

FOR QUESTIONS, CALL THE
Eastern PA Mechanical
REGION 108
PHONE: (267) 504 - 4126
EMAIL: reg108@captiveaire.com

HOOD INFORMATION - JOB#7454358

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)				HOOD CONSTRUCTION	HOOD CONFIG			
										WIDTH	LENG	HEIGHT	DIA		CFM	VEL	SP	END TO END
1	90 (Fryer)	5430 ND-2	CAPTIVEAIRE	5' 0"	600 DEG	I	HEAVY	175	875	9'	9'	4'	875	1556	-0.405'	430 SS WHERE EXPOSED	ALONE	ALONE
2	90 (Grill)	5430 ND-2	CAPTIVEAIRE	7' 11"	450 DEG	I	MEDIUM	150	1188	10'	11'	4'	1188	1555	-0.462'	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	SIZE			ELECTRICAL MODEL #	SWITCHES QUANTITY
1	90 (Fryer)	CAPTRATE SOLD FILTER	3	20"	16"	85% SEE FILTER SPEC	2	RECESSED ROUND	NO	LEFT	12"x54"x30"	TANK FS	4.0/4.0/4.0	SC-320110MA	1 LIGHT 1 FAN	YES	762 LBS
2	90 (Grill)	CAPTRATE SOLD FILTER	5	20"	16"	85% SEE FILTER SPEC	2	RECESSED ROUND	NO							YES	508 LBS

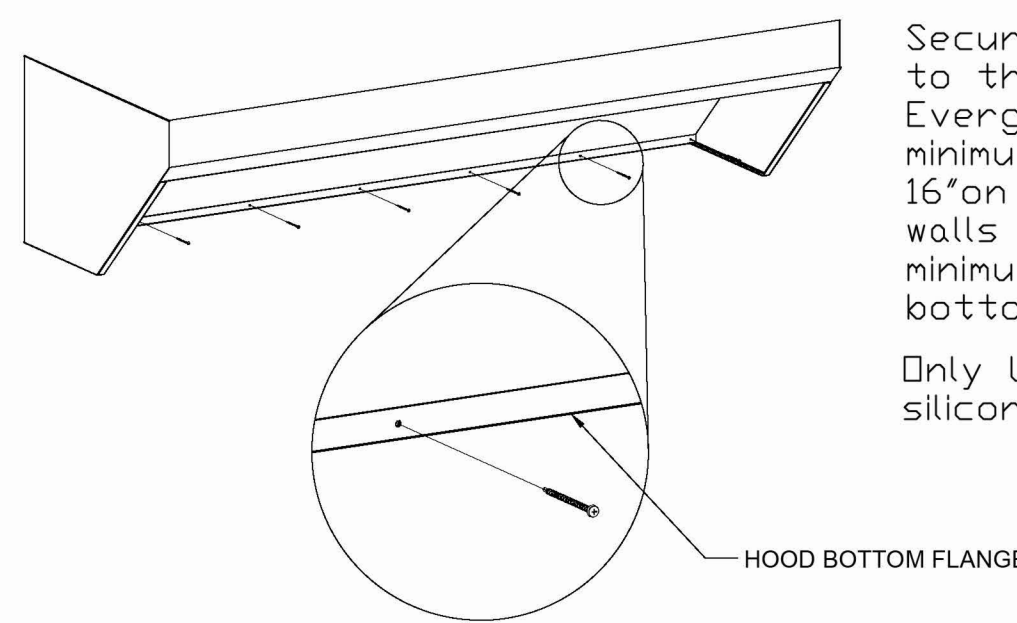
HOOD OPTIONS

HOOD NO	TAG	OPTION
1	90 (Fryer)	FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT.
		RIGHT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS.
		LEFT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS.
		INSULATION FOR BACK OF HOOD.
2	90 (Grill)	RISER SENSOR INSTALL 6IN PLEN.
		FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT.
		RIGHT END STANDOFF (FINISHED) 1" WIDE 54" LONG INSULATED.
		INSULATION FOR BACK OF HOOD.
		RISER SENSOR INSTALL 6IN PLEN.
		LEFT WIDE VERTICAL END PANEL 42" TOP WIDTH, 36" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
		RIGHT WALL AS END PANEL.

HVAC DISTRIBUTION NOTE

SUPPLY DIFFUSERS WITHIN TEN (10) FEET OF THE EXHAUST HOOD SHOULD BE LOW-VELOCITY / NON-DIRECTIONAL

Bottom Flange Securing Detail

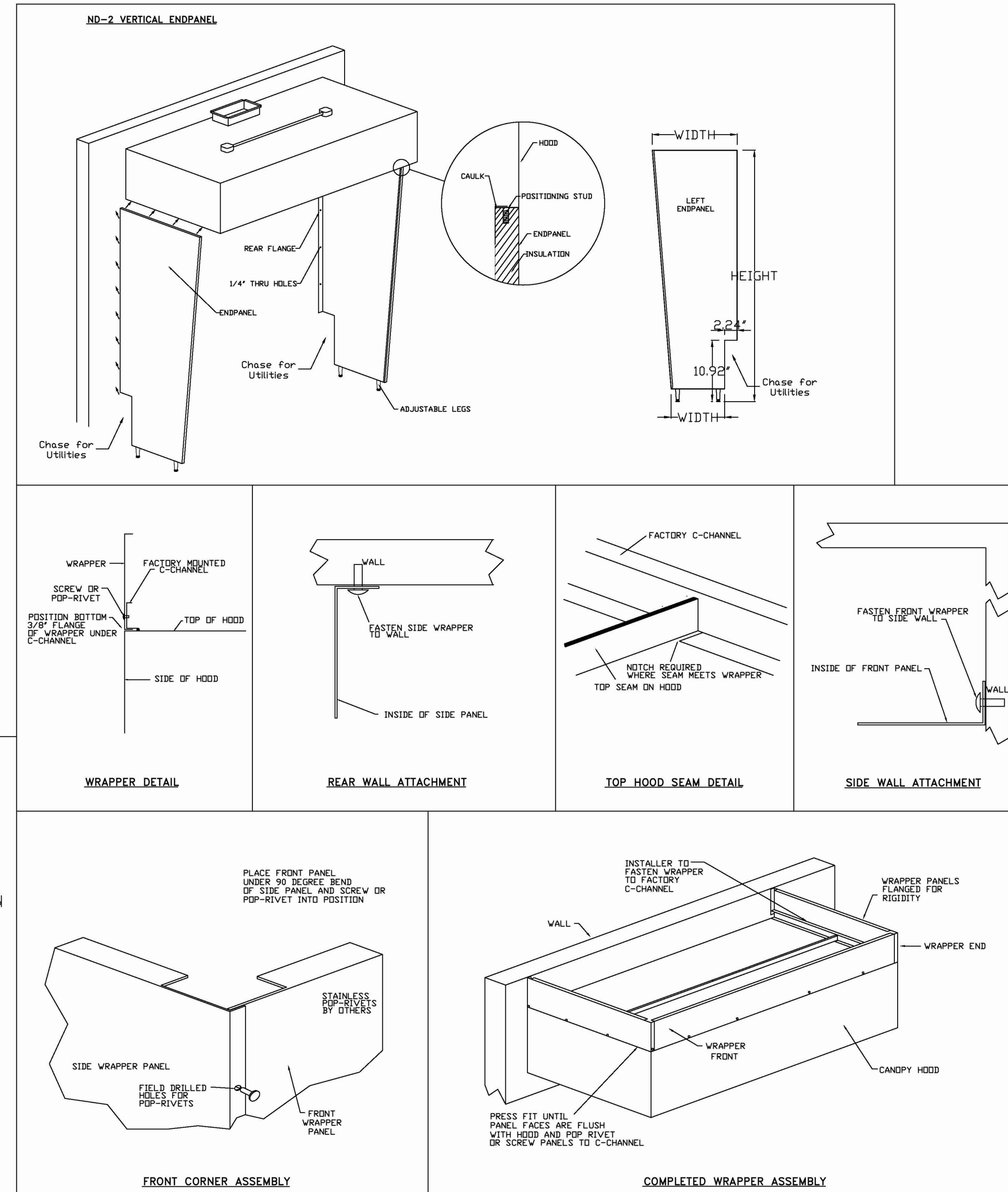


Secure the bottom of the hood to the rear wall using 1404 Evergreen Quik-Fastener. Use a minimum of 1 fastener every 16" on the bottom flange. For walls with metal studs, use a minimum of 1 fastener on the bottom flange at each stud. Only Use SIL-BOND RTV 4500 silicone sealant on hood.

CLEARANCE TO COMBUSTIBLES

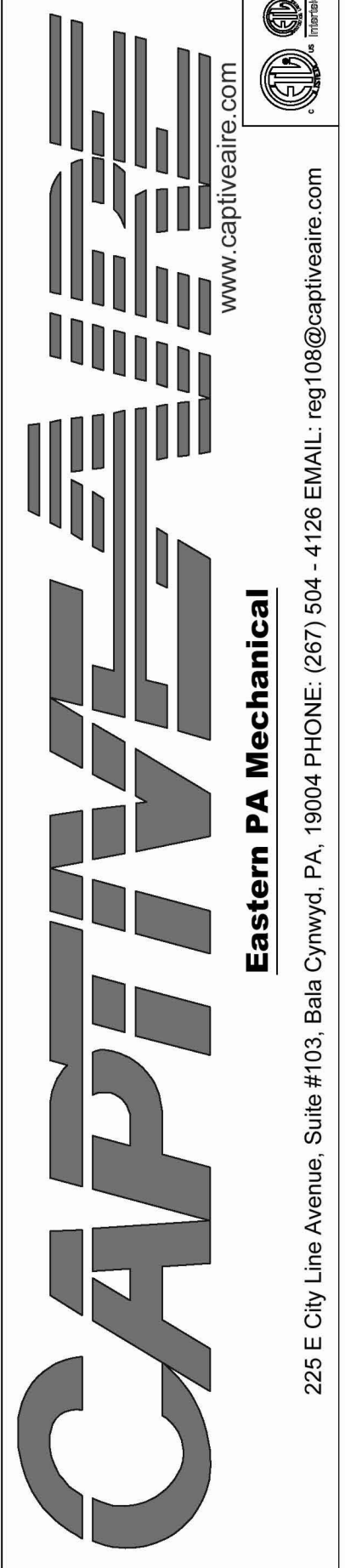
HOODS #	SURFACE	*CLEARANCE
1	TOP	18"
	FRONT	0"
	BACK	0"
	LEFT	0"
2	RIGHT	18"
	TOP	18"
	FRONT	0"
	BACK	0"
	LEFT	18"
	RIGHT	0"

- 18" CLEARANCE TO COMBUSTIBLES CONFORMS TO UL710 STANDARD.
- HOOD MOUNTED UTILITY CABINETS REQUIRE 36" SERVICE CLEARANCE.



REVISIONS

NO.	DESCRIPTION	DATE



Shake Shack - CT - 1730 - Stonebridge (Kitchen)
Cheshire, CT, 06408

DATE: 4/7/2025
DWG.#: 7454358
DRAWN BY: EB
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 1

Bergmeyer
CONSULTANTS:
SEAL SIGNATURE:
FOR REFERENCE ONLY

225 E. City Line Avenue, Suite #103, Bala Cynwyd, PA, 19004
PHONE: (267) 504-4128
EMAIL: reg108@captiveaire.com

1 HEI 2025-07-21 IFC SET
HEI 2025-06-06 BID/PERMIT SET

SHAKE SHACK
SHAKE SHACK SHOPS AT STONEBRIDGE

2053 HIGHLAND AVE, UNIT E 120
CHESHIRE, CT 06410
SHACK #1730

IFC SET
CAPTIVEAIRE DRAWINGS

DRAWN BY: Author
CHECKED BY: Checker
JOB NO: 20250040

M701

THE DOCUMENTATION CONTAINED ON THIS SHEET WAS NOT PREPARED BY HENDERSON ENGINEERS AND IS INCLUDED IN THIS SET FOR REFERENCE ONLY. HENDERSON ENGINEERS REVIEWED THE DOCUMENTATION ON THIS SHEET FOR GENERAL COMPLIANCE WITH DESIGN INTENT. SUPPLIER IS RESPONSIBLE THAT ALL FURNISHED EQUIPMENT ON THIS SHEET COMPLIES WITH APPLICABLE LOCAL, STATE, AND FEDERAL LAWS, CODES, AND REGULATIONS.

FIRE SYSTEM INFORMATION - JOB#7454358

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	41	FIRE CABINET LEFT	LEFT, HOOD 1

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 SHELVEING, 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 PRE-ENGINEERED FIRE SYSTEM COMPLIES WITH UL 300 REQUIREMENTS.

- DL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

JOB #: 7454358
JOB NAME: SHAKE SHACK - CT - 1730 - STONEBRIDGE (KITCHEN).

SYSTEM SIZE: TANK-SP-3 DESIGN FP: 41. MAXIMUM FP: 60.

HOOD # 1 5' 0.00' LONG x 54" WIDE x 30" HIGH.

RISER # 1 SIZE: 10" x 10".

HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

HOOD # 2 7' 11.00' LONG x 54" WIDE x 30" HIGH.

RISER # 1 SIZE: 10" x 11".

HOOD # 2 METAL BLOW-OFF CAPS INCLUDED.

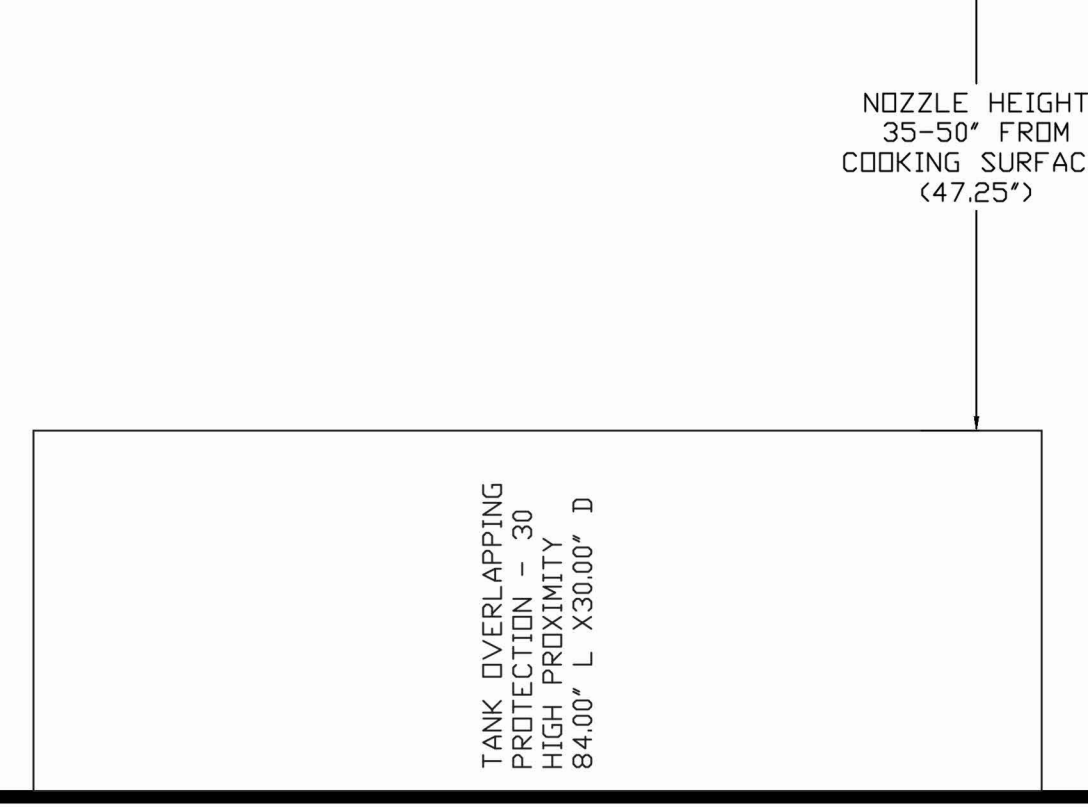
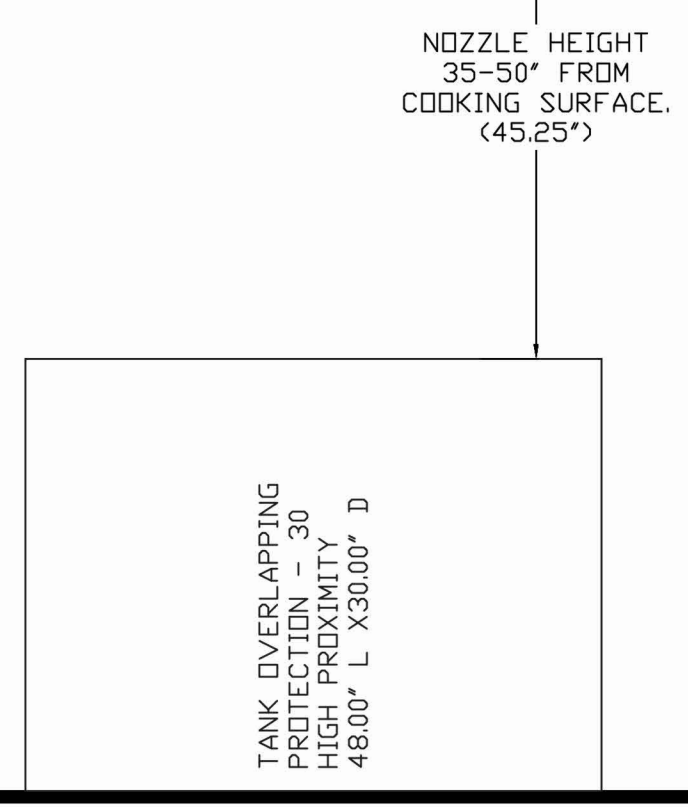
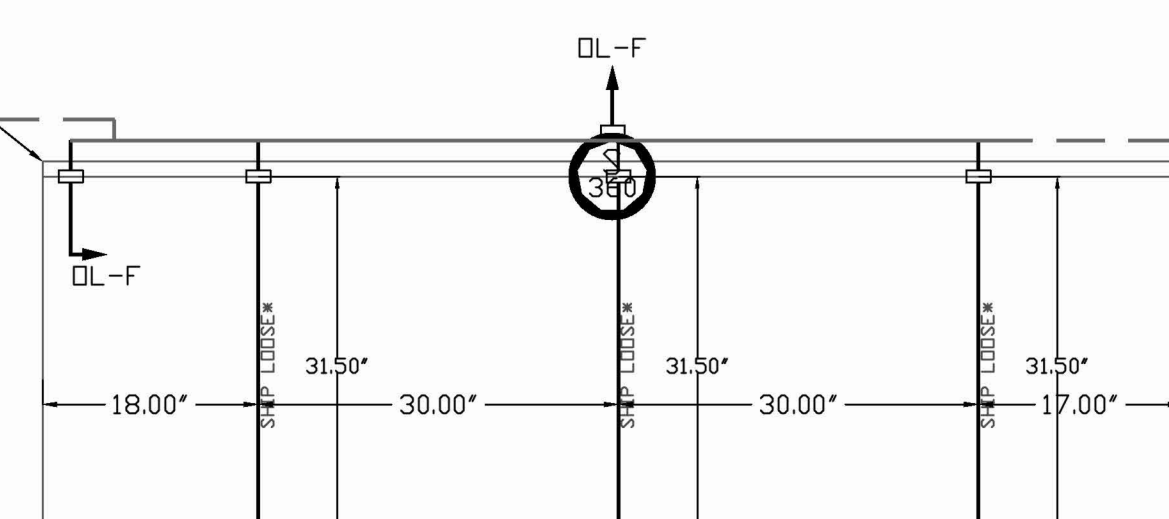
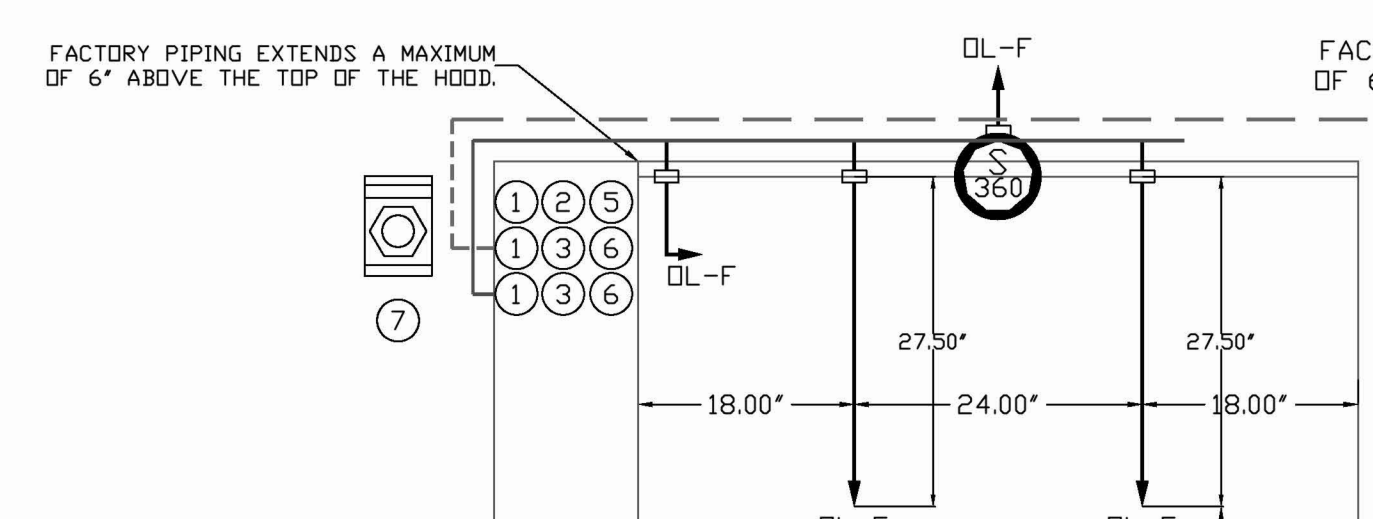
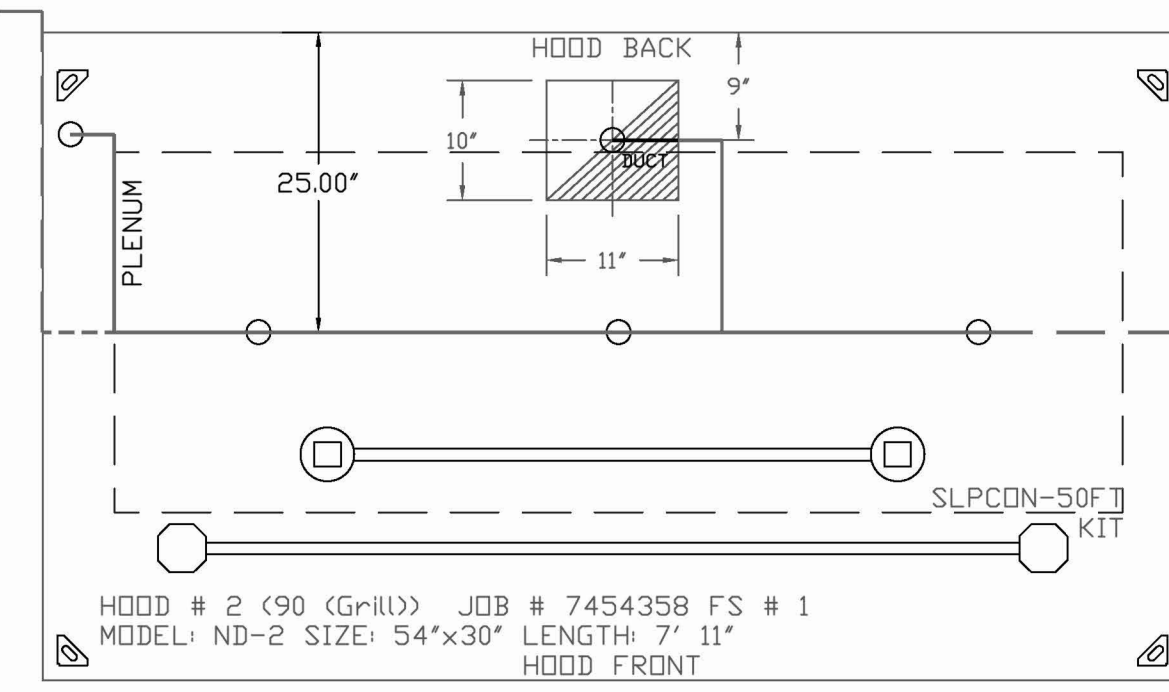
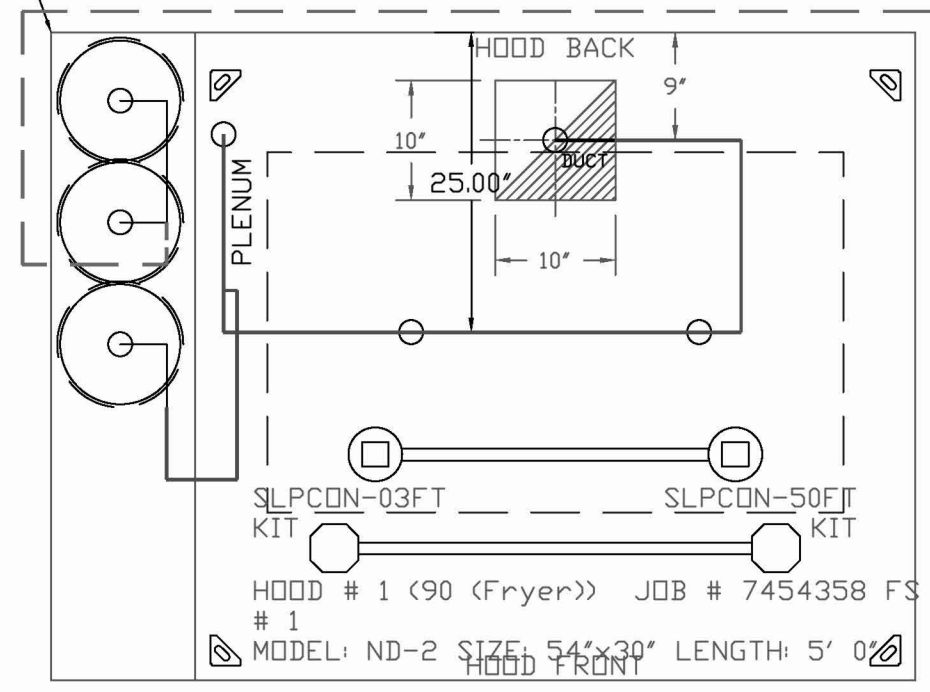
- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

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.

- SYSTEM REQUIRES A MINIMUM OF 7 FT OF EQUIVALENT PIPE LENGTH BETWEEN TANK AND NEAREST APPLIANCE NOZZLE FOR MOST APPLIANCES. EACH 90 DEGREE ELBOW ADDS 1.3 FT OF EQUIVALENT LENGTH. SEE MANUAL FOR DETAILS.



REVISIONS	
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CAPTIVE

www.captiveaire.com

Eastern PA Mechanical

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Shake Shack - CT - 1730 - Stonebridge (Kitchen)
Cheshire, CT, 06408

DATE:	4/7/2025
DWG.#:	7454358
DRAWN BY:	EB
SCALE:	3/4" = 1'-0"
MASTER DRAWING	
SHEET NO.	3

Bergmeyer

CONSULTANTS:

SEAL SIGNATURE:

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HEI 2025-06-06 BID/PERMIT SET

SHAKE SHACK

SHAKE SHACK SHOPS AT STONEBRIDGE

2053 HIGHLAND AVE, UNIT E 120
CHESHIRE, CT 06410
SHACK #1730

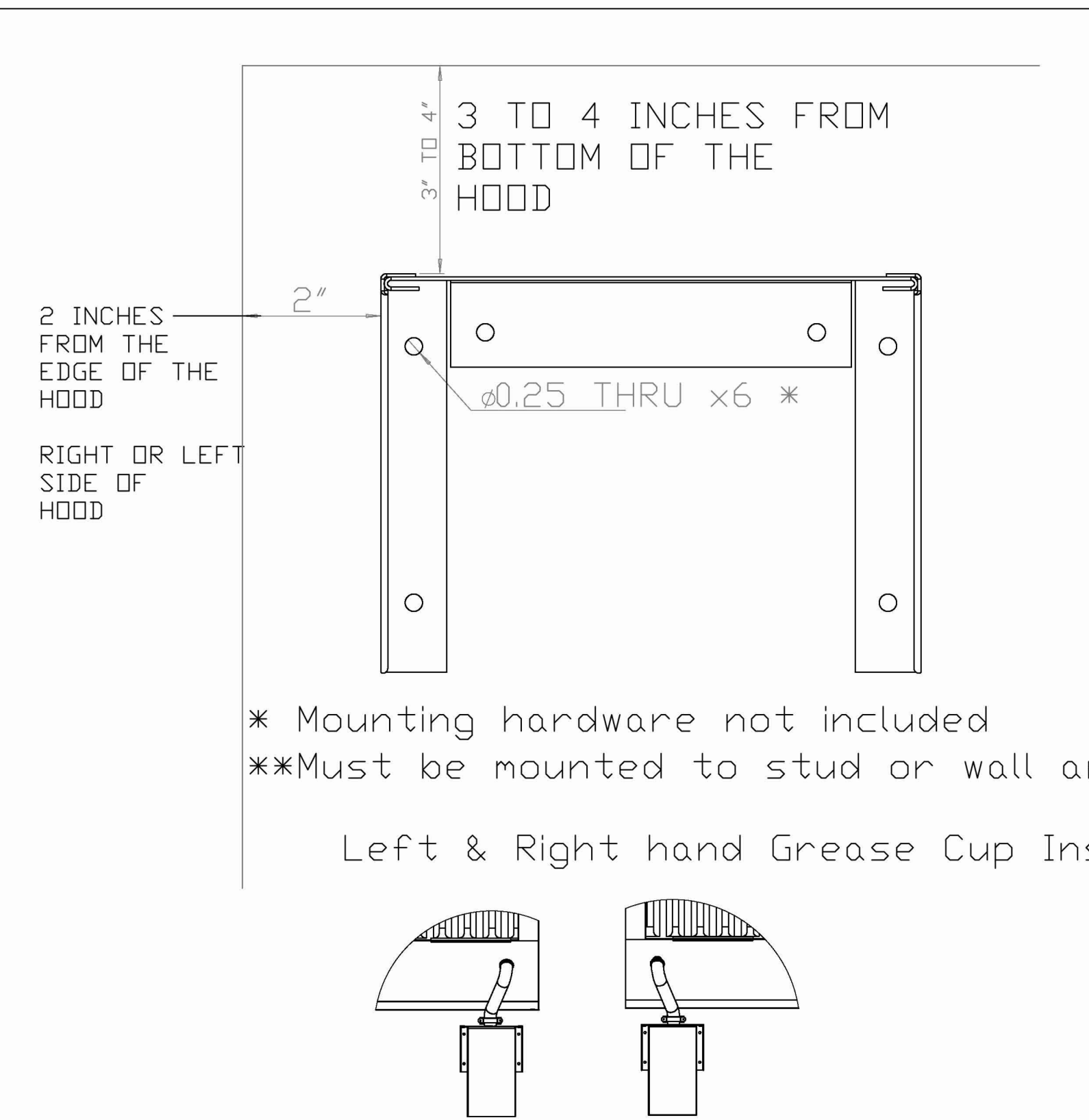
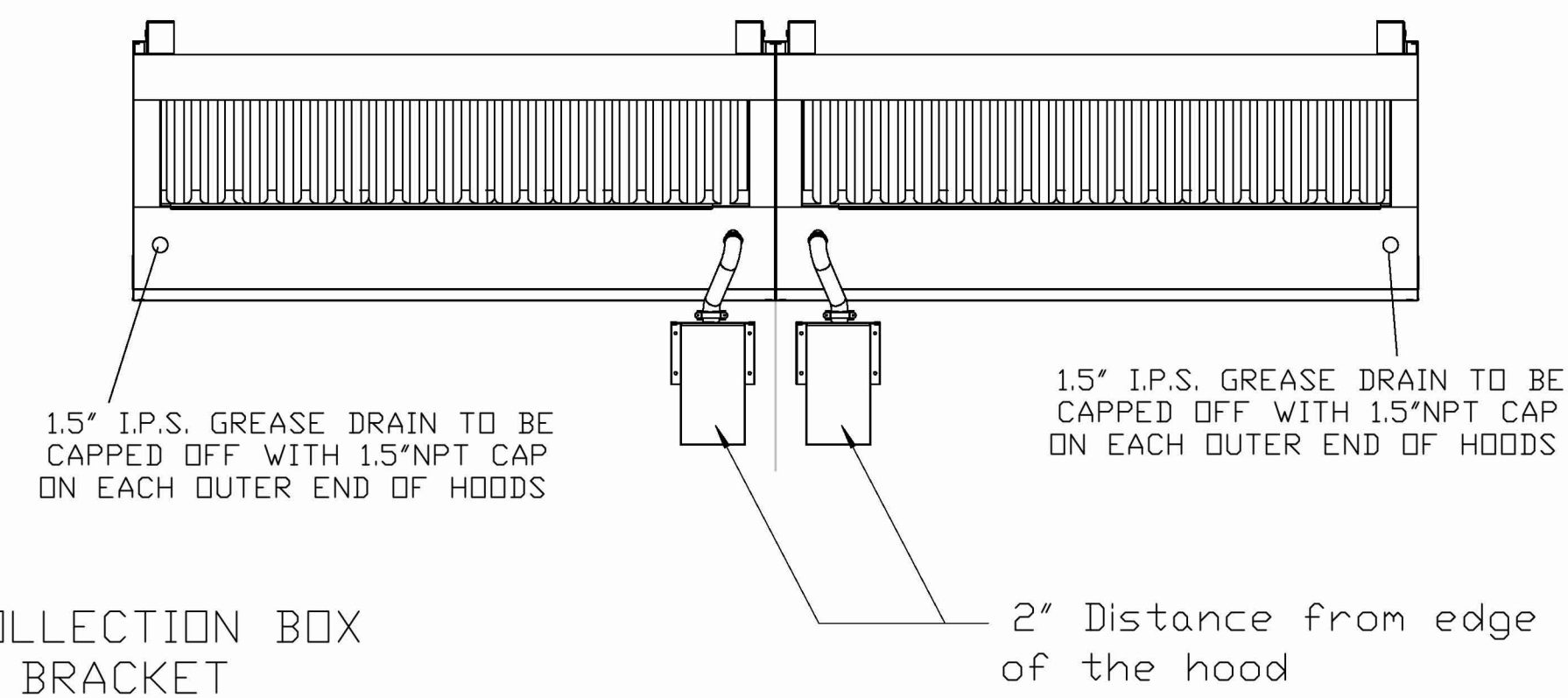
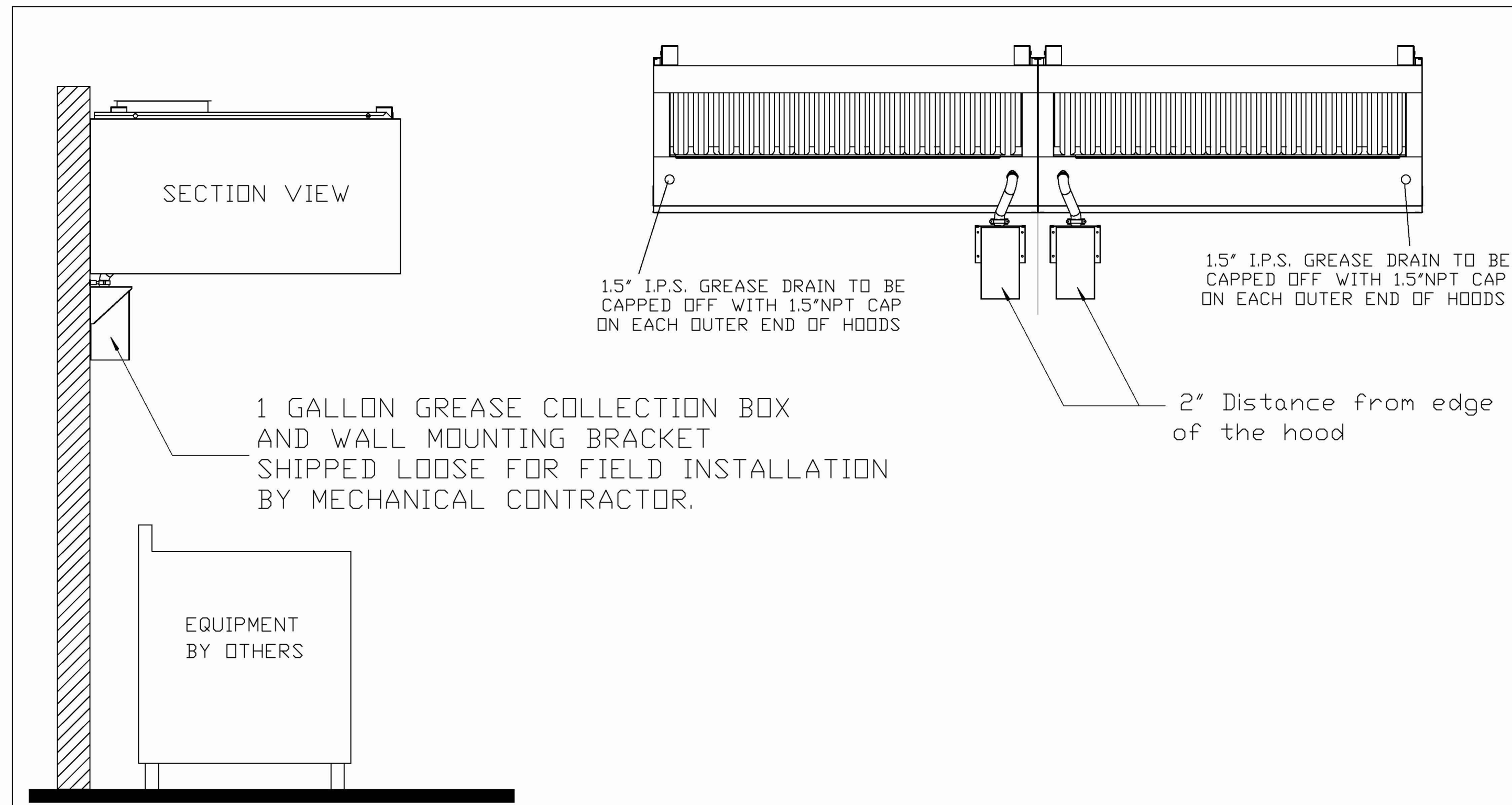
IFC SET

CAPTIVEAIRE DRAWINGS

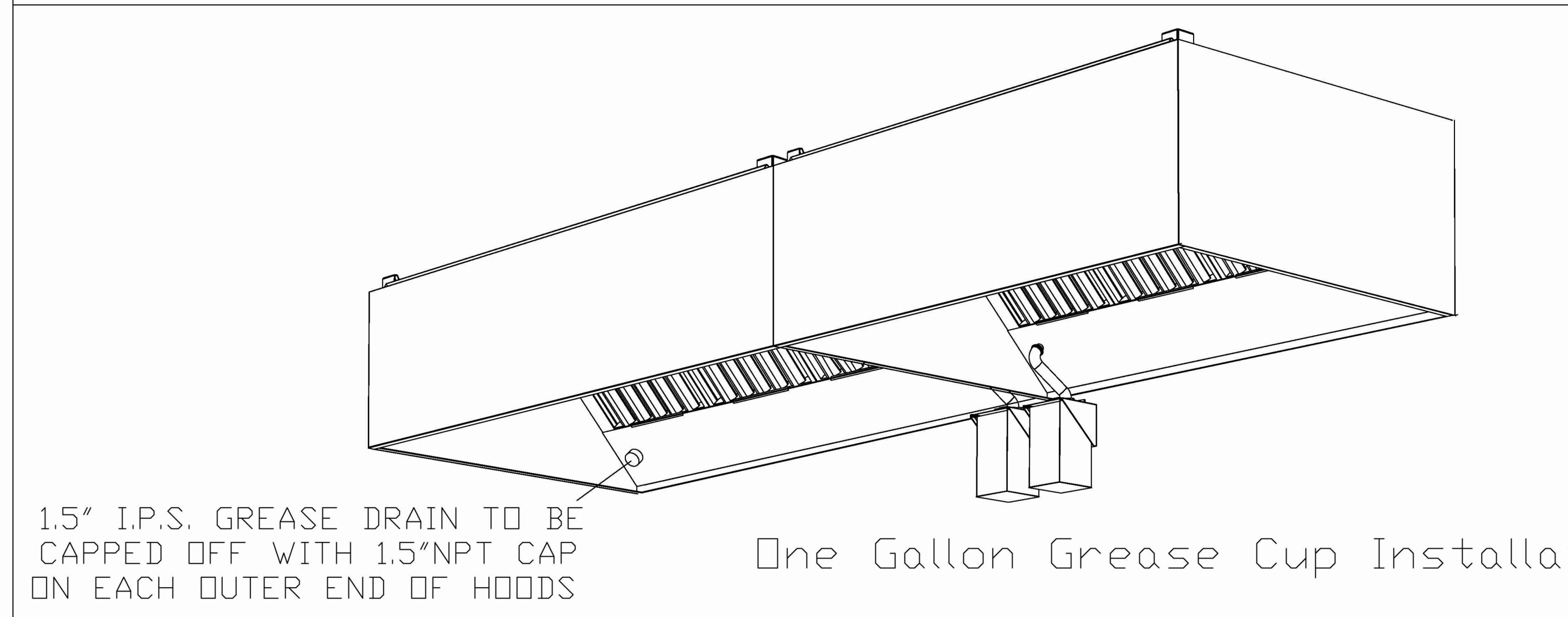
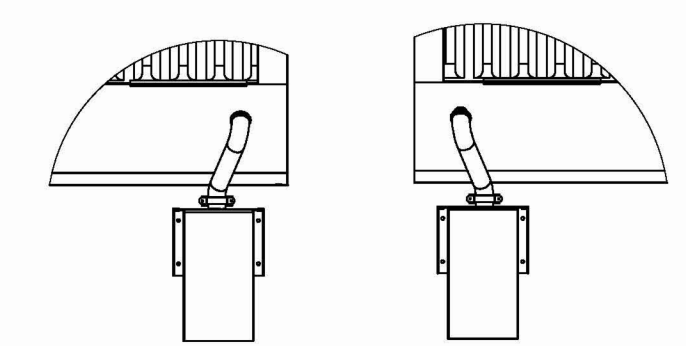
DRAWN BY: Author
CHECKED BY: Checker
JOB NO: 2025040

M703

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* Mounting hardware not included
 **Must be mounted to stud or wall anchor
 Left & Right hand Grease Cup Install

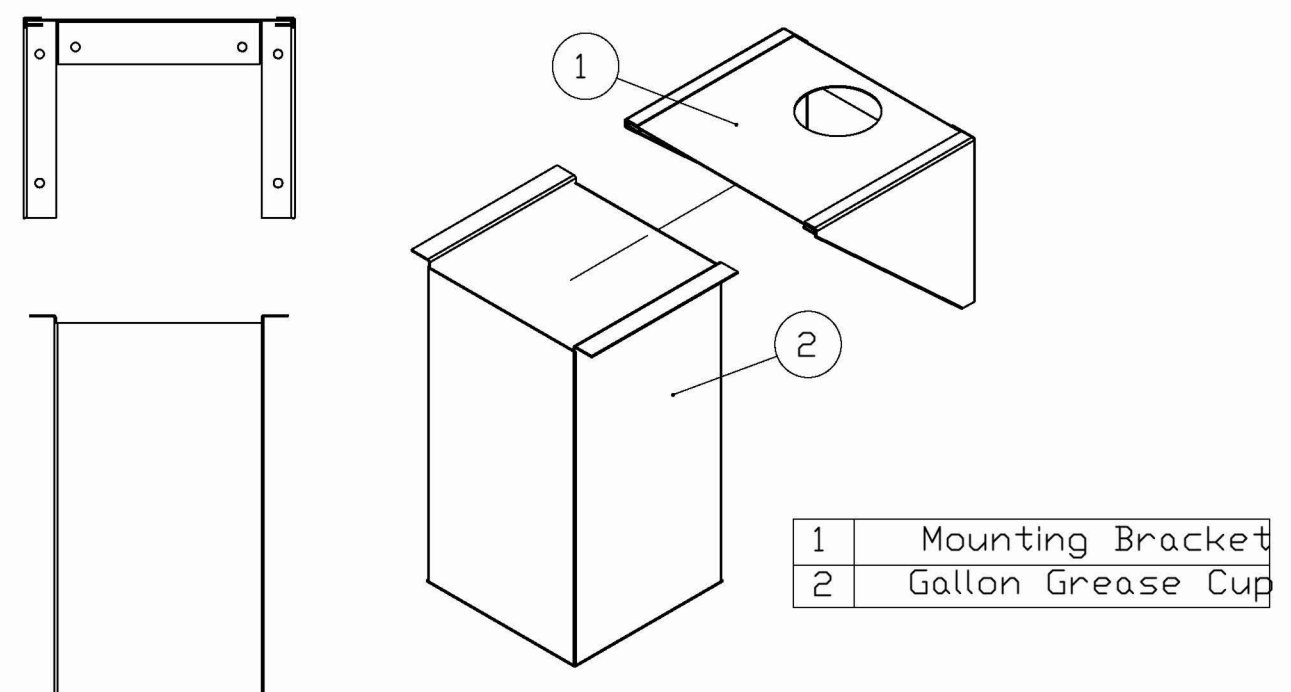
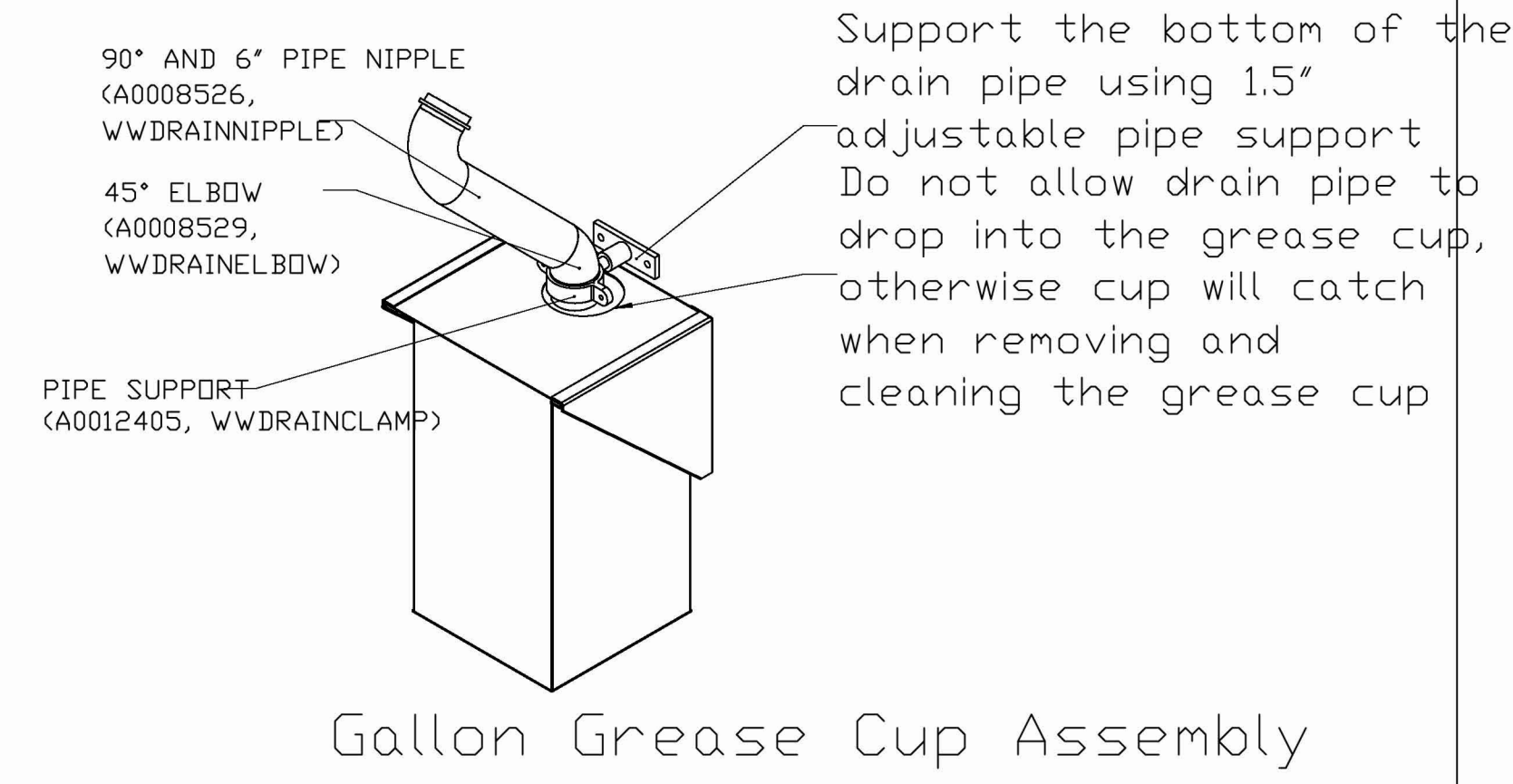


One Gallon Grease Cup Installation

Instructions below outline single, or dual, one gallon grease cup installation for ND-2 hood models.

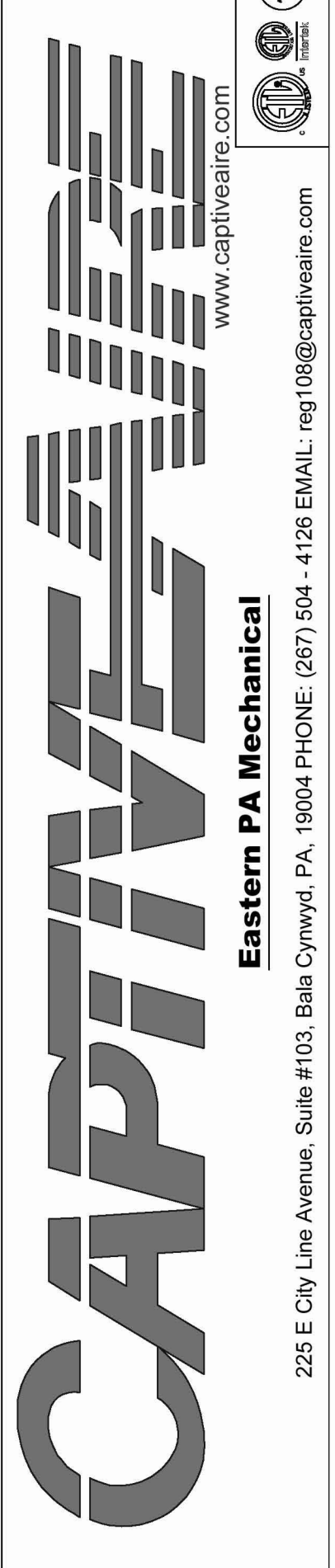
The one gallon grease cup comes as an assembly of stainless steel wall mounting bracket and one gallon cup. The mounting bracket should be installed 2" from the edge of the containment plenum and 3"-4" below the bottom of the hood.

Piping from the hood grease drain should route to the opening of the grease cup, but not into the cup, otherwise the cup will not be able to be removed and emptied.



1 GALLON GREASE COLLECTION BOX AND WALL MOUNTING BRACKET SHIPPED LOOSE FOR FIELD INSTALLATION BY MECHANICAL CONTRACTOR.

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DESCRIPTION	DATE



Shake Shack - CT - 1730 - Stonebridge (Kitchen)
 Cheshire, CT, 06408

DATE:	4/7/2025
DWG.#:	7454358
DRAWN BY:	EB
SCALE:	3/4" = 1'-0"
MASTER DRAWING	
SHEET NO.	4

Bergmeyer

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 2 HEI 2025-06-06 BID/PERMIT SET

SHAKE SHACK

SHAKE SHACK SHOPS AT STONEBRIDGE

2053 HIGHLAND AVE, UNIT E 120
 CHESHIRE, CT 06410
 SHACK #1730

IFC SET

CAPTIVEAIRE DRAWINGS

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 CHECKED BY: Checker
 JOB NO: 20250040

M704

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EXHAUST FAN INFORMATION - JOB#7454358

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL.	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SDS'S
1	KEF (FRYER)	1	DU50HFA	CAPTIVEAIRE	875	1.000	1471	TEAD-ECM	0.500	0.3260	1	208	3.8	333 FPM	79	15
2	KEF (GRILL)	1	DUB5HFA	CAPTIVEAIRE	1188	1.000	1194	TEAD-ECM	0.750	0.3050	1	208	5.2	376 FPM	90	8.8

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF (FRYER)	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR50HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -MSC- (TELCD), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
2	KEF (GRILL)	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR85HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -MSC- (TELCD), CCW ROTATION
		1	2 YEAR PARTS WARRANTY

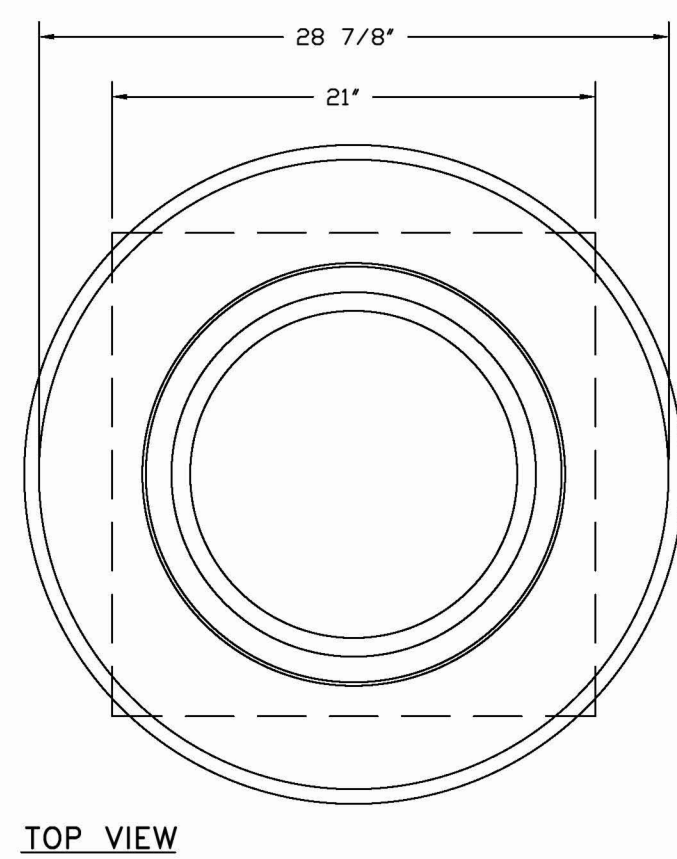
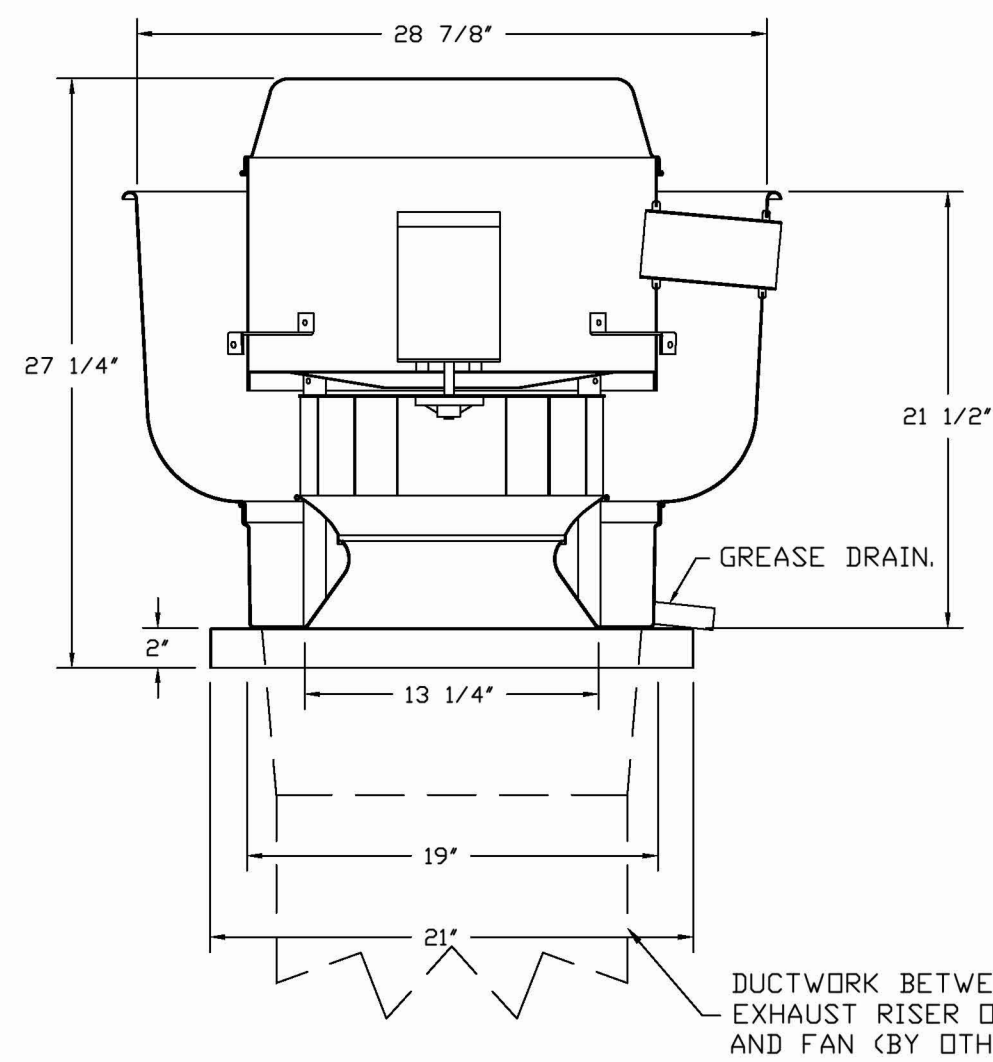
FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST	SUPPLY					
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	KEF (FRYER)	YES						
2	KEF (GRILL)	YES						

CURB ASSEMBLIES

NO	DN FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF (FRYER)	34 LBS	CURB	19.500"W X 19.500"L X 24.000"H VENTED HINGED.
2	# 2	KEF (GRILL)	41 LBS	CURB	23.000"W X 23.000"L X 24.000"H VENTED HINGED.

FAN #1 DU50HFA - EXHAUST FAN (KEF (FRYER))



TOP VIEW

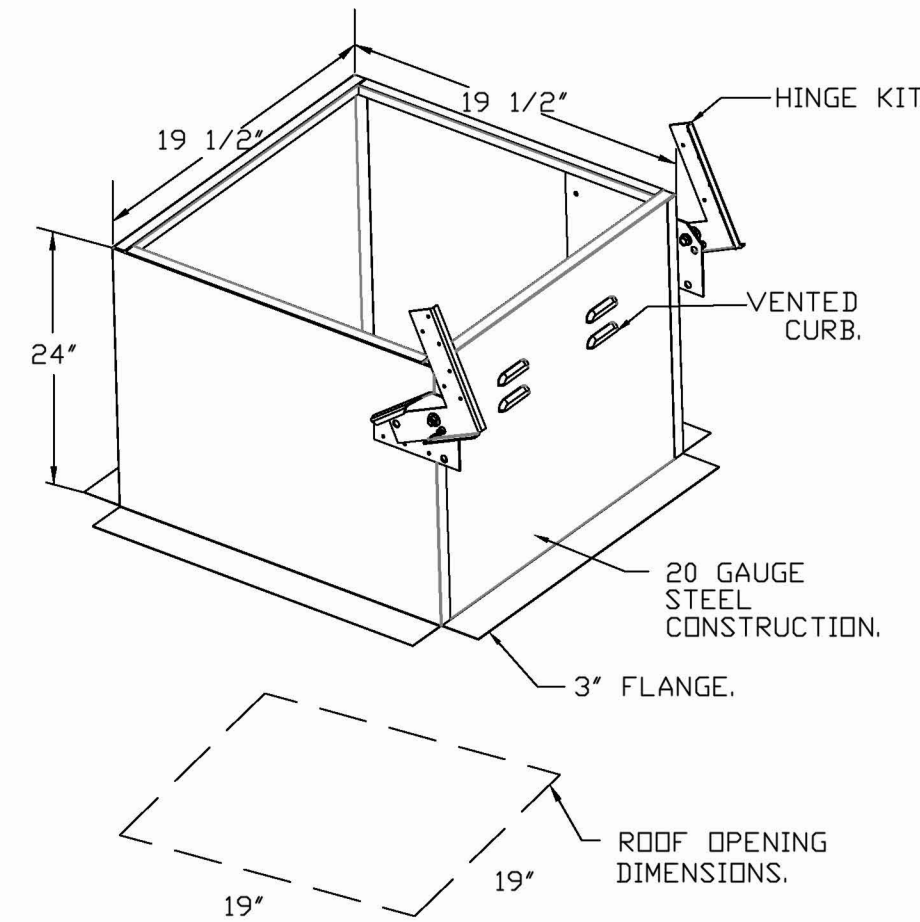
FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ILC-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.

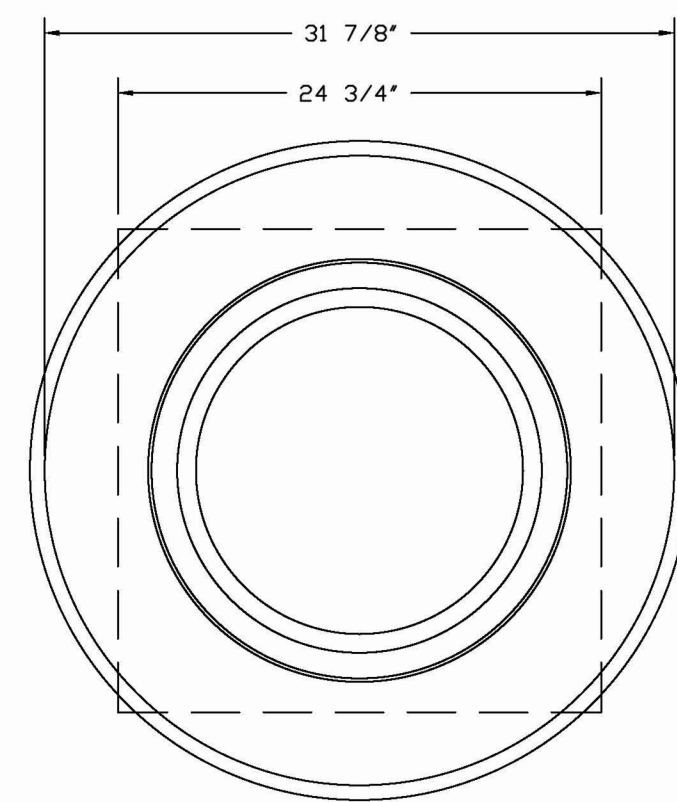
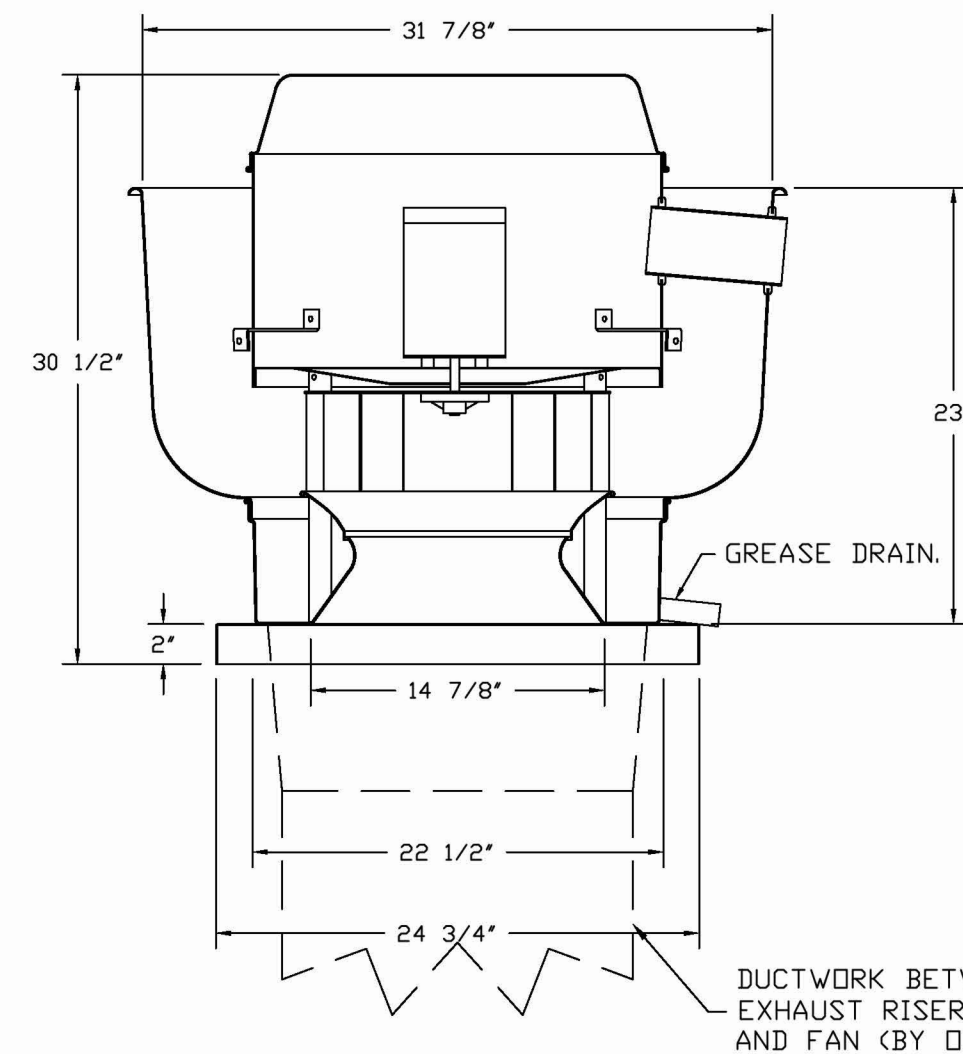
NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

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.

- DETAILS**
- GREASE BOX.
 - FAN BASE CERAMIC SEAL - DU/DR50HFA - INSTALLED AT PLANT - FOR GREASE DUCTS.
 - ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -MSC- (TELCD), CCW ROTATION.
 - 2 YEAR PARTS WARRANTY.



FAN #2 DUB5HFA - EXHAUST FAN (KEF (GRILL))



TOP VIEW

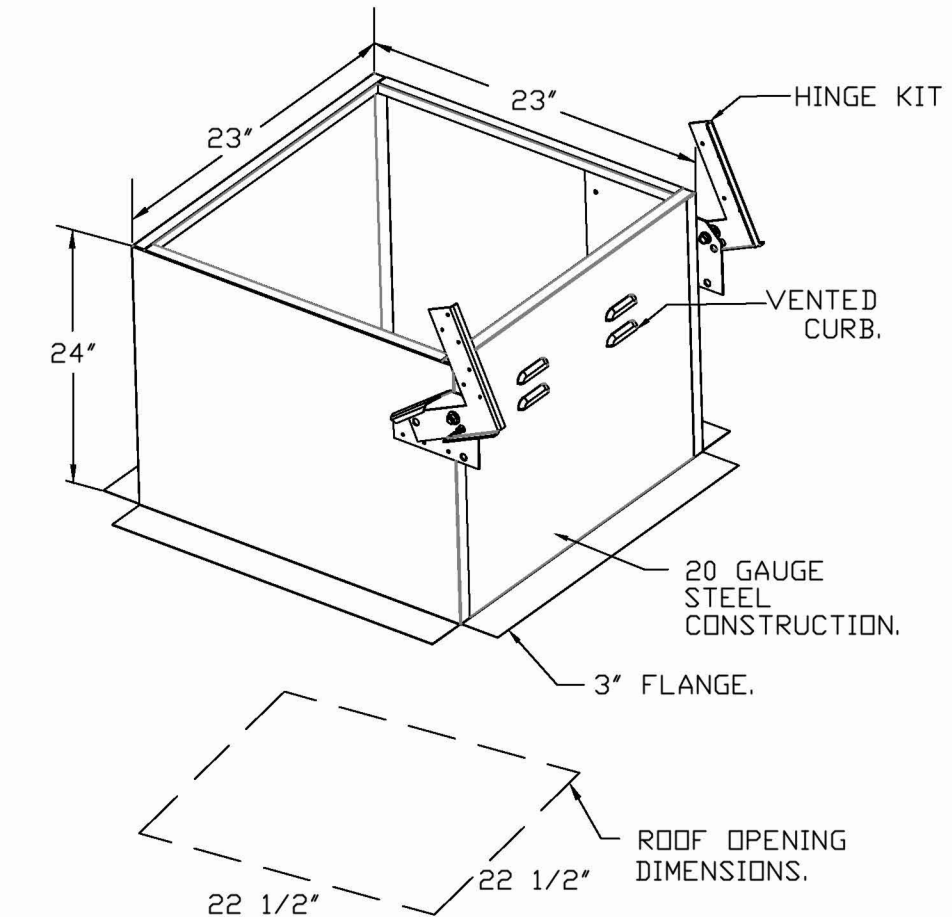
FEATURES:

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- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
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 - ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -MSC- (TELCD), CCW ROTATION.
 - 2 YEAR PARTS WARRANTY.



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Cheshire, CT, 06408

DATE: 4/7/2025
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DRAWN BY: EB
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 5

ROOF EQUIPMENT CURBS TO BE PROVIDED BY LANDLORD. INSTALLATION OF CURBS TO BE COORDINATED BETWEEN LANDLORD, SHAKE SHACK, AND GENERAL CONTRACTOR.

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Bergmeyer

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HEI 2025-06-06 BID/PERMIT SET

SHAKE SHACK

SHAKE SHACK SHOPS AT STONEBRIDGE

2053 HIGHLAND AVE, UNIT E 120
CHESHIRE, CT 06410
SHACK #1730

IFC SET

CAPTIVEAIRE DRAWINGS

DRAWN BY: Author
CHECKED BY: Checker
JOB NO: 2025040

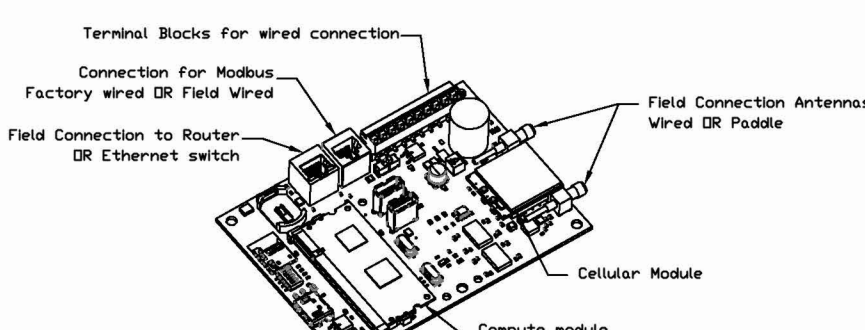
M705

www.bergmeyer.com
380 E 20th Street
Los Angeles, CA 90012
213.337.1090

380 N High St.
Boston, MA 02210
617.542.1025
380.900.8887

ELECTRICAL PACKAGE - JOB#7454358

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				UTILITY CABINET LEFT	QUANTITY		FAN TAG	TYPE	#	HP	VOLTS	FLA
1		SC-320110MA	UTILITY CABINET LEFT	LEFT	1 LIGHT	SMART CONTROLS THERMOSTATIC CONTROL W/ RELAY ON/OFF WITH SUPPLY	KEF (Fryer)	EXHAUST	1	0.500	208	3.8
				HOOD # 1	1 FAN		KEF (GHIU)	EXHAUST	1	0.750	208	5.2

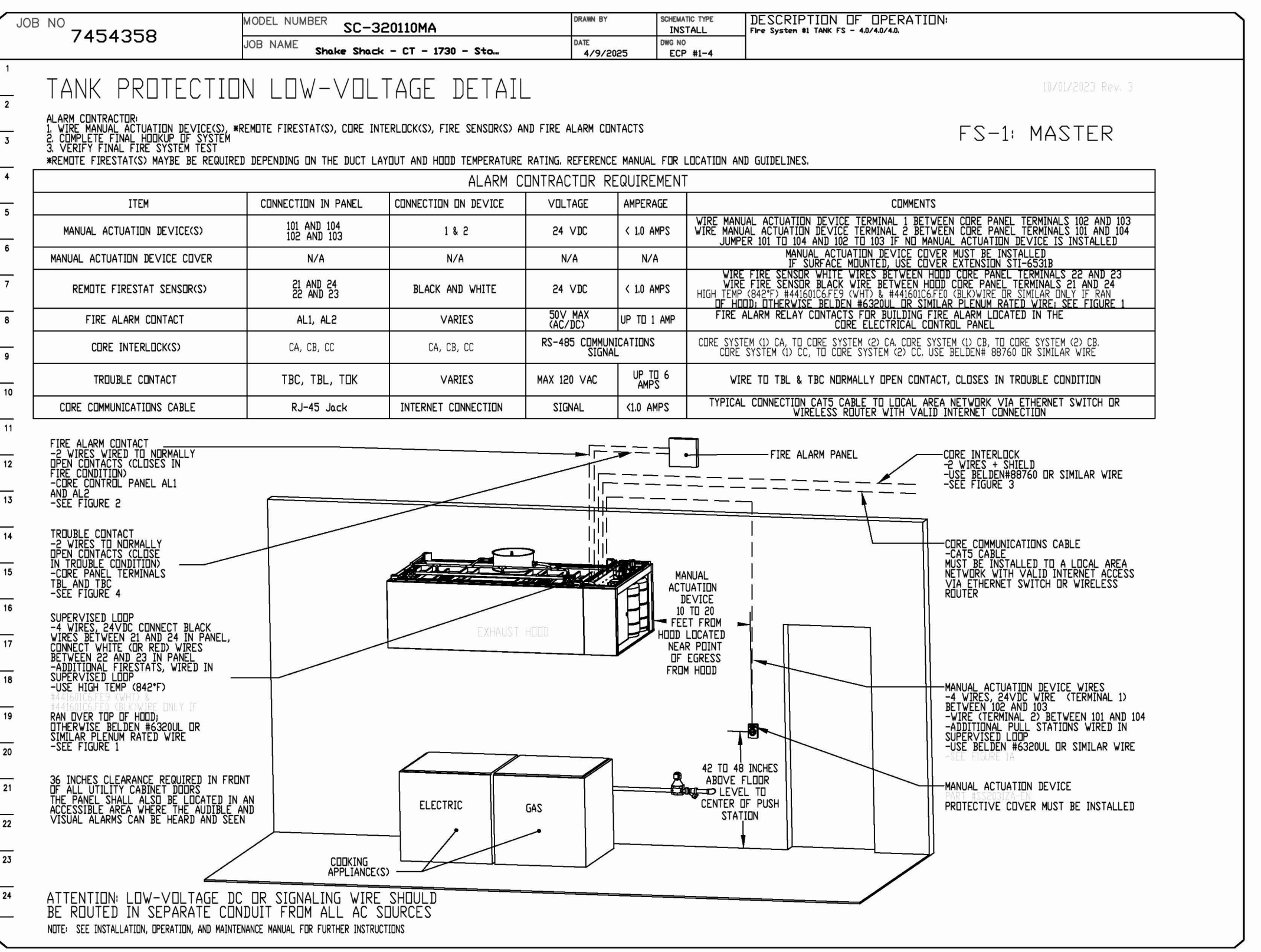
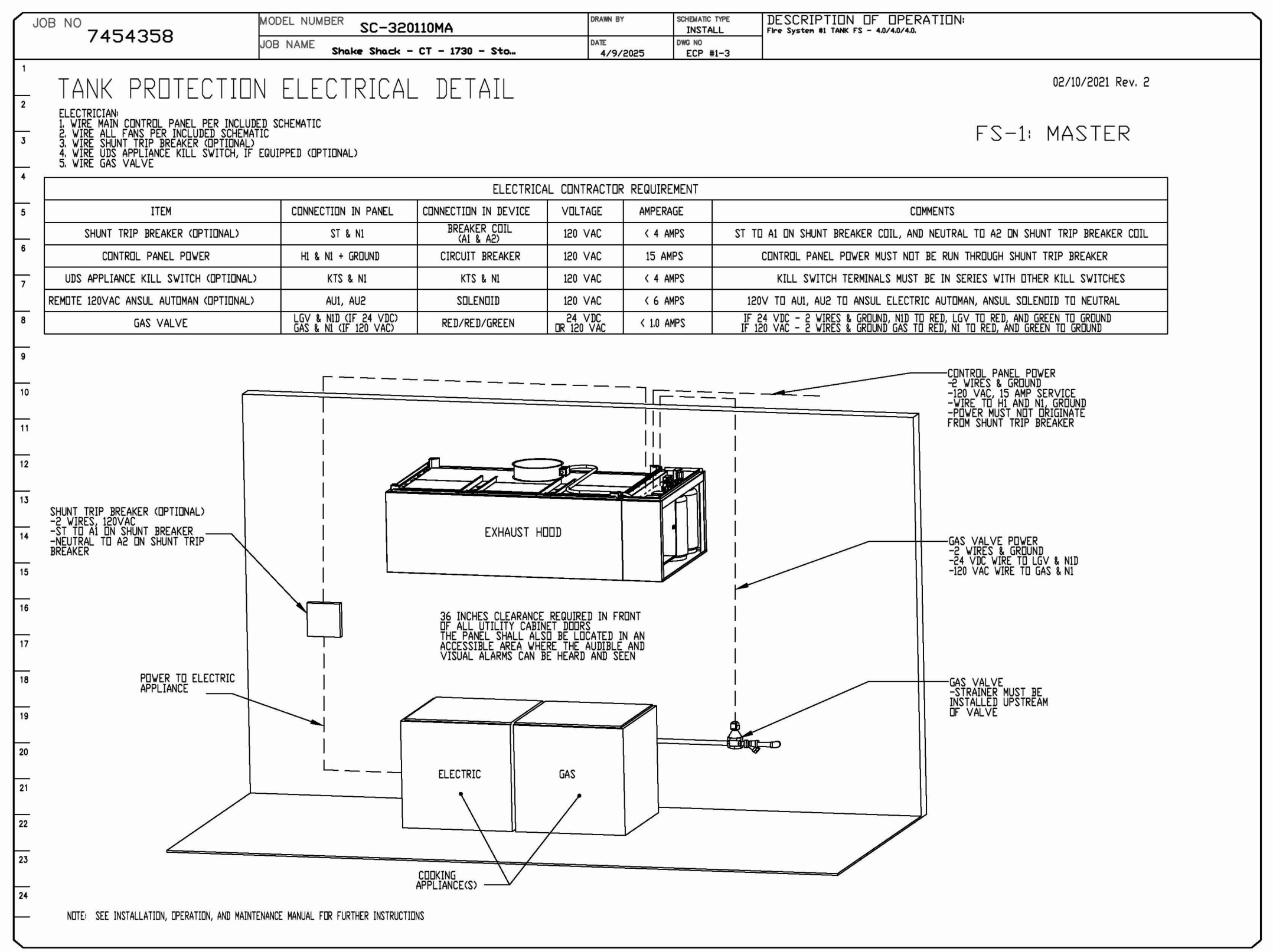
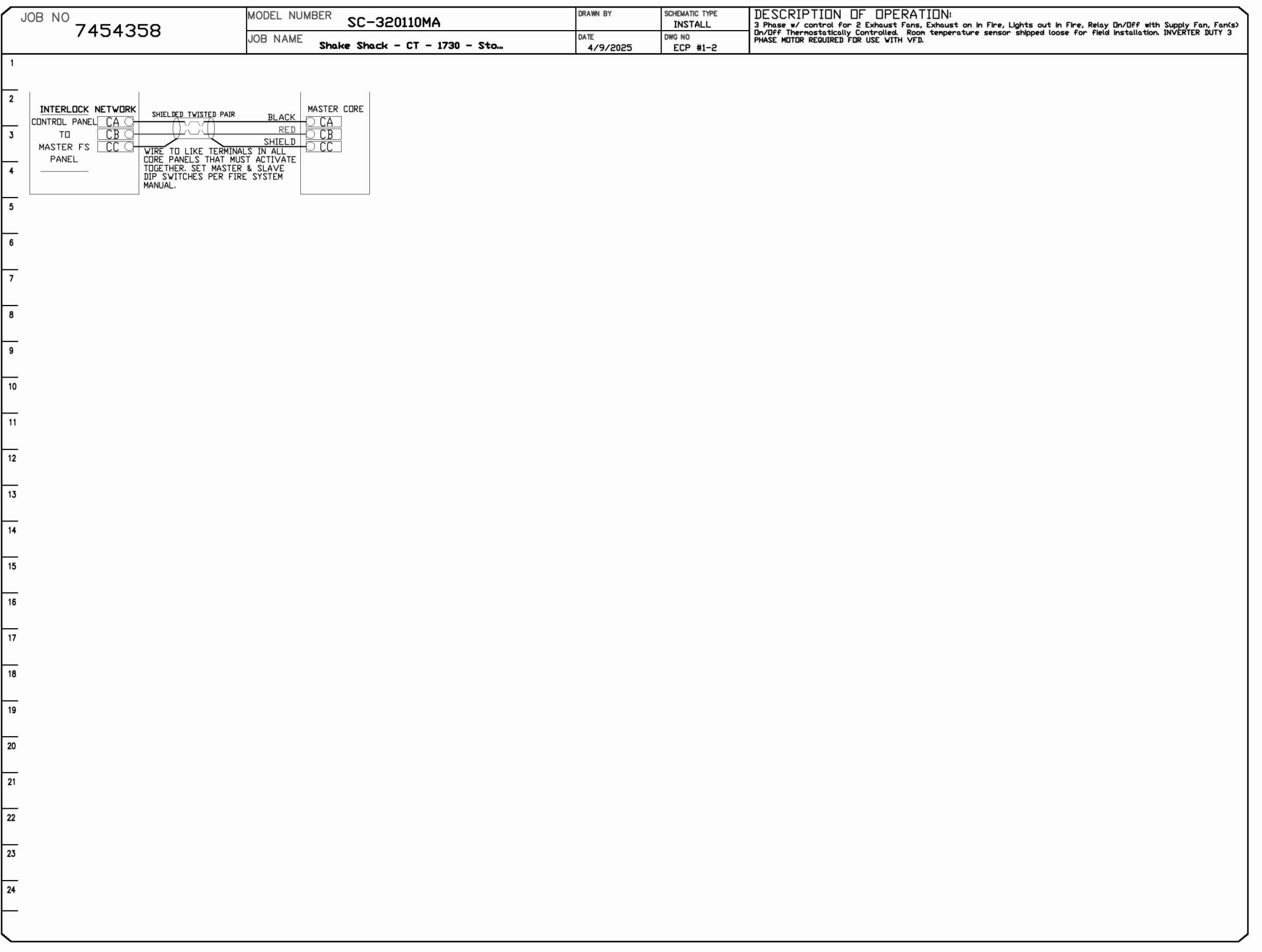
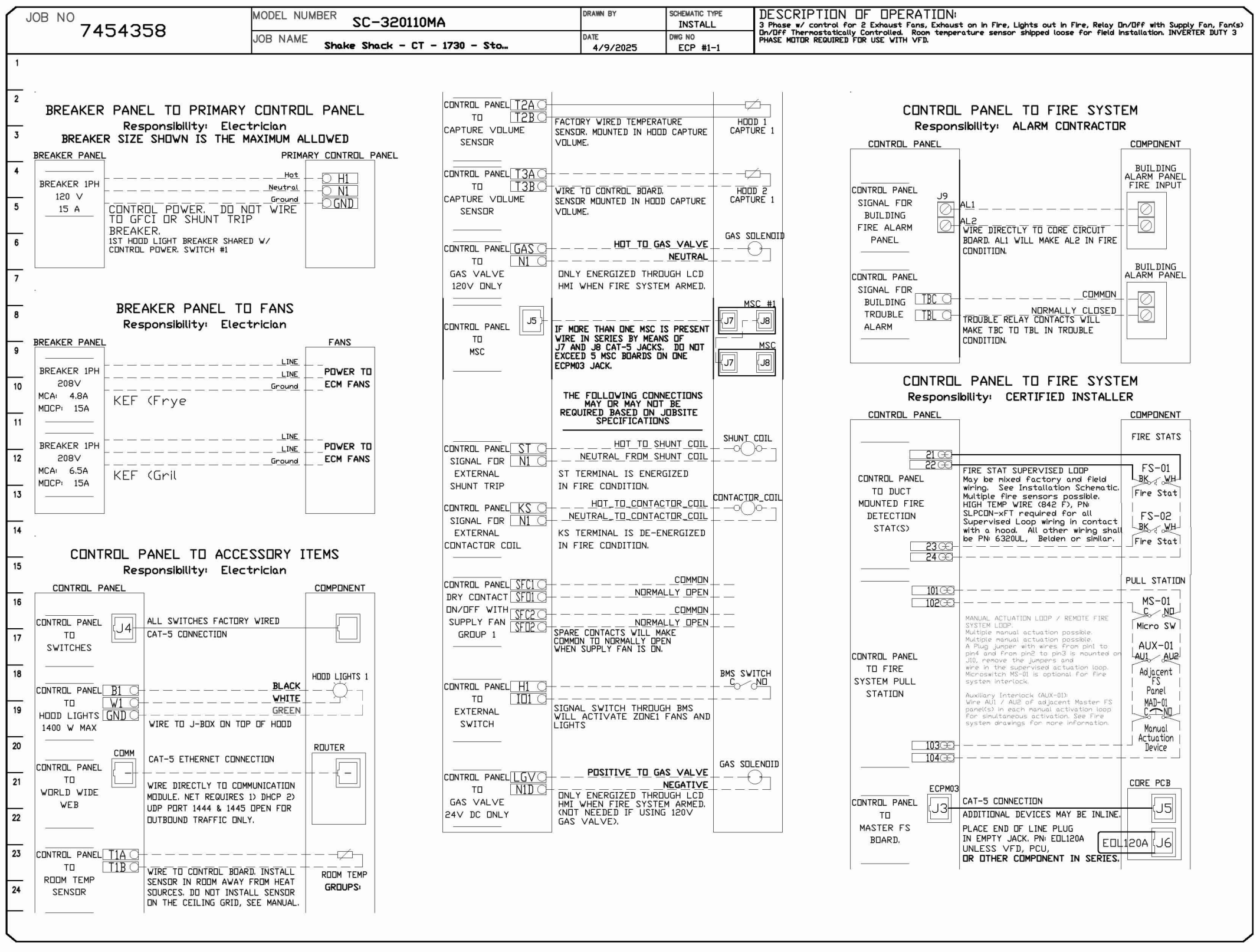


CASink Monitor and Control

— 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 on the points list.
 — Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL on 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

DC Packages	Function	DC Packages	Function
Room Temperature	MONITOR	Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR	Duct Temperature(s)	MONITOR
MMA Discharge Temperature	MONITOR	MMA Discharge Temperature	MONITOR
Mechan. RTV Discharge Temperature	MONITOR	Mechan. RTV Discharge Temperature	MONITOR
Fan Speed	MONITOR	Controler Faults	MONITOR
Fan Amperage	MONITOR	Fan Status	MONITOR
Fan Power	MONITOR	Fan Status	MONITOR
FFO Faults	MONITOR	Fan Status	MONITOR
Controler Faults	MONITOR	FFO Filter Clap Permalaps	MONITOR
Fan Faults	MONITOR	Fan Condition	MONITOR
Fan Status	MONITOR	COOP Fire System	MONITOR
FFO Faults	MONITOR	Building Pressure	MONITOR
FFO Filter Clap Permalaps	MONITOR	Fan Status(s)	MONITOR & CONTROL
Fan Condition	MONITOR	Alpha Status(s)	MONITOR & CONTROL
COOP Fire System	MONITOR	Wash Button	MONITOR & CONTROL
Building Pressure	MONITOR & CONTROL		
Fan Power System	MONITOR & CONTROL		
Wash Button	MONITOR & CONTROL		
Alpha Button	MONITOR & CONTROL		
Wash Button	MONITOR & CONTROL		



REVISIONS

NO.	DESCRIPTION	DATE

CAPTIVEAIRE
 Eastern PA Mechanical
 225 E. City Line Avenue, Suite #103, Bala Cynwyd, PA, 19004
 PHONE: (267) 804-4128 EMAIL: reg108@captiveaire.com

Shake Shack - CT - 1730 - Stonebridge (Kitchen)
 Cheshire, CT, 06408

DATE: 4/7/2025
 DWG.#: 7454358
 DRAWN BY: EB
 SCALE: 3/4" = 1'-0"
 MASTER DRAWING
 SHEET NO. 6

Bergmeyer
 CONSULTANTS
 SEAL SIGNATURE: [Signature Box]
 FOR REFERENCE ONLY: [Signature Box]

1 HEI 2025-07-21 IFC SET
 2 HEI 2025-06-06 BID/PERMIT SET

SHAKE SHACK
 SHAKE SHACK SHOPS AT STONEBRIDGE
 2053 HIGHLAND AVE, UNIT E 120
 CHESHIRE, CT 06410
 SHACK #1730
 IFC SET
 CAPTIVEAIRE DRAWINGS

DRAWN BY: Author
 CHECKED BY: Checker
 JOB NO: 2025040

M706

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DOAS/RTU FAN SCHEDULE - JOB#7454470

FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	FAN INFORMATION				ELECTRICAL INFORMATION				COOLING INFORMATION				REHEAT INFORMATION				GAS HEAT INFORMATION				AEL MINIMUM ROOM VOLUME	NOTES																				
				MANUFACTURER	BLDWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	WEIGHT (LBS)	ESP	HP	PHASE	VOLT	MCA	MDCP	OUTSIDE AIR DB	MIXED AIR WB	LEAVING AIR DB	LEAVING AIR WB	DP	TOTAL CAPACITY	TEER	ISMRE			DISCHARGE DB	DISCHARGE WB	DESIRED DB	DESIRED WB	MAX	MOISTURE REMOVAL RATE	GAS TYPE	INPUT BTUS	OUTPUT BTUS	TEMP RISE	REQUIRED INPUT GAS PRESSURE	ROOM AREA (FT ²)	AIRFLOW (CFM)	HEIGHT (FT)						
1	RTU-1	1	CAS-HVAC1-1150-18-10T	CAPTIVEAIRE	18MF-1-RTU	1000	800	1800	1511	0.800	2.00	3	208	55.1A	60A	86.1°F	76.4°F	79.9°F	68.9°F	47.6°F	47.3°F	47.1°F	114.2	MBH	63.0	MBH	14.8	5.9	70.0°F	56.9°F	45.4	MBH	71.9	MBH	45.3	LBS/HR	NATURAL	138343	112058	55°F	7 IN. W.C. - 14 IN. W.C.	345.1	621	7.2	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19
2	RTU-2	1	CAS-HVAC3-1300-24-20T	CAPTIVEAIRE	24MF-3-RTU	3400	1800	5200	2770	0.800	7.50	3	208	99A	110A	86.1°F	76.4°F	78.9°F	67.6°F	51.2°F	51.1°F	51.1°F	256.0	MBH	156.7	MBH	18.2	6.0	70.0°F	58.7°F	109.4	MBH	129.6	MBH	89.0	LBS/HR	NATURAL	260494	211000	36°F	7 IN. W.C. - 14 IN. W.C.	572.7	1031	7.2	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,18,19,20

NOTES:

- INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL.
- DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE.
- INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER.
- REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE.
- EC MOTOR CONDENSING FANS.
- ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE.
- SUCTION LINE ACCUMULATOR.
- FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY, 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER.
- AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT).
- 80% EFFICIENT FURNACE, WITH MODULATING INDUCER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 6:1 TURNDOWN WITH NG AND 5:1 TURNDOWN WITH LP.
- SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE.
- FULLY MODULATING HOT GAS REHEAT.
- 15 DEGREE LOW AMBIENT OPERATION.
- HALL GUARD FOR CONDENSING COIL.
- RTU ECONOMIZER WITH DIFFERENTIAL ENTHALPY CONTROL.
- BAROMETRIC RELIEF DAMPER.
- 1" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-4.3 INSULATION-MINIMUM 24GA EXTERIOR W/ 18GA BARE.
- DOWN DISCHARGE/DOWN RETURN.
- MINIMUM ROOM AREA ASSUMED 7.2' SUPPLY DIFFUSER HEIGHT AND IS CALCULATED PER UL60325-2-40 4TH ED. VALUES BASED ON FACTORY CHARGE. ACTUAL SITE CHARGE MAY DIFFER.
- 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 20GA EXTERIOR W/ 14GA BARE.

FOR QUESTIONS, CALL THE
 Eastern PA Mechanical
 REGION 108
 PHONE: (267) 504 - 4126
 EMAIL: reg108@captiveaire.com

FAN OPTIONS

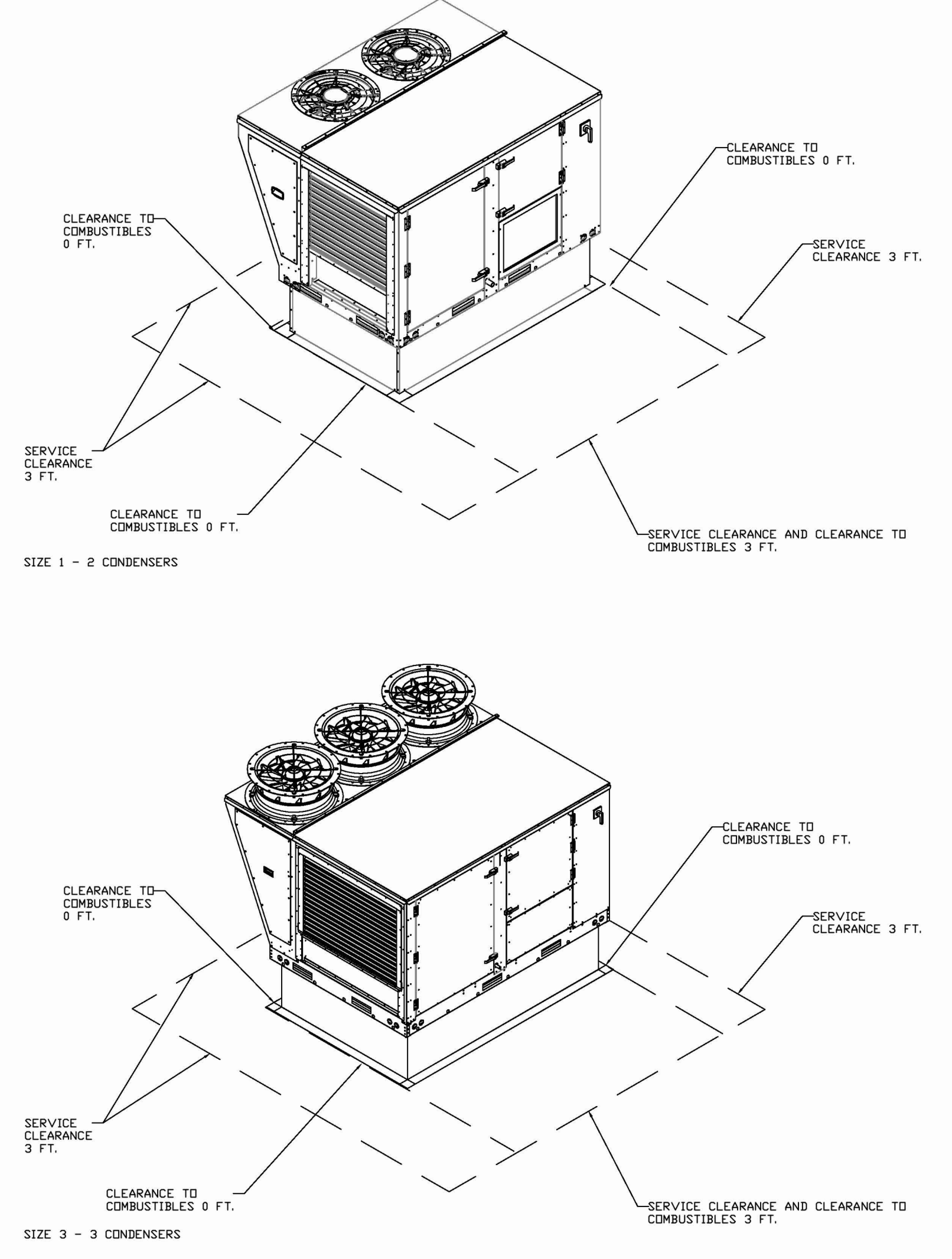
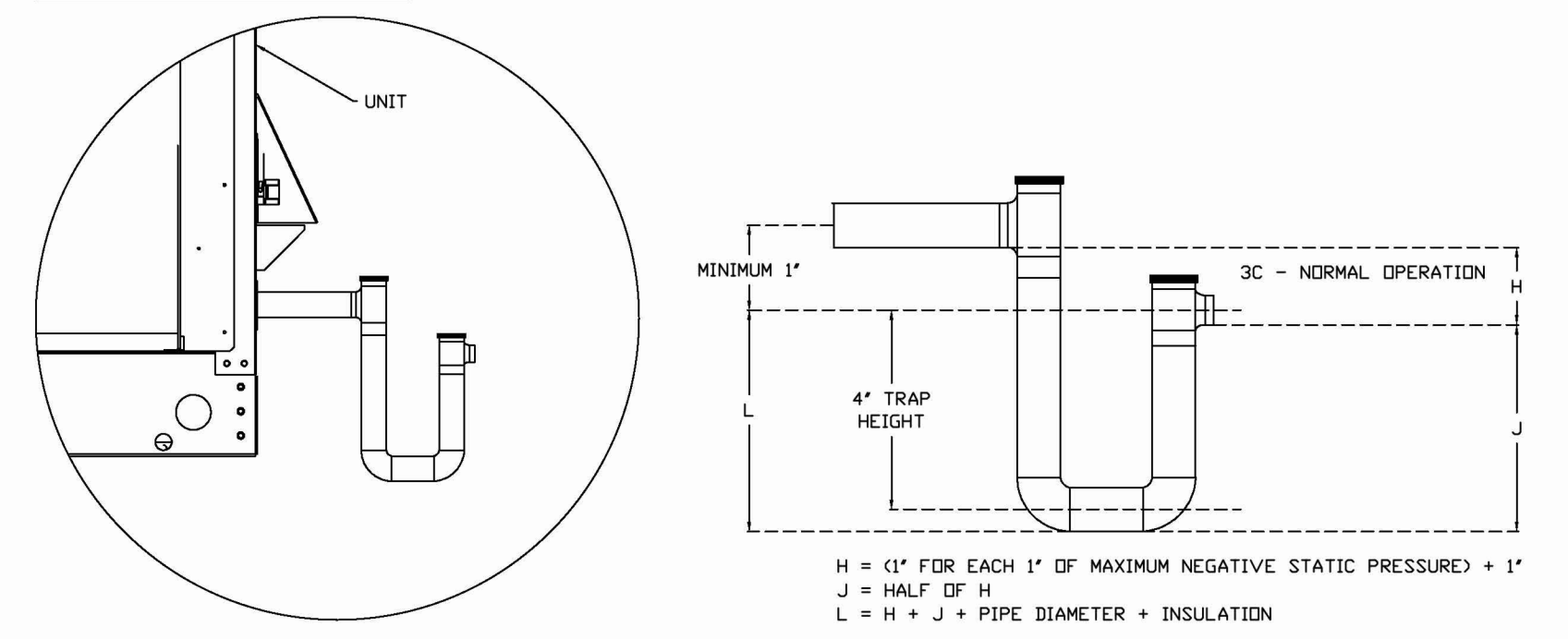
FAN UNIT NO	TAG	QTY	DESCRIPTION
1	RTU-1	1	INLET PRESSURE GAUGE, 0-35"
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
		1	COOLING OVERRIDE
		1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #8B, #47, "MA", OR "E2" PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE.
		1	RTU BLOWER DOOR SWITCH
		1	2" MERV 13 FILTERS FOR RTU1 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU1 (QTY. 4)
		1	OVERHEAT STAT
		1	TOTAL CFM MONITORING
		1	VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
		1	RTU3 DOWN DISCHARGE
		1	20 TON SIZE 1 MODULATING COOLING OPTION, R454B REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
		1	LOW AMBIENT COOLING OPERATION - DOWN TO 0F AMBIENT
		1	R454B LEAK DETECTOR OPTION FOR RTU3
		1	OCCUPIED SCHEDULING
		1	INTAKE FIRESTAT SET TO 135°F
		2	RTU-2
1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED		
1	20 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL - R454B		
1	RTU3 CURB DUCT HANGER		
1	24VAC FIRE INPUT		
1	COMMERCIAL SMOKE DETECTOR/ALARM INTERLOCK - ALARM SUPPLIED BY OTHERS		
1	CLOGGED FILTER SWITCH - NOTIFICATION ON HMI		
1	RTU3 CONVENIENCE OUTLET (GFCD), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX		
1	RTU ECONOMIZER - DIFFERENTIAL ENTHALPY CONTROL		
1	RTU ECONOMIZER BAROMETRIC RELIEF		
1	RTU INTAKE/RETURN DAMPER - MANUAL CONTROL VIA HMI		
1	RTU3 DOWN RETURN		
1	2" METAL MESH FILTERS FOR RTU3 OUTDOOR INTAKE		
1	RTU3 HALL GUARD		
1	VAV PACKAGE W/ MANUAL/DDC CONTROL (S71 VFD INCLUDED)		
1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)		
2	RTU-2		
		1	INLET PRESSURE GAUGE, 0-35"
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
		1	COOLING OVERRIDE
		1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #8B, #47, "MA", OR "E2" PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE.
		1	RTU BLOWER DOOR SWITCH
		1	RTU3 DOWN DISCHARGE
		1	2" MERV 13 FILTERS FOR RTU3 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU3 (QTY. 4)
		1	OVERHEAT STAT
		1	TOTAL CFM MONITORING
		1	VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
		1	20 TON MODULATING COOLING OPTION, R454B REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
		1	LOW AMBIENT COOLING OPERATION - DOWN TO 0F AMBIENT
		1	R454B LEAK DETECTOR OPTION FOR RTU3
		1	OCCUPIED SCHEDULING
		1	INTAKE FIRESTAT SET TO 135°F
1	FREEZE/STAT		
1	DISCHARGE FIRESTAT SET TO 240°F		
1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED		
1	20 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL - R454B		
1	RTU3 CURB DUCT HANGER		
1	24VAC FIRE INPUT		
1	COMMERCIAL SMOKE DETECTOR/ALARM INTERLOCK - ALARM SUPPLIED BY OTHERS		
1	CLOGGED FILTER SWITCH - NOTIFICATION ON HMI		
1	RTU3 CONVENIENCE OUTLET (GFCD), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX		
1	RTU ECONOMIZER - DIFFERENTIAL ENTHALPY CONTROL		
1	RTU INTAKE/RETURN DAMPER - MANUAL CONTROL VIA HMI		
1	ZIEHL FAN EXHAUST FOR RTU3 - MANUAL CONTROL. 3000 CFM MAX AT 0"		
1	RTU3 DOWN RETURN		
1	2" METAL MESH FILTERS FOR RTU3 OUTDOOR INTAKE		
1	RTU3 ECONOMIZER BAROMETRIC RELIEF		
1	RTU3 HALL GUARD		
1	VAV PACKAGE W/ MANUAL/DDC CONTROL (S71 VFD INCLUDED)		
1	LOAD REACTOR MOUNTED IN FAN		
1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)		
1	EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET		

CURB ASSEMBLIES

NO	DN FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	RTU-1	83 LBS	CURB	41.000"W X 71.000"L X 14.000"H INSULATED.
2	# 2	RTU-2	104 LBS	CURB	59.500"W X 91.000"L X 14.000"H INSULATED.

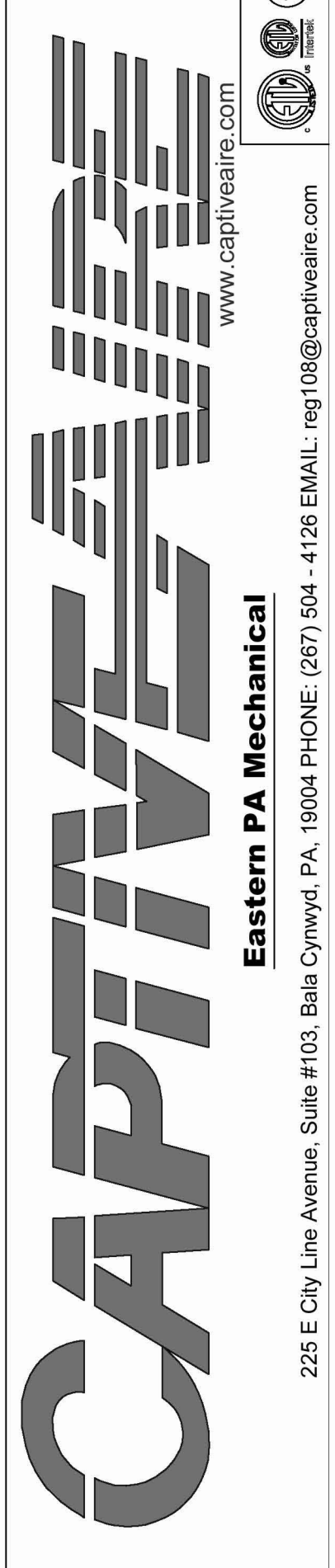
HMI SCHEDULE				
UNIT NUMBER	HMI #	HMI LOCATION	TEMP AVERAGING	MODBUS ADDRESS
FAN #1	HMI #1	- UNIT	IN UNIT	NOT AVERAGED 55
FAN #1	HMI #2	- SPACE	NOT AVERAGED	56
FAN #2	HMI #1	- UNIT	IN UNIT	NOT AVERAGED 55
FAN #2	HMI #2	- SPACE	NOT AVERAGED	56

RTU CONDENSATE DRAIN TRAP DETAIL



REVISIONS

NO.	DESCRIPTION	DATE



Snake Shack - CT - 1730 - Stonebridge (HVAC)
 Cheshire, CT, 06408

DATE: 4/24/2025
 DWG.#: 7454470
 DRAWN BY: Joe.shilba
 SCALE: 1/2" = 1'-0"
 MASTER DRAWING
 SHEET NO. 1

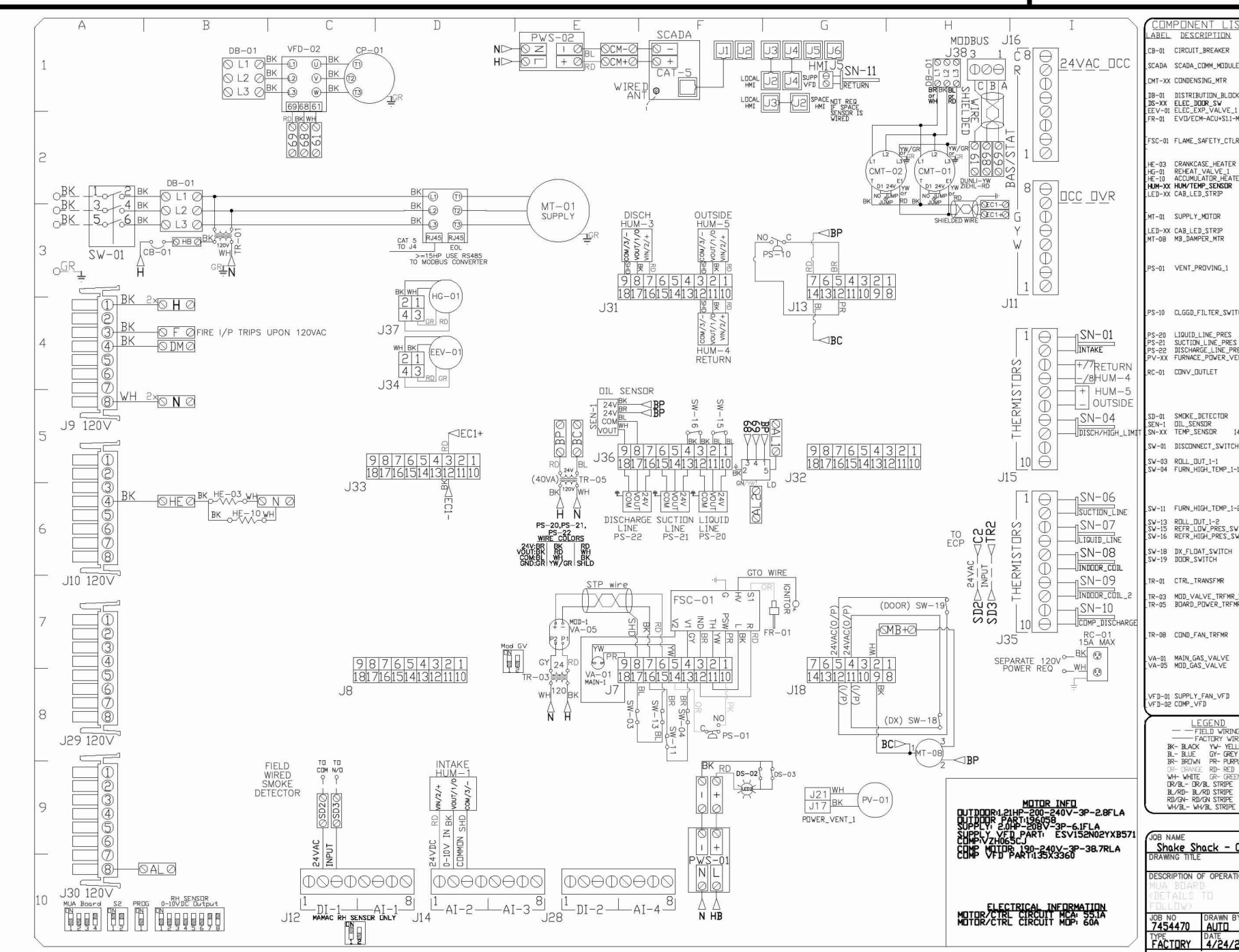
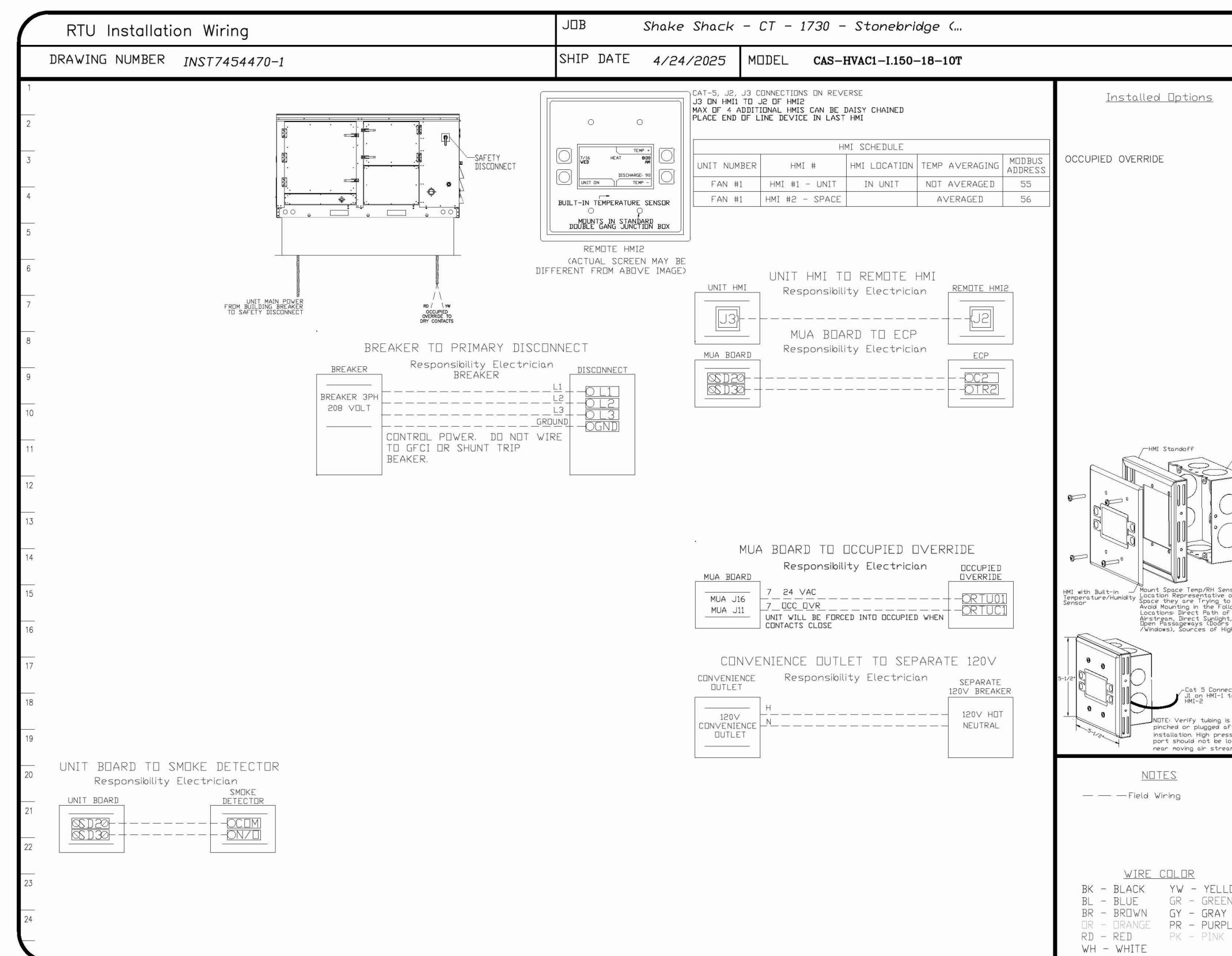
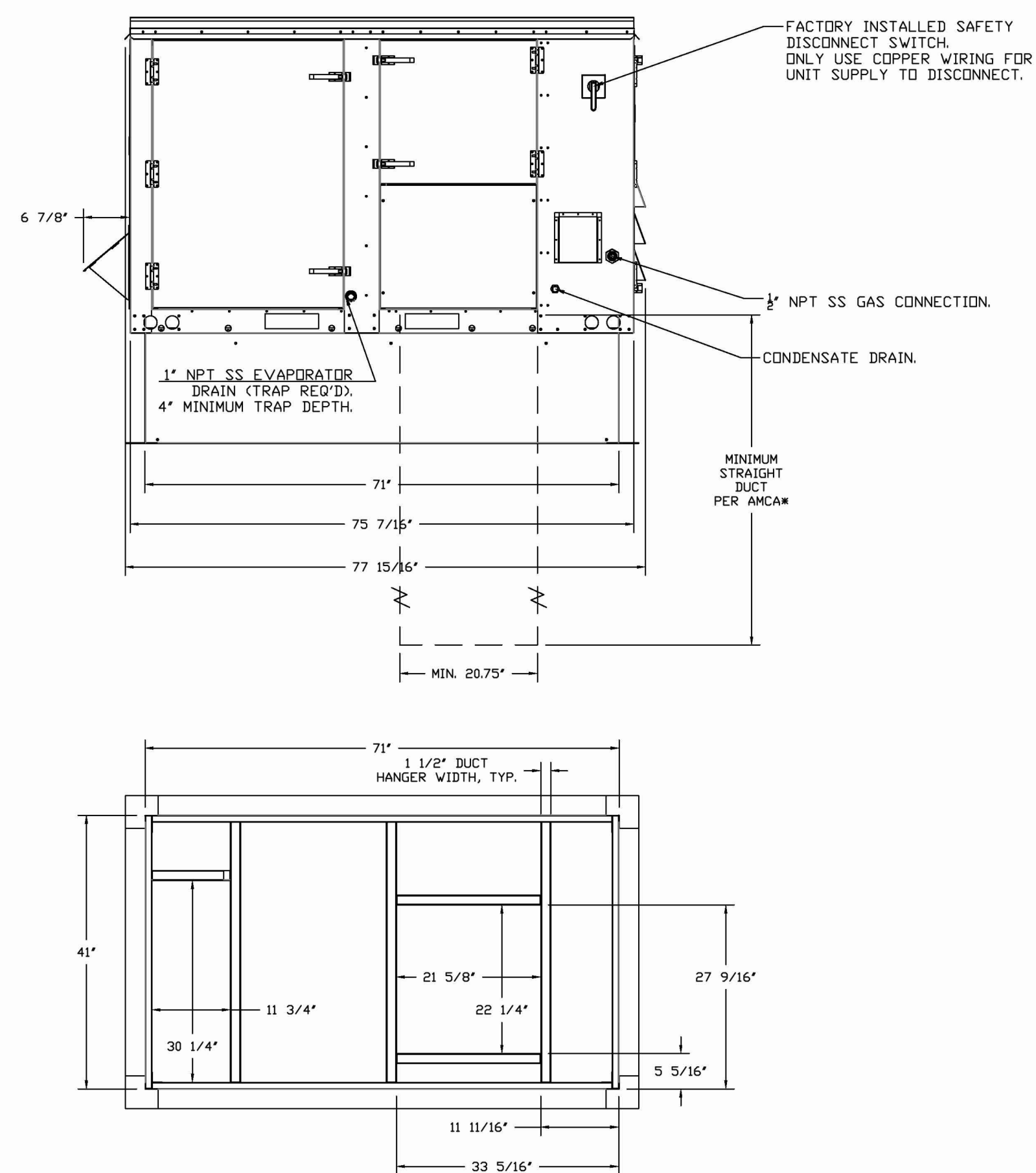
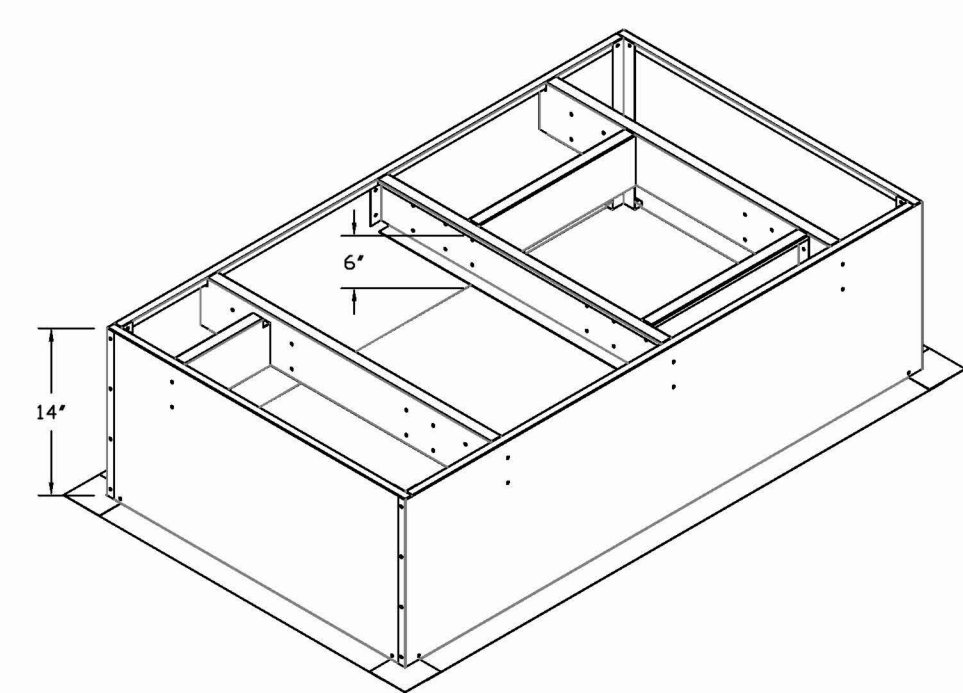
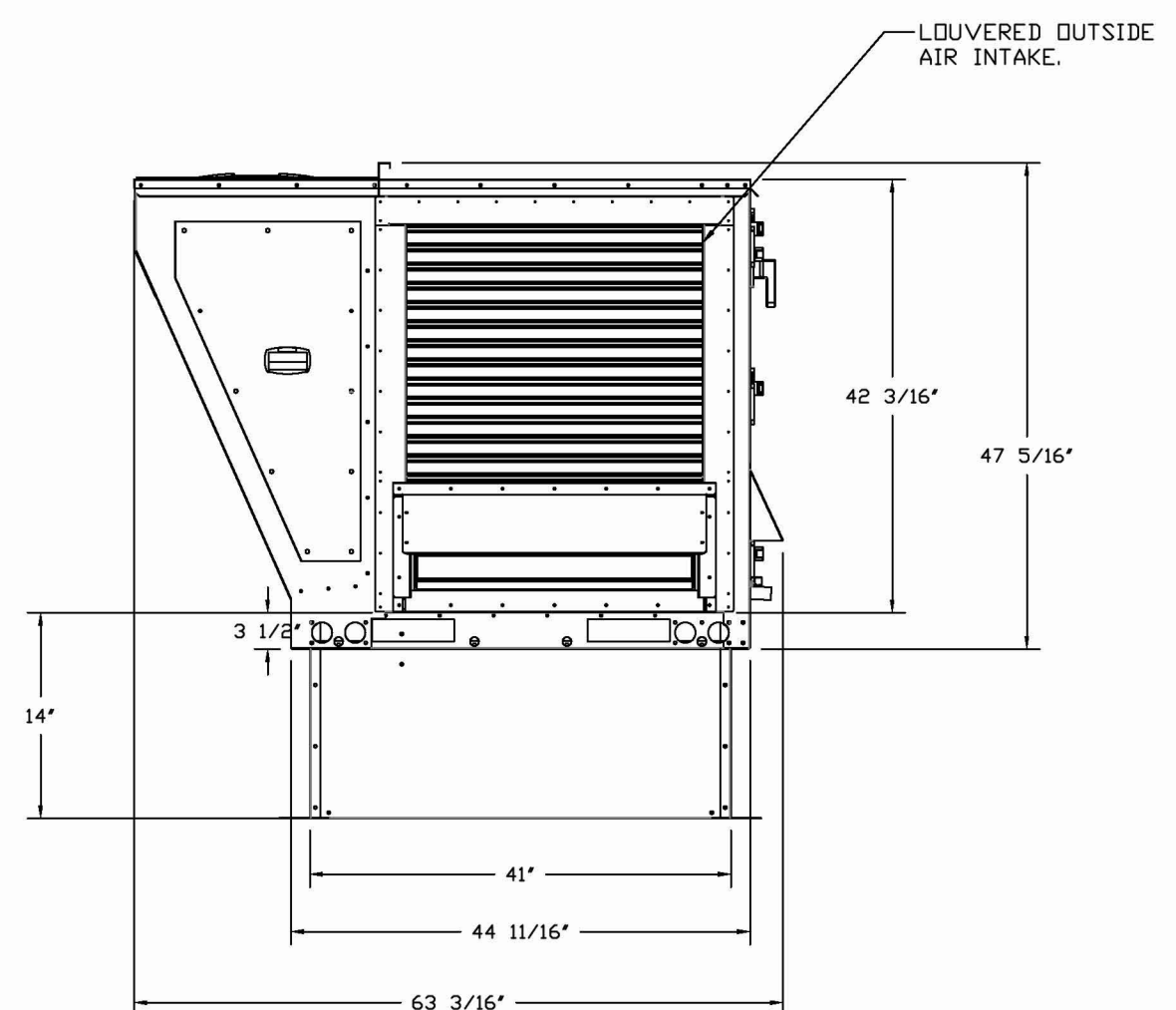
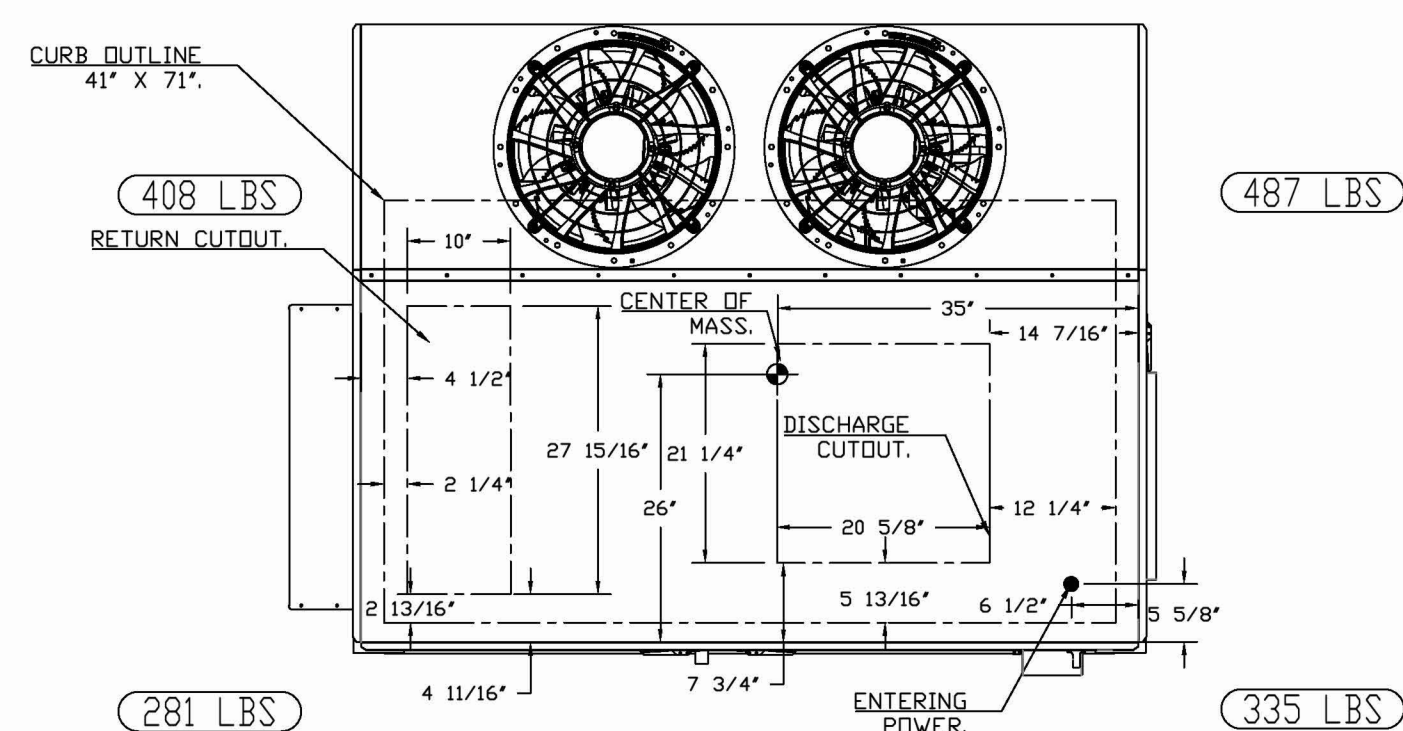
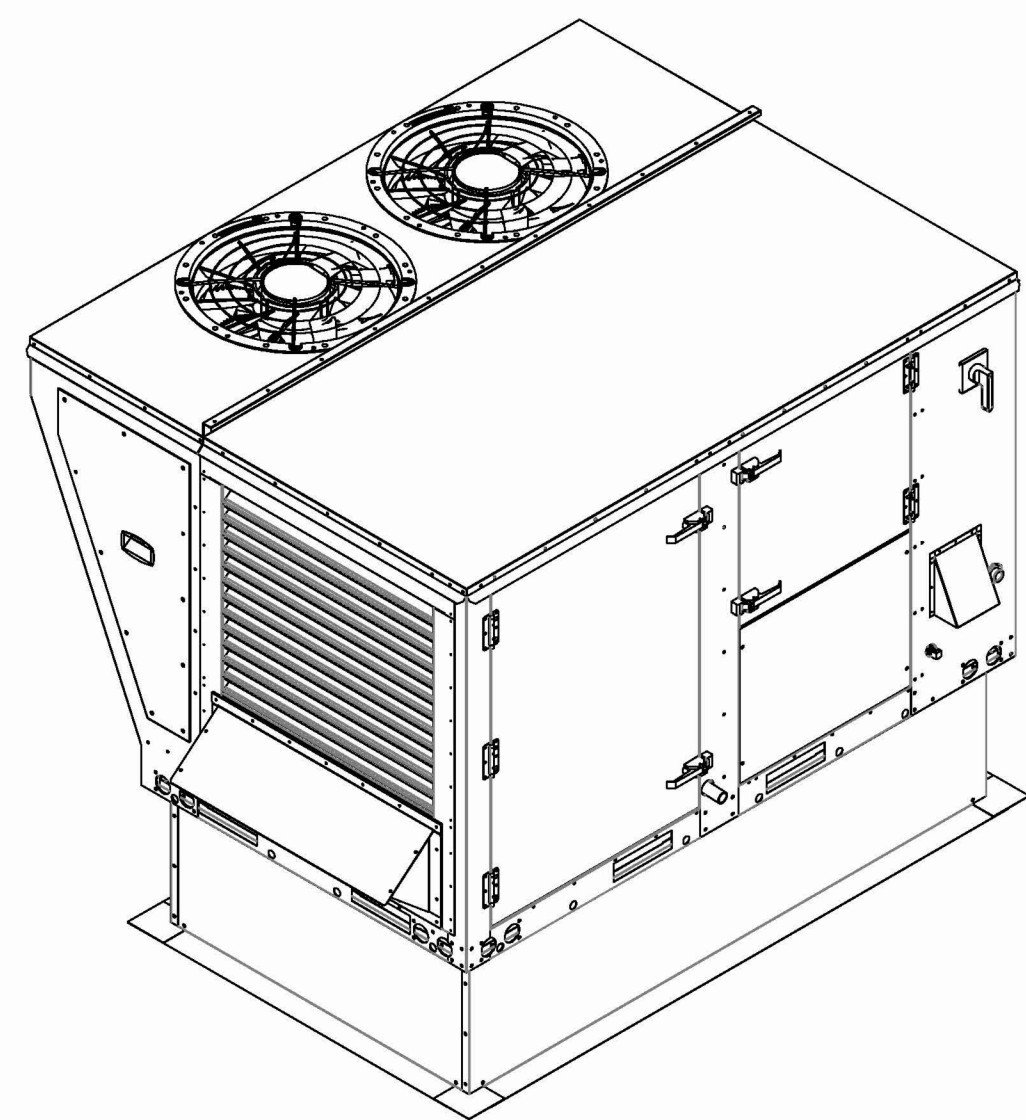
Bergmeyer
 CONSULTANTS
 SEAL SIGNATURE: [Signature Box]
 FOR REFERENCE ONLY: [Signature Box]

SHAKE SHACK SHOPS AT STONEBRIDGE
 2053 HIGHLAND AVE, UNIT E 120
 CHESHIRE, CT 06410
 SHACK #1730
 IFC SET

CAPTIVEAIRE DRAWINGS
 DRAWN BY: Author
 CHECKED BY: Checker
 JOB NO: 2025040

SHAKE SHACK
 M707

THE DOCUMENTATION CONTAINED ON THIS SHEET WAS NOT PREPARED BY HENDERSON ENGINEERS AND IS INCLUDED IN THIS SET FOR REFERENCE ONLY. HENDERSON ENGINEERS REVIEWED THE DOCUMENTATION ON THIS SHEET FOR GENERAL COMPLIANCE WITH DESIGN INTENT. SUPPLIER IS RESPONSIBLE THAT ALL FURNISHED EQUIPMENT ON THIS SHEET COMPLIES WITH APPLICABLE LOCAL, STATE, AND FEDERAL LAWS, CODES, AND REGULATIONS.



FAN #1 CAS-HVAC1-I.150-18MF-10T - HEATER (RTU-1)

NOTES:

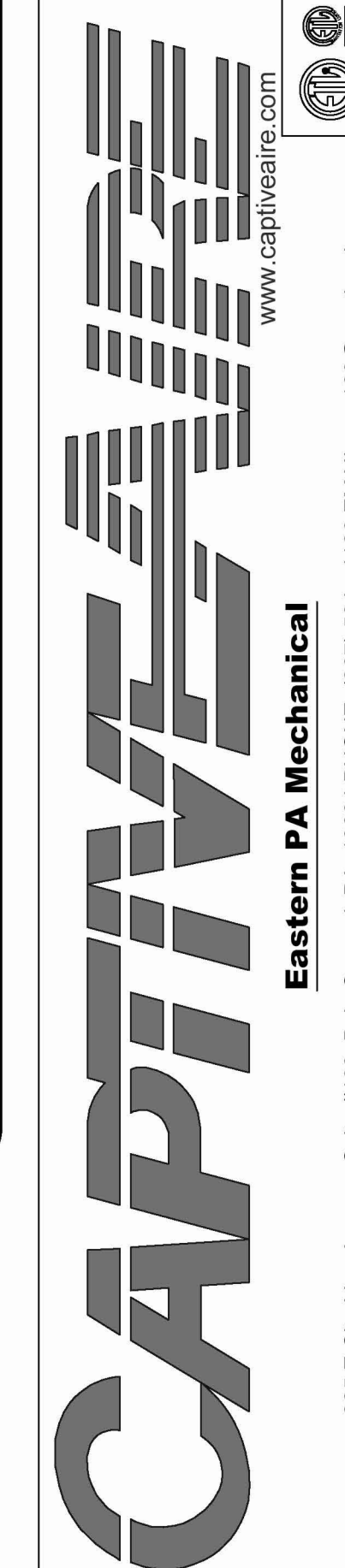
- DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
- DENOTES CORNER WEIGHT.
- ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.
- CONNECTION FROM BREAKER TO UNITS SAFETY DISCONNECT SWITCH TO BE COPPER WIRE ONLY.
- EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET.

*NOTE: INTEGRAL CO2 MONITORING AND CONTROL CAPABILITIES FOR ALL SPACE MOUNTED THERMOSTATS.

ROOF EQUIPMENT CURBS TO BE PROVIDED BY LANDLORD. INSTALLATION OF CURBS TO BE COORDINATED BETWEEN LANDLORD, SHAKE SHACK, AND GENERAL CONTRACTOR.

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REVISIONS	
NO.	DESCRIPTION



Shake Shack - CT - 1730 - Stonebridge (HVAC)
Cheshire, CT, 06408

DATE: 4/24/2025

DWG.#: 7454470

DRAWN BY: Joe.shilba

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

MASTER DRAWING

SHEET NO. 2

NO.	BY	DATE	DESCRIPTION
1	HEI	2025-07-21	IFC SET
	HEI	2025-06-06	BID/PERMIT SET



SHAKE SHACK SHOPS AT STONEBRIDGE

2053 HIGHLAND AVE, UNIT E 120
CHESHIRE, CT 06410
SHACK #1730

IFC SET

CAPTIVEAIRE DRAWINGS

DRAWN BY: Author

CHECKED BY: Checker

JOB NO: 2025040

M708

Bergmeyer

CONSULTANTS:

SEAL SIGNATURE:

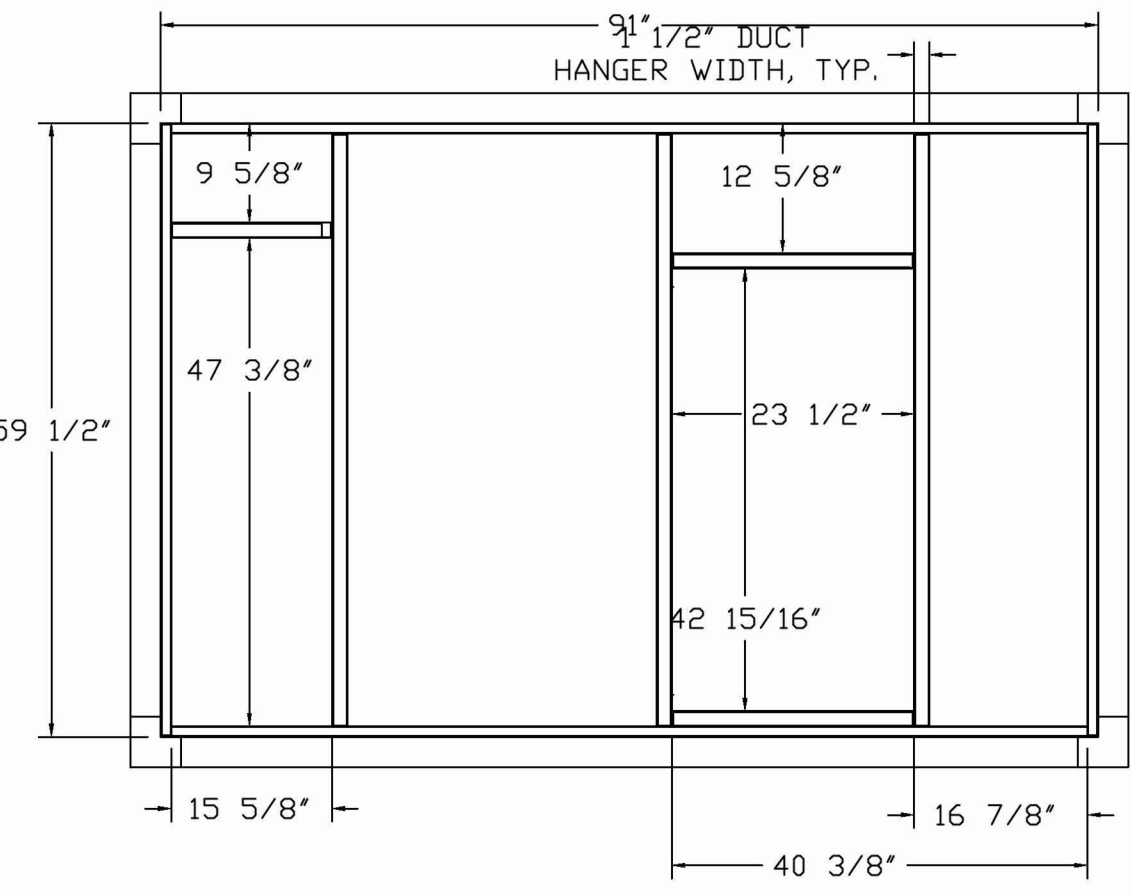
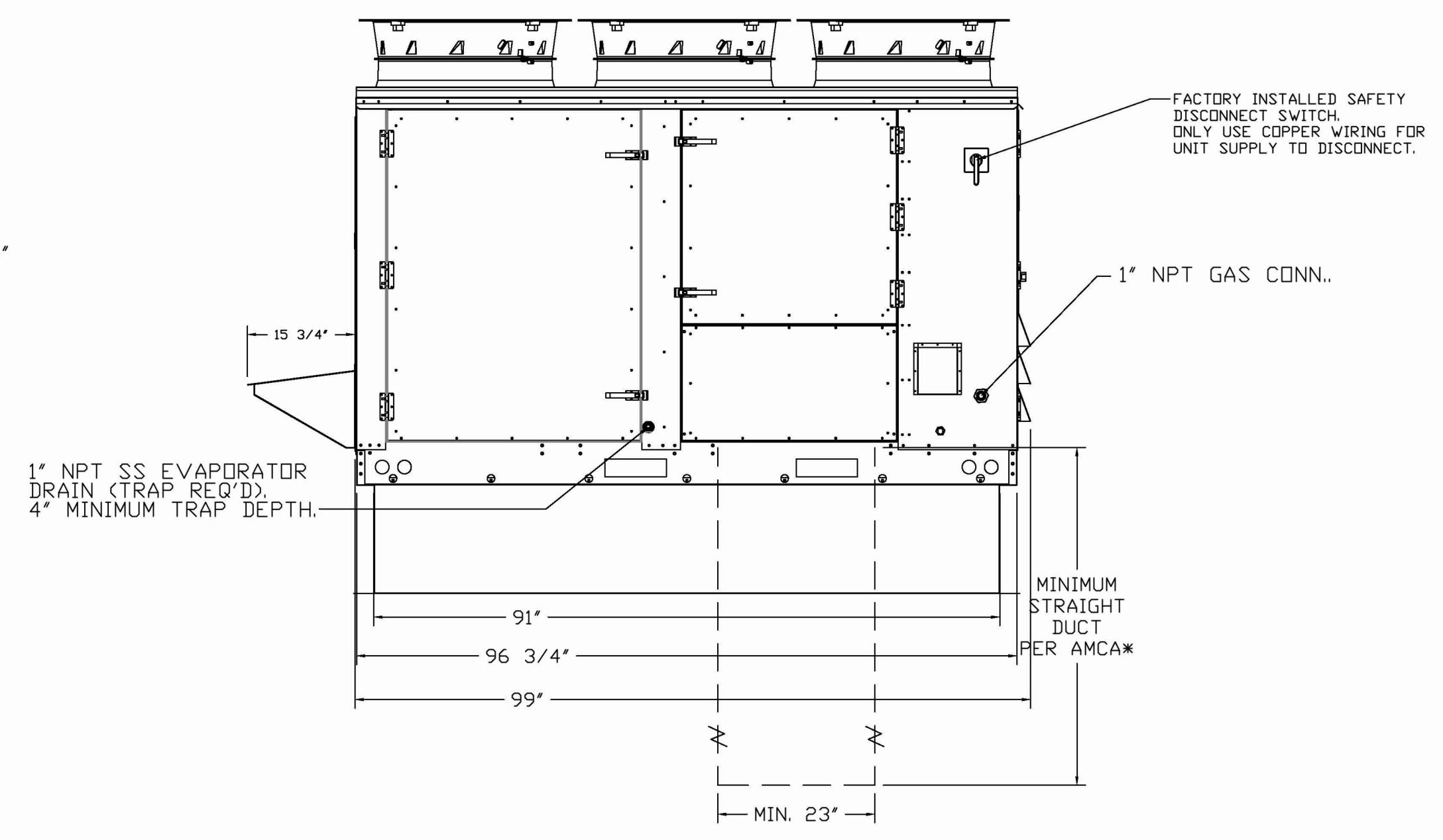
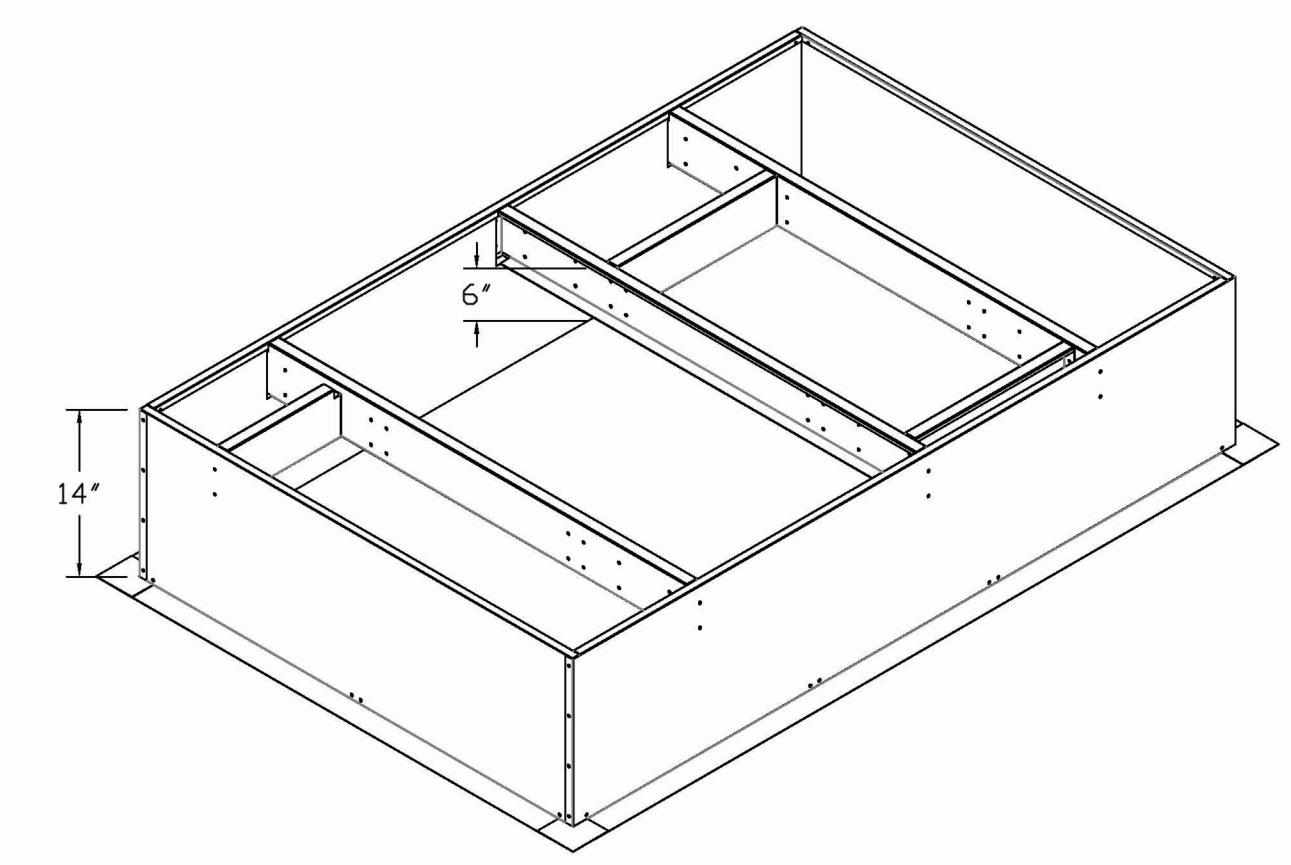
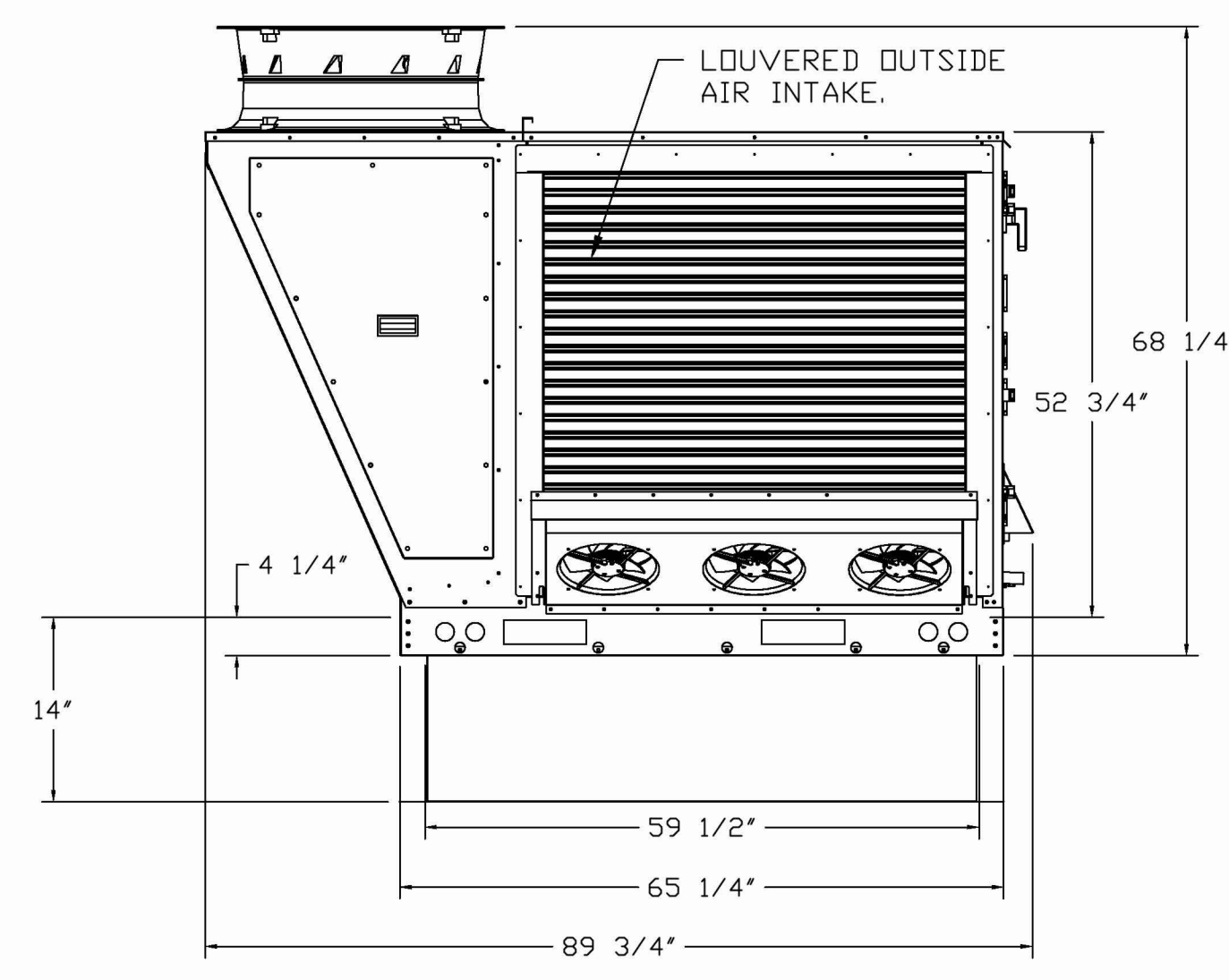
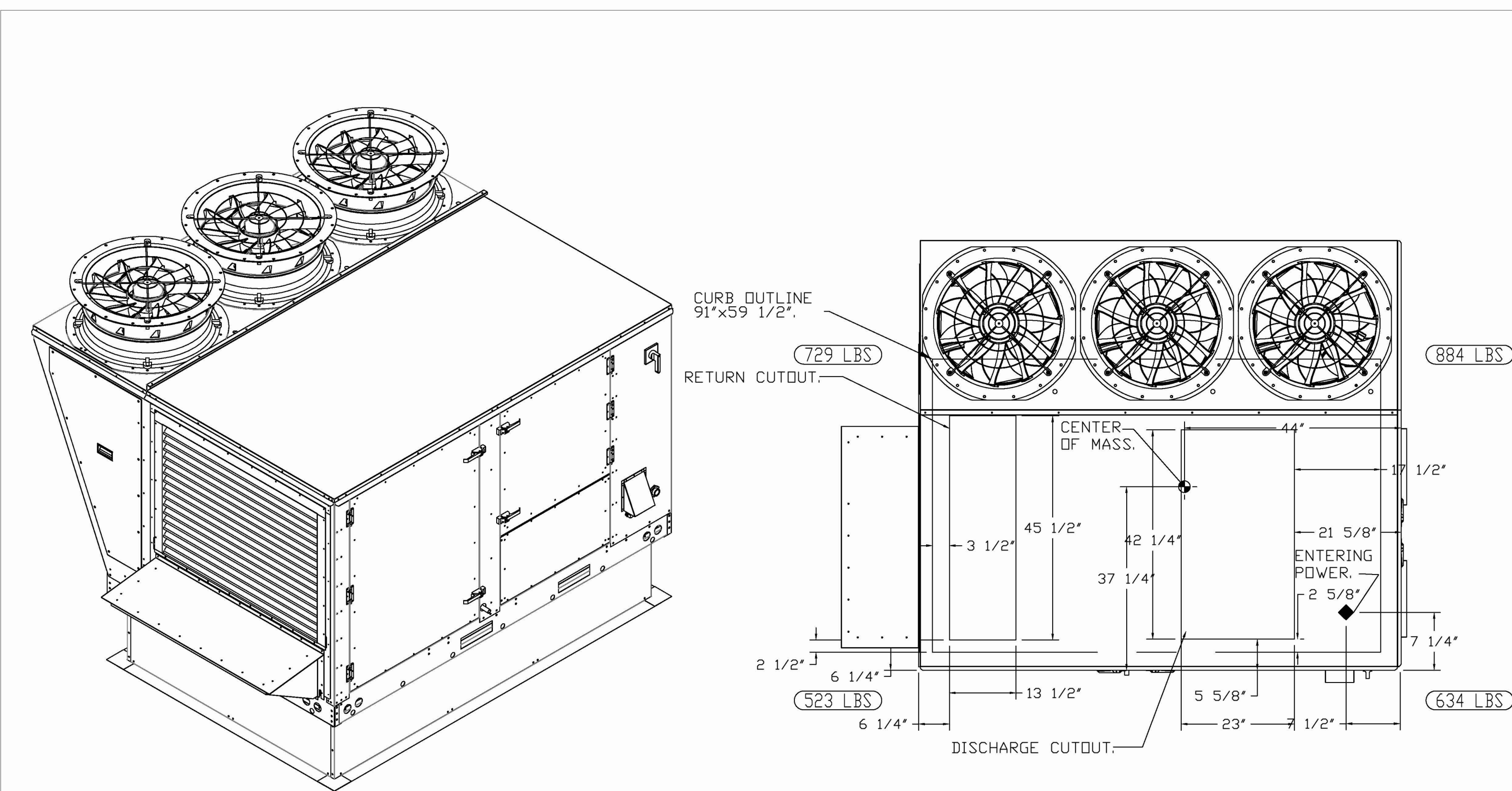
FOR REFERENCE ONLY

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Shelton St.
61
Berkton, MA 02210
617.542.1025

CO
275 N High St.
Columbus, OH 43215
380.900.8887

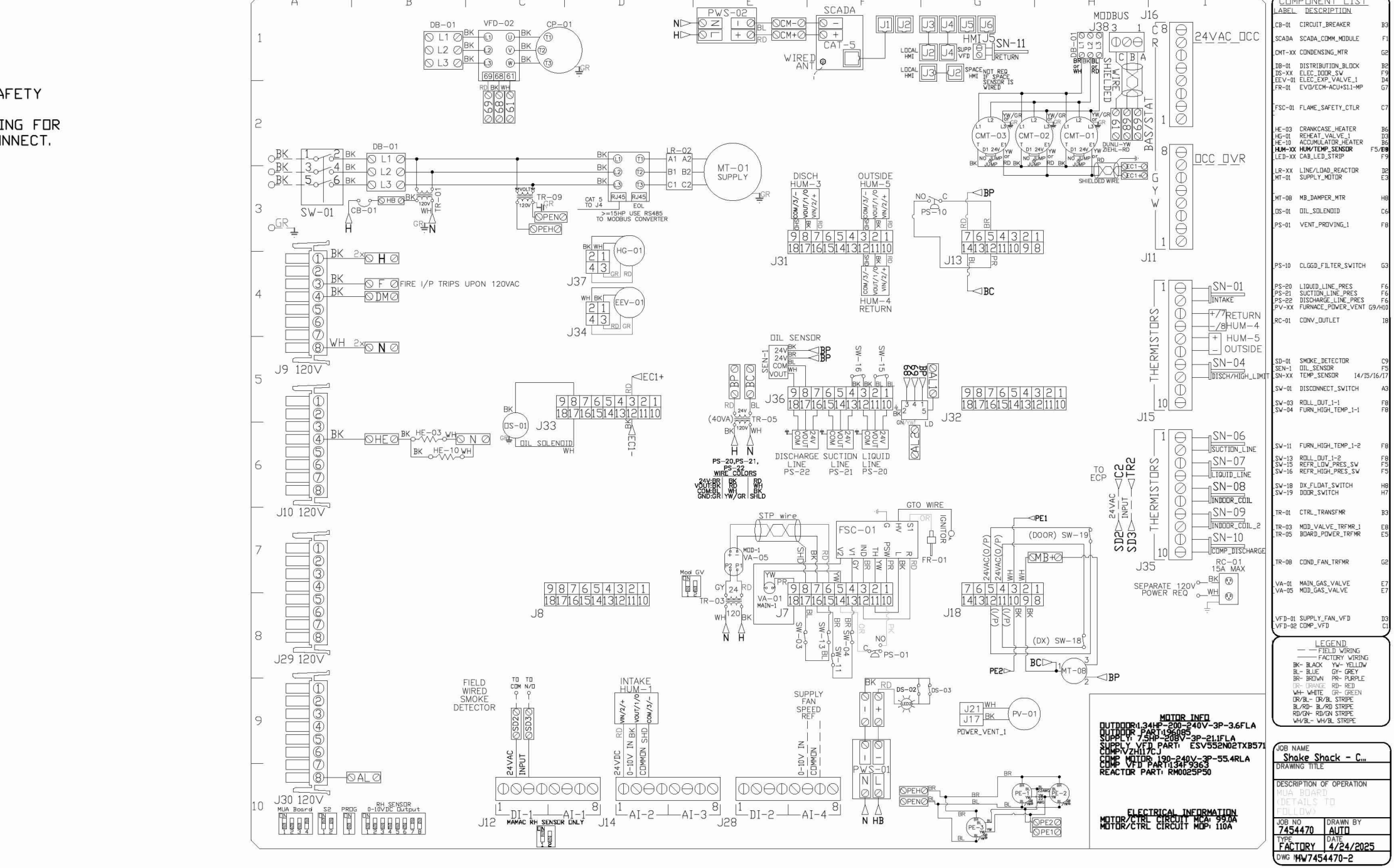
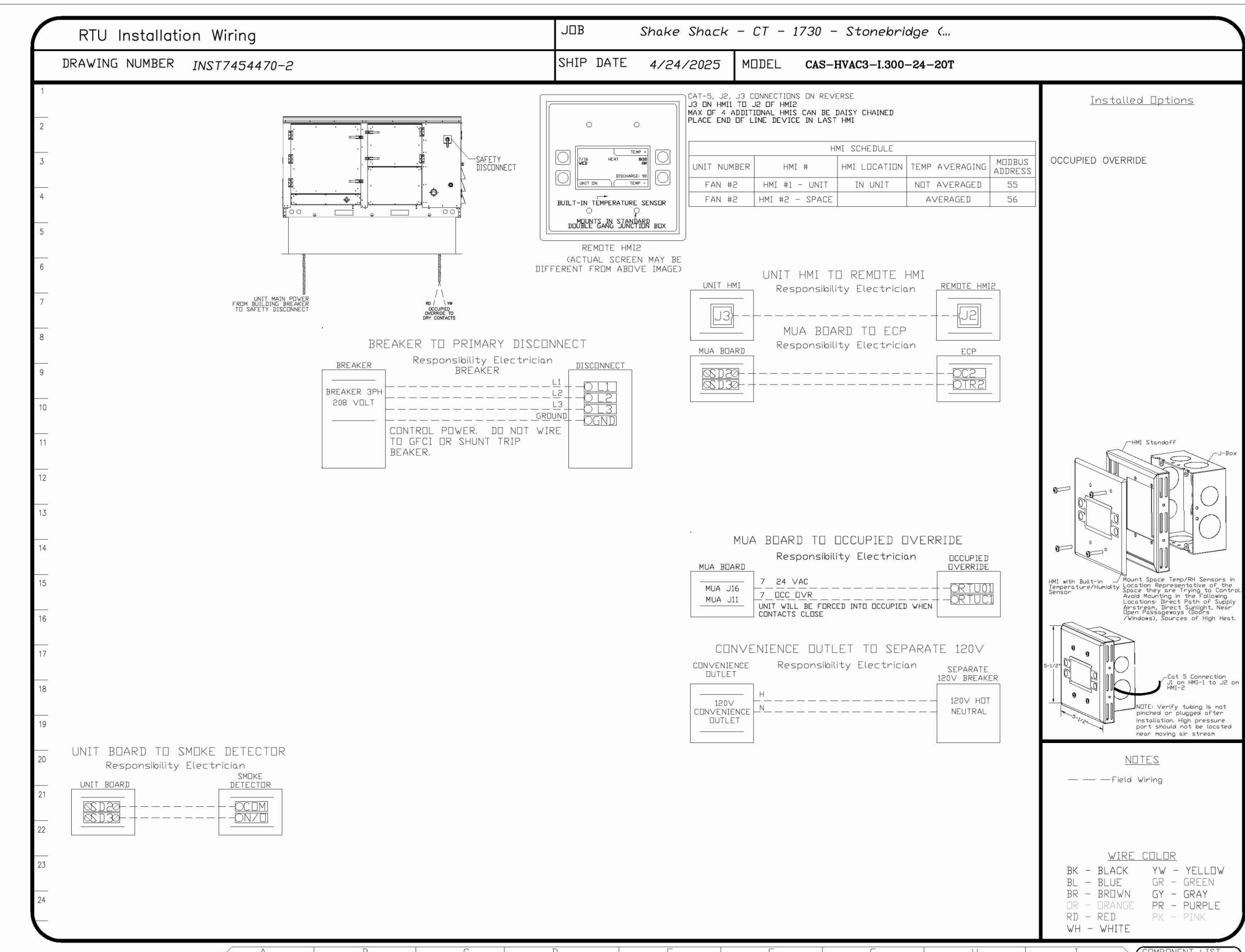
LA
360 E 20th Street
Los Angeles, CA 90012
213.337.1090

www.bergmeyer.com

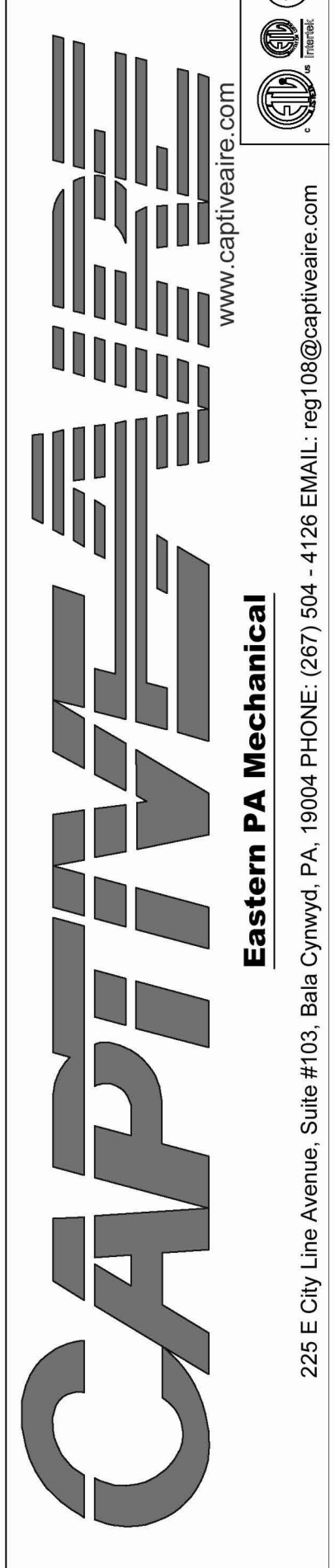


FAN #2 CAS-HVAC3-I.300-24MF-20T - HEATER (RTU-2)

- NOTES:
- DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
 - DENOTES CORNER WEIGHT.
 - ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.
 - CONNECTION FROM BREAKER TO UNITS SAFETY DISCONNECT SWITCH TO BE COPPER WIRE ONLY.
 - EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET.
- *NOTE: INTEGRAL CO2 MONITORING AND CONTROL CAPABILITIES FOR ALL SPACE MOUNTED THERMOSTATS.



REVISIONS	
NO.	DESCRIPTION

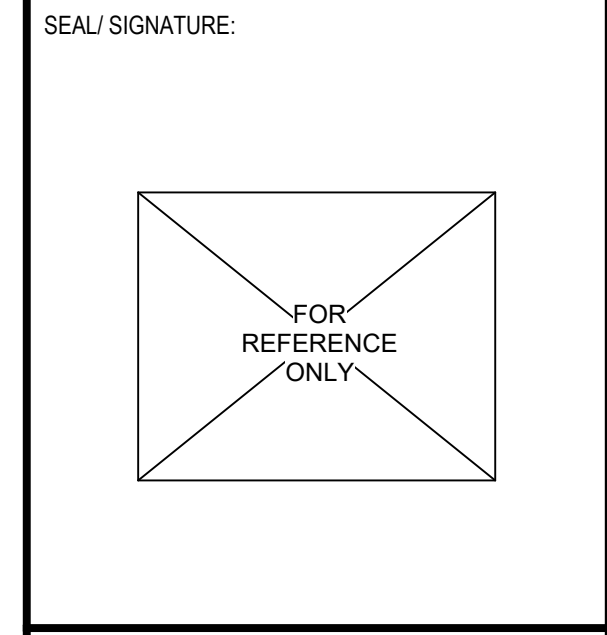


Shake Shack - CT - 1730 - Stonebridge (HVAC)
Cheshire, CT, 06408

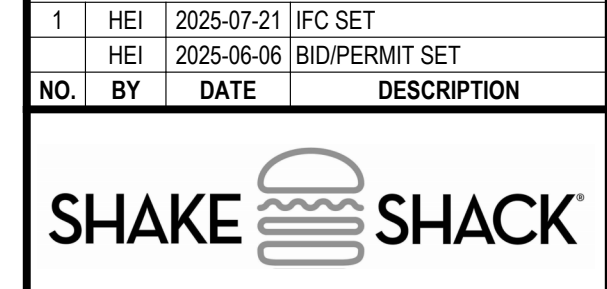
DATE: 4/24/2025
DWG.#: 7454470
DRAWN BY: Joe.shilba
SCALE: 1/2" = 1'-0"
MASTER DRAWING
SHEET NO. 3

Bergmeyer
CONSULTANTS

SEAL SIGNATURE



NO.	BY	DATE	DESCRIPTION
1	HEI	2025-07-21	IFC SET



SHAKE SHACK SHOPS AT STONEBRIDGE

2053 HIGHLAND AVE, UNIT E 120
CHESHIRE, CT 06410
SHACK #1730

IFC SET

CAPTIVEAIR DRAWINGS

DRAWN BY: Author
CHECKED BY: Checker

JOB NO. 2025040

M709

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