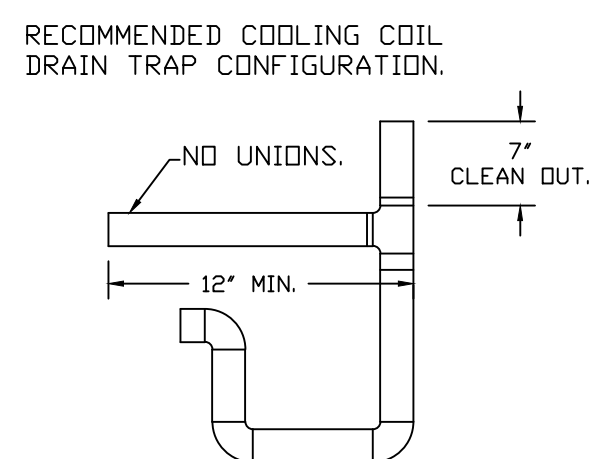
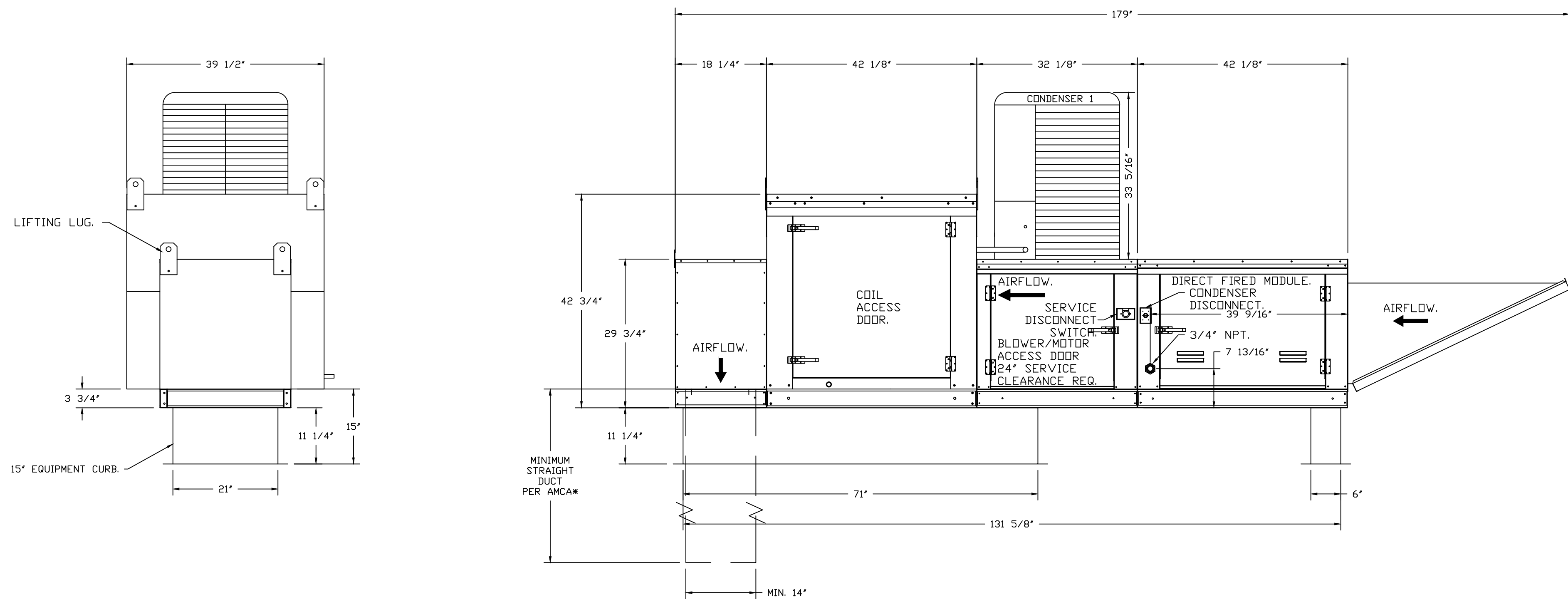


INLET SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE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

```

WINTER TEMPERATURE = 25°F.    TEMP. RISE = 50°F.
BTUS CALCULATED OFF ACTUAL AIR DENSITY.
OUTPUT BTUS AT ALTITUDE OF 0.0 FT. = 96151.
INPUT BTUS AT ALTITUDE OF 0.0 FT. = 104512.
OUTPUT BTUS AT ALTITUDE OF 83 FT. = 95863.
INPUT BTUS AT ALTITUDE OF 83 FT. = 104198.

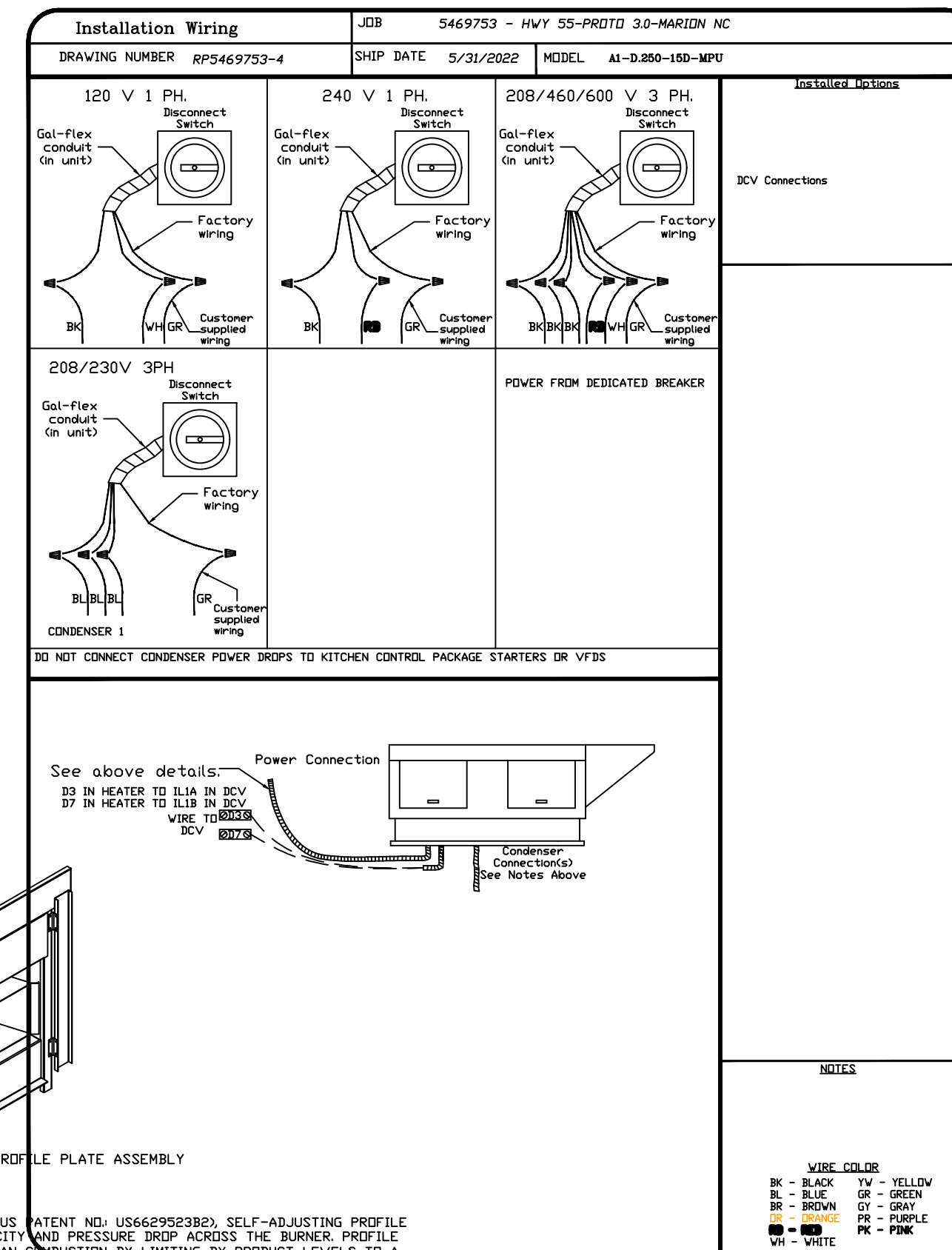
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NOTES:

- 1) 1" DIAMETER PVC PIPE ONLY.
- 2) USE ONLY LOW PROFILE COUPLINGS
- 3) ADD CLEAN OUT AS SHOWN.

THIS DRAWING IS PROVIDED FOR REFERENCE ONLY. HOOD CONTRACTOR SHALL SELECT AND CERTIFY ALL EXHAUST/M.U. AIR FANS. ALL SYSTEMS SHALL MEET ALL APPLICABLE REQUIREMENTS OF STATE AND LOCAL CODES AND OTHER REQUIREMENTS AS SHOWN IN DESIGN DRAWINGS.



DIRECT FIRED (DF) PROFILE PLATE ASSEMBLY

DIRECT FIRE PROFILE PLATE SPECIFICATIONS:

DESCRIPTION:

DIRECT FIRE BURNERS SHALL HAVE PATENTED US PATENT NO. US5667932B2, SELF-ADJUSTING PROFILE PLATES DESIGNED TO ENSURE PROPER AIR VELOCITY AND PRESSURE DROP ACROSS THE BURNER. PROFILE PLATES SHALL BE MANUFACTURED FROM 304 STAINLESS STEEL. THE PROFILE PLATES SHALL BE DESIGNED TO PROVIDE A MAXIMUM OF 50PPM OF CARBON MONOXIDE (CO) AND 0.5PPM OF NITROGEN DIOXIDE (NO₂) DIRECT FIRE. THE PROFILE PLATES SHALL BE DESIGNED TO PROVIDE A MINIMUM OF 1000 FPM OF AIR VELOCITY THROUGH THE BURNER. THIS ARRANGEMENT WILL ENSURE A CONSISTENT AIRFLOW, REGARDLESS OF INLET AIR TEMPERATURE.

APPLICATION:





DIRECT FIRE 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 OF UNITS ARE DESIGNED FOR DEMAND CONTROL VENTILATION (DCV) REQUIREMENTS.

CERTIFICATIONS:

DIRECT FIRE PROFILE PLATE ASSEMBLIES SHALL BE INCLUDED IN THE DF UNIT'S ETL LISTING AND COMPLY WITH CO SAFETY STANDARDS ANSI Z83.4 AND CSA 3.7 (NON-RECIRCULATING OF HEATERS) AND ANSI Z83.18 (RECIRCULATING OF 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.
- PROFILE PLATES SHALL BE MADE FROM 304 STAINLESS STEEL.

REVISIONS	
DESCRIPTION	DATE:
Δ	
Δ	
Δ	
Δ	
Δ	
 www.captiveair.com   	
Eastern North Carolina 4641 Paragon Park Rd., Raleigh, NC. 27616 PHONE: (919) 825-3566 FAX: (919) 227-5917 EMAIL: reg36@captiveaire.com	
HWY 55-PROTO 3.0-	
DATE: 5/31/2022	
DWG.#: 5469753	
DRAWN BY: reg36	
SCALE: 3/4" = 1'-0"	
MASTER DRAWING	
SHEET NO. 6	

THIS DRAWING IS THE PROPERTY OF THE ARCHITECT AND MAY NOT BE REPRODUCED OR USED WITHOUT HIS WRITTEN PERMISSION

SHOP DRAWING FOR
REFERENCE ONLY

PROJECT: **HIGHWAY 55**
3.0 PROTOTYPE

1424 CURTIS BRIDGE ROAD
WILKESBORO, NC 28697

DRAWING: HOOD DETAILS

Revisions

THRU ADDENDUM "A"

2 EQUIP. UPDATE - 06.24.2022

PROJECT DATE
01/07/2022

Drawn By

Checked By

Sheet No.

M507