

FOR QUESTIONS, CALL THE  
Highwoods Group  
REGION 40  
PHONE: (919) 875-0420  
EMAIL: reg40@captiveaire.com

**PATENT NUMBERS**

AC-PSP (UNITED STATES) - US PATENT 7963830 B2.  
AC-PSP WALL (CANADA) - CA PATENT 2820509.  
AC-PSP ISLAND (CANADA) - CA PATENT 2520330.

**SPECIFICATION: CAPTRATE® GREASE-STOP® SOLID FILTER**

THE CAPTRATE GREASE-STOP SOLID FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

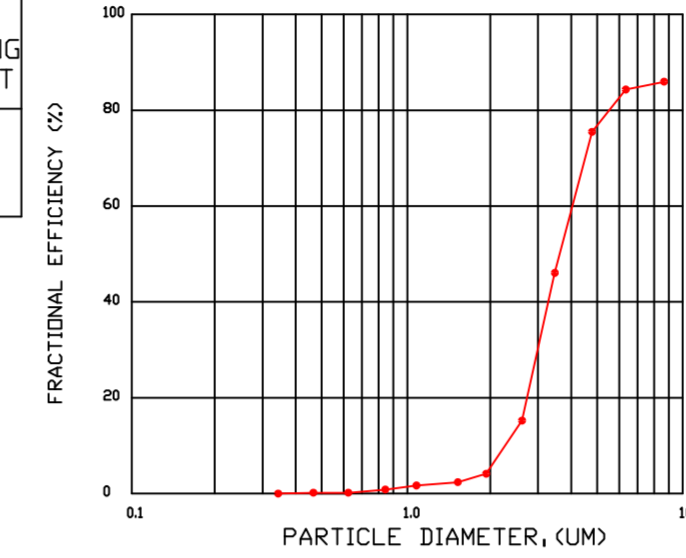
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

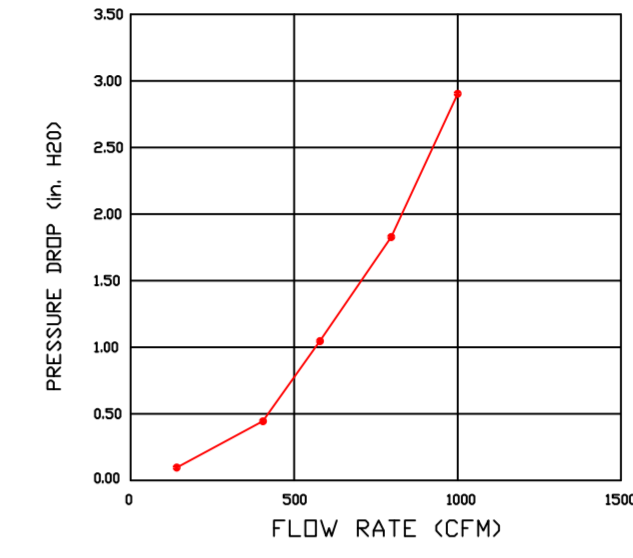
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLID WAS TESTED TO ASTM STANDARD ASTM F2519-05, MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.

EFFICIENCY VS. PARTICLE DIAMETER



PRESSURE DROP VS. FLOW RATE



CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:  
NFPA #96.  
NSF STANDARD #2.  
UL STANDARD #1046.  
INT. MECH. CODE (IMC).  
ULC-S649.



**HOOD INFORMATION - JOB#5071884**

| HOOD NO | TAG | MODEL             | MANUFACTURER | LENGTH | MAX COOKING TEMP | TYPE | APPLIANCE DUTY | DESIGN CFM/FT | TOTAL EXH CFM | EXHAUST PLENUM RISER(S) |      |        |      |      | MUA CFM | AC CFM | HOOD CONSTRUCTION | HOOD CONFIG          |       |            |
|---------|-----|-------------------|--------------|--------|------------------|------|----------------|---------------|---------------|-------------------------|------|--------|------|------|---------|--------|-------------------|----------------------|-------|------------|
|         |     |                   |              |        |                  |      |                |               |               | WIDTH                   | LENG | HEIGHT | DIA  | CFM  |         |        |                   | VEL                  | SP    | END TO END |
| 1       |     | 5424 ND-2-ACPSP-F | CAPTIVEAIRE  | 14' 3" | 600 DEG          | I    | HEAVY          | 225           | 3200          | 10"                     | 15"  | 4"     | 1600 | 1536 | -0.854" | 1950   | 798               | 430 SS WHERE EXPOSED | ALONE | ALONE      |

**HOOD INFORMATION**

| HOOD NO | TAG | FILTER(S)             |     |        |        | LIGHT(S)               |     |                |            | UTILITY CABINET(S) |             |                  |         | FIRE SYSTEM PIPING | HOOD HANGING WEIGHT |                    |                   |
|---------|-----|-----------------------|-----|--------|--------|------------------------|-----|----------------|------------|--------------------|-------------|------------------|---------|--------------------|---------------------|--------------------|-------------------|
|         |     | TYPE                  | QTY | HEIGHT | LENGTH | EFFICIENCY @ 7 MICRONS | QTY | TYPE           | WIRE GUARD | LOCATION           | SIZE        | FIRE SYSTEM TYPE | SIZE    |                    |                     | ELECTRICAL MODEL # | SWITCHES QUANTITY |
| 1       |     | CAPTRATE SOLID FILTER | 10  | 16"    | 16"    | 85% SEE FILTER SPEC    | 10  | L55 SERIES E26 | NO         | RIGHT              | 12"x54"x24" | ANSUL R-102      | 3.0/3.0 | SC-31110MA         | 1 LIGHT<br>1 FAN    | YES                | 1122 LBS          |

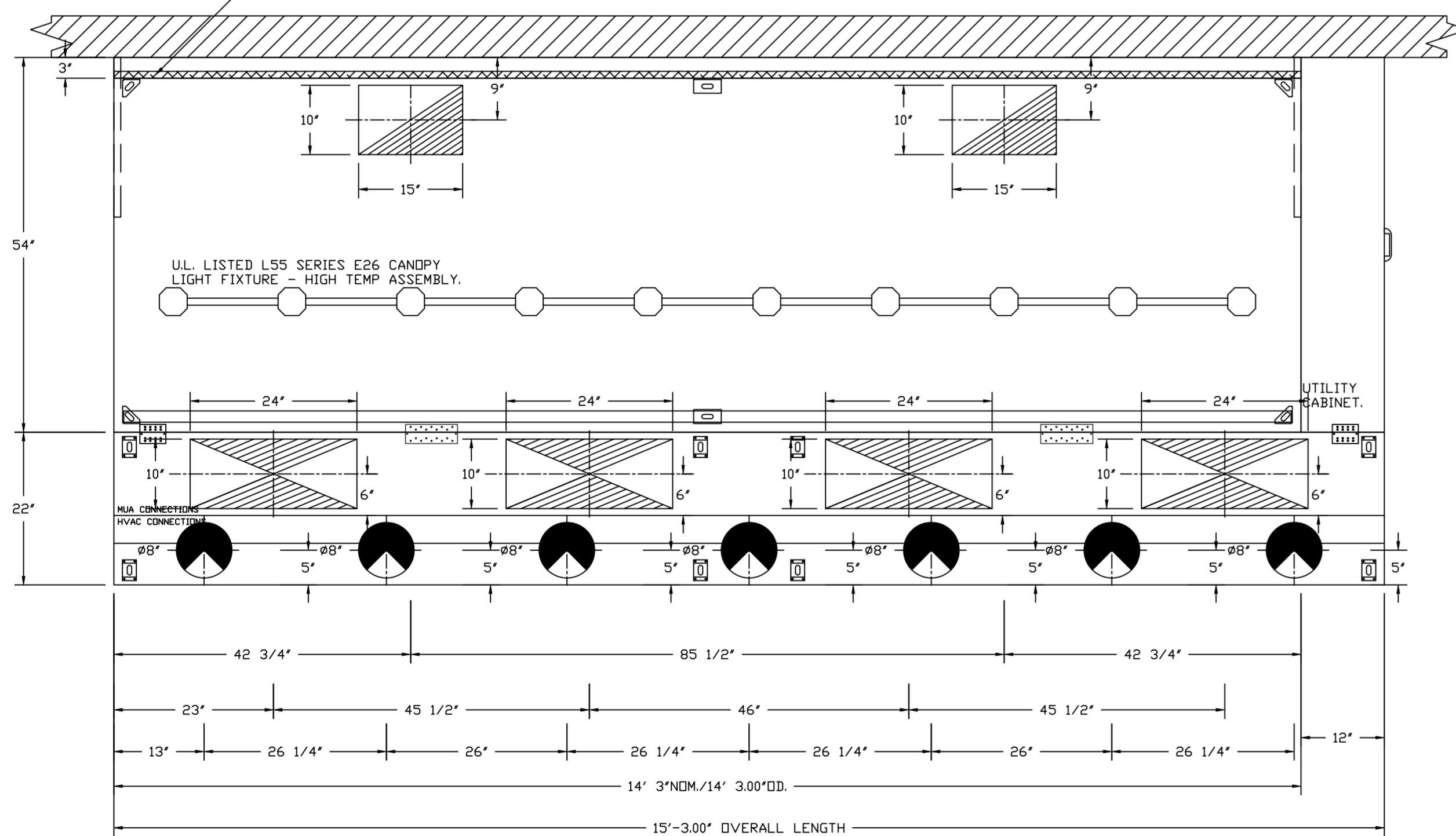
**HOOD OPTIONS**

| HOOD NO | TAG | OPTION  |
|---------|-----|---|
| 1       |     | FIELD WRAPPER 18.00' HIGH FRONT, LEFT, RIGHT.<br>RIGHT QUARTER END PANEL 23' TOP WIDTH, 0' BOTTOM WIDTH, 23' HIGH 430 SS.<br>LEFT QUARTER END PANEL 23' TOP WIDTH, 0' BOTTOM WIDTH, 23' HIGH 430 SS.<br>INSULATION FOR BACK OF HOOD.<br>FULL DIMENSION HANGING BRACKET - FRONT. |

**PERFORATED SUPPLY PLENUM(S)**

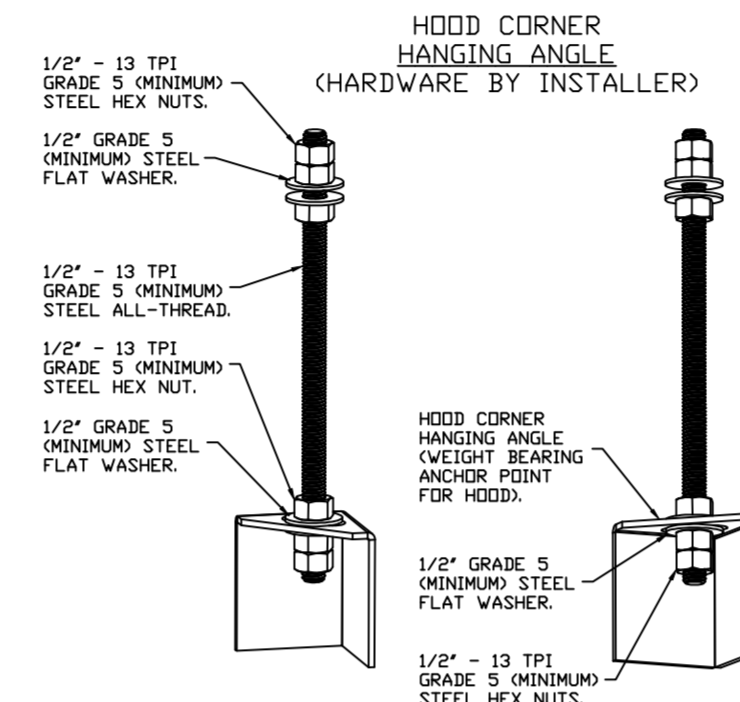
| HOOD NO | TAG | POS   | LENGTH | WIDTH | HEIGHT | TYPE | RISER(S) |      |     |     |        |
|---------|-----|-------|--------|-------|--------|------|----------|------|-----|-----|--------|
|         |     |       |        |       |        |      | WIDTH    | LENG | DIA | CFM | SP     |
| 1       |     | Front | 183'   | 22'   | 6'     | MUA  | 10"      | 24"  |     | 487 | 0.131' |
|         |     |       |        |       |        | MUA  | 10"      | 24"  |     | 487 | 0.131' |
|         |     |       |        |       |        | MUA  | 10"      | 24"  |     | 487 | 0.131' |
|         |     |       |        |       |        | MUA  | 10"      | 24"  |     | 487 | 0.131' |
|         |     |       |        |       |        | AC   |          |      | 8"  | 114 | 0.041' |
|         |     |       |        |       |        | AC   |          |      | 8"  | 114 | 0.041' |
|         |     |       |        |       |        | AC   |          |      | 8"  | 114 | 0.041' |
|         |     |       |        |       |        | AC   |          |      | 8"  | 114 | 0.041' |
|         |     |       |        |       |        | AC   |          |      | 8"  | 114 | 0.041' |
|         |     |       |        |       |        | AC   |          |      | 8"  | 114 | 0.041' |

1" LAYER OF INSULATION FACTORY INSTALLED IN INTERNAL BACK STANDOFF. MEETS 0 INCH REQUIREMENTS FOR CLEARANCE TO COMBUSTIBLE SURFACES.



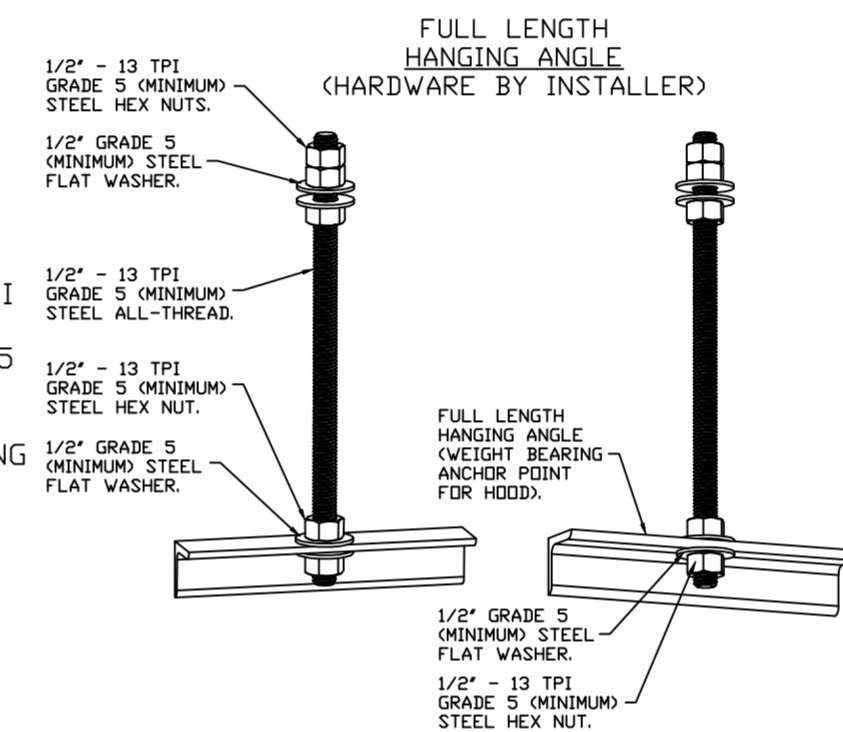
PLAN VIEW - HOOD #1  
14' 3.00" LONG 5424ND-2-ACPSP-F  
NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.

ACPSP SHIPS LOOSE FOR FIELD INSTALLATION



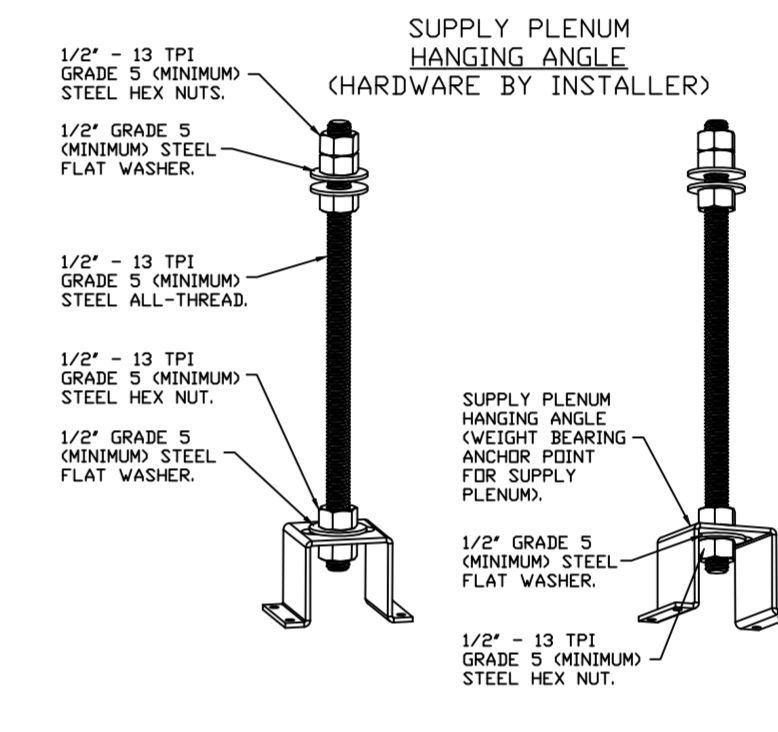
**ASSEMBLY INSTRUCTIONS**

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



**ASSEMBLY INSTRUCTIONS**

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**ASSEMBLY INSTRUCTIONS**

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NO EXCEPTION TAKEN  MAKE CORRECTIONS NOTED  
 NOTE MARKINGS  CHECKED FOR PREVIOUS CORRECTIONS ONLY  
 REJECTED  REVISE AND RESUBMIT FOR RECORD ONLY  
 REVISE AND RESUBMIT

Corrections of comments made on the shop drawings during this review do not relieve contractor from compliance with requirements of all the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction; coordinating his work with that of other trades; and performing his work in a safe and satisfactory manner.

**GREENBERG FARROW ARCHITECTURE INCORPORATED**  
Date: 03/25/2022 by: Ross Waters

**REVISIONS**

| DESCRIPTION | DATE |
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**CAPTIVEAIRE**

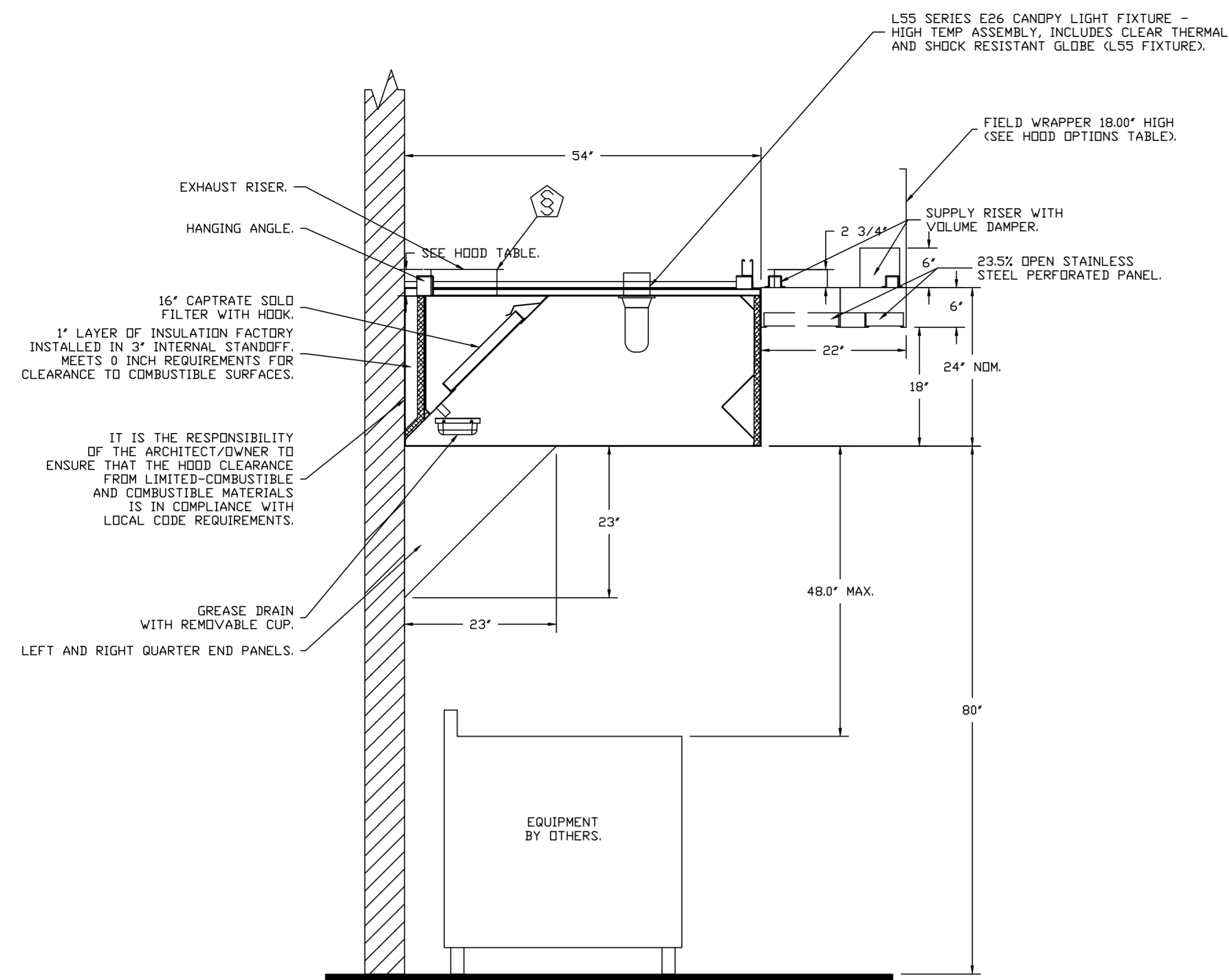
Highwoods Group  
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4641 Paragon Park Rd., Raleigh, NC 27616 PHONE: (919) 875-0420 FAX: (919) 875-0577 EMAIL: reg40@captiveaire.com

CHIPOTLE BURLINGTON NJ #3991  
BURLINGTON, NJ, 08016

DATE: 3/20/2022  
DWG.#: 5071884  
DRAWN BY: JMB-40  
SCALE: 3/4" = 1'-0"  
MASTER DRAWING

SHEET NO. 1



SECTION VIEW - MODEL 5424ND-2-ACPSP-F  
HOOD - #1

FIRE SYSTEM INFORMATION - JOB#5071884

| FIRE SYSTEM NO | TAG | TYPE       | SIZE    | FLOW POINTS | INSTALLATION       |                  |
|----------------|-----|------------|---------|-------------|--------------------|------------------|
|                |     |            |         |             | SYSTEM             | LOCATION ON HOOD |
| 1              |     | ANSUL R102 | 3.0/3.0 | 13          | FIRE CABINET RIGHT | RIGHT, HOOD 1    |

GAS VALVE(S)

| FIRE SYSTEM NO | TAG | TYPE       | SIZE  | SUPPLIED BY         |
|----------------|-----|------------|-------|---------------------|
| 1              |     | MECHANICAL | 1.500 | CAPTIVEAIRE SYSTEMS |

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**CAPTIVEAIRE**  
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SHEET NO.  
2

SPECIFICATIONS

TAG: Commercial Kitchen Ventilation Hoods, Listed Commercial Kitchen Hoods

PART 1 - GENERAL

1.1 SUMMARY

- A. The ND2 series is a Type I, wall canopy hood for use over 600°F cooking surface temperatures. The aerodynamic design includes a mechanical baffle and performance enhancing lip for exceptional capture and containment.
- B. The hood shall have the size, shape, and performance specified on drawings.

1.2 SUBMITTALS

- A. The manufacturer assumes no liability for the use or results of use from this document. Specifications are to be reviewed by the engineer to confirm the project's requirements and meet Federal, State, and Local codes and regulations.
- B. As the manufacturer continues product development, it reserves the right to change design and specifications without notice.
- C. The manufacturer shall supply complete computer generated submittal drawings, including hood section view(s) and hood plan view(s). These drawings must be available to the engineer, architect, and owner for their use in construction, operation, and maintenance.

1.3 QUALITY ASSURANCE

- A. This hood is ETL-listed to standard UL710, ULC710, and ULC-S646 when installed in accordance with these installation instructions and National Fire Protection Association Standard NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations."
- B. Built-in compliance with NSF/ANSI Standard 2.
- C. The hood shall be ETL Listed as:
  - 1. "Exhaust Hood Without Exhaust Damper."
  - 2. ETL Sanitation Listed and built in accordance with NFPA 96.
  - 3. The ETL label shall list temperature rating(s) and minimum CFM/ft rating(s).

1.4 WARRANTY

- A. All units shall be provided with the following standard warranty:
  - 1. This equipment is warranted to be free from defects in materials and workmanship, under normal use and service, for a period of 2-years from date of shipment.
- B. The manufacturer shall not be liable for incidental and consequential losses and damages potentially attributable to malfunctioning equipment. Should any part of the equipment prove to be defective in material or workmanship within the 2-year warranty period, upon examination by the manufacturer, such part will be repaired or replaced by manufacturer at no charge. The buyer shall pay all labor costs incurred in connection with such repair or replacement. Equipment shall not be returned without manufacturer's prior authorization, and all returned equipment shall be shipped by the buyer, freight prepaid to a destination determined by the manufacturer.
- C. Refer to Manufacturer's Operation, Installation, and Maintenance (OIM) Manual for detailed descriptions of what is/is not covered and contact information for warranty claims.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Construction shall be dependent on the structural application to minimize distortion and other defects. All seams, joints, and penetrations of the hood enclosure to the lower outermost perimeter, which directs and captures grease-laden vapor and exhaust gases, shall have a liquid-tight continuous external weld in accordance with NFPA 96.

- B. Duct sizes, CFM, and static pressure requirements shall be as shown on drawings. Static pressure requirements shall be precise and accurate; air velocity and volume information shall be accurate within 1-ft increments along the length of the ventilator.

2.2 CONSTRUCTION

- A. Construction shall be type 430 stainless steel.
- B. Double wall insulated front to eliminate condensation and increase rigidity on wide sizes. The insulation shall have a flexural modulus of 475 EI, meet UL 181 requirements and be in accordance with NFPA 90A and 90B.
- C. Hood shall be equipped with a minimum of four connections for hanger rods. Hood lengths greater than 12' will have added hangers.
- D. Exhaust duct collar to be 4" high with flange.
- E. The grease drain system shall be an enclosed integral part of the hood back and have slopes with an exposed, removable 1/2 grease cup to facilitate cleaning.
- F. An integral baffle to direct grease laden vapors toward the exhaust filter bank.
- G. Hood shall be furnished with UL classified filters, supplied in size and quantity as required by ventilator.
- H. All seams shall be welded and have stainless steel on exposed surfaces.

2.3 LIGHTING

- A. L55 Series canopy light fixture, includes clear thermal and shock resistant globe.

2.4 FILTERS

- A. Stainless Steel Captrate Solo filter with hook, ETL Listed. Particulate capture efficiency: 85% efficient at 9 microns, 76% efficient at 5 microns.

2.5 OPTIONS

- A. Fire Suppression System: UL 300 fire suppression system.
- B. Optional perforated supply plenum shall provide make-up air discharged below the cooking equipment.
  - 1. Perforated diffuser plates shall be included in the design to provide even air distribution.
  - 2. Unexposed surfaces shall be constructed of aluminized steel. Plenum shall be insulated to prevent condensation.
  - 3. Dual Plenum (AC-PSP)
- C. Hood Mounted Utility Cabinet - Cabinet can store listed fire suppression system, listed components, pre-wired electrical controls.

2.6 ACCESSORIES

- A. End Panel(s) maximize hood performance and eliminate the effects of cross drafts in the kitchen. Units constructed of stainless steel and sized according to hood width and cooking equipment. Exposed edges hemmed for safety and rigidity. Selected panels:
  - 1. Quarter End Panel
- B. Wrapper(s) may be installed from the factory or field installed. Wrapper(s) selected:
  - 1. Wrapper
- C. Miscellaneous option(s) selected:
  - 1. Full Dimension Hanging Bracket -Unistrut added to allow for various hood mounting locations.
  - 2. Insulation for Back of Hood -Backside of hood is fully insulated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions under which the system is installed. Do not proceed with work until unsatisfactory conditions have been

corrected in a manner acceptable to Installer.

3.2 INSTALLATION

- A. Install in accordance with manufacturer's instructions, drawings, written specifications, manufacturer's installation manual, and all applicable building codes.

| REVISIONS   |      |
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| DESCRIPTION | DATE |
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BURLINGTON, NJ, 08016

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| <b>DWG.#:</b> 5071884      |
| <b>DRAWN BY:</b> JMB-40    |
| <b>SCALE:</b> 3/4" = 1'-0" |
| <b>MASTER DRAWING</b>      |

**SHEET NO.**

3

**EXHAUST FAN INFORMATION – JOB#5071884**

| FAN UNIT NO | TAG  | QTY | FAN UNIT MODEL # | MANUFACTURER | CFM  | ESP   | RPM  | MOTOR ENCL  | HP    | BHP    | PHASE | VOLT | FLA  | DISCHARGE VELOCITY | WEIGHT (LBS) | SDNES |
|-------------|------|-----|------------------|--------------|------|-------|------|-------------|-------|--------|-------|------|------|--------------------|--------------|-------|
| 1           | EF-1 | 1   | DU240HFA         | CAPTIVEAIRE  | 3200 | 1.500 | 853  | DDP,PREMIUM | 3.000 | 1.6890 | 3     | 208  | 10.2 | 727 FPM            | 304          | 16.1  |
| 2           | EF-2 | 1   | DR12HFA          | CAPTIVEAIRE  | 150  | 0.600 | 1282 | TEAD-ECM    | 0.250 | 0.0940 | 1     | 115  | 2.9  |                    | 49           | 7.1   |

**MUA FAN INFORMATION – JOB#5071884**

| FAN UNIT NO | TAG   | QTY | FAN UNIT MODEL # | BLOWER     | HOUSING  | MIN CFM | DESIGN CFM | ESP   | RPM  | MOTOR ENCL  | HP    | BHP    | PHASE | VOLT | FLA | MCA  | MDCP | WEIGHT (LBS) | SDNES |
|-------------|-------|-----|------------------|------------|----------|---------|------------|-------|------|-------------|-------|--------|-------|------|-----|------|------|--------------|-------|
| 3           | MAU-1 | 1   | A1-D.250-15D     | 15MF-1-MDD | A1-D.250 | 1000    | 1950       | 0.500 | 2038 | DDP,PREMIUM | 2.000 | 1.3650 | 3     | 208  | 6.1 | 7.7A | 15A  | 517          | 21    |

**GAS FIRED MAKE-UP AIR UNIT(S)**

| FAN UNIT NO | TAG   | INPUT BTUs | OUTPUT BTUs | TEMP RISE | REQUIRED INPUT GAS PRESSURE | GAS TYPE | BURNER EFFICIENCY(%) |
|-------------|-------|------------|-------------|-----------|-----------------------------|----------|----------------------|
| 3           | MAU-1 | 133408     | 122735      | 59°F      | 7 IN. W.C. – 14 IN. W.C.    | NATURAL  | 92                   |

**FAN OPTIONS**

| FAN UNIT NO | TAG   | QTY | DESCRIPTION  |
|-------------|---|-----|--|
| 1           | EF-1  | 1   | GREASE BOX   |
|             |   | 1   | REMOVE HINGE KIT LABEL FROM THE FAN BASE   |
| 2           | EF-2  | 1   | 2 YEAR PARTS WARRANTY  |
|             |   | 1   | I 12-BDD DAMPER  |
| 3           | MAU-1   | 1   | ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL (TELCO MOTOR), CCW ROTATION           |
|             |   | 1   | 2 YEAR PARTS WARRANTY  |
|             |   | 1   | MOTORIZED BACKDRAFT DAMPER FOR A1-D HOUSING - MEETS AMCA CLASS 1A RATING                             |
|             |   | 1   | LOW FIRE START   |
|             |   | 1   | INLET PRESSURE GAUGE, 0-35"  |
|             |   | 1   | MANIFOLD PRESSURE GAUGE, -5 TO 15" WC  |
|             |   | 1   | SEPARATE 120V WIRING PACKAGE (REQUIRED AND USED ONLY FOR DCV OR PREWIRE WITH VFD) - THREE PHASE ONLY |
| 1           | SIZE 1 TEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS |     |  |
| 1           | UNIT MOUNTED VFD FOR USE WITH ECM03                             |     |  |
| 1           | 2 YEAR PARTS WARRANTY   |     |  |

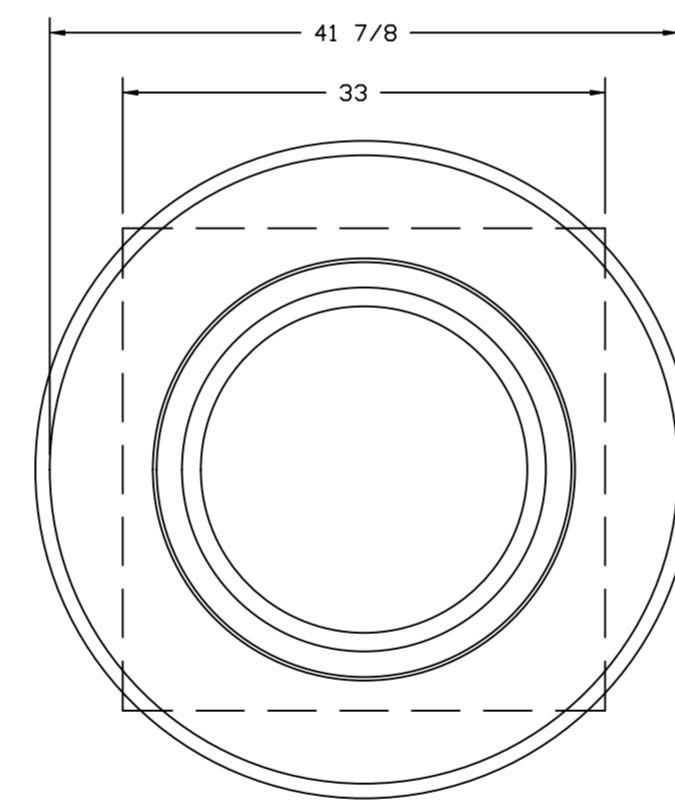
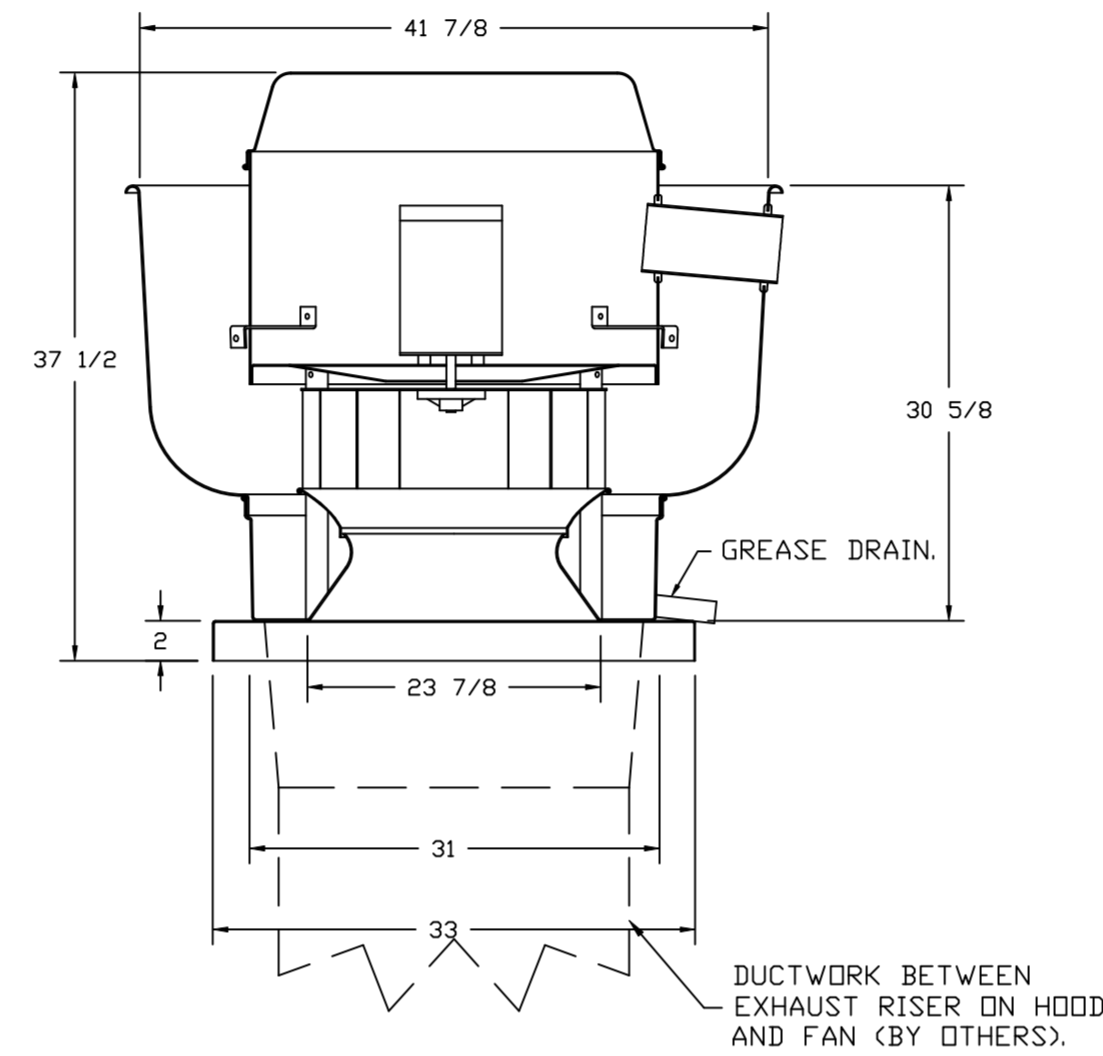
**FAN ACCESSORIES**

| FAN UNIT NO | TAG   | EXHAUST    |                |            |                | SUPPLY         |                  |            |  |
|-------------|-------|------------|----------------|------------|----------------|----------------|------------------|------------|--|
|             |       | GREASE CUP | GRAVITY DAMPER | WALL MOUNT | SIDE DISCHARGE | GRAVITY DAMPER | MOTORIZED DAMPER | WALL MOUNT |  |
| 1           | EF-1  | YES        |                |            |                |                |                  |            |  |
| 2           | EF-2  |            | YES            |            |                |                |                  |            |  |
| 3           | MAU-1 |            |                |            |                |                | YES              |            |  |

**CURB ASSEMBLIES**

| NO | ON FAN | TAG   | WEIGHT | ITEM | SIZE   |
|----|--------|-------|--------|------|--|
| 1  | # 1    |       | 43 LBS | CURB | 31.500"W X 31.500"L X 20.000"H ALONG LENGTH, RIGHT VENTED.   |
| 2  | # 2    | EF-2  | 31 LBS | CURB | 17.500"W X 17.500"L X 26.000"H ALONG LENGTH, RIGHT.          |
| 3  | # 3    | MAU-1 | 75 LBS | CURB | 21.000"W X 71.000"L X 20.000"H ALONG WIDTH, RIGHT INSULATED. |
|    | # 3    |       |        | RAIL | 4.000"W X 4.000"L X 36.000"H ALONG LENGTH, RIGHT.            |

FAN #1 DU240HFA – EXHAUST FAN (EF-1)



TOP VIEW

**FEATURES:**

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

**NORMAL TEMPERATURE TEST**

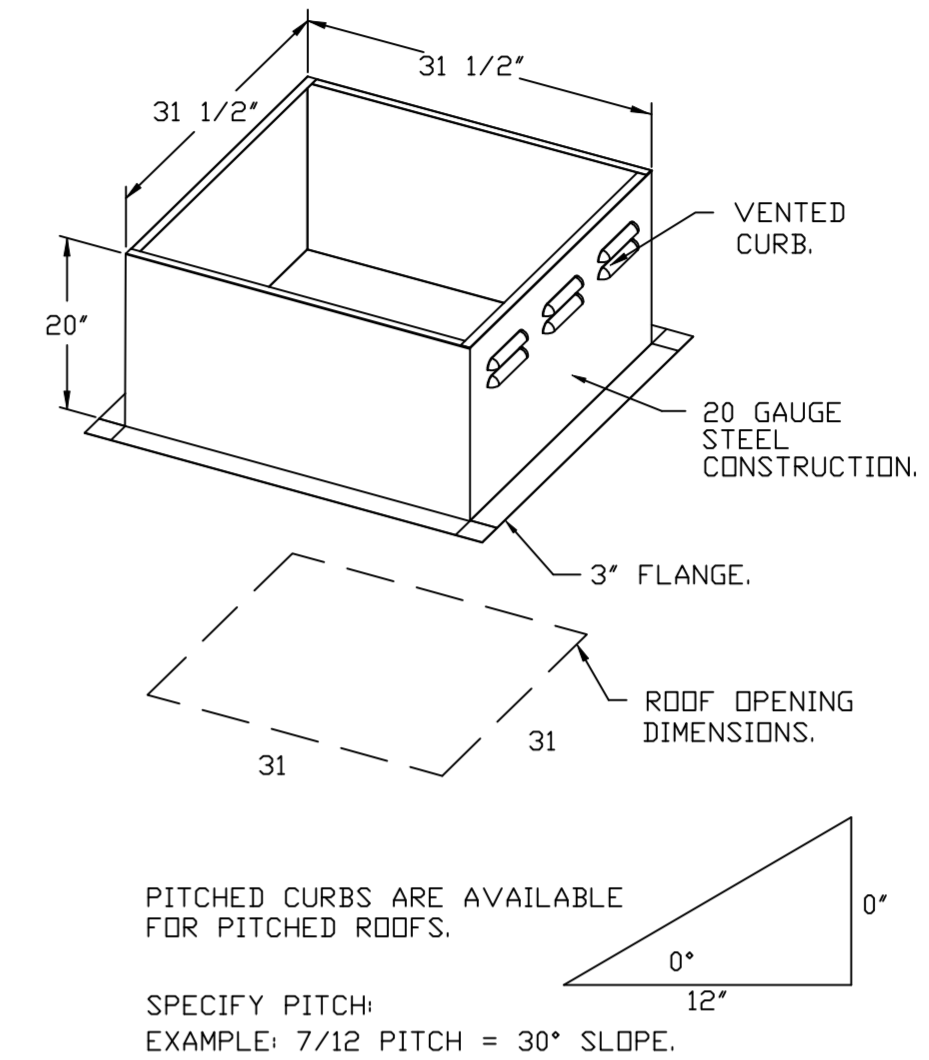
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

**ABNORMAL FLARE-UP TEST**

EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

**OPTIONS**

- GREASE BOX.
- REMOVE HINGE KIT LABEL FROM THE FAN BASE.
- 2 YEAR PARTS WARRANTY.

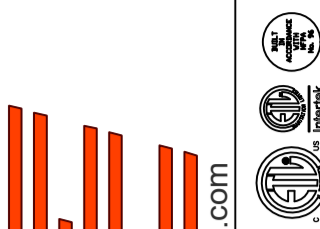


PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

SPECIFY PITCH:  
EXAMPLE: 7/12 PITCH = 30° SLOPE.

**REVISIONS**

| DESCRIPTION | DATE |
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5071884

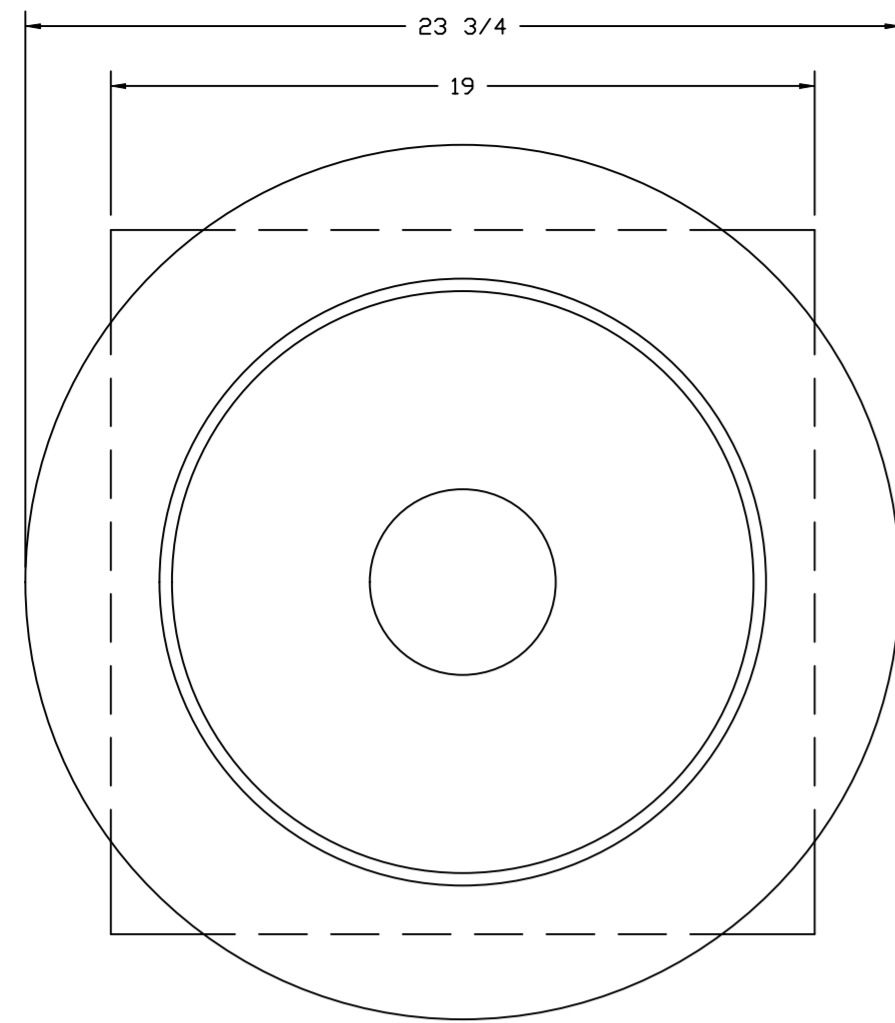
DRAWN BY: JMB-40

SCALE:  
3/4" = 1'-0"

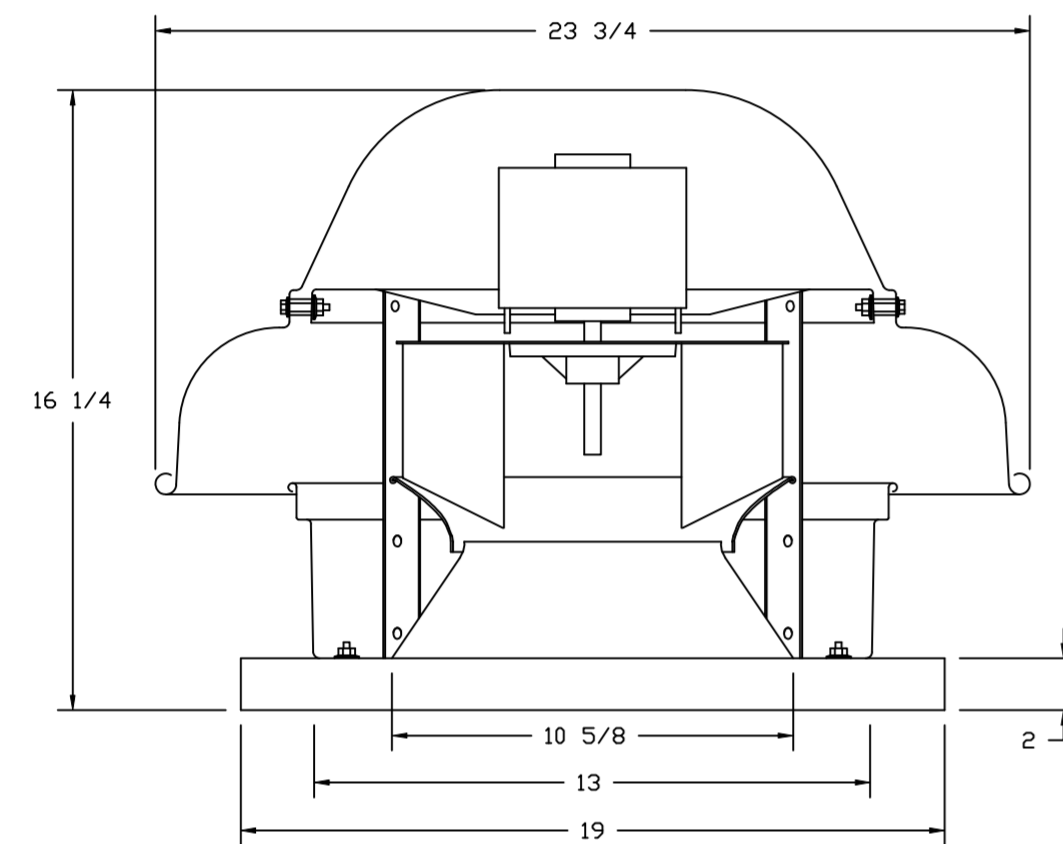
MASTER DRAWING

SHEET NO.  
4

FAN #2 DR12HFA - EXHAUST FAN (CF-2)



TOP VIEW

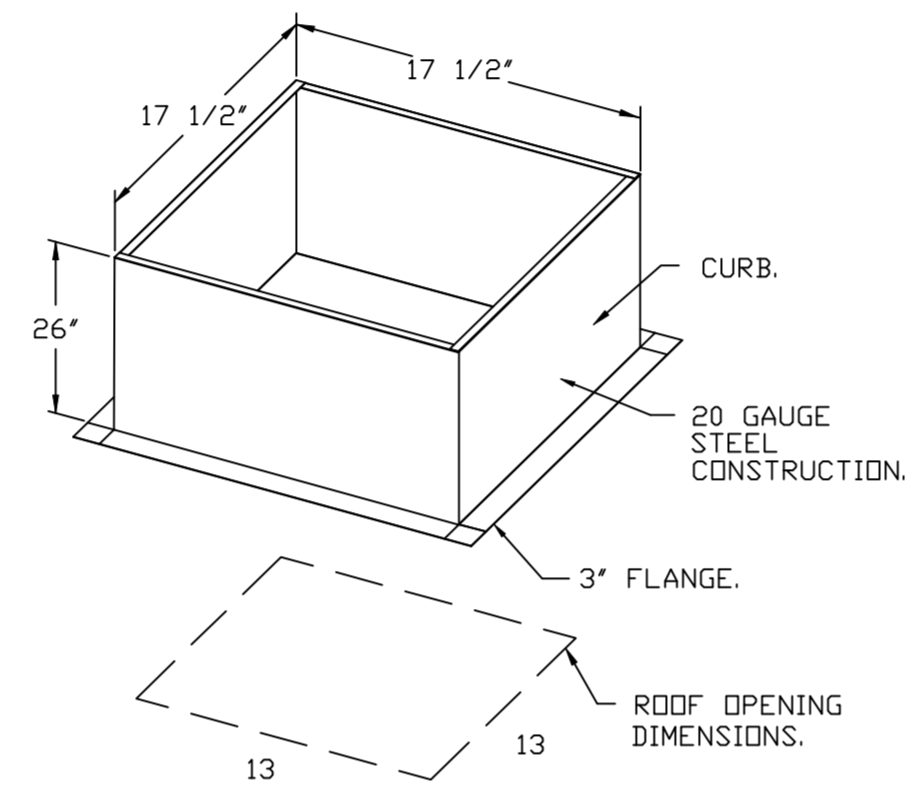


**FEATURES:**

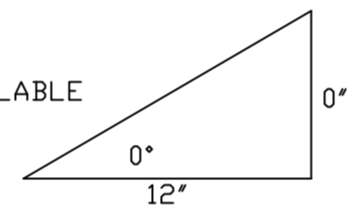
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- UL705.
- SAFETY DISCONNECT.
- STANDARD BIRD SCREEN.
- SPEED CONTROL.

**OPTIONS:**

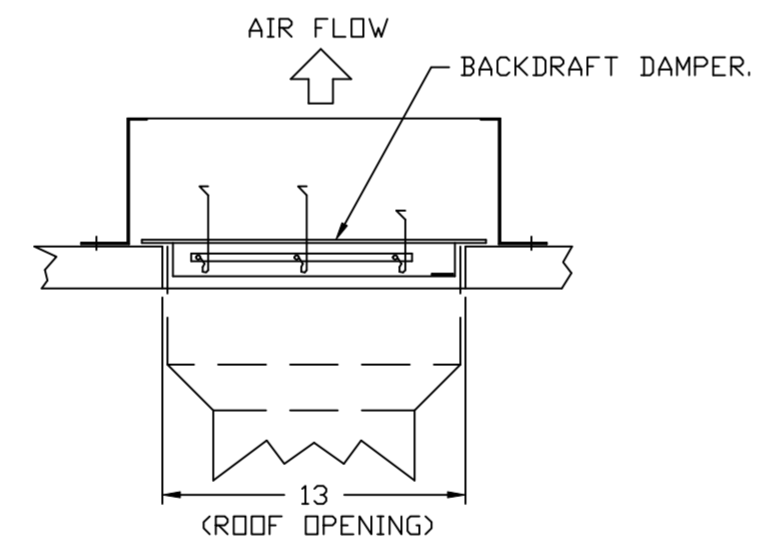
- 1 1/2" BDD DAMPER.
- EDM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL (TELCO MOTOR), CCW ROTATION.
- 2 YEAR PARTS WARRANTY.



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.  
 SPECIFY PITCH:  
 EXAMPLE: 7/12 PITCH = 30° SLOPE.

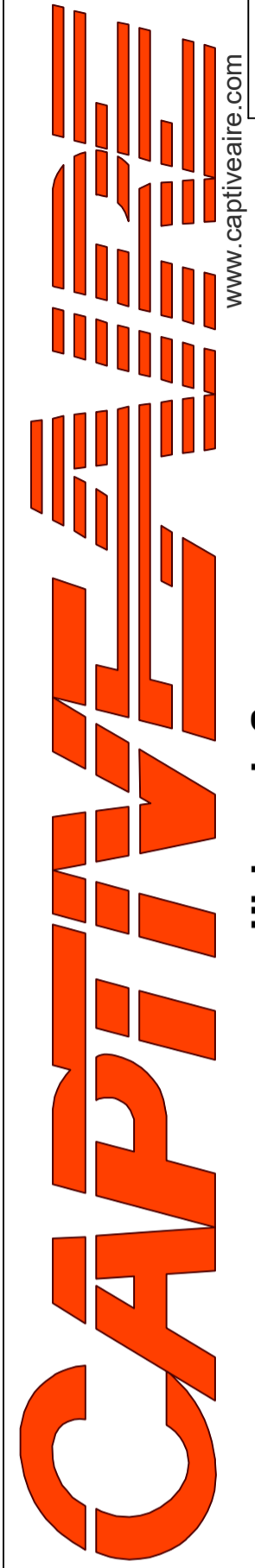
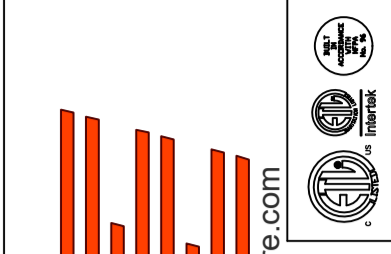


**BACKDRAFT DAMPER INSTALLATION**



**REVISIONS**

| DESCRIPTION | DATE: |
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Highwoods Group

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CHIPOTLE BURLINGTON NJ #3991  
 BURLINGTON, NJ, 08016

DATE: 3/20/2022

DWG.#: 5071884

DRAWN BY: JMB-40

SCALE: 3/4" = 1'-0"

MASTER DRAWING

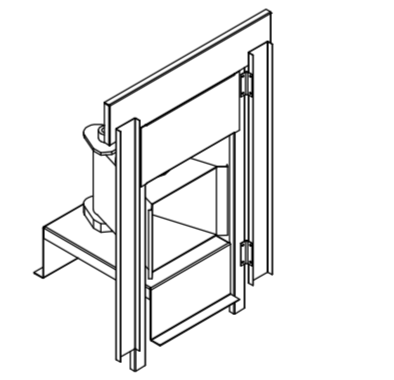
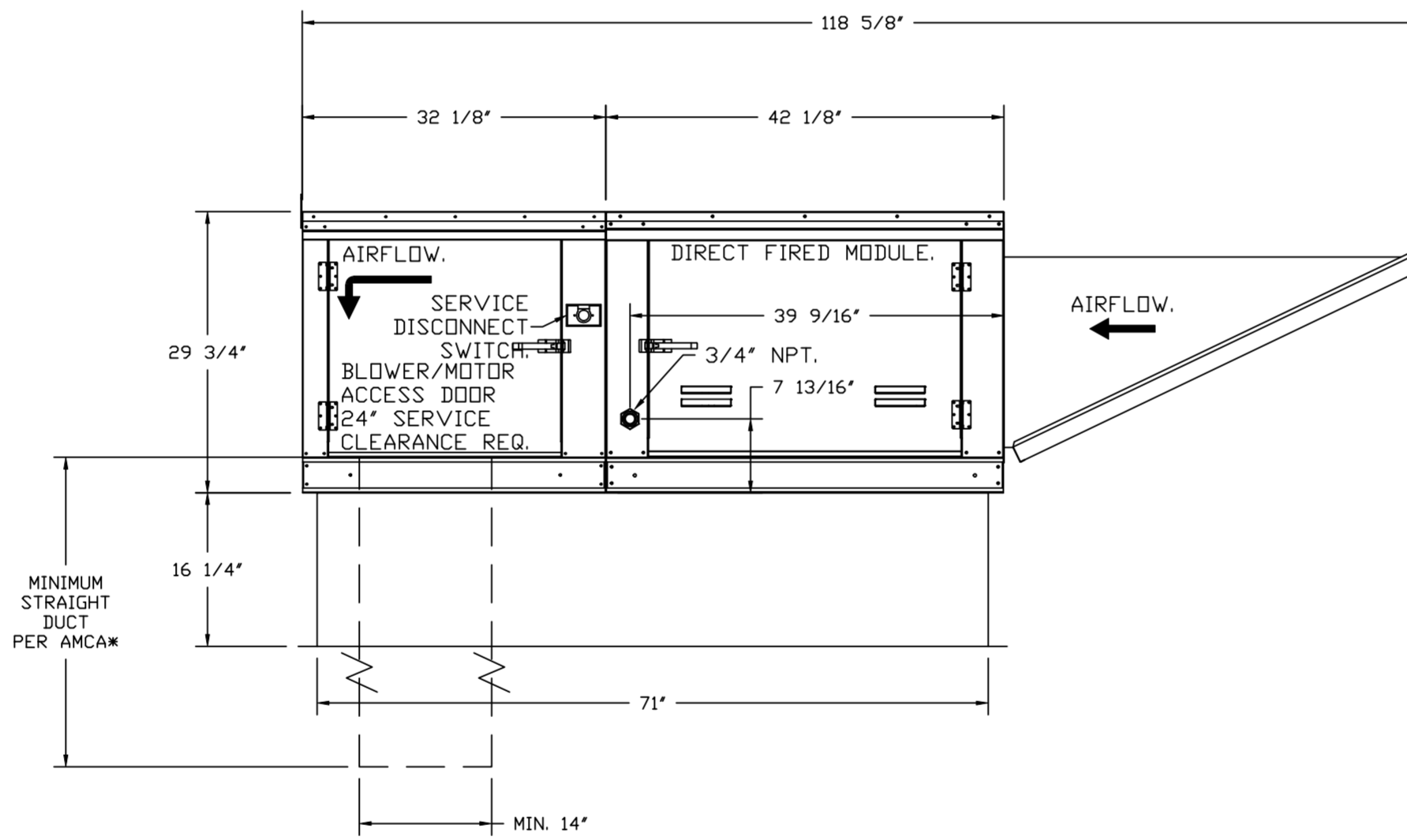
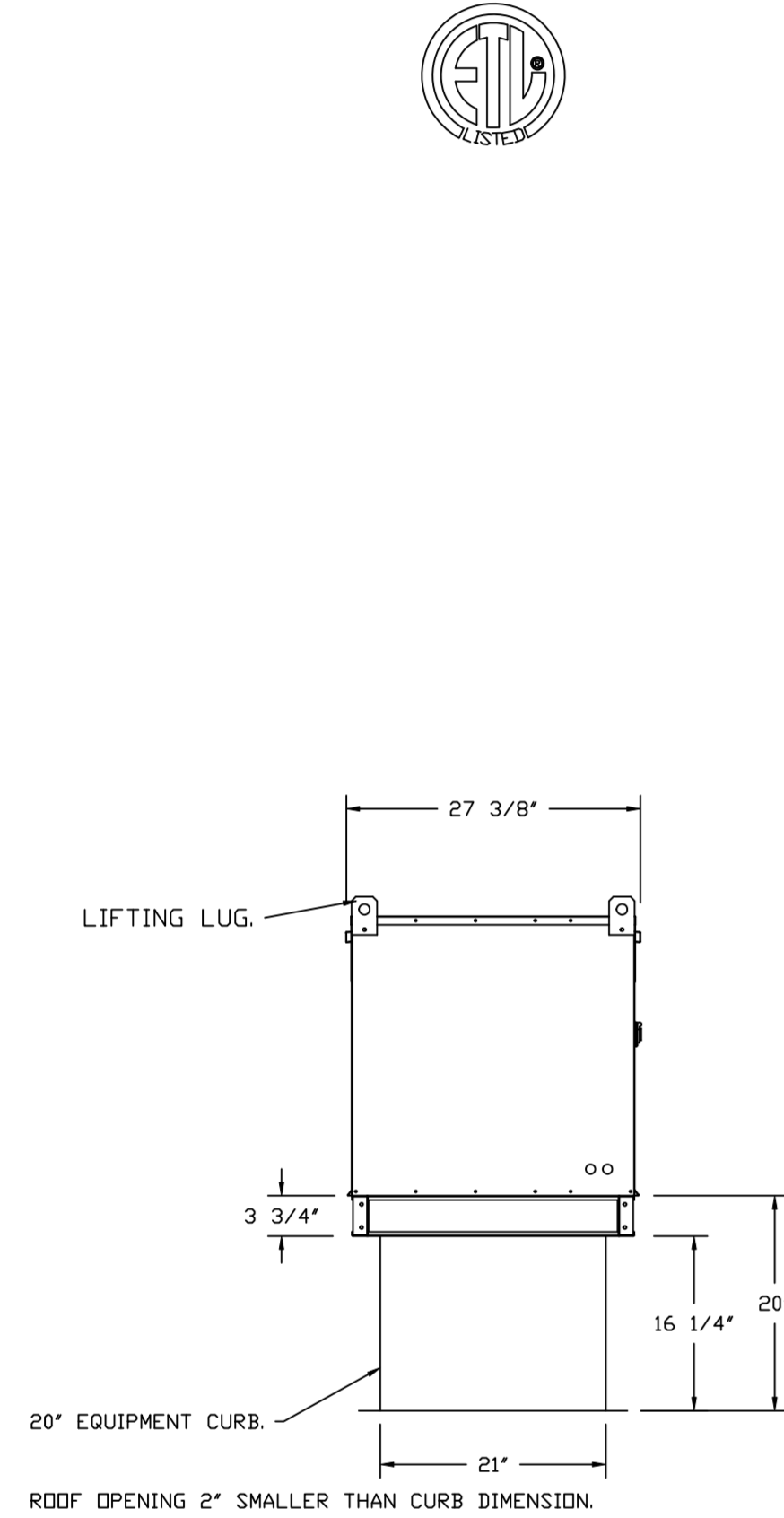
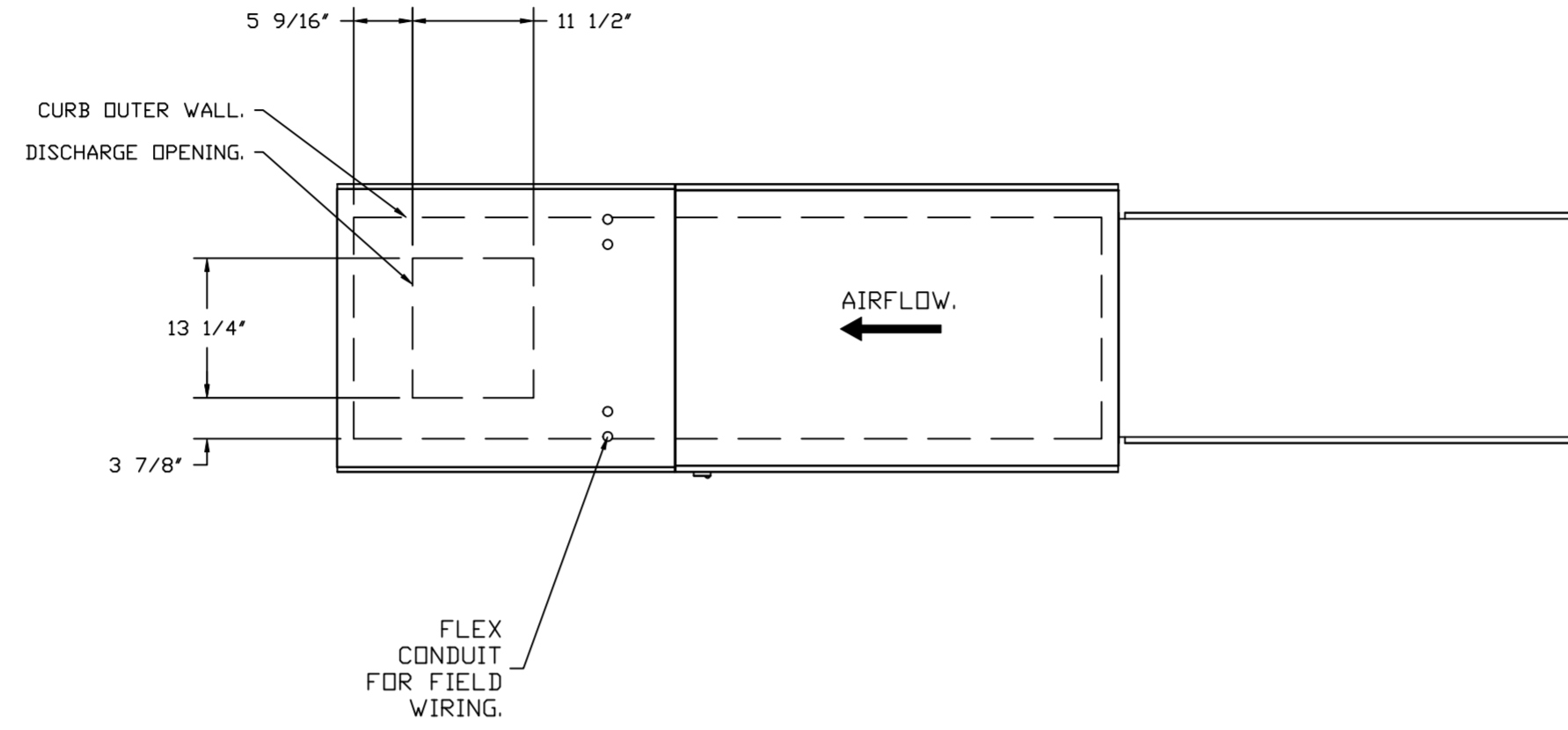
SHEET NO. 5

- FAN #3 AI-D250-15D - HEATER (MAU-1)
1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 15' MIXED FLOW DIRECT DRIVE FAN.
  2. INTAKE HOOD WITH EZ FILTERS.
  3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
  4. MOTORIZED BACK DRAFT DAMPER 16" X 18" FOR SIZE 1 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, TFB20S ACTUATOR INCLUDED.
  5. LOW FIRE START. ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
  6. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE.
  7. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC., 2.5" DIAMETER, 1/4" THREAD SIZE.
  8. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH.
  9. DOWN DISCHARGE CONSTRUCTION FOR SIZE 1 DIRECT DRIVE AHUS.
  10. UNIT MOUNTED VFD FOR USE WITH ECPM03.
  11. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER SECTION).
  12. 2 YEAR PARTS WARRANTY

\*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 14" X 14".

SUPPLY SIDE HEATER INFORMATION

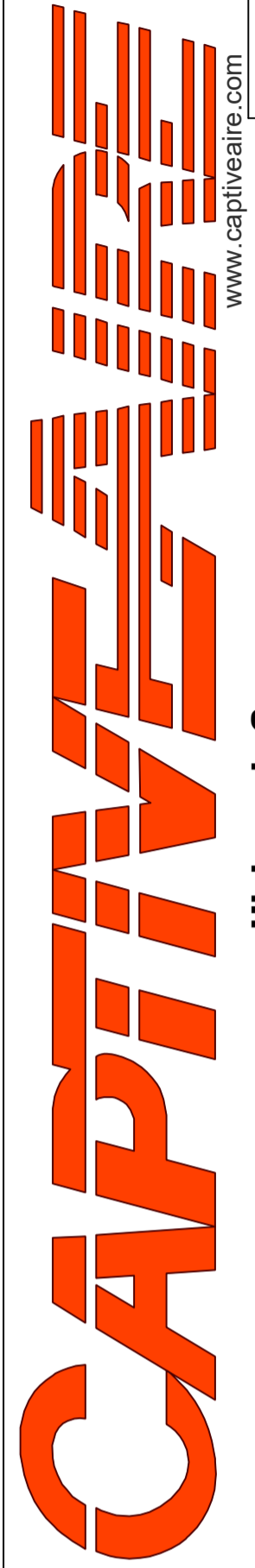
WINTER TEMPERATURE = 16°F. TEMP. RISE = 59°F.  
 BTUs CALCULATED OFF ACTUAL AIR DENSITY.  
 OUTPUT BTUs AT ALTITUDE OF 0.0 FT. = 122913.  
 INPUT BTUs AT ALTITUDE OF 0.0 FT. = 133601.  
 OUTPUT BTUs AT ALTITUDE OF 40 FT. = 122735.  
 INPUT BTUs AT ALTITUDE OF 40 FT. = 133408.



DIRECT FIRED (DF) PROFILE PLATE ASSEMBLY

**DIRECT FIRED PROFILE PLATE SPECIFICATIONS:**  
**DESCRIPTION:**  
 DIRECT FIRED BURNERS SHALL HAVE PATENTED (US PATENT NO. US6629523B2), SELF-ADJUSTING PROFILE PLATES DESIGNED TO ENSURE PROPER AIR VELOCITY AND PRESSURE DROP ACROSS THE BURNER. PROFILE PLATES SHALL ALLOW BURNERS TO ACHIEVE CLEAN COMBUSTION BY LIMITING BY-PRODUCT LEVELS TO A MAXIMUM OF 5PPM OF CARBON MONOXIDE (CO), AND 0.5PPM OF NITROGEN DIOXIDE (NO2). DIRECT FIRED UNITS SHALL BE CONFIGURED WITH THE BLOWER MOUNTED DOWNSTREAM OF THE BURNER. THIS ARRANGEMENT WILL ENSURE A CONSISTENT AIRFLOW, REGARDLESS OF INLET AIR TEMPERATURE.  
**APPLICATION:**  
 SPRING-LOADED BURNER PROFILE PLATES ARE ENGINEERED TO AUTOMATICALLY REACT TO THE MOMENTUM OF A FRESH AIR STREAM, WITHOUT THE NEED FOR ANY MOTORS OR ACTUATORS TO MECHANICALLY ADJUST THEM. WITH THIS FEATURE, ALL DF UNITS ARE DESIGNED FOR DEMAND CONTROL VENTILATION (DCV) REQUIREMENTS.  
**CERTIFICATIONS:**  
 ALL PROFILE PLATE ASSEMBLIES SHALL BE INCLUDED IN THE DF UNIT'S ETL LISTING AND COMPLY WITH COMBINED SAFETY STANDARDS ANSI Z83.4 AND CSA 3.7 (NON-RECIRCULATING DF HEATERS) AND ANSI Z83.18 (RECIRCULATING DF HEATERS).  
**GENERAL CONSTRUCTION:**  
 -PROFILE PLATES SHALL BE FORMED FROM G90 GALVANIZED STEEL.  
 -PROFILE PLATES SHALL VARY IN SIZE PER UNIT.  
 -PROFILE PLATES SHALL BE MOUNTED ALONG THE SAME PLANE AS THE DISCHARGE OF THE BURNER.  
 -DESIGN SHALL INCORPORATE PROPERLY TORQUED, PERMANENTLY MOUNTED SPRING HINGES.  
 -SPRING HINGES SHALL BE MADE FROM PLATED STEEL.

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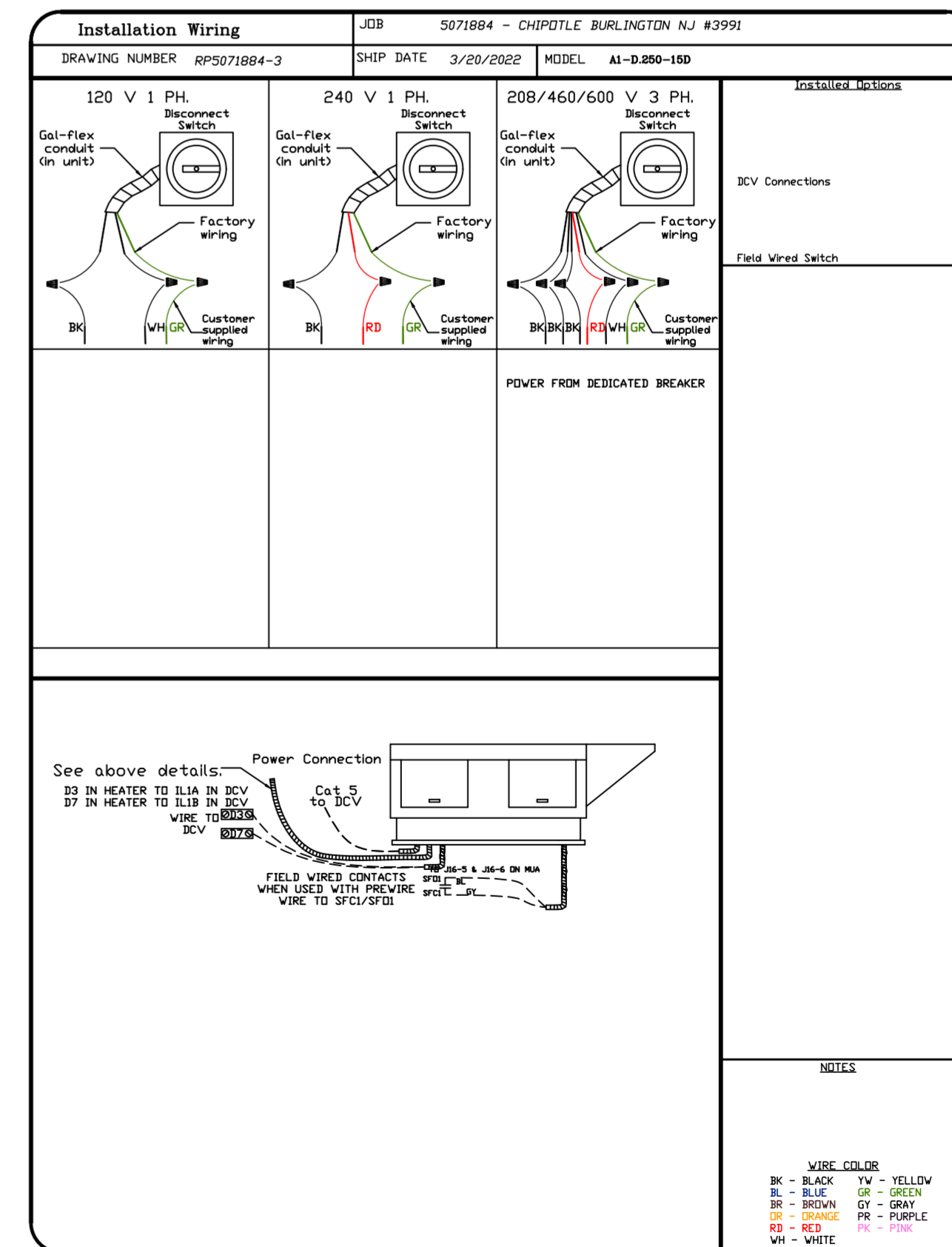
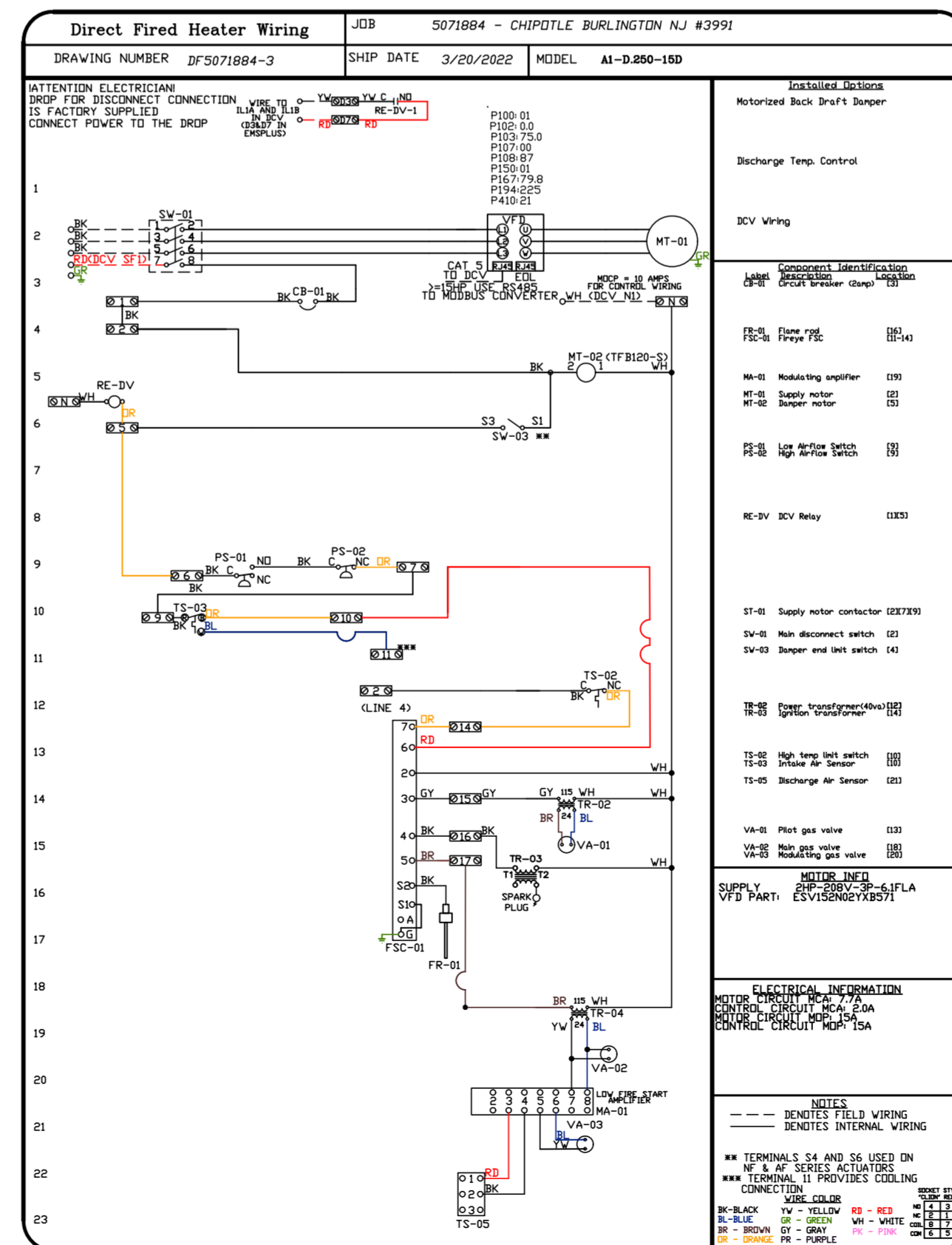
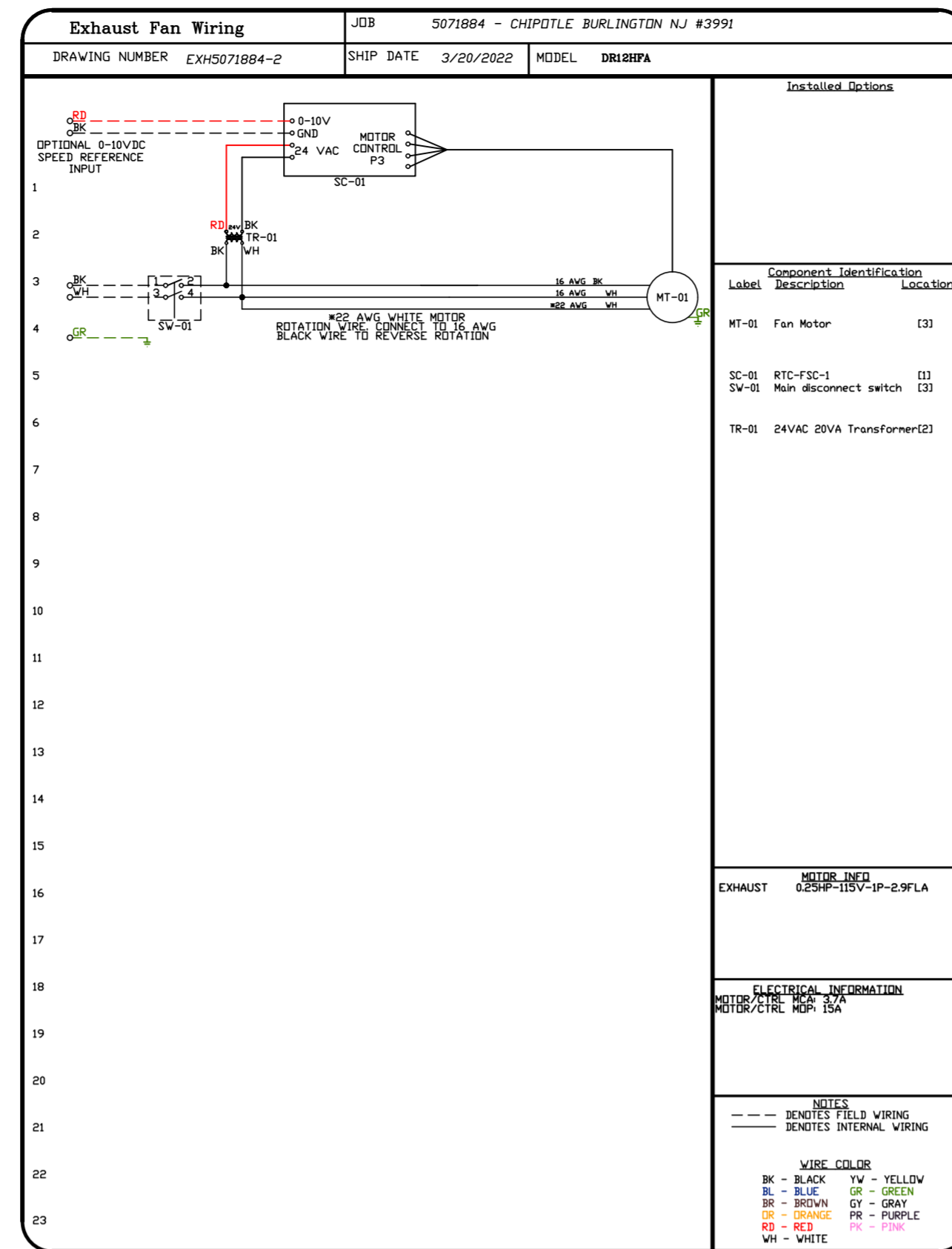
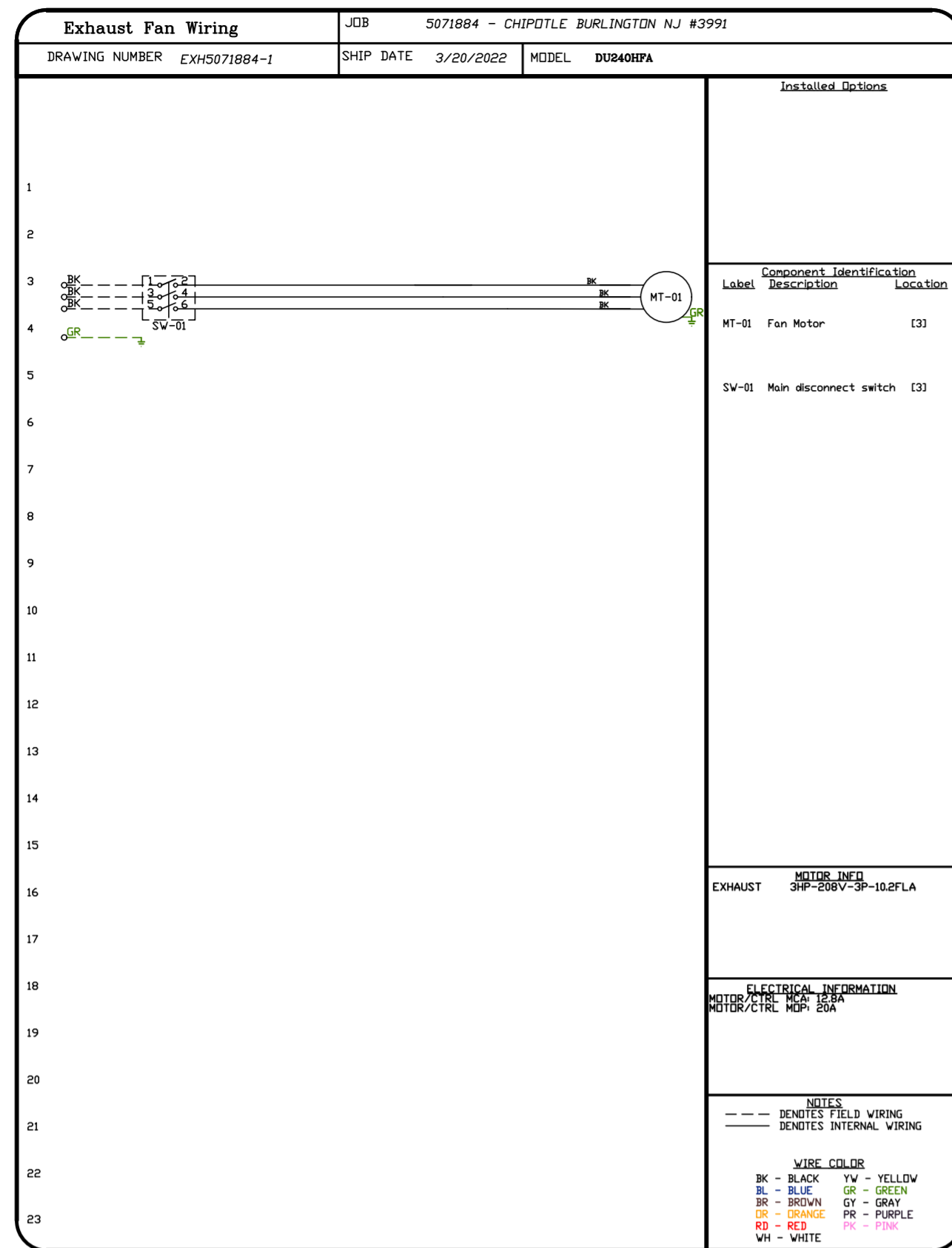


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CHIPOTLE BURLINGTON NJ #3991  
 BURLINGTON, NJ, 08016

DATE: 3/20/2022  
 DWG.#: 5071884  
 DRAWN BY: JMB-40  
 SCALE: 3/4" = 1'-0"  
 MASTER DRAWING

SHEET NO. 6



| REVISIONS   |      |
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| DESCRIPTION | DATE |
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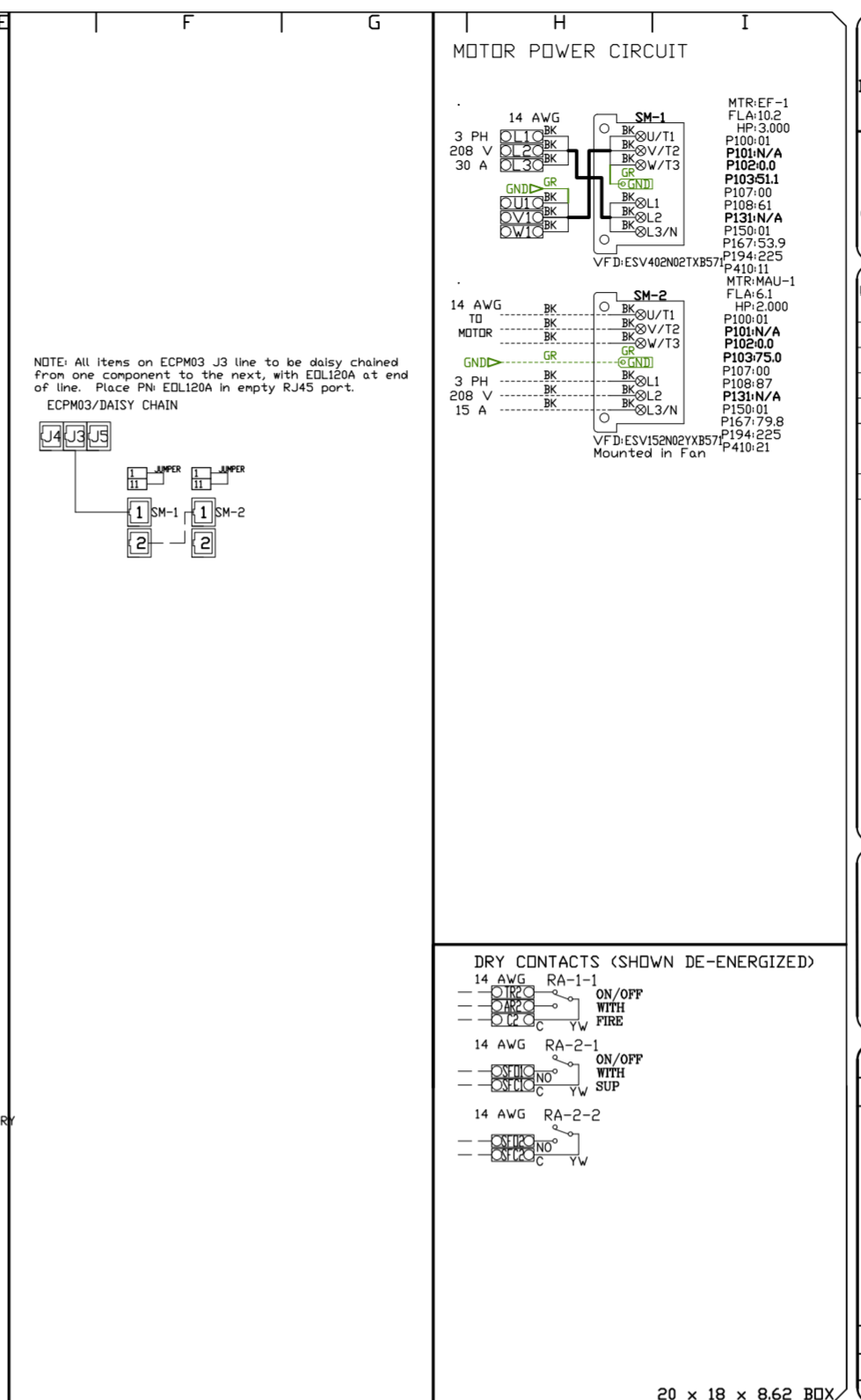
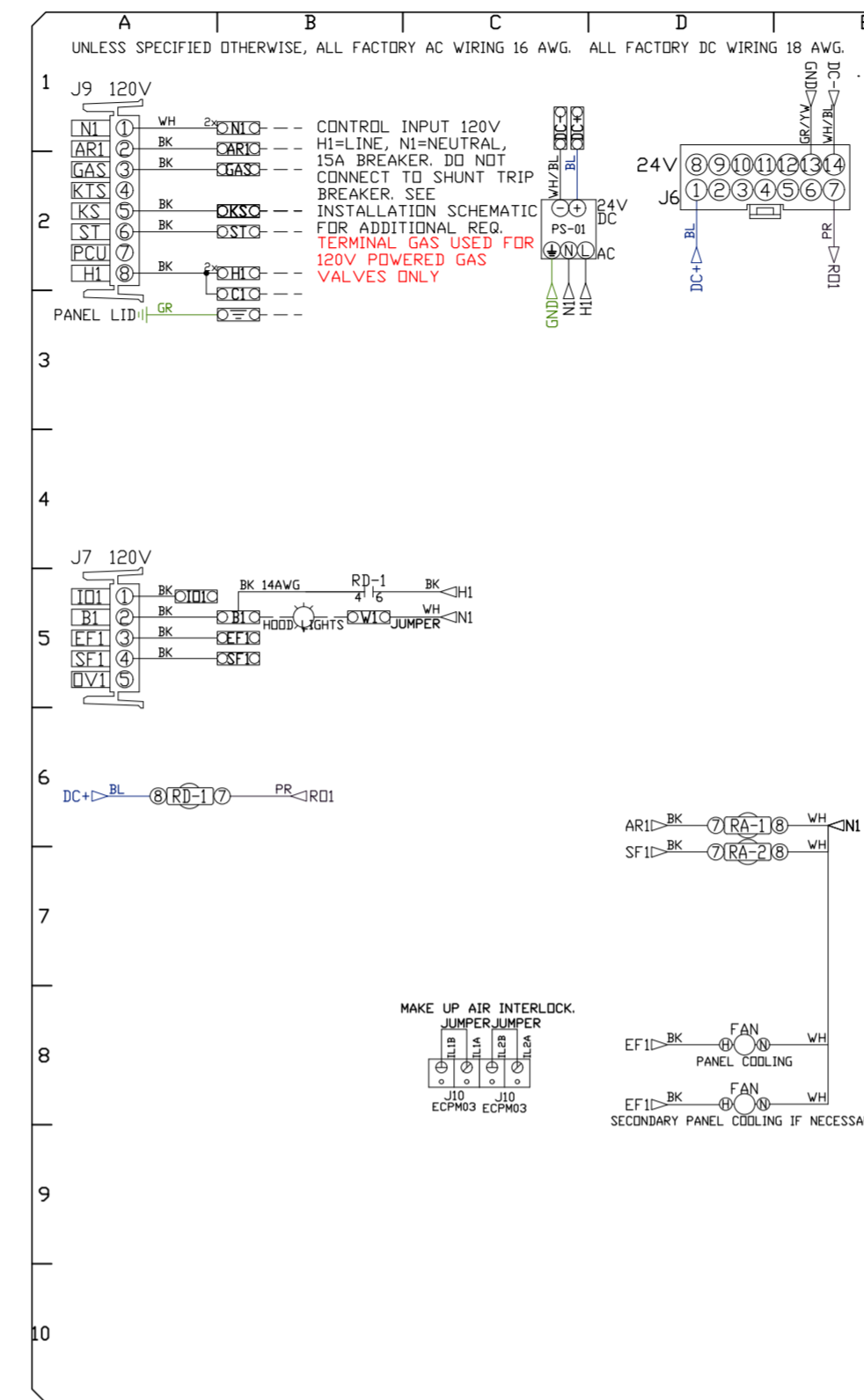
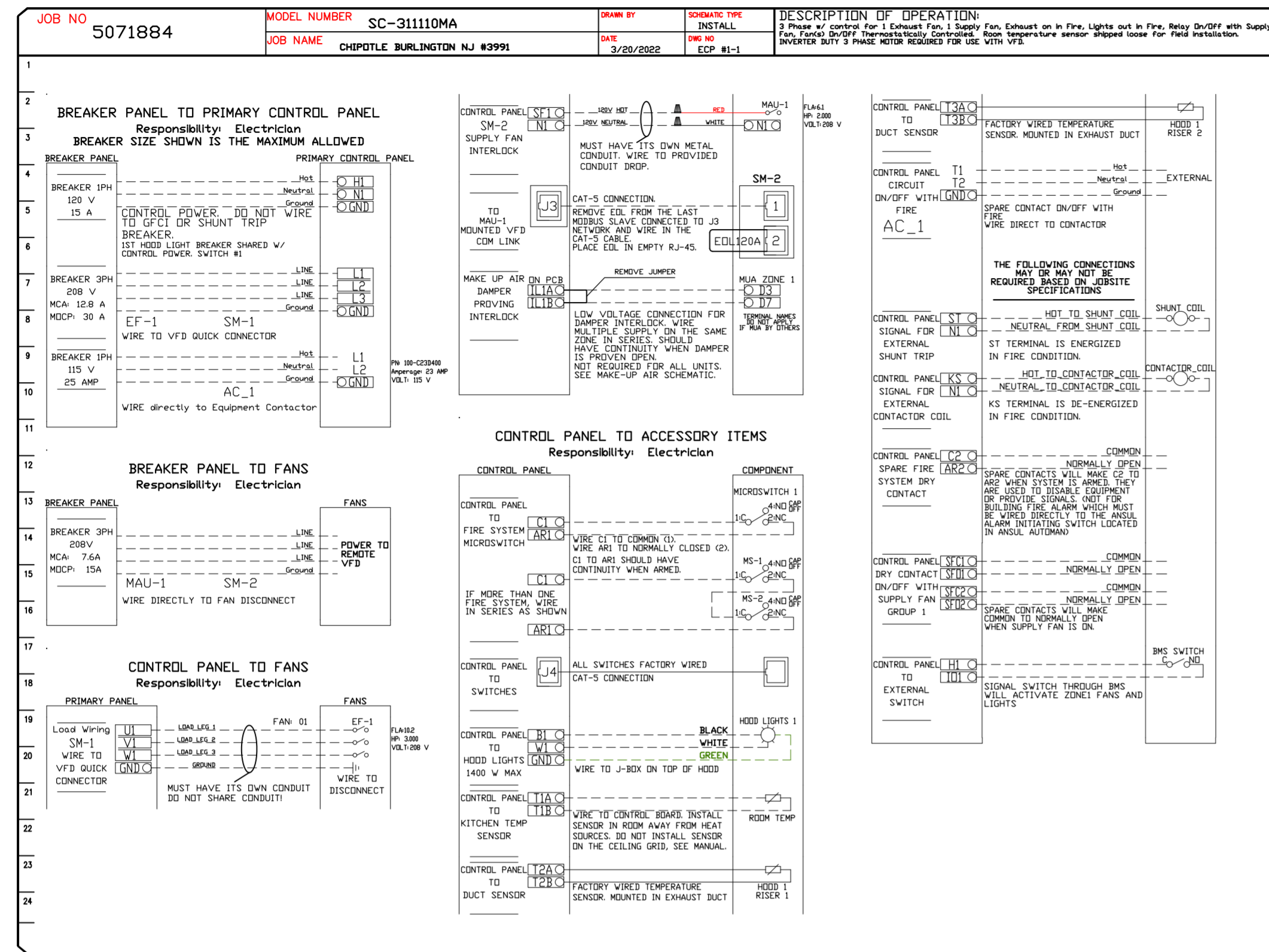
SCALE:  
3/4" = 1'-0"

MASTER DRAWING

SHEET NO.  
7

ELECTRICAL PACKAGE - JOB#5071884

| NO | TAG | PACKAGE #   | LOCATION              | SWITCHES                   |                  | OPTION  | FANS CONTROLLED |         |   |       |      |      |
|----|-----|-------------|-----------------------|----------------------------|------------------|---|-----------------|---------|---|-------|------|------|
|    |     |             |                       | LOCATION                   | QUANTITY         |   | FAN TAG         | TYPE    | # | HP    | VOLT | FLA  |
| 1  |     | SC-311110MA | UTILITY CABINET RIGHT | 04 - UTILITY CABINET RIGHT | 1 LIGHT HOOD # 1 | SMART CONTROLS THERMOSTATIC CONTROL W/ RELAY ON/OFF WITH SUPPLY | EF-1            | EXHAUST | 3 | 3.000 | 208  | 10.2 |
|    |     |             |                       |                            |                  |   | MAU-1           | SUPPLY  | 3 | 2.000 | 208  | 6.1  |



**FACTORY WIRING SCHEMATIC CIRCUIT BOARDS**  
 DCV Rev. 2.14.00  
 HMI Rev. 2.14.00

**COMPONENT LIST**

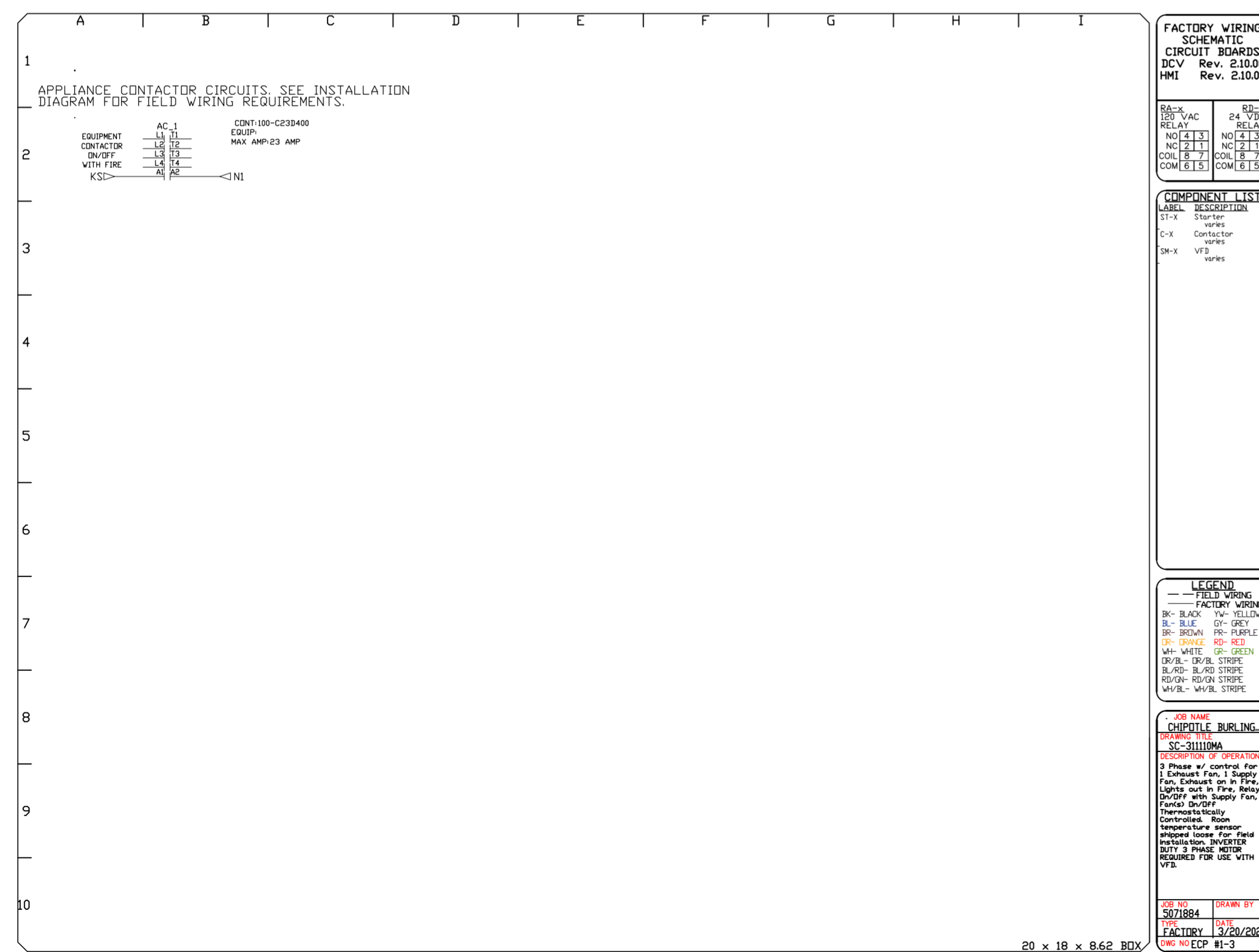
| ITEM | DESCRIPTION       |
|------|-------------------|
| 1    | Shunt Trip        |
| 2    | Overload          |
| 3    | Contactor         |
| 4    | Power-Sup, 24VDC  |
| 5    | Relay             |
| 6    | 120V Relay        |
| 7    | 24VDC Light Relay |
| 8    | Thermostat        |
| 9    | 24VDC-12VDC       |

**LEGEND**

--- FIELD WIRING  
 --- FACTORY WIRING  
 BK-BLACK, BR-BROWN, BU-BLUE, GR-GRAY, GN-GREEN, WH-WHITE, RD-RED, YL-YELLOW, LG-LIGHT GREEN, LGN-LIGHT GREEN, LGD-DARK GREEN, LGV-VOLTA, LGW-WHITE, LGY-YELLOW, LGZ-ZINC, LG1-1, LG2-2, LG3-3, LG4-4, LG5-5, LG6-6, LG7-7, LG8-8, LG9-9, LG10-10, LG11-11, LG12-12, LG13-13, LG14-14, LG15-15, LG16-16, LG17-17, LG18-18, LG19-19, LG20-20, LG21-21, LG22-22, LG23-23, LG24-24, LG25-25, LG26-26, LG27-27, LG28-28, LG29-29, LG30-30, LG31-31, LG32-32, LG33-33, LG34-34, LG35-35, LG36-36, LG37-37, LG38-38, LG39-39, LG40-40, LG41-41, LG42-42, LG43-43, LG44-44, LG45-45, LG46-46, LG47-47, LG48-48, LG49-49, LG50-50, LG51-51, LG52-52, LG53-53, LG54-54, LG55-55, LG56-56, LG57-57, LG58-58, LG59-59, LG60-60, LG61-61, LG62-62, LG63-63, LG64-64, LG65-65, LG66-66, LG67-67, LG68-68, LG69-69, LG70-70, LG71-71, LG72-72, LG73-73, LG74-74, LG75-75, LG76-76, LG77-77, LG78-78, LG79-79, LG80-80, LG81-81, LG82-82, LG83-83, LG84-84, LG85-85, LG86-86, LG87-87, LG88-88, LG89-89, LG90-90, LG91-91, LG92-92, LG93-93, LG94-94, LG95-95, LG96-96, LG97-97, LG98-98, LG99-99, LG100-100

**CHIPOTLE BURLING.**  
**SCHEMATIC**  
**DESCRIPTION OF OPERATION:** 2 Phase AC Control for Exhaust Fan, Supply Fan, Exhaust on in Fire, Lights on in Fire, Relay On/Off with Supply Fan, Fan On/Off Thermostatic Control, Room Temperature sensor, Shunt Trip, Breaker, Breaker size shown for field installation.

**JOB NO** 5071884  
**DATE** 3/20/2022  
**SCALE** 1:1



**REVISIONS**

| NO | DESCRIPTION | DATE |
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**CHIPOTLE BURLINGTON NJ #3991**  
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**SHEET NO.**  
 8

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