IF LOCAL CODE OFFICIAL REQUIRES GLOBAL SHUTDOWN OF ALL RTU'S UPON SMOKE DETECTION IN ANY RTU DUCTWORK, OR WATER FLOW IN THE SPRINKLER SYSTEM, THE FIRE ALARM CONTRACTOR SHALL PROVIDE A RELAY IN EACH RTU TIED TO THE FIRE ALARM PANEL TO SHUT DOWN ALL RTU'S SIMULTANEOUSLY.

**HOODS:**  
 HOODS HAVE (1) SWITCH FOR FAN OPERATION AND (1) SWITCH FOR LIGHTS ON THE TOUCH PAD. MANAGER SHOULD TURN BOTH SWITCHES ON UPON ARRIVAL, ENERGIZING THE FAN SWITCH ENABLES THE CONTROL PANEL TO AUTOMATICALLY TURN ON EXHAUST FAN IF HOOD TEMPERATURE REACHES 85 DEGREES (MEASURED BY DUCT STAT IN HOOD RISER AND COMPARED TO BASE ROOM SENSOR). EXHAUST FAN WILL TURN OFF ONLY IF HOOD TEMPERATURE IS BELOW 85° WHEN FINISHED FOR THE DAY. THE MANAGER SHOULD TURN THE HOOD LIGHT SWITCH OFF AND THE FAN SWITCH TO AUTO (WILL ACTIVATE AUTOMATICALLY IF RISER TEMPERATURE REACHES 85°). THERE IS NO FAN OVERRIDE SWITCH.

### HOOD CONTROL SEQUENCE OF OPERATIONS

**MANUAL CONTROL:**

- TO TURN ON THE HOOD SYSTEM, PUSH THE FAN AND LIGHTS BUTTONS ON THE TOUCH SCREEN USER INTERFACE. THE FANS AND LIGHTS WILL TURN ON AND THE INDICATING LIGHTS ADJACENT TO THE BUTTONS WILL ILLUMINATE INDICATING THE FANS AND LIGHTS ARE ON.
- TO TURN OFF THE HOOD SYSTEM, PUSH THE FAN AND LIGHTS BUTTONS ON THE TOUCH SCREEN USER INTERFACE. THE FANS AND LIGHTS WILL TURN OFF AND THE INDICATING LIGHTS ADJACENT TO THE BUTTONS WILL GO OUT INDICATING THE FANS AND LIGHTS ARE OFF.
- THE HOOD WILL REMAIN ON BASED ON DIFFERENTIAL TEMPERATURE BETWEEN THE ROOM THERMOSTAT AND THE HOOD TEMPERATURE PROBE. ONCE THE EQUIPMENT COOLS DOWN, THE HOOD WILL SYSTEM WILL TURN OFF AUTOMATICALLY.

**AUTOMATIC CONTROL:**

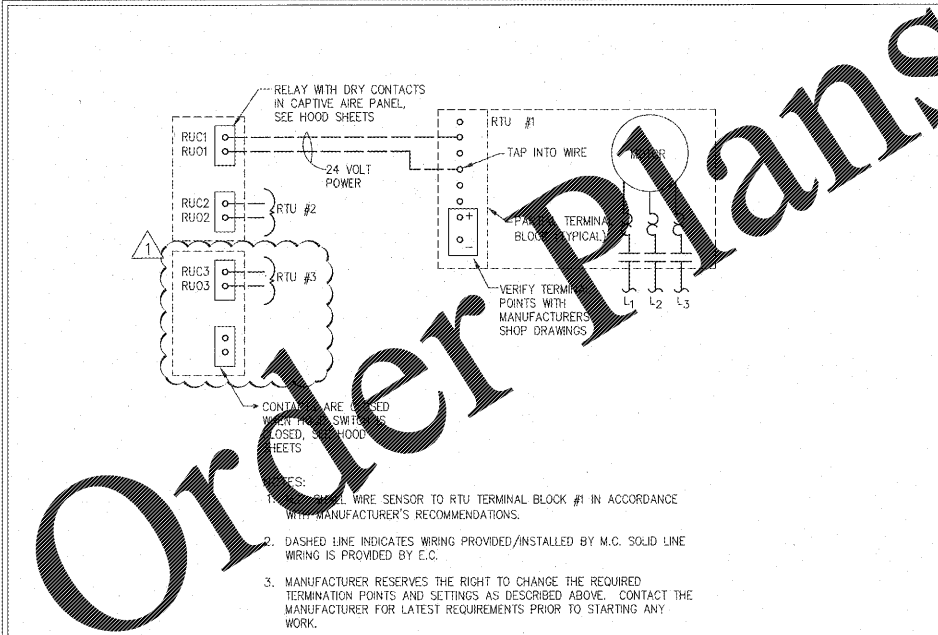
- THE HOOD SYSTEM WILL TURN ON AUTOMATICALLY ONCE THE TEMPERATURE WITHIN THE HOOD SYSTEM REACHES A SET TEMPERATURE. THE INDICATOR LIGHT ADJACENT TO THE FANS BUTTON ON THE TOUCH SCREEN USER INTERFACE WILL ILLUMINATE. THE LIGHTS WILL NEED TO BE TURNS ON MANUALLY.
- THE HOOD SYSTEM WILL TURN OFF AUTOMATICALLY AS DESCRIBED ABOVE.

**GENERAL:**

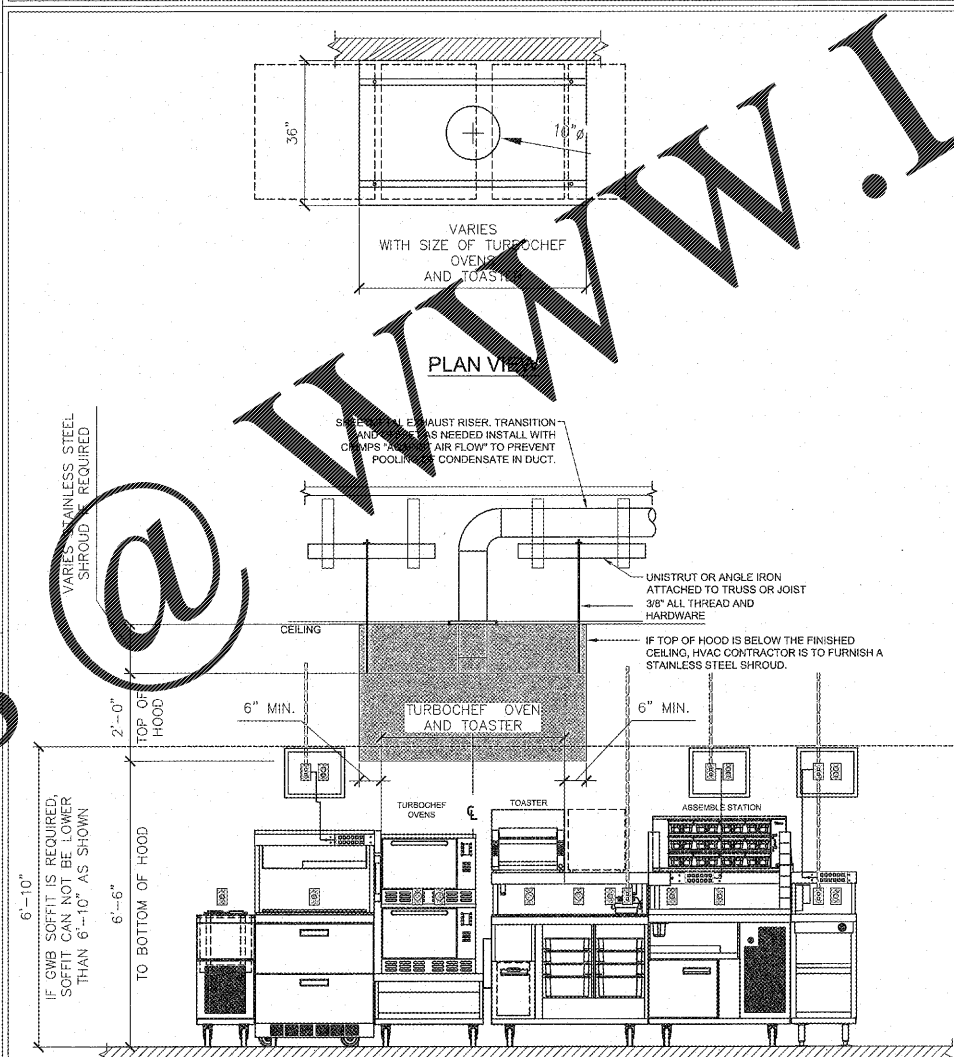
- THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH CAPTIVE AIRE.
- THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR ON THE REQUIRED WIRING OF THE HOOD CONTROLS PER THE CAPTIVE AIRE DRAWINGS.

### GENERAL NOTES:

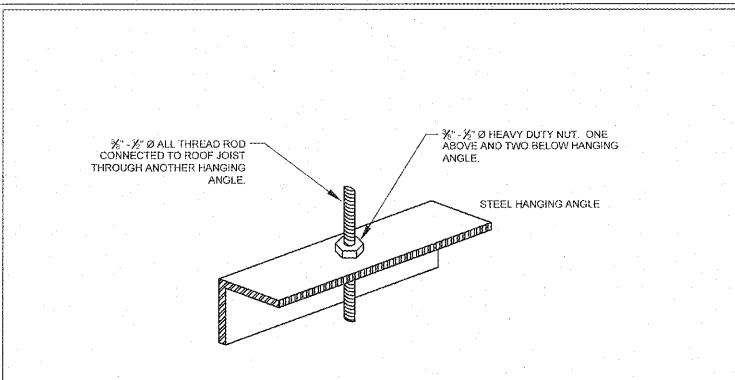
- ALL ELECTRICAL "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY ELECTRICAL CONTRACTOR.
- ALL PLUMBING "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY PLUMBING CONTRACTOR.
- ALL ASSOCIATED HANGER MATERIALS BY INSTALLING CONTRACTOR.
- ANY LIGHTS SHOWN INSTALLED BY THE MANUFACTURER, AND FACTORY PREWIRED PER THE PLANS. INTERCONNECTIONS BETWEEN HOODS AND TO SWITCHES BY ELECTRICAL CONTRACTOR.
- SEISMIC RESTRAINTS ARE RESPONSIBILITY OF INSTALLING CONTRACTOR.
- INSTALLING CONTRACTOR ASSUMES ALL RELATED RESPONSIBILITY FOR VERIFICATION OF DIMENSIONAL DATA CONTAINED ON THESE DOCUMENTS FOR ACCURACY, INTEGRATION, AND ADMINISTRATION OF CODE REQUIREMENTS IN EFFECT PRIOR TO ANY RELEASE FOR PRODUCTION OF EQUIPMENT SHOWN.
- SIGNED AND "APPROVED" COPIES OF THIS DOCUMENT MUST BE RECEIVED BY THE FACTORY PRIOR TO COMMENCEMENT OF FABRICATION.
- NOMINAL HOOD DIMENSIONS AS SHOWN ON DRAWINGS.
- THE HOOD(S) INDICATED SHALL BE CAPTIVE-AIRE MODEL VH6 OR APPROVED EQUAL. THE HOOD SHALL BE SINGLE WALL TYPE HOOD WITH NO BUILT-IN MAKE-UP AIR CAPABILITIES. THE HOOD COMPONENTS SHALL BE FABRICATED TYPE 304 STAINLESS STEEL WITH A #3 OR #4 POLISH, ON ALL EXPOSED SURFACES. HOOD SHALL BE WITH HANGING ANGLES ON EACH END OF THE HOOD. NOMINAL HOOD DIMENSIONS SHALL BE AS SHOWN ON DRAWINGS.



1 INTERLOCK WIRING DETAIL  
 NONE



2 HOOD 1 - ELEVATION AND PLAN  
 NONE



3 HANGING ANGLE DETAIL  
 NONE

HOODS SHALL BE BUILT IN COMPLIANCE WITH

NSF  
 BUILT IN ACCORDANCE WITH NFPA #96

NFPA #96  
 NSF  
 UL 710 & ULC710 STANDARDS  
 E.T.L. LISTED 3054804-001

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PROJECT NO.: 17229

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 REGISTRATION NO. 12222  
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| NO | DESCRIPTION                      | DATE   | SCALE | DRAWN | CKD | APPD |
|----|----------------------------------|--------|-------|-------|-----|------|
| 1  | OWNER COMMENTS (RESTROOM CHANGE) | 5/2/18 |       |       |     |      |
|    | SHEET REVISIONS                  |        |       |       |     |      |

DD FRESH BREW 1.0  
 908 MARKET DRIVE, EMPORIA, VA

MECHANICAL HOOD INFORMATION

PC# 358084

M-3.0