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Shop Drawing Review

Project: Chipotle Reunion, FL

Log Number:	<input type="text" value="2"/>	Return Date:	3.30.2023
Date Received:	<input type="text" value="3.30.2023"/>	<input type="checkbox"/> Approved	
Resubmittal	<input type="checkbox"/> Check if a Resubmittal	<input checked="" type="checkbox"/> Approved as Noted	
Date Previously Returned:	<input type="text"/>	<input type="checkbox"/> Revise and Resubmit	
		<input type="checkbox"/> Rejected	

Specification:

Approval is only for general conformance with the design concept and the information given in the Construction Documents. Corrections or comments made on the shop drawings during this review do not relieve the contractor from compliance with the requirements of the plans and specifications. Review of a specific item shall not include review of an assembly of which the item is a component. The Contractor is responsible for: dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work with that of all other trades and performing all Work in a safe and satisfactory manner.

Contractor:	<input type="text" value="Captive-Aire"/>
Submittal	<input type="text" value="Exhaust Fans, Hood, and Makeup Air Unit"/>
Comments:	<input type="text" value="TANK fire suppression systems will require approval from Chipotle. ANSUL systems are specified in the drawings."/>

By: A Janosik

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

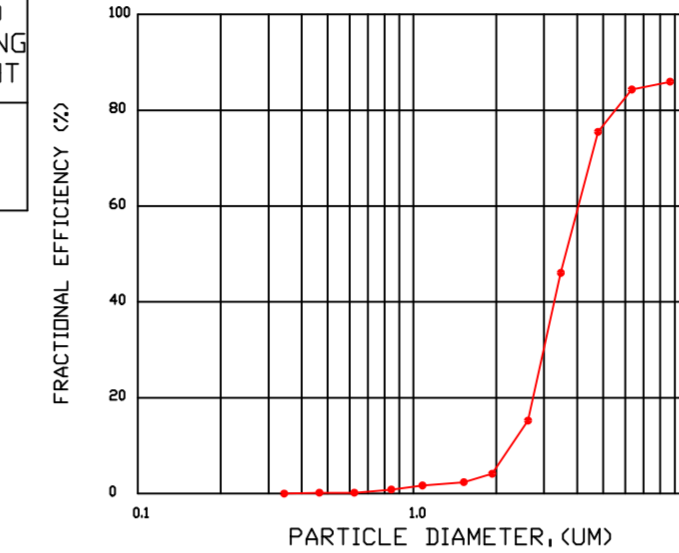
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

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

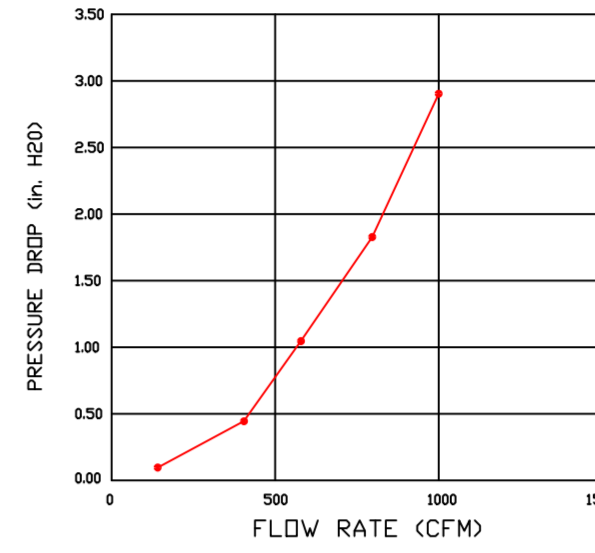
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

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#5928797

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	ROW
1		5424 ND-2-ACPSP-F	CAPTIVEAIRE	12' 9"	600 DEG	I	HEAVY	200	2550	10'	24'	4'		2550	1530	-0.966'	1300	696	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	9	16"	16"	85% SEE FILTER SPEC	8	L55 SERIES E26	NO	RIGHT	12"x54"x24"	TANK FS	4.0/4.0	SC-311110MA	1 LIGHT 1 FAN	YES	1192 LBS

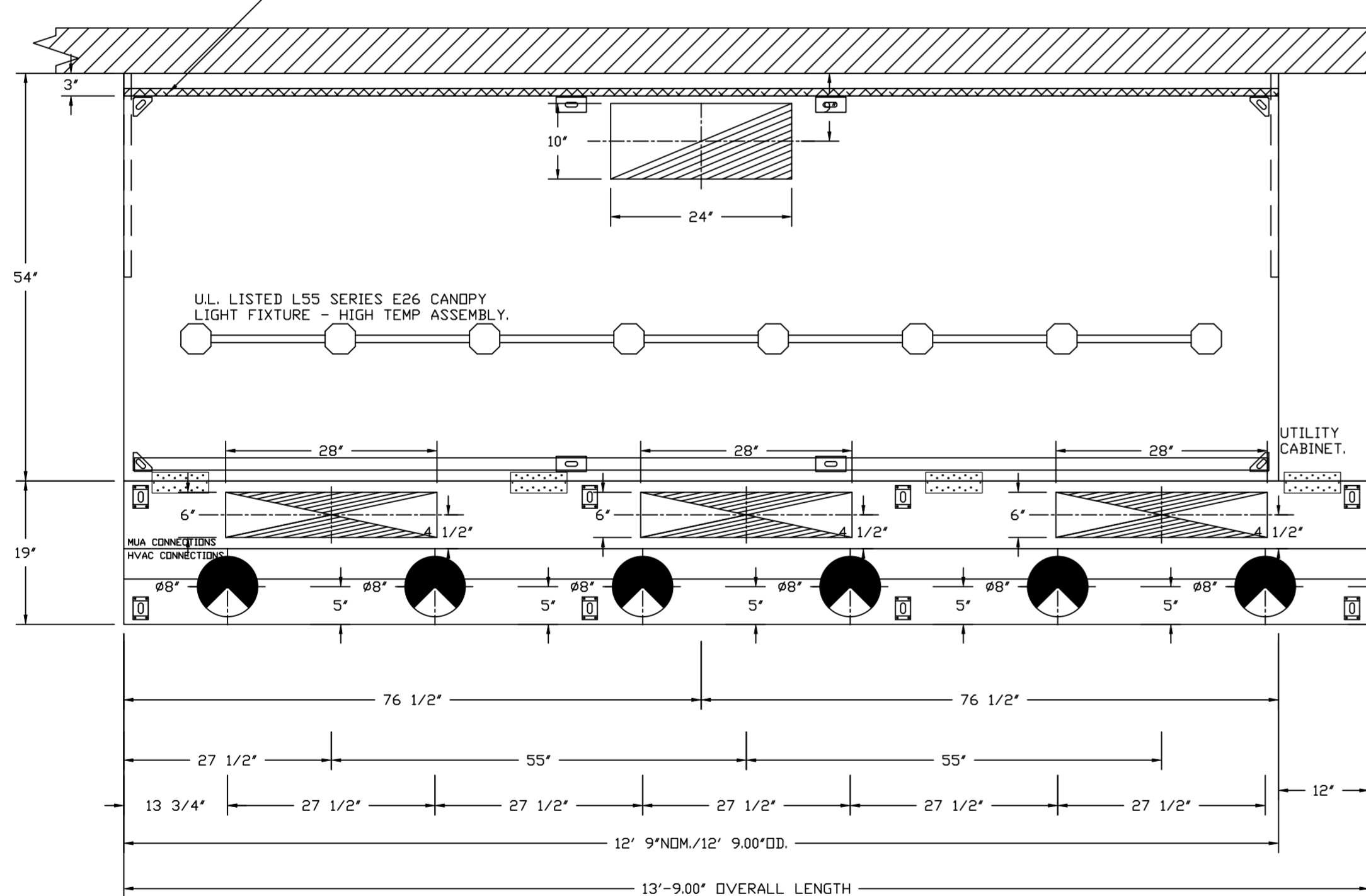
HOOD OPTIONS

HOOD NO	TAG	OPTION
1		FIELD WRAPPER 10.00" HIGH FRONT, LEFT, RIGHT. INSULATION FOR BACK OF HOOD. RISER SENSOR INSTALL 6IN PLEN. RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS. LEFT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS. FULL DIMENSION HANGING BRACKET - FRONT.

PERFORATED SUPPLY PLENUM(S)

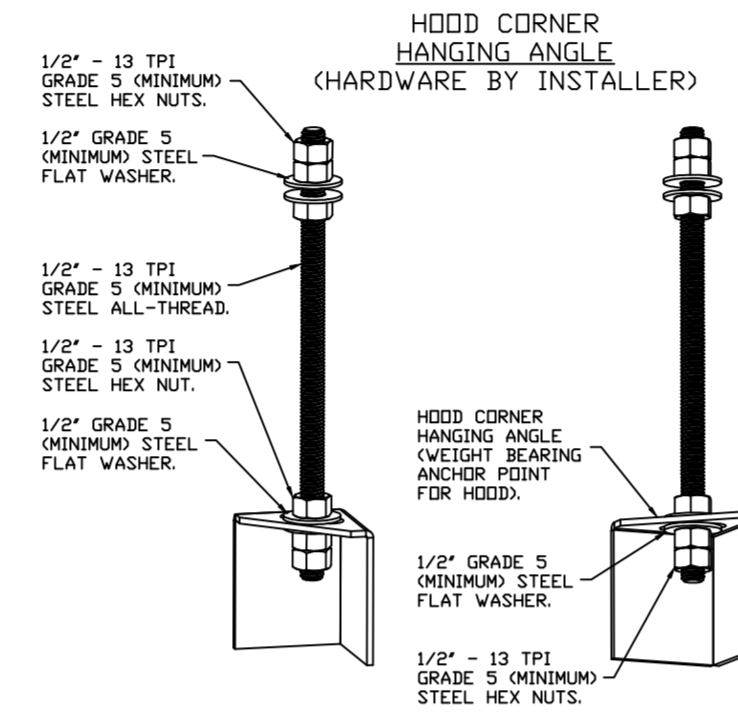
HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)																																														
							WIDTH	LENG	DIA	CFM	SP																																										
1		Front	165'	19'	6'	MUA	6"	28"		432	0.127"	MUA	6"	28"		432	0.127"	MUA	6"	28"		432	0.127"	AC		8"	116	0.043"	AC		8"	116	0.043"	AC		8"	116	0.043"	AC		8"	116	0.043"	AC		8"	116	0.043"	AC		8"	116	0.043"

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



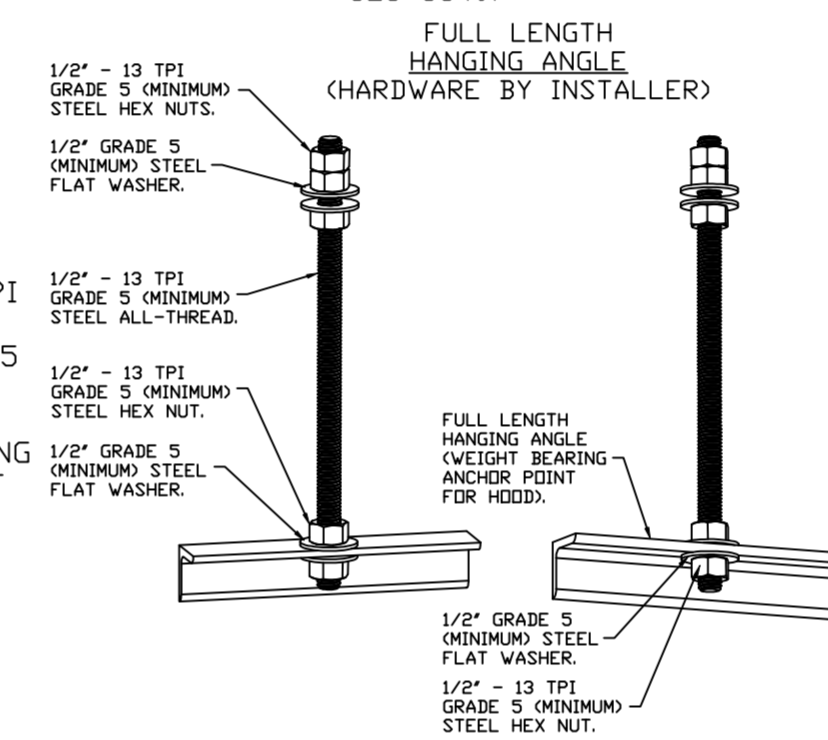
PLAN VIEW - HOOD #1
12' 9.00" LONG 5424ND-2-ACPSP-F
NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.

ACPSP SHIPS LOOSE FOR FIELD INSTALLATION



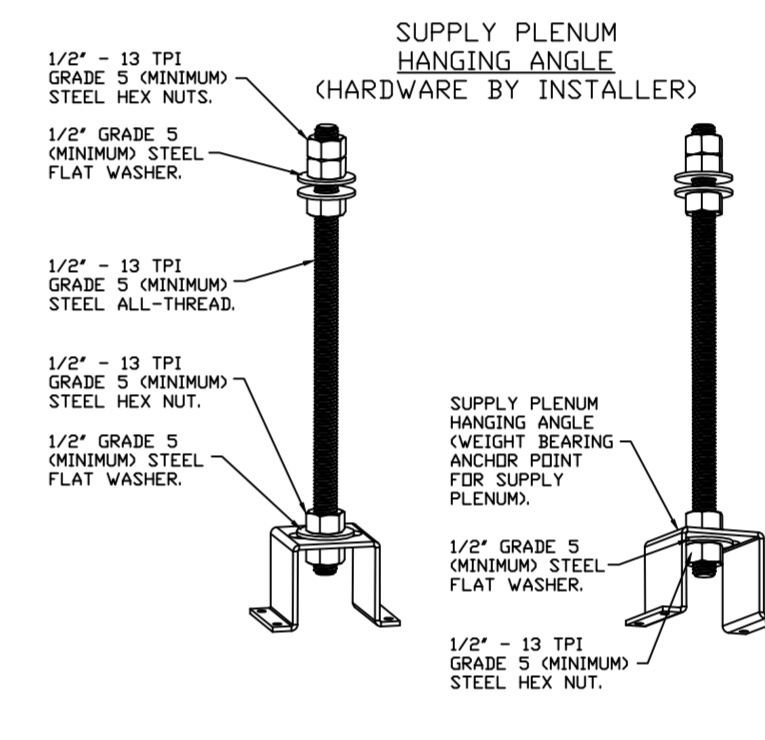
ASSEMBLY INSTRUCTIONS

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

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 ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR FULL LENGTH HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



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 ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR PSP HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

SHOP DRAWING REVIEW

Reviewed for compliance with the architectural drawings

- REVIEWED
- FURNISH AS CORRECTED
- REVISE AND RESUBMIT
- SUBMIT SPECIFIED ITEM
- REJECTED

This review is only for conformance with the design intent of the project and compliance with information given within the contract documents. Corrections or comments shall not relieve the contractor from compliance with the contract documents nor allow departures from them. The contractor remains solely responsible for verifying all dimensions, correlating quantities, selecting fabrication processes and construction techniques, coordinating the work of all trades, and insuring that all work is performed safely and in a complete and workmanlike manner.

Stefano De Luca & Associates, Inc.

Architecture & Design
AA#26001224

By ARL Date 03.30.23

Project # 3966 Submittal # 03

REVISIONS

DESCRIPTION	DATE

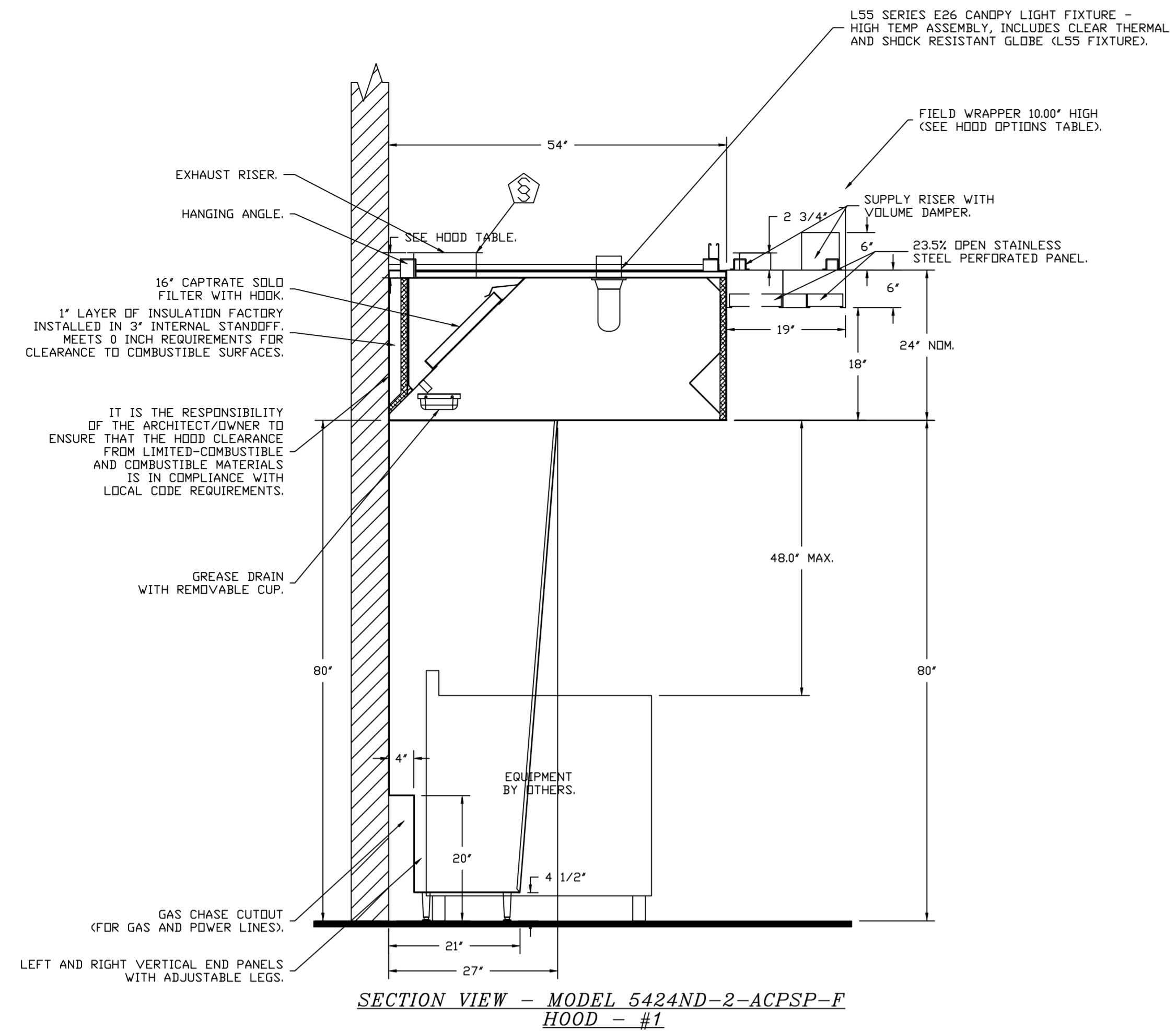
CAPTIVEAIRE

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

CHIPOTLE REUNION #3966
DAVENPORT, FL, 33896

DATE: 3/30/2023
DWG.#: 5928797
DRAWN BY: JMB-40
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO.
1



PER THE ENGINEER,
CHIPOTLE WILL NEED TO
APPROVE OF THE TANK
SYSTEM AS WELL

FIRE SYSTEM INFORMATION - JOB#5928797

FIRE SYSTEM NO	TAG	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0/4.0	32	FIRE CABINET RIGHT	RIGHT, HOOD 1

GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		SC ELECTRICAL	1.250	CAPTIVEAIRE SYSTEMS

REVISIONS

DESCRIPTION	DATE:

CAPTIVEAIRE
Highwoods Group
www.captiveaire.com
4641 Paragon Park Rd., Raleigh, NC, 27616 PHONE: (919) 875-0420 FAX: (919) 875-0577 EMAIL: reg@0@captiveaire.com

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

SHEET NO.
2

EXHAUST FAN INFORMATION - JOB#5928797

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	EF-1	1	DU180HFA	CAPTIVEAIRE	2550	1.450	1221	DDP,PREMIUM	2.000	1.2790	3	208	8.3	589 FPM	183	16.7
2	EF-2	1	DR12HFA	CAPTIVEAIRE	150	0.600	1282	TEAD-ECM	0.250	0.0930	1	115	2.9		52	6.1

MUA FAN INFORMATION - JOB#5928797

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	MCA	MOCP	WEIGHT (LBS)	SONES
3	MAU-1	1	A1-D.250-15D	15MF-1-MDD	A1-D.250	1000	1300	0.500	1548	DDP,PREMIUM	1.000	0.5680	3	208	3.1	3.9A	15A	495	12.2

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	49622	45652	33°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	MIAMI DADE CERTIFICATION - NOA-1 ALUMINUM UPBLAST
		1	2 YEAR PARTS WARRANTY
2	EF-2	1	I 12-BDD DAMPER
		1	ECM WIRING PACKAGE - MANUAL DR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCO MOTOR), CCW ROTATION
		1	MIAMI DADE CERTIFICATION - NOA-1 ALUMINUM DOWNBLAST 10
3	MAU-1	1	2 YEAR PARTS WARRANTY
		1	SIZE 1 TEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS
		1	INLET PRESSURE GAUGE, 0-35"
		1	MANIFOLD PRESSURE GAUGE, -5 TO 15" WC
		1	SHIP LOOSE GAS STRAINER 3/4"
		1	MOTORIZED BACKDRAFT DAMPER FOR A1-D HOUSING - MEETS AMCA CLASS 1A RATING
		1	MIAMI DADE CERTIFICATION - NOA-2 SUPPLY
1	SEPARATE 120V WIRING PACKAGE (REQUIRED AND USED ONLY FOR DCV OR PREWIRE WITH VFD) - THREE PHASE ONLY		
1	2 YEAR PARTS WARRANTY		

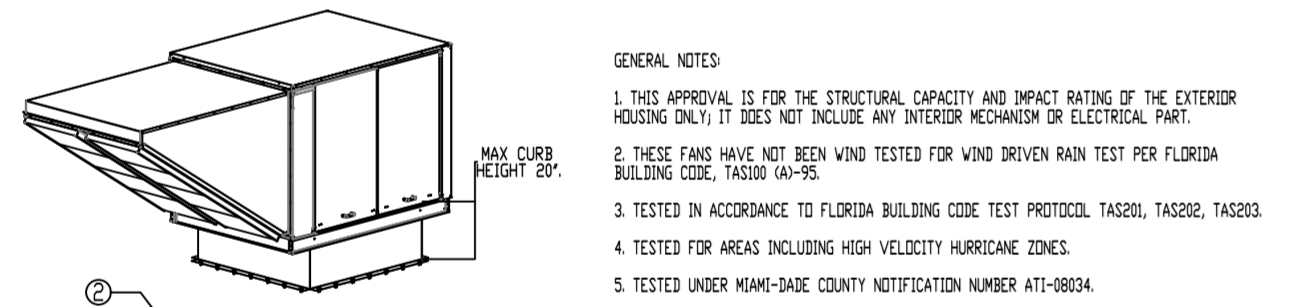
FAN ACCESSORIES

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	EF-1	50 LBS	CURB	26.500"W X 26.500"L X 26.000"H ALONG LENGTH, RIGHT VENTED 16 GAUGE.
2	# 2	EF-2	51 LBS	CURB	17.500"W X 17.500"L X 26.000"H ALONG LENGTH, RIGHT 16 GAUGE.
3	# 3	MAU-1	108 LBS	CURB	21.000"W X 71.000"L X 20.000"H ALONG WIDTH, RIGHT INSULATED 16 GAUGE.

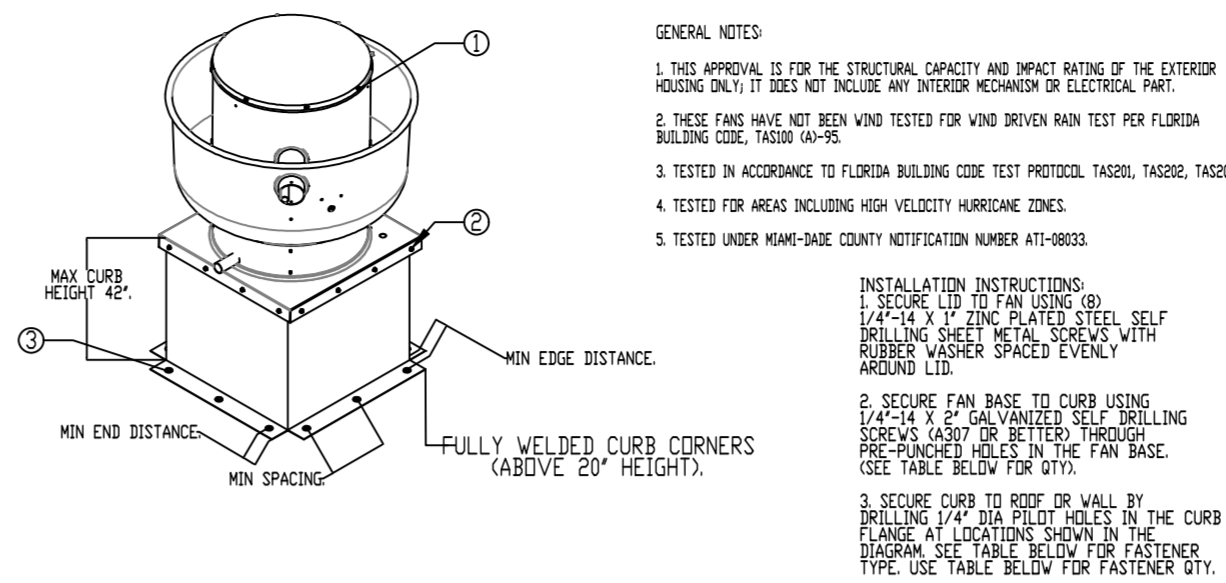
MIAMI-DADE NOA2 SUPPLY FANS



INSTALLATION FASTENER TYPES											
FAN TO CURB		WOOD (SG = 0.42 MIN.)		STEEL (12 GAUGE MIN.)		CONCRETE (2500 PSI MIN. CRACKED CONCRETE)					
FASTENER	1/4"-14 X 1" SELF DRILLING SCREW (A307 OR BETTER)	3/8" DIA. ZINC PLATED LAG BOLT	1/4"-14 DRILL-FLEX SELF DRILLING SCREW	3/8" DIA. SS HILTI KWIK BOLT T2 EXPANSION ANCHOR							
MINIMUM THREAD PENETRATION	N/A	2"	12 GAUGE	2-5/16"							
MINIMUM EDGE DISTANCE	N/A	1-1/2"	3/8"	3"							
MINIMUM END DISTANCE	N/A	2-5/8"	3/8"	4"							
MINIMUM SPACING	N/A	1-1/2"	3/4"	7"							

INSTALLATION FASTENER QTY												
FAN MODEL	CURB TO FAN (WOOD)			WOOD (WOOD)			STEEL			CONCRETE		
	LONG SIDE	SHORT SIDE	TOTAL	LONG SIDE	SHORT SIDE	TOTAL	LONG SIDE	PER SIDE	TOTAL	LONG SIDE	SHORT SIDE	TOTAL
DIRECT FIRED 1	5	2	14	8	3	22	6	2	16	7	2	18

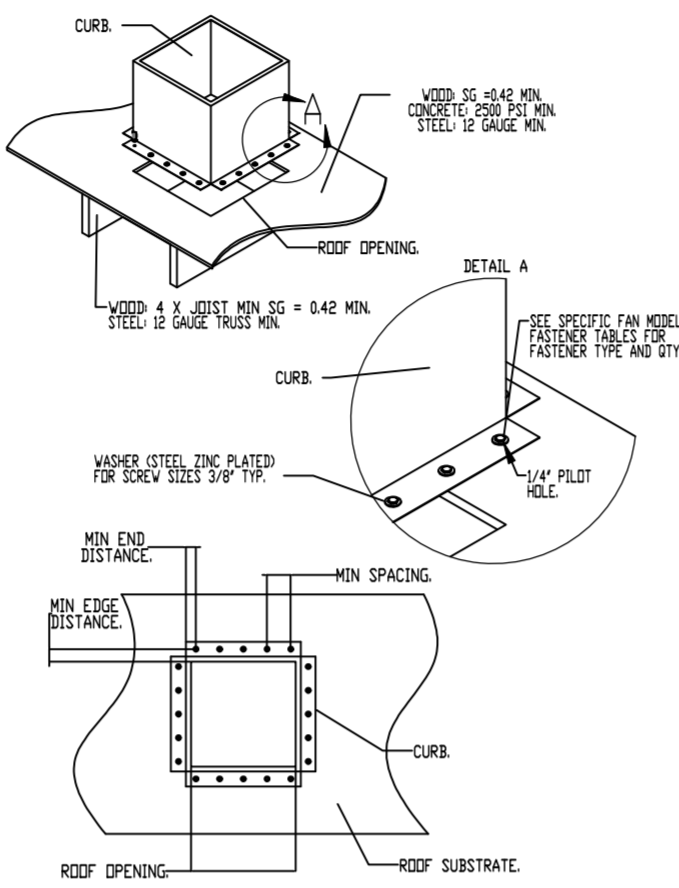
MIAMI-DADE NOA1 ALUMINUM UP-BLAST FANS



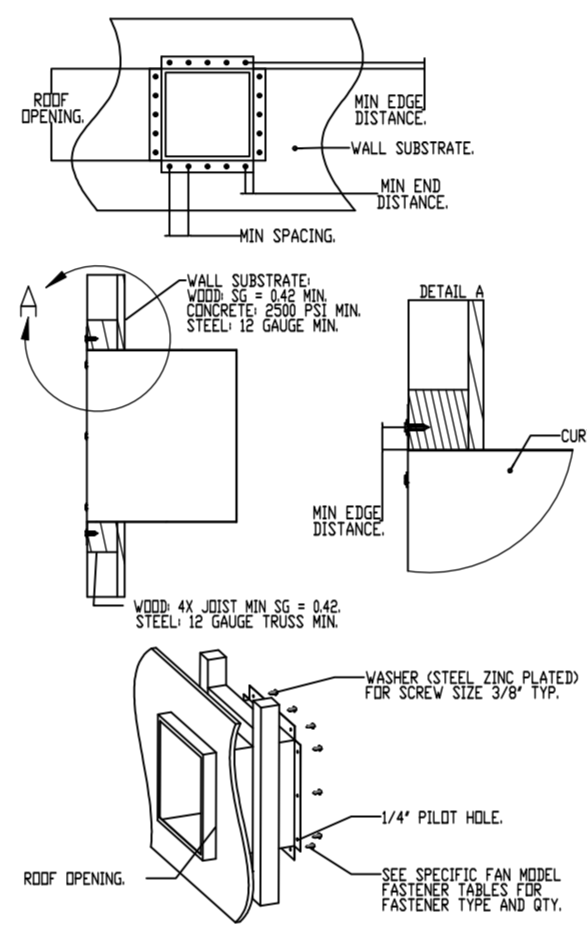
INSTALLATION FASTENER TYPES											
FAN TO CURB		WOOD (SG = 0.42 MIN.)		STEEL (12 GAUGE MIN.)		CONCRETE (2500 PSI MIN. CRACKED CONCRETE)					
FASTENER	5/16"-18 X 2" SELF DRILLING SCREW (ELCO DRILL-FLEX OR BETTER)	3/8" DIA. ZINC PLATED LAG BOLT	1/4"-14 DRILL-FLEX SELF DRILLING SCREW	3/8" DIA. SS HILTI KWIK BOLT T2 EXPANSION ANCHOR							
MINIMUM THREAD PENETRATION	N/A	2-1/2"	12 GAUGE	2"							
MINIMUM EDGE DISTANCE	N/A	1-1/2"	3/8"	3"							
MINIMUM END DISTANCE	N/A	2-5/8"	3/8"	3"							
MINIMUM SPACING	N/A	1-1/2"	3/4"	5-1/2"							

INSTALLATION FASTENER QTY												
FAN MODEL	CURB TO FAN (WOOD)			WOOD (WOOD)			STEEL			CONCRETE		
	LONG SIDE	SHORT SIDE	TOTAL	LONG SIDE	SHORT SIDE	TOTAL	LONG SIDE	PER SIDE	TOTAL	LONG SIDE	SHORT SIDE	TOTAL
D0800	3	12	9	12	5	20	5	20	6	24	5	20

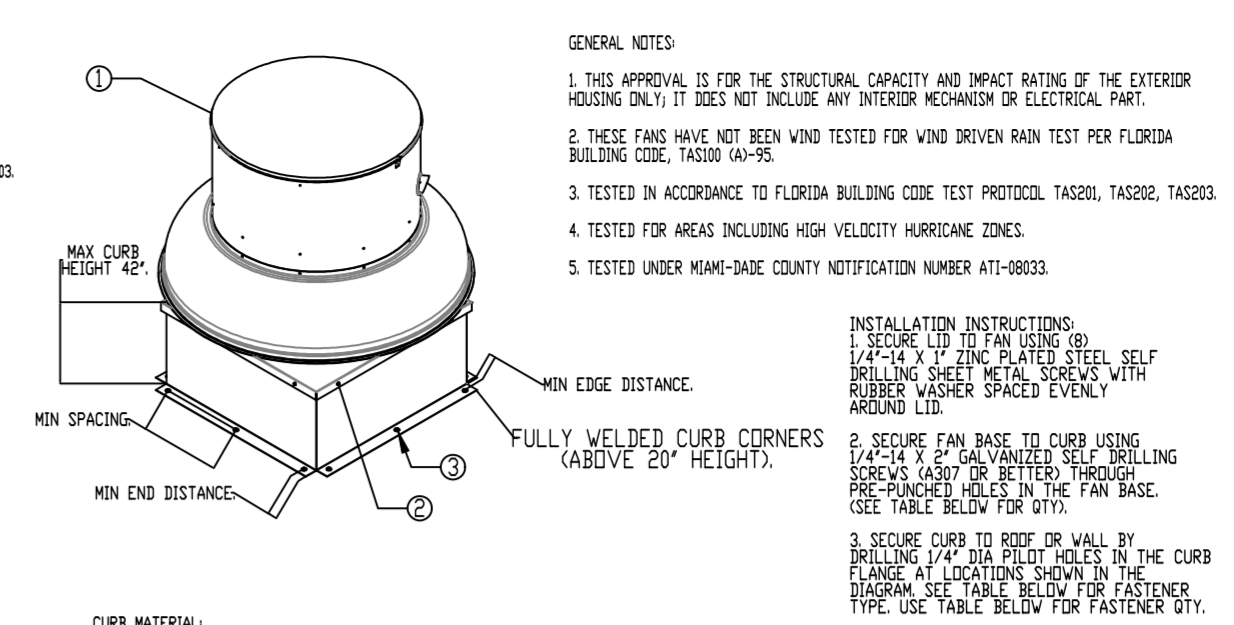
MIAMI-DADE COUNTY - CURB ROOF INSTALLATION GUIDE



MIAMI-DADE COUNTY - WALL CURB INSTALLATION GUIDE



MIAMI-DADE NOA1 ALUMINUM DOWN-BLAST FANS



INSTALLATION FASTENER TYPES											
FAN TO CURB		WOOD (SG = 0.42 MIN.)		STEEL (12 GAUGE MIN.)		CONCRETE (2500 PSI MIN. CRACKED CONCRETE)					
FASTENER	5/16"-18 X 2" SELF DRILLING SCREW (ELCO DRILL-FLEX OR BETTER)	3/8" DIA. ZINC PLATED LAG BOLT	1/4"-14 DRILL-FLEX SELF DRILLING SCREW	3/8" DIA. SS HILTI KWIK BOLT T2 EXPANSION ANCHOR							
MINIMUM THREAD PENETRATION	N/A	2-1/2"	12 GAUGE	2"							
MINIMUM EDGE DISTANCE	N/A	1-1/2"	3/8"	3"							
MINIMUM END DISTANCE	N/A	2-5/8"	3/8"	3"							
MINIMUM SPACING	N/A	1-1/2"	3/4"	5-1/2"							

INSTALLATION FASTENER QTY												
FAN MODEL	CURB TO FAN (WOOD)			WOOD (WOOD)			STEEL			CONCRETE		
	LONG SIDE	SHORT SIDE	TOTAL	LONG SIDE	SHORT SIDE	TOTAL	LONG SIDE	PER SIDE	TOTAL	LONG SIDE	SHORT SIDE	TOTAL
D0800	3	12	9	12	5	20	5	20	6	24	5	20

REVISIONS

DESCRIPTION	DATE:

www.captiveair.com

Highwoods Group

4641 Paragon Park Rd., Raleigh, NC 27616 PHONE: (919) 875-0420 FAX: (919) 875-0577 EMAIL: reg10@captiveair.com

CHIPOTLE REUNION #3966

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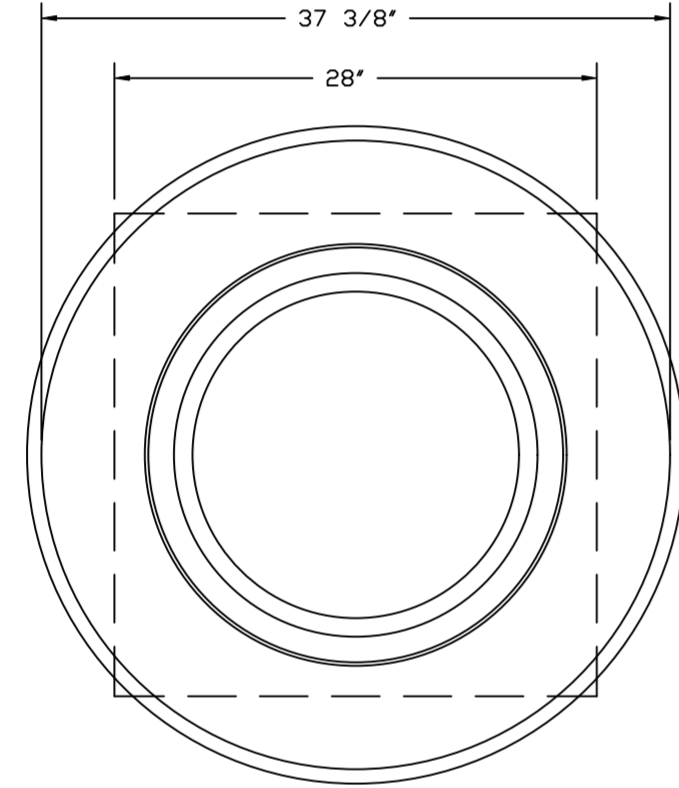
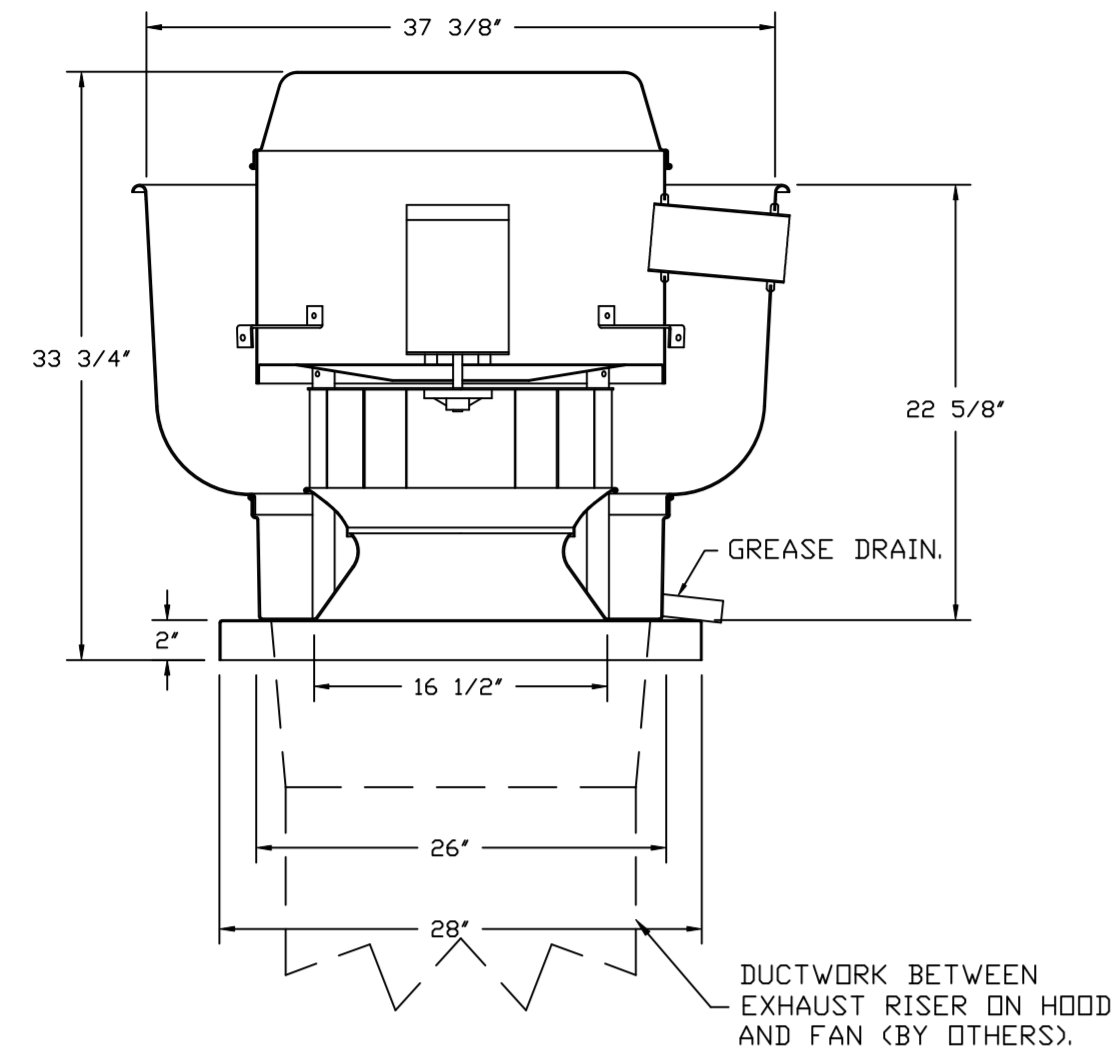
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SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 3

FAN #1 DU180HFA - EXHAUST FAN (EF-1)



TOP VIEW

FEATURES:

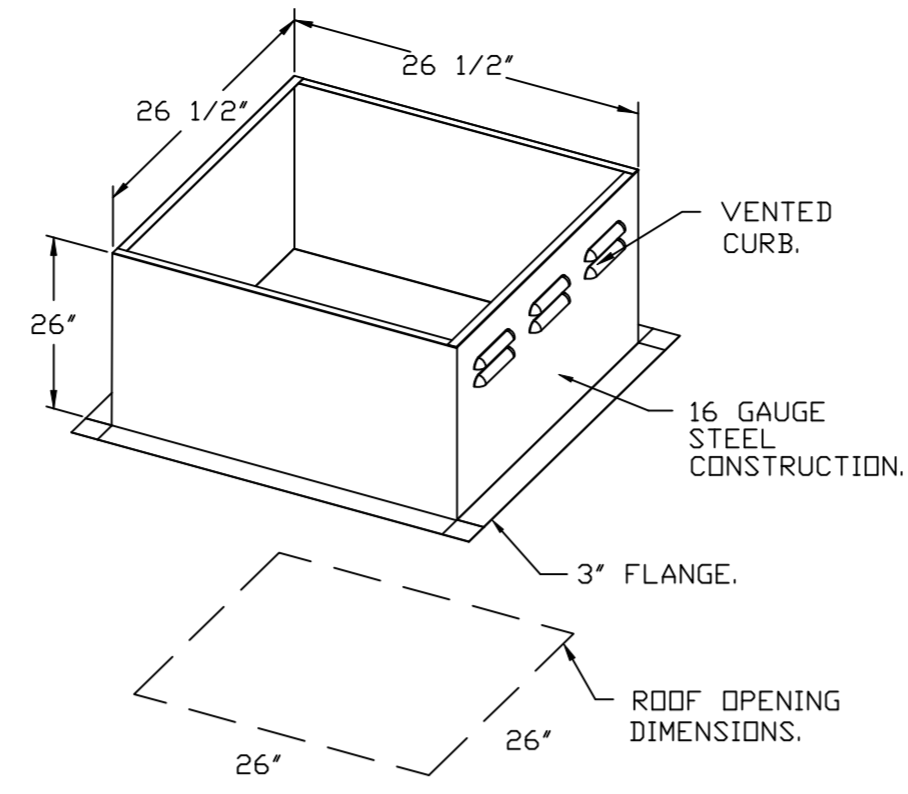
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT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

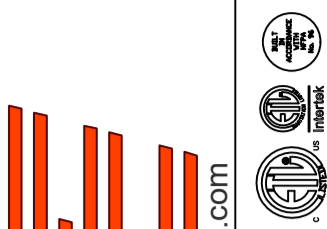
OPTIONS

- GREASE BOX.
- MIAMI DADE CERTIFICATION - NDA-1 ALUMINUM UPBLAST.
- 2 YEAR PARTS WARRANTY.

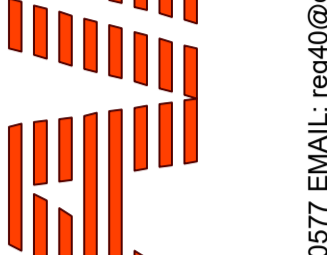


REVISIONS

DESCRIPTION	DATE:



www.captiveair.com



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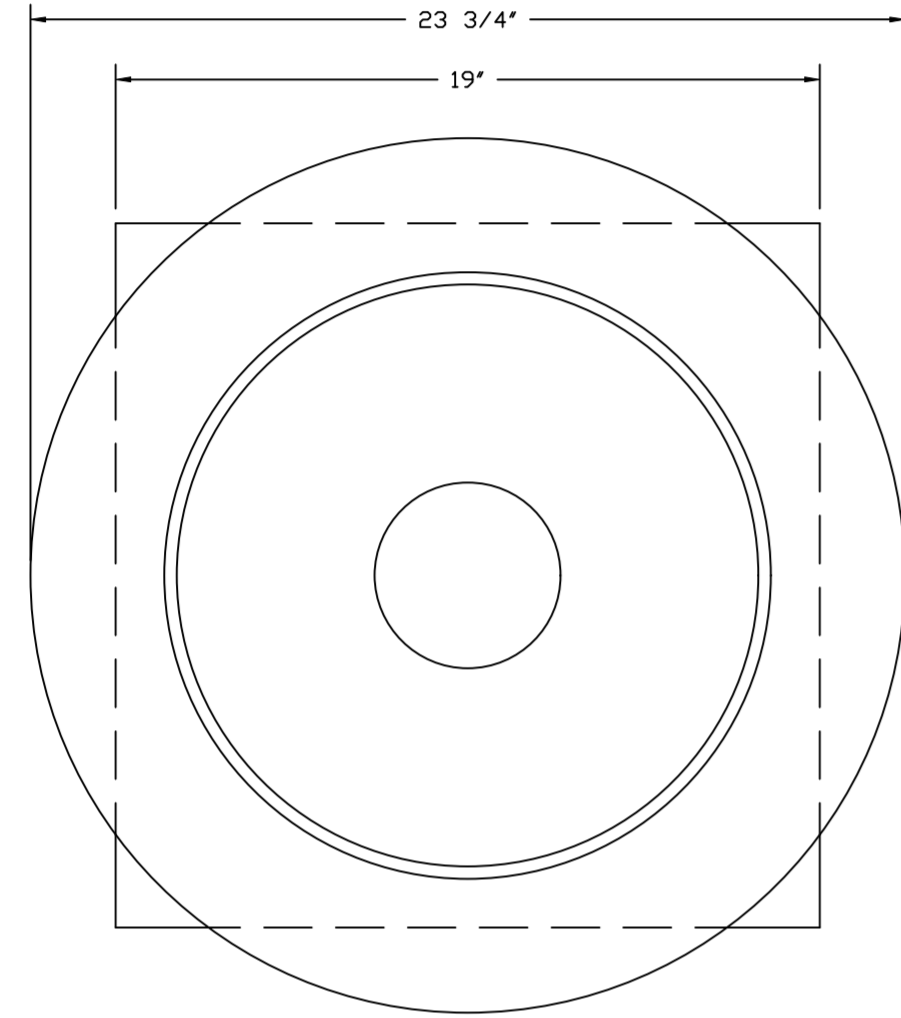
DRAWN BY: JMB-40

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

MASTER DRAWING

SHEET NO.

FAN #2 DR12HFA - EXHAUST FAN (CF-22)



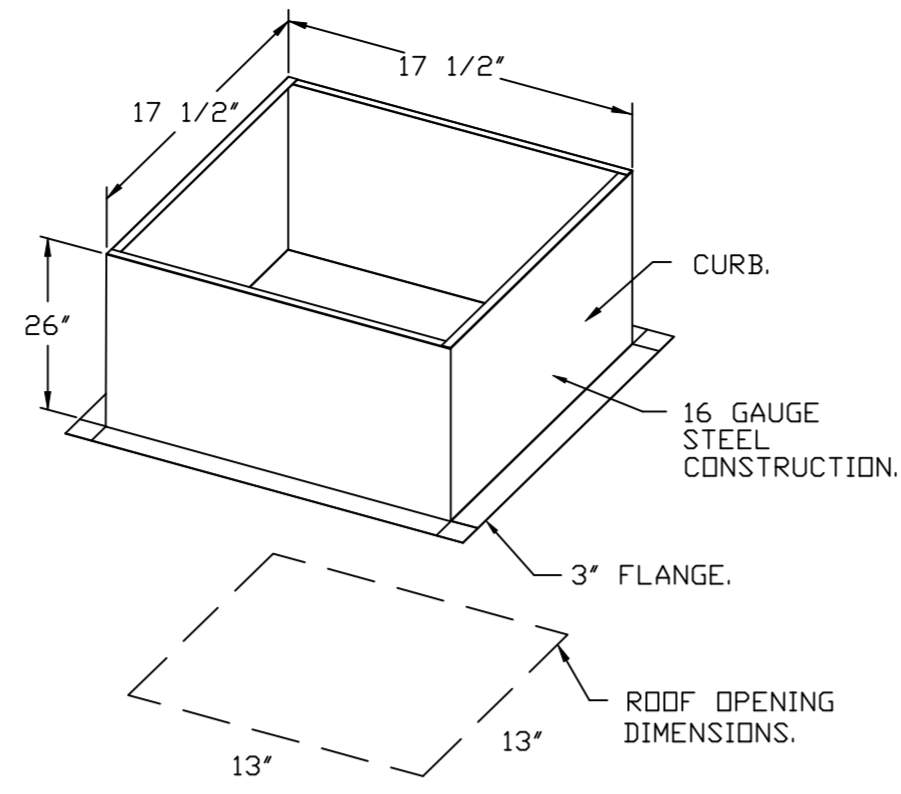
TOP VIEW

FEATURES:

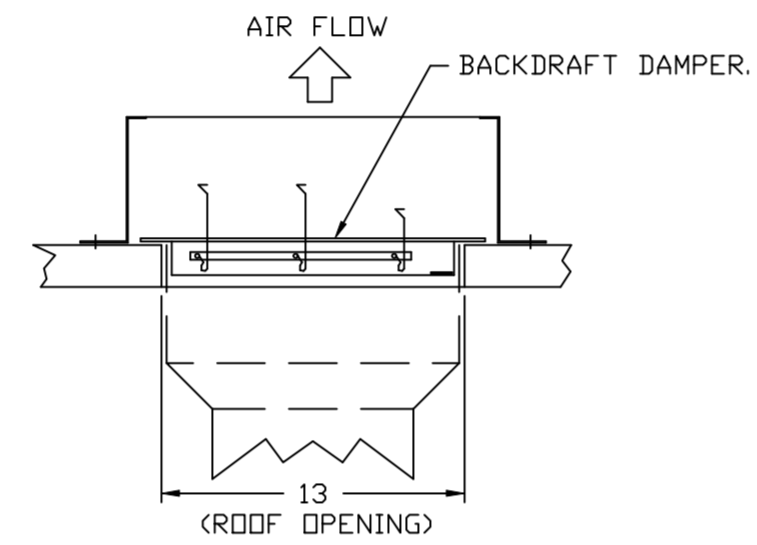
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- UL705.
- SAFETY DISCONNECT.
- STANDARD BIRD SCREEN.
- SPEED CONTROL.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).

OPTIONS:

- I 12-BDD DAMPER.
- ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL.
- RTC- (THERMISTOR), CCW ROTATION.
- MIAMI DADE CERTIFICATION - NDA-1 ALUMINUM DOWNBLAST 10.
- 2 YEAR PARTS WARRANTY.



BACKDRAFT DAMPER INSTALLATION



REVISIONS

DESCRIPTION	DATE:



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CHIPOTLE REUNION #3966
 DAVENPORT, FL, 33896

DATE: 3/30/2023

DWG.#: 5928797

DRAWN BY: JMB-40

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

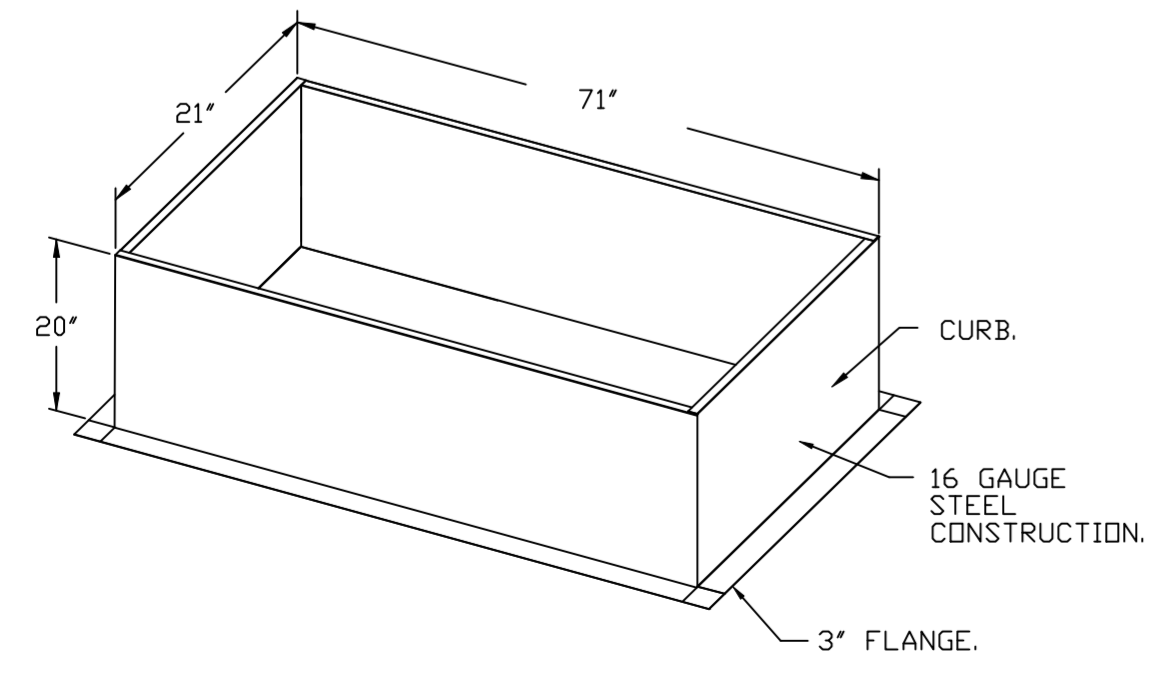
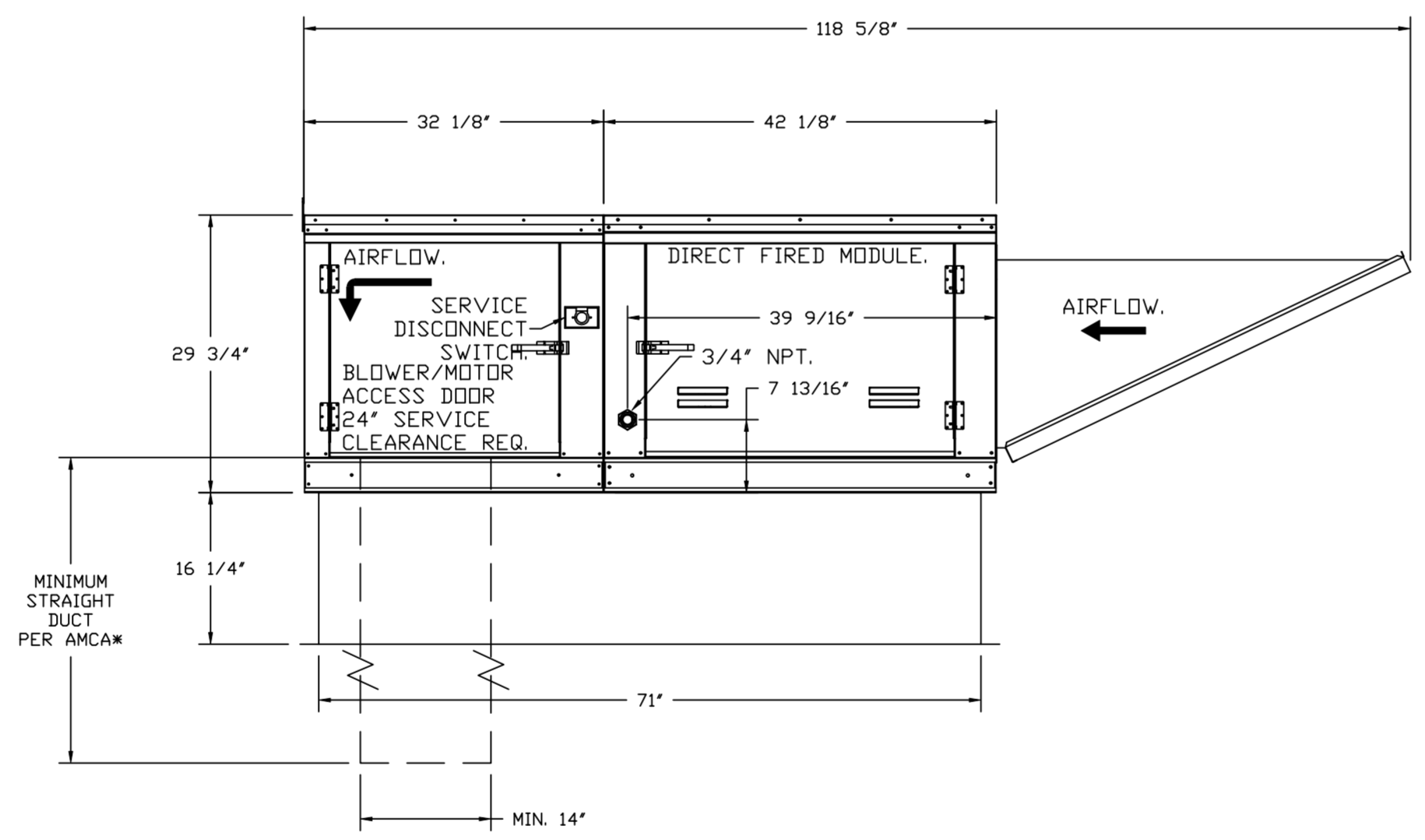
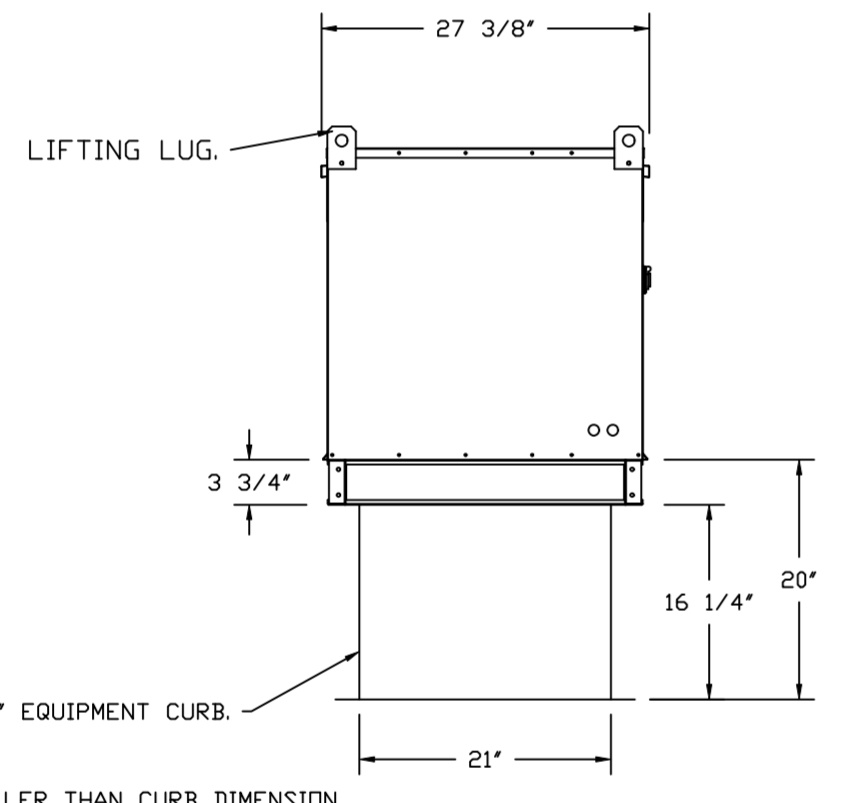
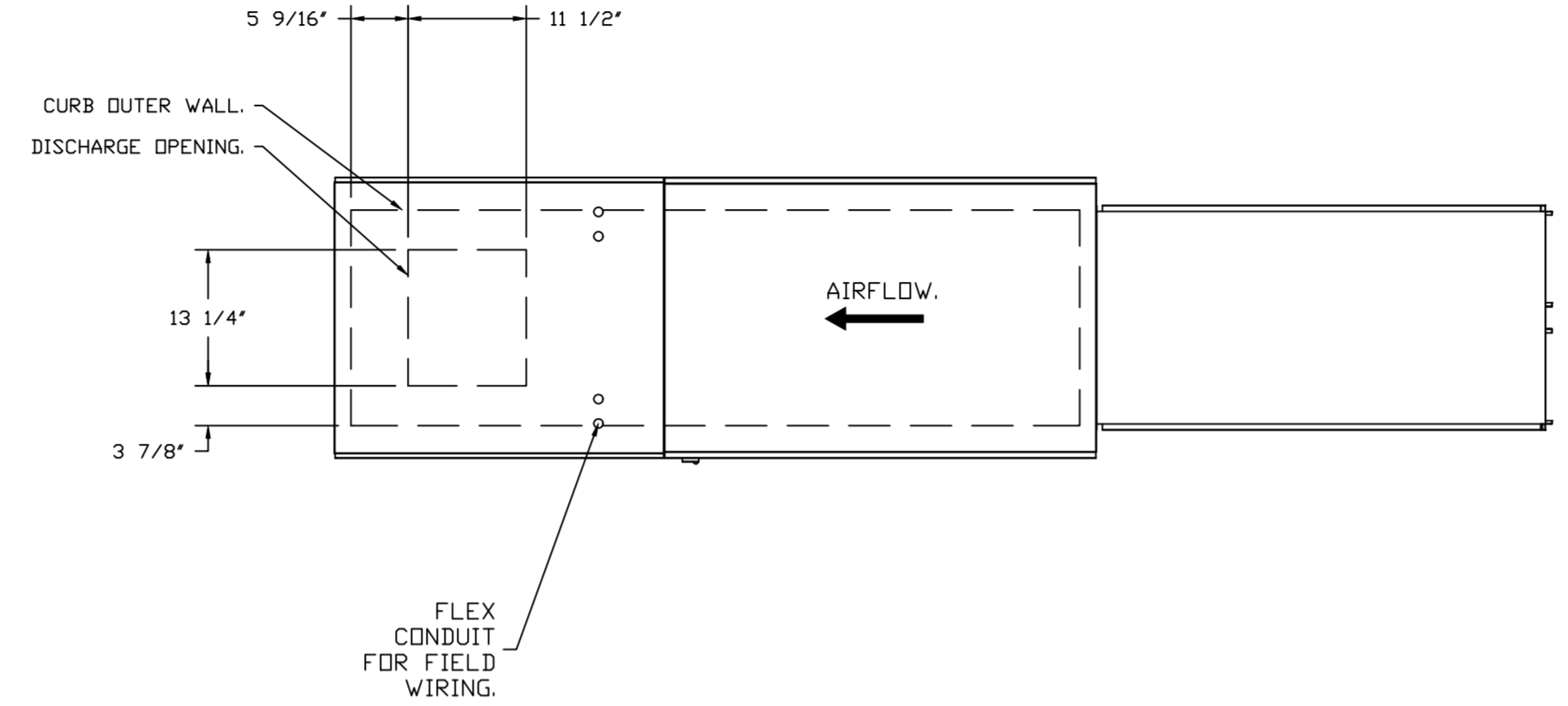
MASTER DRAWING

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. DOWN DISCHARGE CONSTRUCTION FOR SIZE 1 DIRECT DRIVE AHUS.
 5. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE.
 6. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC, 2.5" DIAMETER, 1/4" THREAD SIZE.
 7. SHIP LODGE GAS STRAINER TO BE INSTALLED UPSTREAM OF UNIT CONNECTION, 3/4" CONNECTION.
 8. 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, TFB220S ACTUATOR INCLUDED.
 9. MIAMI DADE IMPACT AND WIND LOAD CERTIFICATION +30 / -130 PSF - MIAMI DADE COUNTY PRODUCT CONTROL APPROVED. FLORIDA BUILDING CODE APPROVAL. ROOF MOUNT EXHAUST CURBS UP TO 20" HIGH MUST BE 18 GAUGE ALUMINIZED.
 10. 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.
 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 = 42°F. TEMP. RISE = 33°F.
 BTUs CALCULATED OFF ACTUAL AIR DENSITY.
 OUTPUT BTUs AT ALTITUDE OF 0.0 FT. = 45832.
 INPUT BTUs AT ALTITUDE OF 109 FT. = 49817.
 OUTPUT BTUs AT ALTITUDE OF 109 FT. = 45652.
 INPUT BTUs AT ALTITUDE OF 109 FT. = 49621.



DIRECT FIRED (DF) PROFILE PLATE SPECIFICATIONS:

DESCRIPTION:
 DIRECT FIRED BURNERS SHALL HAVE PATENTED (US PATENT NO. US6629238B2), 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 9PPM OF CARBON MONOXIDE (CO), AND 0.5PPM OF NITROGEN DIOXIDE (NO2). DIRECT FIRED UNITS SHALL BE CONFIGURED WITH THE BLOWERS 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 690 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.

REVISIONS	
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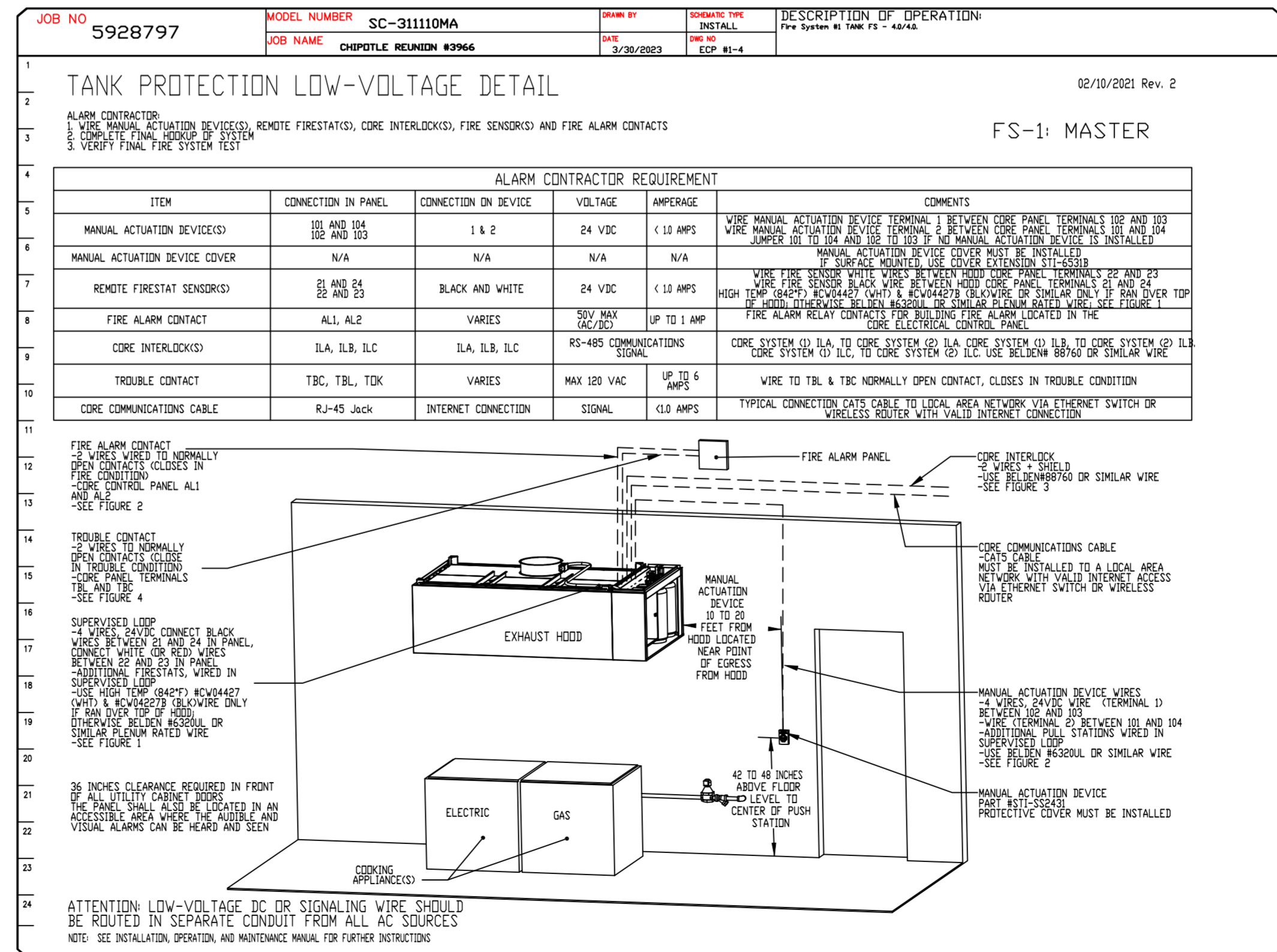
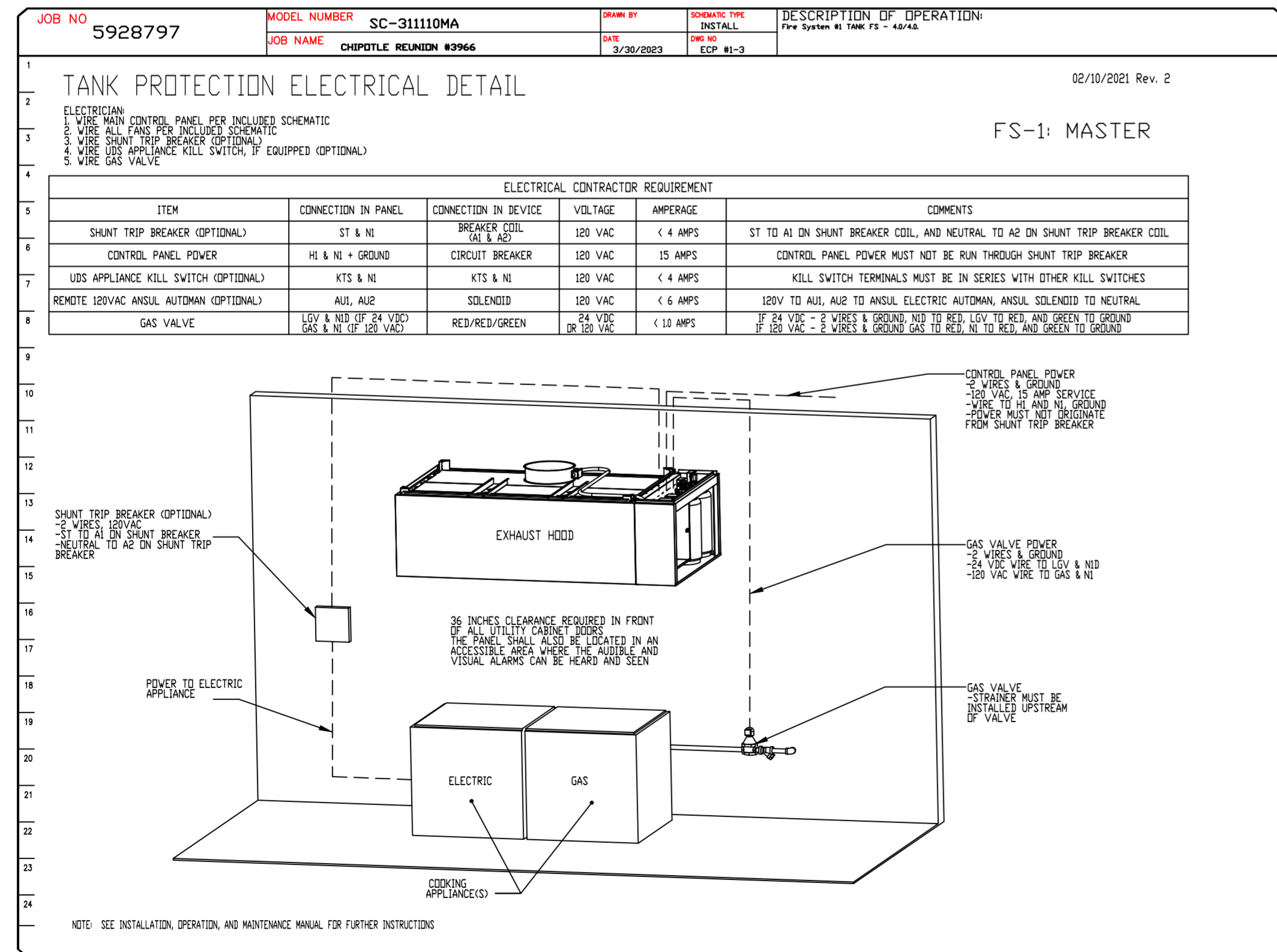
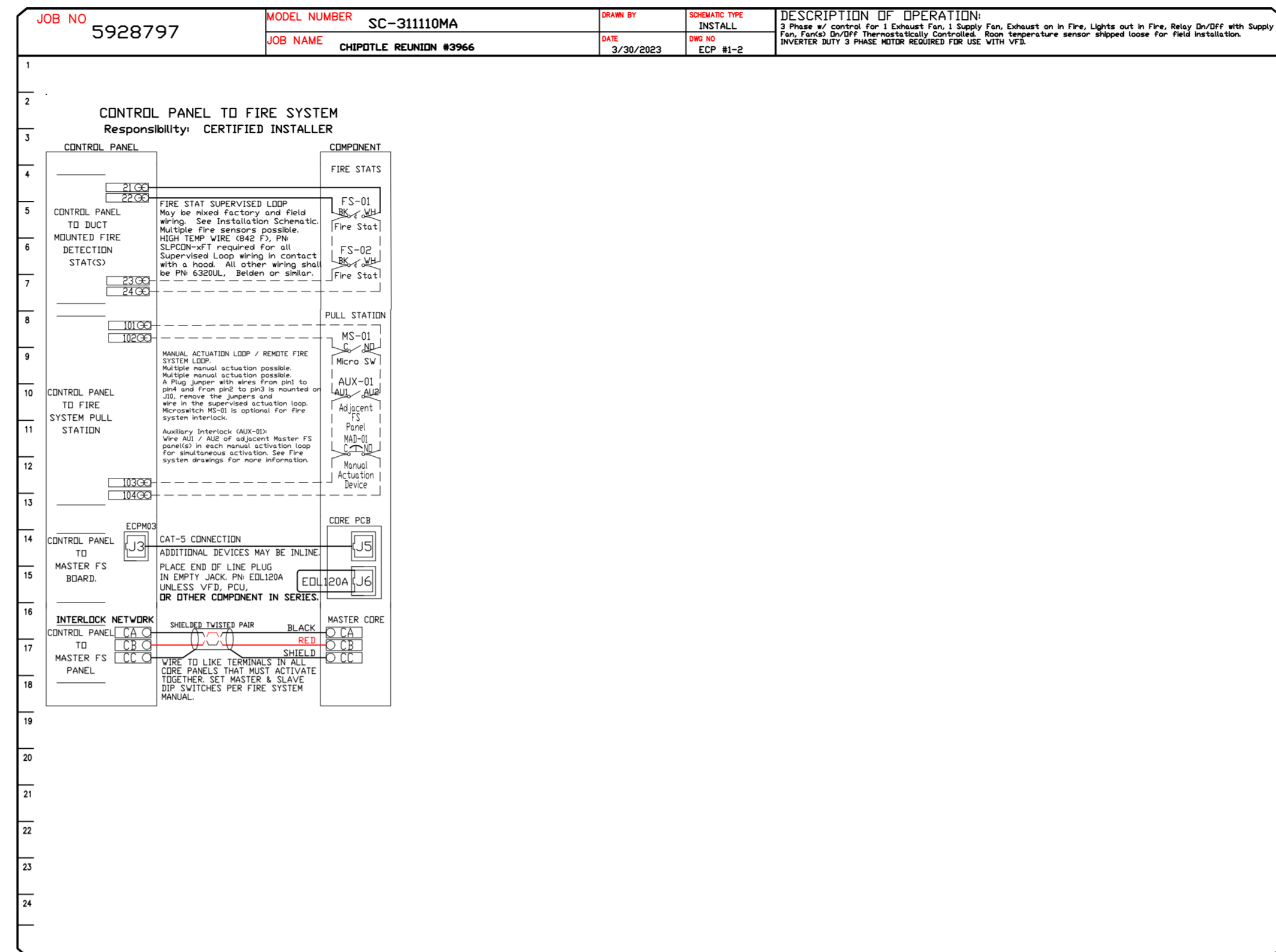
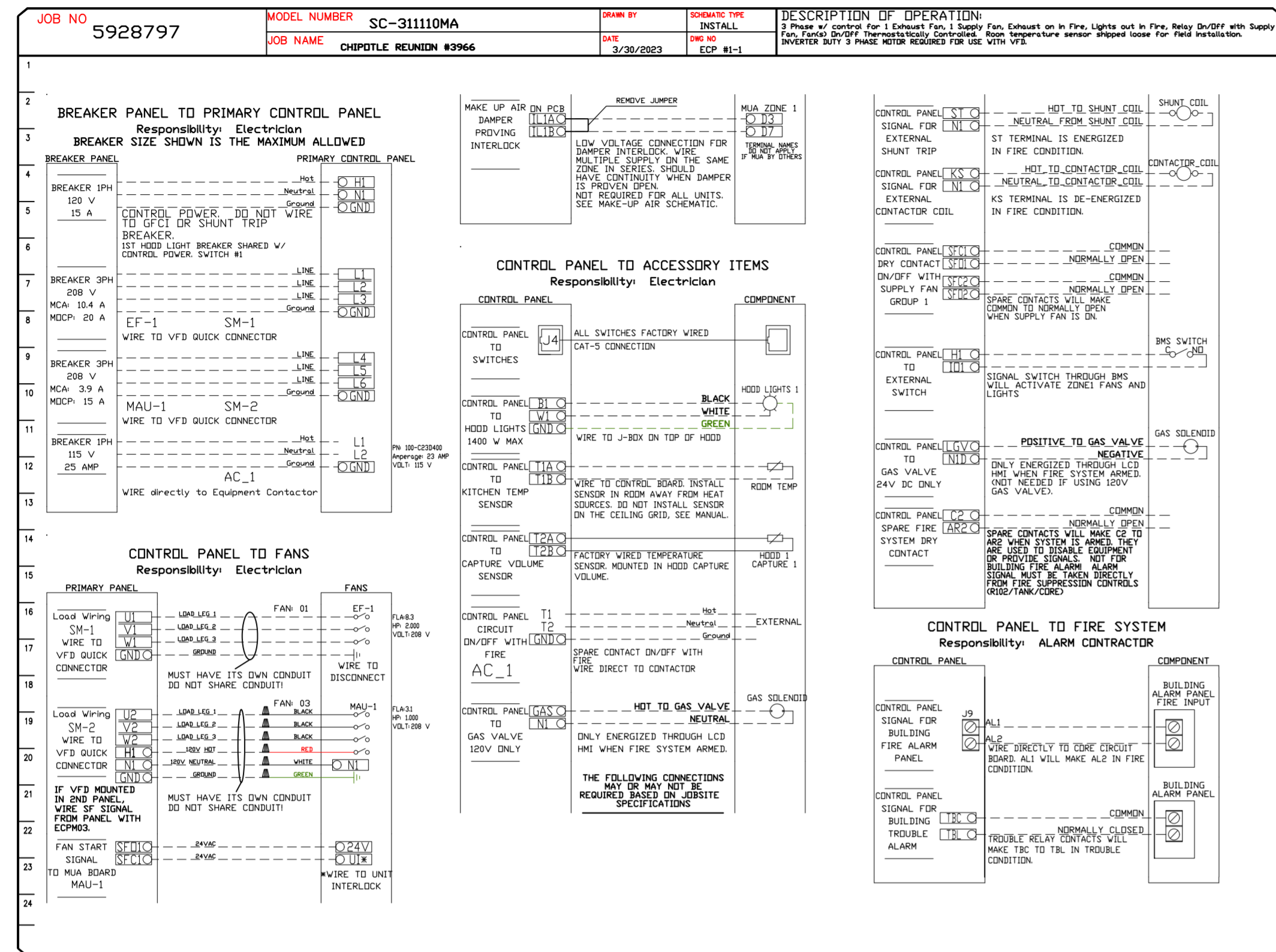
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SHEET NO.
 6

ELECTRICAL PACKAGE - JOB#5928797

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	#	HP	VOLT	FLA
1		SC-311110MA	UTILITY CABINET RIGHT	UTILITY CABINET RIGHT HOOD # 1	1 LIGHT 1 FAN	SMART CONTROLS THERMOSTATIC CONTROL W/ RELAY ON/OFF WITH SUPPLY	EF-1	EXHAUST	3	2.000	208	8.3
							MAU-1	SUPPLY	3	1.000	208	3.1



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SHEET NO. 8

