

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.

**HOOD INFORMATION - JOB#5822076**

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	ND	RIGHT	12"x54"x24"	TANK FS	4.0/4.0	SC-31110MA	1 LIGHT 1 FAN	YES	1269 LBS

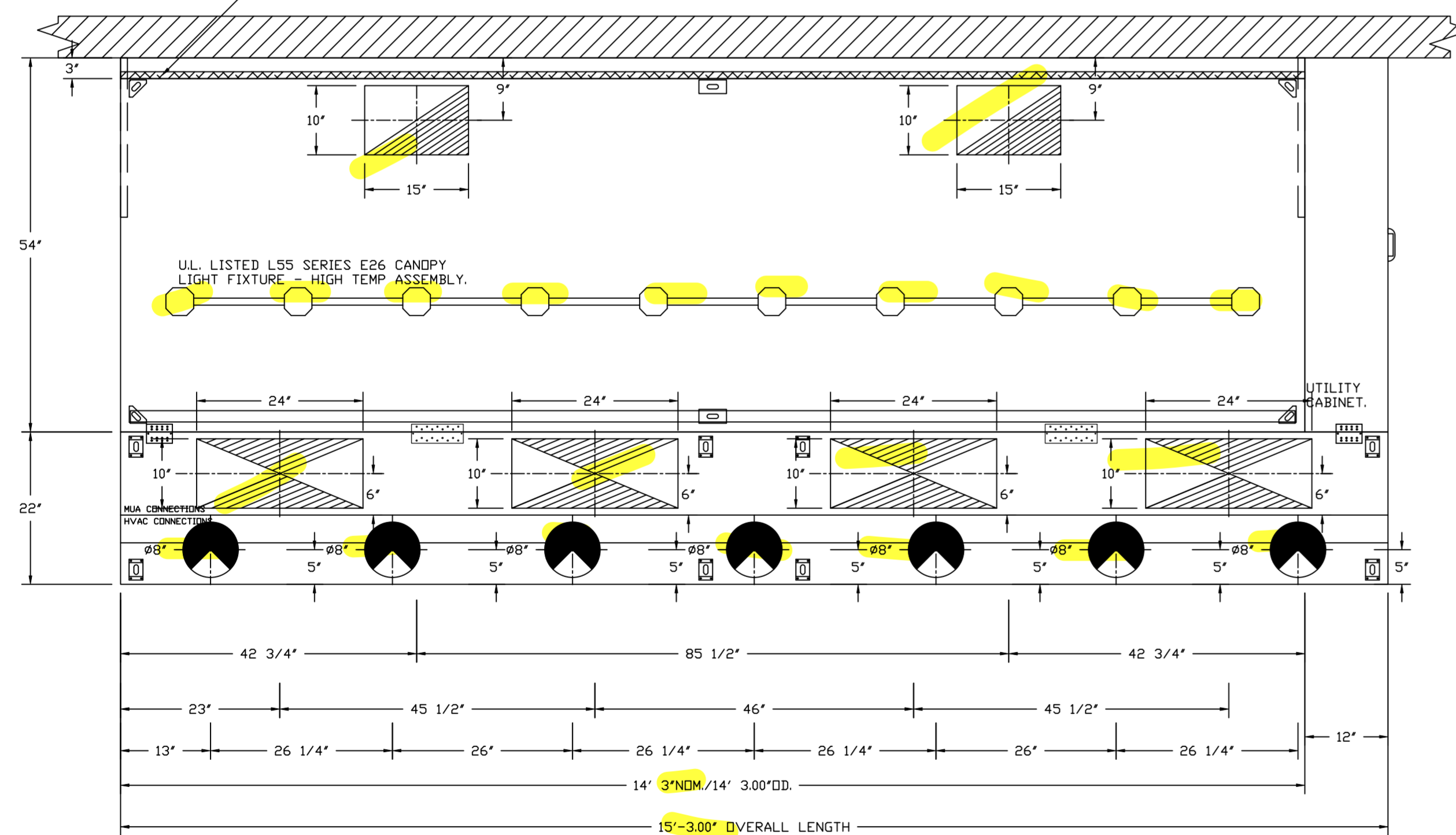
**HOOD OPTIONS**

HOOD NO	TAG	OPTION
1		FIELD WRAPPER 10.00' HIGH FRONT, LEFT, RIGHT. RIGHT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS. LEFT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS. INSULATION FOR BACK OF HOOD. RISER SENSOR INSTALL 6IN PLEN. FULL DIMENSION HANGING BRACKET - FRONT.

**PERFORATED SUPPLY PLENUM(S)**

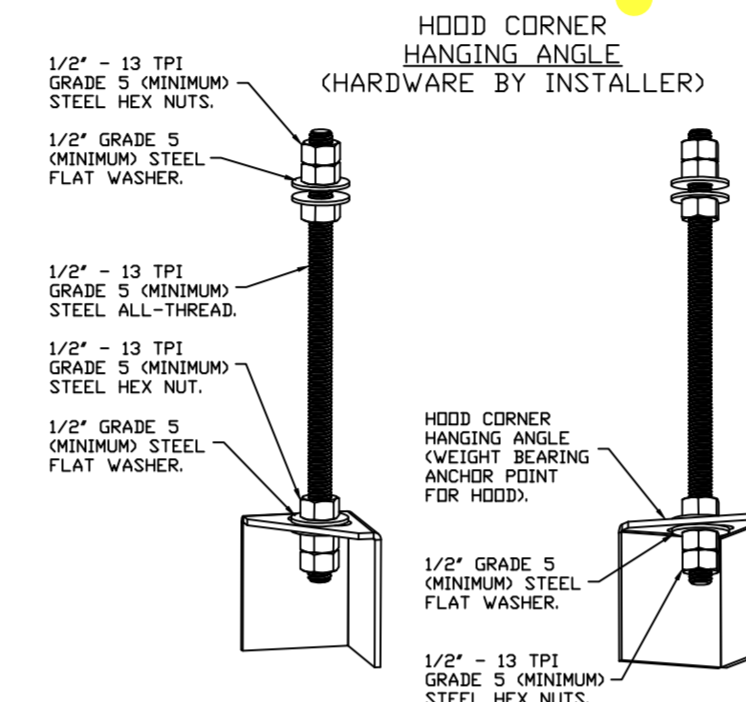
HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				
							WIDTH	LENG	DIA	CFM	SP
1		Front	183'	22'	6'	MUA	10"	24"		486	0.131'
						MUA	10"	24"		486	0.131'
						MUA	10"	24"		486	0.131'
						MUA	10"	24"		486	0.131'
						AC		8"	114	0.041'	
						AC		8"	114	0.041'	
						AC		8"	114	0.041'	
						AC		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.

**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.

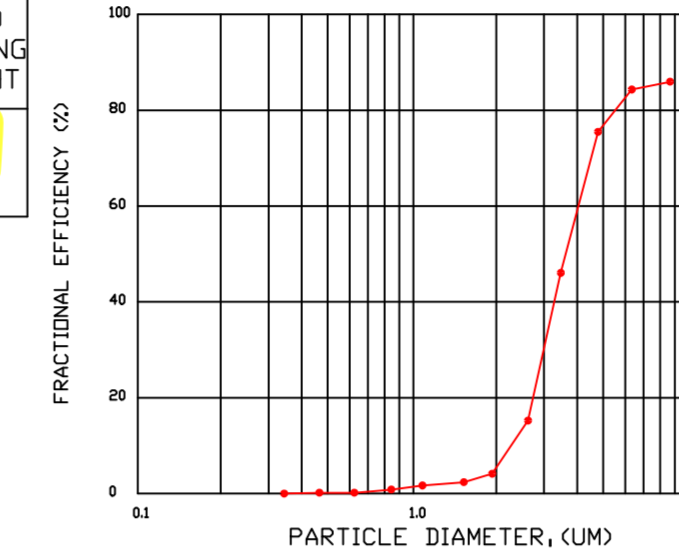
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

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

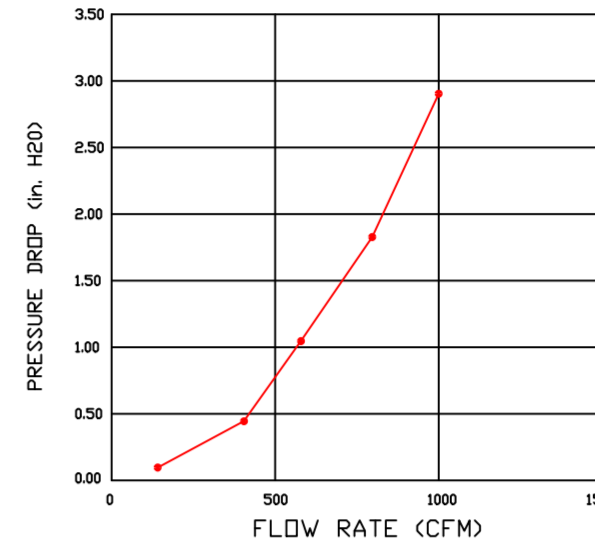
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

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.

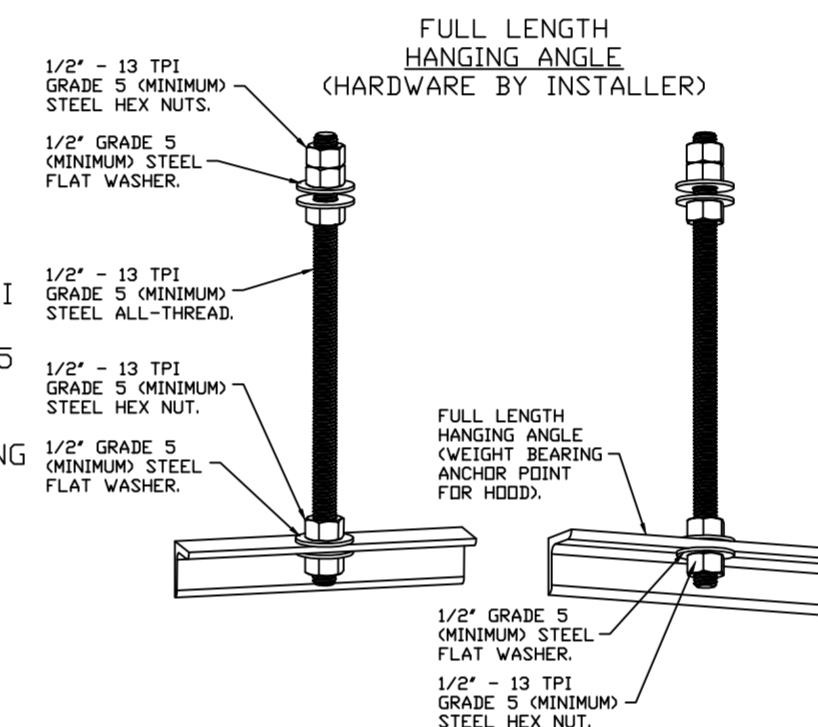
**EFFICIENCY VS. PARTICLE DIAMETER**



**PRESSURE DROP VS. FLOW RATE**

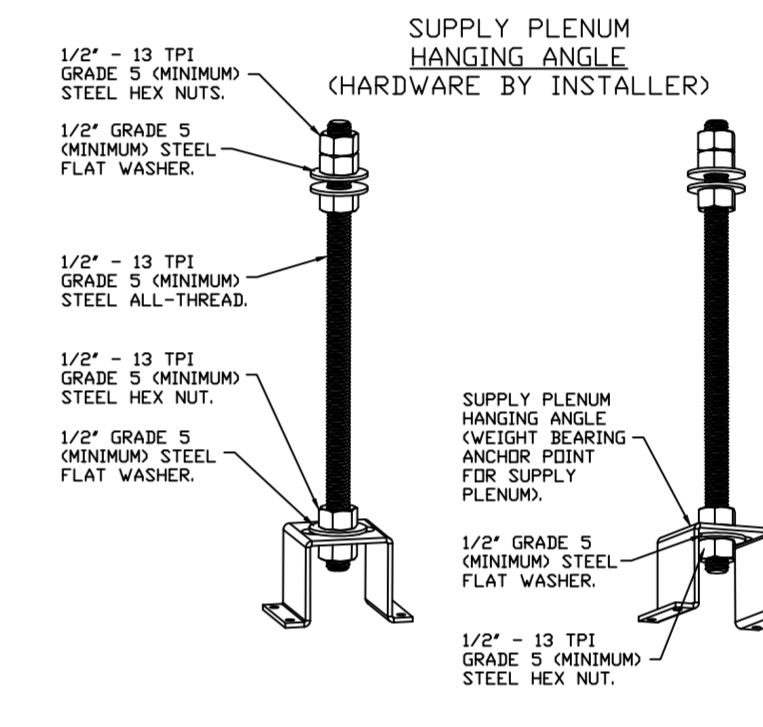


CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:  
NFPA #96.  
NSF STANDARD #2.  
UL STANDARD #1046.  
INT. MECH. CODE (IMC).  
ULC-S649.



**ASSEMBLY INSTRUCTIONS**

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**EVERJ ENGINEERING, INC**

JOB #: 220073 - Chipotle, Poulsbo

DATE: 01/25/2023

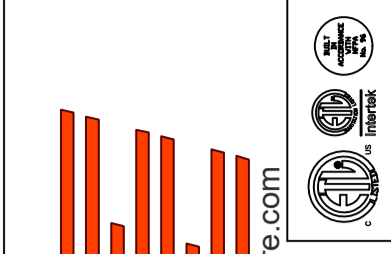
Reviewed By: J. Everett

- Reviewed Without Exceptions
- Reviewed With Exceptions
- Revise and Resubmit
- Rejected
- For Information Only

This submittal has been reviewed only for general conformance with project requirements indicated in the Contract Documents and for consistency with the project design intent. Corrections or comments made on the shop drawings do not relieve the Contractor from responsibility for errors or omissions, for compliance with all requirements of the Contract Documents and for the safe and successful construction of the work. The Contractor shall be responsible for dimensions to be confirmed on the jobsite and for the coordination of work between trades. This review does not consider quantities, means, methods, techniques, sequence of assembly and operations for construction or the said precautions or programs identical thereto.

**REVISIONS**

DESCRIPTION	DATE



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

CHIPOTLE POULSBO #4387  
BATTLE GROUND, WA, 98604

DATE: 1/23/2023

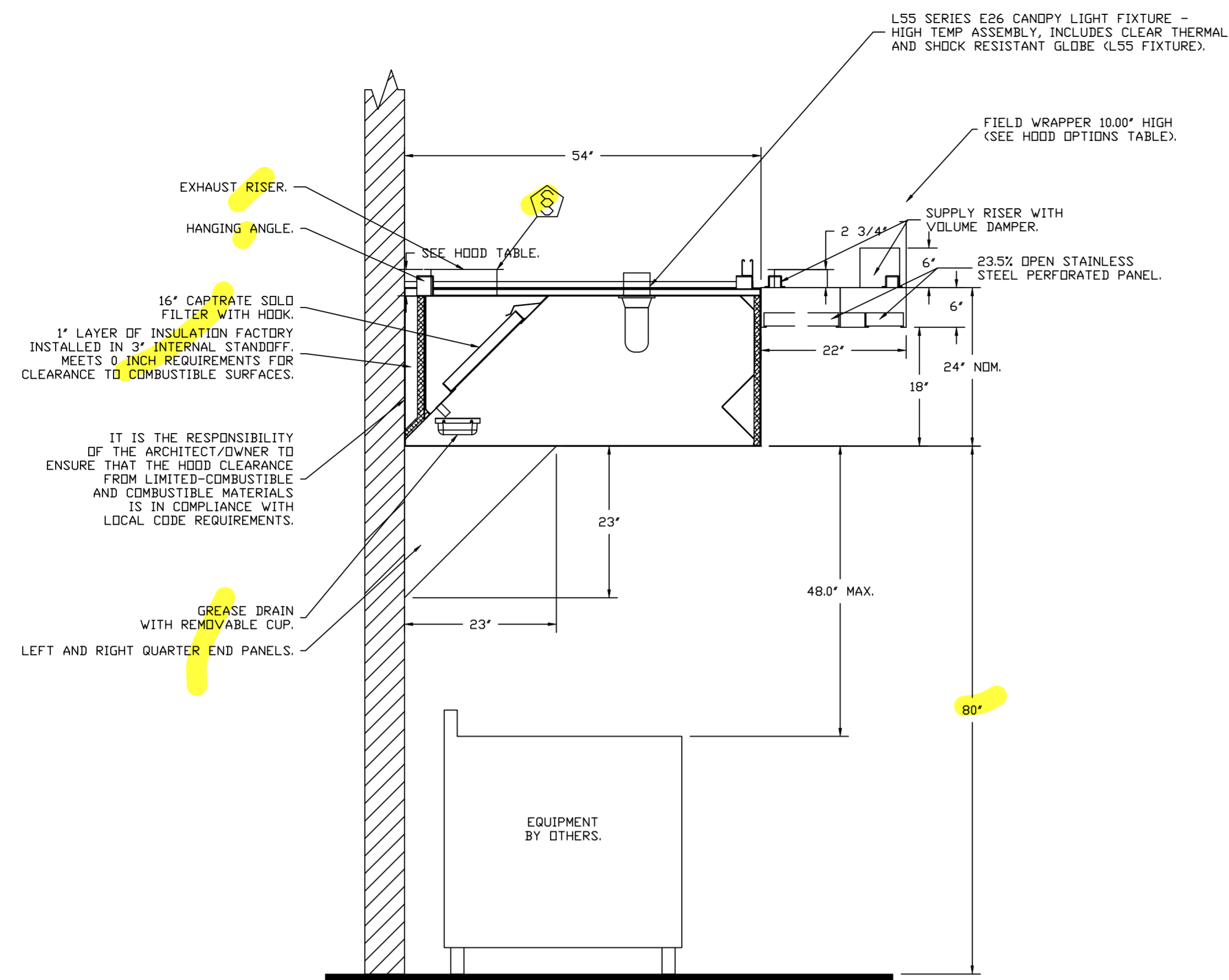
DWG.#:  
5822076

DRAWN BY: JMB-40

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

MASTER DRAWING

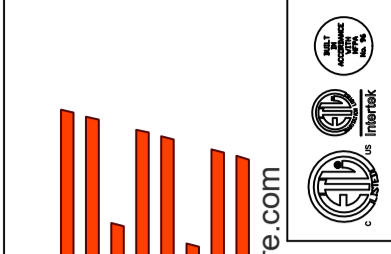
SHEET NO.  
1



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

**REVISIONS**

DESCRIPTION	DATE



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DRAWN BY: JMB-40

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

MASTER DRAWING

SHEET NO.  
2

**FIRE SYSTEM INFORMATION - JOB#5822076**

FIRE SYSTEM NO	TAG	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0/4.0	36	FIRE CABINET RIGHT	RIGHT, HOOD 1

**GAS VALVE(S)**

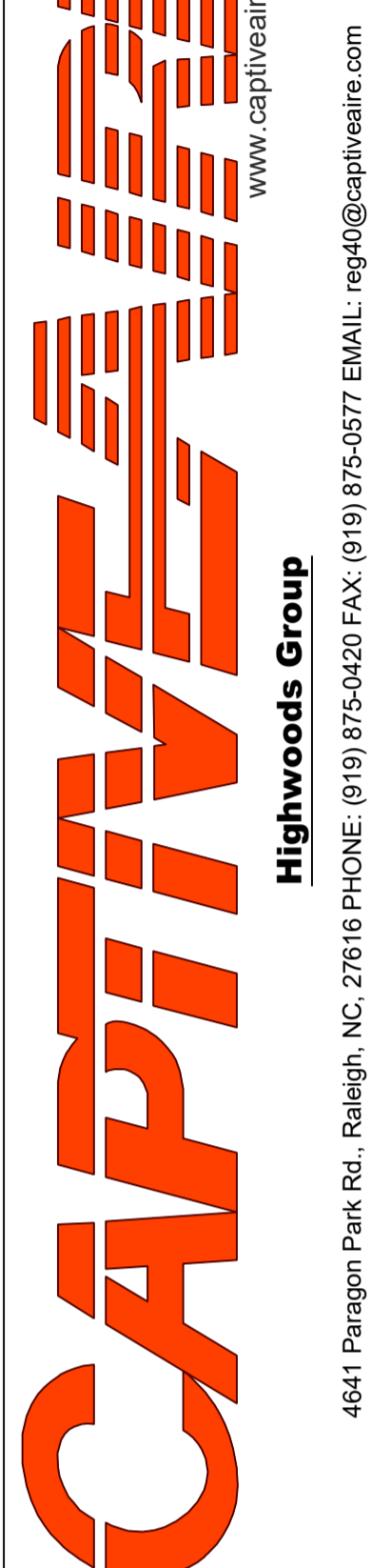
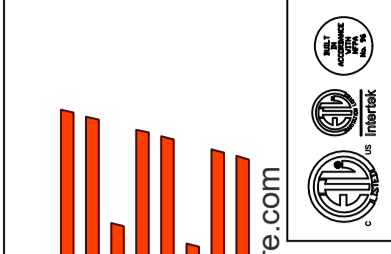
FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		SC ELECTRICAL	1.500	CAPTIVEAIR SYSTEMS

**FIRE SYSTEM PARTS LIST KEY**

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
		0 - 0 - TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - 12-F28021-32144-QT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO. CLOSE ON TEMP RISE AT 360°F.	2	0
		0 - 0 - 4429K153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW, BRASS.	2	0
		0 - 0 - 4429K422 1/2" X 1/4" BRASS REDUCING BUSHING.	1	0
		0 - 0 - 79525 1/2" 90 PRO-PRESS ELBOW WITH 1/2" NPT FEMALE CONNECTION, VIEGA.	1	0
		0 - 0 - 79580 1/2" X 1/2" PRO-PRESS TEE X 1/2" NPT FEMALE CONNECTION, VIEGA.	2	0
		0 - 0 - 87-120042-001 SECONDARY ACTUATOR VALVE (SVA) - SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-120045-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5' BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	2	0
		0 - 0 - 87-300030-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300152-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	8	0
		0 - 0 - 9055455PC PRO PRESS 1/2 PRESS X PRESS 90 ELBOW LD.	8	0
		0 - 0 - 9097200PC PRO PRESS PC611 1/2 PRESS TEE LD.	8	0
		0 - 0 - 98694A115 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	4	0
		0 - 0 - A0034332 JUNCTION BOX FOR MANUAL PULL STATION. 1.5" DEEP BACK BOX, RED COLOR.	1	0
		0 - 0 - A31484 1/4" NPT SCHRADER VALVE AND CAP, JB INDUSTRIES. 1/4" FLARE X 1/4" MPT HALF UNION. USED ON TANK SERVICE PORT.	1	0
		0 - 0 - B1145 3/8" BLACK IRON 90 ELL.	4	0
		0 - 0 - DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	6	0
		0 - 0 - TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	2	0
		16 - 16 - 79210 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	9	0
		16 - 16 - DL-F NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE)- 4 FLOW POINTS.	9	0
		26 - 26 - QSA-3/8 QUIK SEAL - 3/8" (UL).	9	0
		34 - 34 - A0034331 24VDC SINGLE ACTION MANUAL ACTION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT. RED COLOR.	1	0

**REVISIONS**

DESCRIPTION	DATE



CHIPOTLE POULSBORO #4387  
 BATTLE GROUND, WA, 98604

DATE: 1/23/2023

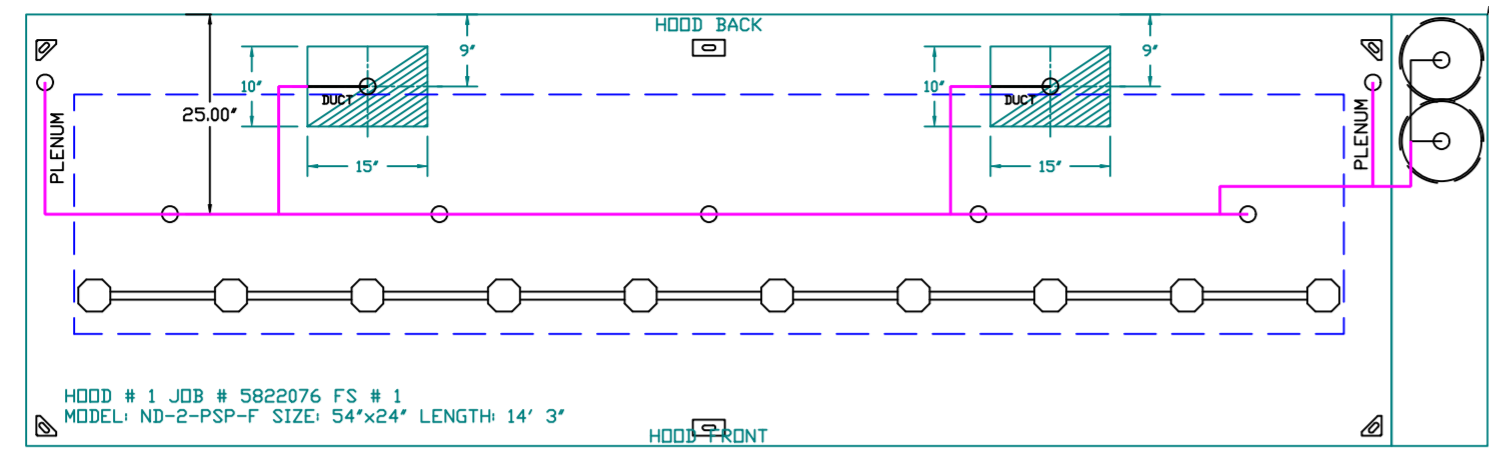
DWG.#: 5822076

DRAWN BY: JMB-40

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

MASTER DRAWING

SHEET NO. 3

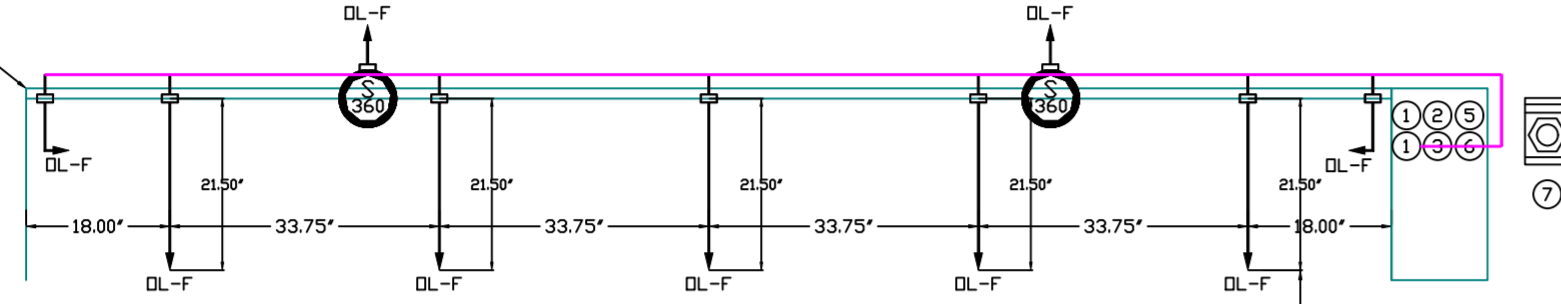


SYSTEM REQUIRES A MINIMUM OF 7 FT OF EQUIVALENT PIPE LENGTH BETWEEN TANK AND NEAREST APPLIANCE NOZZLE FOR MOST APPLIANCES. EACH 90 DEGREE ELBOW ADDS 1.5 FT OF EQUIVALENT LENGTH. SEE MANUAL FOR DETAILS.

- NOTES
- FIELD PIPE DROPS AS SHOWN.
  - PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY GAS.
  - FIELD INSTALLED DROP: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
  - SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
  - RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
  - OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
  - IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE.
  - FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.
  - APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.
  - THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.
  - DL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

INCLUDES: FIELD INSTALLATION AND HOOKUP DURING NORMAL BUSINESS HOURS BY CERTIFIED INSTALLERS ONLY IN THE LOCATION NOTED ABOVE. TWO SITE VISITS ONLY (ONE VISIT TO SET PULL STATION & SYSTEM HOOKUP AND ONE VISIT FOR ONE TEST). ADDITIONAL VISITS WILL RESULT IN ADDITIONAL CHARGES. ONE MECHANICAL OR ELECTRICAL GAS VALVE PER SYSTEM AT A MAXIMUM SIZE OF 2". PERMIT, AND SYSTEM TEST. EXCLUDES: UNION LABOR & PREVAILING WAGE (LABOR & WAGES WILL BE ADDED IF APPLICABLE), GAS VALVE INSTALLATION, ELECTRICAL HOOKUP AND CONNECTIONS, HANGING OF FIRE CABINET, SHUNT TRIP, HANDHELD EXTINGUISHERS, ON-SITE RE-PIPPING DUE TO EQUIPMENT LAYOUT CHANGES.

FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.



- JOB #: 5822076
- JOB NAME: CHIPOTLE POULSBO #4387.

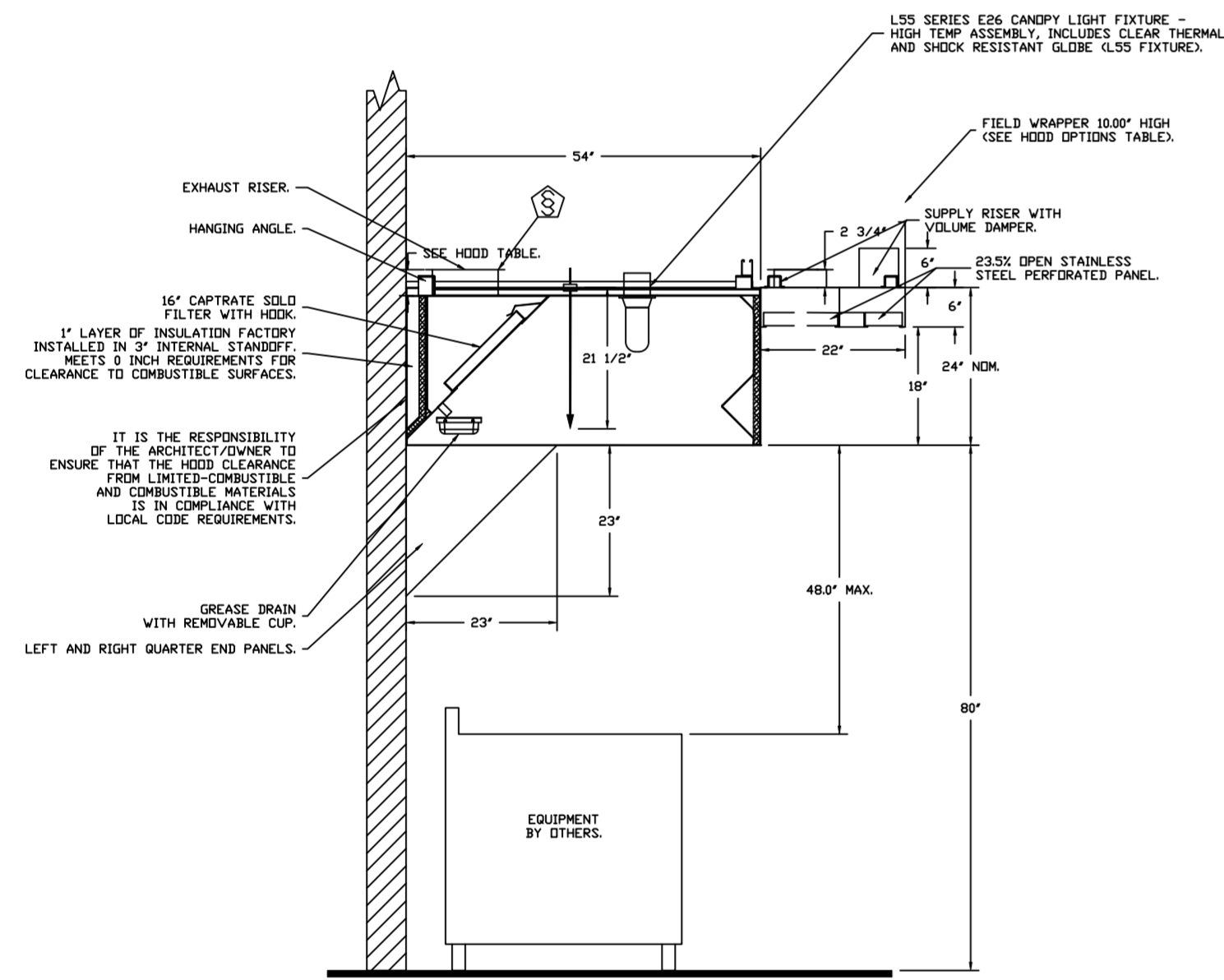
SYSTEM SIZE: TANK-SP-2 TOTAL FP REQUIRED: 36.  
HOOD # 1 14' 3.00" LONG x 54" WIDE x 24" HIGH.  
RISER # 1 SIZE: 10" x 15".  
RISER # 2 SIZE: 10" x 15".  
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

LEGEND - FIRE CABINET TANK SYSTEM

- 4 GALLON TANK.
- PRIMARY ACTUATOR RELEASE.
- SECONDARY ACTUATOR RELEASE.
- PRESSURE SUPERVISION SWITCH.
- PRIMARY HOSE ASSEMBLY.
- SECONDARY HOSE ASSEMBLY.
- REMOTE MANUAL ACTUATION DEVICE.

TANK OVERLAPPING HIGH PROXIMITY 15500" L X 3000" D



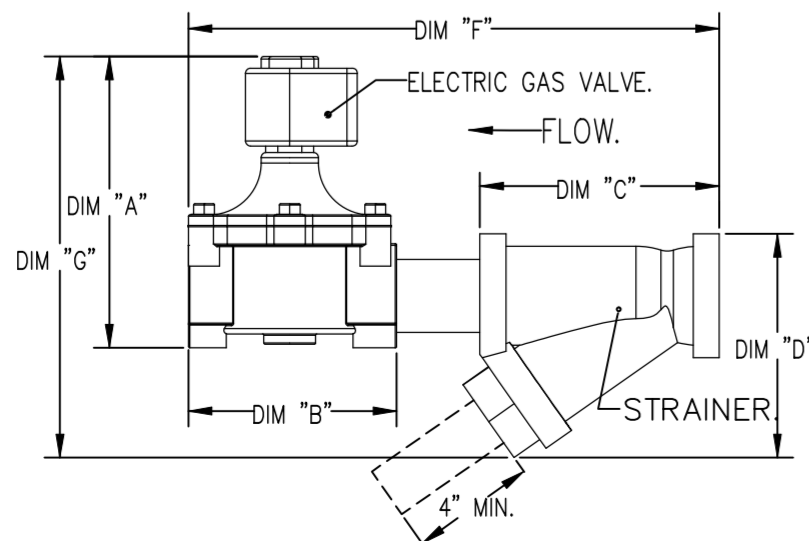
SECTION VIEW - MODEL 5424ND-2-ACSP-F HOOD - #1

GAS VALVE SIZING		GAS VALVE DIMENSIONS										INSTALLATION			PART NUMBERS		
TYPE	SIZE	VOLTAGE	MIN. INLET PRESSURE	MAX. INLET PRESSURE	FLOW AT 1 IN.W.C. DROP NATURAL GAS	FLOW AT 1 IN.W.C. DROP PROPANE	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"	DIM "F"	DIM "G"	MOUNTING ORIENTATION	GAS VALVE PART NUMBER	STRAINER PART NUMBER	GAS VALVE/STRAINER KIT NUMBER
ELECTRICAL	1-1/2"	120 VAC	0 PSIG (0 IN.W.C.)	5 PSIG (1.38 IN.W.C.)	2,406,000 BTU/HR	1,561,219 BTU/HR	7-5/8"	6-3/8"	5-3/4"	6-3/16"	14-1/8"	12-5/16"	HORIZONTAL/VERTICAL	8214275	4417967		(SC20VA)-1/2

ALL GAS VALVES/STRAINERS PROPER CLEARANCE MUST BE PROVIDED IN ORDER TO SERVICE THE STRAINERS A MINIMUM OF 4" CLEARANCE DISTANCE MUST BE PROVIDED AT THE BASE OF THE STRAINER. CUSTOMER MUST VERIFY BTU CONSUMPTION AS WELL AS PRESSURE RATIO SPECIFIC GRAVITY OF NATURAL GAS = 0.64, SPECIFIC GRAVITY OF LP = 1.52.

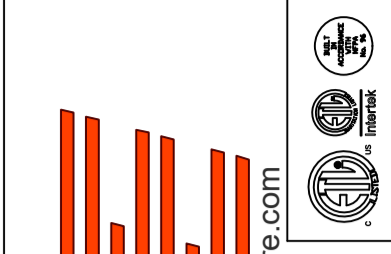
TO CALCULATE GAS FLOW FOR OTHER THAN 1 IN.W.C. PRESSURE DROP  
NEW BTU/HR = (BTU/HR AT 1 IN.W.C. PRESSURE DROP) X NEW PRESSURE DROP<sup>0.85</sup>

TO CALCULATE GAS FLOW FOR OTHER THAN 0.64 SPECIFIC GRAVITY  
NEW BTU/HR = (BTU/HR AT 0.64) X (0.64 / NEW SPECIFIC GRAVITY)<sup>0.85</sup>



REVISIONS

DESCRIPTION	DATE:



www.captivefire.com  
www.highwoods.com



Highwoods Group

CHIPOTLE POULSBO #4387  
BATTLE GROUND, WA, 98604

DATE: 1/23/2023

DWG.#: 5822076

DRAWN BY: JMB-40

SCALE: 1/2" = 1'-0"

MASTER DRAWING

SHEET NO. 4

**EXHAUST FAN INFORMATION - JOB#5822076**

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	857	DDP,PREMIUM	3.000	1.6920	3	208	10.2	727 FPM	305	14.3
2	EF-2	1	DR12HFA	CAPTIVEAIRE	150	0.600	1293	TEAD-ECM	0.250	0.0950	1	115	2.9		50	6.2

**MUA FAN INFORMATION - JOB#5822076**

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	2042	DDP,PREMIUM	2.000	1.3490	3	208	6.1	7.7A	15A	500	20.1

**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	102916	94683	46°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	12-BDD DAMPER
3	MAU-1	1	ECM WIRING PACKAGE - MANUAL DR 0-10VDC REFERENCE SPEED CONTROL -RTC- (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	SIZE 1 TEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS
1	SEPARATE 120V WIRING PACKAGE (REQUIRED AND USED ONLY FOR DCV OR PREWIRE WITH VFD) - THREE PHASE ONLY		
1	2 YEAR PARTS WARRANTY		

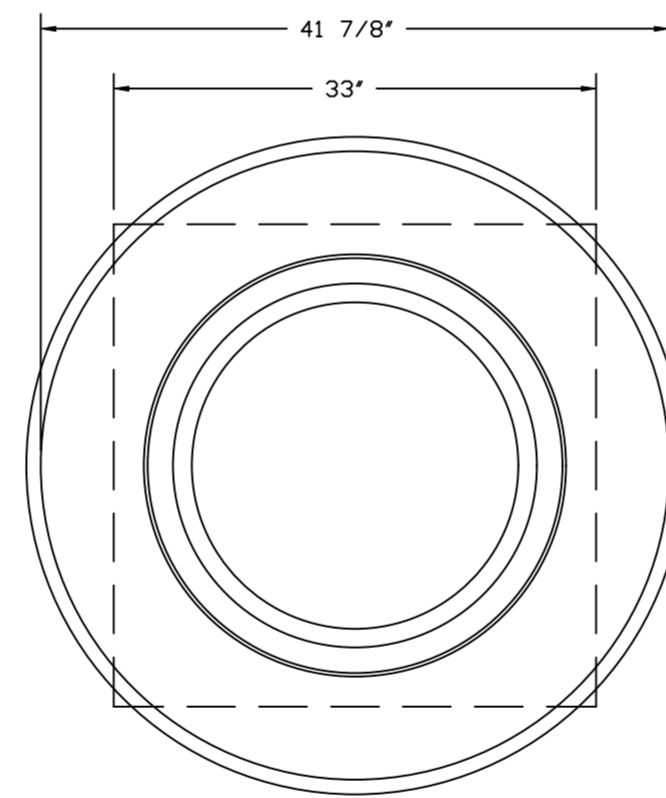
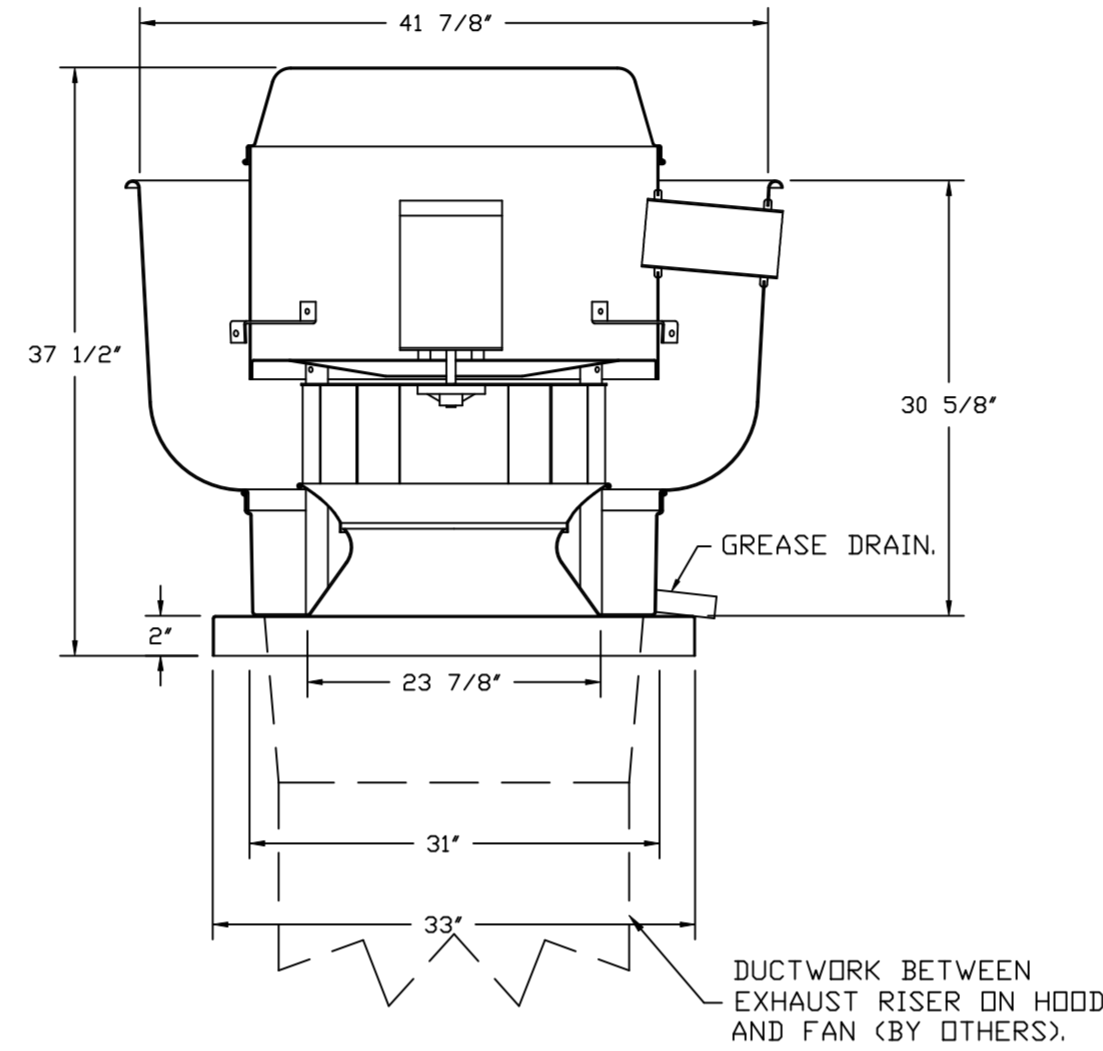
**FAN ACCESSORIES**

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	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	65 LBS	CURB	21.000"W X 71.000"L X 20.000"H ALONG WIDTH, RIGHT INSULATED.

FAN #1 DU240HFA - EXHAUST FAN (EF-1)



TOP VIEW

**FEATURES:**

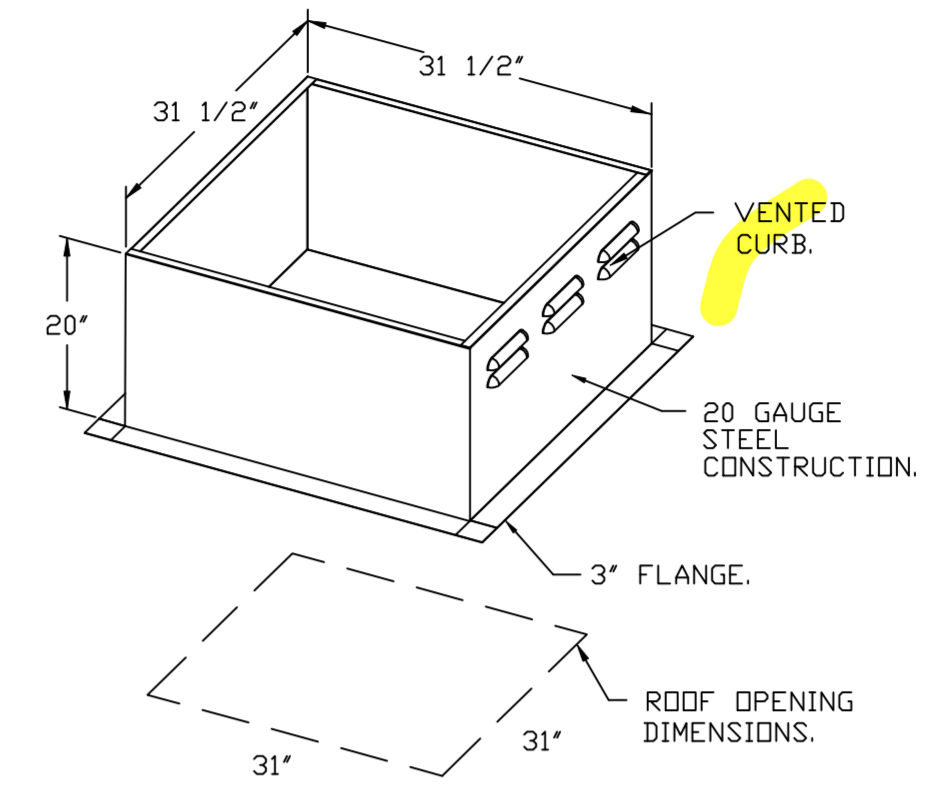
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT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

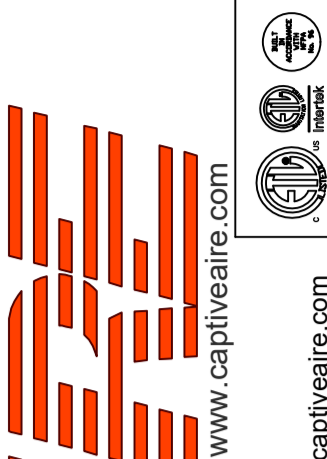
**OPTIONS**

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



**REVISIONS**

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

CHIPOTLE POULSBORO #4387  
BATTLE GROUND, WA, 98604

DATE: 1/23/2023

DWG.#: 5822076

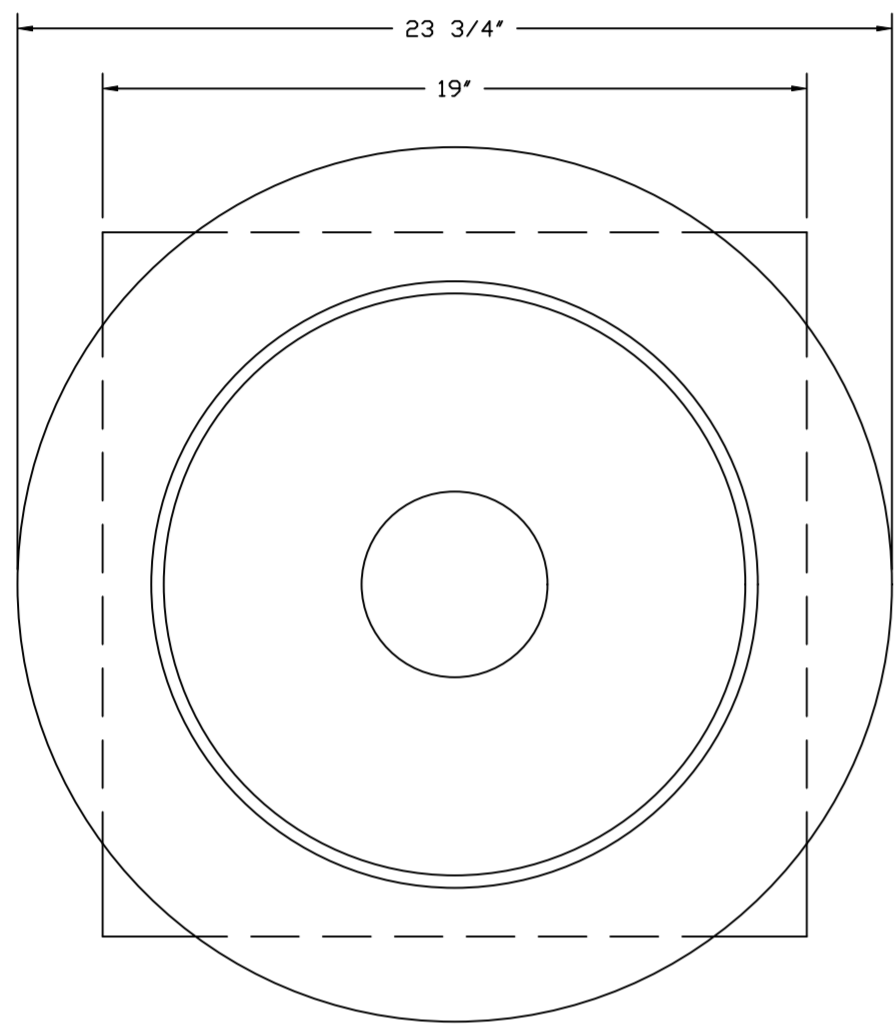
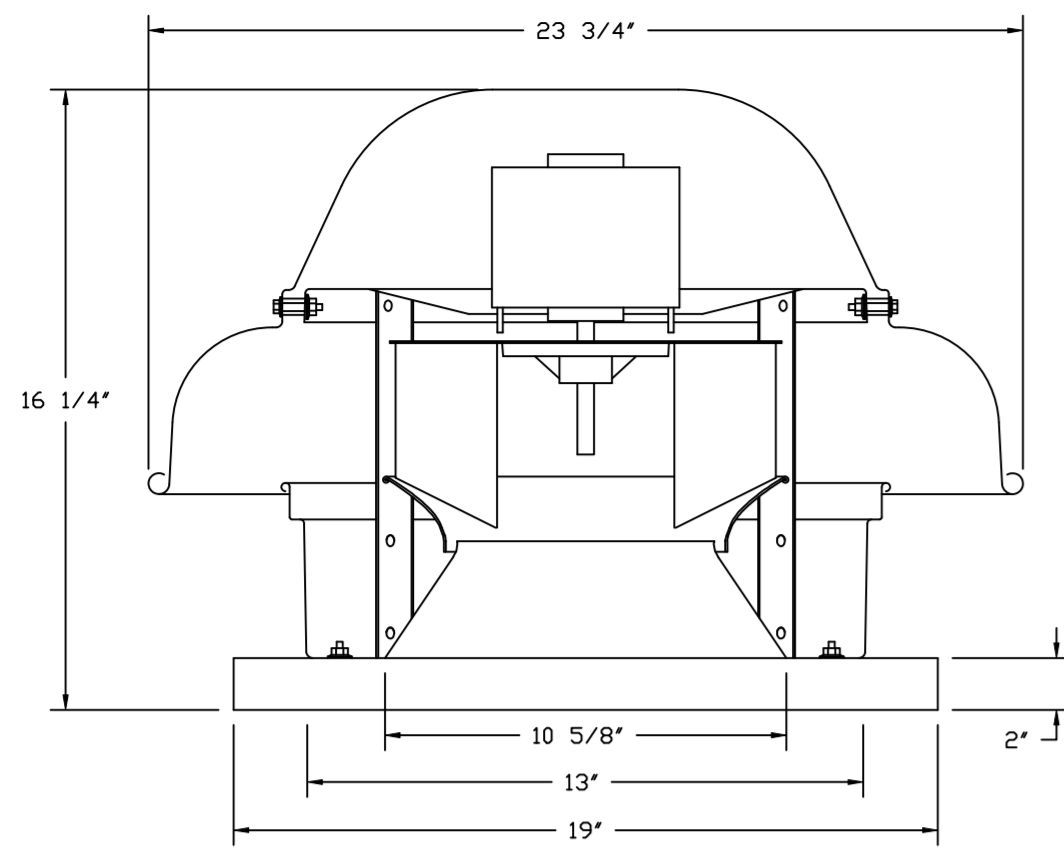
DRAWN BY: JMB-40

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

MASTER DRAWING

SHEET NO.

FAN #2\_DR12HFA - EXHAUST FAN (CF-22)



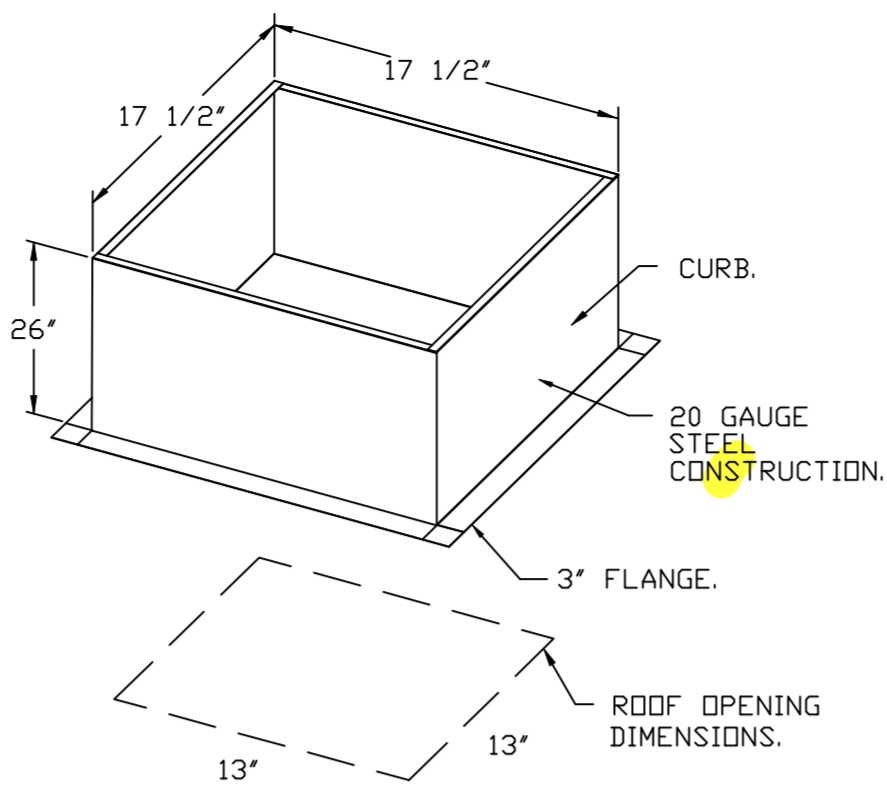
TOP VIEW

**FEATURES:**

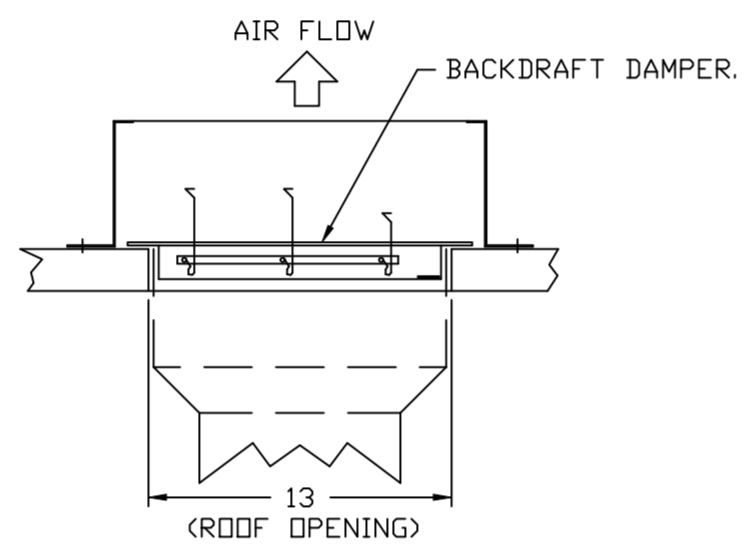
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- UL705.
- SAFETY DISCONNECT.
- STANDARD BIRD SCREEN.
- SPEED CONTROL.

**OPTIONS**

- 1 12-BDD DAMPER.
- ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL.
- RTC - (TELCO MOTOR), CCW ROTATION.
- 2 YEAR PARTS WARRANTY.



**BACKDRAFT DAMPER INSTALLATION**



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 EMAIL: reg40@captiveair.com

CHIPOTLE POULSB0 #4387  
 BATTLE GROUND, WA, 98604

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<b>DWG.#:</b> 5822076
<b>DRAWN BY:</b> JMB-40
<b>SCALE:</b> 3/4" = 1'-0"
<b>MASTER DRAWING</b>

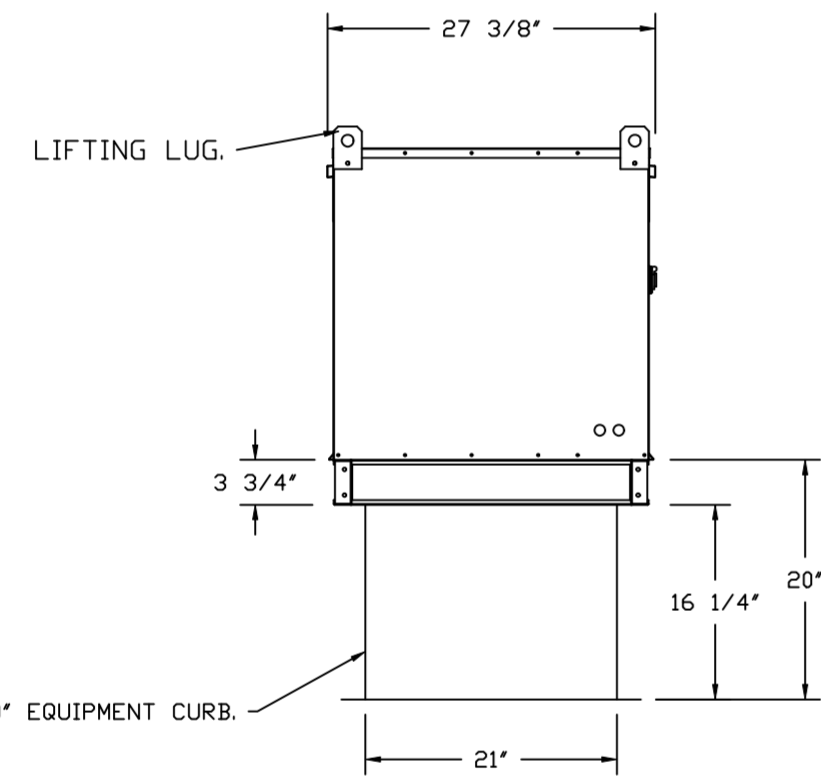
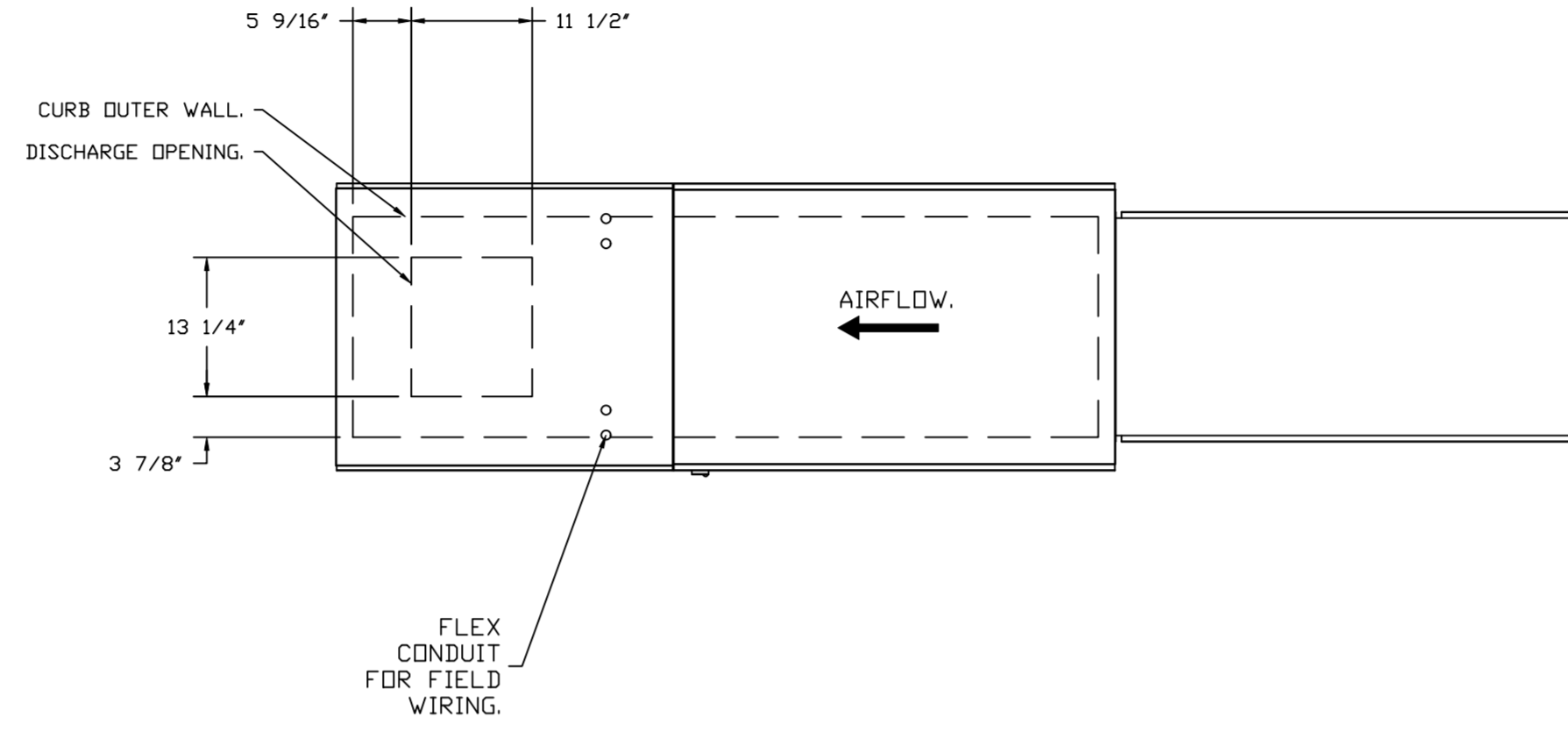
**SHEET NO.**  
6

- 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, TFBIDS 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. DOWN DISCHARGE CONSTRUCTION FOR SIZE 1 DIRECT DRIVE AHUS.
  9. 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.
  10. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER SECTION).
  11. 2 YEAR PARTS WARRANTY

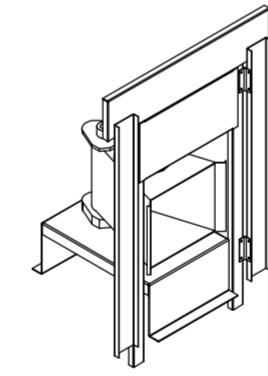
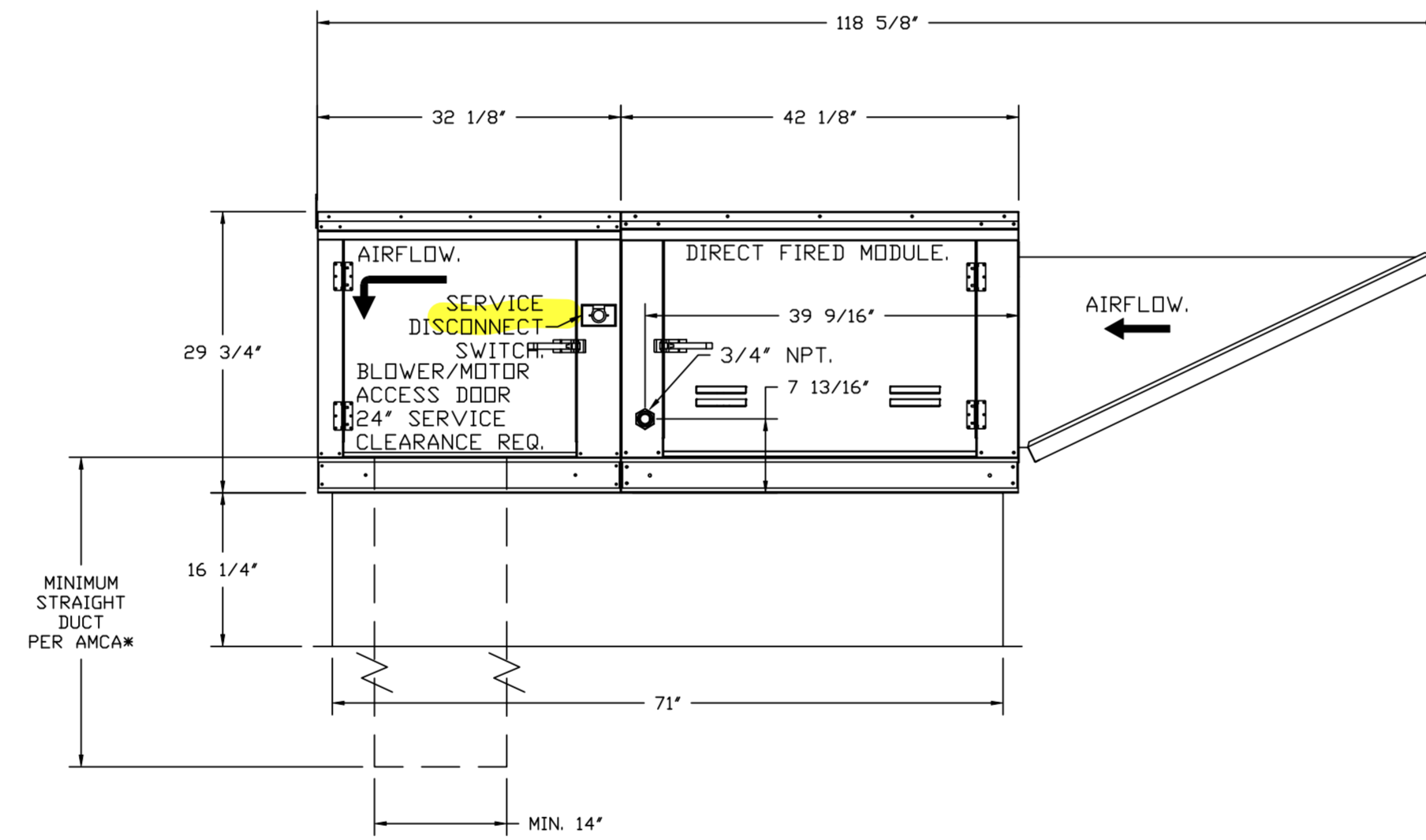
\*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE 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 = 29°F. TEMP. RISE = 46°F.  
 BTUS CALCULATED OFF ACTUAL AIR DENSITY.  
 OUTPUT BTUS AT ALTITUDE OF 0.0 FT. = 95830.  
 INPUT BTUS AT ALTITUDE OF 0.0 FT. = 104163.  
 OUTPUT BTUS AT ALTITUDE OF 333 FT. = 94663.  
 INPUT BTUS AT ALTITUDE OF 333 FT. = 102916.



ROOF OPENING 2" SMALLER THAN CURB DIMENSION.



DIRECT FIRED (DF) PROFILE PLATE ASSEMBLY

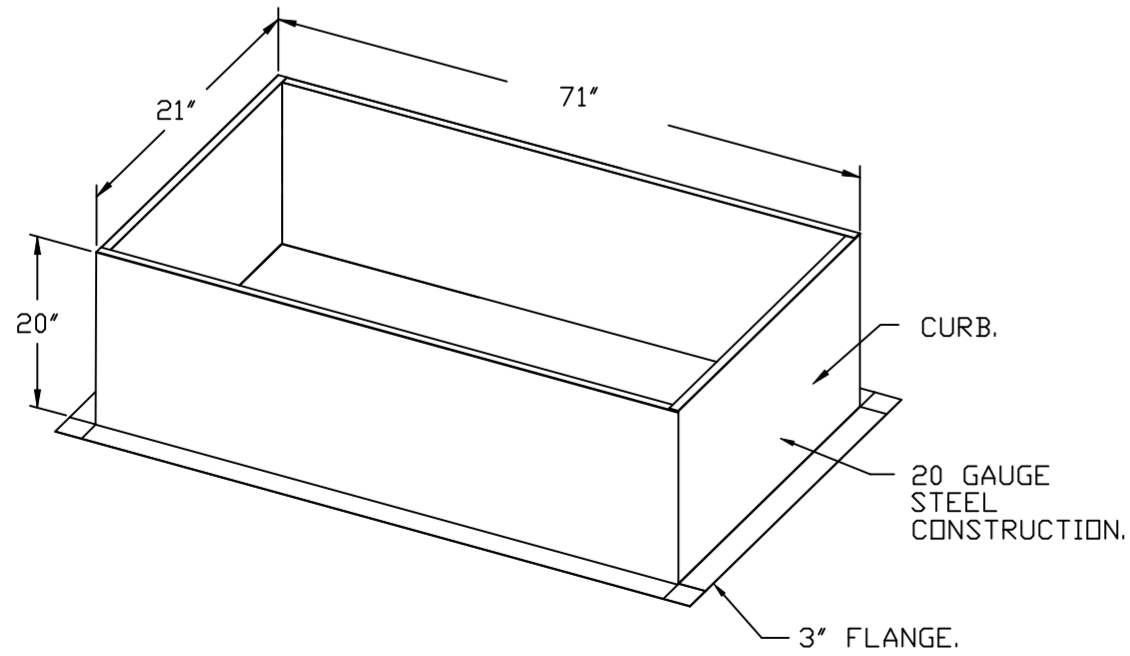
DIRECT FIRED PROFILE PLATE SPECIFICATIONS:

**DESCRIPTION:**  
 DIRECT FIRED BURNERS SHALL HAVE PATENTED (US PATENT NO. US6699508B0), 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 50PPM OF CARBON MONOXIDE (CO), AND 50PPM 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.

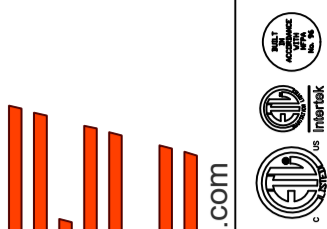
**CERTIFICATIONS:**  
 ALL PROFILE PLATE ASSEMBLIES SHALL BE INCLUDED IN THE DF UNIT'S ETL LISTING AND COMPLY WITH COMBINED SAFETY STANDARDS ANSI Z83.4 AND CSA 3.7 (NON-RECIRCULATING DF HEATERS) AND ANSI Z83.8 (RECIRCULATING DF HEATERS).

**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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DRAWN BY: JMB-40

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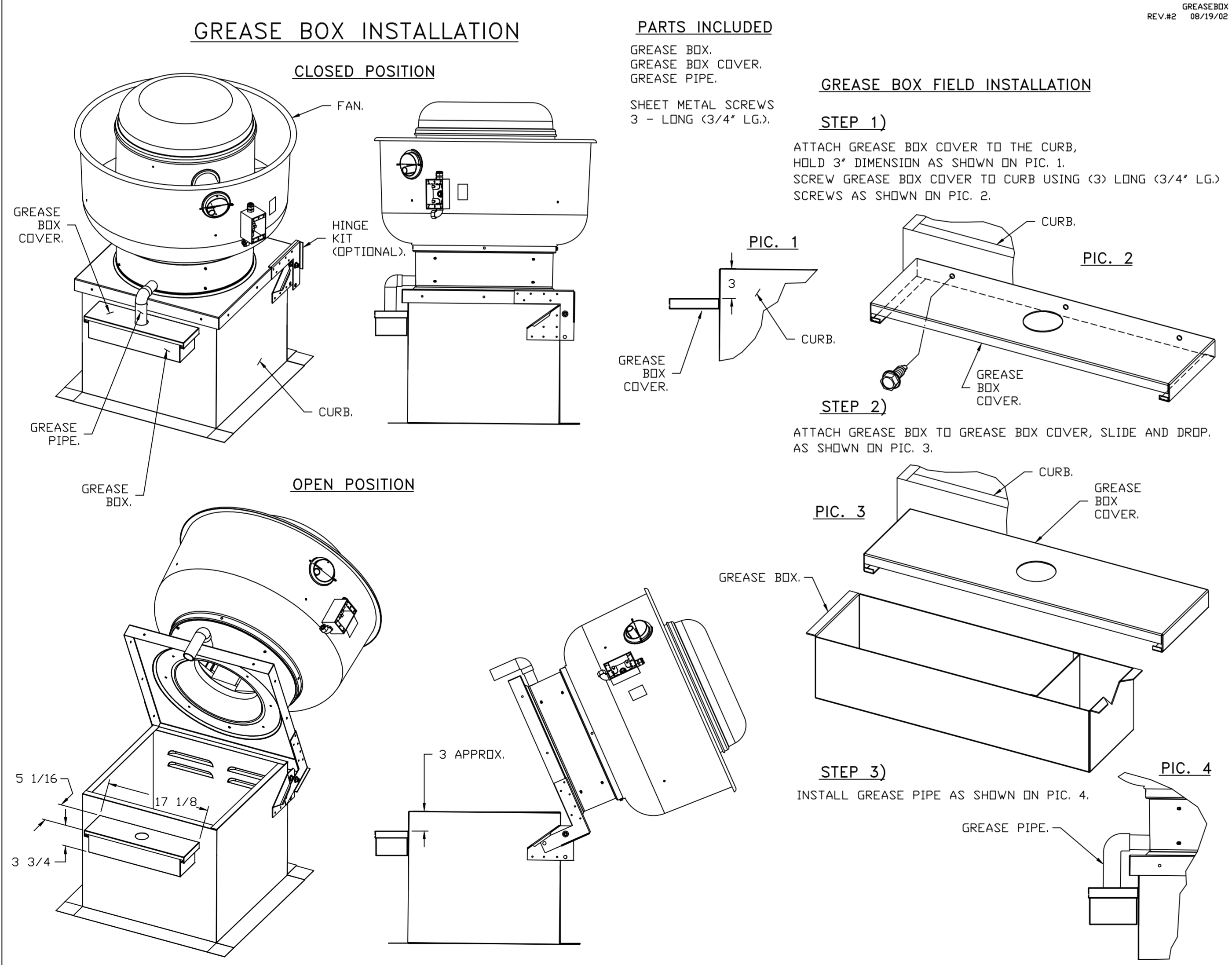
MASTER DRAWING

SHEET NO. 7

GREASE DUCT & CHIMNEY SPECIFICATIONS:  
 PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIR SYSTEMS MODEL "DW"  
 ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "DW"  
 IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING  
 CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "DW"  
 DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER  
 THE MANUFACTURES INSTALLATION GUIDE.  
 PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER.  
 PER MANUFACTURES LISTING MODEL "DW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE  
 SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12".  
 DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE  
 ACCUMULATION IN HORIZONTAL RUNS.  
  
 IF THE DUCT OR CHIMNEY IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE  
 UL-2221 OR UL-103 HT LISTED DOUBLE WALL GREASE DUCT OR DOUBLE WALL CHIMNEY  
 EQUAL TO CAPTIVEAIR SYSTEMS MODEL "DW- 2R, 2R TYPE HT, 3R, OR 3Z" ROUND 20 GAUGE  
 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

**CUSTOMER APPROVAL TO MANUFACTURE:**

APPROVED AS NOTED	<input type="checkbox"/>
APPROVED WITH NO EXCEPTION TAKEN	<input type="checkbox"/>
REVISE AND RESUBMIT	<input type="checkbox"/>
SIGNATURE _____	
YOUR TITLE _____	DATE _____



\*NOTE: UL 705 INSTALL.

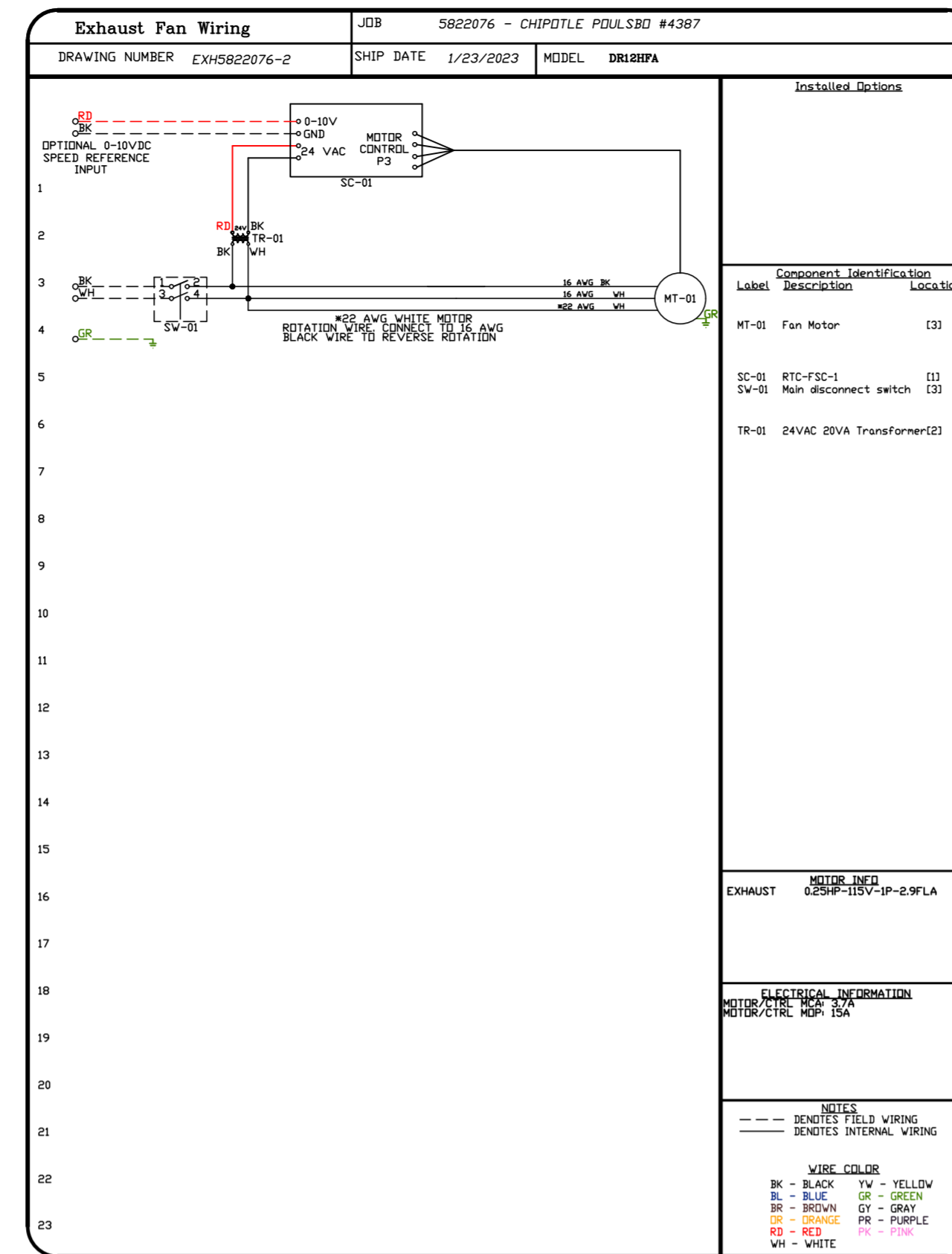
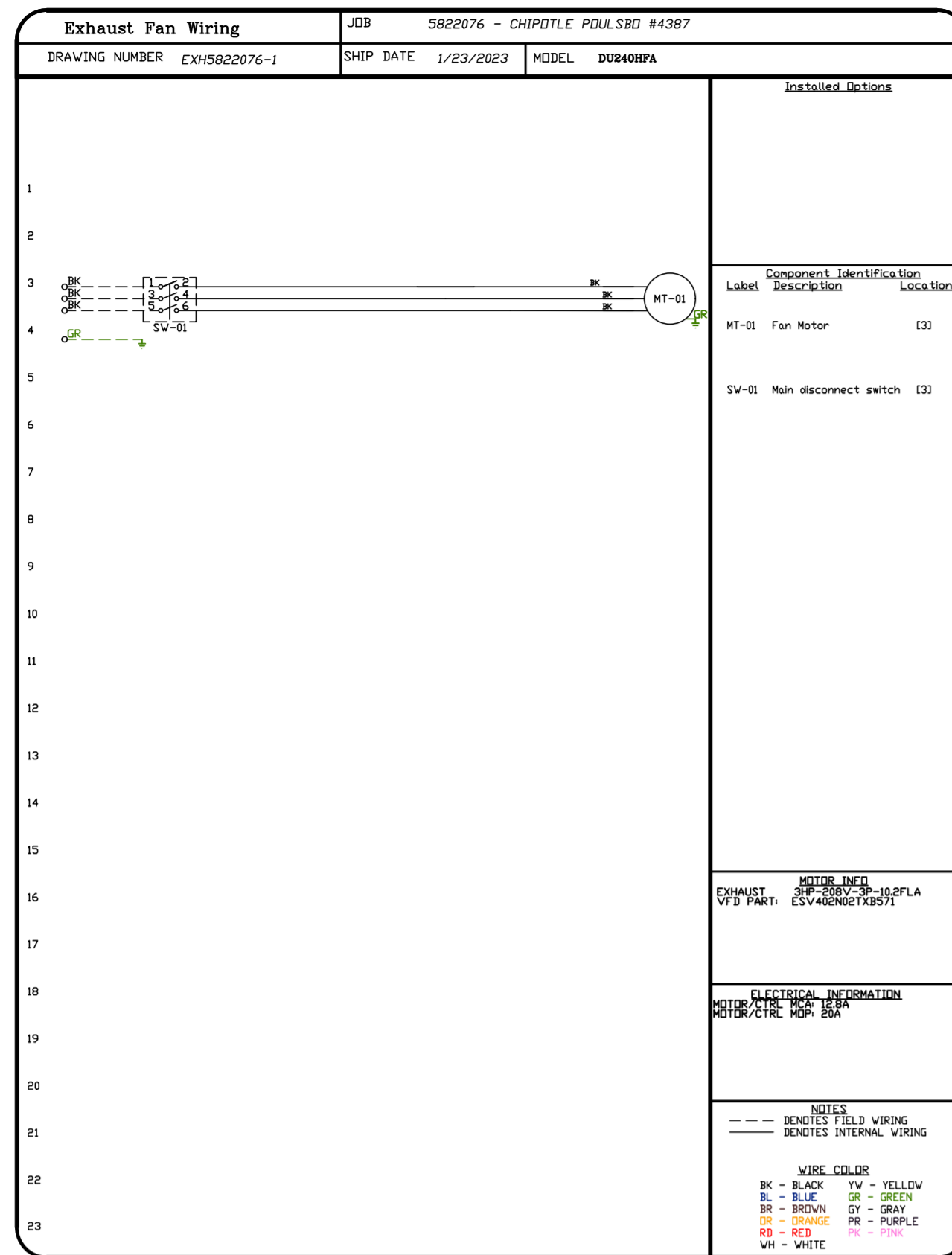
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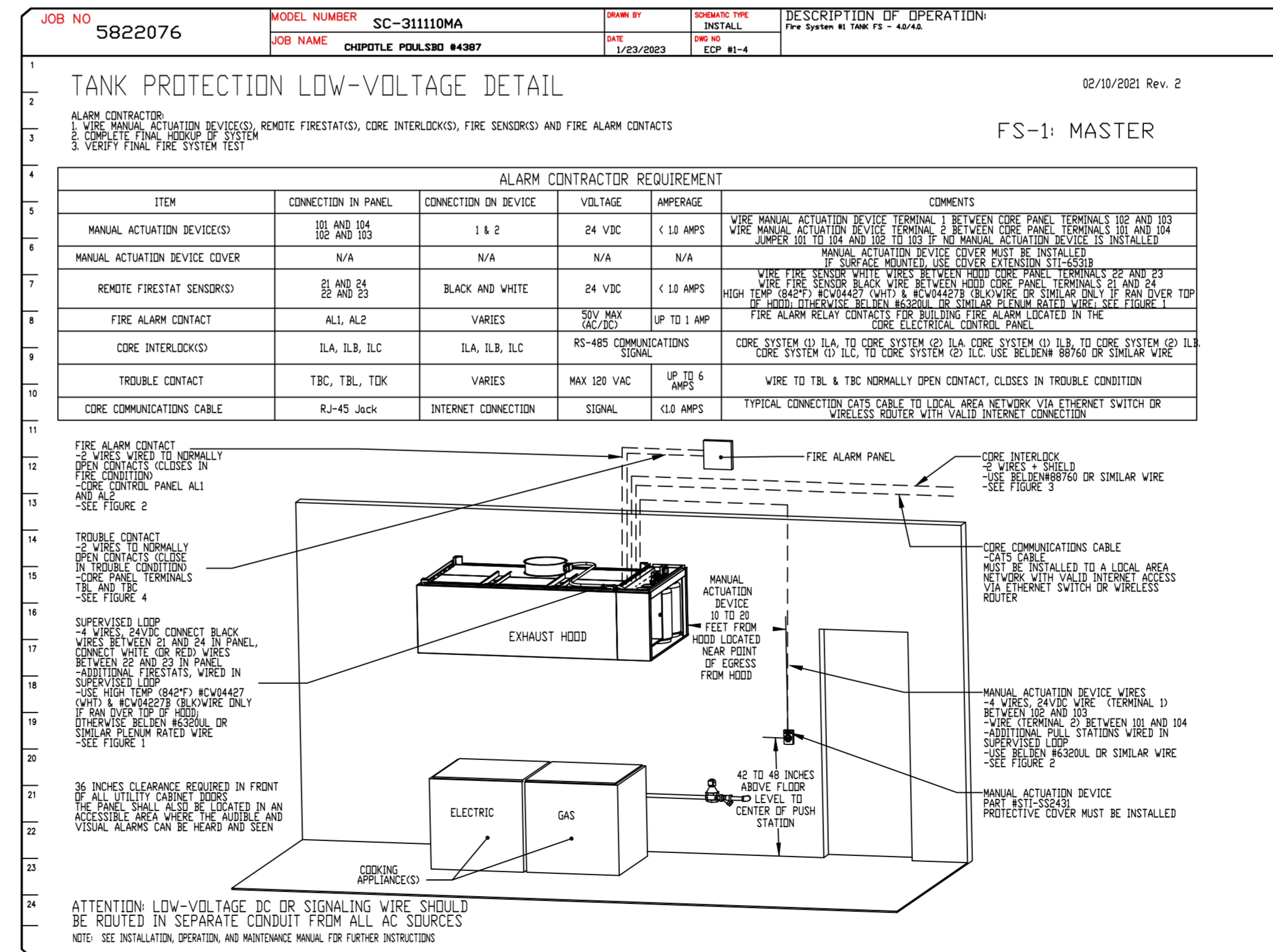
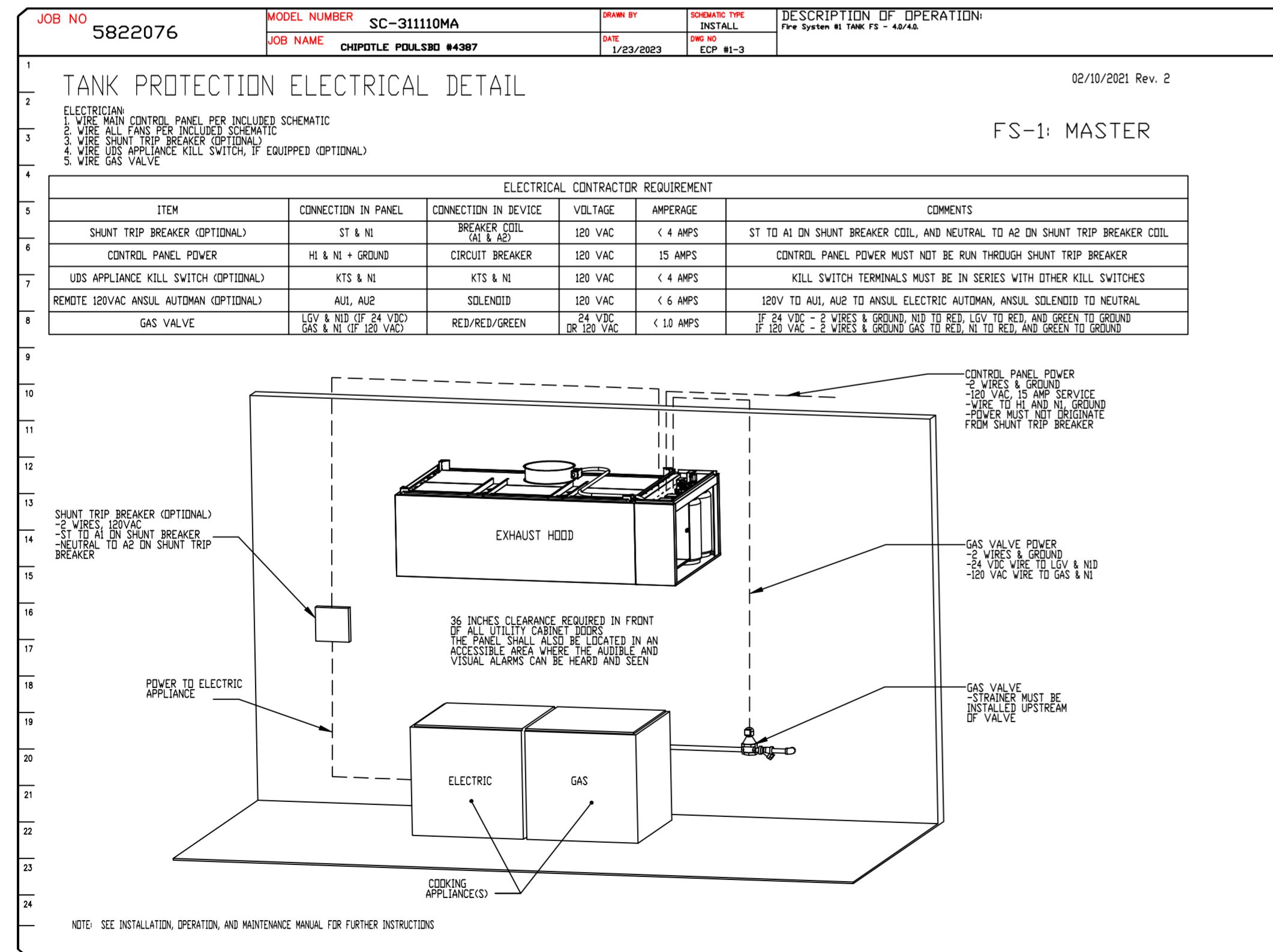
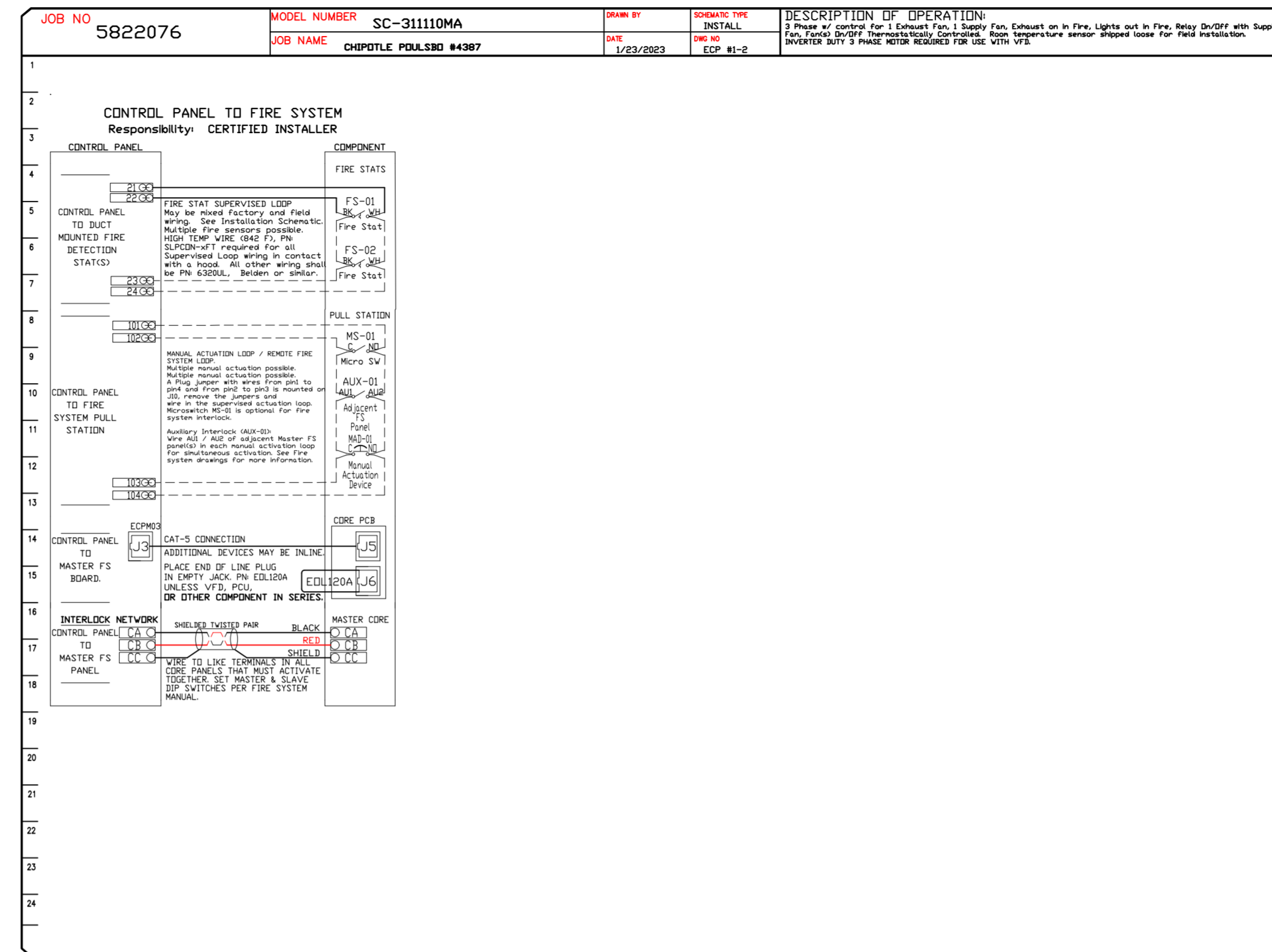
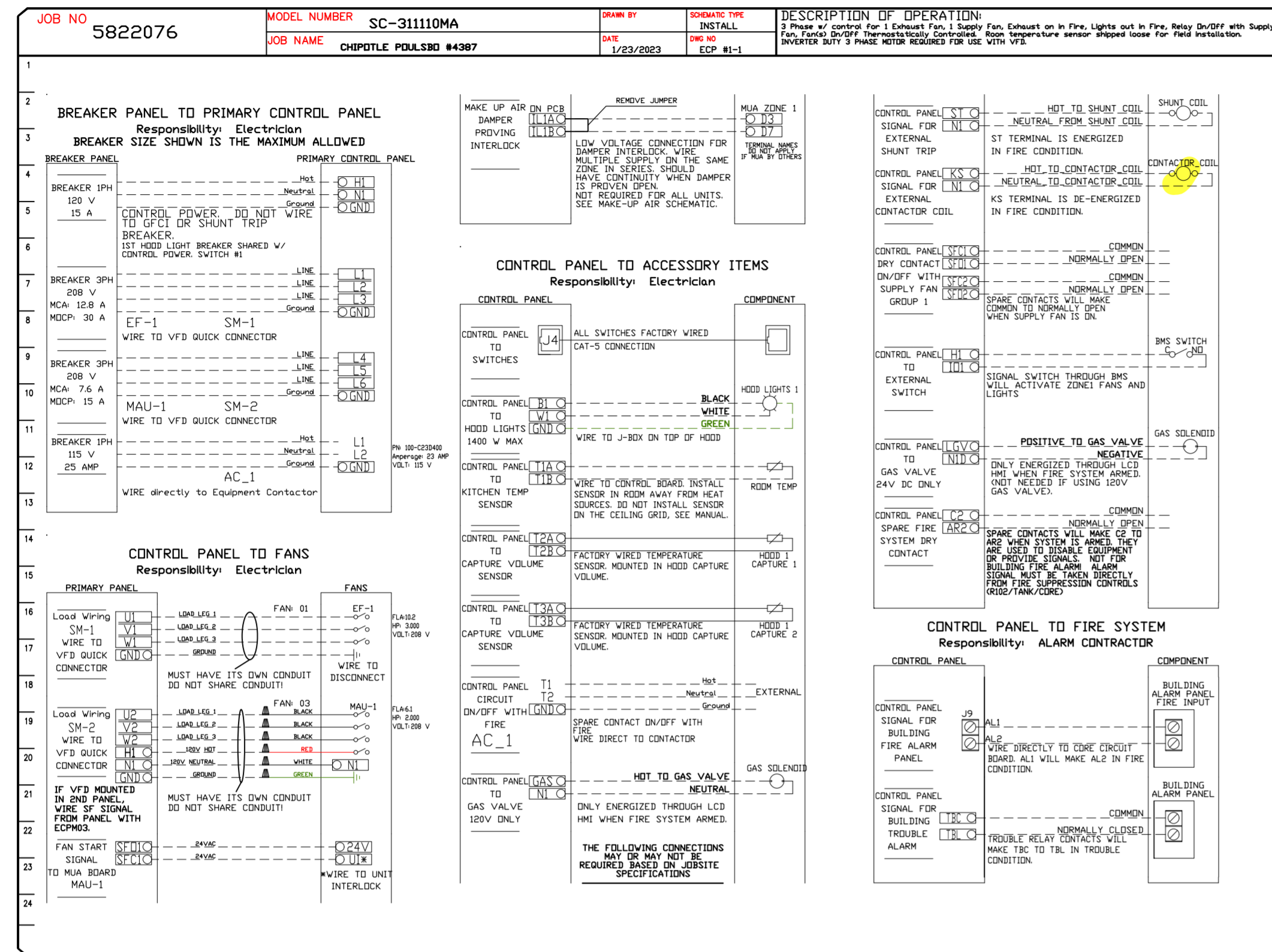
9

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ELECTRICAL PACKAGE - JOB#5822076

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	3.000	208	10.2
							MAU-1	SUPPLY	3	2.000	208	6.1



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**SHEET NO.** 11

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SYSTEM DESIGN VERIFICATION (SDV)

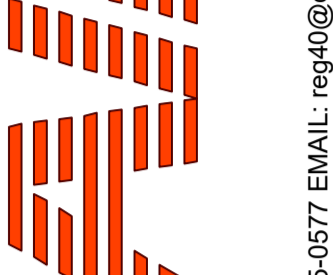
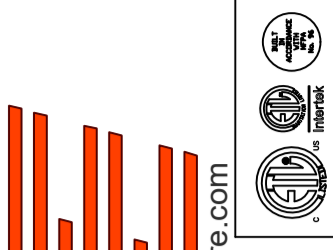
IF ORDERED, CAS SERVICE WILL PERFORM A SYSTEM DESIGN VERIFICATION (SDV) ONCE ALL EQUIPMENT HAS HAD A COMPLETE START UP PER THE OPERATION AND INSTALLATION MANUAL. TYPICALLY, THE SDV WILL BE PERFORMED AFTER ALL INSPECTIONS ARE COMPLETE.

ANY FIELD RELATED DISCREPANCIES THAT ARE DISCOVERED DURING THE SDV WILL BE BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR AND CORRESPONDING TRADES ON SITE. THESE ISSUES WILL BE DOCUMENTED AND FORWARDED TO THE APPROPRIATE SALES OFFICE. IF CAS SERVICE HAS TO RESOLVE A DISCREPANCY THAT IS A FIELD ISSUE, THE GENERAL CONTRACTOR WILL BE NOTIFIED AND BILLED FOR THE WORK. SHOULD A RETURN TRIP BE REQUIRED DUE TO ANY FIELD RELATED DISCREPANCY THAT CANNOT BE RESOLVED DURING THE SDV, THERE WILL BE ADDITIONAL TRIP CHARGES.

DURING THE SDV, CAS SERVICE WILL ADDRESS ANY DISCREPANCY THAT IS THE FAULT OF THE MANUFACTURER. SHOULD A RETURN TRIP BE REQUIRED, THE GENERAL CONTRACTOR AND APPROPRIATE SALES OFFICE WILL BE NOTIFIED. THERE WILL BE NO ADDITIONAL CHARGES FOR MANUFACTURER DISCREPANCIES.

**REVISIONS**

DESCRIPTION	DATE:
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Δ	
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13