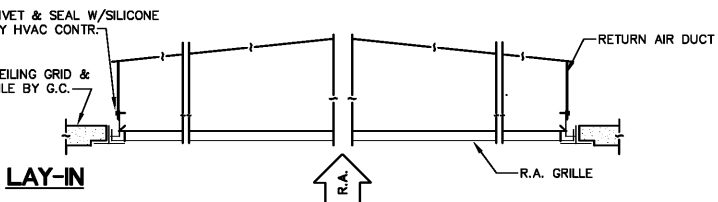
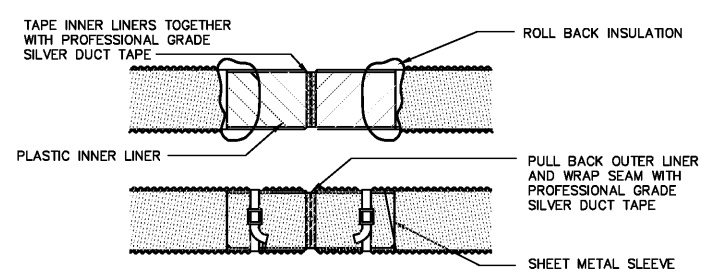


**SURFACE MOUNTED**

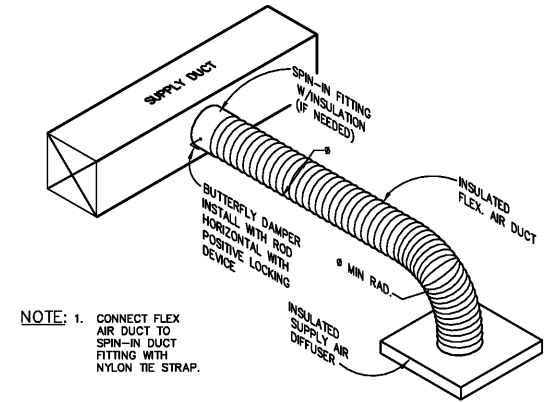


**LAY-IN**

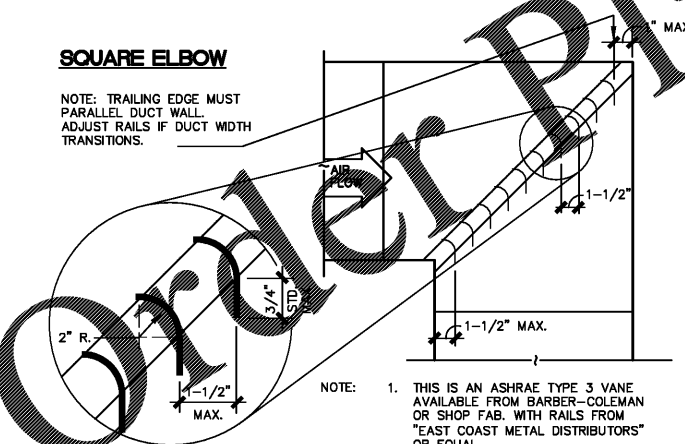
**1 GRILLE CONNECTION**  
M3 SCALE: NONE



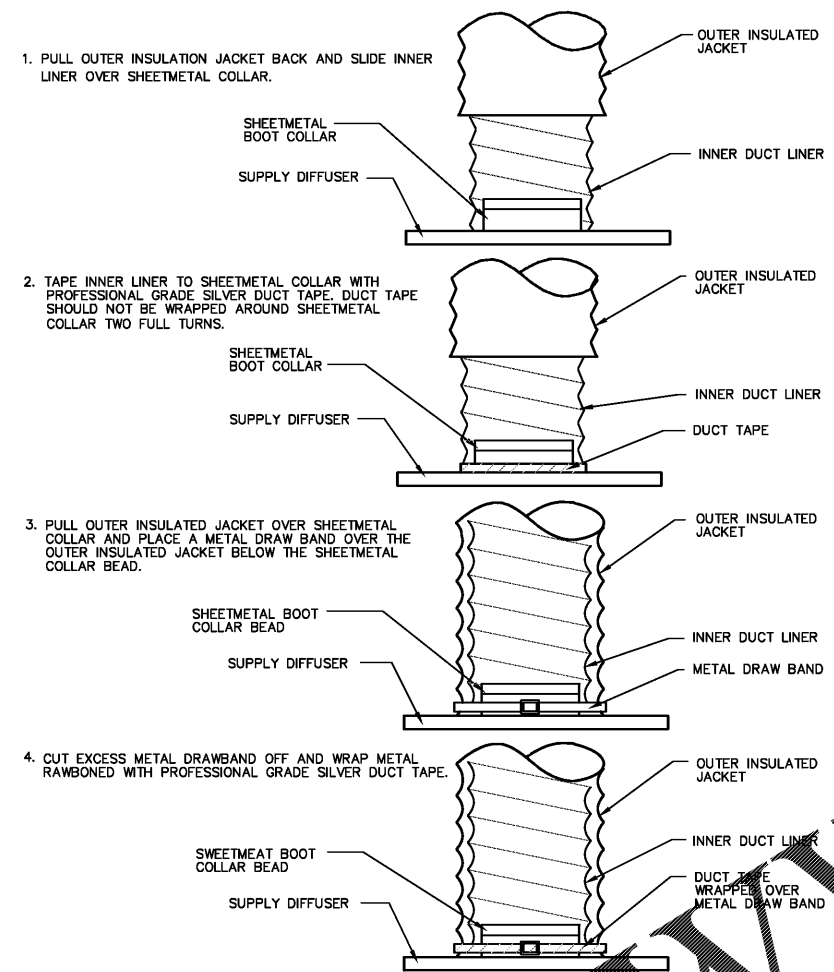
**2 FLEXIBLE DUCT SPLICING DETAIL**  
M3 SCALE: NONE



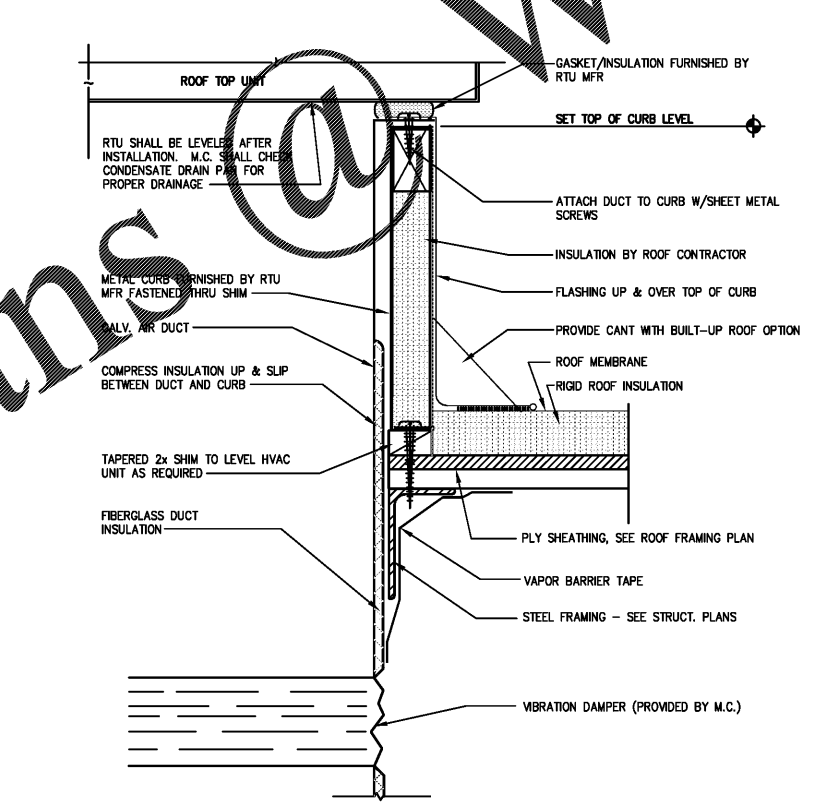
**3 TYPICAL DUCT CONNECTION**  
M3 SCALE: NONE



**4 TYPICAL DUCT ELBOW**  
M3 SCALE: NONE



**5 FLEX DUCT CONNECTION TO DIFFUSERS AND SHEETMETAL DUCTWORK COLLARS**  
M3 SCALE: NONE



**6 ROOF CURB DETAIL**  
M3 SCALE: NONE

**HVAC SEQUENCE OF OPERATION**

M.C. SHALL SET THERMOSTAT 'OCCUPIED' AND 'UNOCCUPIED' MODES TO OWNER'S OPERATION SCHEDULE. EVAPORATOR FANS SHALL RUN CONTINUOUSLY(ON) IN THE "OCCUPIED" MODE.

**NORMAL OPERATION (OCCUPIED):**  
HEF-1, EVAPORATOR FANS, AND ECONOMIZERS (IF INSTALLED) ON RTU-1, AND 2 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: 74°F COOLING, 70°F HEATING  
RTU-1: 78°F COOLING, 68°F HEATING  
SPACE HUMIDITY SET POINTS: RTU-1: 55% RH  
RTU-2: 60% RH

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 M2 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. M.C. SHALL CHANGE OPTION 4 IN THE OPTIONS MENU TO 1-ENABLED. OR, REMOVE JUMPER FROM RTOM J3-1 AND J3-2 FOR PROGRAMMABLE TSTATS.

**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 SETPOINT (SEE -ADJ.), THEN OUTDOOR AIR AND RETURN AIR DAMPERS SHALL BE SET TO DELIVER MINIMUM O.A. CFM'S INDICATED IN THE AIR BALANCE SCHEDULE.

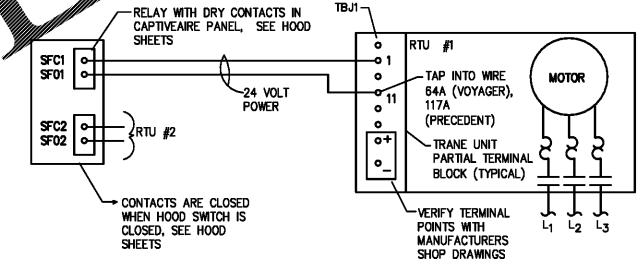
**NIGHT SETBACK OPERATION (UNOCCUPIED):**  
SPACE TEMPERATURE SET POINTS: RTU-1, AND 2: 85°F COOLING, 55°F HEATING, AND RH SETPOINTS ABOVE.

ALL RTU'S EVAPORATOR FANS, COMPRESSORS AND HEATER SHALL RUN ON DEMAND (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.

**EMERGENCY OPERATION:**  
E.C. SHALL WIRE ANSUL SYSTEM ON TYPE 1 GREASE COOKING HOOD SO THAT UPON FIRE DETECTION OR MANUAL ACTIVATION, ALL POWER TO EQUIPMENT UNDER HOOD SHALL BE ISOLATED, WHILE THE EXHAUST FAN SHALL CONTINUE TO OPERATE. ELECTRICAL SHUNT TRIPPING SHALL ISOLATE ALL POWER TO EQUIPMENT UNDER HOOD. EVAPORATOR FAN ON EACH RTU SHALL BE SHUT DOWN BY INDIVIDUAL SMOKE DETECTOR UPON DETECTING SMOKE.

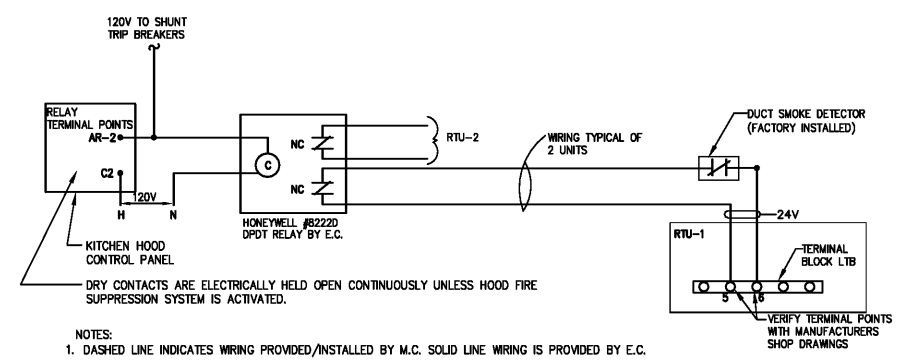
**FIRE PROTECTION GLOBAL SHUTDOWN:**  
IF LOCAL CODE OFFICIAL REQUIRES GLOBAL SHUTDOWN OF ALL RTU'S UPON SMOKE DETECTION IN ANY ROOM DUCTWORK, MANUAL ACTIVATION OF SPRINKLER OR ANSUL SYSTEM, FIRE DETECTION UNDER ANY HOOD, OR WATER FLOW IN THE SPRINKLER SYSTEM, THE FIRE ALARM CONTRACTOR SHALL PROVIDE A RELAY IN EACH ROOM 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.



- NOTES:**
- M.C. SHALL WIRE SENSOR TO RTU TERMINAL BLOCK #1 IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
  - DASHED LINE INDICATES WIRING PROVIDED/INSTALLED BY M.C. SOLID LINE WIRING IS PROVIDED BY E.C.
  - TRANE RESERVES THE RIGHT TO CHANGE THE REQUIRED TERMINATION POINTS AND SETTINGS AS DESCRIBED ABOVE. CONTACT TRANE FOR LATEST REQUIREMENTS PRIOR TO STARTING ANY WORK.

**7 TRANE INTERLOCK WIRING DETAIL**  
M3 SCALE: NONE



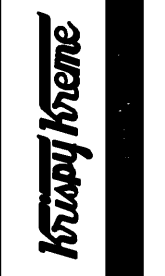
- NOTES:**
- DASHED LINE INDICATES WIRING PROVIDED/INSTALLED BY M.C. SOLID LINE WIRING IS PROVIDED BY E.C.
  - RTU UNITS SHALL SHUT DOWN UPON FIRE DETECTION BY HOOD ANSUL SYSTEM, SEE "HVAC SEQUENCE OF OPERATION" THIS SHEET. COORDINATE WIRING WITH MANUFACTURERS SHOP DRAWINGS. SEE H SHEETS.
  - THE MECHANICAL CONTRACTOR SHALL INSTALL ADDITIONAL WIRING BETWEEN TERMINAL POINT LT66 AND FACTORY MOUNTED SMOKE DETECTOR AS SHOWN. FACTORY MOUNTED SMOKE DETECTOR SHALL REMAIN.
  - M.C. SHALL COORDINATE WITH FIRE ALARM CONTRACTOR TO INTEGRATE THE HVAC/ANSUL SYSTEM INTO THE FIRE ALARM SYSTEM. FIRE ALARM CONTRACTOR SHALL ENSURE SMOKE DETECTOR ACTIVATION WILL ALERT THE FIRE ALARM PANEL.

**8 EMERGENCY AC UNIT SHUT DOWN DETAIL**  
M3 SCALE: NONE

**GEORGE SARTTY, AIA**  
300 Davis Street, Suite 410, Fort Myers, FL 33901  
(941) 719-1708  
Copyright 2014

**KENNETH L. KRAUS**  
P.E. # 74120  
308 Oak Grove Drive  
Wauchula, FL 33994  
T (847) 719-1708  
Plumbing Mechanical Electrical

**KRISPY KREME DOUGHNUTS**  
1730 E. NINE MILE ROAD  
PENSACOLA, FL 32514



SEAL  
LICENSE  
74120  
STATE OF  
FLORIDA  
DATE: 08/23/18

PROJECT NO.: 18-004  
CHECKED BY: KJK  
DRAWN BY: STAFF  
SHEET TITLE: MECHANICAL DETAILS

SHEET NO.:

**M3**