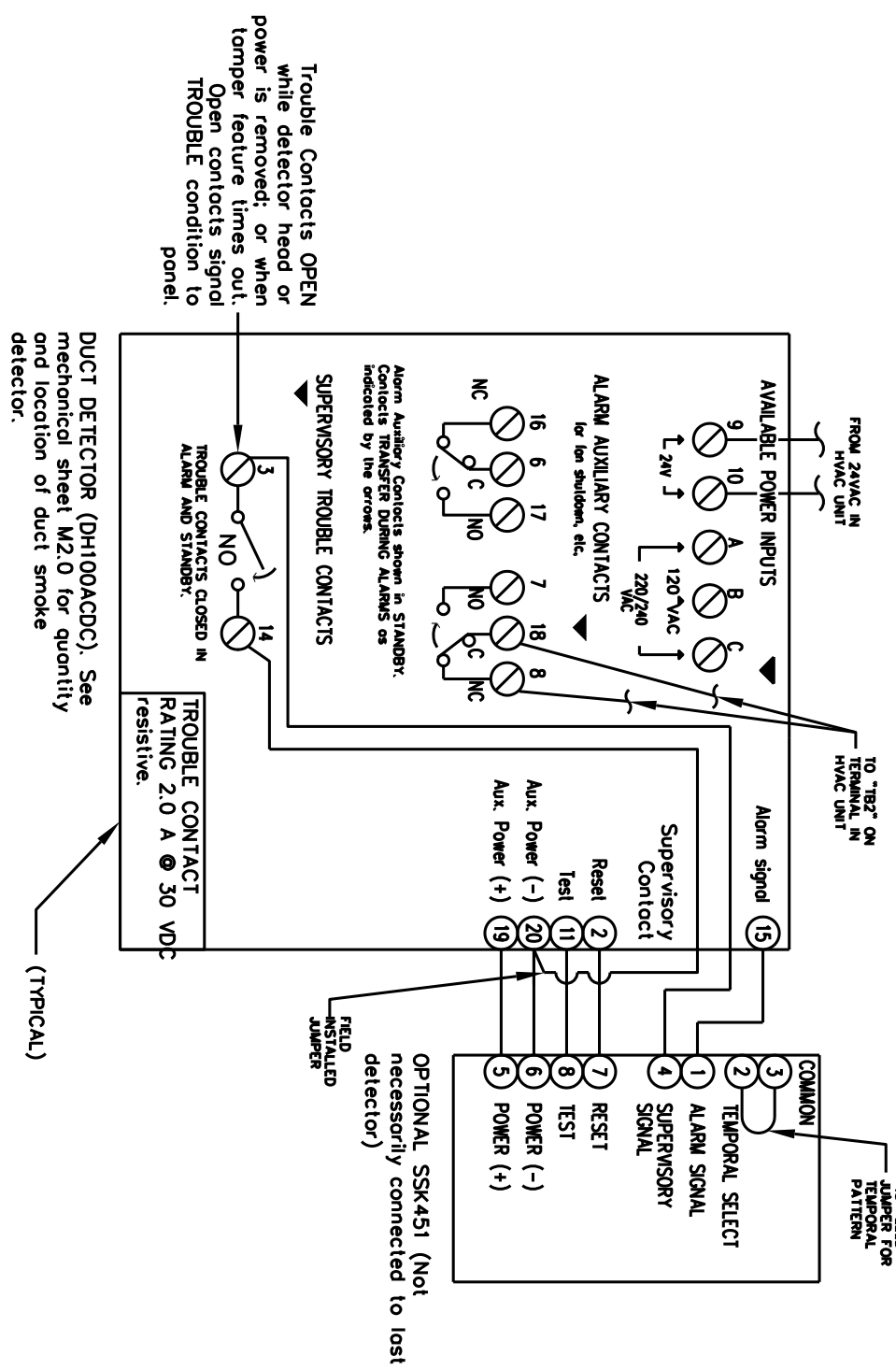
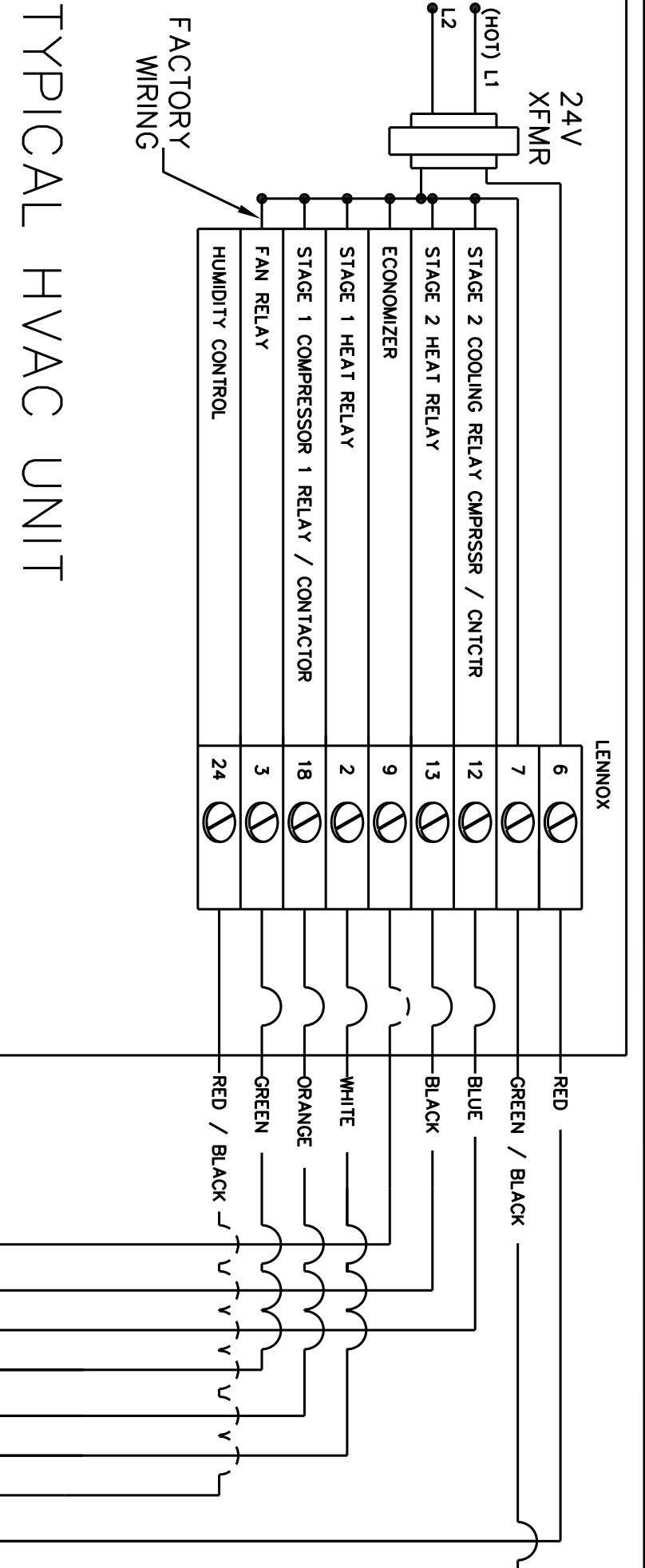


# DUCT SMOKE DETECTOR WIRING DIAGRAM WITH MULTI-SIGNALING ACCESSORY

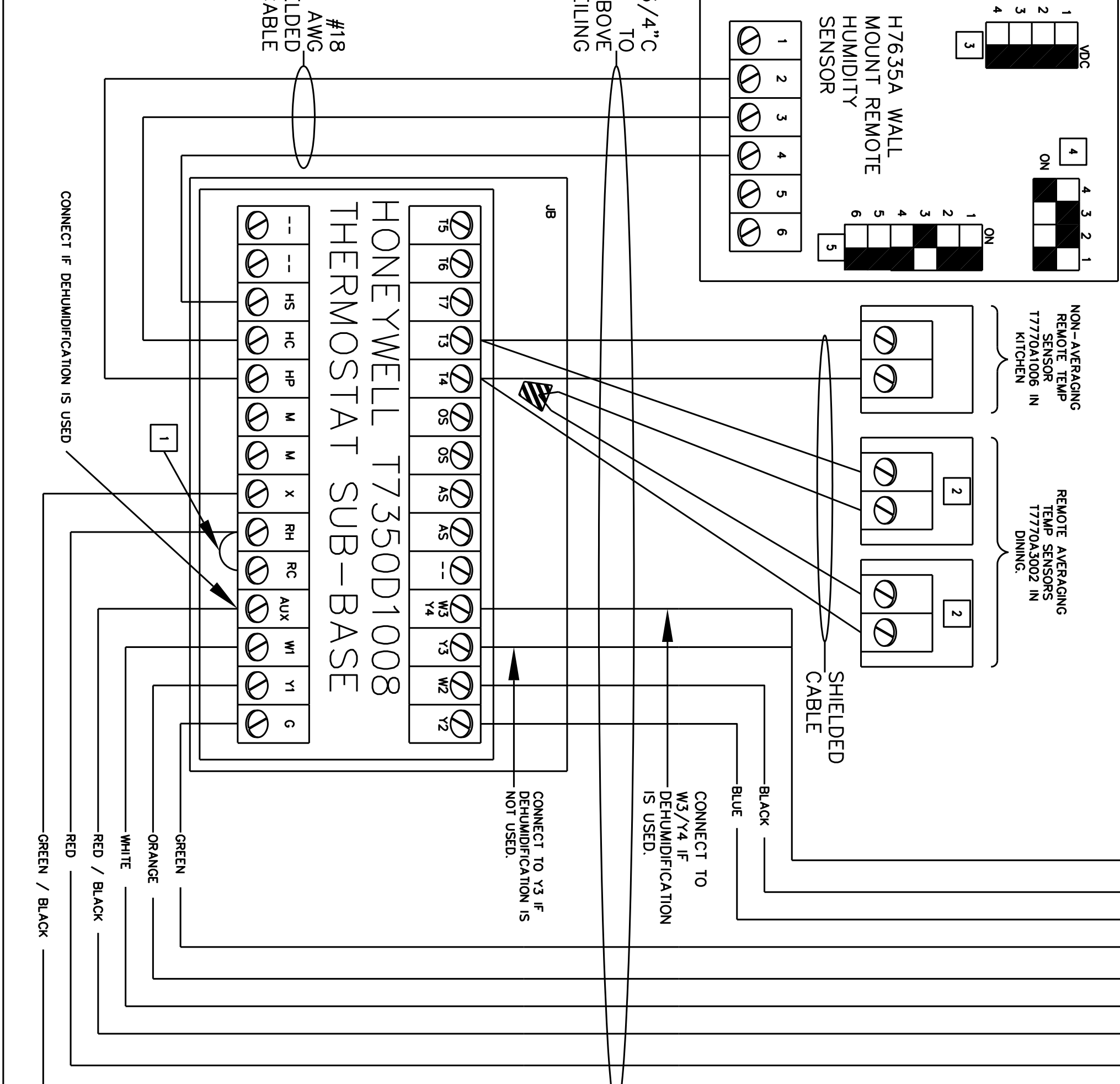


(WIRING SHOWN FOR MULTI-SIGNALING PANEL - CONSULT HONEYWELL FIRE SYSTEMS GROUP/ SYSTEM SENSOR FOR WIRING TO FIRE ALARM CONTROL ACCESSORY AT: 1332 US ROUTE 302, PORTLAND, ME 04107, (203) 484-7173, ext. 3725, Model # (899) 221-8417 (www.honeywell-fire.com))

- DUCT SMOKE DETECTOR OPERATION:**
- DUCT DETECTOR ACTION SHALL SHUT DOWN THE AIR DISTRIBUTION SYSTEM COMPLAINT WITH 2008 INTERNATIONAL MECHANICAL CODE (IMC) SMOKE DETECTOR SYSTEM CONTROL, 2003 UNIFORM MECHANICAL CODE (UMC) 905-403.0(1) SMOKE DETECTOR.
  - DUCT DETECTOR ACTIVATION SHALL ACTIVATE VISIBLE AND AUDIBLE SMOKE DETECTOR SIGNALS WITHIN 30 SECONDS OF SMOKE DETECTOR ACTIVATION.
  - DUCT DETECTOR MODEM CONDITION SHALL ACTIVATE A VISIBLE OR AUDIBLE SMOKE DETECTOR SIGNAL.
- REDUCT ALARM INSTALLATION:**
- CELESTIAL LABEL TO INDICATE BOTH FUNCTION (N-DUCT SMOKE DETECTOR ALARM) AND AIR HANDLING UNIT ASSOCIATED WITH EACH SMOKE DETECTOR. COMPLY WITH THE 1995 NFPA 72 ARTICLE 5-10.6.8, EX.2, AND ALL LOCAL CODES.
  - PLACE REMOVE ALARMS IN A READILY ACCESSIBLE LOCATION APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- COMPONENT REQUIREMENTS:**
- PHOTOACOUSTIC DUCT SMOKE DETECTOR
  - MODEL SSK-451 MULTI-SIGNALING DEVICE CONTAINING:
    - A BLUE LED'S STROBE LIGHT INDICATING SMOKE
    - A GREEN 'POWER' LED (ON WHEN DUCT DETECTOR IS POWERED-ALL LED'S ARE OFF UPON LOSS OF POWER)
    - DUCT DETECTOR SENSOR BOARD IS WIRING FOR THE COVER IS REMOVED FOR MORE THAN 30 MINUTES)
    - A RED 'ALARM' LED (LED AND HORN WILL BE ON WHEN EVER THE DUCT SMOKE DETECTOR IS IN ALARM)
- SCOPE OF WORK:**
- SEE NOTE 10 ON SHEET M-1.
  - ALL WIRING BETWEEN THE 'THROUGHPUT' AND 'TEST' DEVICES SHALL BE CONNECTED AS INDICATED IN MANUFACTURER'S DRAWINGS.



- GENERAL NOTES:**
- SENSOR & HUMIDISTAT WIRING WITH MANUFACTURER'S CONNECTION TO HVAC UNIT.
  - FURNISH AND INSTALL ALL LOW VOLTAGE COILS.
  - FURNISH AND INSTALL ALL WIRING AND JUNCTION BOXES, ROOMING AND JUNCTION BOXES, ROOMING DAMAGE TO THE CABINET OR COMPLIANCE WITH NEC AND LOCAL CODES.
  - ASSEMBLE AND INSTALL MOUNT & INSTALL REMOVE SENSORS ON WOOD BASE.
  - MAKE ALL FINAL CONNECTIONS.
- EC SHALL:**
- FURNISH AND INSTALL ALL LOW VOLTAGE COILS.
  - FURNISH AND INSTALL ALL WIRING AND JUNCTION BOXES, ROOMING AND JUNCTION BOXES, ROOMING DAMAGE TO THE CABINET OR COMPLIANCE WITH NEC AND LOCAL CODES.
  - ASSEMBLE AND INSTALL MOUNT & INSTALL REMOVE SENSORS ON WOOD BASE.
  - MAKE ALL FINAL CONNECTIONS.
- MC SHALL:**
- FURNISH HANGERS WITH TRANSFORMERS PER DRAWINGS.
  - FURNISH HONEYWELL REMOVE SENSORS PER DRAWINGS.
  - WHITE GANG SWITCH ON A BLUE BLOCK (SET TO V00).
  - 4 PIP SWITCH BLOCK SET AT 0-10 VDC (1 & 2 ON).
  - 6 PIP SWITCH BLOCK (3 ON).



- KEY:**
- FIELD WIRING
  - MODIFIED FIELD WIRING

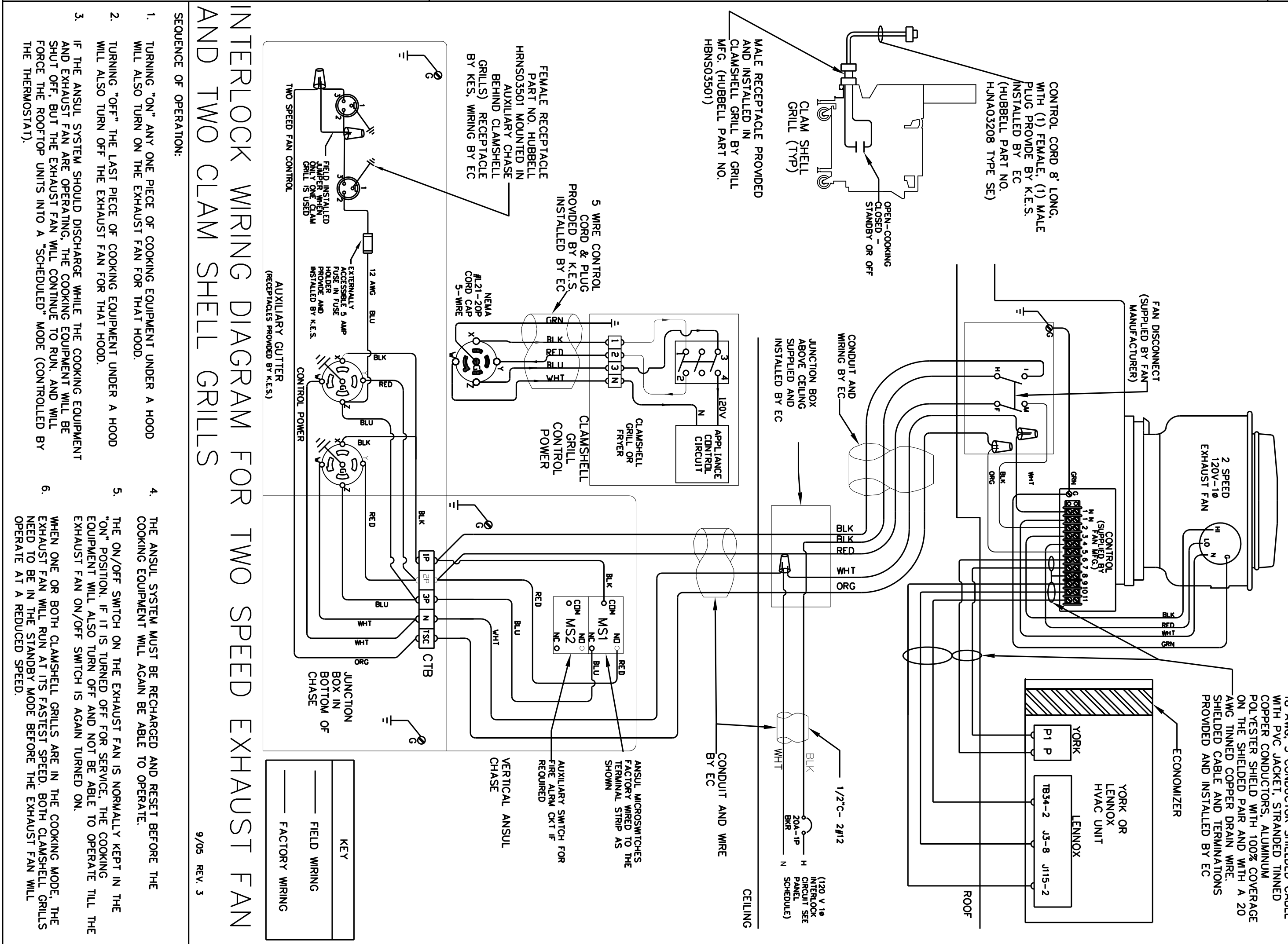
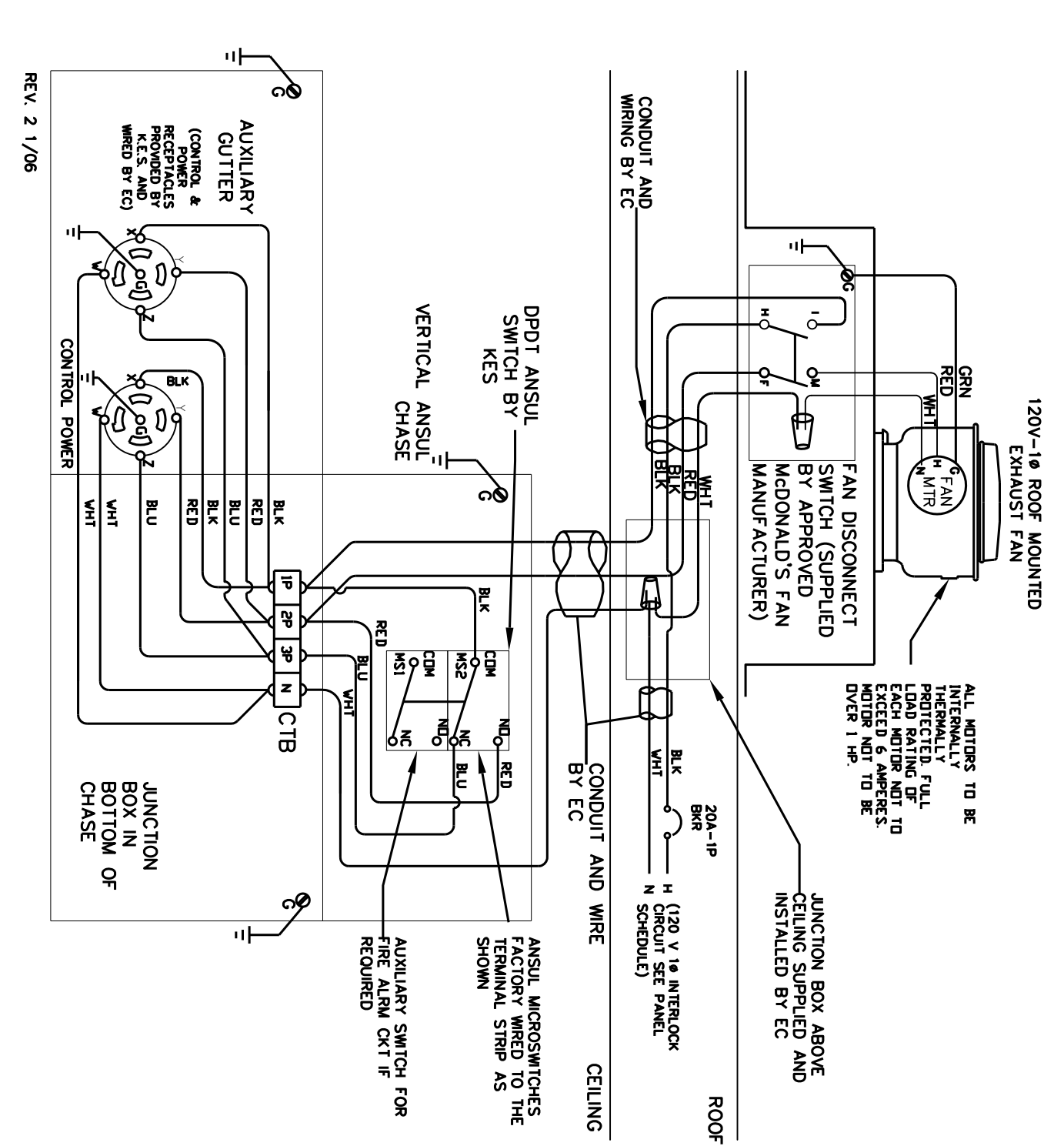
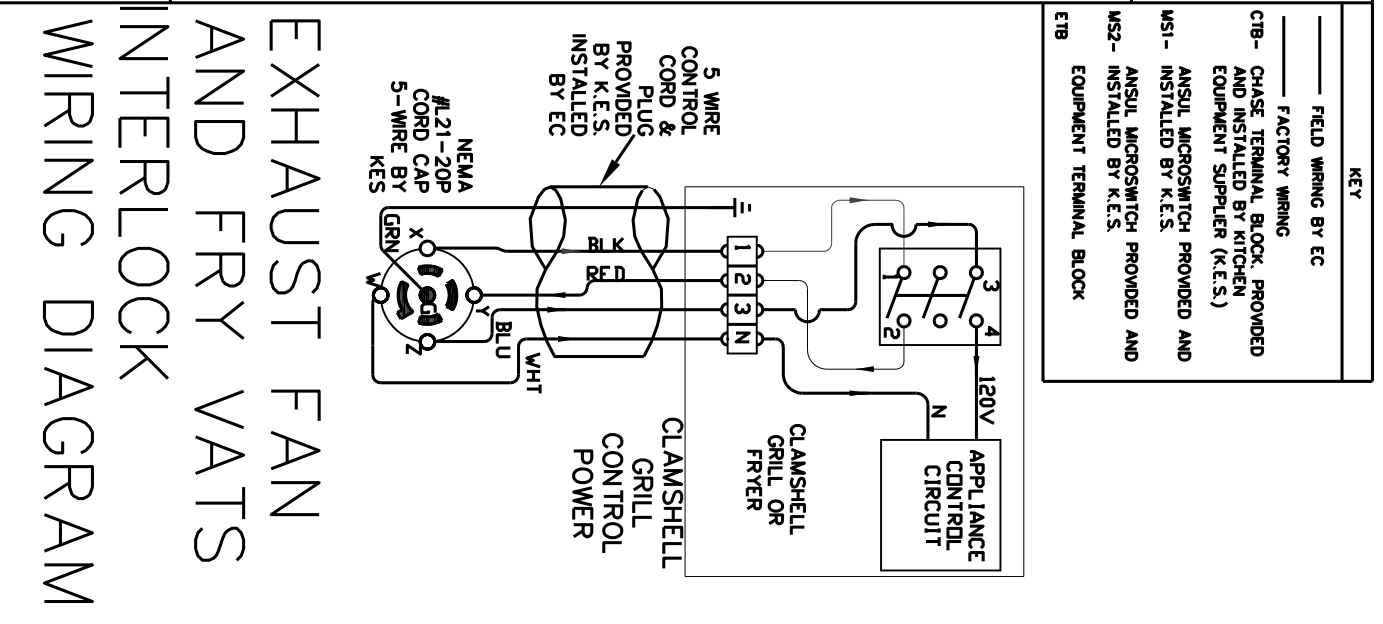
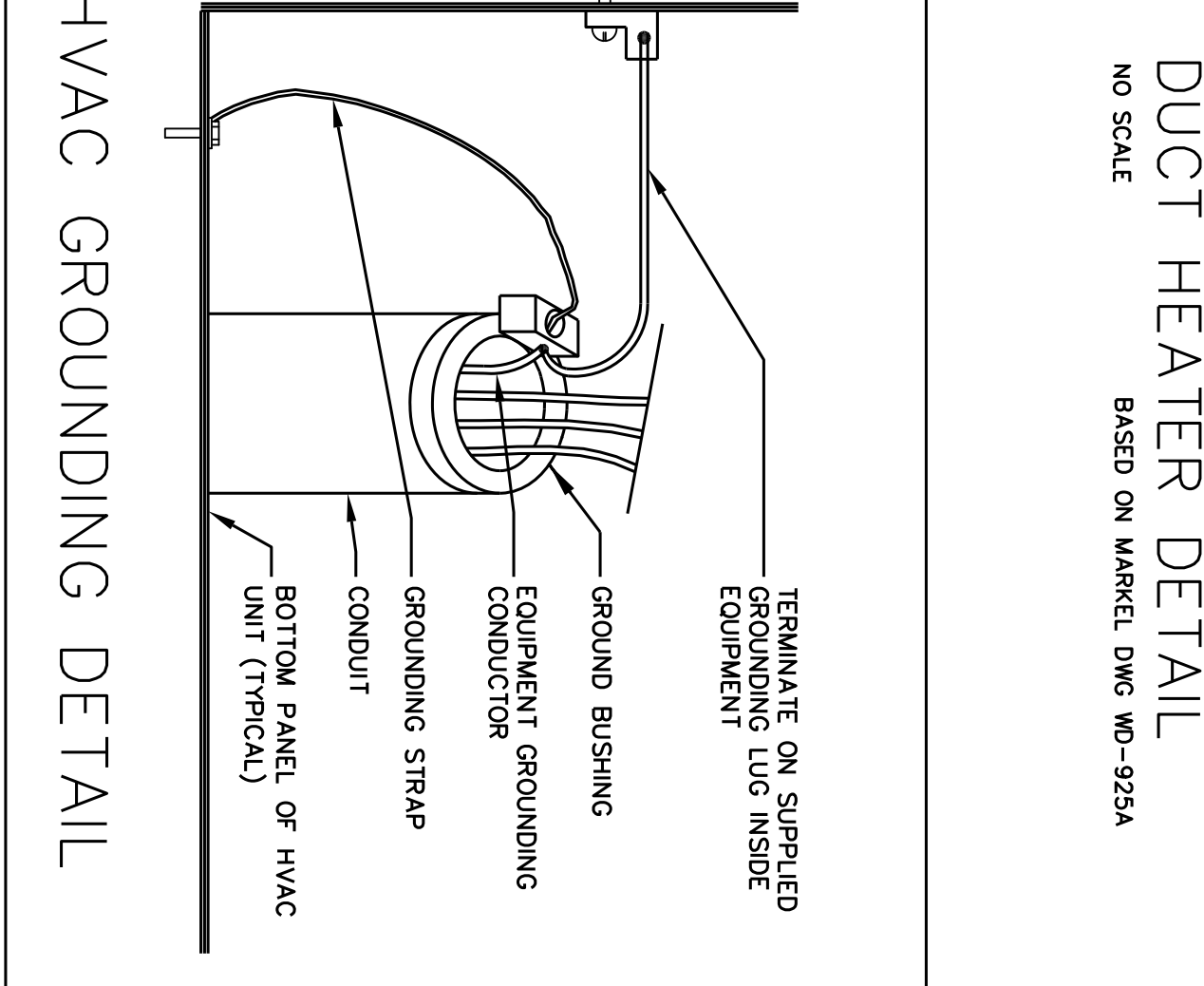
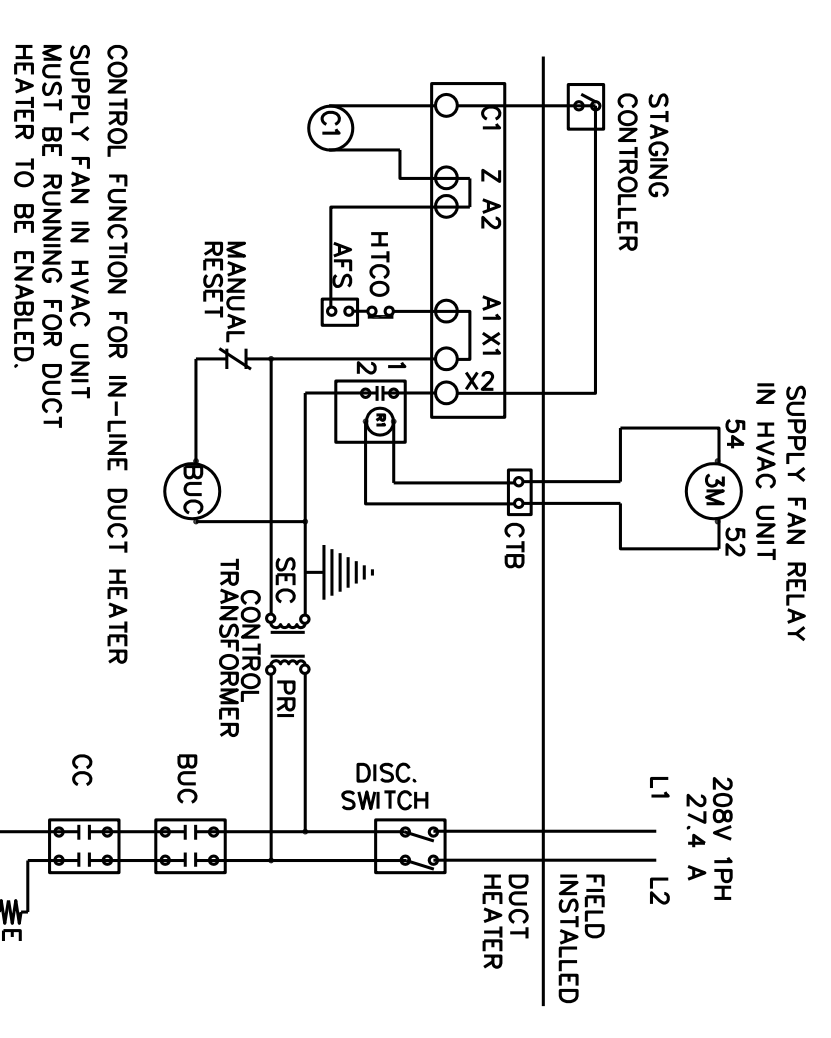
## CONDUIT AND WIRE SIZE FOR HVAC UNITS

HVAC BRK SIZE	CONDUIT & WIRE SIZE
40A	1"-C-3#8
45A	1"-C-3#8
50A	1"-C-3#6
60A	1"-C-3#6
70A	1-1/4"-C-3#4
80A	1-1/4"-C-3#3
90A	1-1/4"-C-3#3
100A	1-1/4"-C-3#2
125A	1-1/2"-C-3#1
150A	1-1/2"-C-3#1/0
175A	2"-C-3#2/0
200A	2"-C-3#1/0
225A	2"-C-3#4/0
250A	2-1/2"-C-3#250

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL COORDINATION OF ALL ELECTRICAL REQUIREMENTS AND FOR PROVIDING ALL NECESSARY ELECTRICAL MATERIAL FOR RELAY, FEEDERS OR CIRCUIT BREAKERS REQUIRED FOR ANY MECHANICAL DEVICES.

## DUCT CEILING HEATERS ELECTRICAL REQUIREMENTS

HEATER SIZE	CONDUIT AND WIRE SIZE	CIRCUIT BREAKER	VOLTAGE AVAILABLE
2.38 kW	1/2" 2#12	20A-2P	208 VOLT SINGLE PHASE
5.7 kW	3/4" 2#8	35A-2P	208 VOLT SINGLE PHASE



RESTAURANT LOCATION: 1332 US ROUTE 302 PORTLAND, ME	SHEET TITLE: WIRING DETAILS	CONSULTANT: ENGINEERING ADVANTAGE, INC. 2 PARK ST. BOSTON, MASSACHUSETTS 02122 PHONE: (617) 288-3969 FAX: (617) 825-8922	REVISIONS <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> </tr> <tr> <td>1</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> </tr> <tr> <td>6</td> <td></td> <td></td> </tr> <tr> <td>7</td> <td></td> <td></td> </tr> </table>	NO.	DATE	BY	1			2			3			4			5			6			7		
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PREPARED FOR: McDonald's USA, LLC OAK BROOK, ILLINOIS 60521		CONSULTANT: ENGINEERING ADVANTAGE, INC. 2 PARK ST. BOSTON, MASSACHUSETTS 02122 PHONE: (617) 288-3969 FAX: (617) 825-8922	DRAWN BY: C.A.C. CHECKED BY: LAF DATE DRAWN: 04/17/07 DATE ISSUED: 08/14/07 SCALE: AS SHOWN JOB NUMBER: M-1035																								