

HOOD INFORMATION - JOB#5036152																		
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	GRILL	3650 BD-2	CAPTIVEAIRE	4' 0"	600 DEG	I	HEAVY	175	700	8'	8'	4'	700	1575	-0.574'	430 SS WHERE EXPOSED	ALONE	ALONE
2	GRILL	3650 BD-2	CAPTIVEAIRE	4' 0"	600 DEG	I	HEAVY	175	700	8'	8'	4'	700	1575	-0.574'	430 SS WHERE EXPOSED	ALONE	ALONE
3	FRYER	3650 BD-2	CAPTIVEAIRE	3' 8"	600 DEG	I	HEAVY	175	642	8'	7'	4'	642	1651	-0.550'	430 SS WHERE EXPOSED	ALONE	ALONE
4	FRYER	3650 BD-2	CAPTIVEAIRE	3' 8"	600 DEG	I	HEAVY	175	642	8'	7'	4'	642	1651	-0.550'	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD NO	TAG	TYPE	FILTER(S)			LIGHT(S)			UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WEIGHT	
			QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	TYPE			SIZE
1	GRILL	CAPTRATE SOLO FILTER	2	16"	20"	85% SEE FILTER SPEC	1	RECESSED ROUND	NO					YES	212 LBS
2	GRILL	CAPTRATE SOLO FILTER	2	16"	20"	85% SEE FILTER SPEC	1	RECESSED ROUND	NO					YES	212 LBS
3	FRYER	CAPTRATE SOLO FILTER	2	16"	20"	85% SEE FILTER SPEC	1	RECESSED ROUND	NO					YES	204 LBS
4	FRYER	CAPTRATE SOLO FILTER	2	16"	20"	85% SEE FILTER SPEC	1	RECESSED ROUND	NO					YES	204 LBS

HOOD NO	TAG	OPTION	
		FIELD WRAPPER	35.00" HIGH FRONT, LEFT, RIGHT.
1	GRILL	RIGHT QUARTER END PANEL	26" TOP WIDTH, 0" BOTTOM WIDTH, 26" HIGH 430 SS.
		LEFT QUARTER END PANEL	26" TOP WIDTH, 0" BOTTOM WIDTH, 26" HIGH 430 SS.
2	GRILL	RIGHT QUARTER END PANEL	26" TOP WIDTH, 0" BOTTOM WIDTH, 26" HIGH 430 SS.
		LEFT QUARTER END PANEL	26" TOP WIDTH, 0" BOTTOM WIDTH, 26" HIGH 430 SS.
3	FRYER	RIGHT QUARTER END PANEL	26" TOP WIDTH, 0" BOTTOM WIDTH, 26" HIGH 430 SS.
		LEFT QUARTER END PANEL	26" TOP WIDTH, 0" BOTTOM WIDTH, 26" HIGH 430 SS.
4	FRYER	RIGHT QUARTER END PANEL	26" TOP WIDTH, 0" BOTTOM WIDTH, 26" HIGH 430 SS.
		LEFT QUARTER END PANEL	26" TOP WIDTH, 0" BOTTOM WIDTH, 26" HIGH 430 SS.

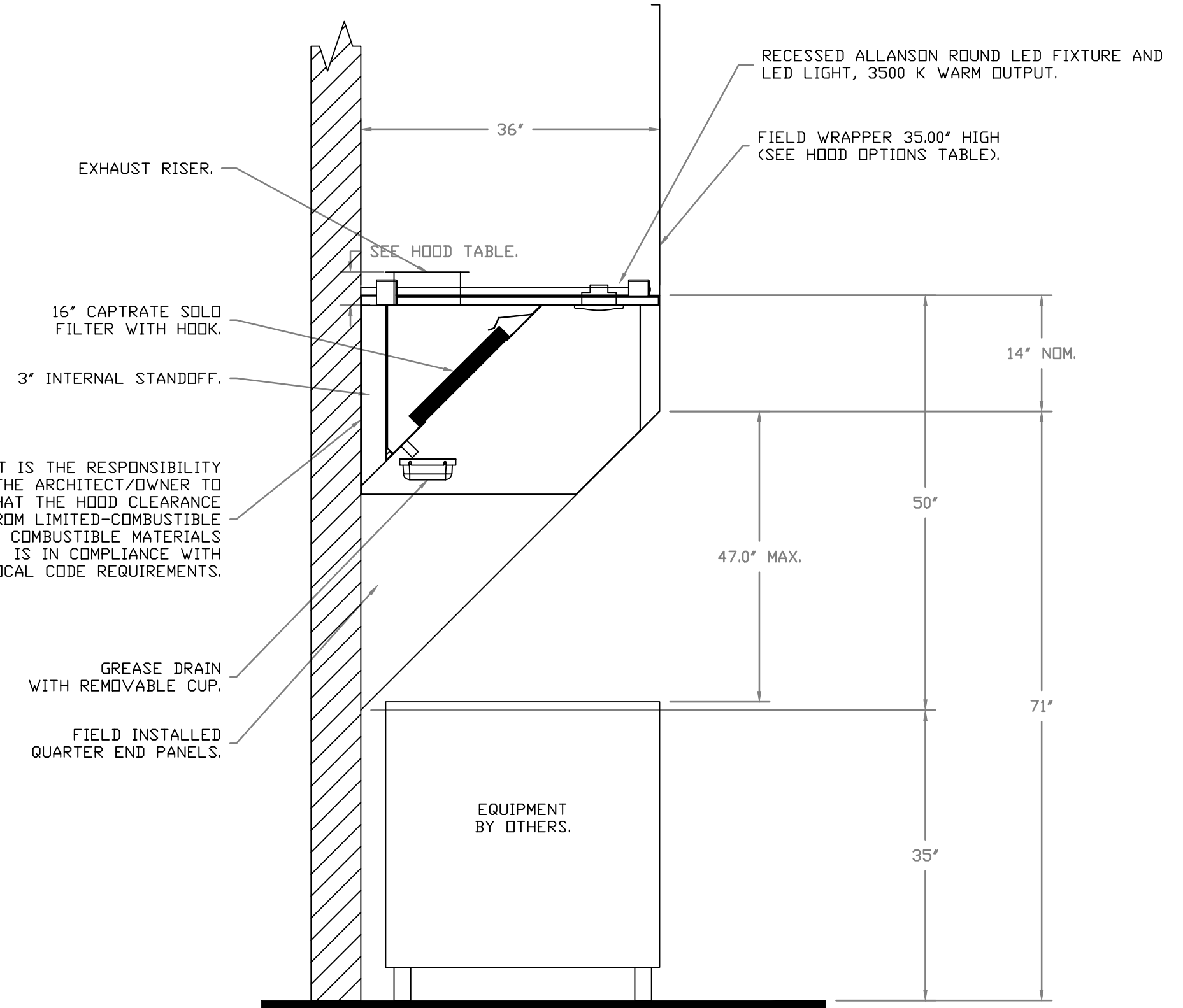
**System Design Verification (SDV)**

If ordered, CAS Service will perform a System Design Verification (SDV) once all equipment has had a complete start up per the Operation and Installation Manual. Typically, the SDV will be performed after all inspections are complete.

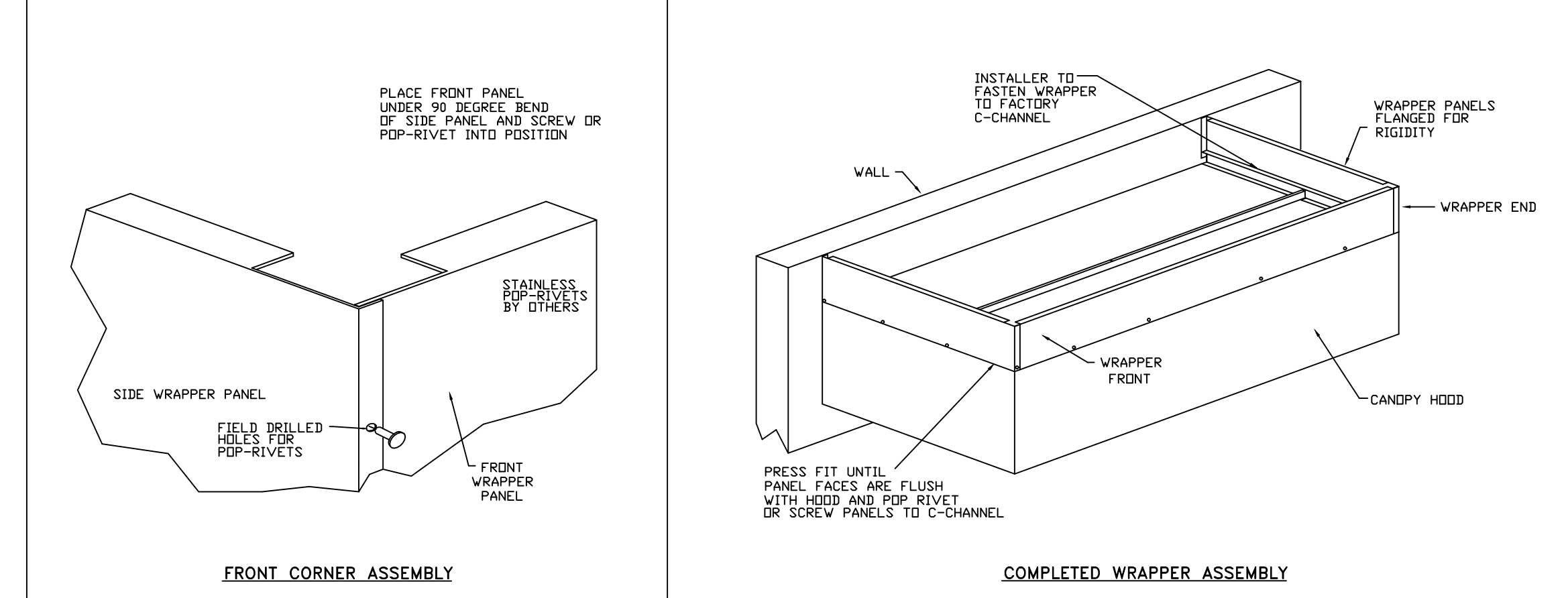
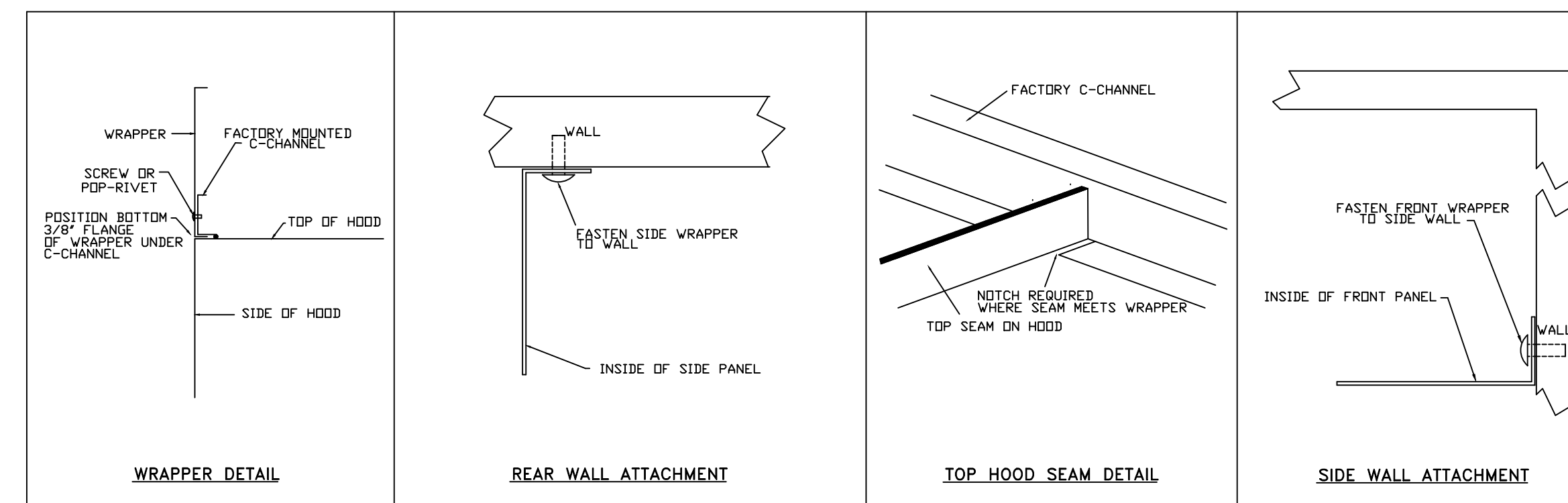
Any field related discrepancies that are discovered during the SDV will be brought to the attention of the general contractor and corresponding trades on site. These issues will be documented and forwarded to the appropriate sales office. If CAS Service has to resolve a discrepancy that is a field issue, the general contractor will be notified and billed for the work. Should a return trip be required due to any field related discrepancy that cannot be resolved during the SDV, there will be additional trip charges.

During the SDV, CAS Service will address any discrepancy that is the fault of the manufacturer. Should a return trip be required, the general contractor and appropriate sales office will be notified. There will be no additional charges for manufacturer discrepancies.

FOR QUESTIONS, CALL THE EASTERN PA SALES OFFICE  
ERIC BUCKMANN  
PHONE: (215) 826-5023, (267) 504-4126  
reg108@captiveaire.com



SECTION VIEW - MODEL 3650BD-2



REVISIONS	
DESCRIPTION	DATE

Shake Shack - 1355 - Sterling Heights, MI, R2  
STERLING HEIGHTS, MI, 48313

DATE: 8/12/2021  
DWG.#: 5036152  
DRAWN BY: EB-108  
SCALE:  
MASTER DRAWING  
SHEET NO. 1

STORE NO: 1355

DATE	DESCRIPTION
03/18/21	REVISION B
04/14/21	REVISION B
08/13/2021	CITY REVISION C
03/16/22	IFC
04/22/22	REVISION 1
05/04/22	REVISION 2

STATUS: IFC SET

FIELD VERIFICATION: The contractor shall verify all figured dimensions and coordinate with the project site and notify Zebra Architecture, PLLC of any discrepancies prior to or during construction. Discrepancies shall be reported to the appropriate sales office. No field modifications shall be made without the written consent of Zebra Architecture, PLLC.

SHEET NAME: CAPTIVEAIRE DRAWINGS  
DATE: 03/01/21 PROJECT NO: 33128  
DRAWN: RAS SCALE: As indicated  
SHEET NO: M701



**FIRE SYSTEM INFORMATION**

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FLOW POINTS	INSTALLATION SYSTEM
1		ANSUL R102	3.0/3.0/3.0/3.0	44	WALL-MT (54"W x 24"H x 9"D)

**GAS VALVE(S)**

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		MECHANICAL	VERIFY	CAPTIVEAIRE SYSTEMS

**NOTES**

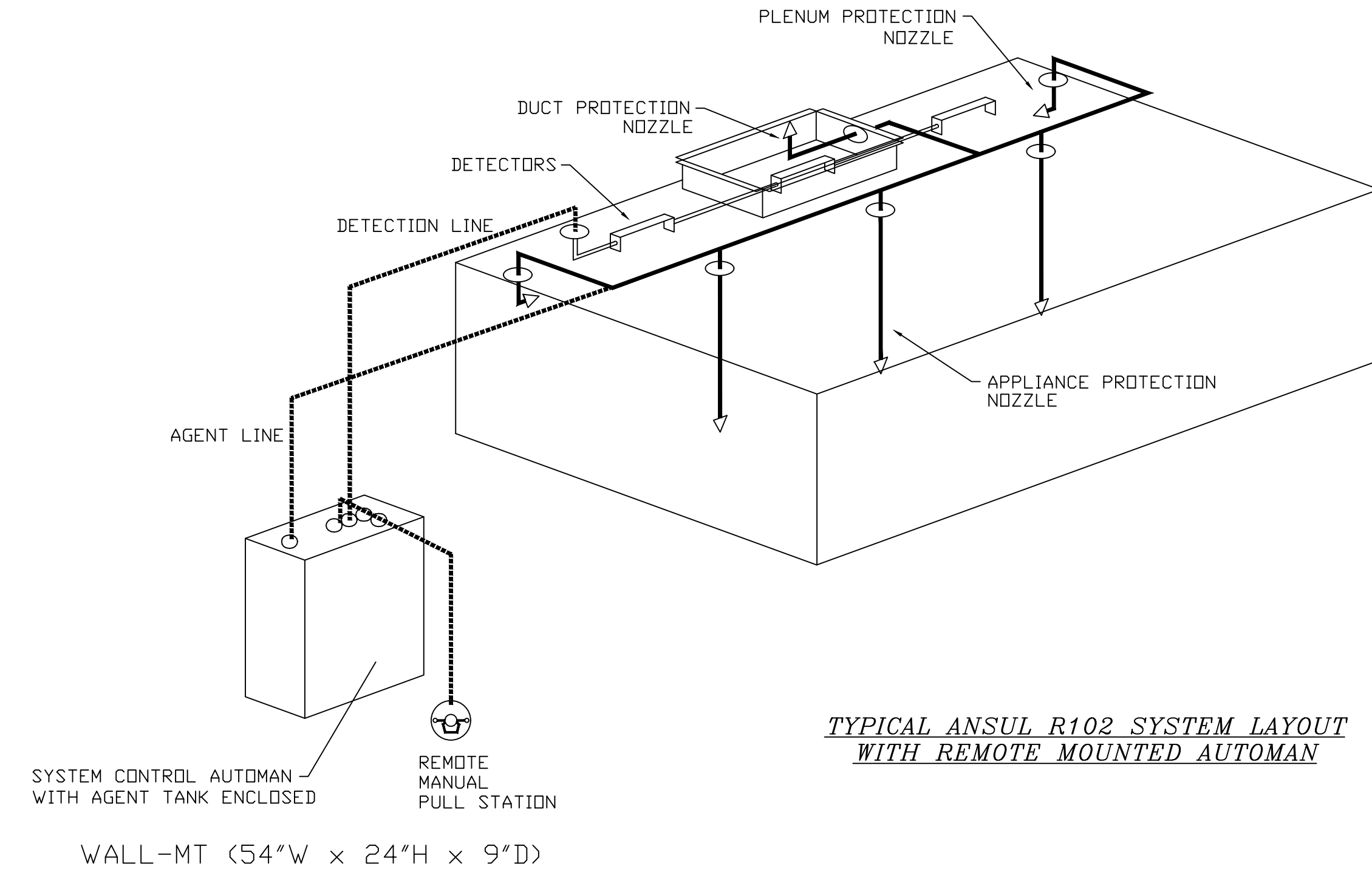
- FIELD PIPE DROPS AS SHOWN
- SLEEVING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- RELICATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELIVING, SALAMANDERS, ETC.
- MAXIMUM 9 ELBOWS IN SUPPLY LINE.
- MINIMUM 72 INCHES OF AGENT LINE FROM TANK TO FIRST NOZZLE COVERING A RANGE, FRYER, OR WOK TO REFLECT GENERAL PIPING REQUIREMENTS.
- IF APPLICABLE, PRE-PIPED CHARBROILER DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.
- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.
- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.

JOB #: 4742620.  
JOB NAME: SHAKE SHACK - 1370 - ALPHARETTA, GA.

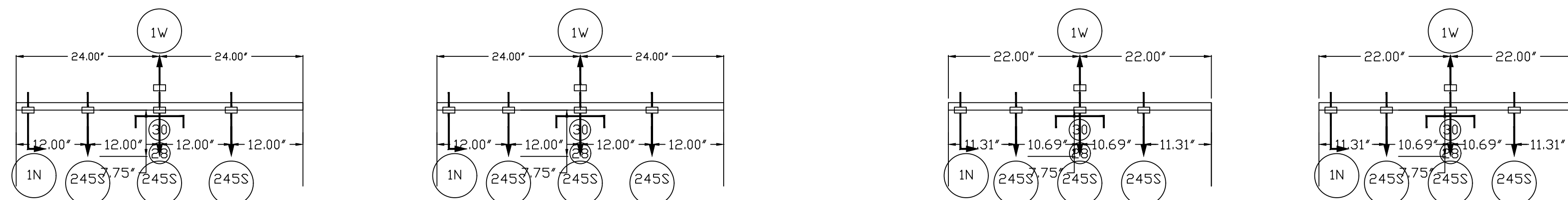
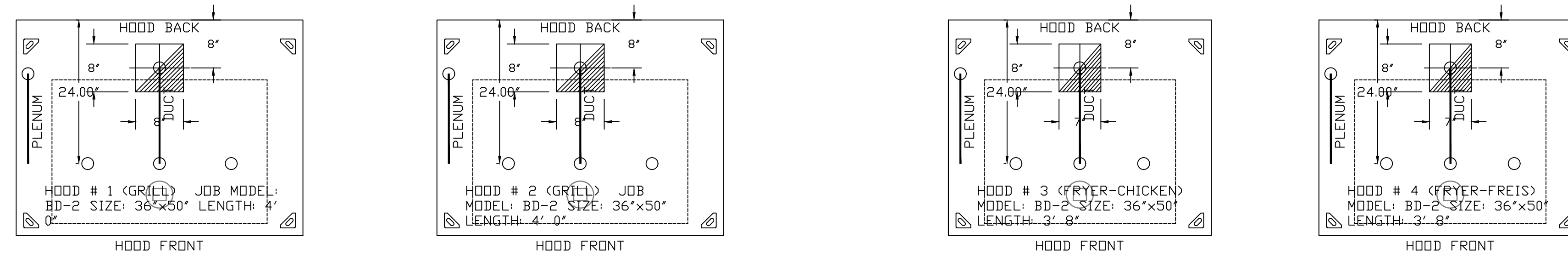
SYSTEM SIZE: ANSUL-3.0/3.0/3.0/3.0 TOTAL FP REQUIRED: 36.  
HOOD # 1 4' 0.00" LONG x 36" WIDE x 50" HIGH.  
RISER # 1 SIZE: 8" x 8".  
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.  
HOOD # 2 6' 0.00" LONG x 36" WIDE x 50" HIGH.  
RISER # 1 SIZE: 10" x 10".  
HOOD # 2 METAL BLOW-OFF CAPS INCLUDED.  
HOOD # 3 3' 8.00" LONG x 36" WIDE x 50" HIGH.  
RISER # 1 SIZE: 8" x 7".  
HOOD # 3 METAL BLOW-OFF CAPS INCLUDED.  
HOOD # 4 3' 8.00" LONG x 36" WIDE x 50" HIGH.  
RISER # 1 SIZE: 8" x 7".  
HOOD # 4 METAL BLOW-OFF CAPS INCLUDED.

**LEGEND - WALL MOUNTED ANSUL SYSTEM**

- 1A 1.5 GALLON TANK.
- 1B 3.0 GALLON TANK.
- 2 AUTOMAN RELEASE.
- 3 3 GALLON TANK ENCLOSURE.
- 3A 6 GALLON TANK ENCLOSURE.
- 4 REGULATED ACTUATOR.
- 5 ANSULEX LIQUID AGENT (3 GAL.).
- 6 ANSULEX LIQUID AGENT (1.5 GAL.).
- 7 CARTRIDGE (101-20).
- 8 CARTRIDGE (101-10).
- 9 CARTRIDGE (101-30).
- 9A CARTRIDGE (LT-A-101-30).
- 9B DOUBLE TANK CARTRIDGE.
- 10 TEST LINK.
- 11 DOUBLE MICROSWITCH.
- 2W DUCT NOZZLE (419337).
- 1W NOZZLE ASSEMBLY (419336).
- 1F NOZZLE ASSEMBLY (419333).
- 1N NOZZLE ASSEMBLY (419335).
- 1/2N NOZZLE ASSEMBLY (419334).
- 3N NOZZLE ASSEMBLY (419338).
- 245 NOZZLE ASSEMBLY (419340).
- 230 NOZZLE ASSEMBLY (419339).
- 2120 NOZZLE ASSEMBLY (419343).
- 290 NOZZLE ASSEMBLY (419342).
- 260 NOZZLE ASSEMBLY (419341).
- 28 DETECTOR BRACKET.
- 29 LOW TEMP FUSIBLE LINK.
- 30 HIGH TEMP FUSIBLE LINK.
- MGV MECHANICAL GAS VALVE.
- EGV ELECTRICAL GAS VALVE.
- 34 REMOTE MANUAL PULL STATION.
- S SWIVEL ADAPTOR.



**TYPICAL ANSUL R102 SYSTEM LAYOUT WITH REMOTE MOUNTED AUTOMAN**



**REVISIONS**

NO.	DESCRIPTION	DATE

**CAPTIVEAIRE**

Eastern, PA Mechanical  
PO Box 2620, 1 Union Ave, Bala Cynwyd, PA, 19004 PHONE: (877) 504-4126 EMAIL: reg.108@captivaire.com

Shake Shack - 1355 - Sterling Heights, MI, R2  
STERLING HEIGHTS, MI, 48313

DATE: 8/12/2021  
DWG.#: 5036152  
DRAWN BY: EB-108  
SCALE:  
MASTER DRAWING

SHEET NO. 3

**CUSTOMER APPROVAL TO MANUFACTURE:**

Approved as Noted

Approved with NO Exception Taken

Revise and Resubmit

SIGNATURE \_\_\_\_\_  
Your Title \_\_\_\_\_ Date \_\_\_\_\_

CONSULTANT LOGO:

800-581-0963  
www.schnackel.com  
SE JOB# 20047

STORE NO: 1355

**SHAKE SHACK**

STERLING HEIGHTS  
1355 W. SHELBY CIRCLE  
STERLING HEIGHTS, MI

**REVISION**

NO.	DATE	REVISION	DESCRIPTION
A	03/16/21	REVISION 1	
B	04/14/21	REVISION 2	
A	08/13/22	CITY GREENING INC	
1	03/16/22	IFC	
2	04/22/22	REVISION 1	
B	05/04/22	REVISION 2	

STATUS: IFC SET

PRELIMINARY:

Date: 08/22/22

**FIELD VERIFICATION:**  
The contractor shall verify all figured dimensions and conditions at the project site and notify Zebra Architecture, PLLC of any discrepancies either in writing or otherwise. Discrepancies shall be corrected before beginning or fabricating any work. Do not begin finish drawing.

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**SHEET NAME:**  
CAPTIVEAIRE DRAWINGS

DATE: 03/01/21 PROJECT NO: 33128  
DRAWN: RAS SCALE: As indicated

SHEET NO: **M703**

**EXHAUST FAN INFORMATION - JOB#5036152**

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	KEF-1 (GRILL)	1	DU33HFA	CAPTIVEAIRE	700	1.000	1659	TEAD-ECM	0.333	0.2770	1	115	4.3	347 FPM	74	17.6
2	KEF-2 (GRILL)	1	DU33HFA	CAPTIVEAIRE	700	1.000	1659	TEAD-ECM	0.333	0.2770	1	115	4.3	347 FPM	74	17.6
3	KEF-3 (FRYER)	1	DU33HFA	CAPTIVEAIRE	642	1.000	1621	TEAD-ECM	0.333	0.2590	1	115	4.3	318 FPM	74	16.9
4	KEF-4 (FRYER)	1	DU33HFA	CAPTIVEAIRE	642	1.000	1621	TEAD-ECM	0.333	0.2590	1	115	4.3	318 FPM	74	16.9

**DOAS/RTU FAN SCHEDULE - JOB#5036152**

FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	BLOWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	ESP	HP	BHP	PHASE	VOLT	MCA	MDCP	WEIGHT (LBS)
5	DDAS-1	1	CASRTU3-1.400-22-20T-DDAS	CAPTIVEAIRE	22Z-3	1566	2434	4000	1.000	5.000	2.2170	3	208	82A	90A	2588

**DOAS/RTU COOLING SCHEDULE**

FAN UNIT NO	TAG	COMPRESSOR			OUTDOOR FAN				INDOOR COIL		OUTSIDE AIR DB TEMP	OUTSIDE AIR WB TEMP	MIXED AIR DB TEMP	MIXED AIR WB TEMP	LEAVING DB TEMP	LEAVING WB TEMP	LEAVING DP TEMP	TOTAL CAPACITY	SENSIBLE CAPACITY	LATENT CAPACITY	REHEAT LEAVING DB TEMP	REHEAT LEAVING WB TEMP	DESIRED REHEAT CAPACITY	MAX REHEAT CAPACITY	REHEAT LEAVING RELATIVE HUMIDITY	MOISTURE REMOVAL RATE	IEER
		TONNAGE	VOLTAGE	PHASE	MOTOR VOLTAGE	MOTOR Ø	MOTOR FREQUENCY	MOTOR QTY	ROWS	FACE AREA																	
5	DDAS-1	20	190-240	3	200-240	3	60	3	7	11.9 SQFT	95.0°F	75.0°F	87.2°F	70.4°F	51.2°F	51.2°F	51.3°F	234.4 MBH	155.7 MBH	78.7 MBH	75.0°F	62.5°F	102.8 MBH	129.6 MBH	50	69.5 LBS/HR	18.2

**DOAS/RTU HEATING SCHEDULE**

FAN UNIT NO	TAG	INPUT BTUS	OUTPUT BTUS	TEMP RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
5	DDAS-1	400000	320000	74°F	7 IN. W.C. - 14 IN. W.C.	NATURAL	80

**FAN OPTIONS**

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF-1 (GRILL)	1	GREASE BDX.
		1	FAN BASE CERAMIC SEAL - INSTALLED AT PLANT - FOR GREASE DUCTS.
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION.
2	KEF-2 (GRILL)	1	GREASE BDX.
		1	FAN BASE CERAMIC SEAL - INSTALLED AT PLANT - FOR GREASE DUCTS.
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION.
3	KEF-3 (FRYER)	1	GREASE BDX.
		1	FAN BASE CERAMIC SEAL - INSTALLED AT PLANT - FOR GREASE DUCTS.
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION.
4	KEF-4 (FRYER)	1	GREASE BDX.
		1	FAN BASE CERAMIC SEAL - INSTALLED AT PLANT - FOR GREASE DUCTS.
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION.
5	DDAS-1	1	2 YEAR PARTS WARRANTY.
		1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU. QNTY 1 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, *MA*, OR *E2* OPTION PREWIRE MUST BE SELECTED. DO NOT PROVIDE SUPPLY STARTER IN PREWIRE.
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED.
		1	RTU SIZE 3 DOWN DISCHARGE.
		1	2" MERV 13 FILTERS FOR SIZE 3 RTU. QTY 4.
		1	2" MERV 8 FILTERS FOR SIZE 3 RTU. QTY 4.
		1	OVERHEAT STAT.
		1	TOTAL CFM MONITORING FOR DDAS.
		1	20 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FAN(S).
		1	ECM FAN DDAS - 3 PHASE.
		1	20 TON MODULATING REHEAT OPTION. SPACE DEWPOINT CONTROL.
		1	INLET PRESSURE GAUGE, 0-35".
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE.
		1	COMMERCIAL SMOKE DETECTOR/ALARM INTERLOCK (SUPPLIED BY OTHERS).
		1	SIZE 3 RTU CURB DUCT HANGER.
		1	ECM SUPPLY FAN CONTROL RTU MUA BOARD.
		1	OCCUPIED SCHEDULING.
		1	CLOGGED FILTER SWITCH WITH NOTIFICATION ON HMI.
		1	SIZE 3 RTU CONVENIENCE OUTLET (GFCI), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J BOX.
		1	RTU MANUAL INTAKE/RETURN DAMPER CONTROL VIA HMI.
1	RTU SIZE 3 DOWN RETURN.		
1	FREEZESTAT.		
1	DAMPER PRESET POSITIONS.		
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).		

**CURB ASSEMBLIES**

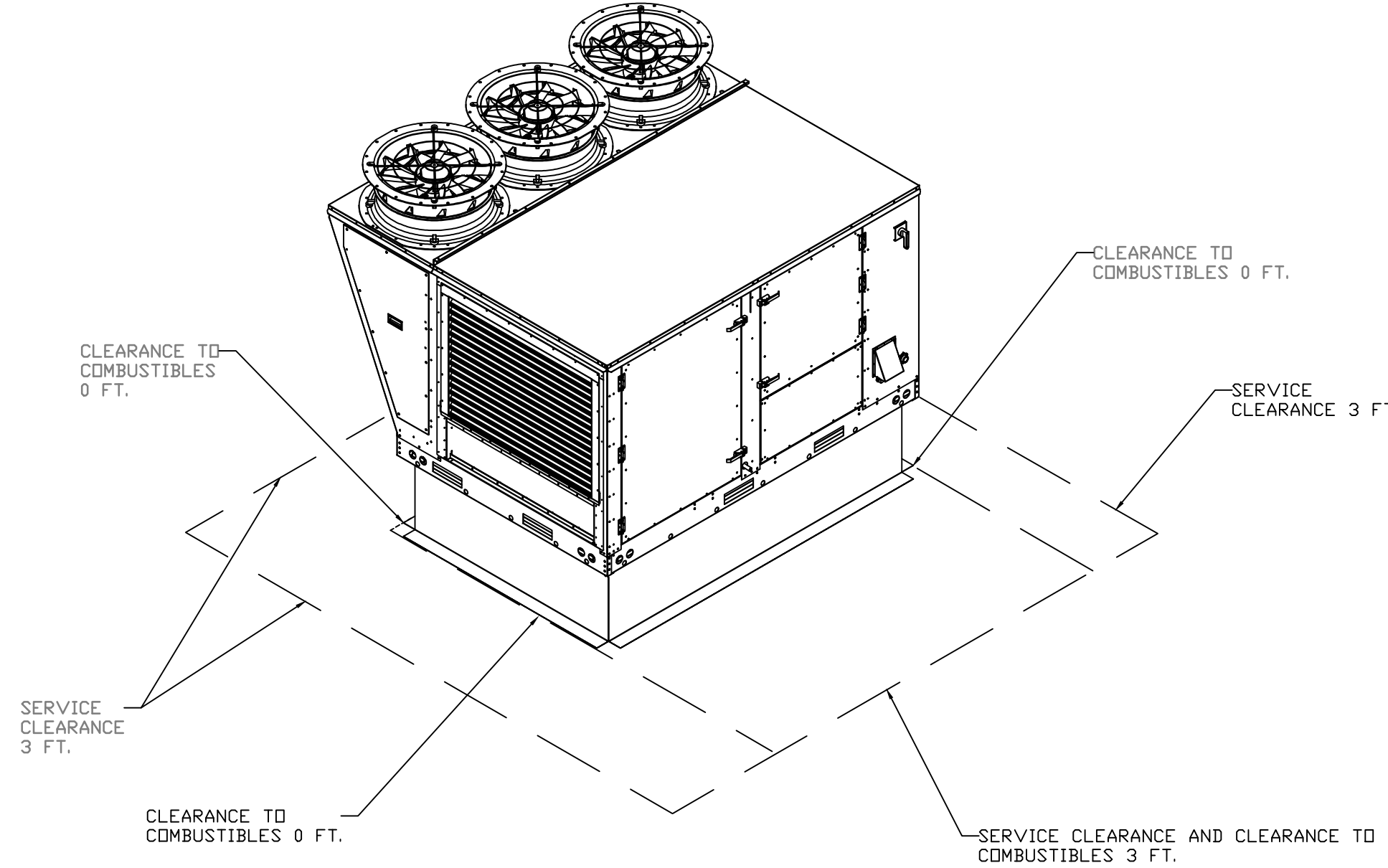
NO	DN FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF-1 (GRILL)	34 LBS	CURB	19.500"W X 19.500"L X 22.000"H VENTED HINGED.
2	# 2	KEF-2 (GRILL)	34 LBS	CURB	19.500"W X 19.500"L X 22.000"H ALONG LENGTH, VENTED HINGED.
3	# 3	KEF-3 (FRYER)	34 LBS	CURB	19.500"W X 19.500"L X 22.000"H VENTED HINGED.
4	# 4	KEF-4 (FRYER)	34 LBS	CURB	19.500"W X 19.500"L X 22.000"H VENTED HINGED.
5	# 5	DDAS-1	68 LBS	CURB	59.500"W X 91.000"L X 12.000"H INSULATED.

REVISIONS	
DESCRIPTION	DATE



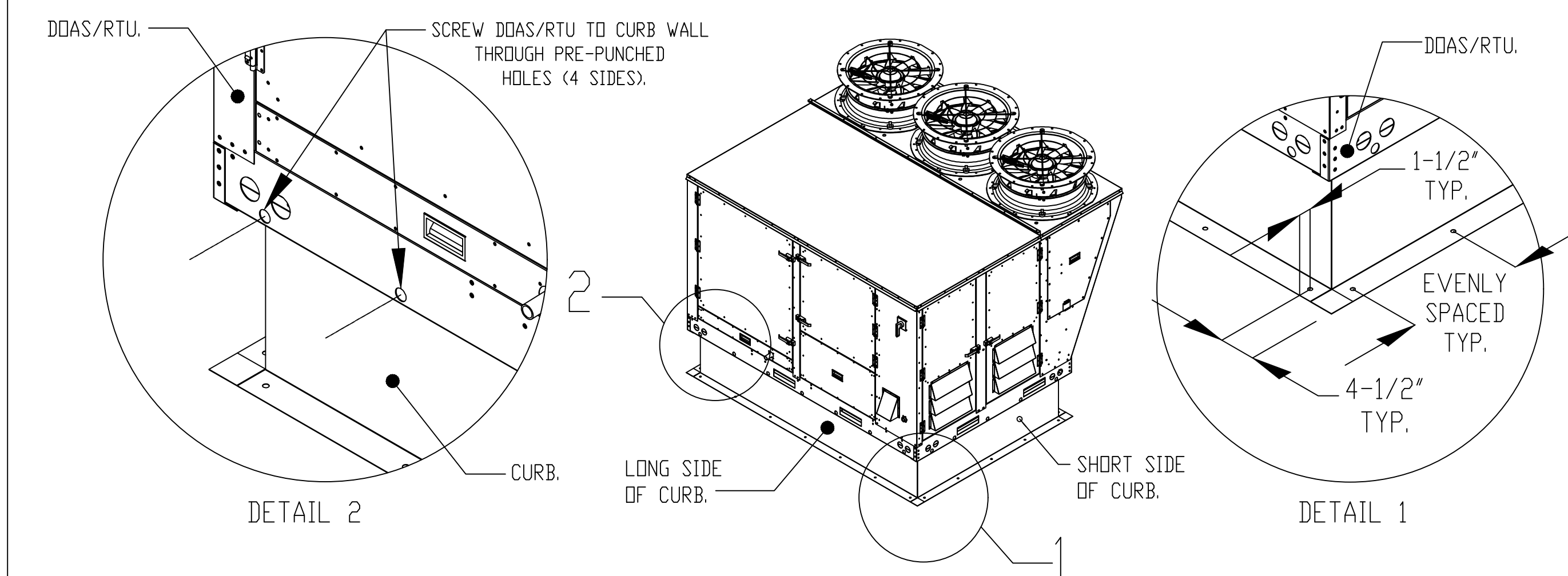
Smoke Shack - 1355 - Sterling Heights, MI, R2  
STERLING HEIGHTS, MI, 48313

DATE: 8/12/2021  
DWG.#: 5036152  
DRAWN BY: EB-108  
SCALE:  
MASTER DRAWING  
SHEET NO. 4



**TYPICAL DOAS/RTU ROOF MOUNTING INSTALLATION INSTRUCTIONS**

1. SECURE THE CURB TO THE ROOF FRAMING MEMBERS BY DRILLING 1/4" PILOT HOLES IN THE CURB FLANGES AT LOCATIONS SHOWN IN THE DIAGRAM BELOW. USING 3/8" X 2" ZINC PLATED STEEL LAG BOLTS, AND ZINC PLATED WASHERS, SCREW THROUGH THE CURB FLANGES AND INTO THE ROOF FRAMING MEMBERS. A MINIMUM OF (5) LAG BOLTS ON EACH SHORT SIDE, AND (7) LAG BOLTS ON EACH LONG SIDE IS REQUIRED.
2. SECURE THE UNIT BASE TO THE SIDE WALLS OF THE CURB USING (24) 1/4"-14 X 2" SELF-DRILLING, STEEL ZINC PLATED SCREWS. PRE-PUNCHED HOLES HAVE BEEN PROVIDED FOR EACH SCREW LOCATION.



**zebra**  
ZEBRA ARCHITECTURE, PLLC.  
1464 N KIERLAND BLVD, SUITE N300  
SCOTTSDALE, ARIZONA 85254  
PHONE: 480.912.1169 zbr.global

**Schnackel engineers**  
800-581-0963  
www.schnackel.com  
EST. 2008 20047

STORE NO: 1355

**SHAKE SHACK**  
STERLING HEIGHTS  
3000 SHERIDAN CIRCLE  
STERLING HEIGHTS, MI

**REVISION**

NO	DATE	DESCRIPTION
A	03/16/21	REVISION A
B	04/14/21	REVISION B
A	08/13/22	CITY GREENING
1	03/16/22	IFC
2	04/22/22	REVISION 1
B	05/04/22	REVISION 2

STATUS: IFC SET

PRELIMINARY:

**GREGORY SCHMACKEL**  
ENGINEER  
No. 3770  
Date: 08/22/22

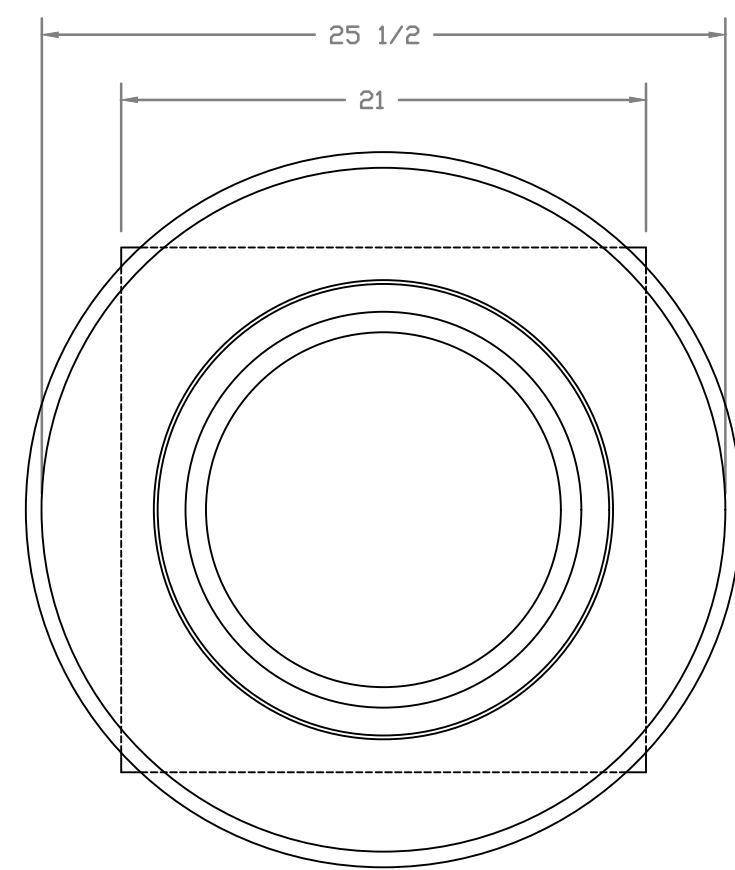
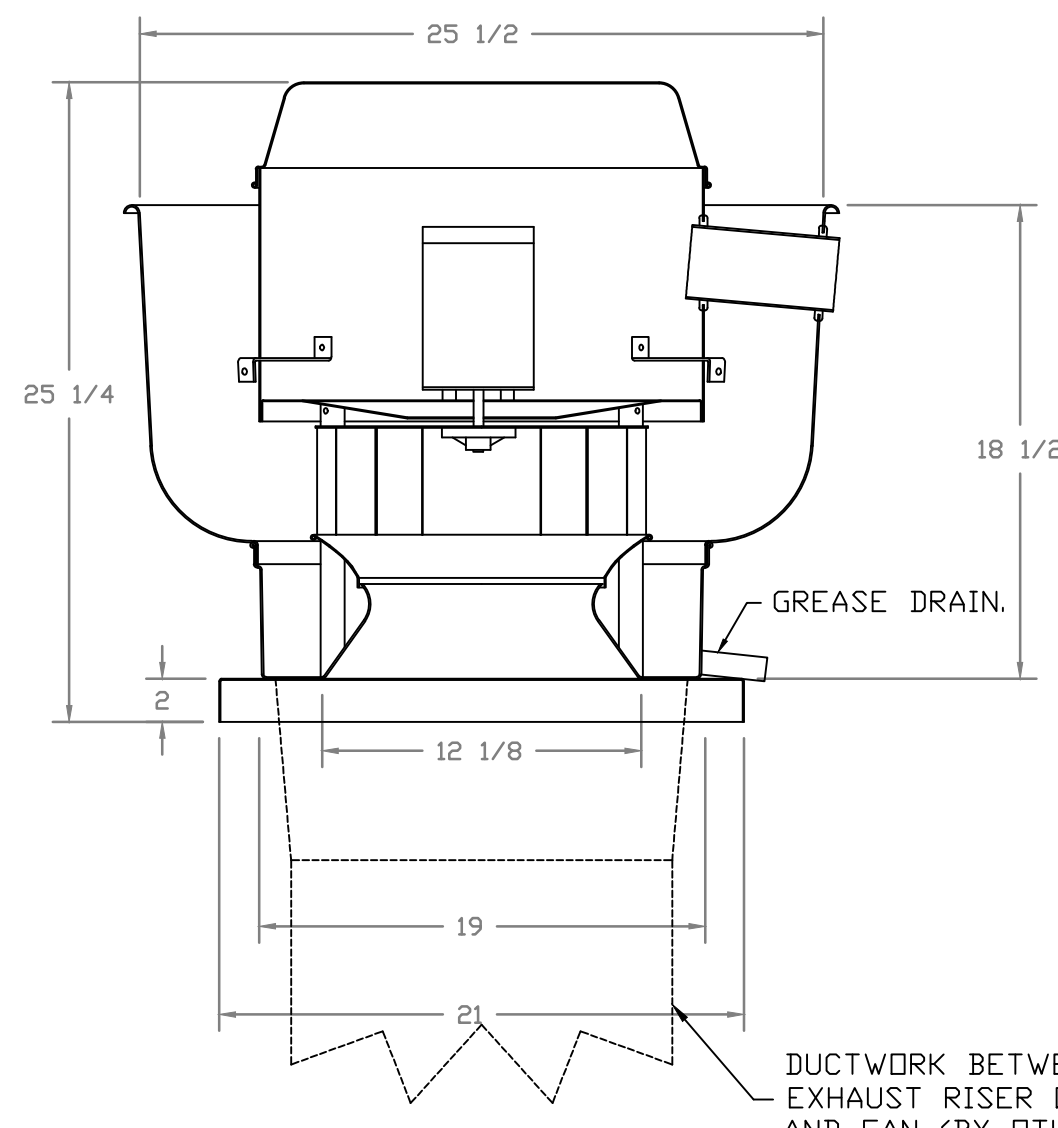
FIELD VERIFICATION:  
The contractor shall verify all figured dimensions and conditions on the project site and notify Zebra Architecture, PLLC of any discrepancies, omissions or conditions. It is the contractor's responsibility to ensure that all dimensions and conditions are accurate before beginning or fabricating any work. Do not make field changes.

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SHEET NAME:  
**CAPTIVEAIRE DRAWINGS**

DATE: 03/01/21 PROJECT NO: 33128  
DRAWN: RAS SCALE: As indicated  
SHEET NO: **M704**

FANS #1 (KEF-1 (GRILL)), #2 (KEF-2 (GRILL)), #3 (KEF-3 (FRYER)), #4 (KEF-4 (FRYER)) - DU33HFA EXHAUST FAN



TOP VIEW

FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL785 AND UL768 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST

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

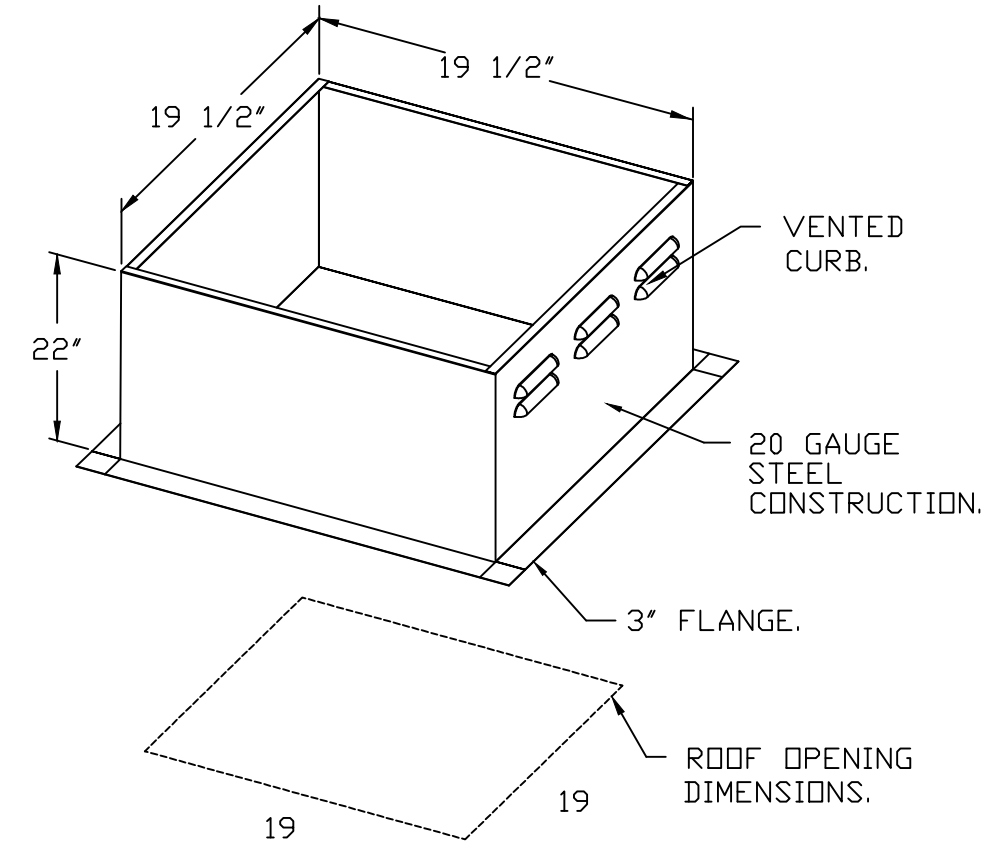
ABNORMAL FLARE-UP TEST

EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

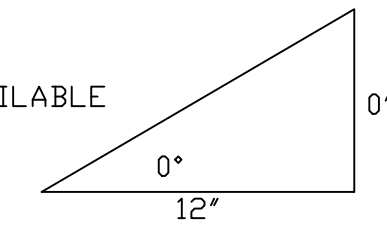
- GREASE BOX.
- FAN BASE CERAMIC SEAL - INSTALLED AT PLANT - FOR GREASE DUCTS.
- ECH WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION.
- 2 YEAR PARTS WARRANTY.

DUCTWORK BETWEEN EXHAUST RISER ON HOOD AND FAN (BY OTHERS).

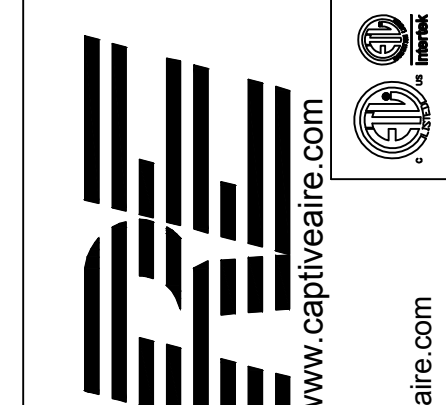


PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

SPECIFY PITCH:  
EXAMPLE: 7/12 PITCH = 30° SLOPE.



REVISIONS	
DESCRIPTION	DATE



**Shake Shack - 1355 - Sterling Heights, MI, 48313**  
STERLING HEIGHTS, MI, 48313

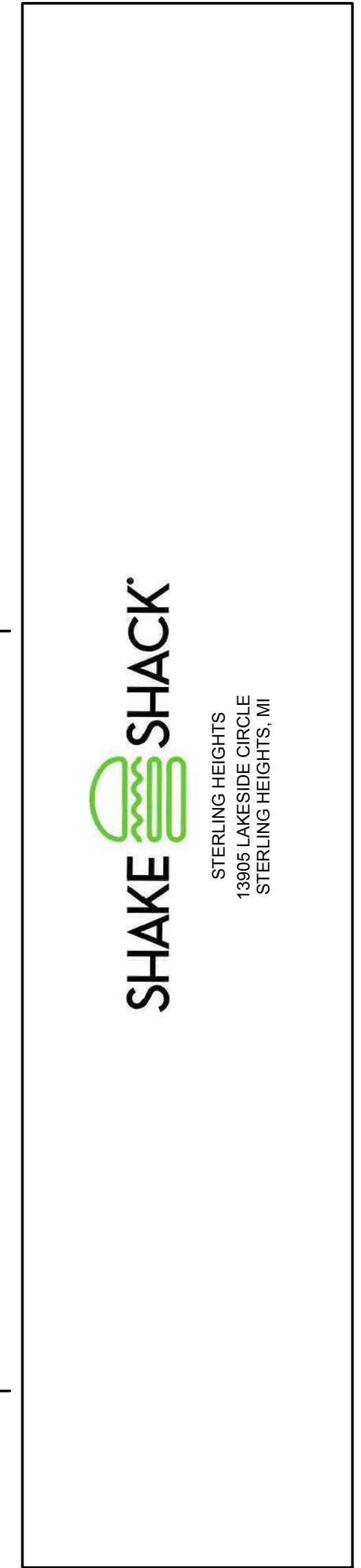
DATE: 8/12/2021  
DWG.#: 5036152  
DRAWN BY: EB-108  
SCALE:  
MASTER DRAWING

CUSTOMER APPROVAL TO MANUFACTURE:  
Approved as Noted   
Approved with NO Exception Taken   
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SHEET NO. 5

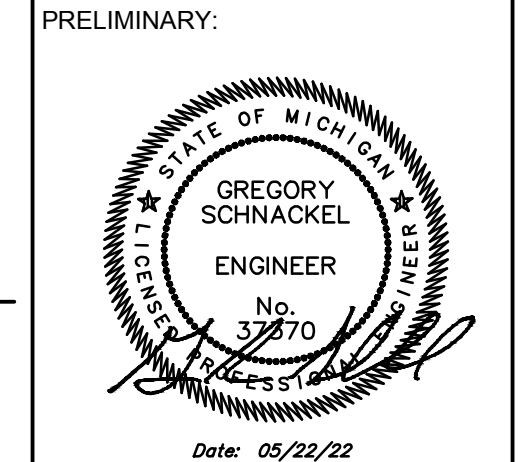


STORE NO: 1355



REVISION	
DATE	DESCRIPTION
03/16/21	REVISION A
04/16/21	REVISION B
08/13/2021	CITY GREENING
03/16/22	IFC
04/22/22	REVISION 1
05/04/22	REVISION 2

STATUS: IFC SET

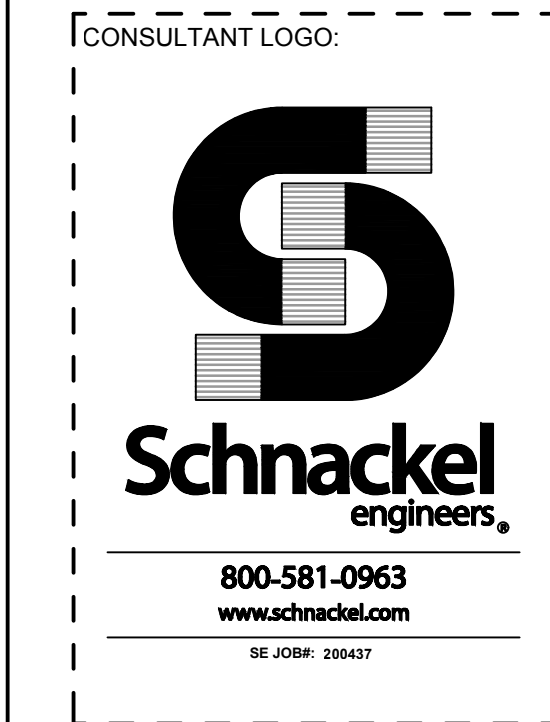


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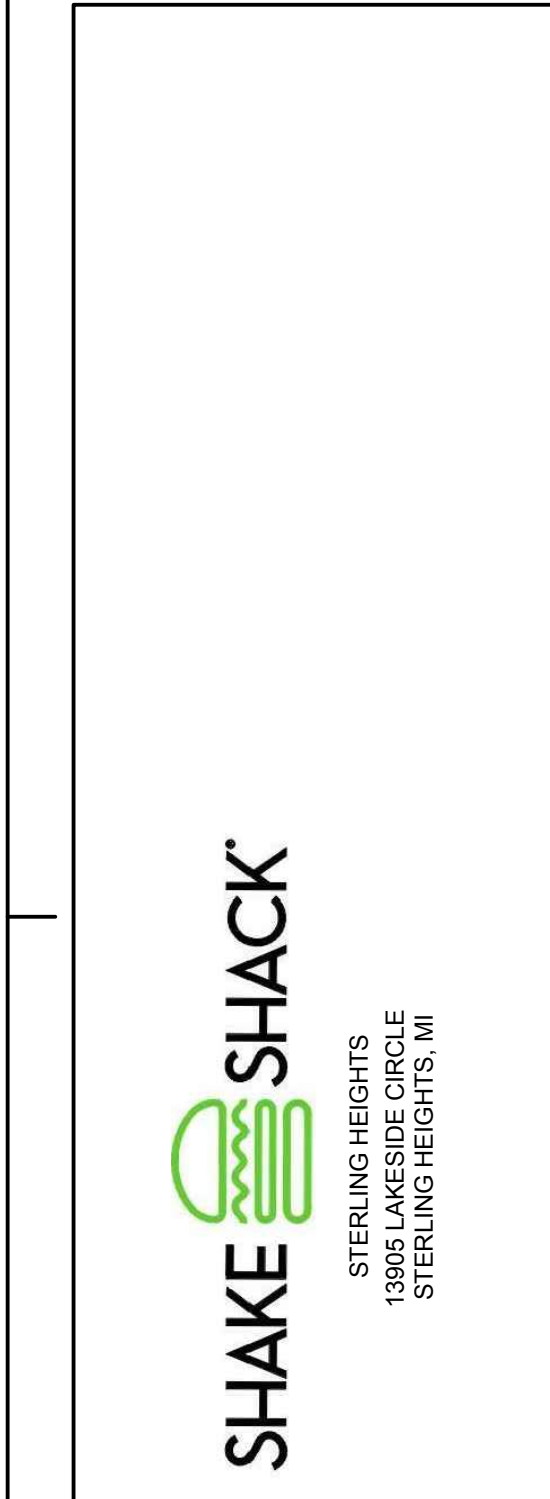
SHEET NAME: CAPTIVEARE DRAWINGS

DATE: 03/01/21 PROJECT NO: 33128  
DRAWN: RAS SCALE: As indicated

SHEET NO: M705

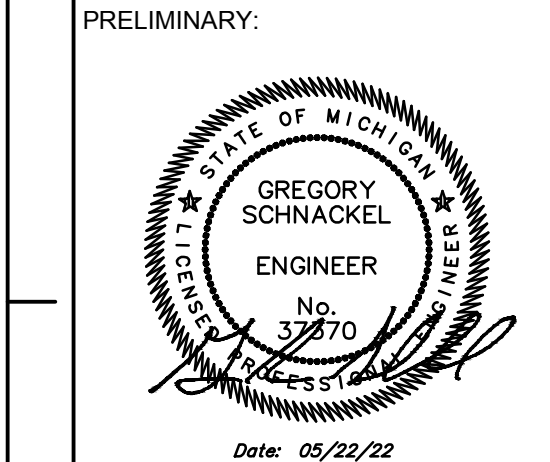


STORE NO: 1355



REVISION	DATE	DESCRIPTION
A	03/18/21	REVISION A
B	04/14/21	REVISION B
A	08/13/22	CITY GREENING INC
1	03/16/22	IFC
2	04/22/22	REVISION 1
B	05/04/22	REVISION 2

STATUS: IFC SET



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SHEET NAME: CAPTIVEAIRE DRAWINGS

DATE: 03/01/21 PROJECT NO: 33128  
DRAWN: RAS SCALE: As indicated

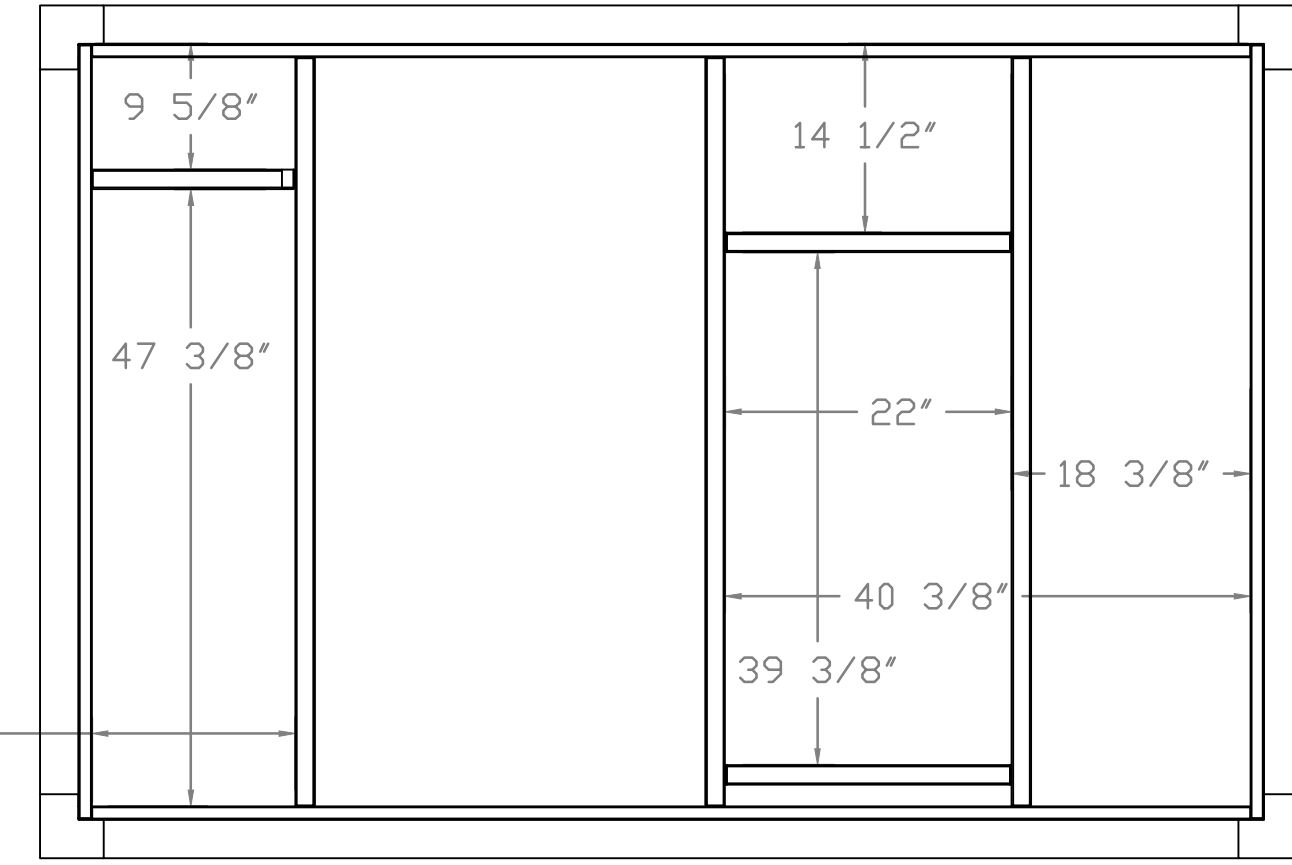
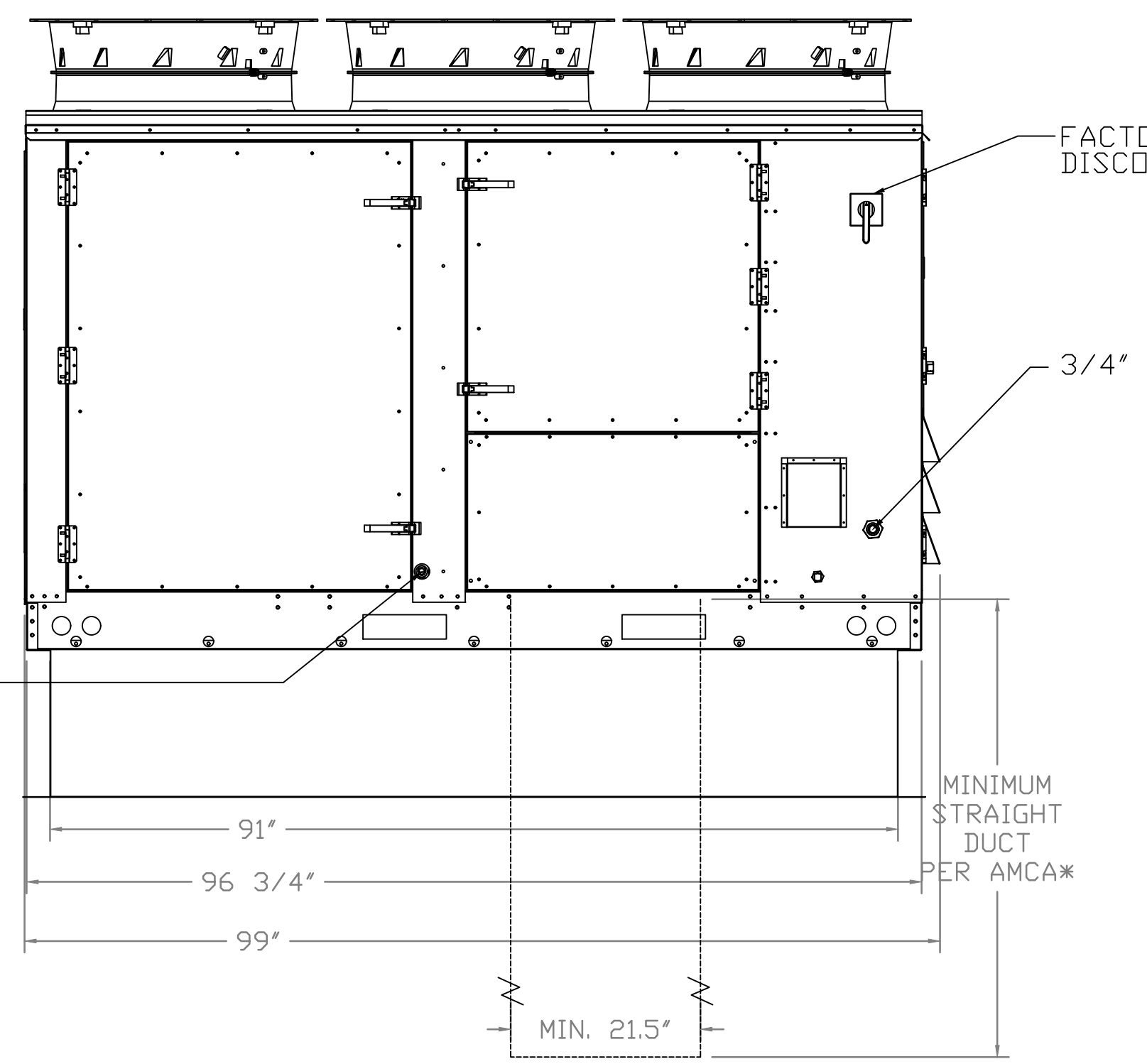
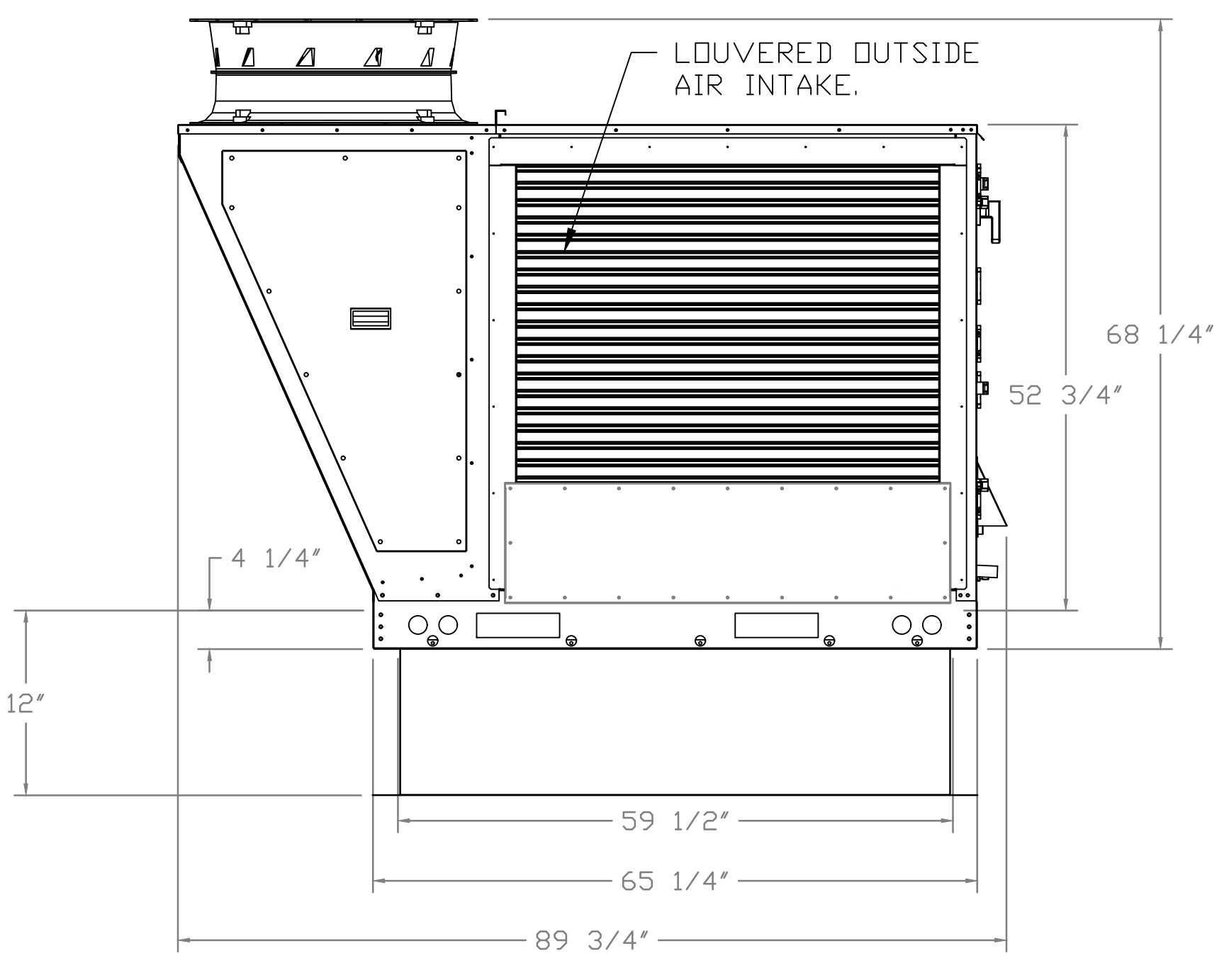
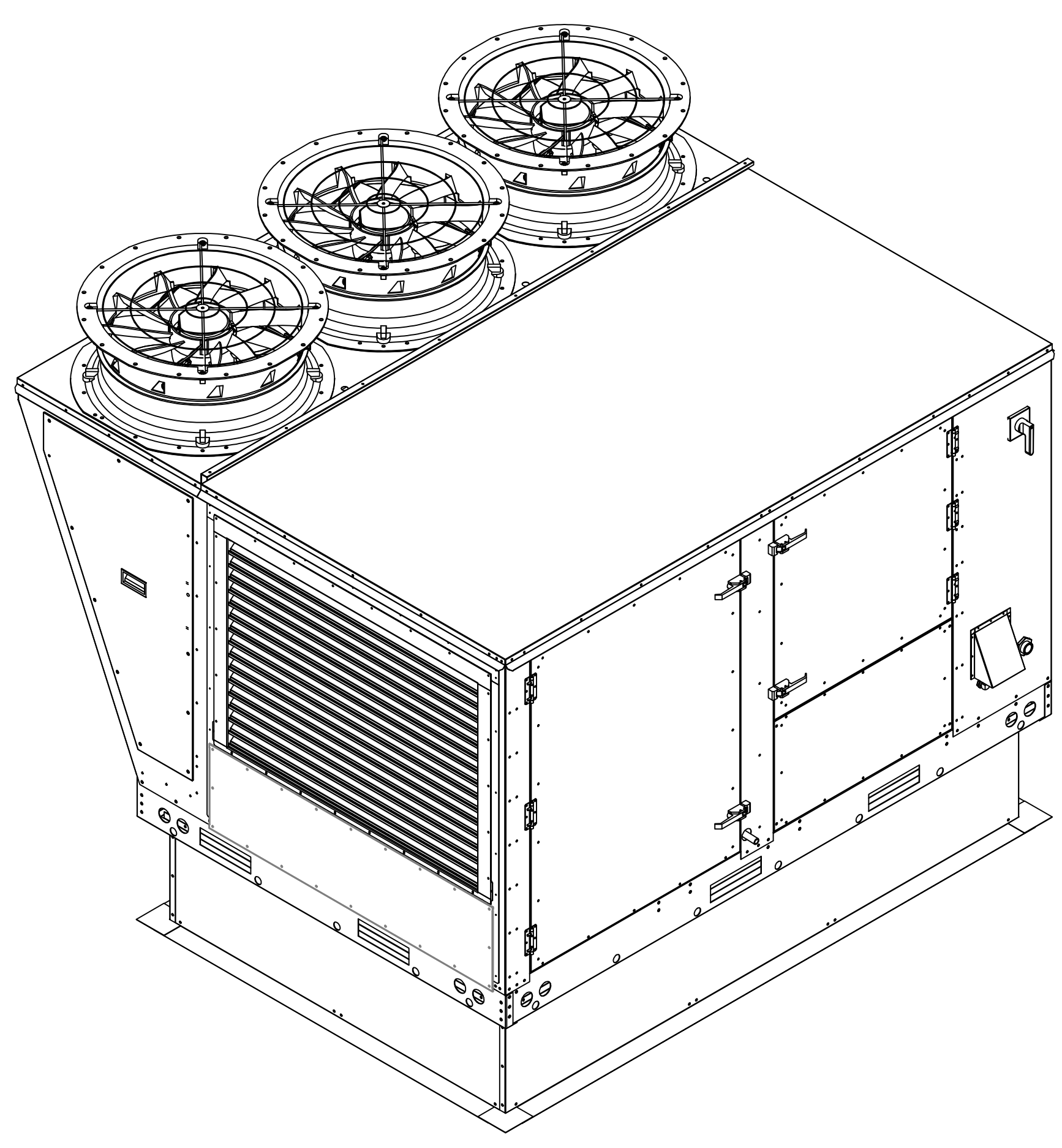
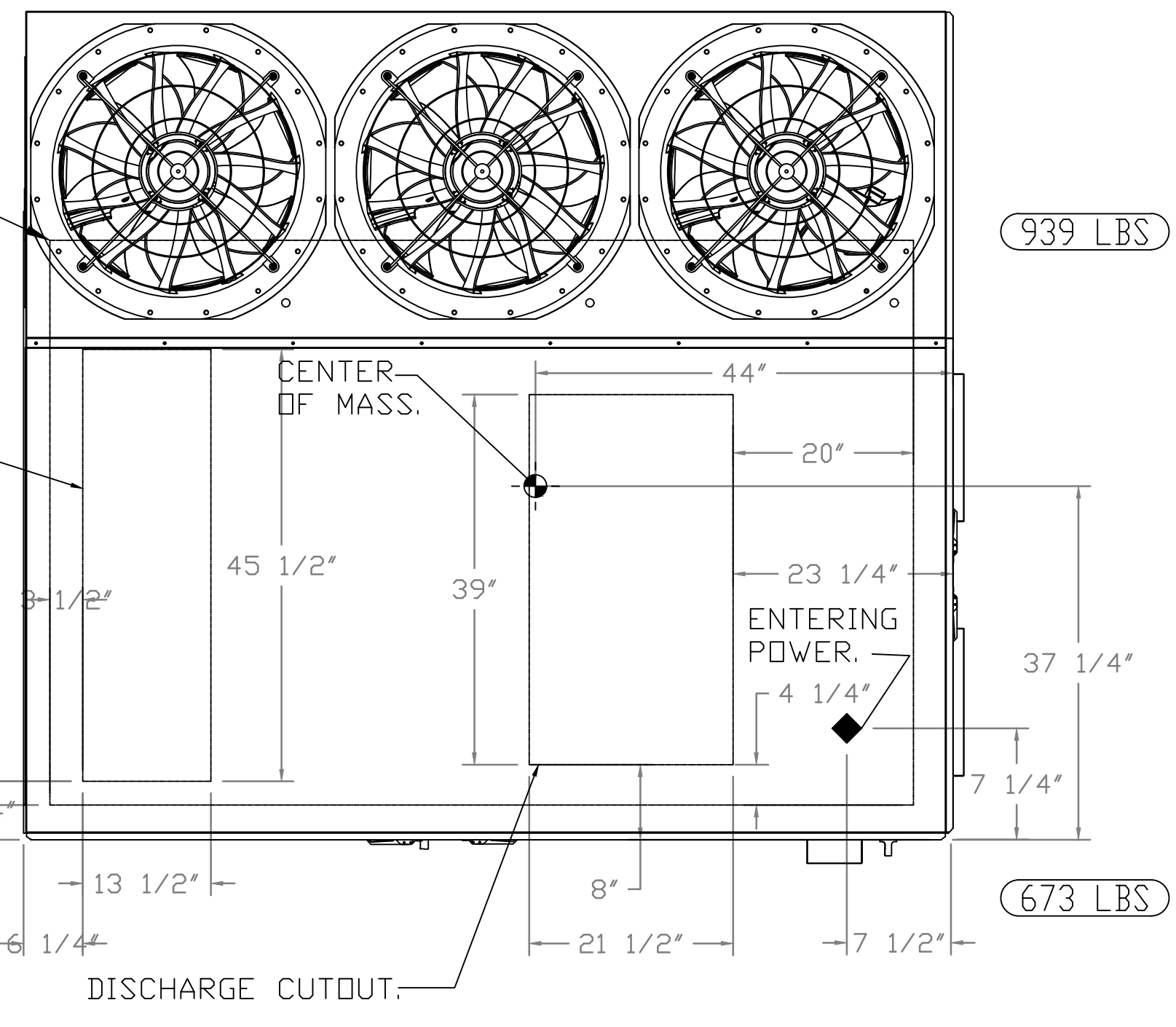
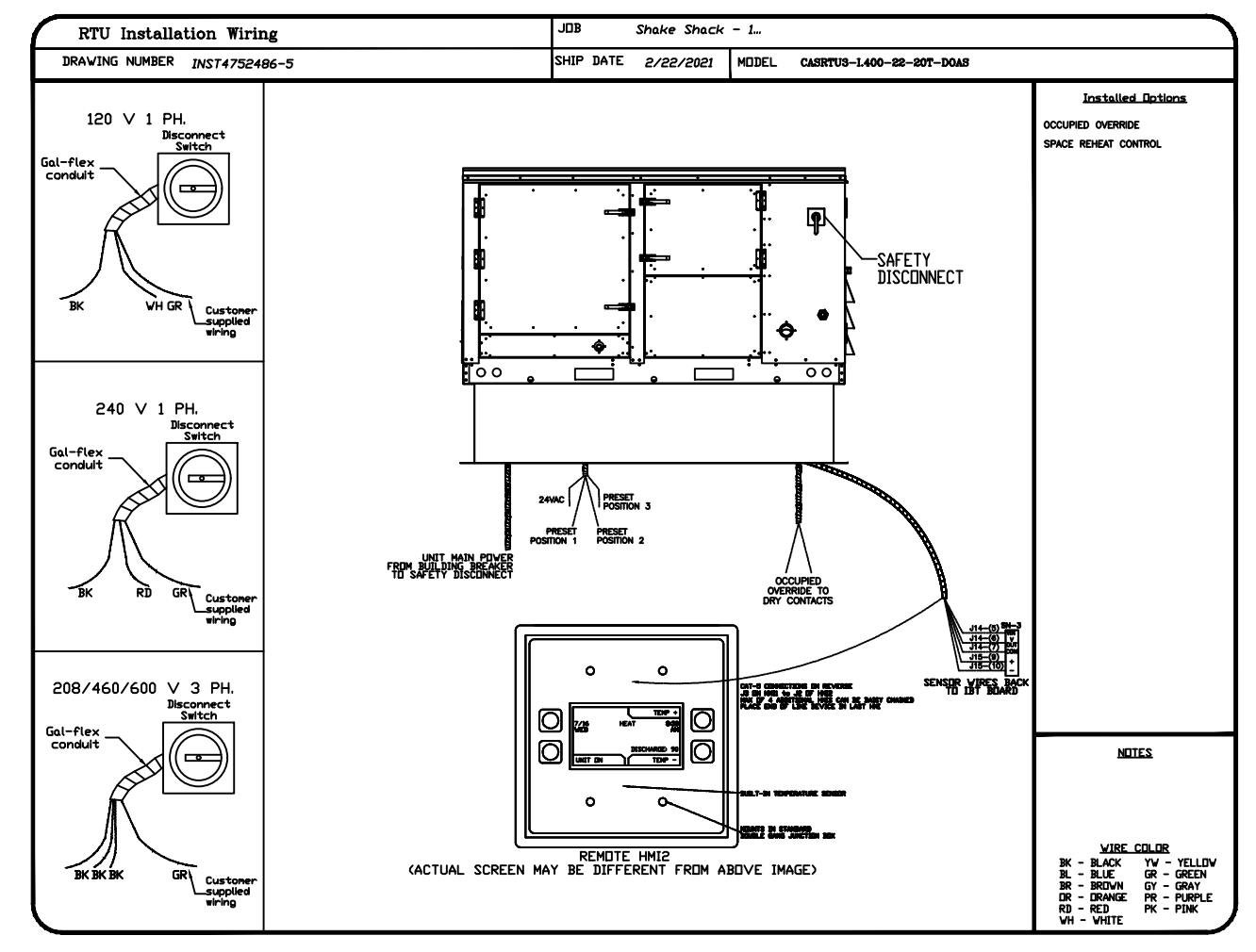
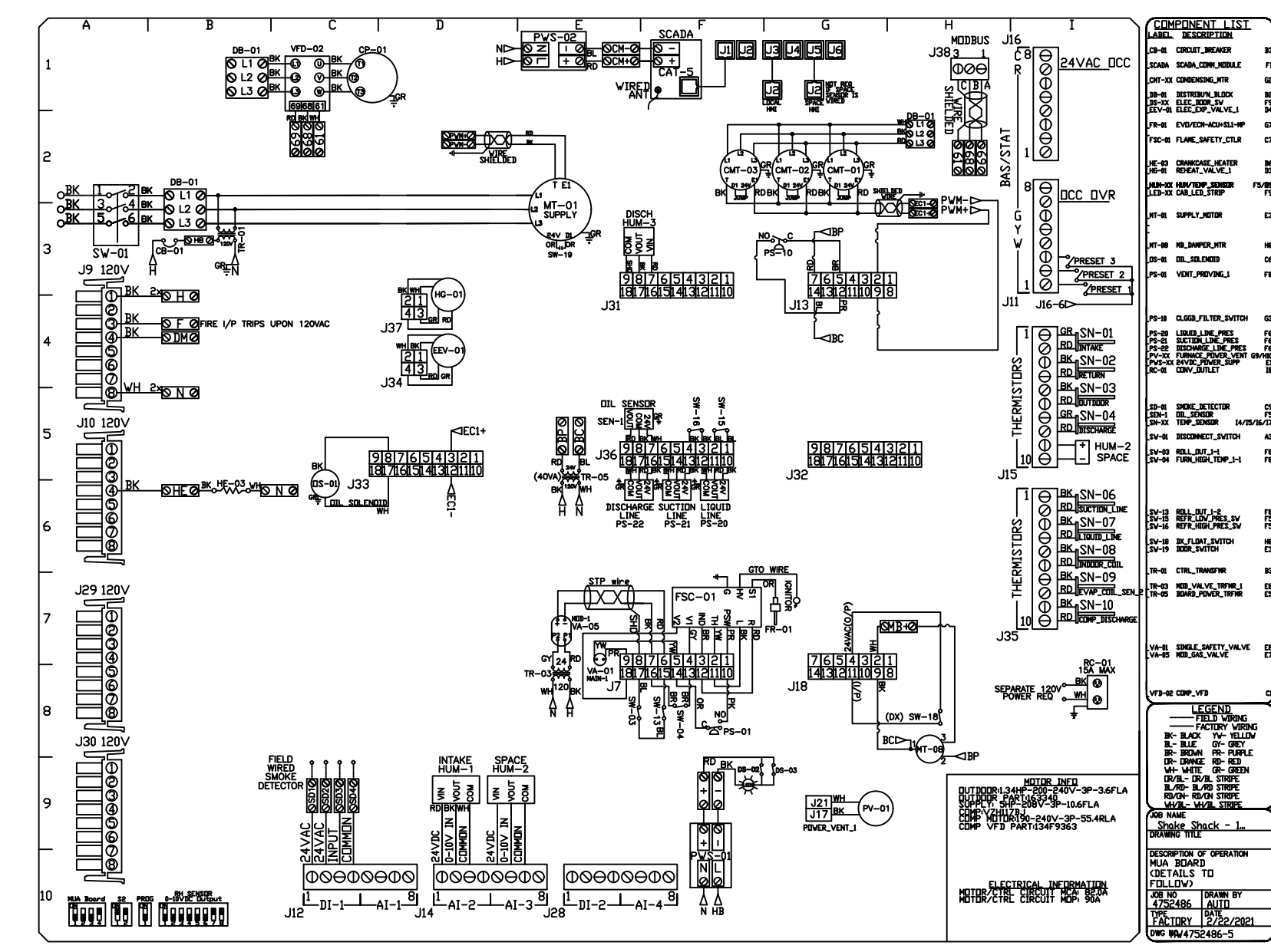
SHEET NO: M706

REVISIONS	DESCRIPTION	DATE

**CAPTIVEAIRE**  
Eastern PA Mechanical  
PO Box 2520, 1 Union Ave, Bala Cynwyd, PA, 19004 PHONE: (267) 504-4126 EMAIL: reg108@captiveaire.com

Shake Shack - 1355 - Sterling Heights, MI\_R2  
STERLING HEIGHTS, MI, 48313

DATE: 8/12/2021  
DWG.#: 5036152  
DRAWN BY: EB-108  
SCALE:  
MASTER DRAWING  
SHEET NO. 6



FAN #5 CASRTU3-I.400-22Z-20T-DDAS - HEATER (DDAS-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.

CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted

Approved with NO Exception Taken

Revise and Resubmit

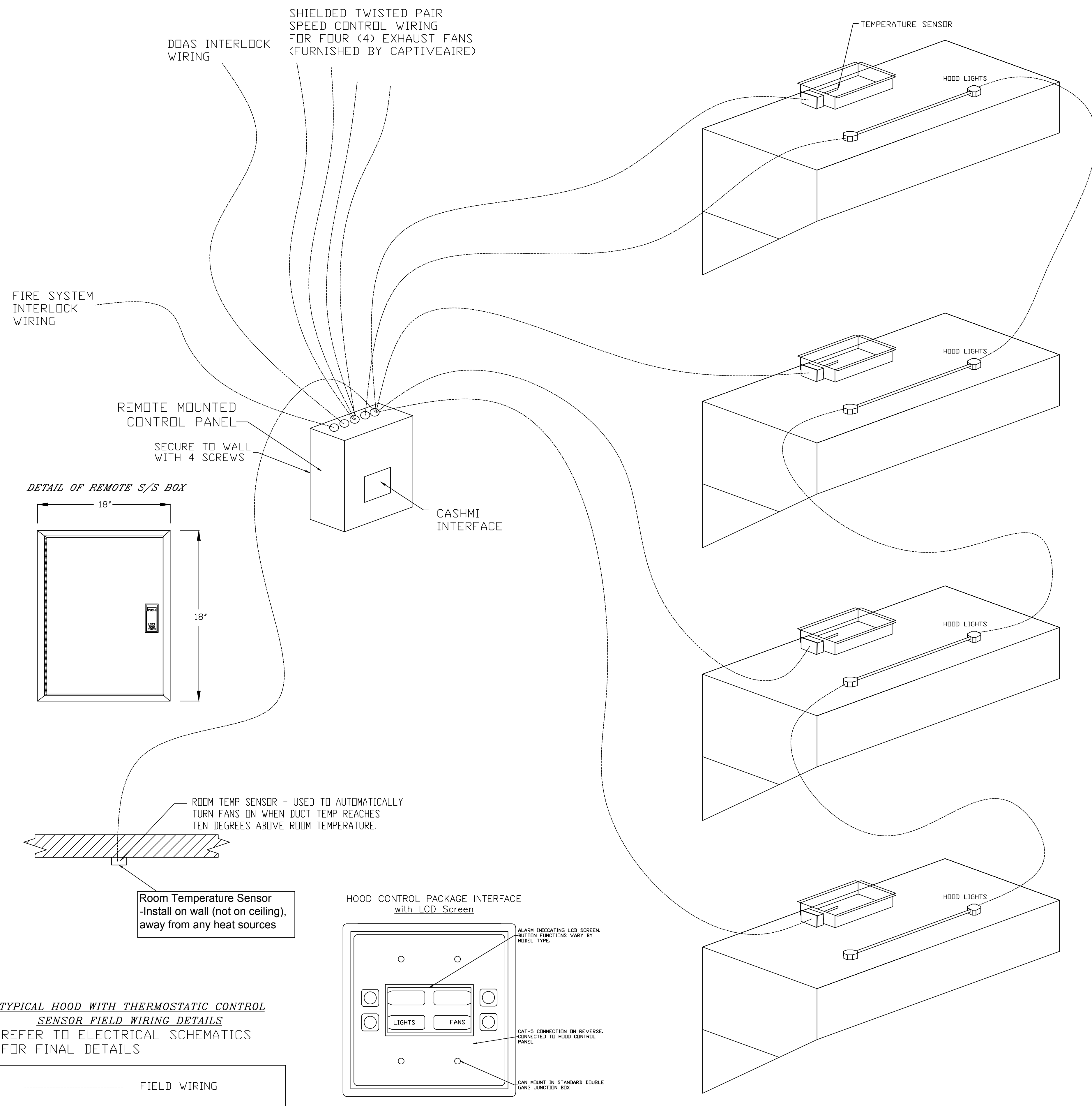
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Your Title \_\_\_\_\_ Date \_\_\_\_\_



# CRIMSON+ CONTROL DETAILS

## LOW VOLTAGE & INTERLOCKS (SEE SCHEMATICS FOR LINE VOLTAGE)



### SC- Specification:

The Electrical Package, typically FP, is designed to thermostatically activate the exhaust fans for an exhaust hood whenever elevated temperatures are sensed in the exhaust system. This option will meet the requirements of IMC 507.2.1.1 by providing a thermostat(s) mounted in the duct or hood riser to sense increased exhaust temperatures. Controls shall be listed by ETL (UL 508A). The control enclosure shall be NEMA 1 rated and listed for installation inside of the exhaust hood utility cabinet. The control enclosure may be constructed of stainless steel or painted steel.

Temperature probes(s) located in the duct riser shall be constructed of Stainless Steel. A room temperature sensor is also provided for field installation in the kitchen space in order to start the fan(s) based on the temperature differential between the room and the exhaust air in the duct, rather than fixed set-points. The system is factory pre-set to activate the fans at 10 deg F° above the room temperature.

Once the duct temperature reaches the activation point, the exhaust fans will be activated. The controls also provide hysteresis to prevent cycling of the fans after the cooking appliances have been turned off and the heat in the exhaust system is reduced. The hysteresis is factory set 2 degrees and will keep the exhaust running until the temperature falls 2 degrees below the activation set point. A hysteresis timer also exists to keep the fans running for at least 30 min after being activated by the temperature rise.

The activation and hysteresis settings may be field adjusted on the board LCD interface located inside the control enclosure to meet application needs. The panel is factory configured to shut down supply fans, turn on the exhaust fans and turn off the hood lights in a fire condition.

REVISIONS	
DESCRIPTION	DATE

**CAPTIVEAIRE**

www.captiveaire.com

Eastern, P.A. Mechanical  
PO Box 2820, 1 Union Ave. Bala Cynwyd, PA 19004 PHONE: (677) 504-4126 EMAIL: rsg108@captiveaire.com

Shake Shack - 1355 - Sterling Heights, MI, R2  
STERLING HEIGHTS, MI, 48313

DATE: 8/12/2021  
DWG.#: 5036152  
DRAWN BY: EB-108  
SCALE:  
MASTER DRAWING

CUSTOMER APPROVAL TO MANUFACTURE:

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Approved with ND Exception Taken

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SHEET NO. 8

**zebra**

ZEBRA ARCHITECTURE, P.L.L.C.  
1464 N KIERLAND BLVD, SUITE N300  
SCOTTSDALE, ARIZONA 85254  
PHONE: 480.912.1169 zbr.global

CONSULTANT LOGO:

**Schnackel**  
engineers

800-581-0963  
www.schnackel.com  
EST. 2008 20047

STORE NO: 1355

**SHAKE SHACK**

STERLING HEIGHTS, MI  
3000 W. 130TH AVE.  
STERLING HEIGHTS, MI

REVISION	
DATE	DESCRIPTION
03/16/21	REVISION A
04/16/21	REVISION B
08/13/22	CITY GREENING
03/16/22	IFC
04/22/22	REVISION 1
05/04/22	REVISION 2

STATUS: IFC SET

PRELIMINARY:

STATE OF MICHIGAN  
GREGORY SCHMACKEL  
ENGINEER  
37710  
Date: 05/22/22

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SHEET NAME: CAPTIVEAIRE DRAWINGS

DATE: 03/01/21 PROJECT NO: 33128  
DRAWN: RAS SCALE: As indicated

SHEET NO: M708