

SECTION 15732 - PACKAGED ROOFTOP AIR-CONDITIONING UNITS

PART 1 - GENERAL

- 1.1 SECTION REQUIREMENTS
A. SUBMITTALS: PRODUCT DATA AND SHOP DRAWINGS.
B. COMPLY WITH ASHRAE 15.
C. EER: EQUAL TO OR GREATER THAN PRESCRIBED BY THE ENERGY CODE...
D. WARRANTIES: SUBMIT A WRITTEN WARRANTY...

PART 2 - PRODUCTS

- 2.1 PACKAGED UNITS, 5 TO 20 TONS
A. FACTORY ASSEMBLED AND TESTED, CONSISTING OF COMPRESSORS, CONDENSERS, EVAPORATOR COILS, CONDENSER AND EVAPORATOR FANS...
1. REFER TO ROOFTOP HEATING/COOLING UNIT SCHEDULE ON DRAWING M600 FOR CAPACITIES...
2. EVAPORATOR FANS: BELT OR DIRECT DRIVEN, FORWARD CURVED CENTRIFUGAL...
3. EXHAUST/RELIEF FANS: DIRECT DRIVE, FORWARD CURVED CENTRIFUGAL OR PROPELLER...
4. CONDENSER FANS: DIRECT DRIVE PROPELLER...
5. REFRIGERANT COILS: ALUMINUM FINS AND COPPER COIL...
6. COMPRESSORS: SERVICEABLE HERMETIC OR FULLY HERMETIC, WITH SAFETY CONTROLS, HOT GAS BYPASS, AND TIMED OFF CONTROLS...
7. HEAT EXCHANGERS: GAS FIRED, WITH GAS CONTROLS, ELECTRONIC IGNITION, HIGH LIMIT CUTOFF, AND FORCED DRAFT PROVING SWITCH...
8. ECONOMIZER CONTROLS (COMPARATIVE ENTHALPY, 100% CAPACITY)...
9. SMOKE DETECTORS: PHOTOELECTRIC IN SUPPLY AND/OR RETURN AS CALLED FOR IN SCHEDULE ON SHEET M600...
10. OPERATING CONTROLS: TWO STAGE HEATING AND TWO STAGE COOLING ON UNITS 7-1/2 TONS AND OVER...
11. ROOF CURB...
12. CONTROL WIRING FROM T-STAT TO ROOFTOP UNIT: SHALL BE 18GA / 7 CONDUCTOR, RATED FOR PLENUM APPLICATIONS...
13. CONTROL WIRING FROM T-STAT TO REMOTE SENSOR: SHALL BE A SEPARATE 18GA / 2 CONDUCTOR SHIELDED, RATED FOR PLENUM APPLICATIONS.

PART 3 - EXECUTION

- 3.1 INSTALLATION
A. INSTALL UNITS LEVEL AND PLUMB AND FIRMLY ANCHORED.
B. CONNECT GAS PIPING TO BURNER WITH PIPE SAME SIZE AS GAS TRAIN INLET, AND PROVIDE UNION WITH SUFFICIENT CLEARANCE FOR BURNER REMOVAL AND SERVICE.
C. INSTALL DUCTS TO TERMINATION IN ROOF MOUNTING FRAMES. TERMINATE DUCTS THROUGH ROOF STRUCTURE.
D. CONNECT UNITS TO WIRING SYSTEMS AND TO GROUND.

END OF SECTION 15732

SECTION 15810 - DUCTS AND ACCESSORIES

PART 1 - GENERAL

- 1.1 SECTION REQUIREMENTS
A. SUBMITTALS: PRODUCT DATA FOR FIRE AND SMOKE DAMPERS.
B. COMPLY WITH NFPA 90A FOR SYSTEMS SERVING SPACES MORE THAN 25,000 CU. FT. IN VOLUME OR BUILDING TYPES II, IV, AND V CONSTRUCTION MORE THAN 3 STORIES IN HEIGHT.
C. COMPLY WITH NFPA 90B FOR SYSTEMS SERVING SPACES IN 1 OR 2 FAMILY DWELLINGS OR SERVING SPACES LESS THAN 25,000 CU. FT..
D. COMPLY WITH NFPA 96, "VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS," FOR KITCHEN HOOD DUCTS.
E. COMPLY WITH UL 181 AND UL 181A FOR DUCTS AND CLOSURES.
F. TESTING, ADJUSTING, AND BALANCING AGENCY QUALIFICATIONS: AABC CERTIFIED (TO BE FURNISHED BY OWNER).

PART 2 - PRODUCTS

- 2.1 DUCTS
A. SPIRAL DUCT: SPIRAL LOCK SEAM, WITHOUT INSULATION, G90 GALVANIZED FINISH, ASTM A-653/924
1. BASIS OF DESIGN MANUFACTURERS: LINDAB SPIROSAFE, ALTERNATES TO THE BASIS OF DESIGN MUST BE SUBMITTED FOR REVIEW.
2. FITTINGS: FACTORY PRODUCED STANDING SEAM CONSTRUCTION WITH INTERNAL SEALING. FITTINGS WITH A MAJOR AXIS OF 36" OR SMALLER SHALL BE 20 GAUGE. FITTINGS WITH A MAJOR AXIS OF 37"-48" SHALL BE 18 GAUGE.
B. GALVANIZED STEEL SHEET: FORMING STEEL, ASTM A 653/653M, G90 COATING DESIGNATION.
C. DUCT LINER: ASTM C 1071, TYPE II, WITH AN AIRSTREAM SURFACE COATED WITH A TEMPERATURE RESISTANT COATING. THICKNESS: 1-1/2 INCH. R-VALUE : 8.
1. ADHESIVE: ASTM C 916, TYPE I.
2. MECHANICAL FASTENERS: GALVANIZED STEEL PIN, LENGTH AS REQUIRED TO PENETRATE LINER PLUS A 1/8 INCH PROJECTION MAXIMUM INTO THE AIRSTREAM.
D. JOINT AND SEAM TAPE: COMPLY WITH UL 181A.
E. JOINT AND SEAM SEALANT: COMPLY WITH UL 181A.
F. RECTANGULAR METAL DUCT FABRICATION: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARD" FOR METAL THICKNESS, REINFORCING TYPES AND INTERVALS, TIE ROD APPLICATIONS, AND JOINT TYPES AND INTERVALS.

2.2 ACCESSORIES

- A. VOLUME-CONTROL DAMPERS: FACTORY FABRICATED VOLUME CONTROL DAMPERS, COMPLETE WITH REQUIRED HARDWARE AND ACCESSORIES. SINGLE BLADE AND MULTIPLE OPPOSED BLADE, STANDARD LEAKAGE RATING, AND SUITABLE FOR HORIZONTAL OR VERTICAL APPLICATIONS.
B. FIRE DAMPERS: FACTORY-FABRICATED FIRE DAMPERS, COMPLETE WITH REQUIRED HARDWARE AND ACCESSORIES. UL LABELED ACCORDING TO UL 555, "FIRE DAMPERS".
C. FLEXIBLE CONNECTORS: FLAME RETARDANT OR NONCOMBUSTIBLE FABRICS, COATINGS, AND ADHESIVES COMPLYING WITH UL 181, CLASS 1.
D. FLEXIBLE DUCTS: FACTORY FABRICATED, INSULATED, ROUND DUCT, WITH AN OUTER JACKET ENCLOSING 2 INCH THICK, GLASS FIBER INSULATION, R-VALUE: 6.0, AROUND A CONTINUOUS INNER LINER.

PART 3 - EXECUTION

- 3.1 INSTALLATION
A. DUCT SYSTEM PRESSURE CLASS: CONSTRUCT AND INSTALL EACH DUCT SYSTEM WITH 2 INCH POSITIVE AND NEGATIVE DUCT PRESSURE CLASSIFICATIONS.
B. CONCEAL DUCTS FROM VIEW IN FINISHED AND OCCUPIED SPACES. EXCEPT WHERE NOTED AS EXPOSED.
C. AVOID PASSING THROUGH ELECTRICAL EQUIPMENT SPACES AND ENCLOSURES.
D. SUPPORT AND CONNECT METAL DUCTS ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARD".
E. INSTALL DUCT ACCESSORIES ACCORDING TO APPLICABLE PORTIONS OF DETAILS OF CONSTRUCTION AS SHOWN IN SMACNA STANDARDS.
F. INSTALL LINER AND/OR INSULATION ON DUCTWORK PER THE MATERIAL SCHEDULE ON SHEET M010.
G. INSTALL VOLUME CONTROL DAMPERS IN LINED DUCT WITH METHODS TO AVOID DAMAGE TO LINER AND TO AVOID EROSION OF DUCT LINER.
H. INSTALL FIRE AND SMOKE DAMPERS ACCORDING TO MANUFACTURER'S UL APPROVED WRITTEN INSTRUCTIONS.
I. INSTALL FUSIBLE LINKS IN FIRE DAMPERS.
J. PROVIDE SADDLE TAPS AT TEES FOR EXPOSED DUCTWORK.

- 3.2 TESTING, ADJUSTING, AND BALANCING
A. THE OWNER WILL SUPPLY AN INDEPENDENT BALANCE AGENT TO TO BALANCE AND ADJUST THE HVAC INSTALLATION. THE BALANCE AGENT WILL BE RESPONSIBLE FOR ANY PULLEY OR BELT CHANGES REQUIRED.
B. THE GC IS TO HAVE TRAINED STAFFED AVAILABLE DURING THE BALANCING TO CORRECT ISSUES NOTED BY THE BALANCE AGENT.
C. THE BALANCE AGENT IS TO BALANCE AIRFLOW WITHIN DISTRIBUTION SYSTEMS, INCLUDING SUBMAINS, BRANCHES, AND TERMINALS TO INDICATED QUANTITIES +/- 10%. THE HOOD EXHAUST SYSTEM SHALL BE BALANCED TO A TOLERANCE OF: -0+10% AND THE MAKE-UP AIR SYSTEM TO A TOLERANCE OF -10+0%.
D. THE BALANCE AGENT IS TO SUPPLY A COPY OF THE BALANCE REPORT TO THE OWNER, ENGINEER AND GENERAL CONTRACTOR FOR REVIEW.

END OF SECTION 15810

SECTION 15855 - DIFFUSERS, REGISTERS, AND GRILLES

PART 1 - GENERAL

- 1.1 SECTION REQUIREMENTS
A. SUBMITTALS: NONE.

PART 2 - PRODUCTS

- 2.1 OUTLETS AND INLETS
A. DIFFUSERS:
1. REFER TO GRILLS, REGISTERS, AND DIFFUSERS SCHEDULE FOR EQUIPMENT SCHEDULE
2. MANUFACTURER: AS SCHEDULED (NO SUBSTITUTIONS)
3. MATERIAL: AS SCHEDULED.
4. FINISH: AS SCHEDULED.
5. MOUNTING: AS SCHEDULED.
B. WALL AND CEILING REGISTERS:
1. REFER TO GRILLS, REGISTERS, AND DIFFUSERS SCHEDULE FOR EQUIPMENT SCHEDULE
2. MANUFACTURER: AS SCHEDULED (NO SUBSTITUTIONS)
3. MATERIAL: AS SCHEDULED.
4. FINISH: AS SCHEDULED.
5. MOUNTING: COUNTERSUNK SCREW.
C. WALL AND CEILING GRILLES:
1. REFER TO GRILLS, REGISTERS, AND DIFFUSERS SCHEDULE FOR EQUIPMENT SCHEDULE
2. MANUFACTURER: AS SCHEDULED (NO SUBSTITUTIONS)
3. MATERIAL: AS SCHEDULED.
4. FINISH: AS SCHEDULED.
5. MOUNTING: COUNTERSUNK SCREW OR LAY IN DEPENDING LOCATION.

PART 3 - EXECUTION

- 3.1 INSTALLATION
A. COORDINATE LOCATION AND INSTALLATION WITH DUCT INSTALLATION AND INSTALLATION OF OTHER CEILING AND WALL MOUNTED ITEMS.
B. LOCATE CEILING DIFFUSERS, REGISTERS, AND GRILLES, AS INDICATED ON THE ARCHITECTURAL "REFLECTED CEILING PLANS." UNLESS OTHERWISE INDICATED, LOCATE UNITS IN CENTER OF ACOUSTICAL CEILING PANELS.

END OF SECTION 15855

Table with 3 columns: CATEGORY, APPLICATION, ALLOWABLE MATERIAL. Row 1: DUCT, EXPOSED SUPPLY, RECT. LINED OR ROUND AS SHOWN, NO EXPOSED DUCT-SEALING MASTIC.

HVAC ABBREVIATIONS

- AFF ABOVE FINISHED FLOOR
CD CONDENSATE
CLU CONDENSING UNIT
EF EXHAUST FAN
EXT'G EXISTING
HD HOOD
MUA MAKEUP AIR UNIT
OPD OPPOSED BLADE DAMPER
RG RETURN GRILLE
RTU ROOFTOP UNIT
SR SUPPLY REGISTER
VSC VARIABLE SPEED CONTROL
CO2AS TENANT'S CO2 ALARM SUPPLIER
GC GENERAL CONTRACTOR
HES TENANT'S HVAC EQUIPMENT SUPPLIER
TAB TENANT'S TEST AND BALANCE VENDOR
TCC TENANT'S CABLING CONTRACTOR
KES TENANT'S KITCHEN EQUIPMENT SUPPLIER
HS TENANT'S HOOD SUPPLIER
TDC TENANT DUCT CLEANER
TEMS TENANT'S ENERGY MANAGEMENT SYSTEM SUPPLIER TENANT'S LIGHT/LAMP SUPPLIER
TMB TENANT'S MENU BOARD SUPPLIER
TMS TENANT'S MILLWORK SUPPLIER
TP TENANT'S PHONE SUPPLIER
TRS TENANT'S RAILING SUPPLIER
TSV TENANT'S SIGN VENDOR
TUV TENANT'S UV SANITIZER SUPPLIER
WCS TENANT'S WALK-IN COOLER SUPPLIER
WHS TENANT'S WATER HEATER SUPPLIER

HVAC SYMBOLS

- CEILING SUPPLY DIFFUSER
CEILING RETURN DIFFUSER
SUPPLY REGISTER
RETURN REGISTER
FLEXIBLE DUCT
MITERED CORNER WITH TURNING VANES
DUCTWORK INTERNAL FREE DIMENSIONS
RECTANGULAR TO ROUND TRANSITION
GREASE DUCT CLEANOUT
MITERED CORNER WITHOUT TURNING VANES
GRIDPOINT THERMOSTAT
GRIDPOINT ZONE SENSOR MODULE
PLAN NOTE: SEE PLAN NOTES LISTED ON THE SAME SHEET FOR NOTE MEANING
EQUIPMENT TAG: SEE EQUIPMENT SCHEDULE ON SHEET M600 FOR EQUIPMENT INFORMATION.
GRILL, REGISTER, OF DIFFUSER TAG: TAG NECK SIZE AIRFLOW (CFM)

HVAC GENERAL NOTES

- A. GENERAL NOTES APPLY TO HVAC SHEETS.
B. WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE AUTHORITY HAVING JURISDICTION, INCLUDING APPLICABLE SECTIONS OF NFPA, THE MECHANICAL CODE, AND ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE PERMITS ASSOCIATED WITH THE WORK. OBTAIN INSPECTIONS REQUIRED BY CODE. SEE SHEET G000 FOR THE PREVAILING CODES.
C. CONTRACTOR AND SUBCONTRACTORS SHALL REVIEW A COMPLETE SET OF THE CONSTRUCTION DOCUMENTS.
D. COORDINATE WORK WITH THE WORK OF OTHER TRADES, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND OF THE EXISTING CONDITIONS AT THE PROJECT SITE.
E. DRAWINGS FOR THE MECHANICAL WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LOCATION, TYPE, AND EQUIPMENT REQUIRED. THE DRAWING SHALL NOT BE SCALED FOR EXACT MEASUREMENTS, REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, OFFSETS, ACCESSORIES, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.
F. DUCT DIMENSIONS ON PLANS INDICATE DIMENSIONS OF INTERNAL FREE AREA.
G. PERFORATED CEILING DIFFUSERS SHALL BE 4-WAY UNLESS NOTED OTHERWISE.
H. COORDINATE ROOF WORK WITH THE OWNER'S CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
I. UNLESS NOTED OTHERWISE RECTANGULAR DUCT ELBOWS GREATER THAN 45° SHALL BE MITERED ELBOWS WITH DOUBLE-THICKNESS TURNING VANES AND RECTANGULAR DUCT ELBOWS 45° OR LESS SHALL BE RADIUSSED ELBOWS WITH AN INSIDE RADIUS OF AT LEAST 1/2 THE WIDTH OF THE DUCT.
J. REPLACE AIR FILTERS WITH NEW, CLEAN MERV 8 AIR FILTERS AT TURNOVER.
K. THE TERM "FURNISH" MEANS SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS. THE TERM "INSTALL" DESCRIBES THE OPERATIONS AT THE PROJECT SITE INCLUDING THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTING, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS. THE TERM "PROVIDE" MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE.
L. PROVIDE LABELING CALLED FOR IN THE HVAC DRAWINGS USING ENGRAVED PHENOLIC PLATES.
M. PROVIDE P3000 12 GA. UNISTRUT WITH PG FINISH FOR DUCT SUPPORTS AND OTHER UNISTRUT IN AREAS EXPOSED TO VIEW. SLOTTED UNISTRUT AND OTHER UNISTRUT WITH HOLES IS NOT ACCEPTABLE.



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Project No: 5316

Contents:

HVAC SPECIFICATIONS

M010



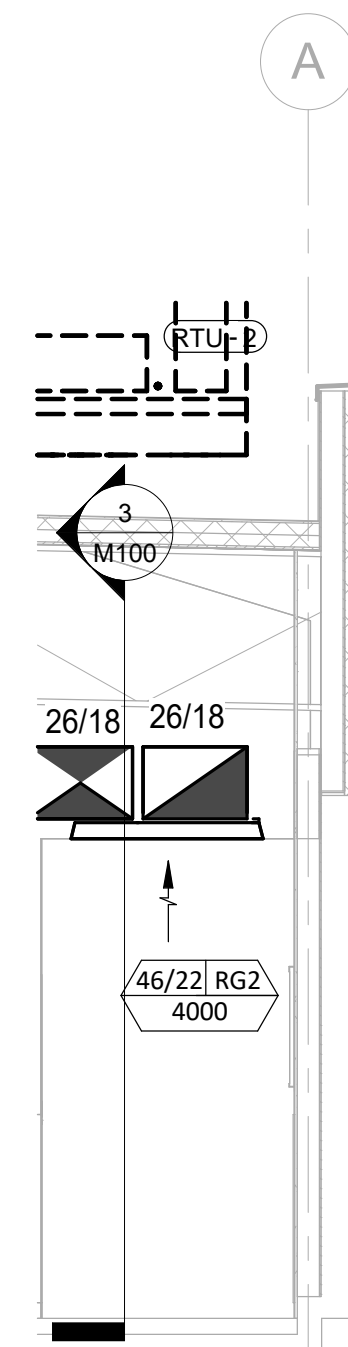
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# HVAC PLAN NOTES

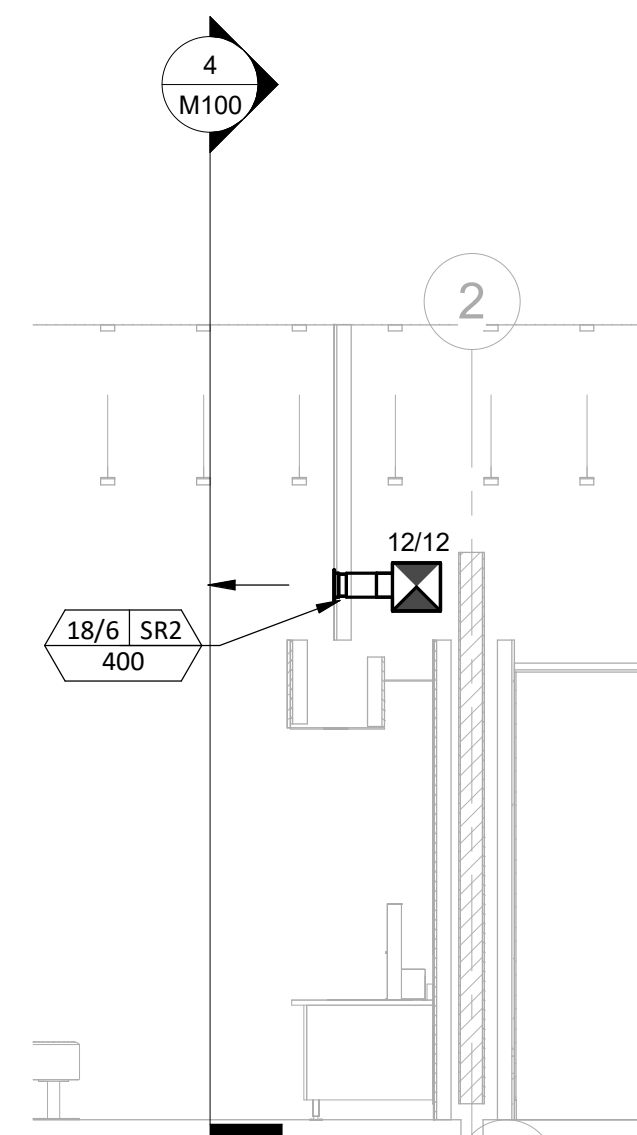
- SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR CEILING MOUNTED EQUIPMENT LOCATION. TYPICAL.
- PAINT DUCTWORK VISIBLE THROUGH DINING ROOM SUPPLY REGISTERS BLACK. TYPICAL.
- PENETRATIONS THROUGH SHEAR WALL SHALL BE LIMITED TO 10" DIAMETER (OR A GROUP OF PENETRATIONS ALL CONTAINED WITHIN 10" DIAMETER). IF LARGER PENETRATIONS OR GROUPS OF PENETRATIONS ARE REQUIRED COORDINATE WITH STRUCTURAL ENGINEER FOR APPROPRIATE BRACING. SEE STRUCTURAL DRAWINGS FOR SHEAR WALL LOCATION.
- 26/18 DUCT UP FOR TRANSITION TO RTU-1 RETURN CONNECTION IN ROOF CURB. RTU-1 SHALL HAVE AN INTEGRAL SMOKE DETECTOR MOUNTED IN THE RETURN AIR STREAM. INTERLOCK SMOKE DETECTOR TO RTU-1 OPERATION.
- 26/18 DUCT UP FOR TRANSITION TO RTU-2 RETURN CONNECTION IN ROOF CURB. RTU-2 SHALL HAVE AN INTEGRAL SMOKE DETECTOR MOUNTED IN THE RETURN AIR STREAM. INTERLOCK SMOKE DETECTOR TO RTU-2 OPERATION.
- 26/18 DUCT UP FROM BUILDING SUPPLY THROUGH ROOF. TRANSITION TO RTU-1 SUPPLY CONNECTION IN ROOF CURB.
- 26/18 DUCT UP FROM BUILDING SUPPLY TO RTU-2 SUPPLY CONNECTION. TRANSITION IN ROOF CURB.
- 14/14 DUCT UP THROUGH ROOF. TRANSITION TO MAU-1 SUPPLY CONNECTION IN ROOF CURB.
- 16/16 DUCT UP FROM HOOD THROUGH ROOF TO EF-1 COMPLIANT WITH NFPA 96. PROVIDE RADIUS ELBOWS WITH AN INSIDE RADIUS OF 0.5W AT ELBOWS IN GREASE DUCT.
- 8/6 DUCT UP THROUGH ROOF TO EF-2.
- 28/10 DUCT DOWN TO MAKEUP AIR PSP DUCT CONNECTION. TRANSITION TO SUPPLY PLENUM OPENING SIZE. TYPICAL FOR 3.
- 8" DIA. DUCT DOWN TO AC PSP DUCT CONNECTION. TRANSITION TO SUPPLY PLENUM OPENING SIZE. TYPICAL. CAP UNUSED DUCT CONNECTIONS.
- INSTALL GRIDPOINT THERMOSTATS FURNISHED BY TEMS FOR RTU-1 (TS200) AND RTU-2 (TS200) AT THIS LOCATION AT 48" AFF. COORDINATE WITH ELECTRICAL SWITCHING IN THIS AREA. PROVIDE THERMOSTAT WIRING FROM EACH THERMOSTAT TO THE CORRESPONDING ROOFTOP UNIT. PROVIDE CATSE CABLE FROM RTU-1 TS200 TO J-BOX #2 ABOVE ELECTRICAL PANELS (LEAVE 16" OF CABLE COILED UP INSIDE OF J-BOX #2 ND 16" BEHIND WALL OF THERMOSTAT FOR FINAL CONNECTION TO THE EMS SYSTEM BY THE TEMS) AND LABEL BOTH ENDS OF CABLE "TSTATS". SEE GRIDPOINT INSTALLATION INSTRUCTIONS FOR TERMINATION INSTRUCTIONS.
- INSTALL GRIDPOINT ZONE SENSOR MODULE FURNISHED BY TEMS FOR RTU-1 AT THIS LOCATION 84" AFF DIRECTLY TO WALL (NO JUNCTION BOX). COORDINATE LOCATION WITH EQUIPMENT. PROVIDE 18G-24G SHIELDED TWISTED PAIR FROM ZSM TO RTU-1 THERMOSTAT T1 TERMINALS. SEE GRIDPOINT INSTALLATION INSTRUCTIONS FOR TERMINATION INSTRUCTIONS.
- INSTALL GRIDPOINT ZONE SENSOR MODULE FURNISHED BY TEMS FOR RTU-2 AT THIS LOCATION 60" AFF DIRECTLY TO WALL (NO JUNCTION BOX). COORDINATE LOCATION WITH EQUIPMENT. PROVIDE 18G-24G SHIELDED TWISTED PAIR FROM ZSM TO RTU-2 THERMOSTAT T1 TERMINALS. SEE GRIDPOINT INSTALLATION INSTRUCTIONS FOR TERMINATION INSTRUCTIONS.
- INSTALL GRIDPOINT SUPPLY PROBE FURNISHED BY TEMS FOR RTU-1 IN THE SUPPLY DUCTWORK UPSTREAM FROM THE FIRST BRANCH CONNECTION. PROVIDE 18G-24G SHIELDED TWISTED PAIR FROM SUPPLY PROBE TO RTU-1 THERMOSTAT T2 TERMINALS. SEE GRIDPOINT INSTALLATION INSTRUCTIONS FOR TERMINATION INSTRUCTIONS.
- INSTALL GRIDPOINT SUPPLY PROBE FURNISHED BY TEMS FOR RTU-2 IN THE SUPPLY DUCTWORK UPSTREAM FROM THE FIRST BRANCH CONNECTION. PROVIDE 18G-24G SHIELDED TWISTED PAIR FROM SUPPLY PROBE TO RTU-2 THERMOSTAT T2 TERMINALS. SEE GRIDPOINT INSTALLATION INSTRUCTIONS FOR TERMINATION INSTRUCTIONS.
- INSTALL REMOTE TEMPERATURE SENSOR FOR HOOD HD-1 AT THIS LOCATION 84" AFF. COORDINATE LOCATION WITH EQUIPMENT. PROVIDE (2) #18 G. THERMISTOR CABLE FROM TEMPERATURE SENSOR TO HOOD CONTROL PANEL.

# HVAC PLAN NOTES

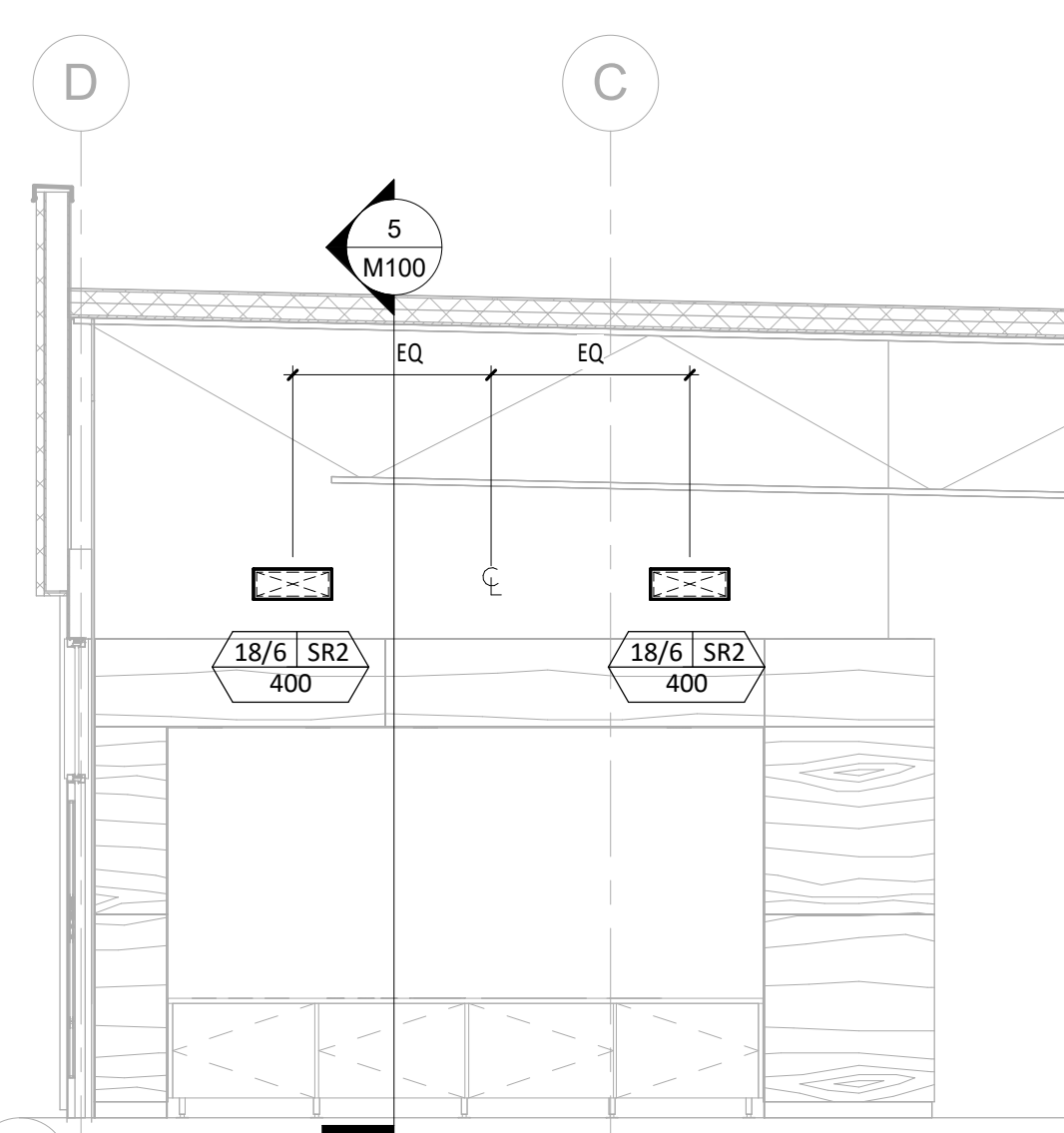
- INSTALL KITCHEN HOOD, HD-1. SUPPORT HOOD PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL HOOD ACCORDING TO THE REQUIREMENTS OF ITS LISTING, IN COMPLIANCE WITH NFPA 96, THE BUILDING CODE, AND AUTHORITIES HAVING JURISDICTION. HOOD SHALL HAVE AN INTEGRAL DUCT COLLAR TEMPERATURE SENSOR TO AUTOMATICALLY ENERGIZE THE EXHAUST AND MAKEUP AIR FANS IF COOKING TEMPERATURES ARE DETECTED. EXHAUST DUCT SYSTEM TO BE WELDED OR FACTORY-MANUFACTURED WATER AND AIR TIGHT. INSTALL CLEANOUTS PER CODE AND AS SHOWN. INSTALL HOOD PER DETAILS 2 AND 4/M700. CHIPOTLE WILL PROVIDE AN INDEPENDENT TESTING AGENCY FOR TESTING THE INTEGRITY OF THE GREASE DUCT SYSTEM.
- INSTALL REMOTE CONDENSING UNIT FOR WALK-IN COOLER ON ROOF AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL REFRIGERANT LINE SET, THERMOSTATIC EXPANSION VALVE, SOLENOID VALVE, TEMPERATURE CONTROL, SIGHT GLASS, FILTER DRIER, PRESSURE CONTROL, LOW AMBIENT CONTROLS, AND WEATHERPROOF HOUSING. TRAP AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. INSTALLATION SHALL COMPLY WITH ASHRAE/ANSI STANDARD 15. INSTALL THE REFRIGERANT LINE SET UNDER THE ROOF DECK TO WITHIN 3' OF THE CONDENSING UNIT. CUT 2-1/2" HOLE IN WALK-IN COOLER ROOF FOR REFRIGERANT LINE SET AND SEAL PER THE COOLER MANUFACTURER'S INSTALLATION INSTRUCTIONS AFTER LINE SET IS INSTALLED.
- INSTALL REMOTE CONDENSER FOR ICE MACHINE ON ROOF AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL REFRIGERANT LINE SET, THERMOSTATIC EXPANSION VALVE, SOLENOID VALVE, TEMPERATURE CONTROL, SIGHT GLASS, FILTER DRIER, PRESSURE CONTROL, LOW AMBIENT CONTROLS, AND WEATHERPROOF HOUSING. TRAP AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. SEAL PIPING PENETRATIONS THROUGH ROOF. INSTALLATION SHALL COMPLY WITH ASHRAE/ANSI STANDARD 15. INSTALL THE REFRIGERANT LINE SET UNDER THE ROOF DECK TO WITHIN 3' OF THE REMOTE CONDENSER. IF REFRIGERANT PIPING TO ICE MAKER IS EXPOSED TO PUBLIC VIEW CONCEAL WITHIN A STAINLESS STEEL SHROUD AS SHOWN IN THE ARCHITECTURAL DRAWINGS.
- INSTALL ROOFTOP EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- INSTALL EXHAUST FAN EF-1 PER DETAIL 5/M700 AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL GREASE VIROGUARD SYSTEM FURNISHED BY CHIPOTLE ON EXHAUST FAN, EF-1.
- PROVIDE SUPPLY DIFFUSER CONNECTION TO SUPPLY SYSTEM PER DETAIL 1/M700. TYPICAL.
- PROVIDE AUDIO/VISUAL REMOTE SMOKE DETECTOR ANNUNCIATOR WITH REMOTE KEY OPERATED RESET. WIRE A UNIT BACK TO EACH SMOKE DETECTOR. MOUNT UNIT 60" AFF. TYPICAL.
- INSTALL REME HALO AIR PURIFIER FURNISHED BY TUV IN RTU PER DETAIL 6/M700. SEE ELECTRICAL DRAWINGS FOR POWER CONNECTION INFORMATION. INSTALL UV WARNING STICKERS ON FACE OF ENCLOSURE PER DETAIL AND ON ANY RTU ACCESS DOOR(S) THROUGH WHICH THE REME HALO WOULD BE VISIBLE IF OPENED.
- MAINTAIN 10" CLEARANCE BETWEEN WATER HEATER FLUE TERMINATION AND OUTSIDE AIR INTAKES. MAINTAIN 10" CLEARANCE BETWEEN WATER HEATER COMBUSTION AIR INTAKE AND EXHAUST FAN EF-1 DISCHARGE. SEE PLUMBING DRAWINGS FOR MORE INFORMATION ON WATER HEATER FLUE AND COMBUSTION AIR TERMINATIONS.
- ADJUST SUPPLY REGISTERS SO THAT SUPPLY AIR HITS WALL ON OPPOSITE SIDE OF ROOM AT APPROXIMATELY 7' AFF WITH NO DRAFTS FELT IN THE DINING ROOM.



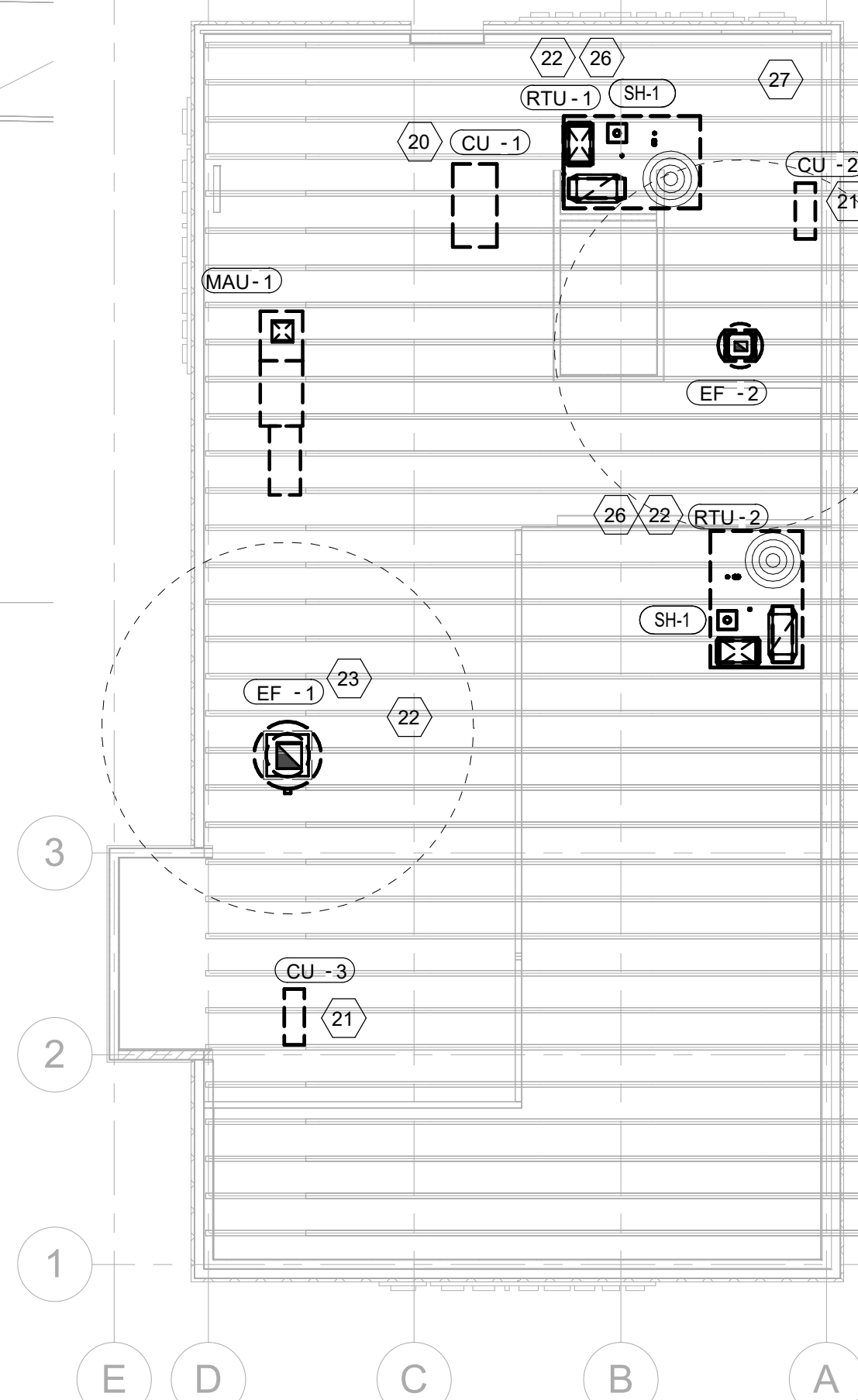
**HVAC DINING ROOM RETURN SECTION**



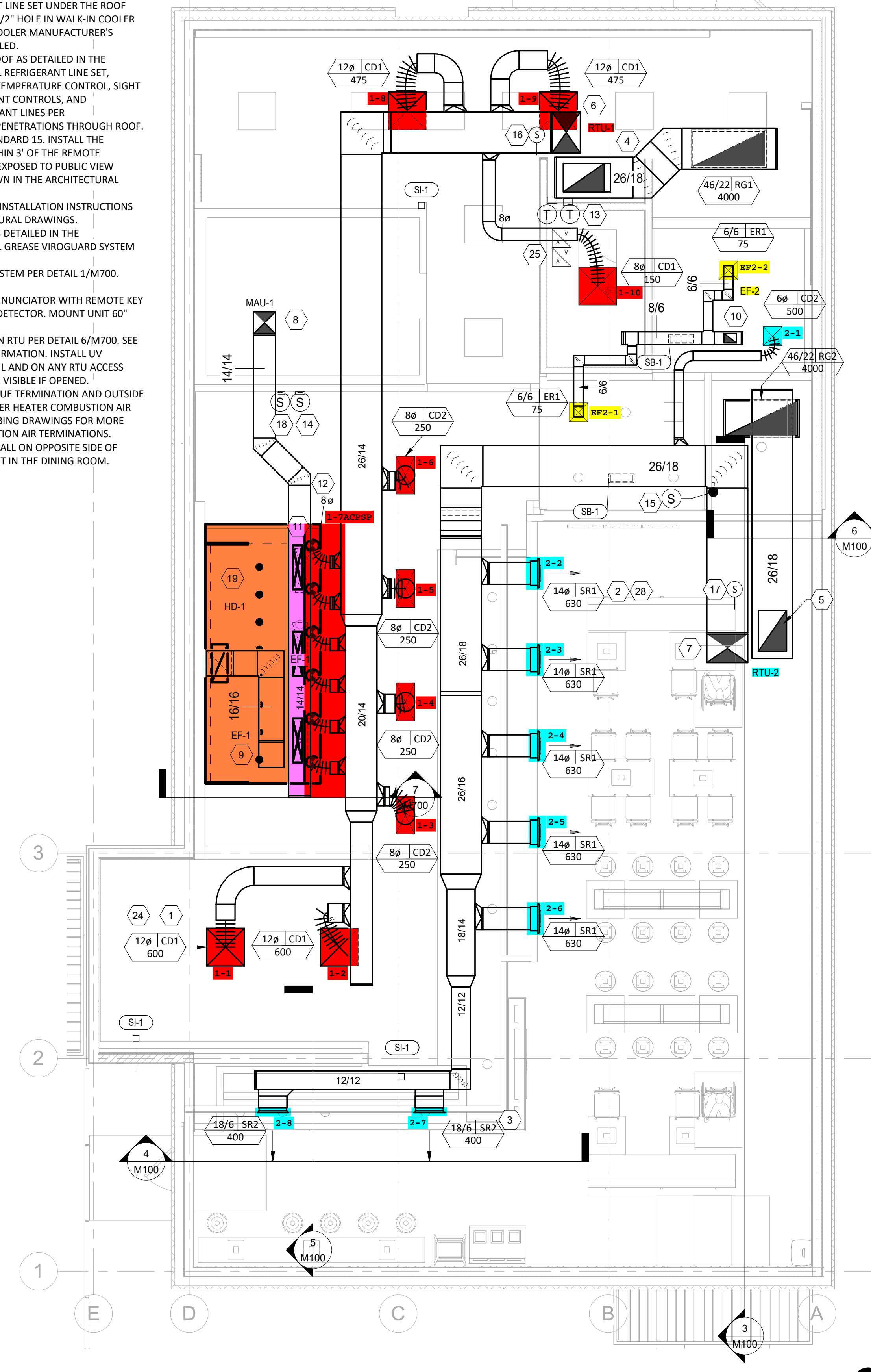
**HVAC DINING ROOM SECTION**



**HVAC DINING ROOM SECTION**



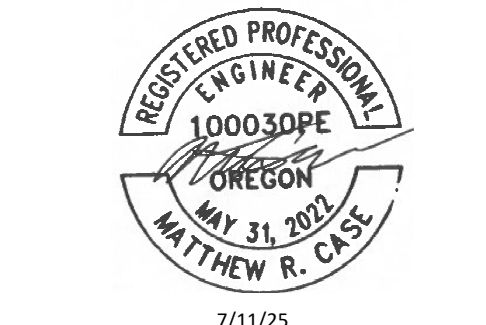
**HVAC ROOF PLAN**



**HVAC FLOOR PLAN**



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STORE NO.: 5316  
Hermiston, OR  
1875 N 1st St  
Hermiston OR 97838

Issue Record:	
10/24/2024	PERMIT SET
07/11/25	CONSTRUCTION SET

Revisions:	
1	07/25/25 DB2 UPDATES

Drawn: JW  
Checked: JW

Project No:  
5316

Contents:  
HVAC PLAN



M100



LINGLE DESIGN GROUP INC  
158 W. MAIN ST.  
LENA, IL 61048  
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7/11/25

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Contents:

MECHANICAL  
SCHEDULES

M600

### AIR BALANCE SCHEDULE

TAG	SUPPLY FLOW	RETURN FLOW	EXHAUST FLOW	SUBTOTAL
EF-1	0 CFM	0 CFM	3,200 CFM	-2,550 CFM
EF-2	0 CFM	0 CFM	150 CFM	-150 CFM
MAU-1	1,950 CFM	0 CFM	0 CFM	1,300 CFM
RTU-1	4,000 CFM	3,500 CFM	0 CFM	500 CFM
RTU-2	4,000 CFM	3,000 CFM	0 CFM	1,000 CFM
NET PRESSURIZATION				100 CFM

### CONTROL FUNCTIONS

- THE MAIN COOKING EXHAUST FAN AND MAKE-UP AIR UNIT SHALL BE INTERLOCKED TO OPERATE TOGETHER. THIS CONTROL CIRCUIT IS ACTIVATED BY A SWITCH AND INCLUDES A FIRE PROTECTION OVERRIDE.
- THE TEMPERATURE IN EACH ZONE IS CONTROLLED BY SPACE TEMPERATURE SENSORS CONNECTED TO THE THERMOSTATS LOCATED IN THE OFFICE. ALL ZONES SHALL OPERATE WITH CONTINUOUS FAN OPERATION DURING OCCUPIED TIMES AND INTERMITTENTLY AS NEEDED TO MAINTAIN SET POINTS DURING UNOCCUPIED TIMES. OUTSIDE AIR DAMPERS SHALL BE OPEN CONTINUOUSLY WHEN EITHER IN OCCUPIED MODE OR WHEN THE HOOD SYSTEM IS ON AND SHALL BE CLOSED DURING UNOCCUPIED PERIODS.
- THE THERMOSTATS SHALL DETERMINE OCCUPIED/UNOCCUPIED STATUS BASED ON THE SCHEDULE IN THE ENERGY MANAGEMENT SYSTEM.

### AIR TERMINAL SCHEDULE

TAG	DESCRIPTION	FACE SIZE	MATERIAL	FINISH	MOUNTING	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		NOTES
								MANUFACTURER	MODEL	
CD1	PERFORATED CEILING DIFFUSER	24" X 24"	ALUMINUM	WHITE	LAY-IN CEILING	GC	GC	NAILOR	4320A TYPE L	PROVIDE WITH INTEGRAL OBD
CD2	PERFORATED CEILING DIFFUSER	24" X 24"	ALUMINUM	WHITE	LAY-IN CEILING	GC	GC	NAILOR	4320A TYPE L	PROVIDE WITH INTEGRAL OBD, REMOVE 4-WAY DEFLECTORS
CD3	PERFORATED CEILING DIFFUSER	12" X 12"	ALUMINUM	WHITE	SURFACE MOUNT	GC	GC	NAILOR	4320A TYPE S	PROVIDE WITH INTEGRAL OBD
ER1	PERFORATED CEILING EXHAUST	12" X 12"	ALUMINUM	WHITE	SURFACE MOUNT	GC	GC	NAILOR	4330R TYPE S	PROVIDE INTEGRAL OBD
RG1	PERFORATED CEILING RETURN	48" X 24"	ALUMINUM	WHITE	LAY-IN CEILING	GC	GC	NAILOR	4330R TYPE L	
RG3	PERFORATED CEILING RETURN	48" X 24"	ALUMINUM	WHITE	SURFACE MOUNT	GC	GC	NAILOR	4330R TYPE S	
SR1	ADJUSTABLE TURBO NOZZLE	SEE NECK SIZE	ALUMINUM	WHITE	WALL	GC	GC	AIR CONCEPTS	ANC-RR	PROVIDE WITH CONCEALED MOUNTING AND FACE-ACCESSIBLE OBD
SR2	ARCHITECTURAL GRILLE	18"x6"	ALUMINUM	WHITE	WALL	GC	GC	AIR CONCEPTS	RGDD-F	PROVIDE WITH CONCEALED MOUNTING AND FACE-ACCESSIBLE OBD

### SANITIZING EQUIPMENT SCHEDULE

TAG	COUNT	DESCRIPTION	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
					MANUFACTURER	MODEL	
SB-1	2	BATHROOM AIR PURIFICATION UNIT	TUV	GC	RGF ENVIRONMENTAL GROUP	BRU ASSEMBLY	SEE ELECTRICAL SHEETS FOR CONNECTION INFORMATION
SH-1	2	HVAC AIR PURIFICATION UNIT	TUV	GC	RGF ENVIRONMENTAL GROUP	REME-HALO	SEE DETAIL 6/M700 FOR INSTALLATION INFORMATION.
SI-1	3	ICE MACHINE TREATMENT SYSTEM	TUV	GC	RGF ENVIRONMENTAL GROUP	IMS-B-GA	SEE PLUMBING DRAWINGS FOR INSTALLATION INFORMATION.

### FAN SCHEDULE

TAG	DESCRIPTION	AIRFLOW	E.S.P.	WEIGHT	ELECTRICAL		FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
					MOTOR POWER	V/P/H			MANUFACTURER	MODEL	
EF-1	UPBLAST DU180HFA EXHAUST FAN	2,550 CFM	1.45 in-wg	183 lb	2 hp	208/3/60	HS	GC	CAPTIVE-AIRE	DU180HFA	DIRECT DRIVE DU180HFA UPBLAST EXHAUST FAN FURNISHED WITH WEATHERPROOF DISCONNECT AND VENTED ROOF CURB
EF-2	DOWNBLAST RESTROOM EXHAUST FAN	150 CFM	0.60 in-wg	100 lb	0.18 hp	120/1/60	HS	GC	CAPTIVE-AIRE	DR12HFA	DIRECT DRIVE DOWNBLAST RESTROOM EXHAUST FAN FURNISHED WITH INTEGRAL DISCONNECT, SPEED CONTROL, BACKDRAFT DAMPER, AND CURB

### VIROGUARD SCHEDULE

TAG	COUNT	DESCRIPTION	DUCT CONNECTION SIZE	FAN	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN MANUFACTURER
VG-1	1	VIROGUARD HOOD EXHAUST FAN ROOFTOP CONTAINMENT SYSTEM	16" X 16"	CAPTIVE-AIRE DU180HFA	TDC	GC	ENVIRONMENTAL

### CONDENSING UNIT SCHEDULE

TAG	DESCRIPTION	NOMINAL CAPACITY	NUMBER OF		REFRIGERANT		WEIGHT	ELECTRICAL			FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
			COMPRESSORS	CIRCUITS	TYPE	CHARGE		MOCP	FLA	V/P/H			MANUFACTURER	MODEL	
CU-1	CONDENSING UNIT - WALK-IN COOLER		1	1	R-404A	10.4 lb	250 lb	15 A	9 A	208/1/60	WCS	GC	RUSSELL DOE	RFO060M45DAALNT	FURNISHED WITH WALK-IN COOLER
CU-2	REMOTE CONDENSER - LOW CAPACITY ICE MAKER		0	1	R-404A	11.46 lb	100 lb			120/1/60	KES	GC	HOSHIZAKI	URC-9F	FURNISHED WITH ICE MAKER
CU-3	REMOTE CONDENSER - SODA MACHINE ICE MAKER		0	1	R-404A	3.86 lb	100 lb			120/1/60	KES	GC	HOSHIZAKI	URC-5F	FURNISHED WITH ICE MAKER

### MAKEUP AIR UNIT SCHEDULE

TAG	DESCRIPTION	AIRFLOW	E.S.P.	HEATING			WEIGHT	ELECTRICAL		FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
				INPUT	OUTPUT	EAT		MOTOR POWER	V/P/H			MANUFACTURER	MODEL	
MAU-1	DIRECT-FIRED, EVAPORATIVE COOLING MAKEUP AIR UNIT	1,300 CFM	0.50 in-wg	78,010 Btu/h	71,769 Btu/h	21 °F	625 lb	1 hp	208/3/60	HS	GC	CAPTIVE-AIRE	A1-D.250-15D	12.5:1 MAX TURNDOWN. FURNISHED WITH DISCONNECT, ROOF CURB, SCREEN INTAKE, AND WASHABLE ALUMINUM FILTERS

### KITCHEN HOOD SCHEDULE

TAG	DESCRIPTION	MAX COOKING TEMP.	EXHAUST PLENUM							PERFORATED SUPPLY PLENUMS							BASIS FOR DESIGN		REMARKS						
			DUCT COLLARS			NO.	WIDTH	LENGTH	LENGTH	WIDTH	LENGTH	WIDTH	MAU PLENUM			AC PLENUM		NO. OF LIGHT FIXTURES		WEIGHT	FURNISHED BY	INSTALLED BY	MANUFACTURER	MODEL	
			AIRFLOW	E.S.P.	NO.								AIRFLOW	NO.	WIDTH	LENGTH	AIRFLOW								NO.
HD-1	TYPE I CANOPY HOOD WITH PERFORATED MAU AND AC SUPPLY PLENUMS	600 °F	2,550 CFM	0.96 in-wg	1	10"	24"	13' - 9"	4' - 3"	54"	19"	1,300 CFM	3	6"	2' - 4"	696 CFM	8	8"	8	1,029 lb	HS	GC	CAPTIVE-AIRE	S424 ND-2-ACPPS-F	MAT'L: 18 GA. TYPE 430 SS. FURNISHED WITH QUARTER END PANELS, VAPORPROOF INCANDESCENT LIGHT FIXTURES, 16" TALL HE SS FILTERS, INTEGRAL UTILITY CABINET, ANSUL SYSTEM, DUCT COLLAR TEMPERATURE SENSOR, PREWIRE PACKAGE, SPARE FIRE SYSTEM DRY CONTACT, AND 4-POLE 20A CONTACTOR

### ROOFTOP UNIT SCHEDULE

TAG	DESCRIPTION	NOMINAL CAPACITY	EER	AIRFLOW			NET COOLING CAPACITY				HEATING CAPACITY			NUMBER OF		REFRIGERANT	WEIGHT	ELECTRICAL			FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS		
				TOTAL	OA	E.S.P.	TOTAL	SENSIBLE	DB	WB	COND. EAT	INPUT	OUTPUT	EAT	COMPRESSORS			CIRCUITS	TYPE	MOCP			FLA	V/P/H		MANUFACTURER	MODEL
				4,000 CFM	500 CFM	1.0 in-wg	118,000 Btu/h	91,000 Btu/h	80 °F	67 °F	80 °F	250,000 Btu/h	205,000 Btu/h	65 °F	2			2	R-454B	1,445 lb			80 A	66 A		208/3/60	CMG
RTU-1	KITCHEN ROOFTOP UNIT	10 ton	11	4,000 CFM	500 CFM	1.0 in-wg	118,000 Btu/h	91,000 Btu/h	80 °F	67 °F	80 °F	250,000 Btu/h	205,000 Btu/h	65 °F	2	2	R-454B	1,445 lb	80 A	66 A	208/3/60	CMG	GC	CARRIER	48FEFN12	FURNISHED WITH COMP. ENTHALPY ECON., BAROMETRIC RELIEF, RET. SMOKE DETECTOR W/ REMOTE KEYED ANNUNCIATOR/RESET, M.O.D., MERV-8 FILTERS, CURB, HAIL GUARD, TOOLLESS HINGED ACCESS PANELS, DISCONNECT, HOT GAS REHEAT & UNIT-MOUNTED CONVENIENCE RECEPTACLE	
RTU-2	DINING ROOM ROOFTOP UNIT	10 ton	11	4,000 CFM	1,000 CFM	1.0 in-wg	118,000 Btu/h	91,000 Btu/h	80 °F	67 °F	80 °F	250,000 Btu/h	205,000 Btu/h	65 °F	2	2	R-454B	1,445 lb	80 A	66 A	208/3/60	CMG	GC	CARRIER	48FEFN12	FURNISHED WITH COMP. ENTHALPY ECON., BAROMETRIC RELIEF, RET. SMOKE DETECTOR W/ REMOTE KEYED ANNUNCIATOR/RESET, M.O.D., MERV-8 FILTERS, CURB, HAIL GUARD, TOOLLESS HINGED ACCESS PANELS, DISCONNECT, HOT GAS REHEAT & UNIT-MOUNTED CONVENIENCE RECEPTACLE	



796 Main Court  
St. Louis, MO 63105  
CERTIFICATE OF AUTHORITY NO. 147678



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#7180658**

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	1213 LBS

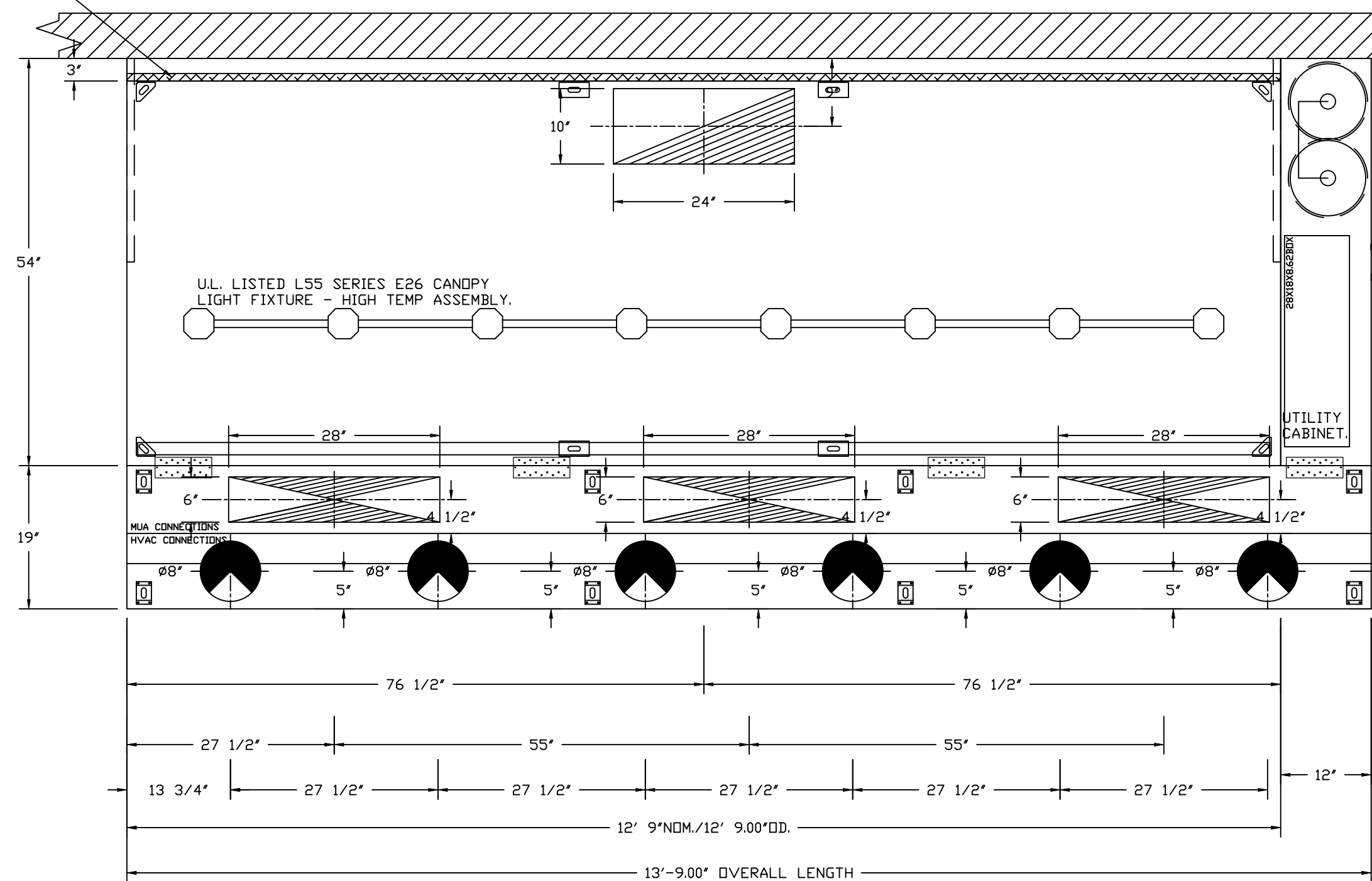
**HOOD OPTIONS**

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	RISER(S)				
						TYPE	WIDTH	LENG	DIA	CFM
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"	

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

**CLEARANCE TO COMBUSTIBLES**

HOODS #	SURFACE	*CLEARANCE
1	TOP	18'
	FRONT	0'
	BACK	0'
	LEFT	18'
	RIGHT	0'

- \*0' CLEARANCE TO COMBUSTIBLES CONFORMS TO UL710 STANDARD.  
- HOOD MOUNTED UTILITY CABINETS REQUIRE 36" SERVICE CLEARANCE.

**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.

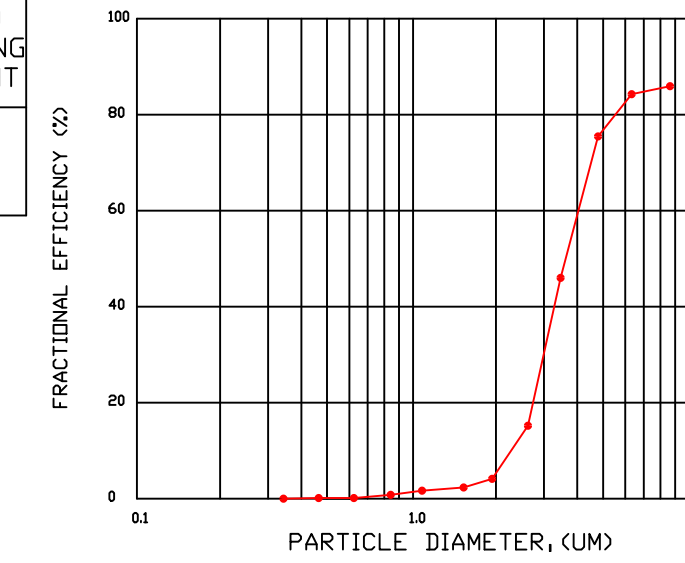
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

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

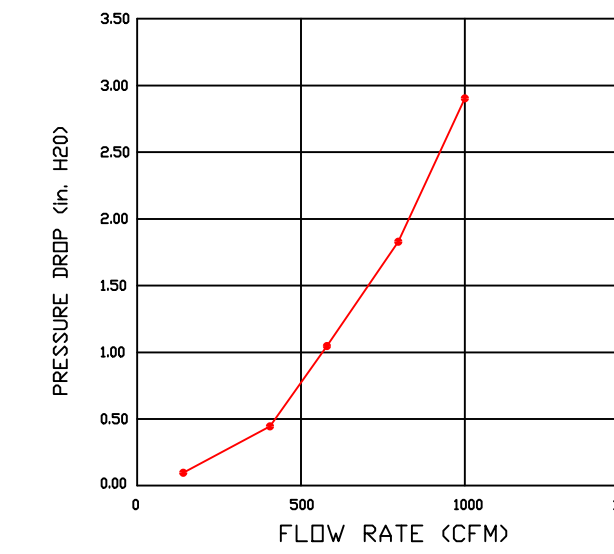
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

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

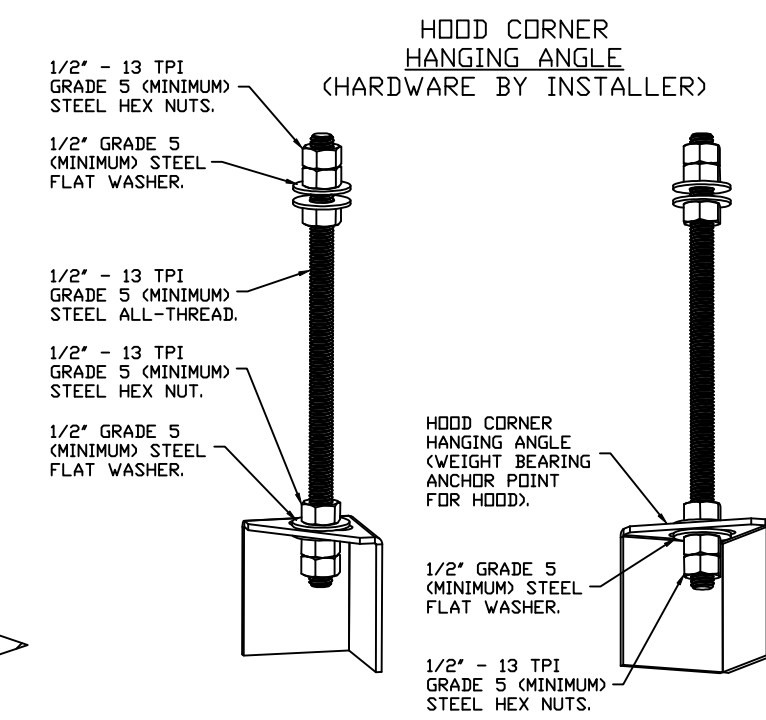


PRESSURE DROP VS. FLOW RATE



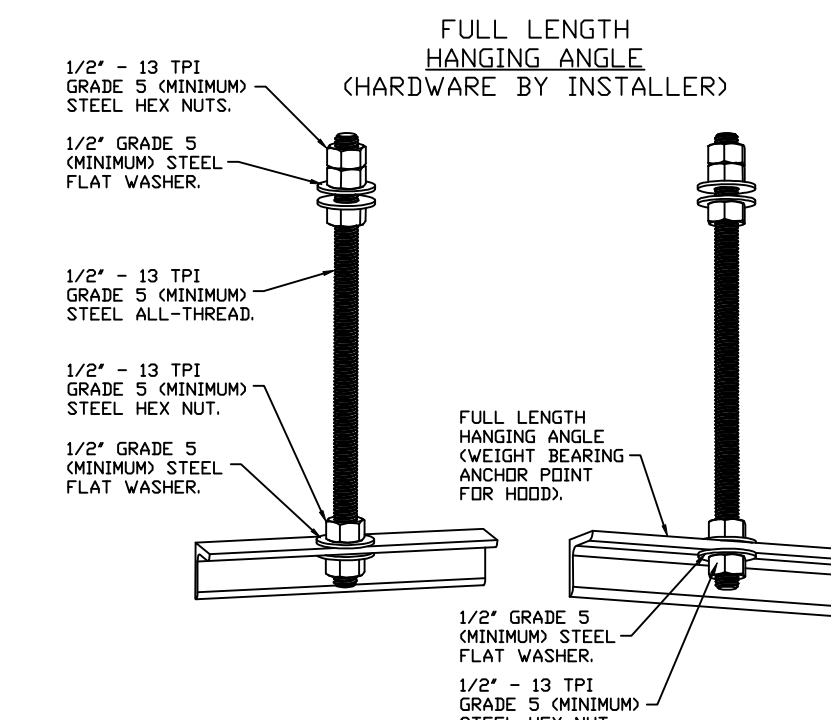
CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:

NFPA #96.  
NSF STANDARD #2.  
UL STANDARD #1046.  
INT. MECH. CODE (IMC).  
ULC-S649.



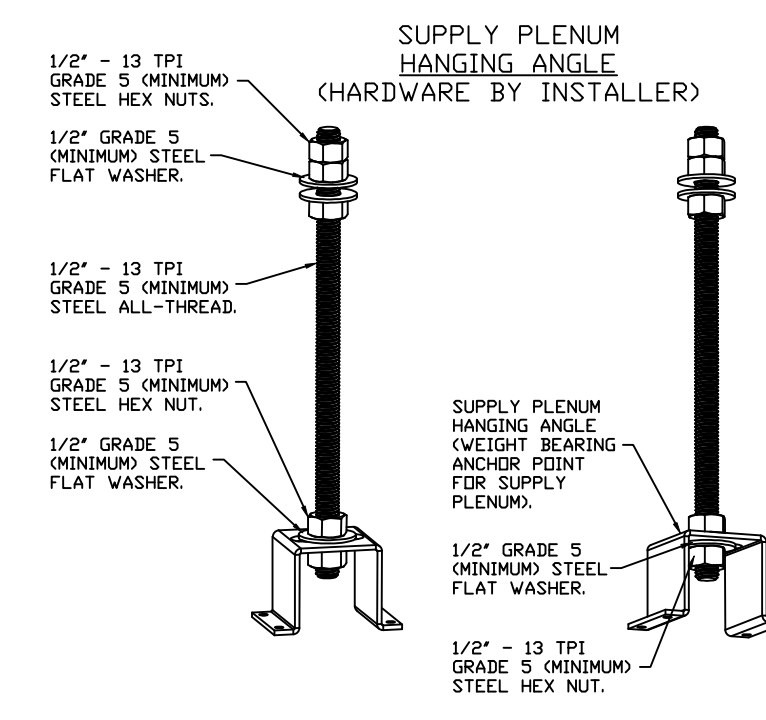
**ASSEMBLY INSTRUCTIONS**

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



**ASSEMBLY INSTRUCTIONS**

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**SHOP DRAWING REVIEW**

- NO EXCEPTIONS TAKEN
- MAKE CORRECTIONS NOTED
- REVISE AND RESUBMIT
- REJECTED

REVIEW IS FOR GENERAL COMPLIANCE WITH CONTRACT DOCUMENTS AND SPECIFICATIONS. NO RESPONSIBILITY IS ASSUMED BY THIS ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTNESS OF QUANTITIES, DIMENSIONS AND DETAILS

**CASE**  
Engineering Inc.

796 Menus Court  
St. Louis, MO 63026

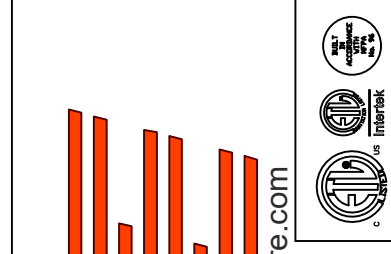
T 636.349.1600  
F 636.349.1730

BY: JW

DATE: 12-04-2024

**REVISIONS**

DESCRIPTION	DATE



**CAPTIVEAIRE**  
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CHIPOTLE HERMISTON #5316  
1875 North 1st Street,  
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DATE: 11/20/2024

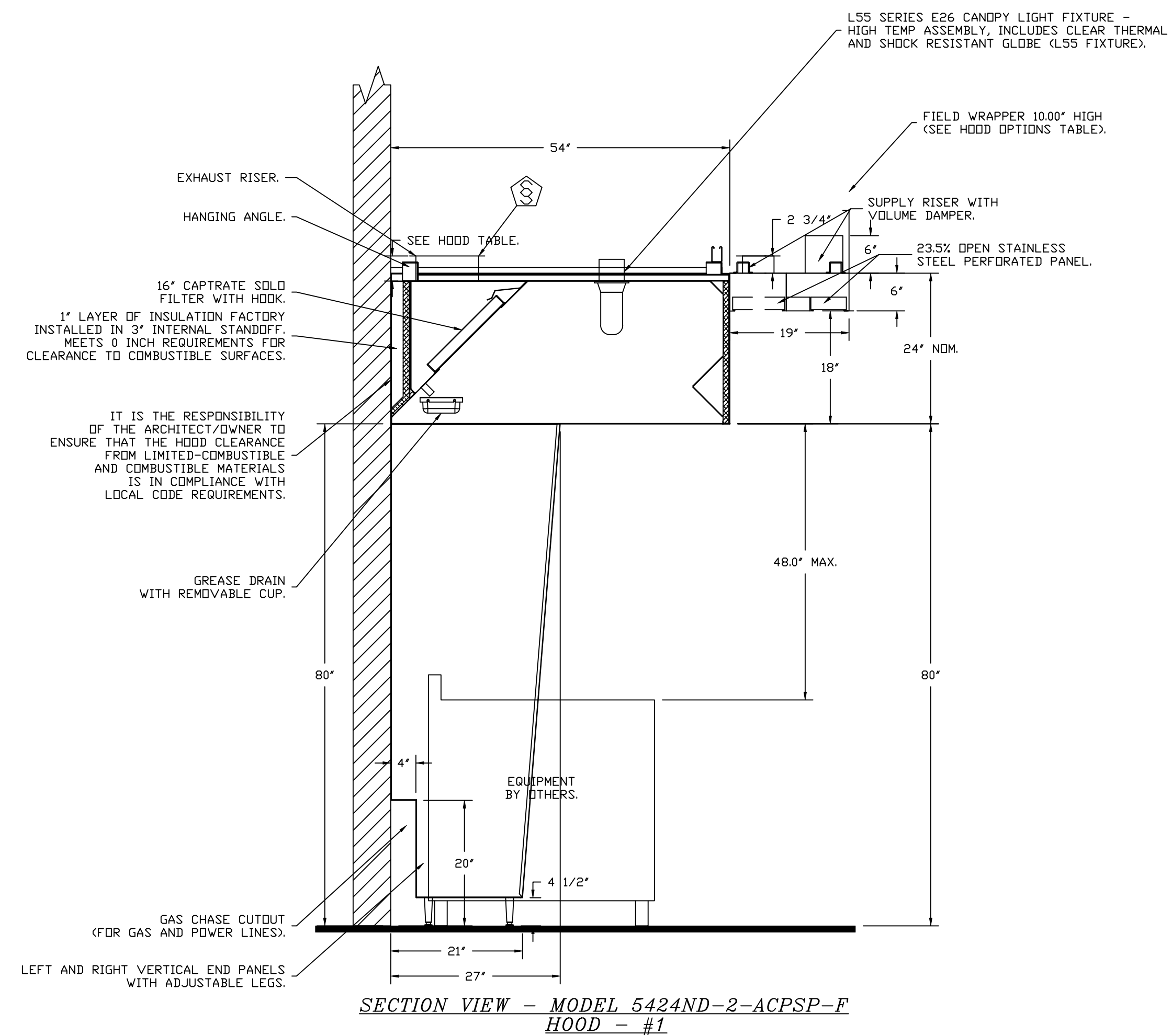
DWG.#:  
7180658

DRAWN BY: JMB-40

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

MASTER DRAWING

SHEET NO.



REVISIONS	
DESCRIPTION	DATE

www.captiveaire.com  
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1875 North 1st Street,  
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**SCALE:**  
3/4" = 1'-0"

**MASTER DRAWING**

**SHEET NO.**  
2

**FIRE SYSTEM INFORMATION - JOB#7180658**

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION	
						SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0/4.0	40	32	FIRE CABINET RIGHT	RIGHT, HOOD 1

**GAS VALVE(S)**

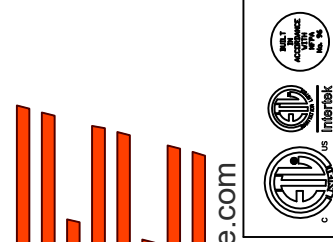
FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		SC ELECTRICAL	1.500	CAPTIVEAIR SYSTEMS

**FIRE SYSTEM PARTS LIST KEY**

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
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-DT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. ND, CLOSE ON TEMP RISE AT 360°F. (A0034310).	1	0
		0 - 0 - 32-00002 QUIK SEAL - 1/2" (UL).	1	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.	7	0
		0 - 0 - 9097200PC PRO PRESS PC611 1/2 PRESS TEE LD.	7	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.	3	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.	8	0
		16 - 16 - DL-F NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE).	8	0
		26 - 26 - QSA-3/8 QUIK SEAL - 3/8" (UL).	8	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:



CHIPOTLE HERMISTON #5316  
1875 North 1st Street,  
Hermiston, OR, 97838

**DATE:** 11/20/2024

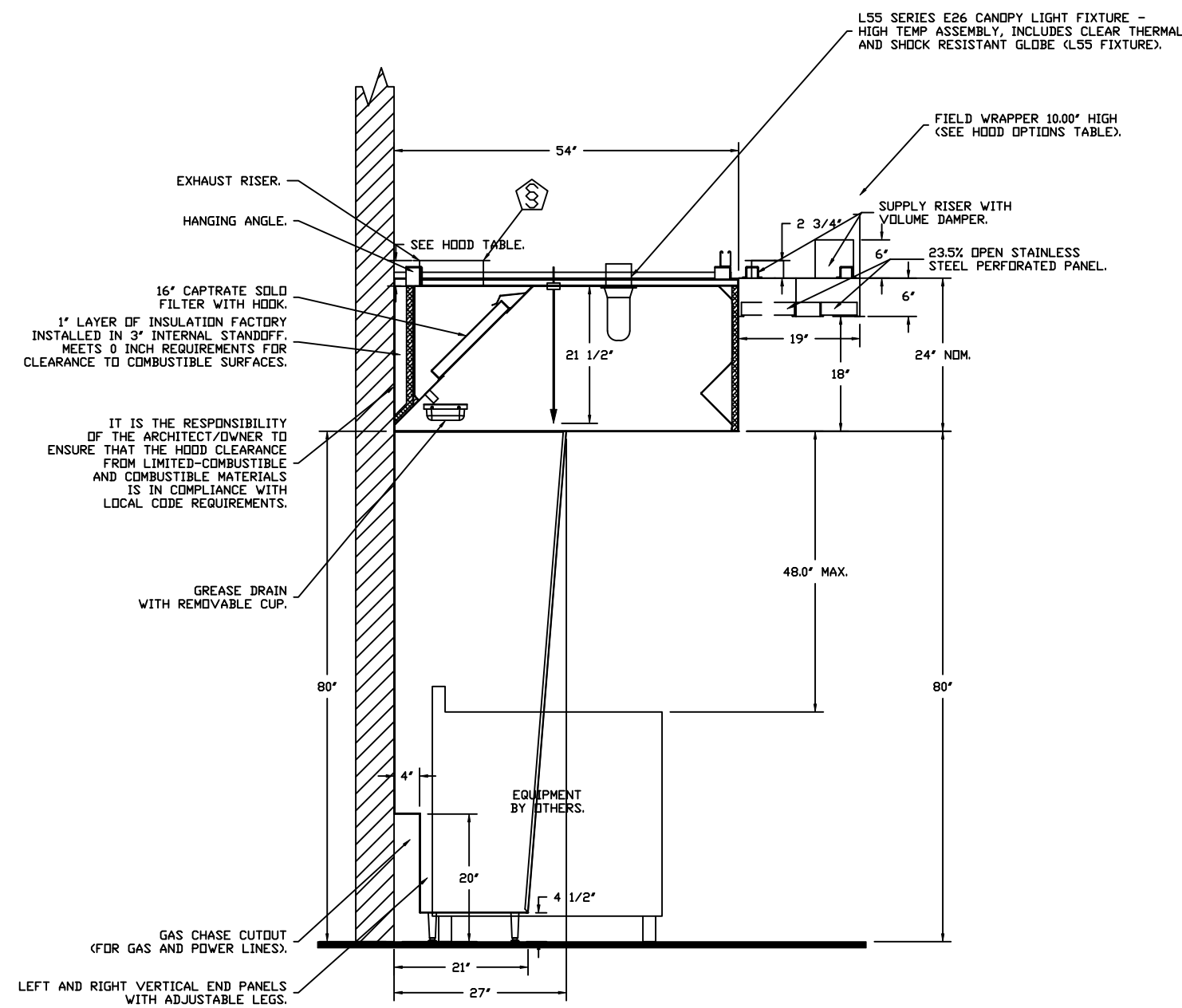
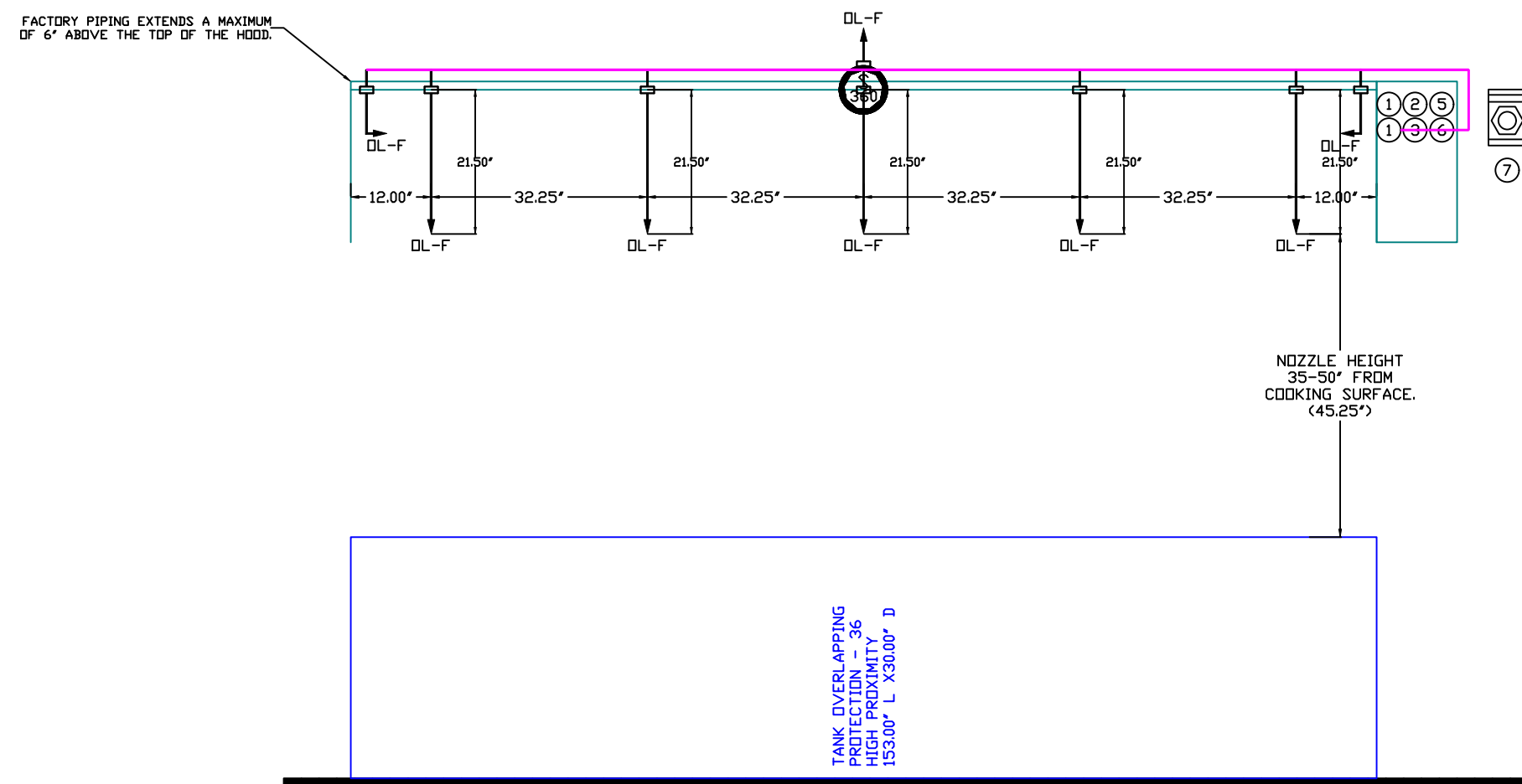
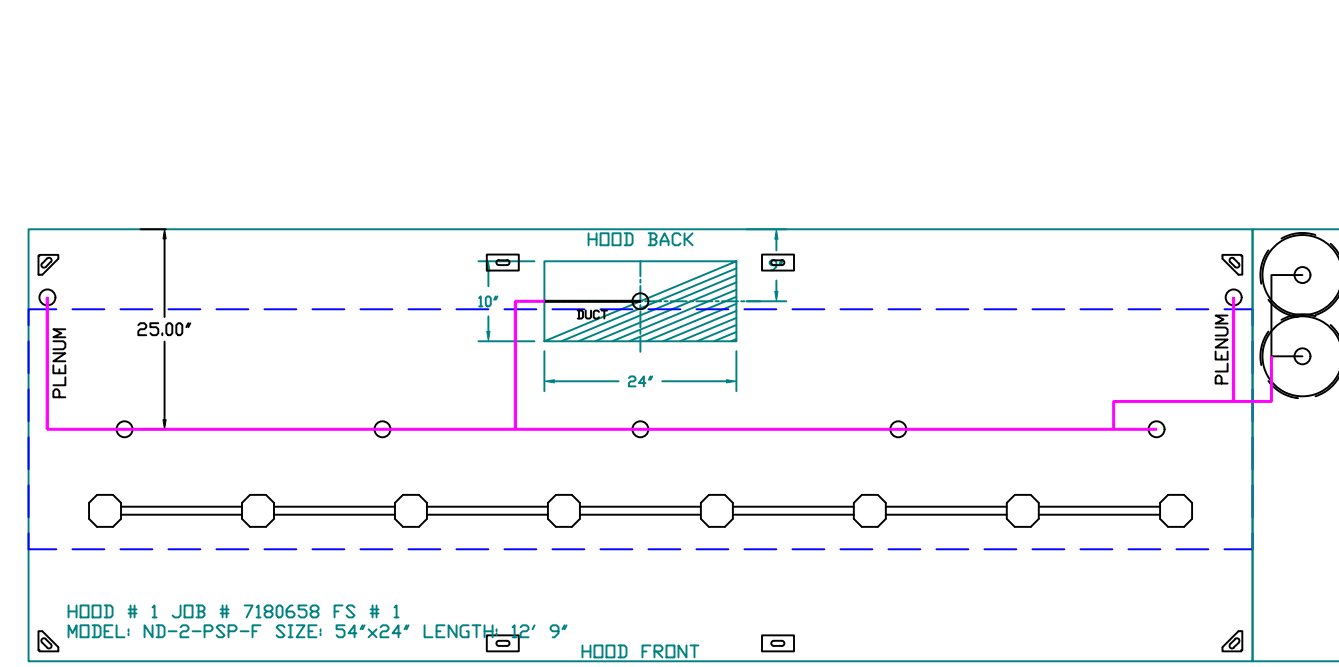
**DWG.#:**  
7180658

**DRAWN BY:** JMB-40

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

**MASTER DRAWING**

**SHEET NO.**  
3



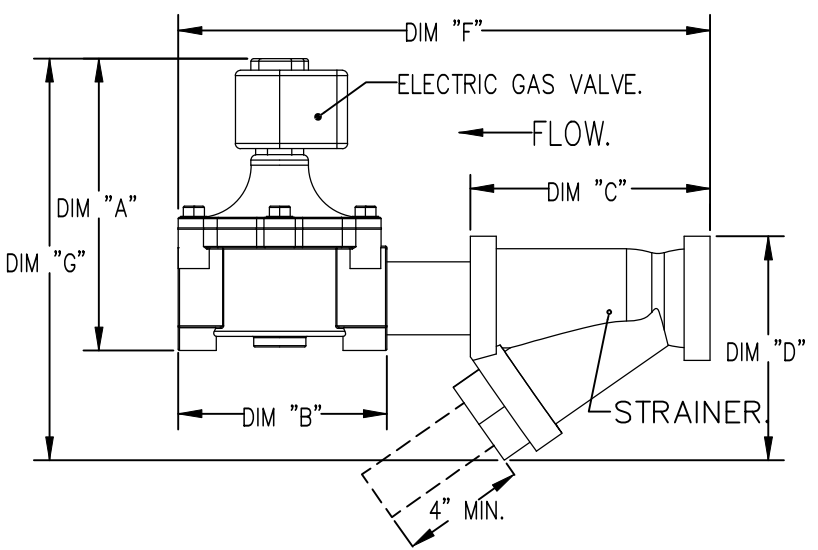
SECTION VIEW - MODEL 5424ND-2-ACPSP-F  
HOOD - #1

GAS VALVES AND STRAINERS																
GAS VALVE SIZING				GAS VALVE DIMENSIONS				INSTALLATION								
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	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"	MOUNTING ORIENTATION	GAS VALVE PART NUMBER	STRAINER PART NUMBER	GAS VALVE/STRAINER KIT	
ELECTRICAL	1-1/2"	24 VDC	0 PSI (0 IN.W.C.)	5 PSI (138 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	8214275-24VDC	4417K67	(50)EVC1-1/2-24

**CAUTION: GAS VALVES ONLY:**  
 3/4"-2" 120VAC GAS VALVES CAN BE MOUNTED WITH THE SOLENOID IN ANY POSITION ABOVE HORIZONTAL.  
 2 1/2"-3" 120VAC GAS VALVES MUST BE MOUNTED WITH THE SOLENOID VERTICAL AND UPRIGHT.  
 240V GAS VALVES MUST BE MOUNTED WITH THE SOLENOID VERTICAL AND UPRIGHT.

**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 RATING SPECIFIC GRAVITY OF NATURAL GAS = 0.64, SPECIFIC GRAVITY OF LP = 1.52.

**CALCULATIONS:**  
 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>3</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>3</sup>



- NOTES
- FIELD PIPE DROPS AS SHOWN
  - PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
  - 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 UL 300 REQUIREMENTS.
  - DL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

JOB #: 7180658  
 JOB NAME: CHIPOTLE HERMISTON #5316.

SYSTEM SIZE: TANK-SP-2 DESIGN FP: 32. MAXIMUM FP: 40.  
 HOOD # 1 12' 9.00" LONG X 54" WIDE X 24" HIGH.  
 RISER # 1 SIZE: 10" X 24".  
 HOOD # 1 METAL BLDW-OFF CAPS INCLUDED.

- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESAT 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.

AGENT DISTRIBUTION PIPING LIMITATIONS	
PIPE SECTION	MAX PIPE LENGTH (FT)
MAX SUPPLY LINE TO FIRST OVERLAPPING NOZZLE	42
OVERLAPPING NOZZLE APPLIANCE BRANCH	10
DEDICATED NOZZLE APPLIANCE BRANCH	10

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.

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 EXTINGUISHER(S), ON-SITE RE-PIPING DUE TO EQUIPMENT LAYOUT CHANGES.

**REVISIONS**

DESCRIPTION	DATE:

**CAPTIVE**

Highwoods Group  
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 4641 Paragon Park Rd., Raleigh, NC, 27616 PHONE: (919) 875 - 0420 FAX: 9198750577 EMAIL: esg40@captivefire.com

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

MASTER DRAWING

SHEET NO.  
 4

**EXHAUST FAN INFORMATION – JOB#7180658**

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	DU180HFA	CAPTIVEAIRE	2550	1.450	1227	TEFC, PREMIUM	2.000	1.2790	3	208	7.3	589 FPM	199	16.8
2	EF-2	1	DR12HFA	CAPTIVEAIRE	150	0.600	1293	TEAD-ECM	0.250	0.0940	1	115	2.9		50	6.2

**MUA FAN INFORMATION – JOB#7180658**

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	EVAP FLOW RATE (Gal/Hr)	EVAP COOLER ENTERING DB TEMP	EVAP COOLER ENTERING WB TEMP	EVAP COOLER LEAVING DB TEMP	EVAP COOLER LEAVING WB TEMP	WEIGHT (LBS)	SONES
3	MAU-1	1	A1-D.250-15D	15MF-1-MDD	A1-D.250	1000	1300	0.500	1601	DDP, PREMIUM	1.000	0.6140	3	208	3.1	3.9A	15A	2.5	96.0°F	66.0°F	75.0°F	66.0°F	732	12.9

**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	85959	79082	58°F	7 IN. W.C. - 14 IN. W.C.	NATURAL	92

FAN #1 DU180HFA – EXHAUST FAN (EF-1)

**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	1 12-BDD DAMPER
3	MAU-1	1	ECM WIRING PACKAGE – MANUAL OR 0-10VDC REFERENCE SPEED CONTROL –RTC- (TELCD MOTOR), CCW ROTATION
		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	IBT/MUA EVAP INTERLOCK
		1	FREEZE PROTECTION DRAIN KIT FOR IBT/MUA WITH EVAPORATIVE COOLERS
		1	SEPARATE 120V WIRING PACKAGE (REQUIRED AND USED ONLY FOR DCV OR PREWIRE WITH VFD) – THREE PHASE ONLY
1	2 YEAR PARTS WARRANTY		
1	EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET		

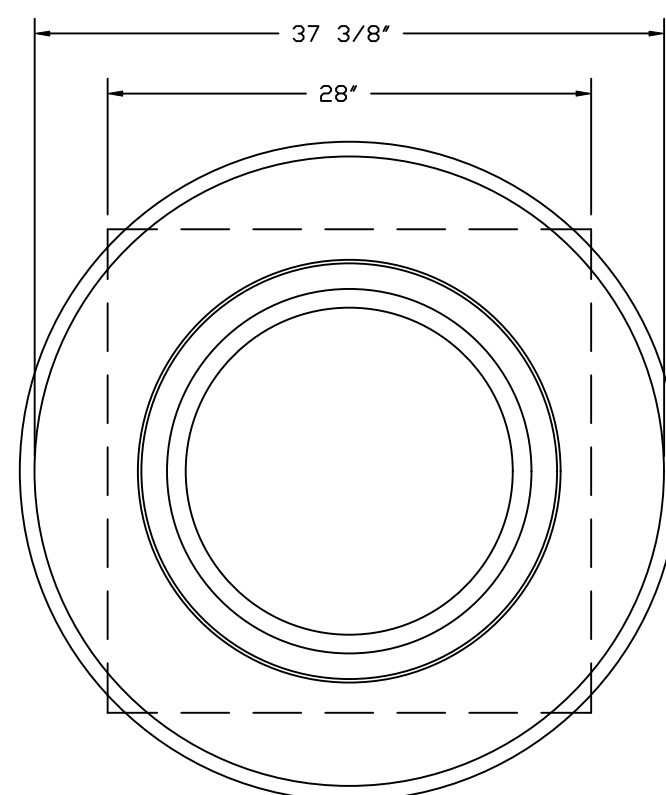
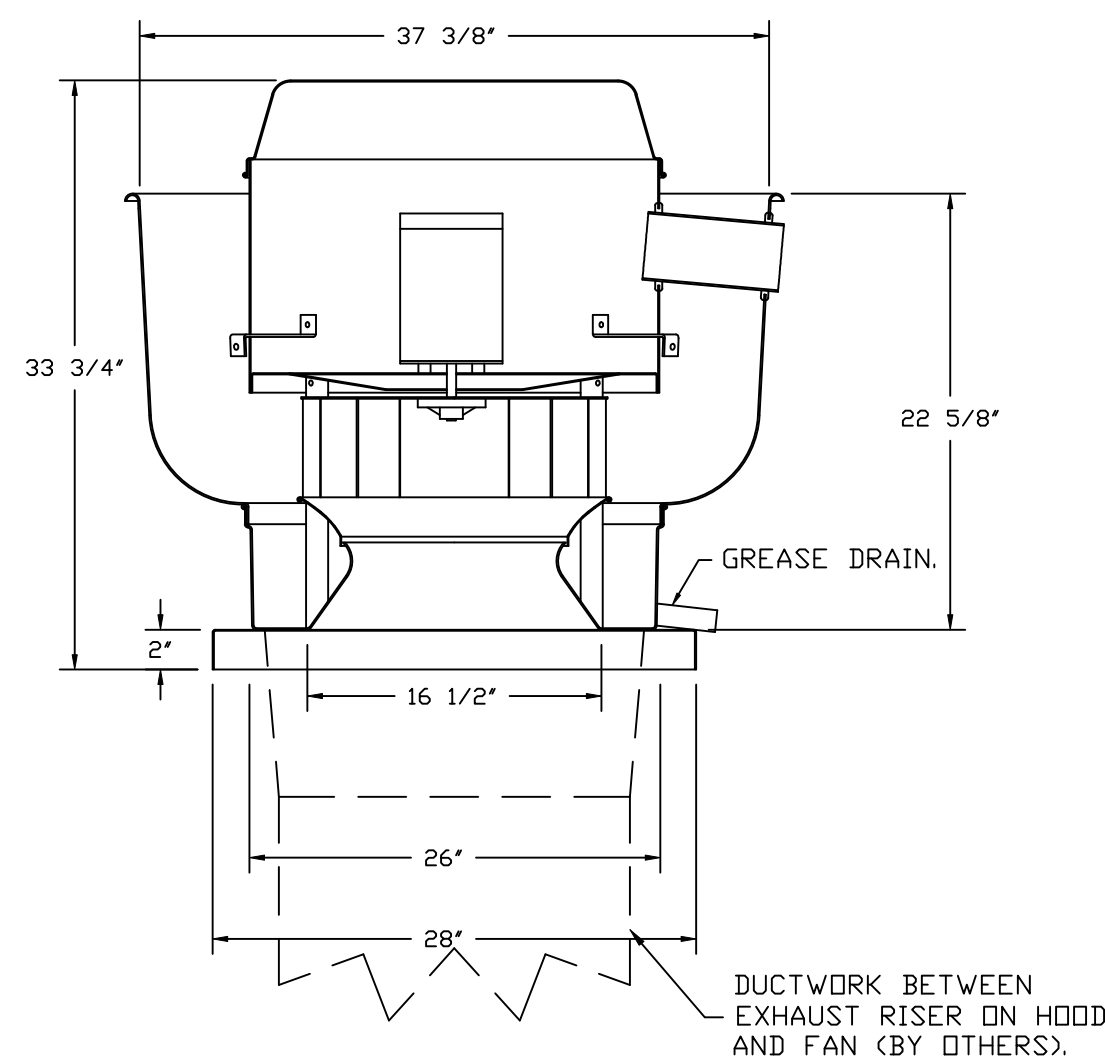
**FAN ACCESSORIES**

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	39 LBS	CURB	26.500"W X 26.500"L X 20.000"H VENTED.
2	# 2	EF-2	31 LBS	CURB	17.500"W X 17.500"L X 26.000"H.
3	# 3		75 LBS	CURB	21.000"W X 71.000"L X 20.000"H INSULATED.
	# 3			RAIL	4.000"W X 4.000"L X 36.000"H.

HMI SCHEDULE				
UNIT NUMBER	HMI #	HMI LOCATION	TEMP AVERAGING	MODBUS ADDRESS
FAN #3	HMI #1 - UNIT	IN UNIT	NOT AVERAGED	55



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**

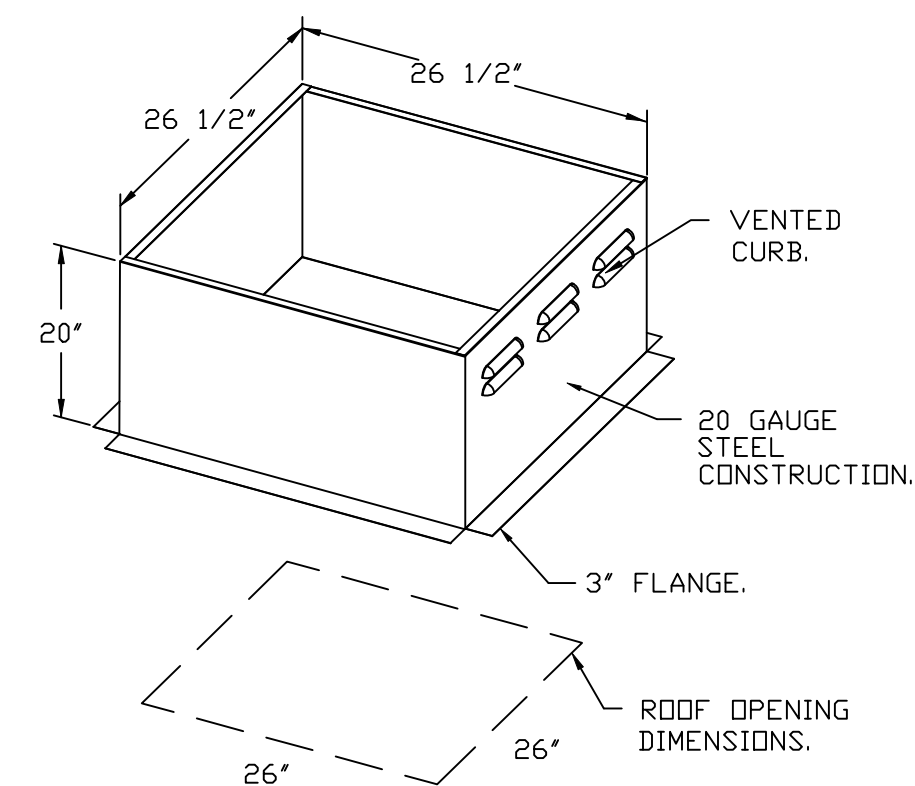
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETEIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

**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 BDX.
- REMOVE HINGE KIT LABEL FROM THE FAN BASE.
- 2 YEAR PARTS WARRANTY.



**REVISIONS**

DESCRIPTION	DATE

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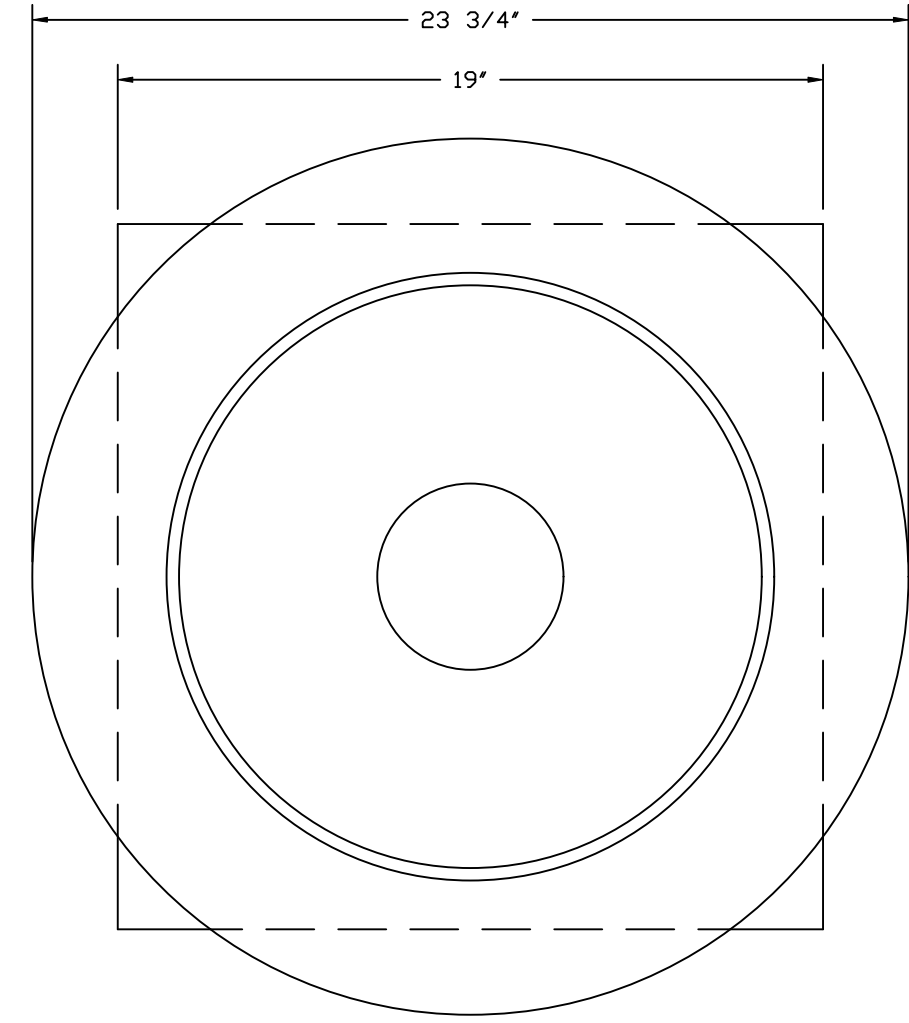
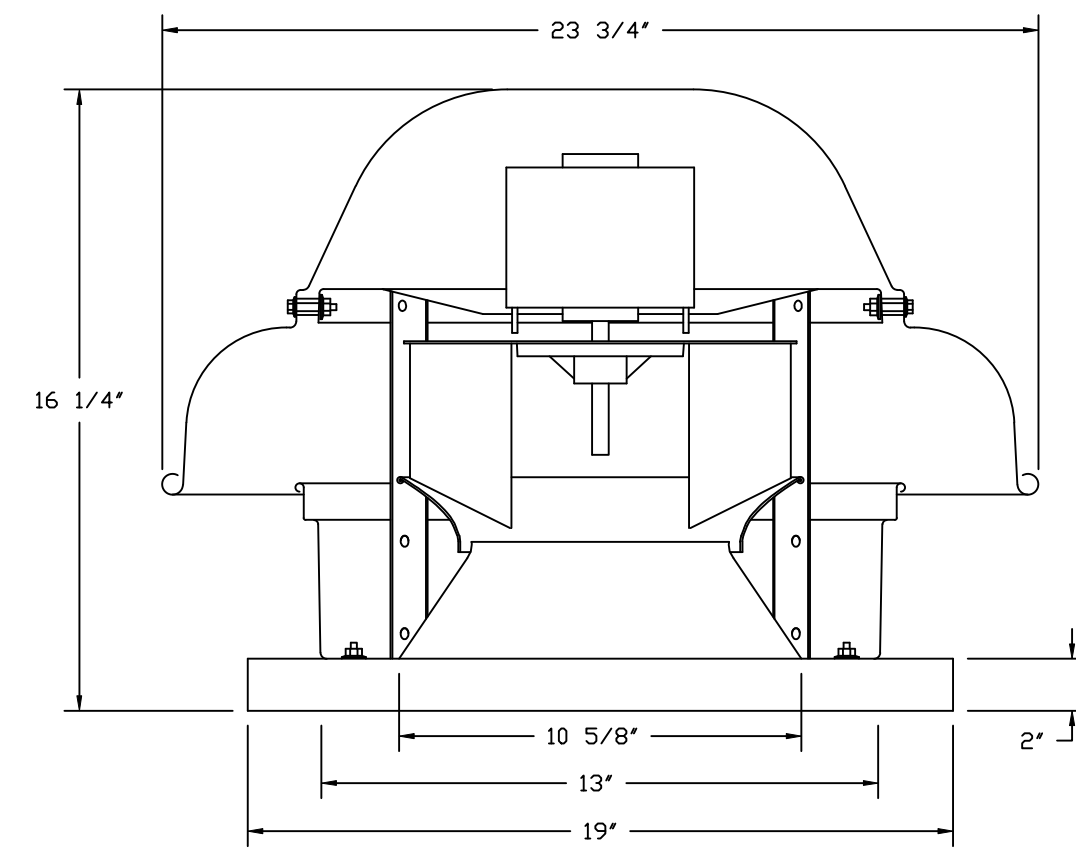
Highwoods Group  
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CHIPOTLE HERMISTON #5316  
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SCALE: 3/4" = 1'-0"  
MASTER DRAWING

SHEET NO. 5

FAN #2\_DR12HFA - EXHAUST FAN (EF-2)



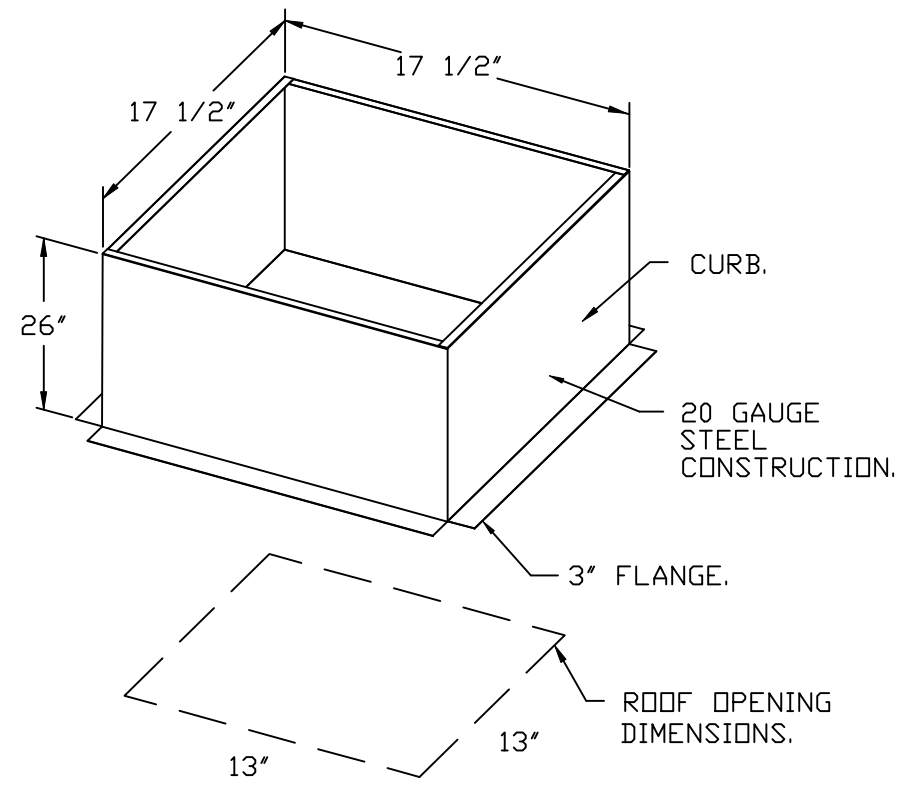
TOP VIEW

**FEATURES:**

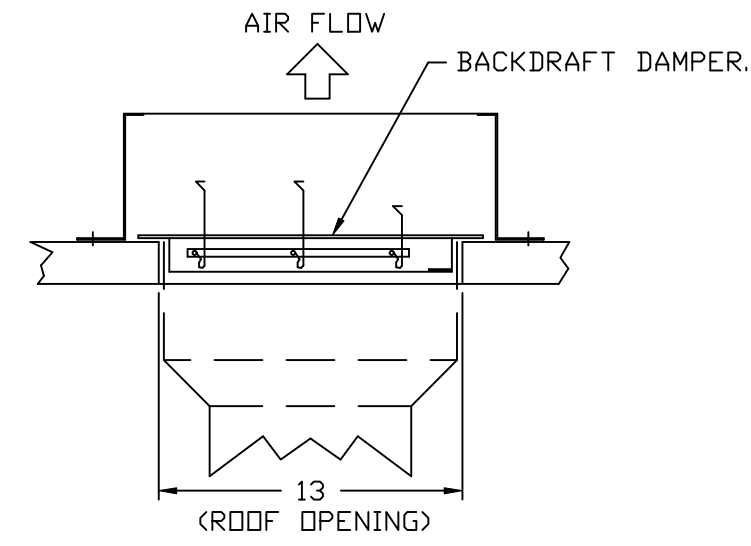
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- UL705.
- SAFETY DISCONNECT.
- STANDARD BIRD SCREEN.
- SPEED CONTROL.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).

**OPTIONS:**

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

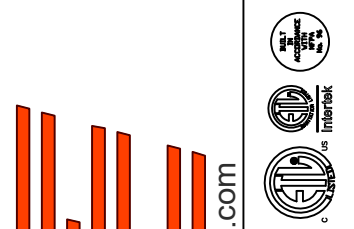


**BACKDRAFT DAMPER INSTALLATION**



**REVISIONS**

DESCRIPTION	DATE:



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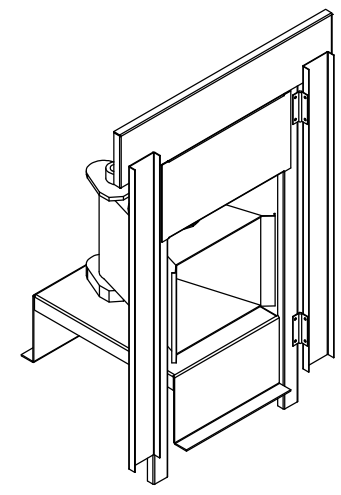
**MASTER DRAWING**

**SHEET NO.**

1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 15" MIXED FLOW DIRECT DRIVE FAN.
2. EVAP COOLER LPB COLBEK - W/INTAKE HOOD W/EZ FILTERS.
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
4. DOWN DISCHARGE CONSTRUCTION FOR SIZE 1 DIRECT DRIVE AHUS.
5. GAS PRESSURE GAUGE, 0-250, 2" DIAMETER, 1/4" THREAD SIZE.
6. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC, 2" DIAMETER, 1/4" THREAD SIZE.
7. SHIP LODES GAS STRAINERS TO BE INSTALLED UPSTREAM OF UNIT CONNECTION, 3/4" CONNECTION.
8. NOTORIZED 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, TRIPPOD ACTUATOR INCLUDED.
9. LAYER CONTROL FOR 1BT EVAP.
10. FREEZE PROTECTION BRAIN CONTROL KIT FOR EVAPORATIVE COOLERS. INCLUDES 3-WAY WATER SOLENOID VALVE, 83165064 (SHIPPED LODES), PRESSURE SWITCH INSTALLED UPSTREAM OF 2WAY SOLENOID IN UNIT, BRASS TEES AND 2 NPT HALF INCH NIPPLES. FIELD WIRING REQUIRED BY OTHERS FOR 3-WAY VALVE, FOR BOTH COLBEK AND STANDARD V-SHANK TYPE CONFIGURATIONS.
11. 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 MAIN SWITCH.
12. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER/EVAP SECTION).
13. EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET.
14. 2 YEAR PARTS WARRANTY.

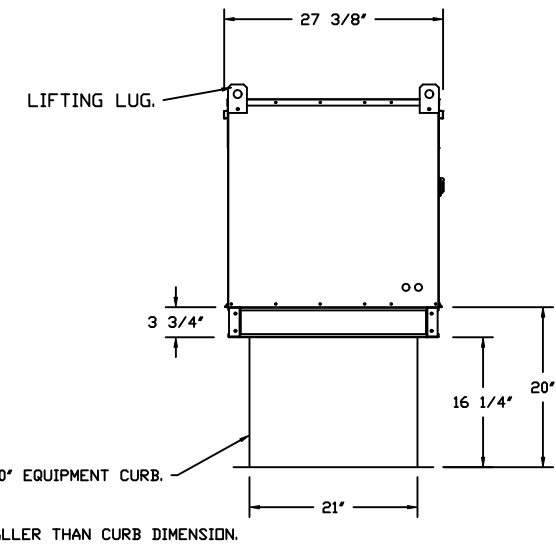
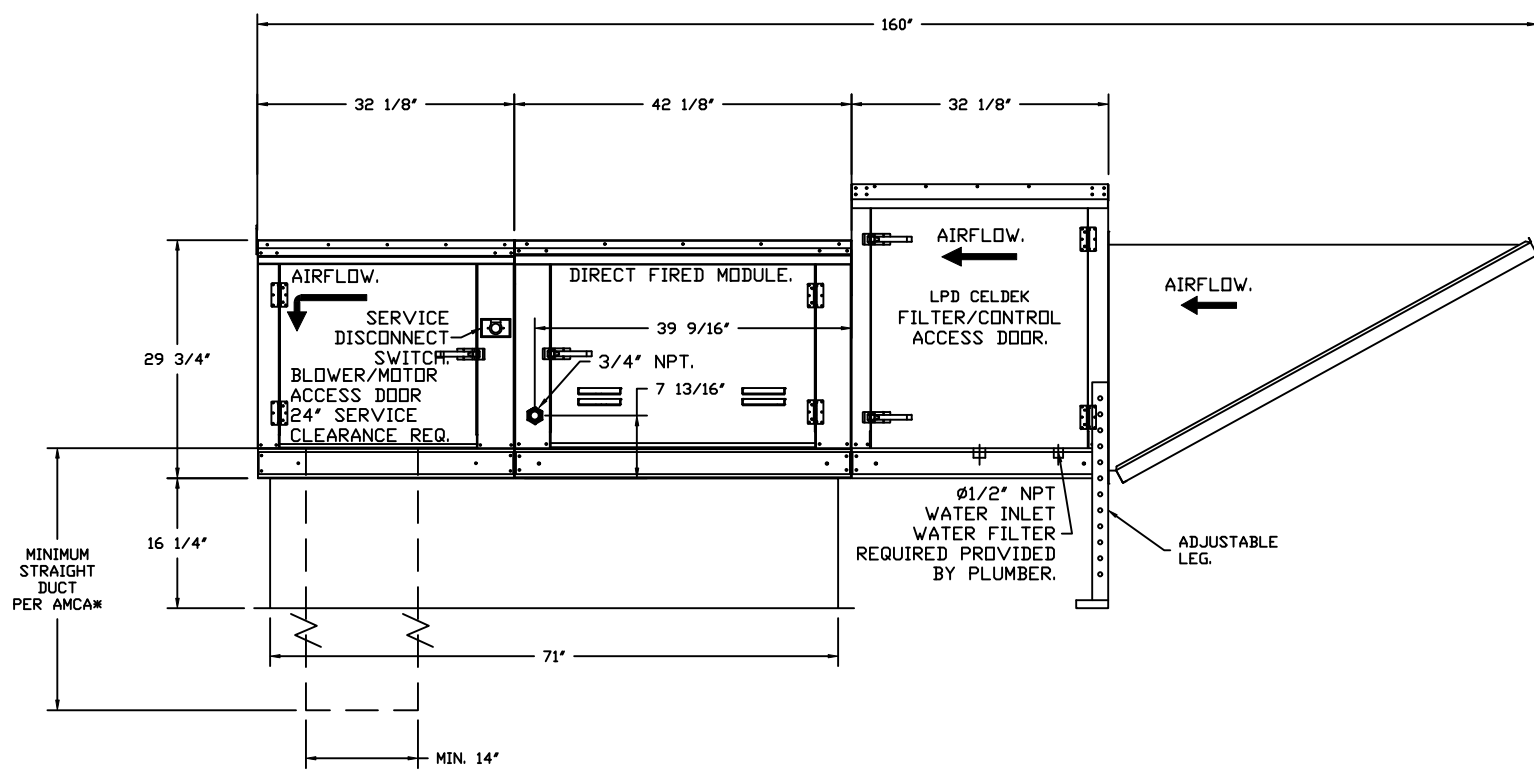
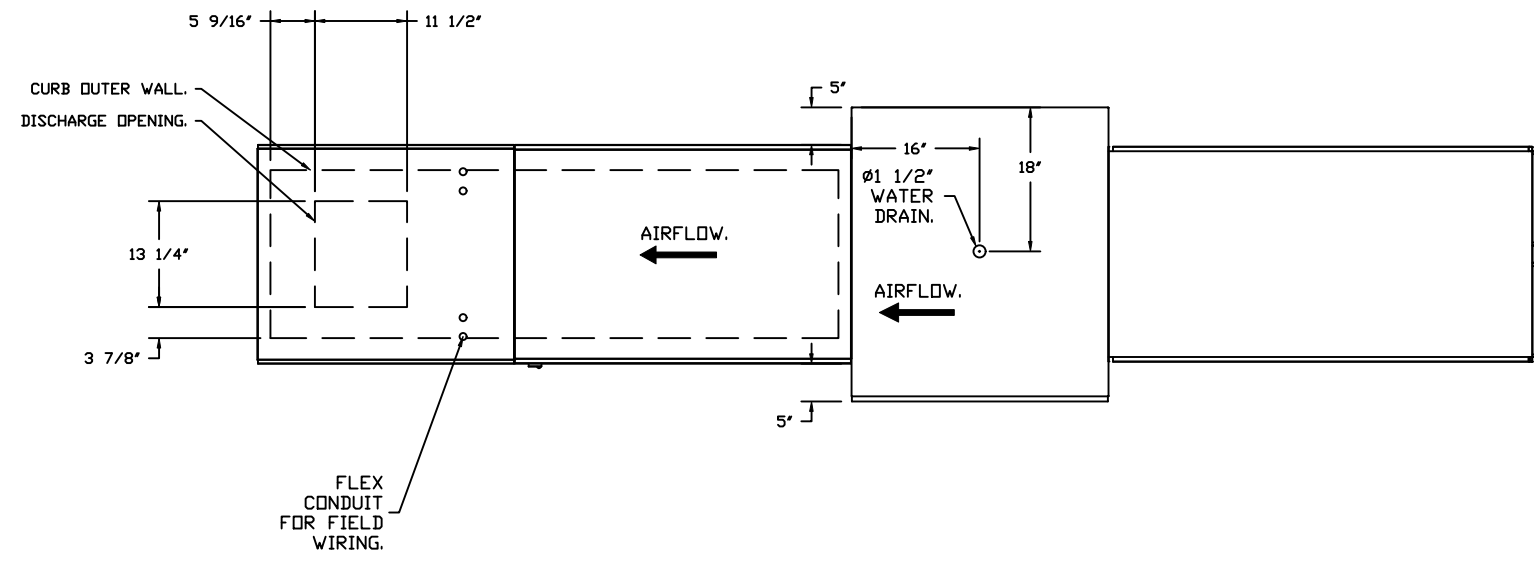
NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS DETAILED IN ANCA PUBLICATION 251. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE 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 = 17°F. TEMP. RISE = 58°F.  
 BTUS CALCULATED OFF ACTUAL AIR DENSITY.  
 OUTPUT BTUH AT ALTITUDE OF 0.0 FT. = 80253.  
 INPUT BTUS AT ALTITUDE OF 0.0 FT. = 87557.  
 OUTPUT BTUH AT ALTITUDE OF 509 FT. = 79656.  
 INPUT BTUS AT ALTITUDE OF 509 FT. = 85959.



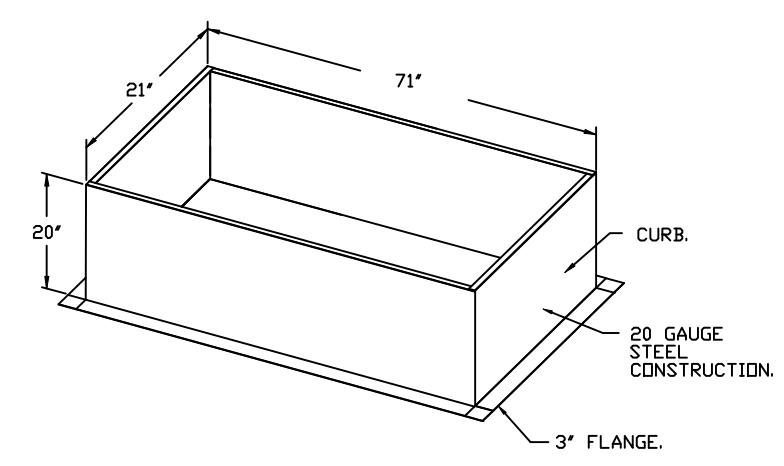
DIRECT FIRED (DF) PROFILE PLATE ASSEMBLY

**DIRECT FIRED PROFILE PLATE SPECIFICATIONS:**  
**DESCRIPTION:**  
 DIRECT FIRED BURNERS SHALL HAVE PATENTED (US PATENT NO. US6695933B2), 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 0.5PPM OF NITROGEN DIOXIDE (NO2). DIRECT FIRED UNITS SHALL BE CONFIGURED WITH THE BLOWER HEATED 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 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 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 TROCKED, PERMANENTLY MOUNTED SPRING HINGES.  
 -SPRING HINGES SHALL BE MADE FROM PLATED STEEL.



ROOF OPENING 2" SMALLER THAN CURB DIMENSION.

OPTIONS:  
 - FULL BOTTOM CORNERS.



REVISIONS	
DESCRIPTION	DATE:

**CAPTIVE**

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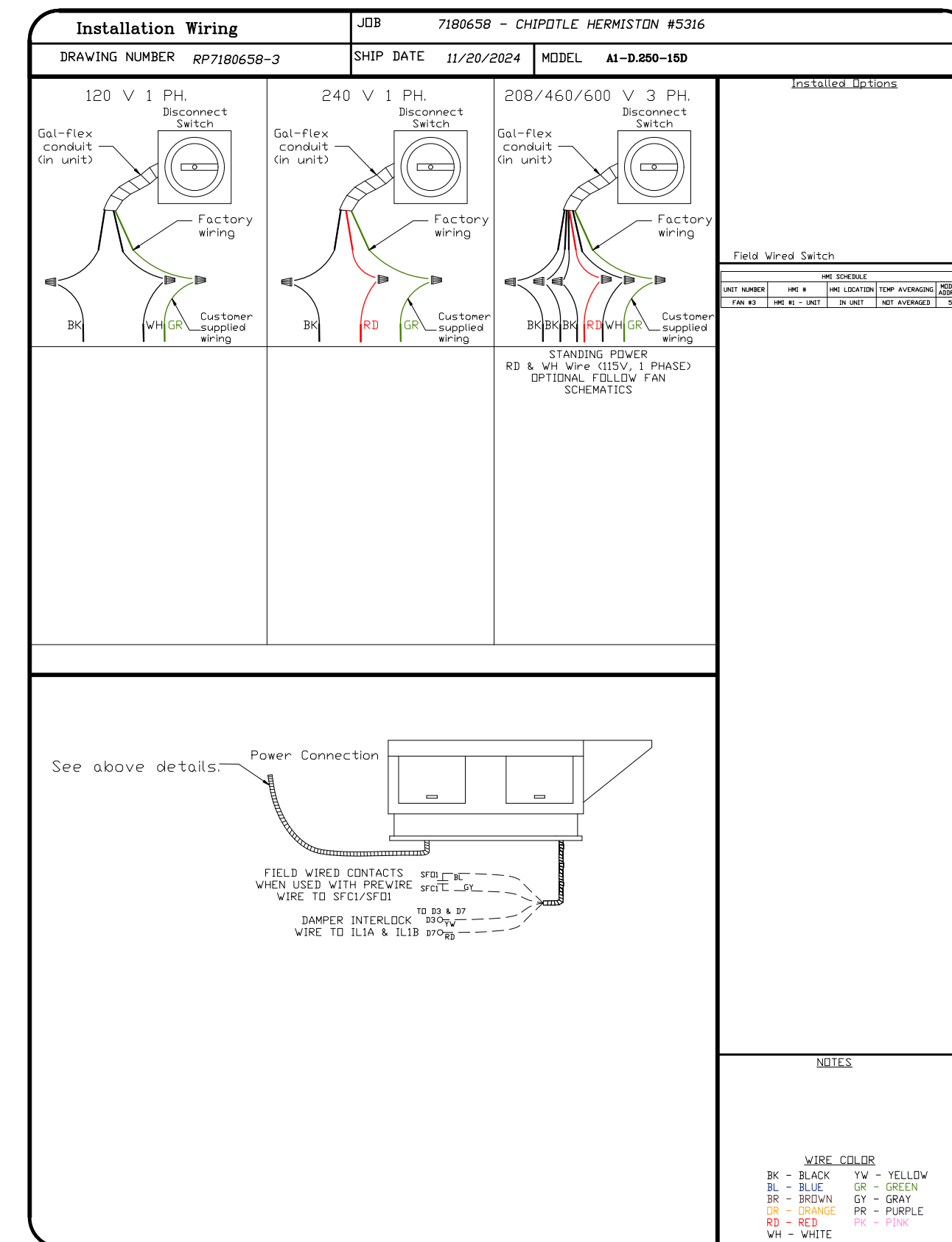
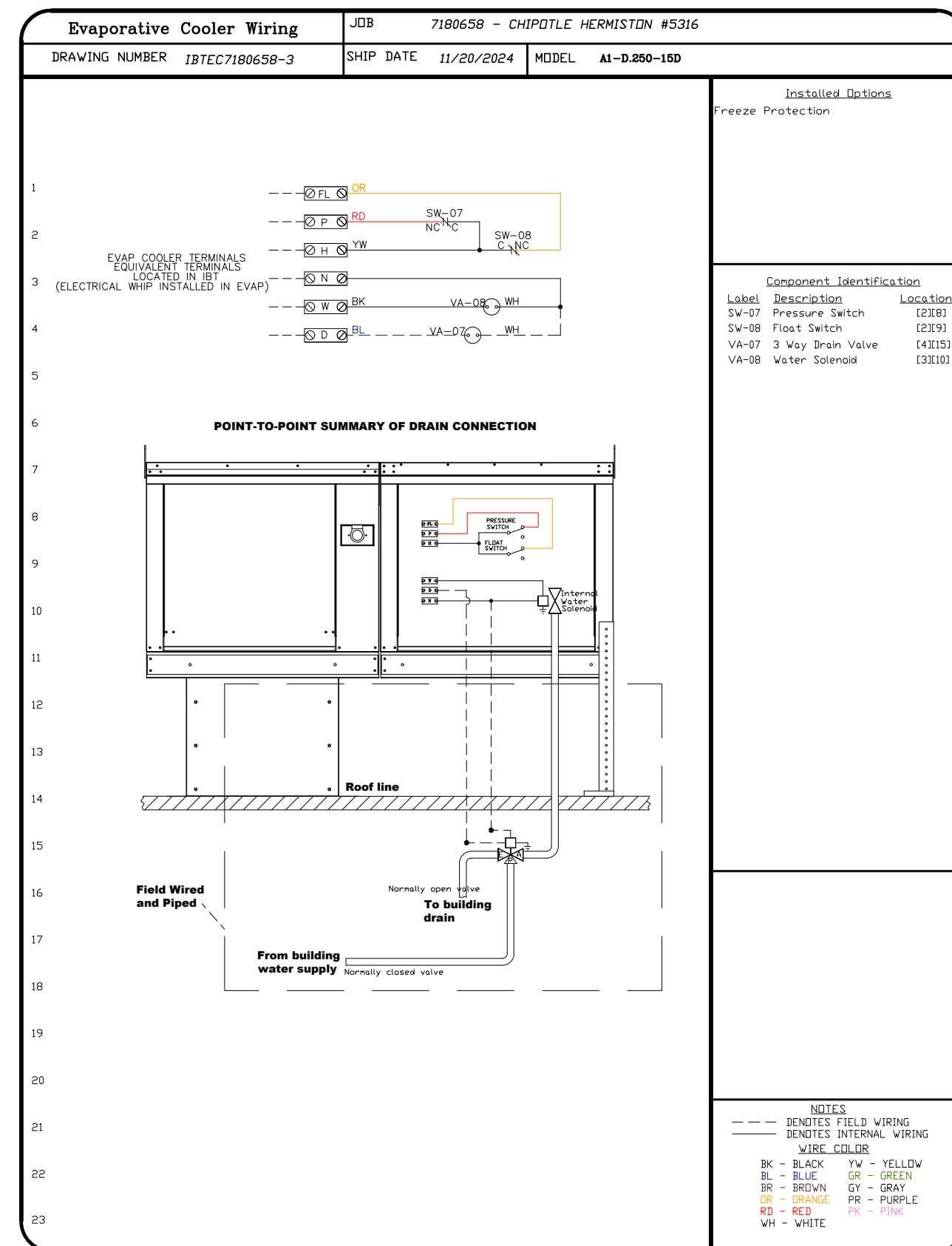
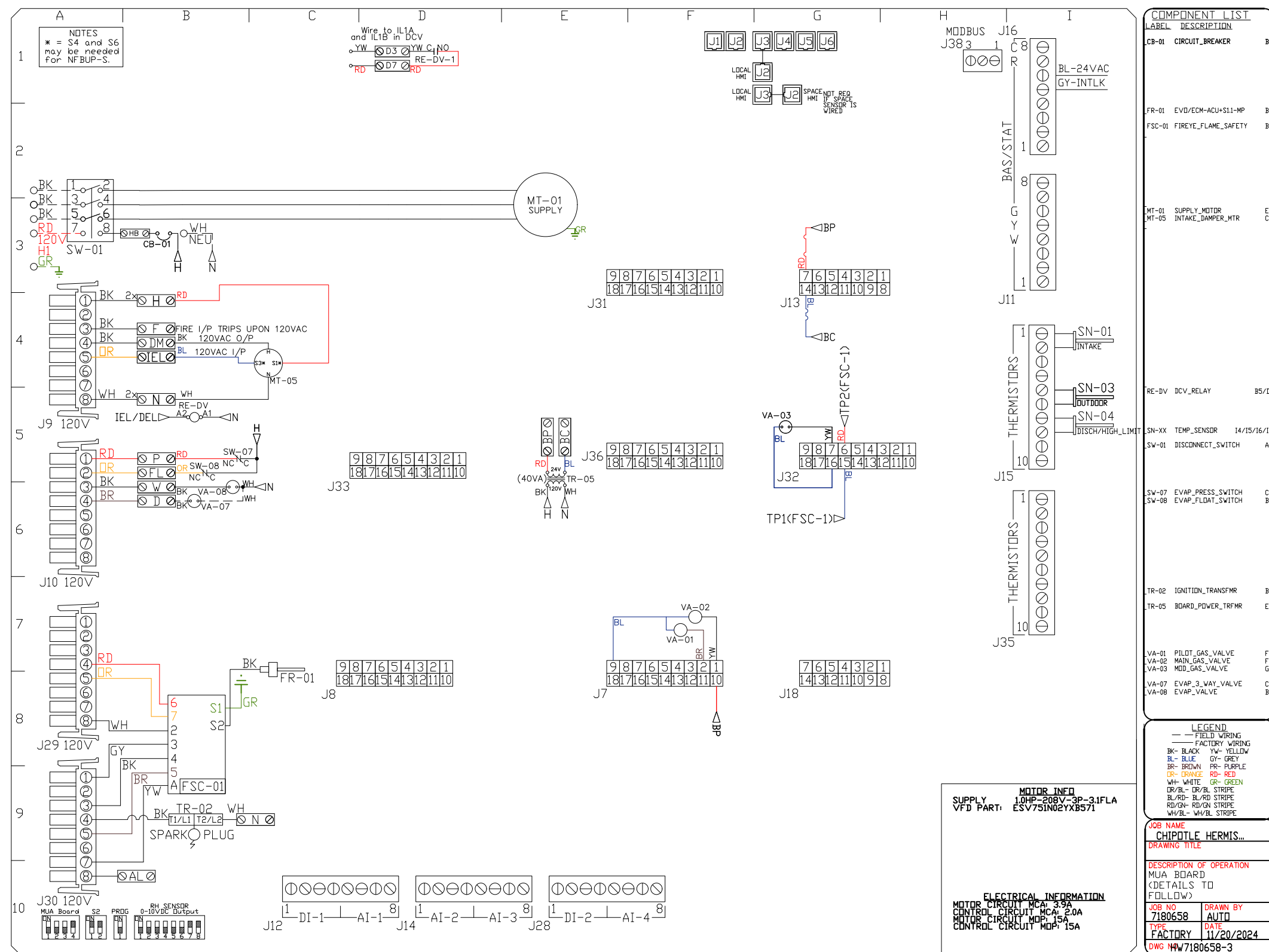
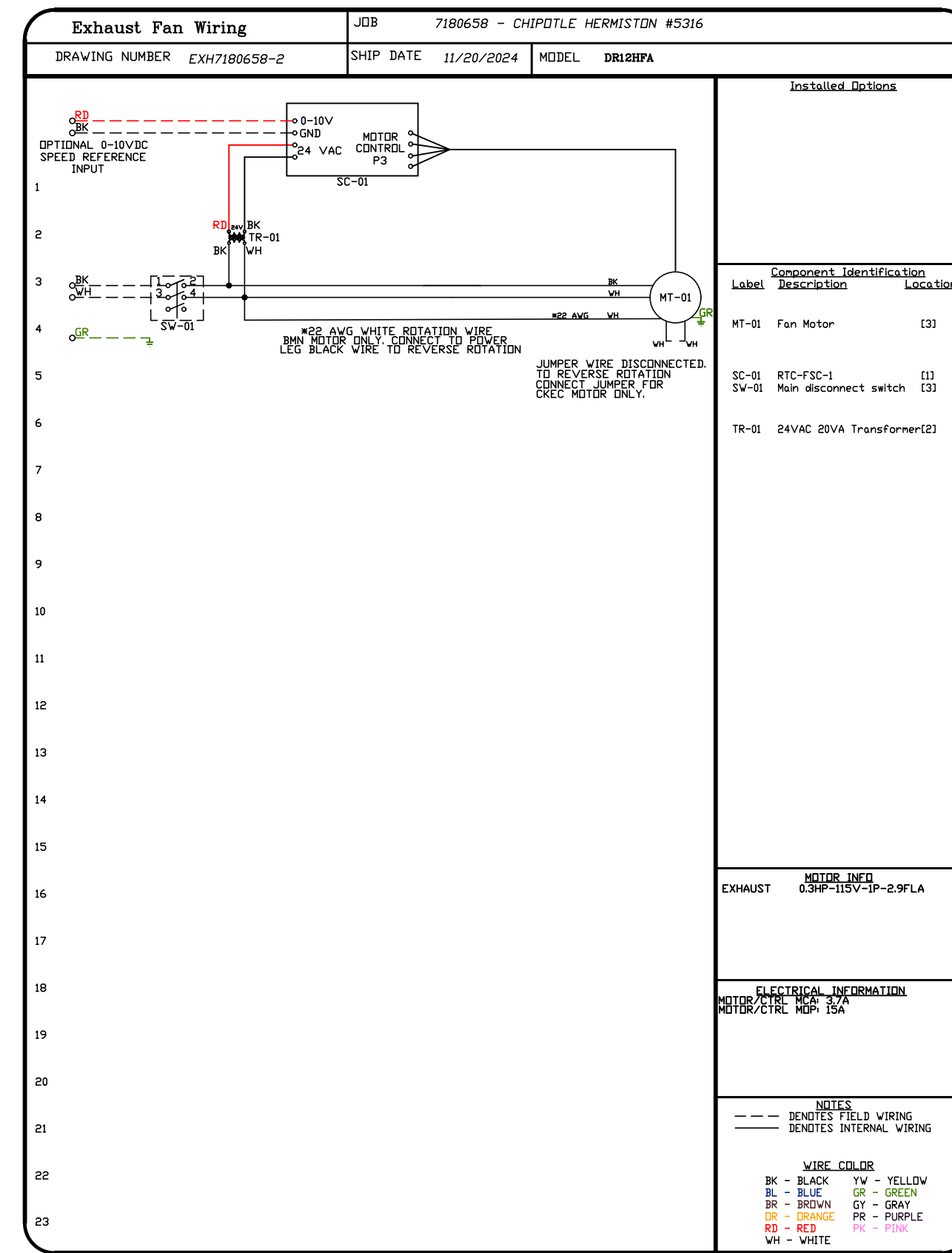
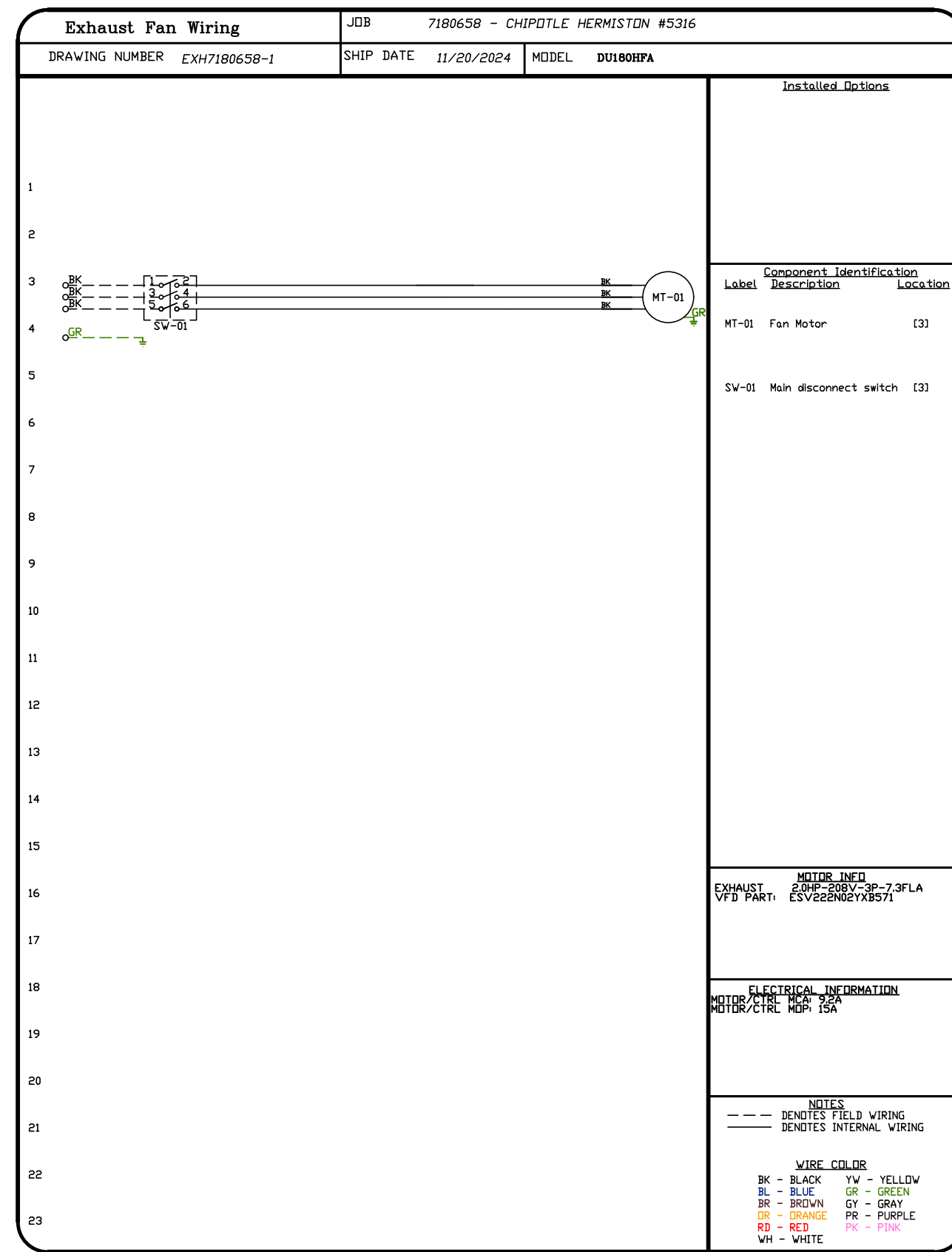
www.captiveaire.com

4641 Paragon Park Rd., Raleigh, NC, 27616 PHONE: (919) 875 - 0420 FAX: 9198750577 EMAIL: egr40@captiveaire.com

CHIPOTLE HERMISTON #5316  
 1875 North 1st Street,  
 Hermiston, OR, 97838

DATE: 11/20/2024  
 DWG.#: 7180658  
 DRAWN BY: JMB-40  
 SCALE: 1/2" = 1'-0"  
 MASTER DRAWING

SHEET NO.  
 7



**REVISIONS**

DESCRIPTION	DATE

**CHIPOTLE**

**Highwoods Group**

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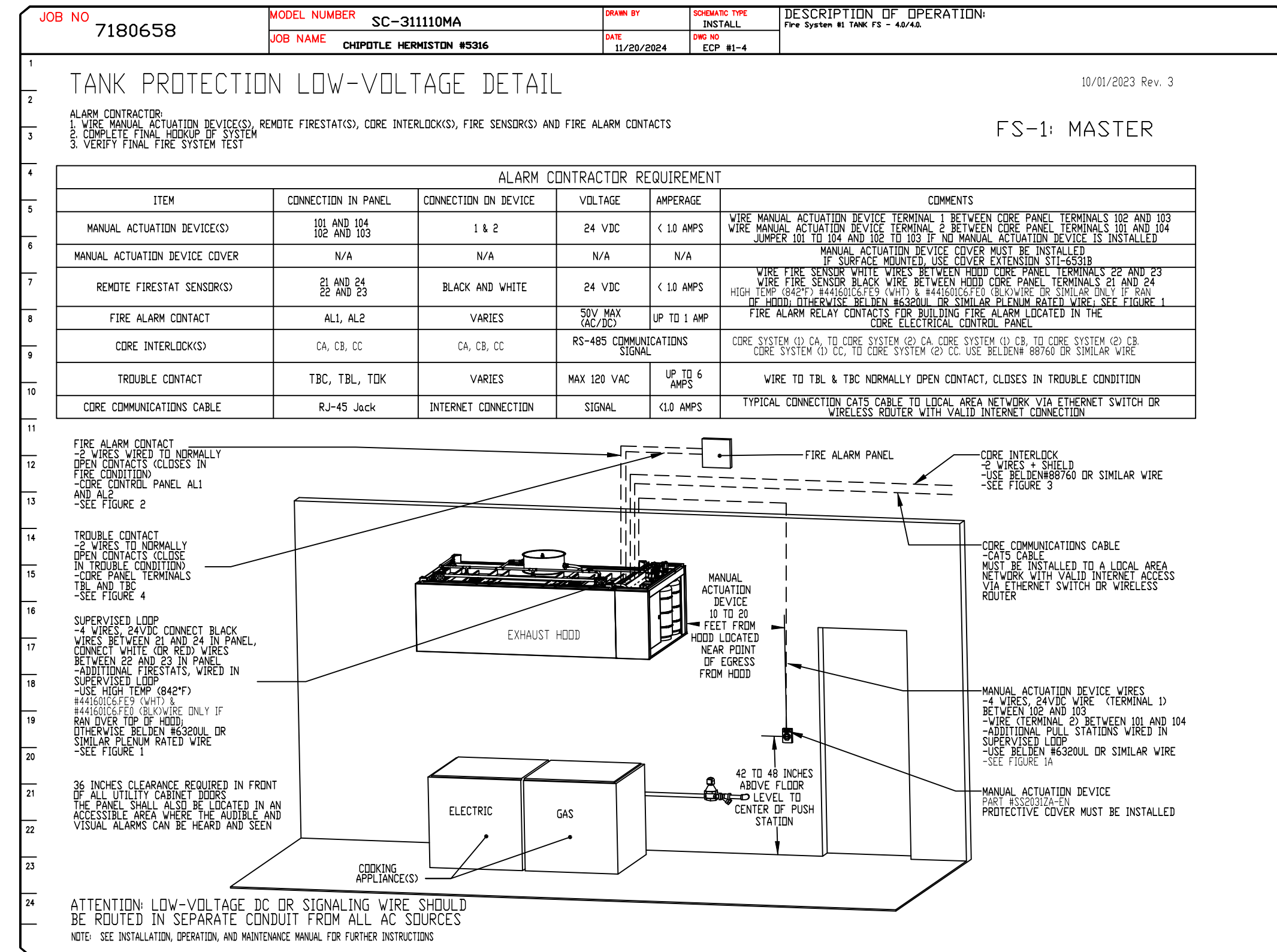
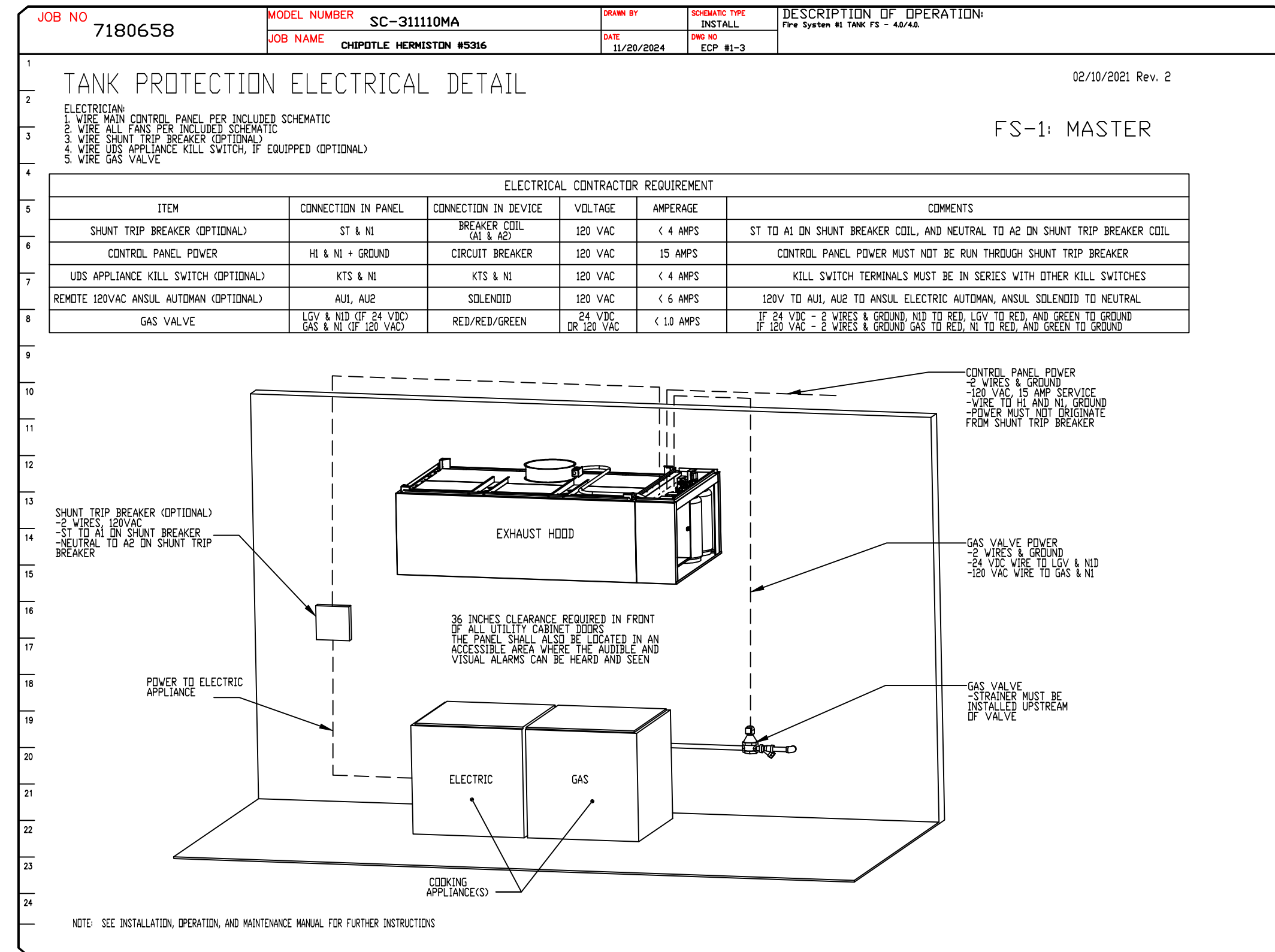
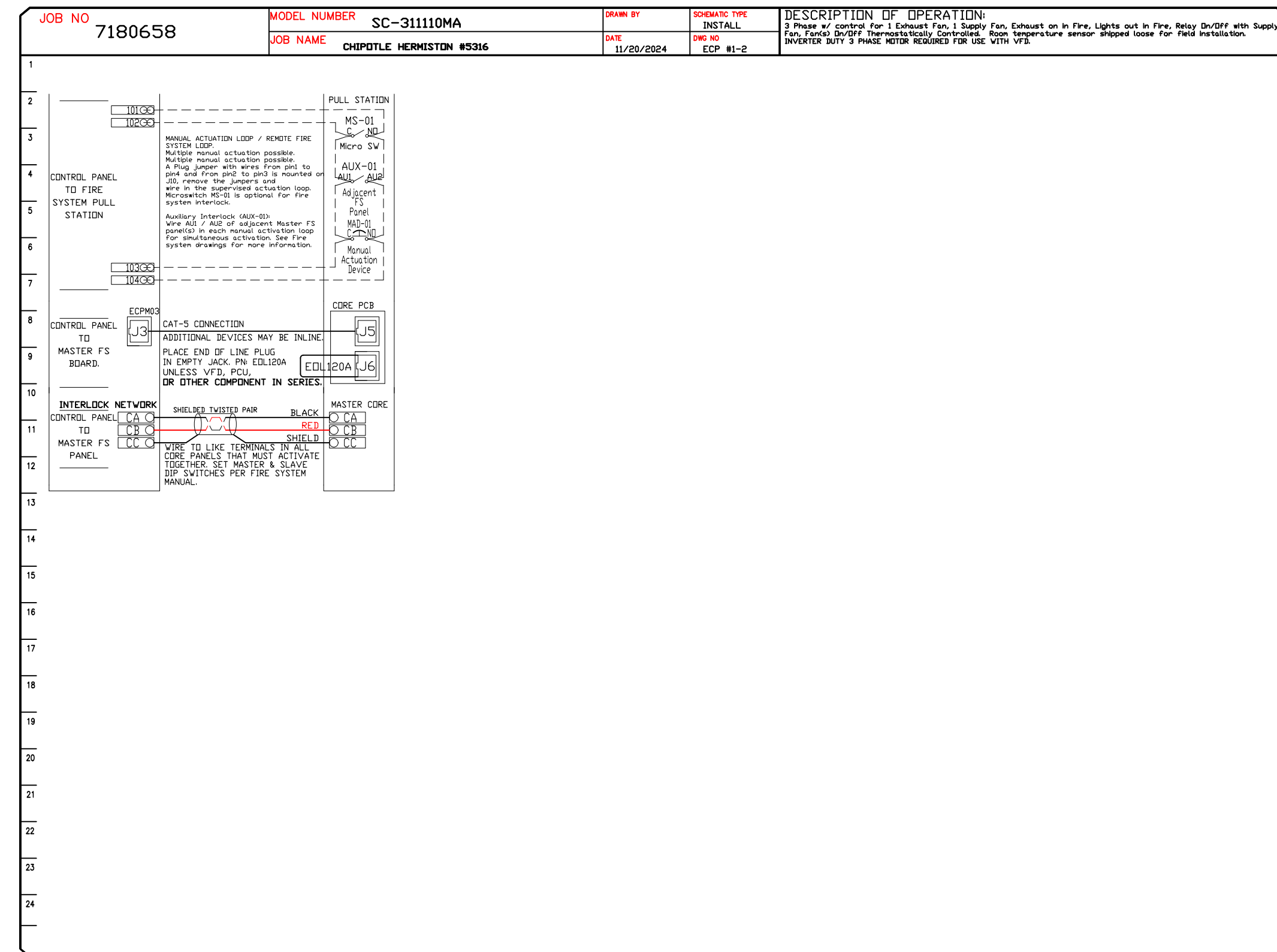
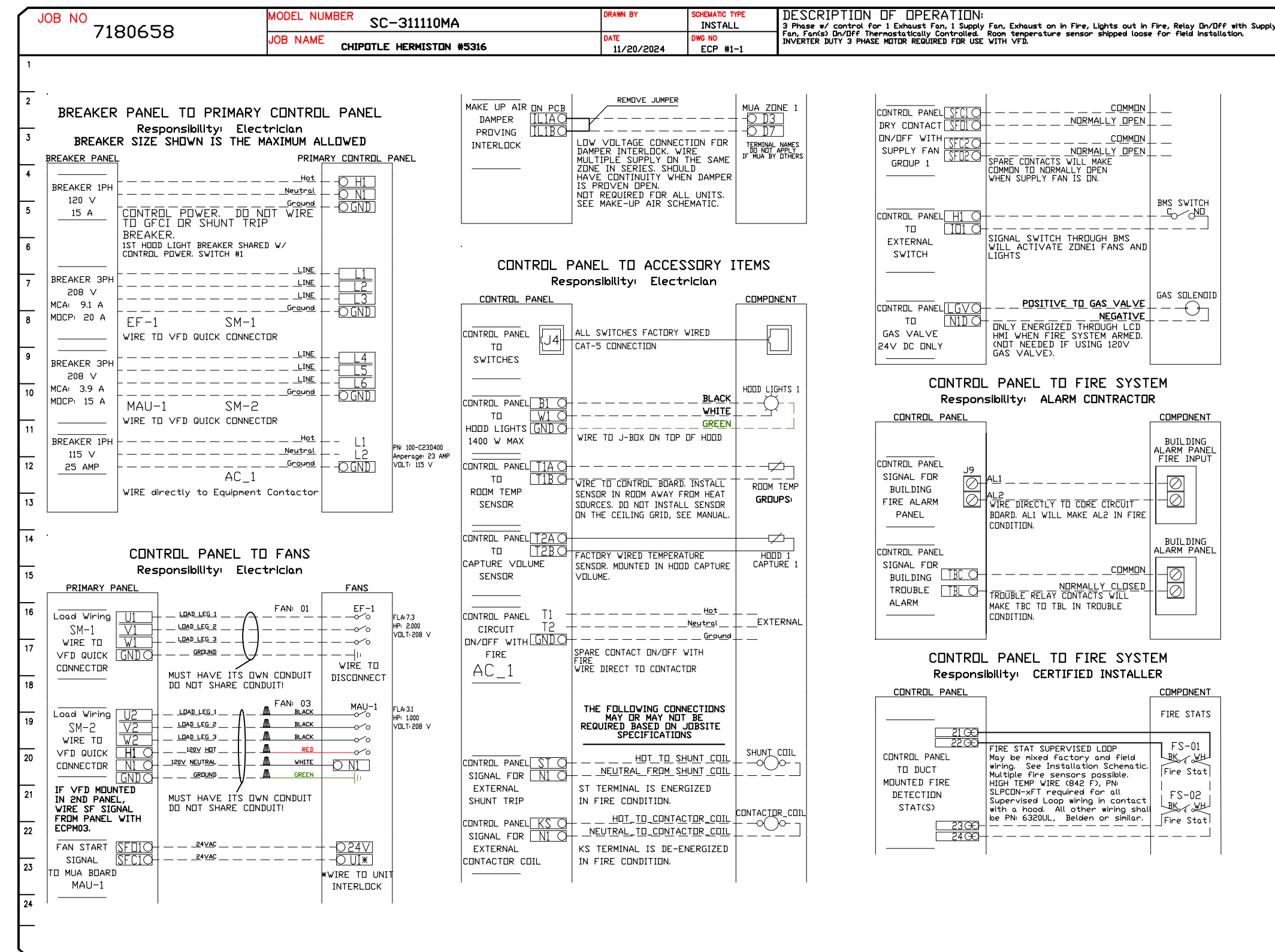
CHIPOTLE HERMISTON #5316  
1875 North 1st Street,  
Hermiston, OR, 97838

DATE: 11/20/2024  
DWG.#: 7180658  
DRAWN BY: JMB-40  
SCALE: 3/4" = 1'-0"  
MASTER DRAWING

SHEET NO. 8

**ELECTRICAL PACKAGE - JOB#7180658**

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	1 LIGHT 1 FAN	SMART CONTROLS THERMOSTATIC CONTROL W/ RELAY ON/OFF WITH SUPPLY	EF-1	EXHAUST	3	2.000	208	7.3
				HOOD # 1			MAU-1	SUPPLY	3	1.000	208	3.1



**REVISIONS**

NO.	DESCRIPTION	DATE

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**CHIPOTLE HERMISTON #5316**

1875 North 1st Street,  
Hermiston, OR, 97838

**DATE:** 11/20/2024

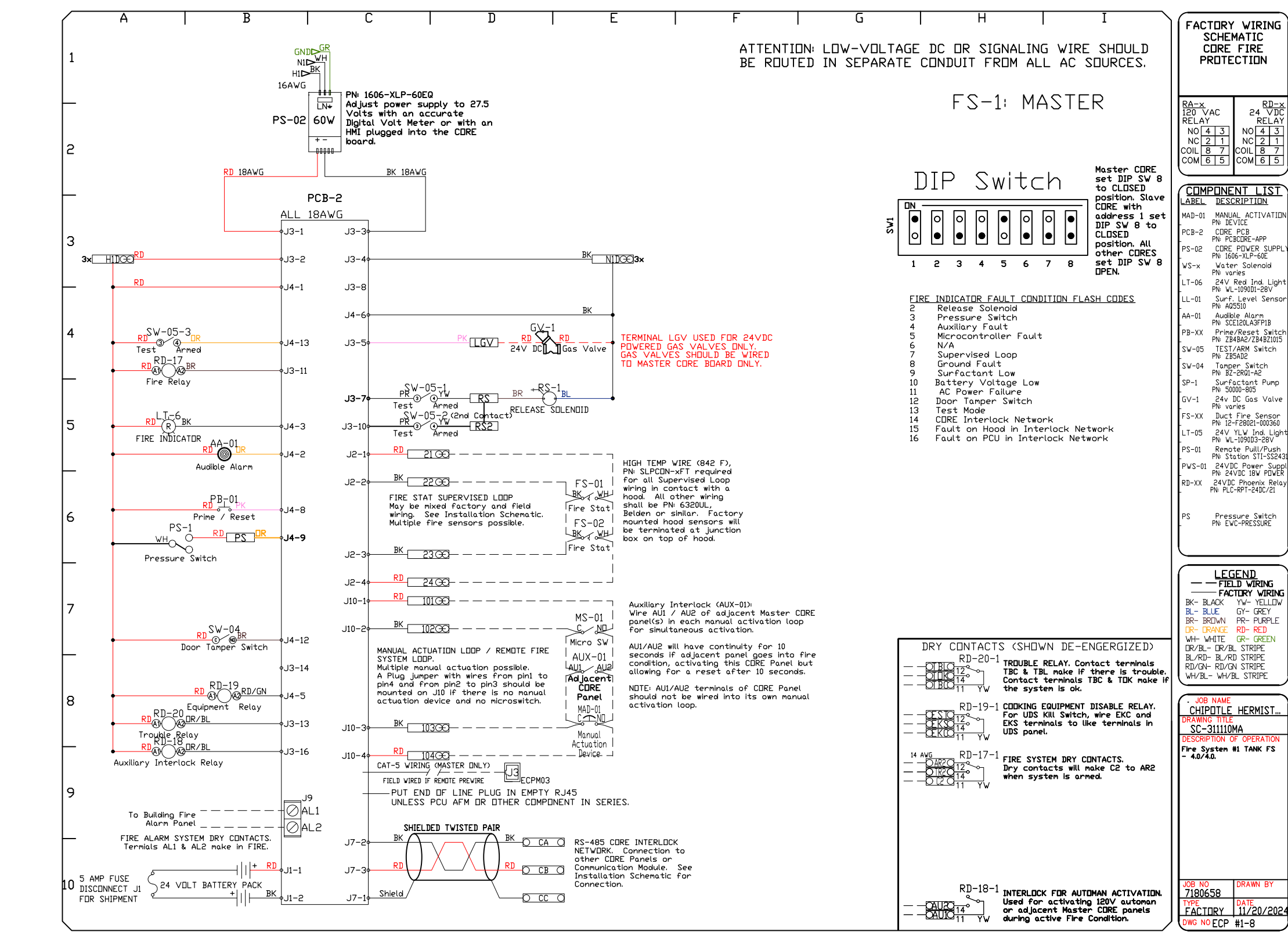
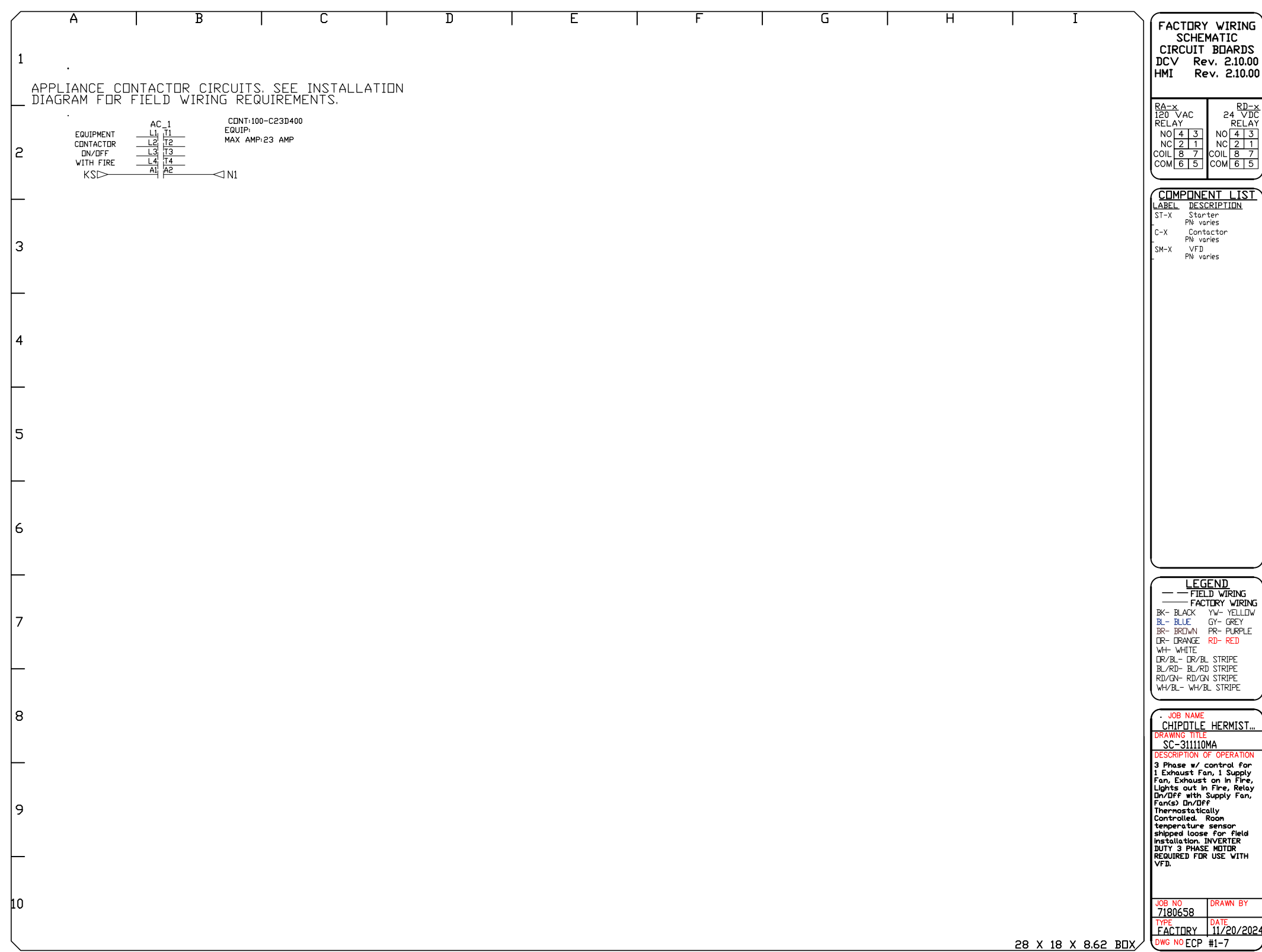
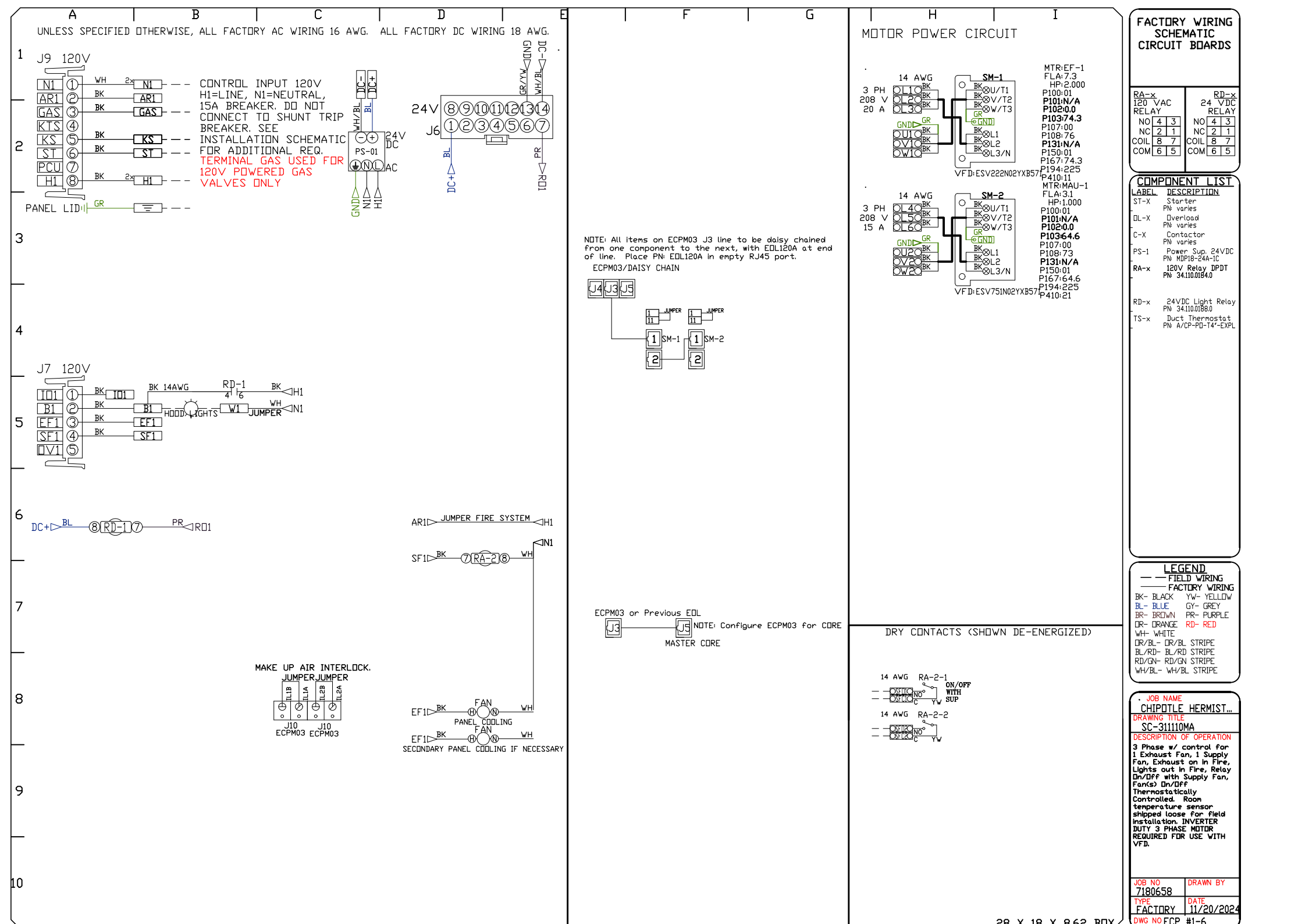
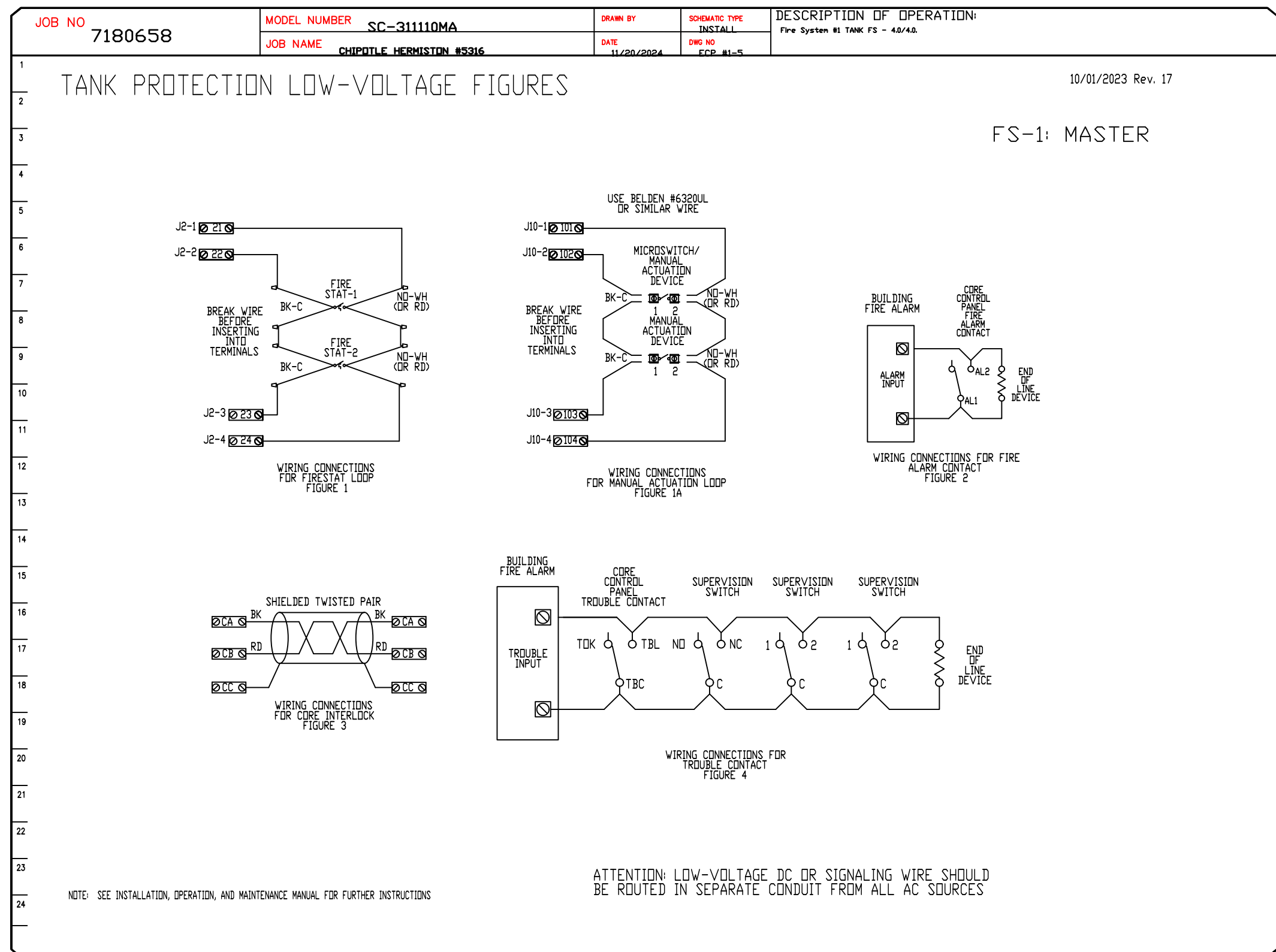
**DWG.#:** 7180658

**DRAWN BY:** JMB-40

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

**MASTER DRAWING**

**SHEET NO.** 9



**REVISIONS**

NO.	DESCRIPTION	DATE

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**CHIPOTLE HERMISTON #5316**

1875 North 1st Street,  
Hermiston, OR, 97838

**DATE:** 11/20/2024

**DWG.#:** 7180658

**DRAWN BY:** JMB-40

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

**MASTER DRAWING**

**SHEET NO.** 10