

Z:\Project Directories\11200 - 11289\11231 - Pelican's Reef - Cincinnati, OH - Construction Documents\11231-M300-MECHANICAL-ECON-AR.dwg-ESS, Plot Date: Dec 06, 2024 - 10:36am - By: kmeyer  
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FOR QUESTIONS, CALL THE  
 Western Ohio Mechanical  
 REGION 133  
 PHONE: (513) 275 - 4986  
 EMAIL: reg133@econair.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#6285641**

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)				TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG			
										WIDTH	LENG	HEIGHT	DIA			CFM	VEL	SP	END TO END
1	H-1	6024 EX-2-PSP-F	ECON-AIR	13' 0"	600 DEG	I	HEAVY	250	3250	12'	22'	4'	3250	1773	-1.049'	2125	430 SS WHERE EXPOSED	ALONE	ALONE

**HOOD INFORMATION**

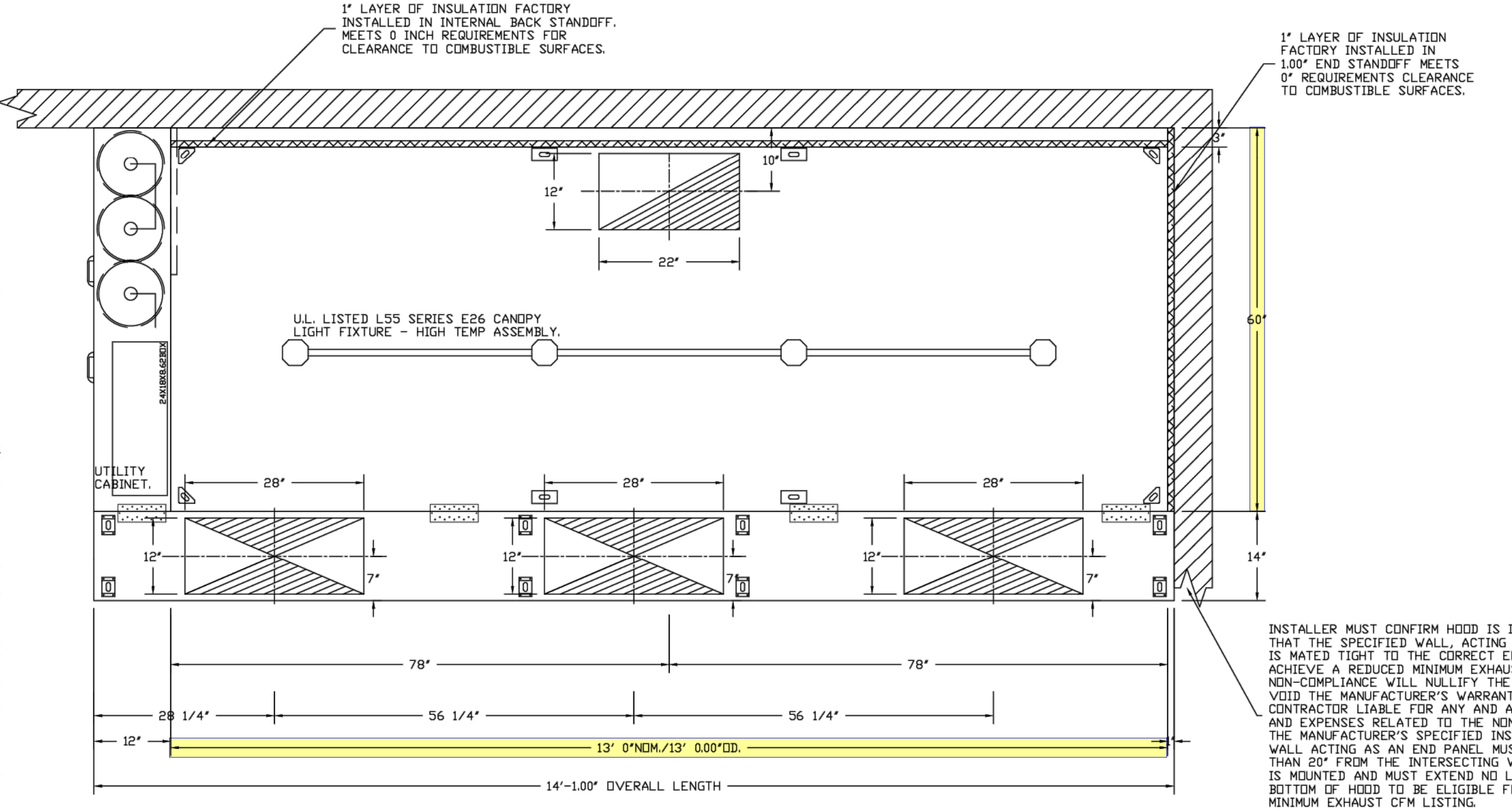
HOOD NO	TAG	FILTER(S)				LIGHT(S)				UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WEIGHT		
		TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM	ELECTRICAL			SWITCHES	
1	H-1	CAPTRATE SOLID FILTER	9	20"	16"	85% SEE FILTER SPEC	4	L55 SERIES E26	NO	LEFT	12"x60"x24"	TANK FS	4.0/4.0/4.0	SC-311110MA	1 LIGHT 1 FAN	YES	1305 LBS

**HOOD OPTIONS**

HOOD NO	TAG	OPTION
1	H-1	BACKSPLASH 80.00" HIGH X 169.00" LONG 430 SS VERTICAL. RIGHT SIDESPLASH 80.00" HIGH X 34.00" LONG 430 SS VERTICAL. RIGHT END STANDOFF (FINISHED) 1' WIDE 60" LONG INSULATED. WRAPPER CHANNEL - FRONT, LEFT. LEFT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS. INSULATION FOR TOP OF HOOD. INSULATION FOR BACK OF HOOD. RISER SENSOR INSTALL 6IN PLEN. RIGHT WALL AS END PANEL.

**PERFORATED SUPPLY PLENUM(S)**

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)			
							WIDTH	LENG	DIA	CFM
1	H-1	Front	169"	14"	6"	MJA	12"	28"	708	0.163"
						MJA	12"	28"	708	0.163"
						MJA	12"	28"	708	0.163"



**PLAN VIEW - HOOD #1 (H-1)**  
 13' 0.00" LONG 6024EX-2-PSP-F  
 NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12" AND LONGER.

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

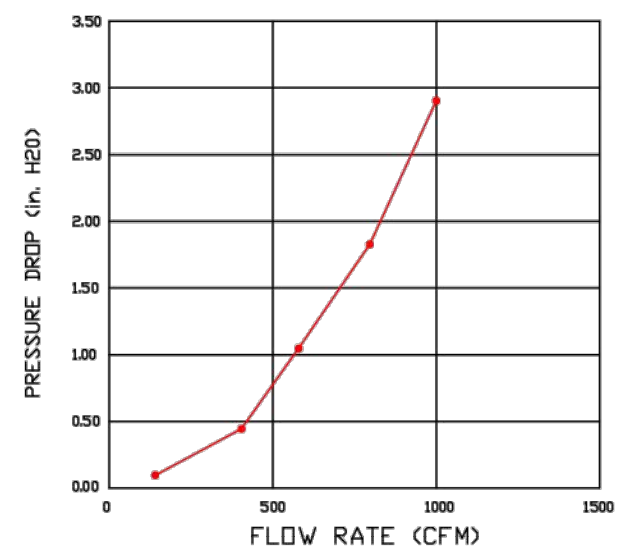
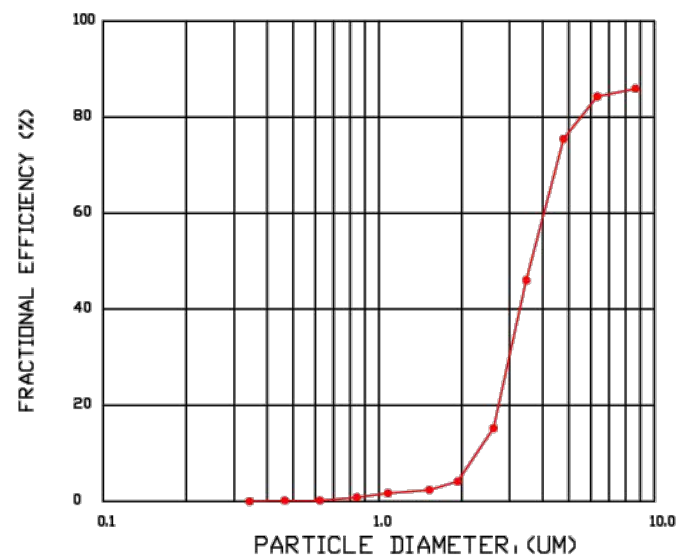
THE CAPTRATE GREASE-STOP SOLID FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

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

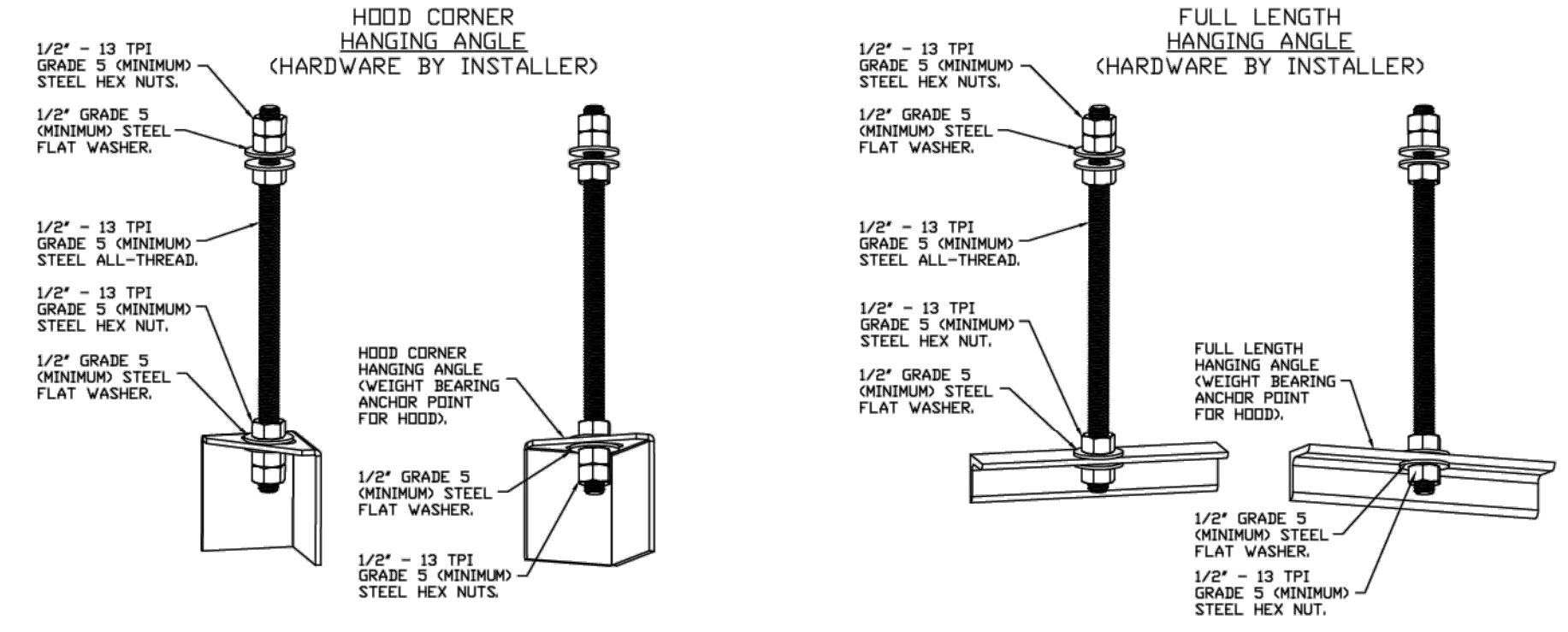
UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

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 10 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.

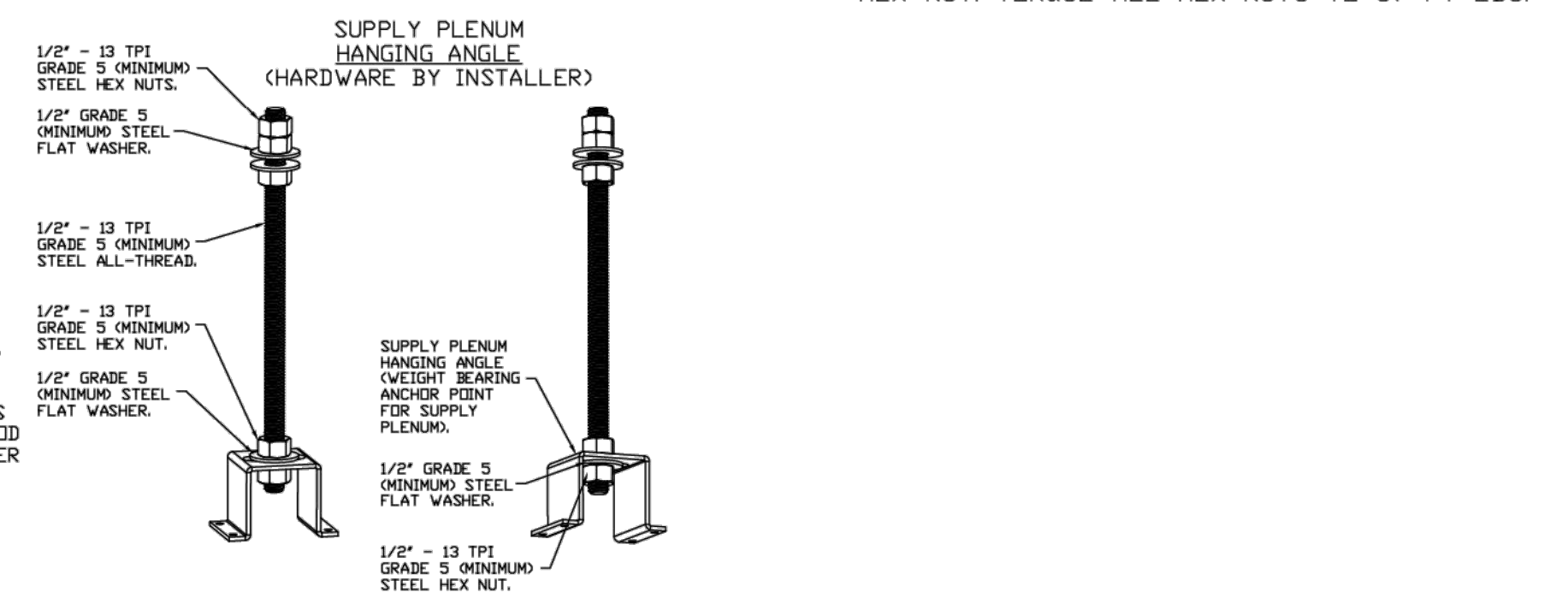


CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:  
 NFPA #96.  
 NSF STANDARD #2.  
 UL STANDARD #1046.  
 INT. MECH. CODE (IMC).  
 ILC-5-649.



**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 PSP HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

DESCRIPTION
DATE:

Pelican's Reef  
 2261 Beechmont Avenue,  
 Cincinnati, OH, 45230

DATE: 3/19/2024  
 DWG.#: 6285641  
 DRAWN BY: grant.homar  
 SCALE: 3/4" = 1'-0"  
 MASTER DRAWING

SHEET NO. 1

ISSUANCES  
 NO. DESCRIPTION  
 12/06/2024 PERMIT

**PELICAN'S REEF**  
**7621 BEECHMONT AVENUE,**  
**CINCINNATI, OH 45230**

PR - 11231  
**ENGINEERED BUILDING SYSTEMS INC.**  
 Shared Success Through Collaboration and Efficiency  
 515 Monmouth Street, Suite 201  
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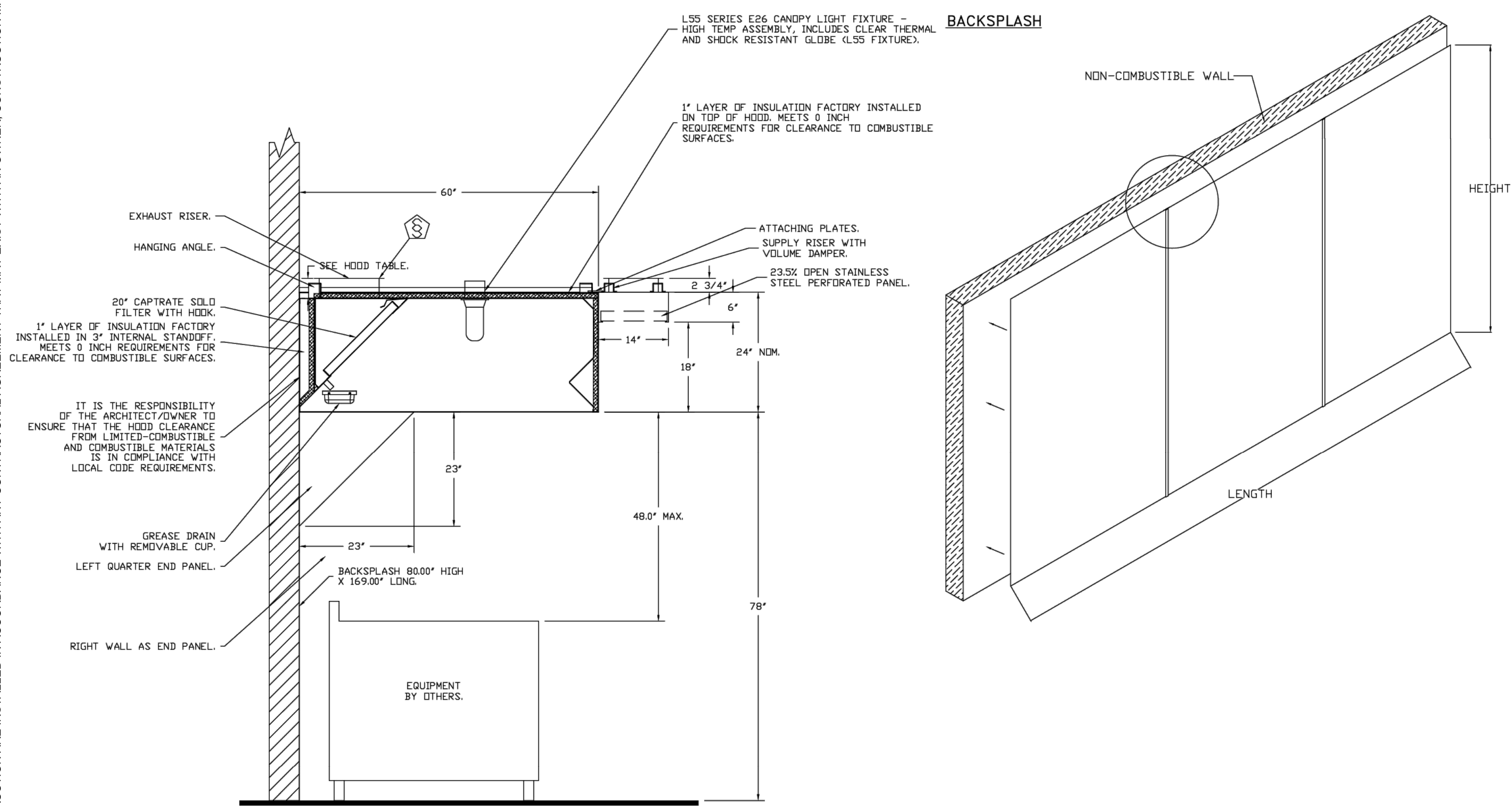
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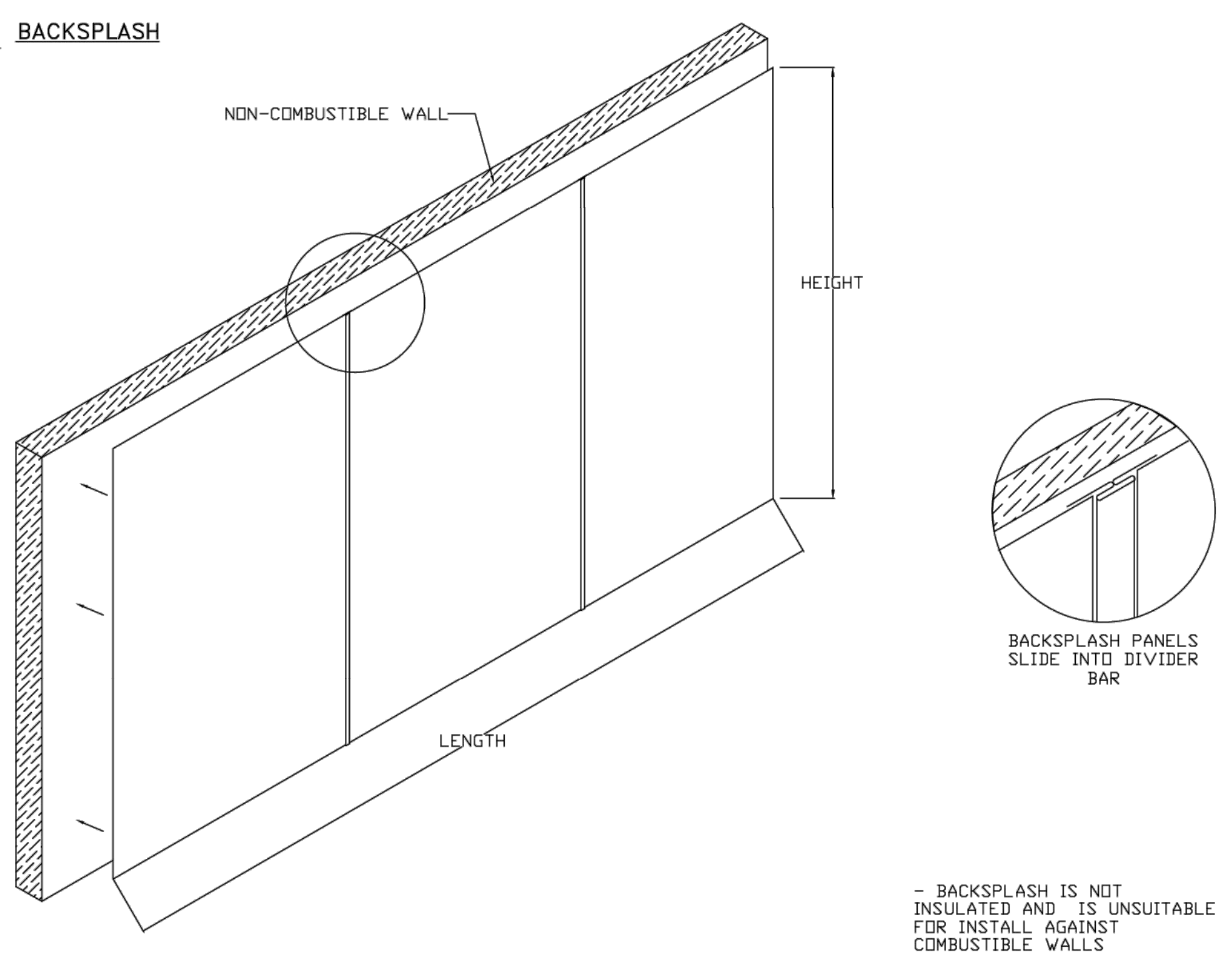
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 SCALE: AS NOTED  
 DATE: 12-06-2024  
 DRAWING TITLE: MECHANICAL DETAILS

SHEET NO. M300

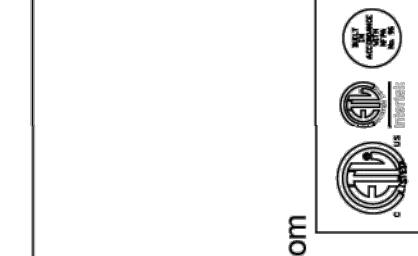
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SECTION VIEW - MODEL 6024EX-2-PSP-F  
 HOOD - #1 (H-1)



REVISIONS	
DESCRIPTION	DATE



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Pelican's Reef  
 2261 Beechmont Avenue,  
 Cincinnati, OH, 45230

DATE: 3/19/2024  
 DWG.#: 6285641  
 DRAWN BY: grant.homar  
 SCALE: 3/4" = 1'-0"  
 MASTER DRAWING

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**ENGINEERED BUILDING SYSTEMS INC.**  
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PROJECT NO.: 11231

SCALE: AS NOTED

DATE: 12-06-2024

DRAWING TITLE  
 MECHANICAL DETAILS

SHEET NO.  
**M301**

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**FIRE SYSTEM INFORMATION - JOB#6285641**

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION	
						SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0/4.0/4.0	60	42	FIRE CABINET LEFT	LEFT, HOOD 1

**GAS VALVE(S)**

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		SC ELECTRICAL	2.000	ECON-AIR

**FIRE SYSTEM PARTS LIST KEY**

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
1		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-F28021-32144-0T-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 360°F.	1	0
		0 - 0 - 32-00002 QUIK SEAL - 1/2" (UL).	1	0
		0 - 0 - 361091 3/8" BRASS PLUG.	1	0
		0 - 0 - 4429K153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBDW, BRASS.	3	0
		0 - 0 - 4429K422 1/2" X 1/4" BRASS REDUCING BUSHING.	2	0
		0 - 0 - 79425 3/8" NPT FEMALE TO 1/2" MALE PROPPRESS ADAPTER.	1	0
		0 - 0 - 79525 1/2" 90 PRO-PRESS ELBOW WITH 1/2" NPT FEMALE CONNECTION, VIEGA.	2	0
		0 - 0 - 79580 1/2" X 1/2" PRO-PRESS TEE X 1/2" NPT FEMALE CONNECTION, VIEGA.	3	0
		0 - 0 - 87-120042-001 SECONDARY ACTUATOR VALVE (SVA) - SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - 87-120045-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5' BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - 87-300001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	3	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.	12	0
		0 - 0 - 9055455PC PRO PRESS 1/2 PRESS X PRESS 90 ELBDW LD.	12	0
		0 - 0 - 9097200PC PRO PRESS PC611 1/2 PRESS TEE LD.	7	0
		0 - 0 - 98694A11S HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	6	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.	2	0
		0 - 0 - B1145 3/8" BLACK IRON 90 ELL.	3	0
		0 - 0 - DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	3	0
		0 - 0 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	9	0
		0 - 0 - TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	3	0
		0 - 0 - WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	3	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).	9	0
		26 - 26 - QSA-3/8 QUIK SEAL - 3/8" (UL).	9	0
		34 - 34 - A0034331 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT. RED COLOR.	1	0

REVISIONS	
DESCRIPTION	DATE



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ISSUANCES	NO.	DESCRIPTION	PERMIT

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 2261 Beechmont Avenue,  
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**PELICAN'S REEF**  
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 DWG.#: 6285641  
 DRAWN BY: granthomas  
 SCALE: 3/4" = 1'-0"  
 MASTER DRAWING

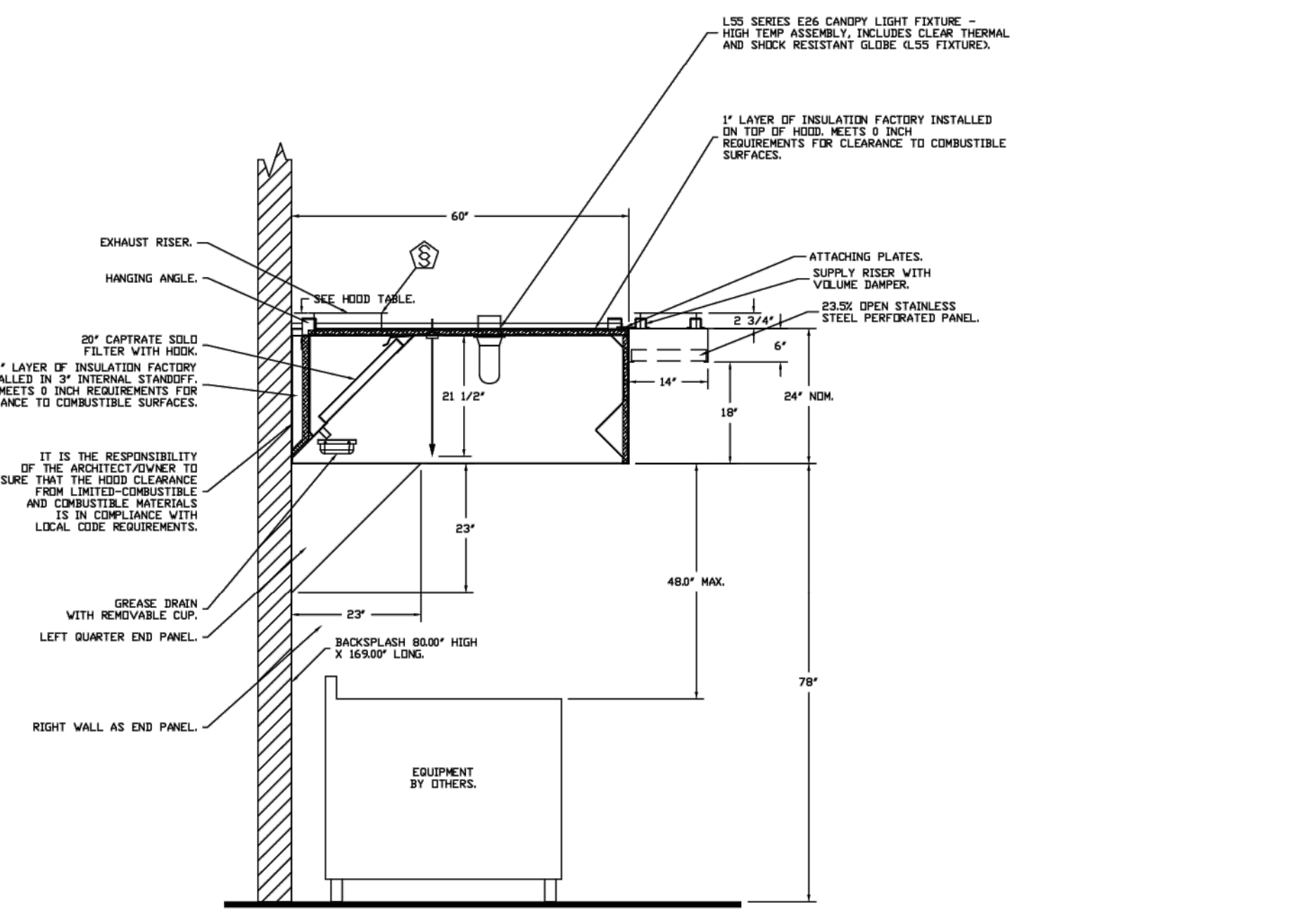
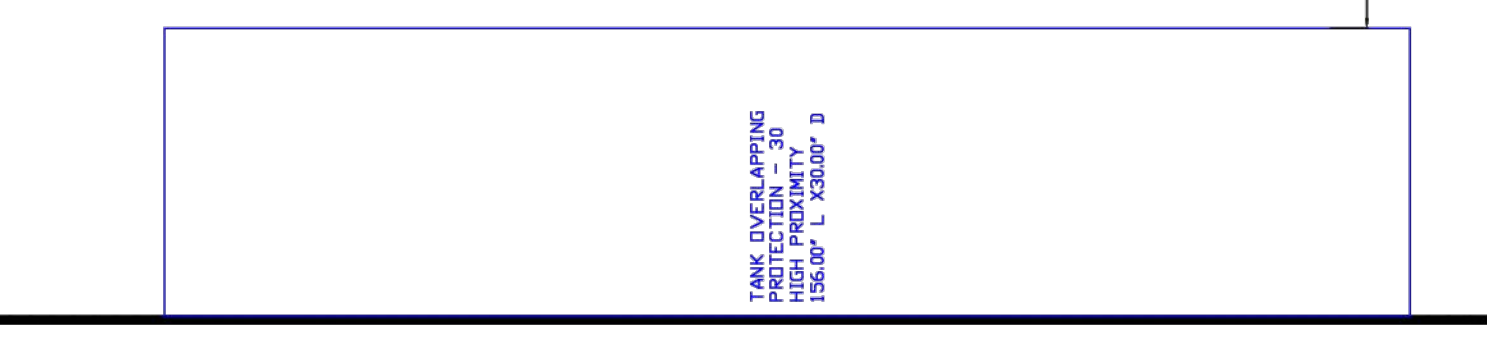
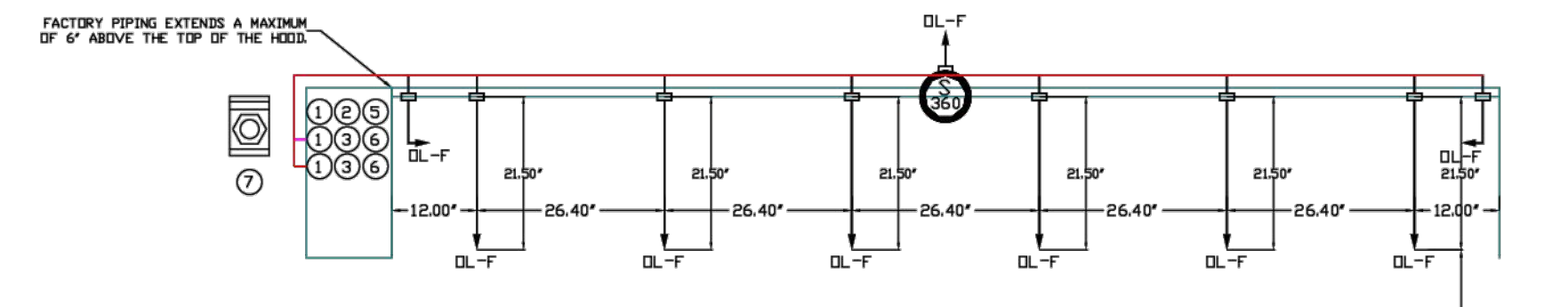
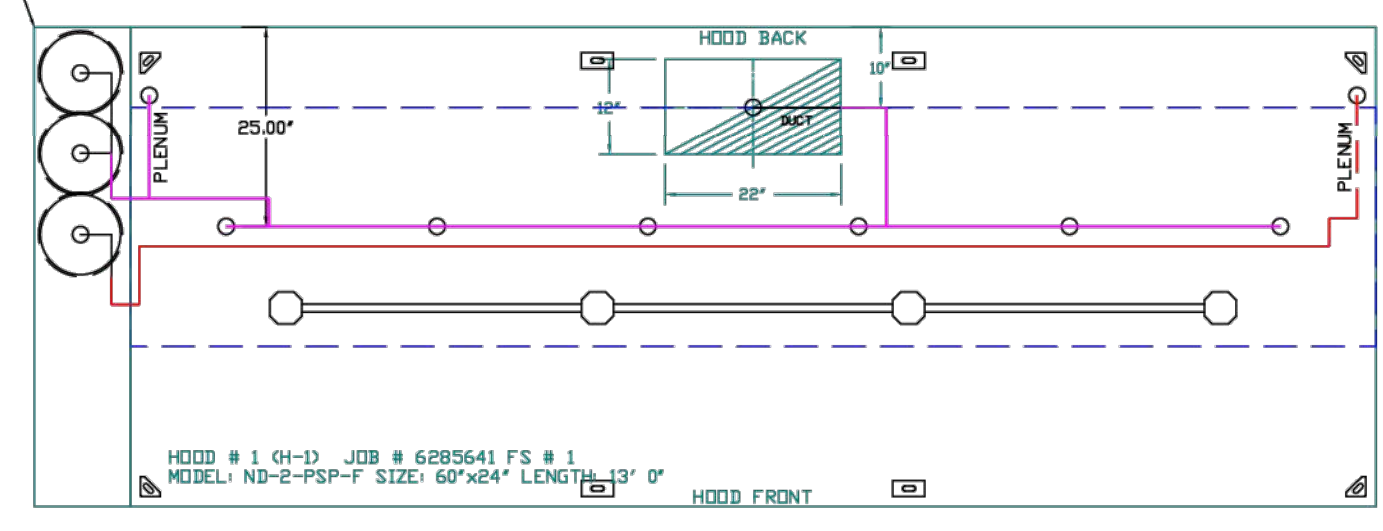
SHEET NO. 3

DRAWN BY: KRM  
 CHECKED BY: SSS  
 PROJECT NO.: 11231  
 SCALE: AS NOTED  
 DATE: 12-06-2024  
 DRAWING TITLE: MECHANICAL DETAILS

SHEET NO. M302

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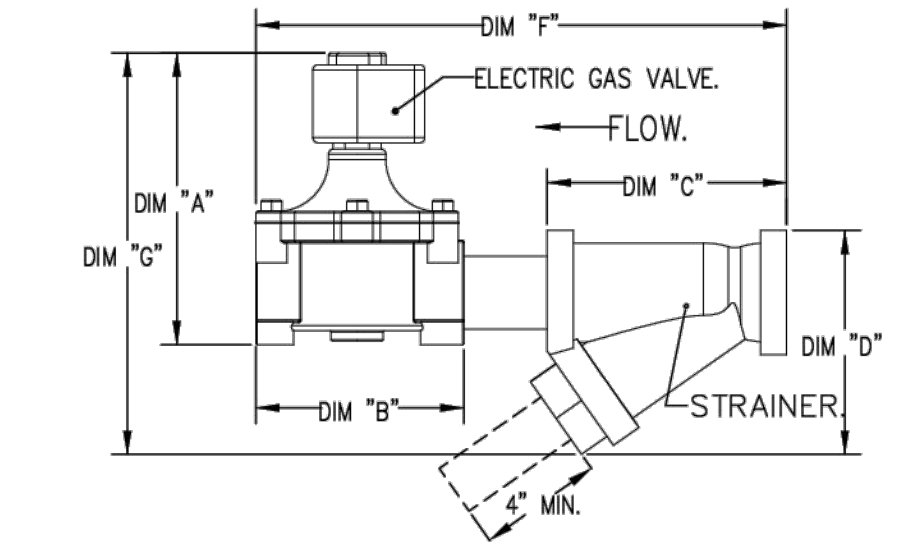
SYSTEM REQUIRES A MINIMUM OF 7 FT OF EQUIVALENT PIPE LENGTH BETWEEN TANK AND APPLIANCE NOZZLE FOR BEST APPLIANCE EACH 90 DEGREE ELBOW ADDS 13 FT OF EQUIVALENT LENGTH SEE MANUAL FOR DETAILS



SECTION VIEW - MODEL 6024EX-2-PSP-F HOOD - #1

GAS VALVE SIZING				GAS VALVES AND STRAINERS													
TYPE	SIZE	VOLTAGE	MIN. INLET PRESSURE	MAX. INLET PRESSURE	FLOW AT 1 IN.W.C. DROP NATURAL GAS BTU/HR	FLOW AT 1 IN.W.C. DROP PROPANE BTU/HR	DM "A"	DM "B"	DM "C"	DM "D"	DM "E"	DM "F"	DM "G"	MOUNTING ORIENTATION	GAS VALVE PART NUMBER	STRAINER PART NUMBER	GAS VALVE/STRAINER MT. OR EQVA2
ELECTRICAL	2"	120 VAC	0 PSI (0 IN.W.C.)	5 PSI (1.36 IN.W.C.)	2,940,500 BTU/HR	1,908,048 BTU/HR	7-5/8"	6-3/8"	7-1/4"	7-13-1/8"	15-5/8"	13-15/16"	HORIZONTAL/VERTICAL	821490	4417988		

ALL GAS VALVES/STRAINERS TO CALCULATE GAS FLOW FOR OTHER THAN 1 IN.W.C. PRESSURE DROP 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 RATING SPECIFIC GRAVITY OF NATURAL GAS = 0.64, SPECIFIC GRAVITY OF LP = 1.52.



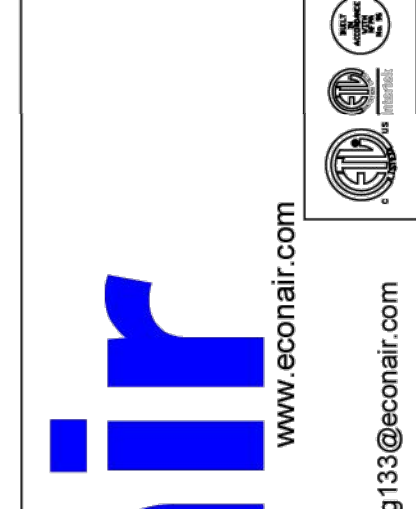
- NOTES
- FIELD PIPE DROPS AS SHOWN
  - PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY GAS.
  - FIELD INSTALLED DROP, FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
  - SHIP LOOSE DROP, FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED 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

- JOB #: 6285641  
 JOB NAME: PELICAN'S REEF.  
 SYSTEM SIZE: TANK-SP-3 DESIGN FP: 42, MAXIMUM FP: 60.  
 HOOD # 1 13' 0.00" LONG X 60" WIDE X 24" HIGH.  
 RISER # 1 SIZE: 1 1/2" X 2 1/2"  
 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
- 1 4 GALLON TANK.
  - 2 PRIMARY ACTUATOR RELEASE.
  - 3 SECONDARY ACTUATOR RELEASE.
  - 4 PRESSURE SUPERVISION SWITCH.
  - 5 PRIMARY HOSE ASSEMBLY.
  - 6 SECONDARY HOSE ASSEMBLY.
  - 7 REMOTE MANUAL ACTUATION DEVICE.

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, HANDING OF FIRE CABINET, SHUNT TRIP, HANDBUILD EXTINGUISHERS, ON-SITE RE-PIPING DUE TO EQUIPMENT LAYOUT CHANGES.

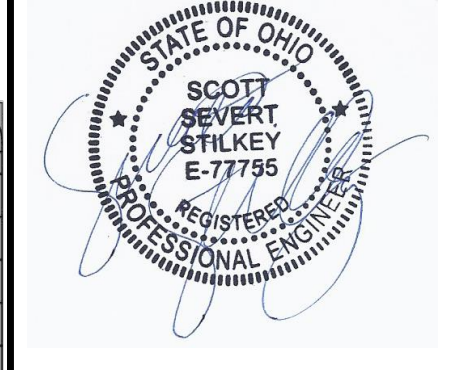
REVISIONS	
DESCRIPTION	DATE



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Pelican's Reef  
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PELICAN'S REEF  
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DATE: 3/19/2024  
 DWG.#: 6285641  
 DRAWN BY: grant.homan  
 SCALE: 1/2" = 1'-0"  
 MASTER DRAWING

DRAWN BY: KRM  
 CHECKED BY: SSS  
 PROJECT NO.: 11231  
 SCALE: AS NOTED  
 DATE: 12-06-2024  
 DRAWING TITLE: MECHANICAL DETAILS

SHEET NO. 4

SHEET NO. M303

Z:\Project Directories\11200 - 11289\11231 - Pelican's Reef - Cincinnati, OH\Construction Documents\11231-M304-MECHANICAL ECON AR.dwg - EBS - Plot Date: Dec 06, 2024 - 10:39am - By: kmeyer  
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**EXHAUST FAN INFORMATION - JOB#6285641**

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-3	1	EADU180H	ECON-AIR	3250	1.500	1326	DDP,PREMIUM	3.000	1.7900	3	208	9.5	751 FPM	199	20.3

**MUA FAN INFORMATION - JOB#6285641**

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)	SONES
2	MUA-1	1	EA2-D.250-20D	20MF-2-MDD	A2-D.250	2000	2125	0.500	999	DDP,PREMIUM	1.500	0.5350	3	208	4.4	16.2A	25A	668	6.8

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

FAN UNIT NO	TAG	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
2	MUA-1	151448	139332	63°F	7 IN. W.C. - 14 IN. W.C.	NATURAL	92

**FAN OPTIONS**

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	EF-3	1	GREASE BOX
		1	WALL MOUNT CONSTRUCTION 18/20 (D60 ISOLATORS), 70LB MOTOR MAX FOR WALL MOUNTING
		1	HINGE KIT LOCKING (XHD)- SHIPS LOOSE FOR CURB SUPPLIED BY OTHERS
		1	SHIP LOOSE DISCONNECT FOR REMOTE MOUNT
		1	FAN BASE CERAMIC SEAL - DU/DR180HFA - SHIP LOOSE - FOR GREASE DUCTS
2	MUA-1	1	2 YEAR PARTS WARRANTY
		1	SIZE 2 DIRECT FIRED HEATER LOW CFM PROFILE PACKAGE - USED ON HEATERS UNDER 2500 CFM
		1	INLET PRESSURE GAUGE, 0-35"
		1	MANIFOLD PRESSURE GAUGE, -5 TO 15" WC
		1	BUTTERFLY MOD VALVE OPTION FOR MOD SIZE 2 (1" MOD VALVE)
		1	SHIP LOOSE GAS STRAINER 1"
		1	MOTORIZED BACKDRAFT DAMPER FOR A2-D HOUSING - MEETS AMCA CLASS 1A RATING
		1	COMMERCIAL SMOKE DETECTOR/ALARM INTERLOCK - ALARM SUPPLIED BY OTHERS
		1	UNIT MOUNTED VFD FOR USE WITH ECPM03
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
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-3	YES			YES		YES	
2	MUA-1							

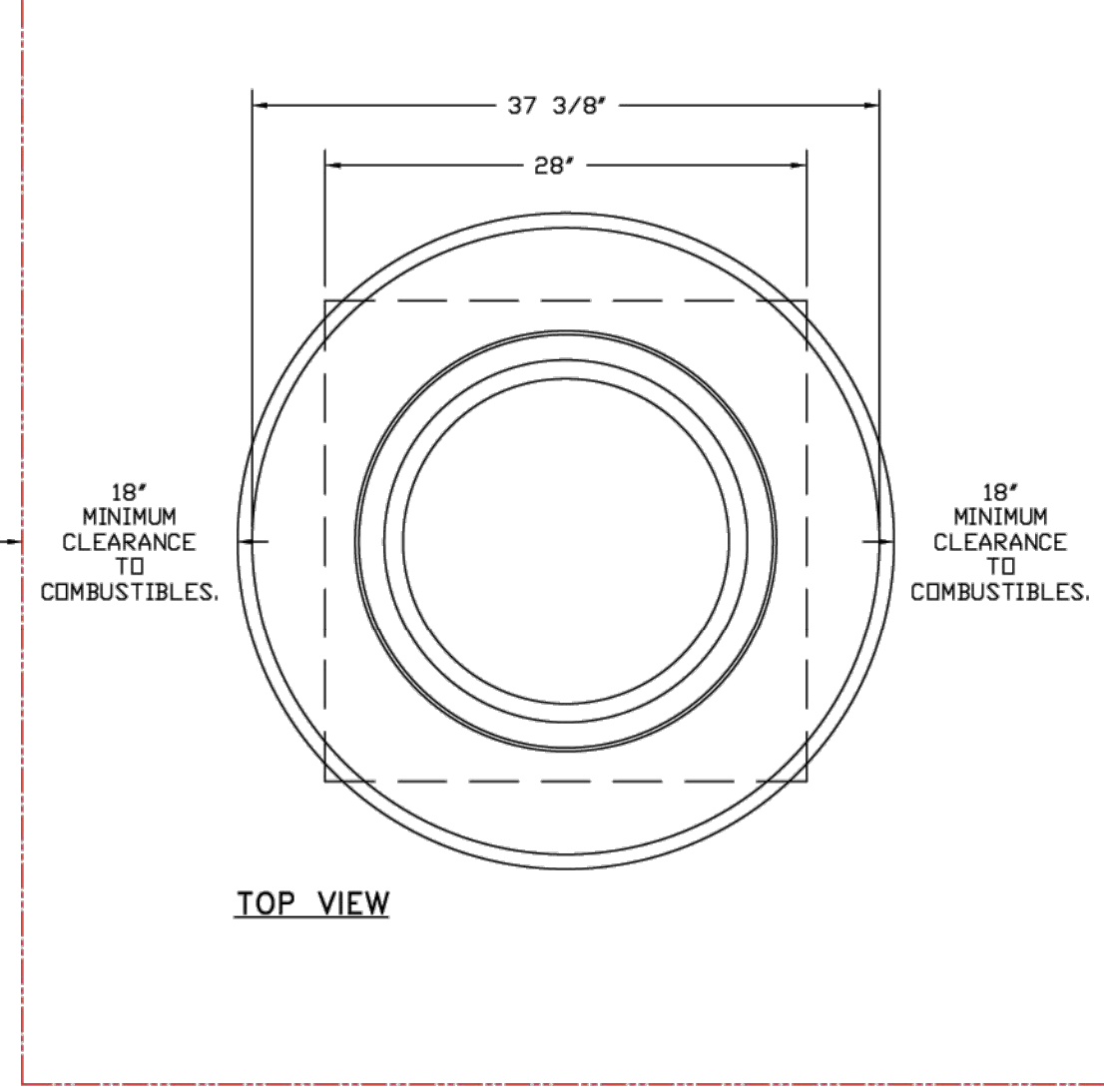
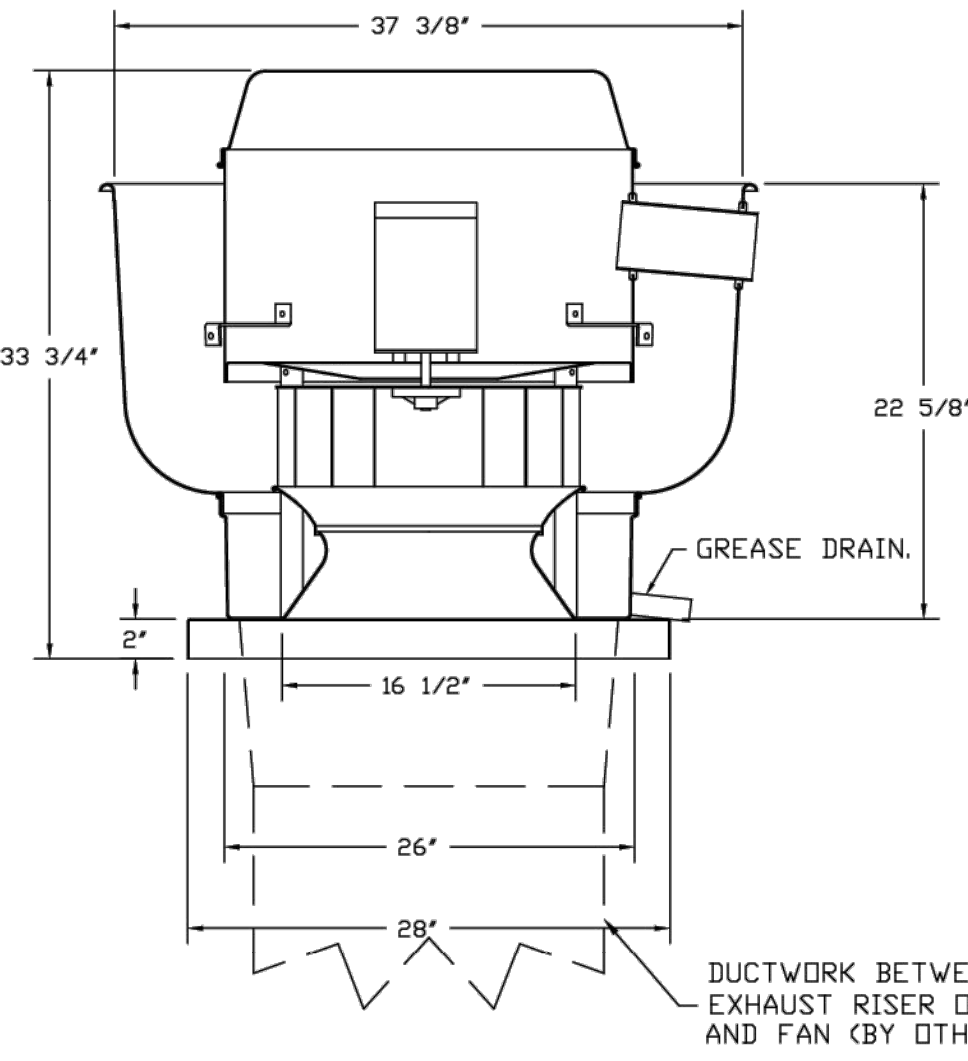
**CURB ASSEMBLIES**

NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
2	# 2	MUA-1	80 LBS	CURB	31.000"W X 79.000"L X 20.000"H INSULATED.

**HMI SCHEDULE**

UNIT NUMBER	HMI #	HMI LOCATION	TEMP AVERAGING	MODBUS ADDRESS	
FAN #2	HMI #1 - UNIT	HMI # 1	MOUNTED IN UNIT	NOT AVERAGED	55

FAN #1 EADU180H - EXHAUST FAN (EF-3)



**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.

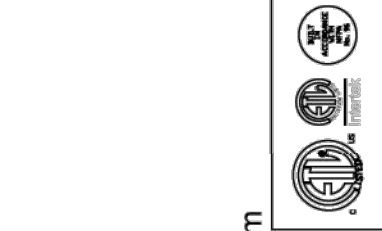
**ABNORMAL FLARE-UP TEST**

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.
- WALL MOUNT CONSTRUCTION 18/20 (D60 ISOLATORS), 70LB MOTOR MAX FOR WALL MOUNTING.
- HINGE KIT LOCKING (XHD)- SHIPS LOOSE FOR CURB SUPPLIED BY OTHERS.
- SHIP LOOSE DISCONNECT FOR REMOTE MOUNT.
- FAN BASE CERAMIC SEAL - DU/DR180HFA
- SHIP LOOSE - FOR GREASE DUCTS.
- 2 YEAR PARTS WARRANTY.

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**DATE:** 3/19/2024  
**DWG.#:** 6285641  
**DRAWN BY:** grant.honar  
**SCALE:** 3/4" = 1'-0"  
**MASTER DRAWING**



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**CHECKED BY:** SSS

**PROJECT NO.:** 11231

**SCALE:** AS NOTED

**DATE:** 12-06-2024

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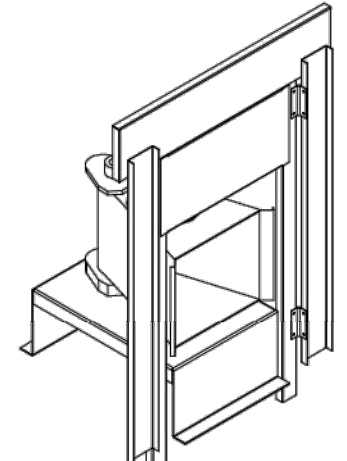
**MECHANICAL DETAILS**

**SHEET NO.**  
5  
**M304**

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FAN #2 EA2-3250-200 - HEATER #M4-D  
 DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 20" MIXED FLOW DIRECT DRIVE FAN.  
 15. DRAINAGE - AIR FLOW RIGHT -> LEFT.  
 16. DIRECT FIRED PROFILE PLATE CONSTRUCTION FOR SIZE 0 DIRECT FIRED UNIT FOR LOW CFM APPLICATIONS.  
 17. GAS PRESSURE GAUGE - 3" TO 4 1/2" INCHES VC, 2.5" DIAMETER, 1/4" THREAD SIZE.  
 18. SHIP LEGS - GAS STRAINER TO BE INSTALLED UPSTREAM OF UNIT CONNECTION, 1" CONNECTION.  
 19. VENTED BACK DRAFT DAMPER 8070" X 84" FOR SIZE 2 STANDARD & MODEL HEATER UNITS W/EXTENDED SHAF. STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, LP2505 ACTUATOR INCLUDED.  
 20. COMMERCIAL SMOKE DETECTOR INTERLOCK - DETECTOR BY OTHER.  
 21. UNIT MOUNTED VFD FOR USE WITH EQUIP.  
 22. COMMERCIAL BUILDING MONITORING SYSTEM COMMUNICATIONS MODULE, REQUIRES INTERNET & FIELD WIRED ETHERNET CONNECTION OR 30 CELLULAR SERVICE. INCLUDES REV 3 COMM MODULE, RJ45 TO MODBUS CONVERTER, 3 FT CAT5 CABLE, AND 1 FT OF INCLUDED WIRELESS PAIR.  
 23. WINDUP DOUBLE WALL INSULATED DOOR ASSEMBLY (ROUND/BLOWER SECTION).  
 24. 2 YEAR PARTS WARRANTY.

**SUPPLY SIDE HEATER INFORMATION**  
 VENTER TEMPERATURE = 100° F, TEMP RISE = 60° F.  
 BTUW CALCULATED OFF ACTUAL AIR DENSITY.  
 OUTPUT BTUW AT ALTITUDE OF 60 FT = 143004.  
 INPUT BTUW AT ALTITUDE OF 60 FT = 150444.  
 OUTPUT BTUW AT ALTITUDE OF 700 FT = 139000.  
 INPUT BTUW AT ALTITUDE OF 700 FT = 154447.  
 SUGGESTED STRAIGHT DUCT SIZE IS 26" X 26".



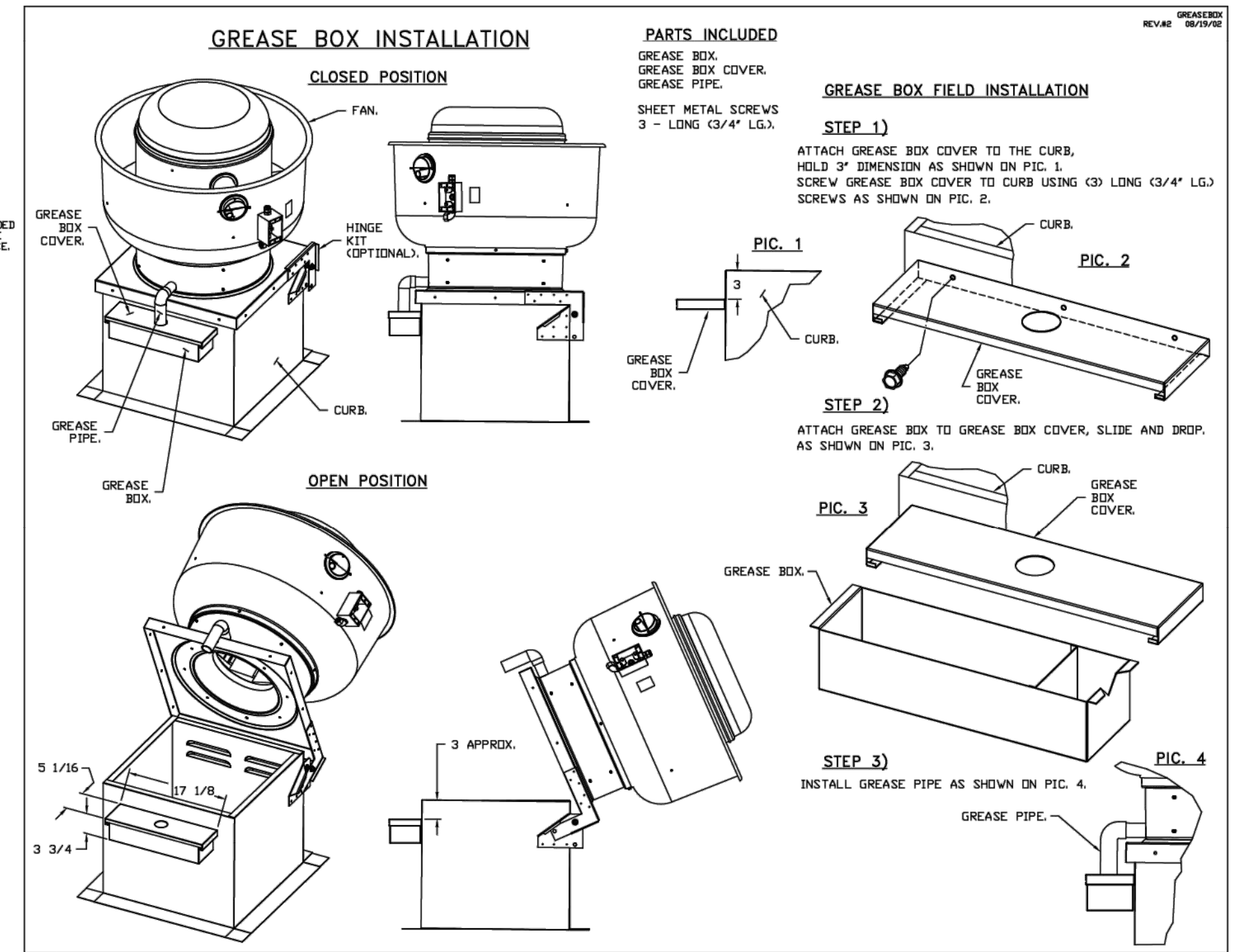
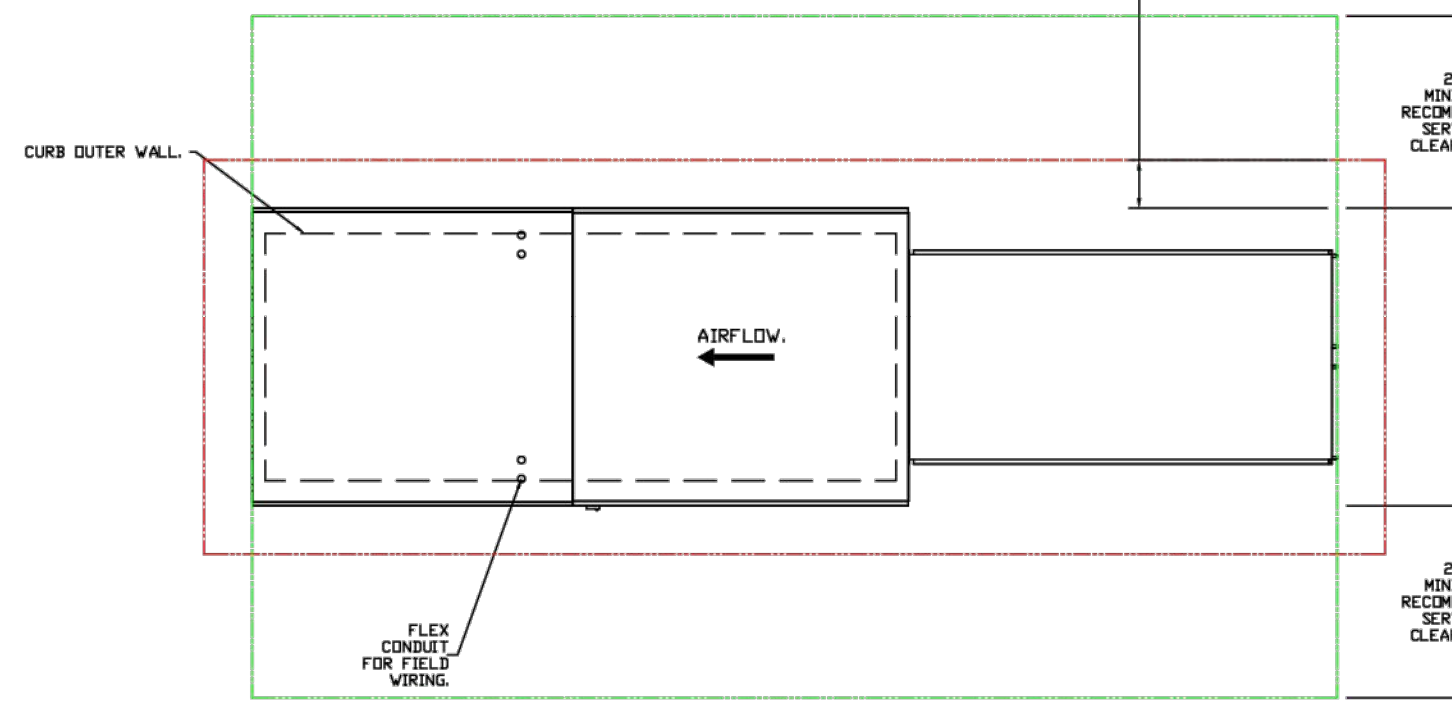
DIRECT FIRED (DF) PROFILE PLATE ASSEMBLY

**DIRECT FIRED PROFILE PLATE SPECIFICATIONS:**  
**DESCRIPTION:**  
 DIRECT FIRED BURNERS SHALL HAVE PATENTED (SEE PATENT NO. US6495529B2) 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.  
**NOTES:**  
 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 OF 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 ANST Z884 AND CSA 3.7 (NON-RECIRCULATING OF HEATERS) AND ANST Z8318 (RECIRCULATING OF HEATERS).  
**GENERAL CONSTRUCTION:**  
 PROFILE PLATES SHALL BE FORMED FROM 600 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 RELATED SPRING HINGES.  
 SPRING HINGES SHALL BE MADE FROM PLATED STEEL.

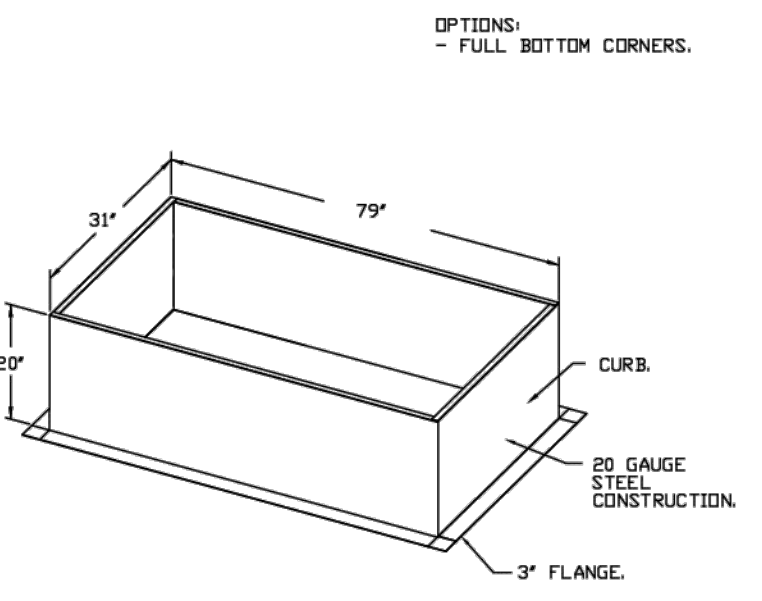
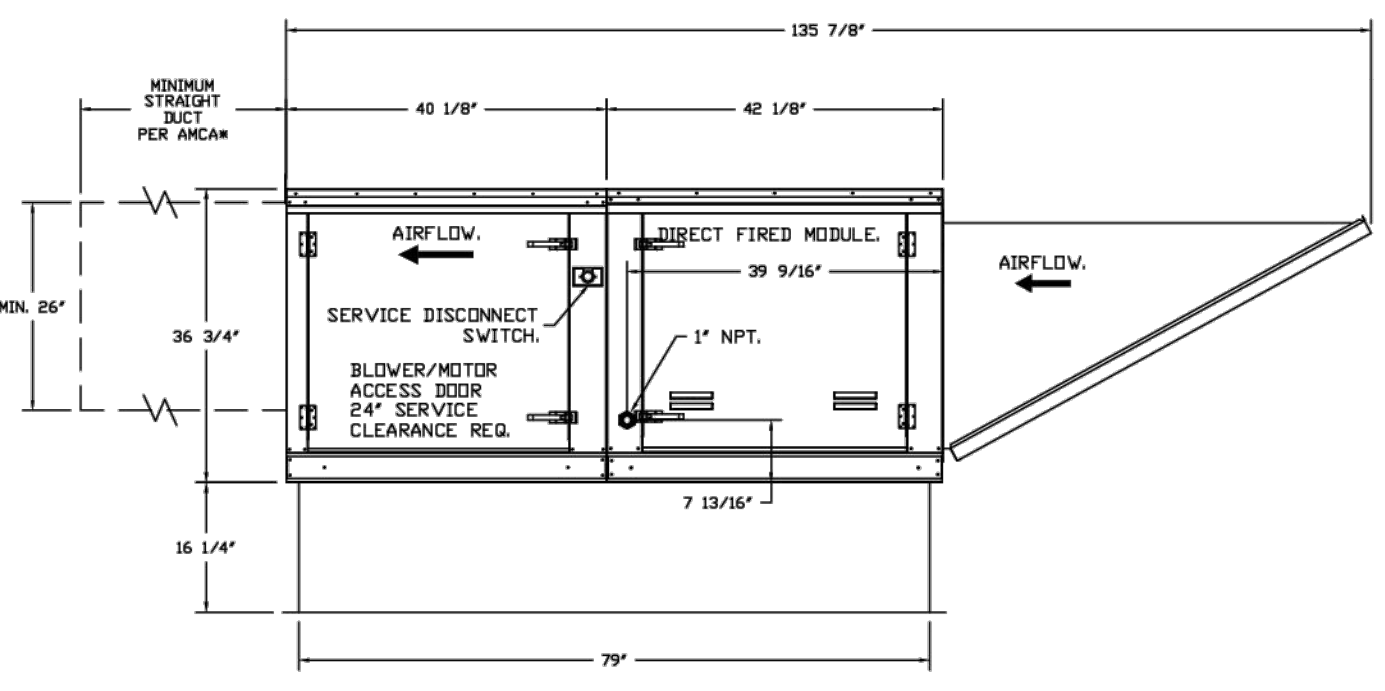
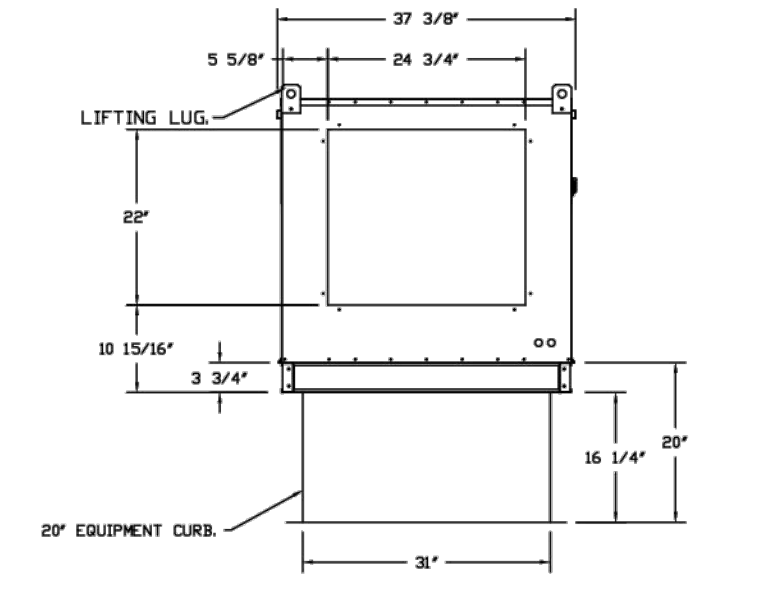
**GREASE DUCT & CHIMNEY SPECIFICATIONS:**  
 PROVIDE GREASE DUCT EQUAL TO ECON-AIR MODEL "EDW"  
 ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "EDW"  
 IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING  
 CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "EDW"  
 DOES NOT REQUIRE 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 "EDW" 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 ECON-AIR MODEL "EDW- 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"/>
REUSE AND RESUBMIT	<input type="checkbox"/>
SIGNATURE _____	
YOUR TITLE _____	DATE _____

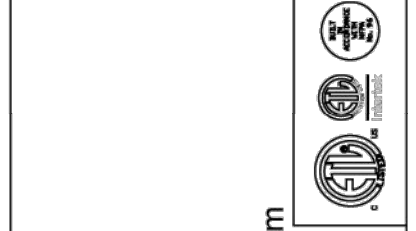


NOTE: UL 705 INSTALL.



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**DATE:** 3/19/2024  
**DWG.#:** 6285641  
**DRAWN BY:** granthomax  
**SCALE:** 1/2" = 1'-0"  
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**SHEET NO.** 6



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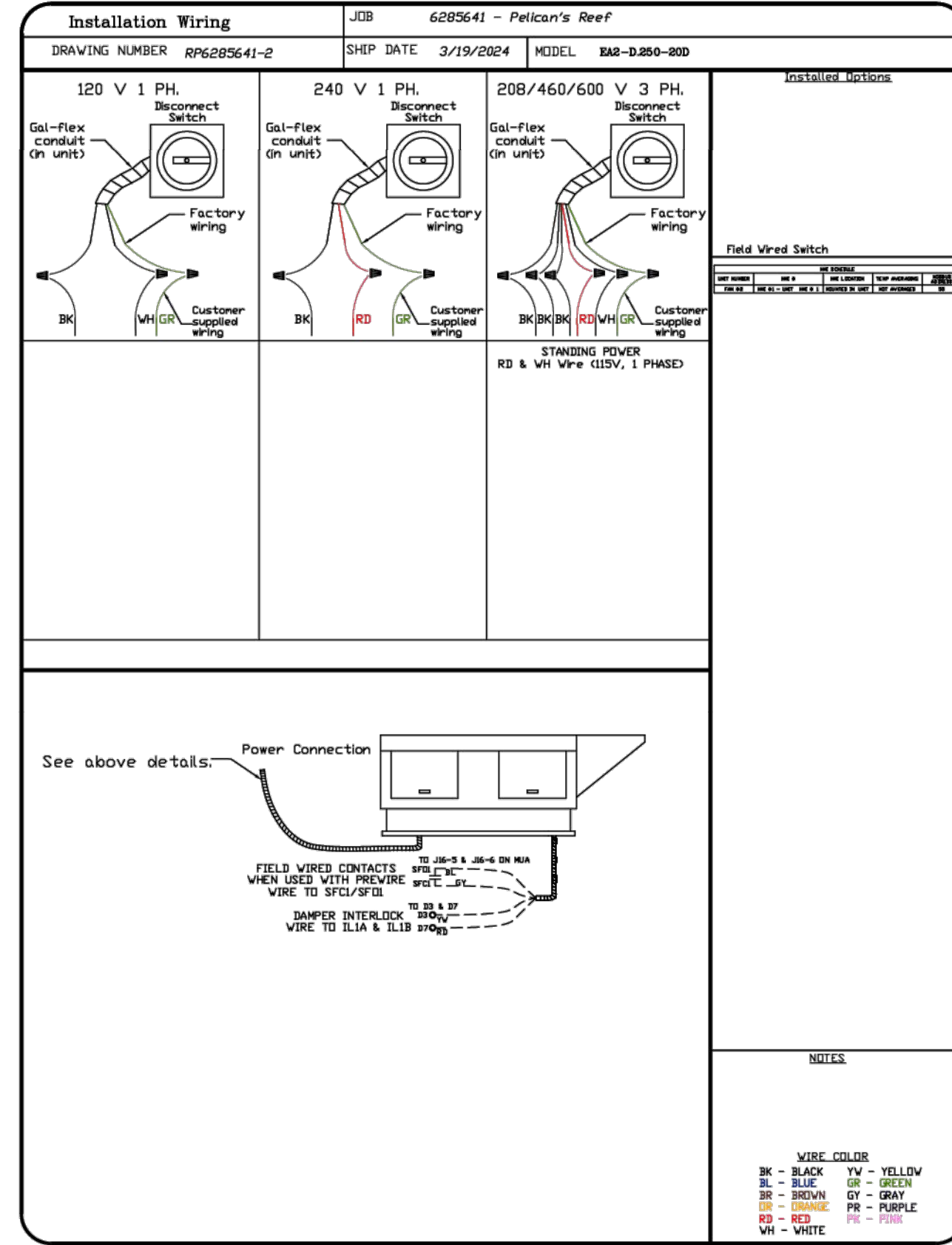
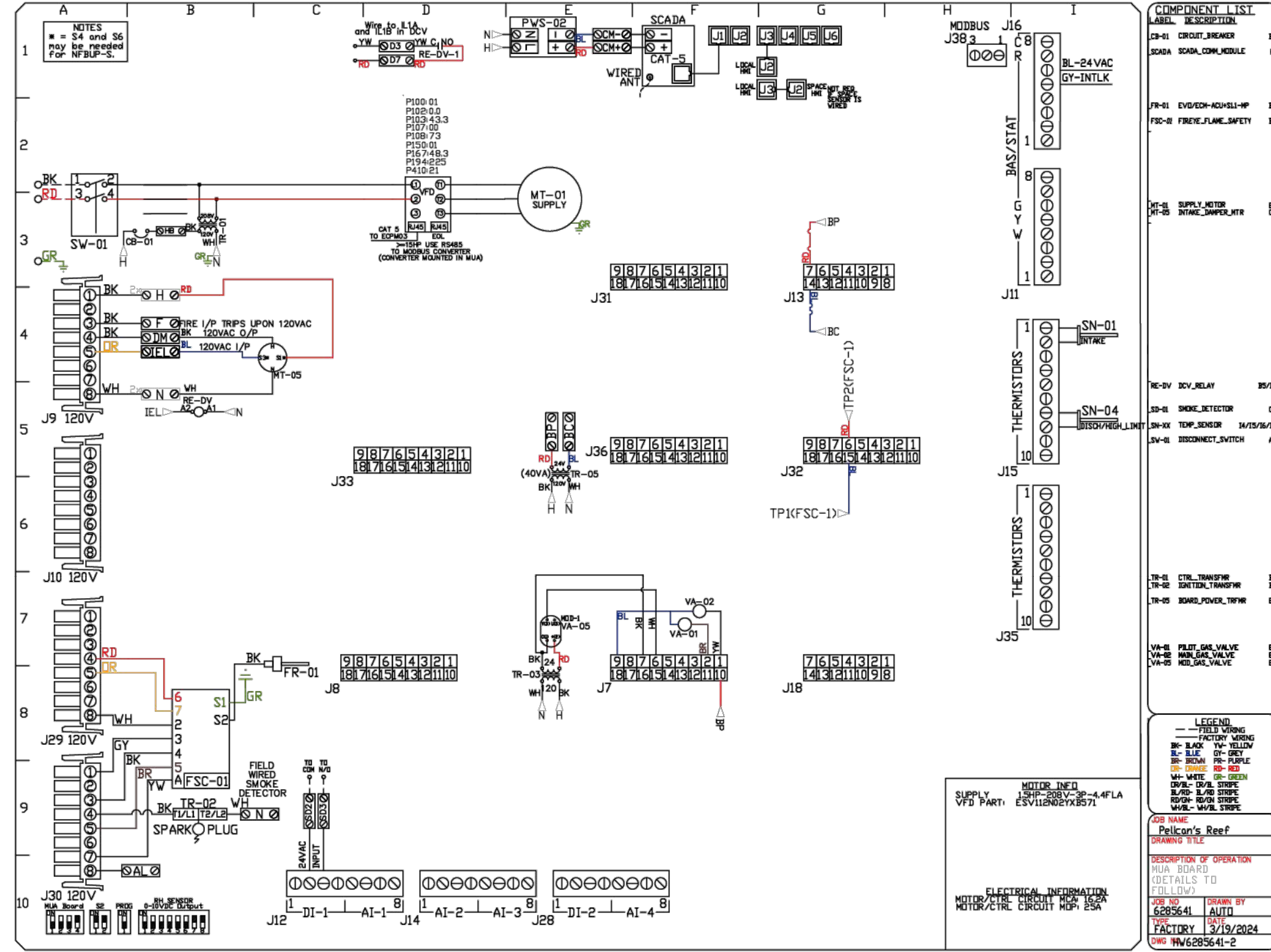
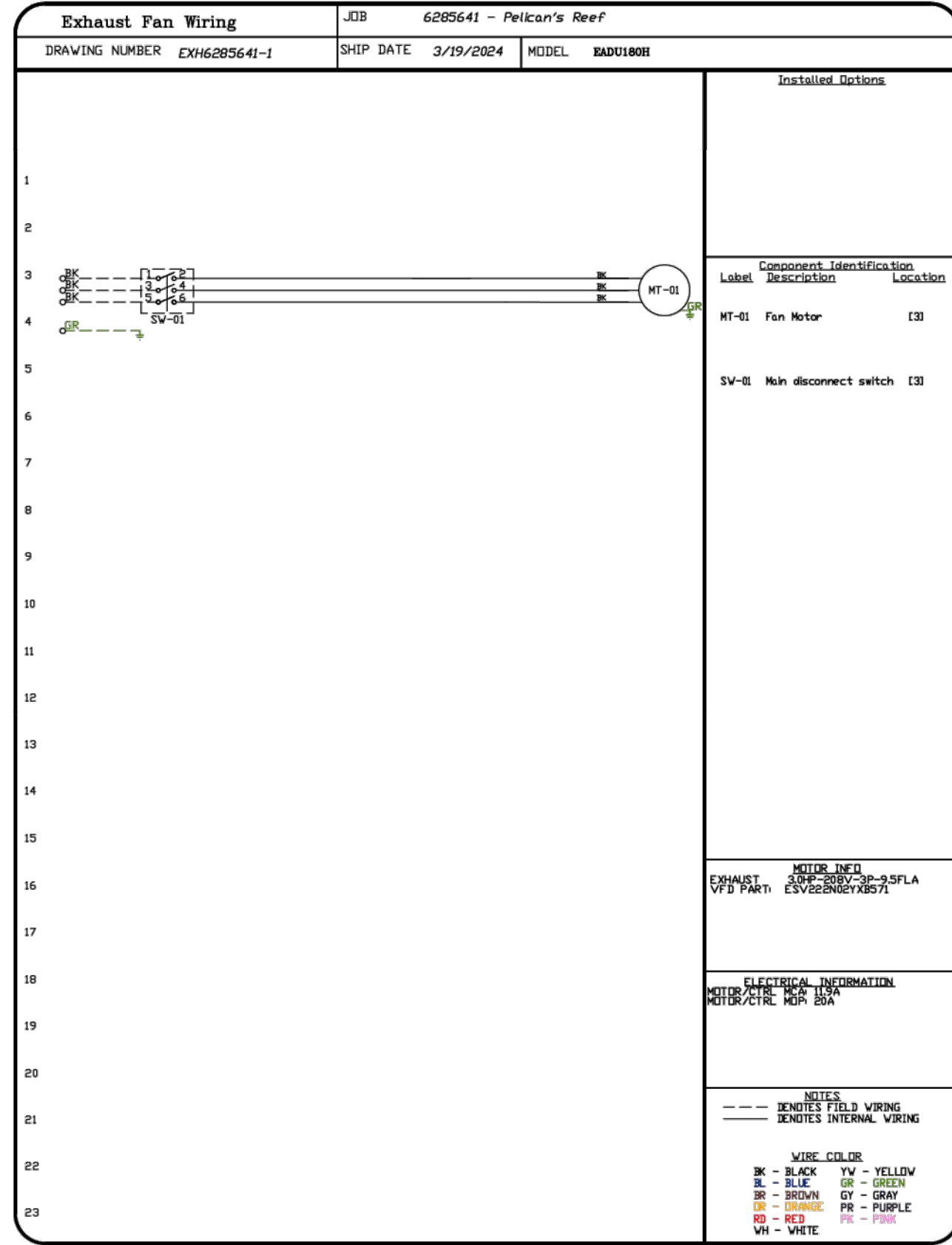
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**PROJECT NO.:** 11231  
**SCALE:** AS NOTED  
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**SHEET NO.** M305

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 2261 Beechmont Avenue,  
 Cincinnati, OH, 45230

<b>DATE:</b> 3/19/2024
<b>DWG.#:</b> 6285641
<b>DRAWN BY:</b> grant.homer
<b>SCALE:</b> 3/4" = 1'-0"
<b>MASTER DRAWING</b>
<b>SHEET NO.</b> 7



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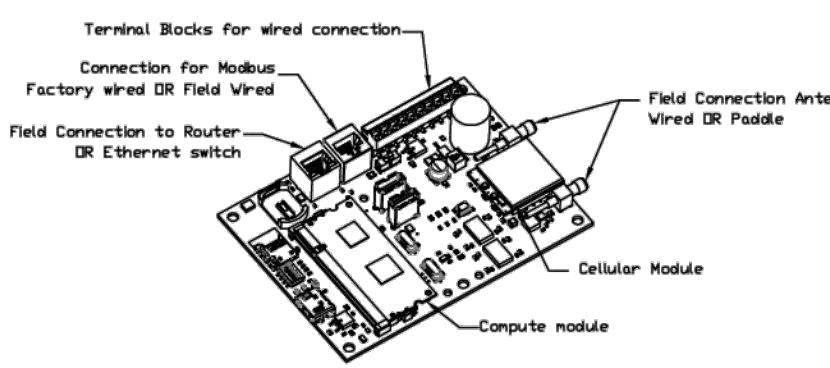
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<b>SCALE:</b> AS NOTED	
<b>DATE:</b> 12-06-2024	
<b>DRAWING TITLE:</b> MECHANICAL DETAILS	
<b>SHEET NO.:</b> M306	

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**ELECTRICAL PACKAGE - JOB#6285641**

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	#	HP	VOLT	FLA
1		SC-31110MA	UTILITY CABINET LEFT	UTILITY CABINET LEFT	1 LIGHT 1 FAN	SMART CONTROLS THERMOSTATIC CONTROL W/ RELAY ON/OFF WITH SUPPLY	EF-3	EXHAUST	3	3.000	208	9.5
				HOOD # 1			MUA-1	SUPPLY	3	1.500	208	4.4

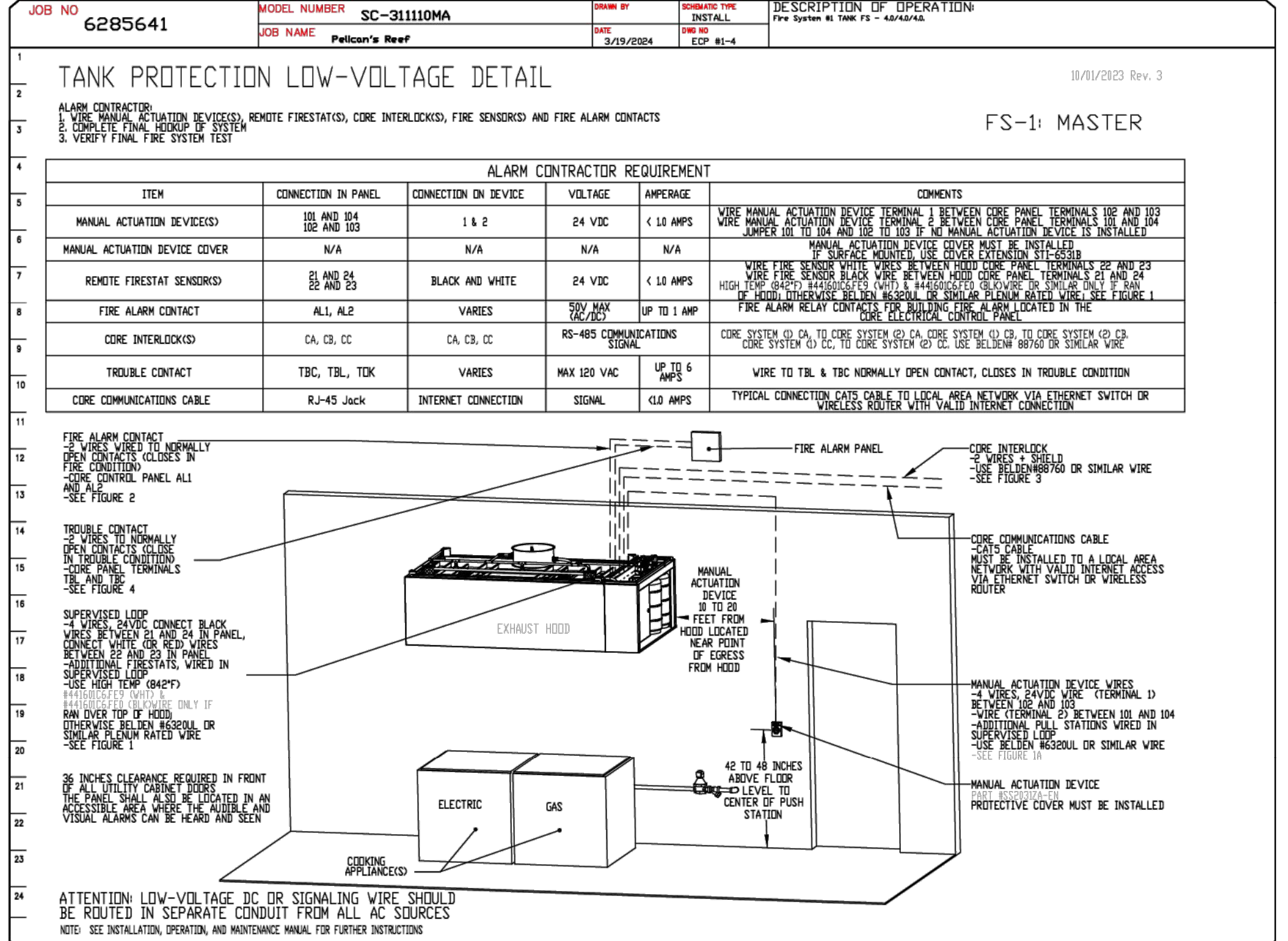
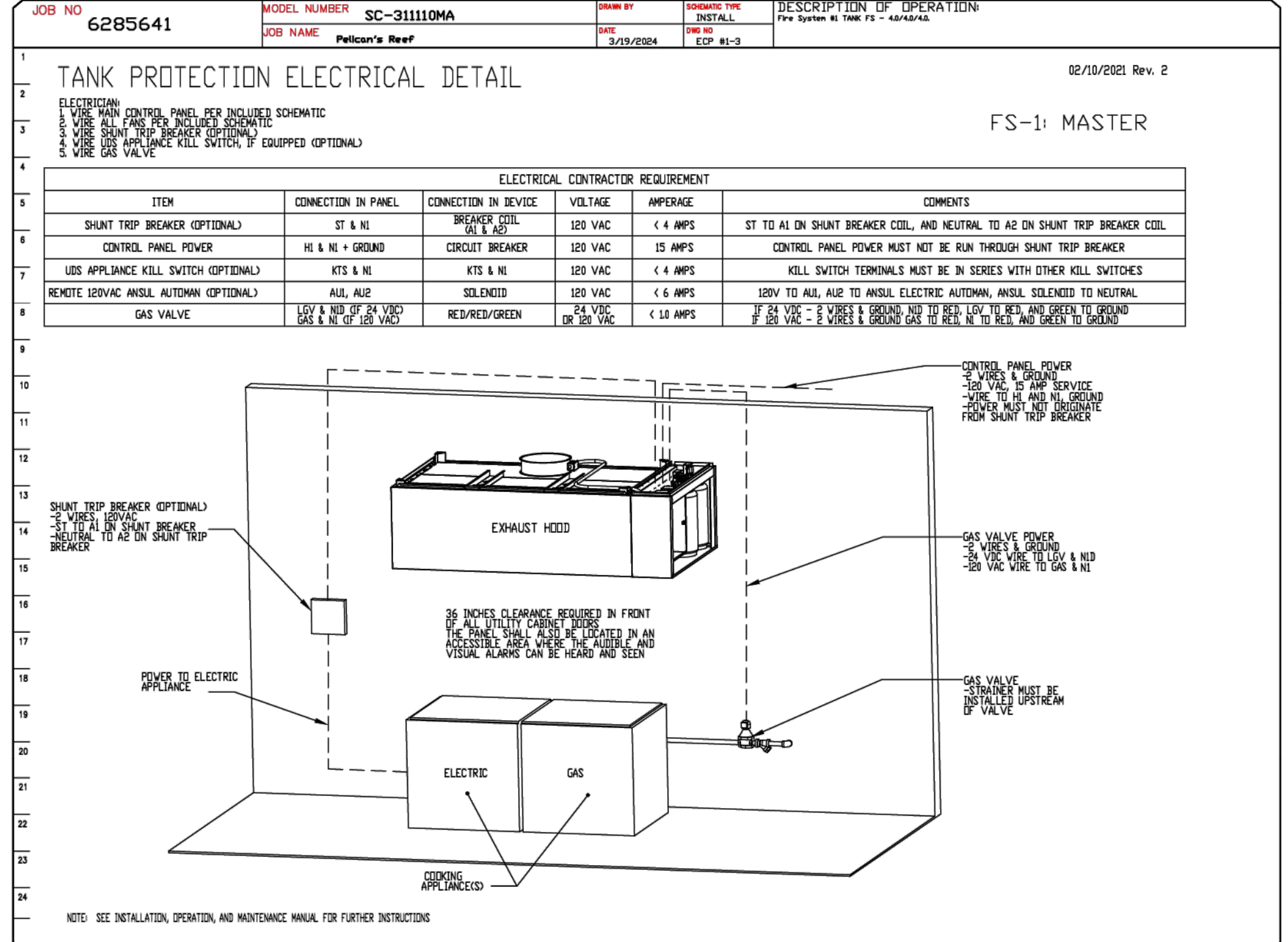
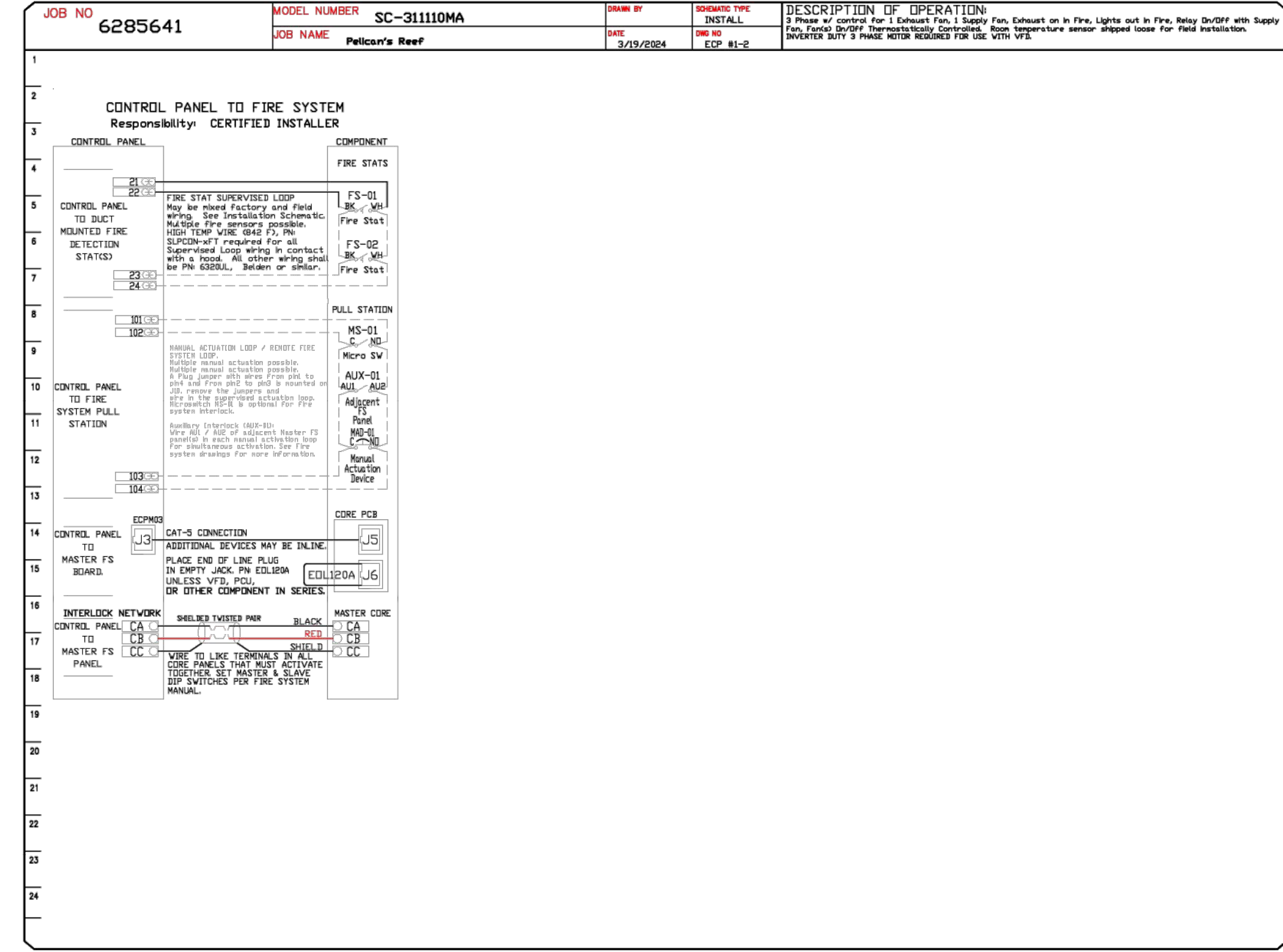
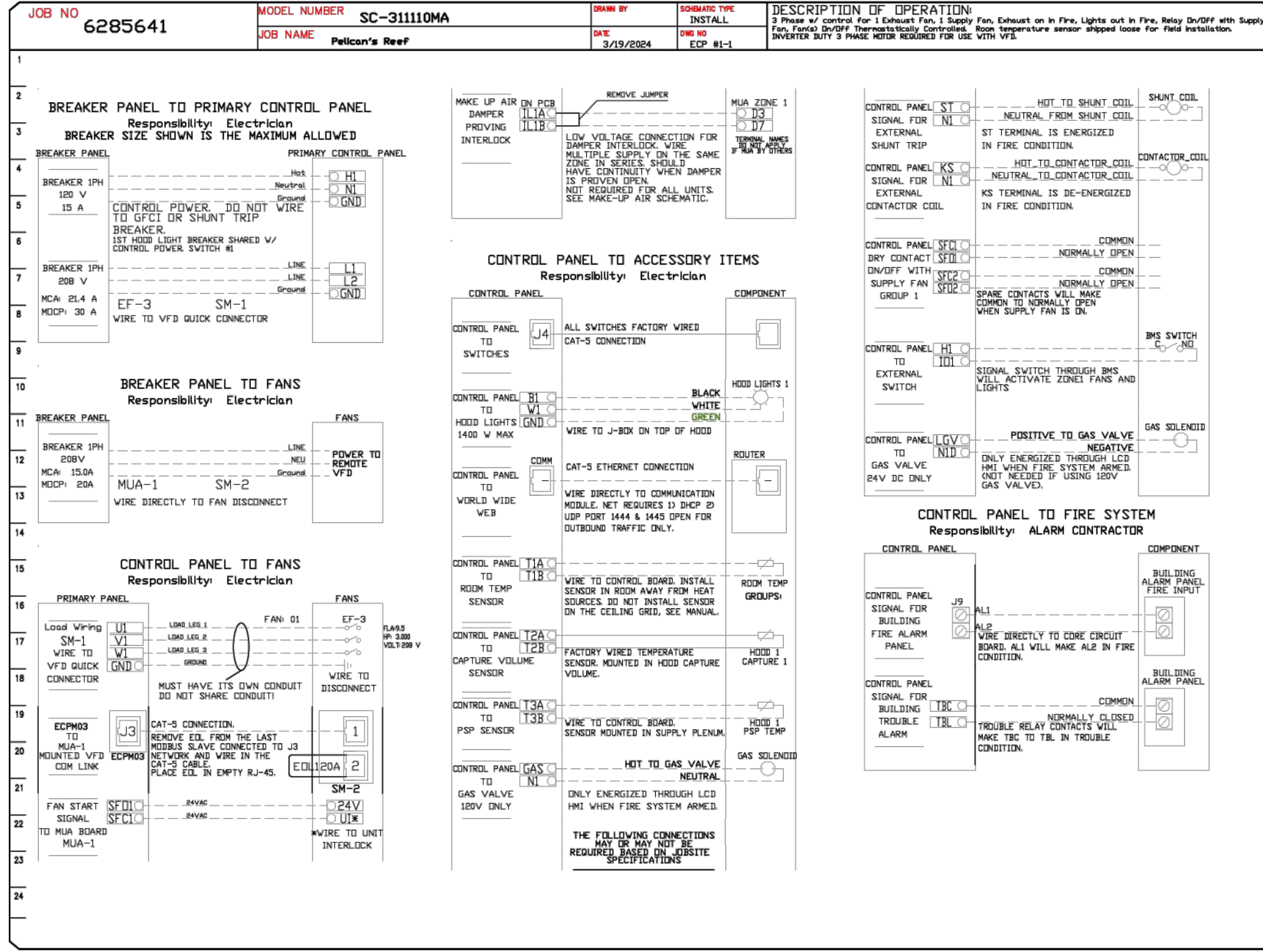


**CASink Monitor and Control**

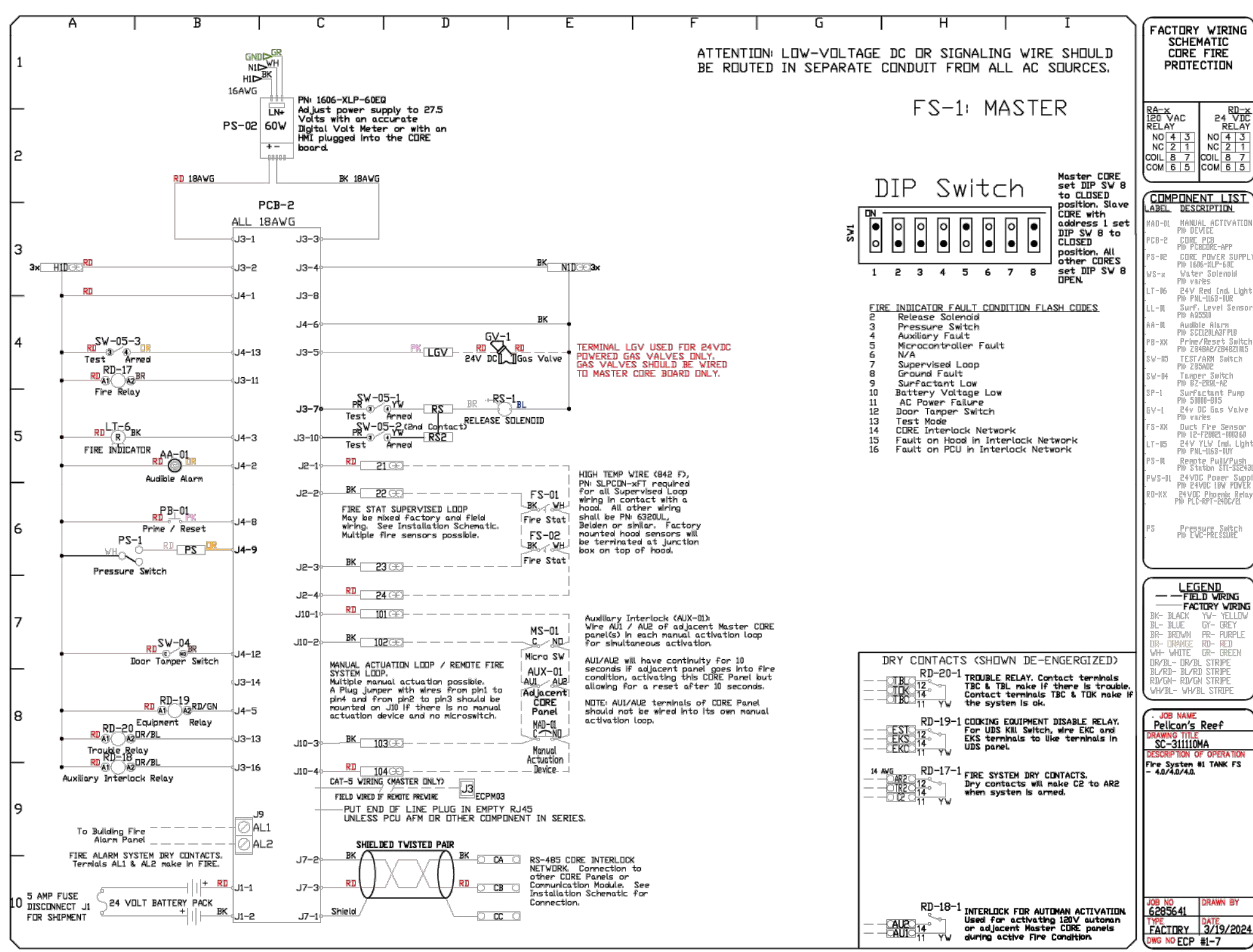
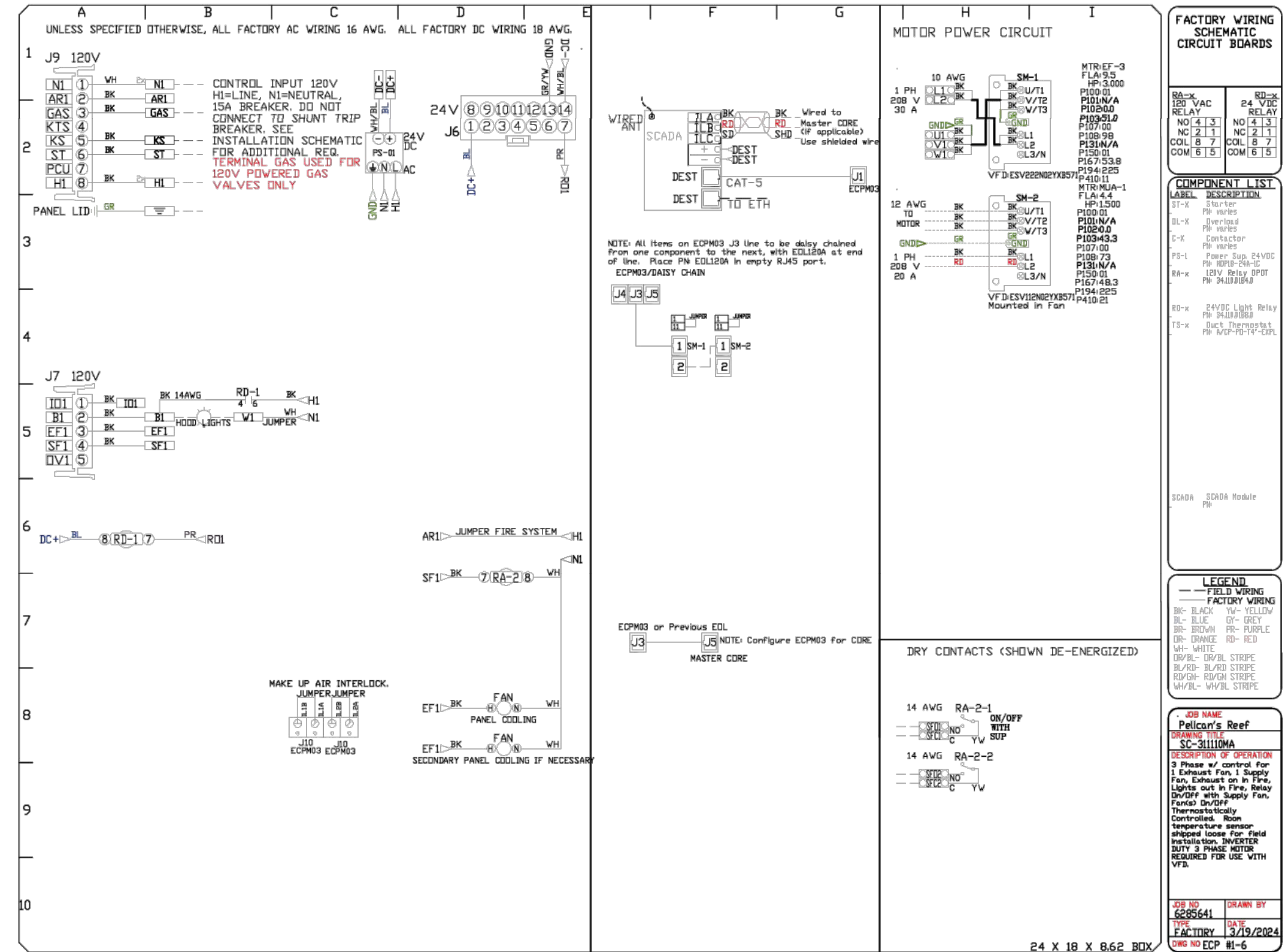
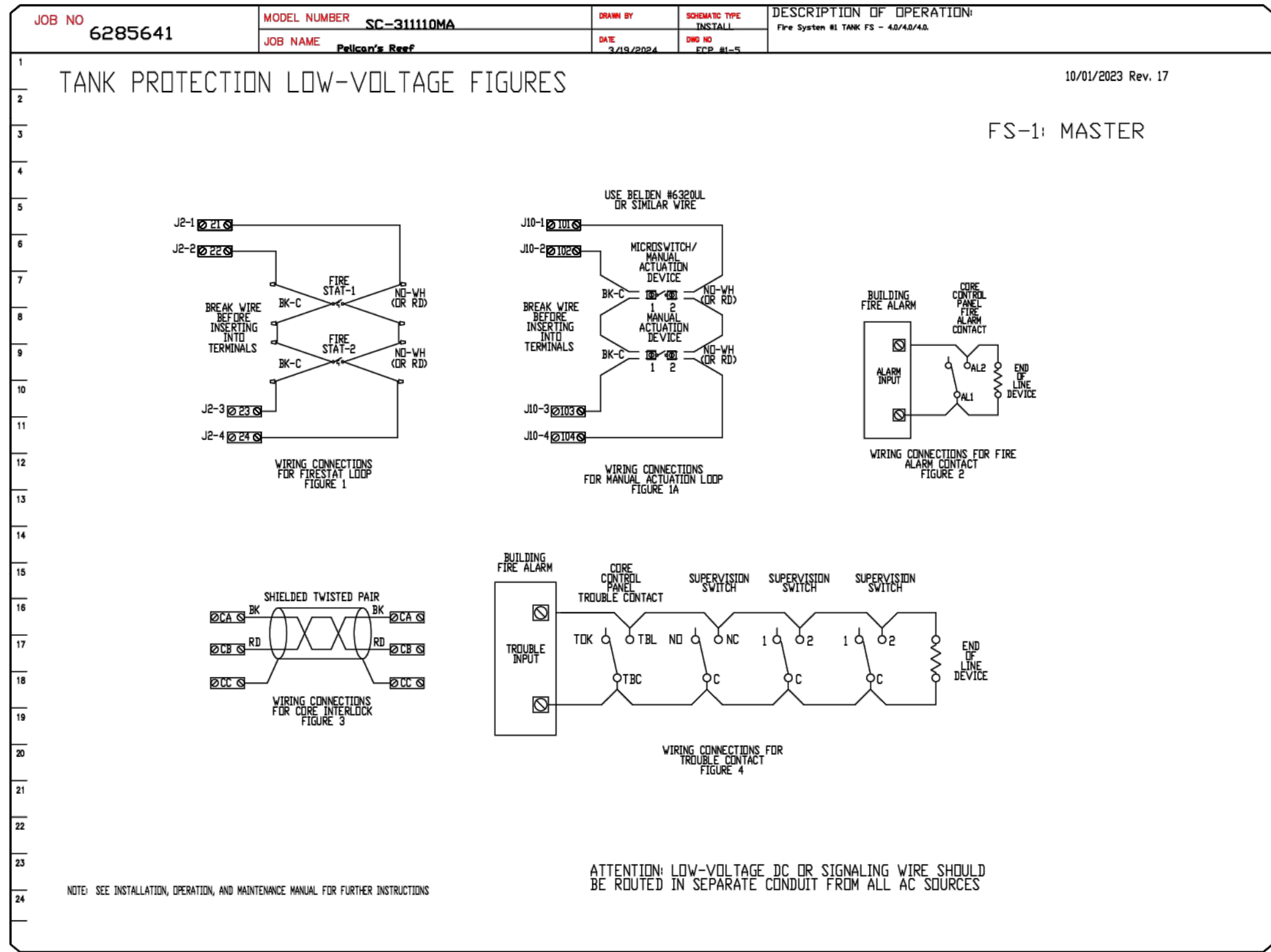
- Hood control panel to support communications to cloud-based Building Management System.  
 - Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.  
 - Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the points list.  
 - Hood Control Panel to allow cloud-based Building Management System to implement SYSTEM ECONOMIZER control strategies for fully integrated Building Management.

**MONITORING AND CONTROL POINTS LIST**

DCV Packages	Function	DC Packages	Function
Room Temperature	MONITOR	Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR	Duct Temperature(s)	MONITOR
MEA Discharge Temperature	MONITOR	MEA Discharge Temperature	MONITOR
Aluminum RTU Discharge Temperature	MONITOR	Aluminum RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR	Controller Faults	MONITOR
Fan Amperage	MONITOR	Fan Faults	MONITOR
Fan Power	MONITOR	Fan Status	MONITOR
FCU Faults	MONITOR	FCU Status	MONITOR
FCU Filter Clog Percentages	MONITOR	FCU Filter Clog Percentages	MONITOR
Fan Faults	MONITOR	Fan Conditions	MONITOR
Fan Status	MONITOR	COSE Fire System	MONITOR
FCU Faults	MONITOR	Building Pressures	MONITOR
FCU Filter Clog Percentages	MONITOR	FCU Filter Clog Percentages	MONITOR
Fan Conditions	MONITOR	Lights Status(s)	MONITOR & CONTROL
COSE Fire System	MONITOR	Prep Time Status	MONITOR & CONTROL
Building Pressures	MONITOR	Fans Status	MONITOR & CONTROL
Prep Time Status	MONITOR & CONTROL	Lights Status	MONITOR & CONTROL
Fans Status	MONITOR & CONTROL	Prep Status	MONITOR & CONTROL

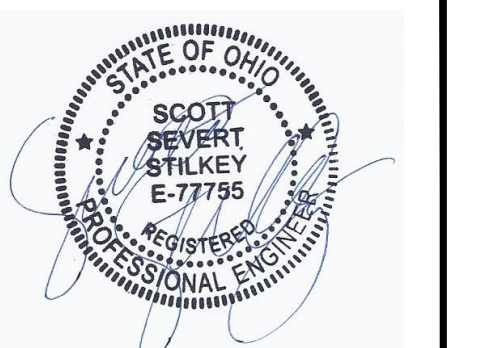


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DATE: 3/19/2024
DWG.#: 6285641
DRAWN BY: grant.homar
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 9

DRAWN BY: KRM	CHECKED BY: SSS
PROJECT NO.: 11231	
SCALE: AS NOTED	
DATE: 12-06-2024	
DRAWING TITLE: MECHANICAL DETAILS	
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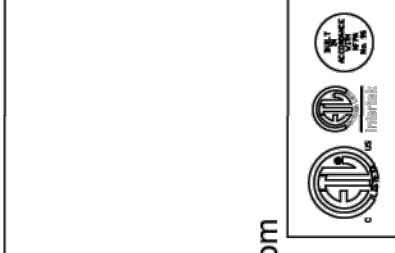
**SYSTEM DESIGN VERIFICATION (SDV)**

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.

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DESCRIPTION	DATE



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 Cincinnati, OH, 45230

**DATE:** 3/19/2024  
**DWG.#:** 6285641  
**DRAWN BY:** grant.honar  
**SCALE:** 3/4" = 1'-0"  
**MASTER DRAWING**

**SHEET NO.**  
 10



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**PELICAN'S REEF**  
**7621 BEECHMONT AVENUE,**  
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**CHECKED BY:** SSS

**PROJECT NO.:** 11231

**SCALE:** AS NOTED

**DATE:** 12-06-2024

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**MECHANICAL DETAILS**

**SHEET NO.**  
**M309**