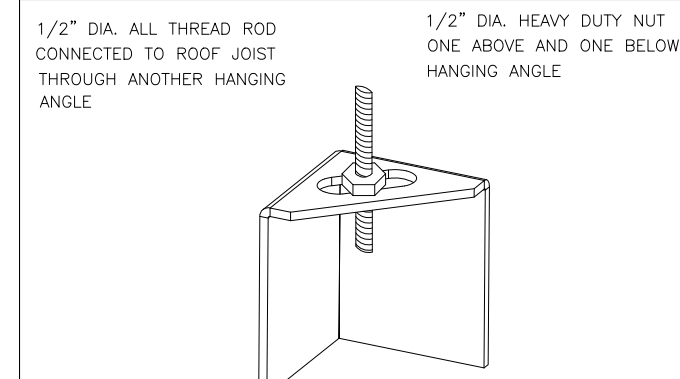


**ND-2 HANGING ANGLE DETAIL**



\*ROD AND NUTS TO BE SUPPLIED BY INSTALLING CONTRACTOR. HANGING ANGLE IS PRE-PUNCHED AT FACTORY.

**HANGING ANGLE LOCATIONS**

HOOD STYLE	DIM FROM REAR	DIM FROM FRONT (24\"/>	
CANOPY ND2	4.166"	2.246"	2.246"
ND2-PSP-F	4.166"	2.246"	2.246"
BACKSHELF BD-2	4.166"	2.246"	-
VHB/VHB-G	36"X36"	42"X42"	48"X48"
FRONT/BACK DIMS BY SIZE	2.246"	2.246"	2.246"

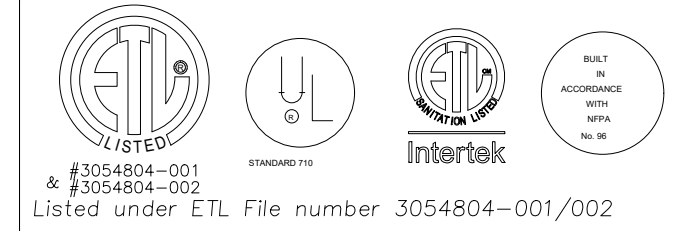
**CALCULATIONS UTILIZED**

EXHAUST CFM=LENGTH OF HOOD X CFM/LIN.FT. (LOAD)  
 SUPPLY CFM=EXHAUST CFM X PERCENTAGE REQUIRED  
 TOTAL DUCT AREA=144 X CFM  
 DUCT LENGTH= TOTAL DUCT AREA / DUCT DEPTH

\*CAPTIVE-AIRE DUCT CONNECTION SIZES ARE CALCULATED USING AN EXHAUST VELOCITY OF 1500-1800 FPM AND A SUPPLY VELOCITY OF 300-400 FPM.

**BUILDING CODES**

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH:



Listed under ETL File number 3054804-001/002

**CLEARANCE TO COMBUSTIBLES**

CAPTIVE-AIRE HOODS HAVE OPTIONAL CLEARANCE REDUCTION SYSTEMS AVAILABLE AS FOLLOWS:

MATERIAL	CLEARANCE REDUCTION SYSTEM
NON-COMBUSTIBLE	NONE REQUIRED
LIMITED-COMBUSTIBLE	3" UNSULATED STANDOFF
COMBUSTIBLE	1" INSULATED STANDOFF

**GENERAL NOTES**

**INSTALLATION**

- ALL ELECTRICAL "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY ELECTRICAL CONTRACTORS.
- ALL PLUMBING "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY PLUMBING CONTRACTORS.
- HANGING BRACKETS LOCATED AND WELDED AS SHOWN ON PLANS. ALL OTHER HANGER MATERIALS PROVIDED BY INSTALLING CONTRACTORS.
- ALL CONNECTIONS FROM CAPTIVE-AIRE DUCT PER MECHANICAL CONTRACTORS' PLANS.
- COOKING EQUIPMENT TO SHUT-OFF IN EVENT OF FIRE.
- EXHAUST FANS TO TURN ON IN EVENT OF FIRE.
- ALL LIGHTS FIXTURE SHOWN INSTALLED BY CAPTIVE-AIRE ARE FACTORY PROVIDED. INTERCONNECTIONS BETWEEN HOODS AND TO SWITCHES BY ELECTRICAL CONTRACTORS.
- LAMPS FOR LIGHT FIXTURES BY INSTALLING CONTRACTORS.
- SEISMIC RESTRAINTS ARE RESPONSIBILITY OF INSTALLING CONTRACTOR.
- INSTALLING CONTRACTORS ASSUME ALL RELATED RESPONSIBILITY FOR VERIFICATION OF DIMENSIONAL DATA CONTAINED ON THESE DOCUMENTS FOR ACCURACY, INTEGRATION, AND ADMINISTRATION OF CODE REQUIREMENTS IN EFFECT PRIOR TO ANY RELEASE FOR PRODUCTION OF EQUIPMENT SHOWN.

**BALANCE**

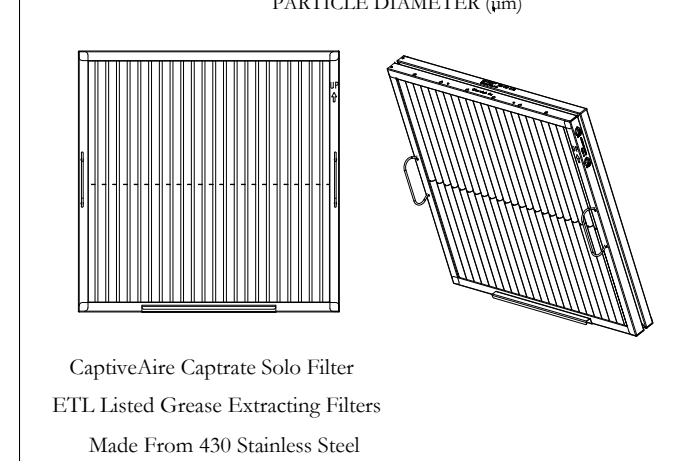
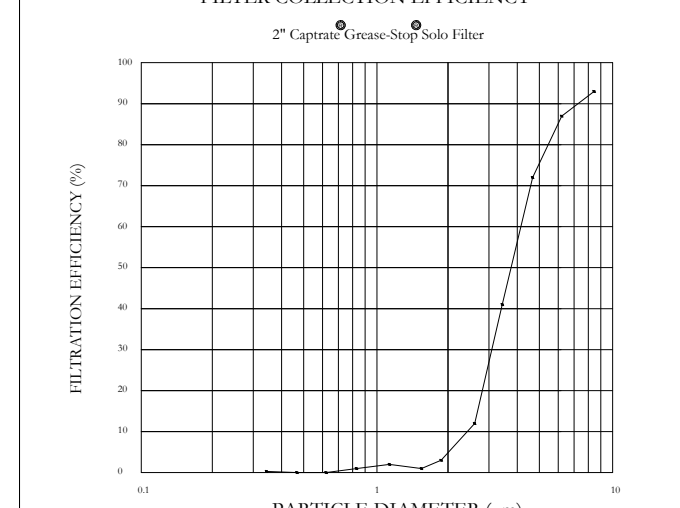
- KITCHEN HOODS MUST BE BALANCED WITH KITCHEN.
- KITCHEN SHALL BE NEGATIVE WITH RESPECT TO DINING AREA.
- RESTAURANT SHALL BE POSITIVE WITH RESPECT TO AMBIENT PRESSURE.

**ADDITIONAL**

- WRITTEN HOOD DIMENSIONS HAVE PRECEDENCE OVER SCALE.
- SIGNED AND "APPROVED" COPIES OF THIS DOCUMENT MUST BE RECEIVED BY THE FACTORY PRIOR TO COMMENCEMENT OF FABRICATION.

**FILTER DETAIL**

**FILTER COLLECTION EFFICIENCY**



Captive-Aire Captrate Solo Filter  
 ETL Listed Grease Extracting Filters  
 Made From 430 Stainless Steel

**HOOD INFORMATION - JOB#5565377**

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISERS	HOOD CONSTRUCTION	HOOD CONFIG
1	GRIDDLE HD	5424 ND-2	CAPTIVEAIRE	8'0"	450 DEG	I	MEDIUM	200	1800	4" 14" 1600 1497 -0.734"	430 SS WHERE EXPOSED	ALONE FRONT
2	FRY HD	5424 ND-2	CAPTIVEAIRE	5'0"	450 DEG	I	MEDIUM	155	775	4" 10" 775 1421 -0.430"	430 SS WHERE EXPOSED	ALONE ALONE
3	DISH HD	4224 VHB-G	CAPTIVEAIRE	3'6"	700 DEG	II	N/A	150	525	4" 10" 525 963 -0.069"	304 SS 100%	ALONE ALONE

**PATENT NUMBERS**

AC-PSP (UNITED STATES) - US PATENT 790330 B2  
 AC-PSP WALL (CANADA) - CA PATENT 2820509  
 AC-PSP ISLAND (CANADA) - CA PATENT 2520330

**HOOD INFORMATION**

HOOD NO	TAG	TYPE	FILTER(S)		EFFICIENCY @ 7 MICRONS		LIGHT(S)		UTILITY CABINET(S)		ELECTRICAL		FIRE SYSTEM PIPING	HOOD SYSTEM HANGING WEIGHT		
			QTY	HEIGHT	LENGTH	QTY	TYPE	SIZE	MODEL #	QUANTITY						
1	GRIDDLE HD	CAPTRATE SOLO FILTER	5	16"	16"	85% SEE FILTER SPEC	2	RECESSED ROUND	NO	LEFT	12"X6"X24"	ANSUL R-102	3.0/3.0	DCV-2011	1 LIGHT 1 FAN	YES 549 LBS
2	FRY HD	CAPTRATE SOLO FILTER	3	16"	16"	85% SEE FILTER SPEC	2	RECESSED ROUND	NO							YES 310 LBS
3	DISH HD						0									NO 161 LBS

**HOOD OPTIONS**

HOOD NO	TAG	OPTION
1	GRIDDLE HD	FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT LEFT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS. RIGHT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS. FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT
2	FRY HD	RIGHT END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 39.5" HIGH 430 SS. LEFT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS. RISER SENSOR INSTALL ON PLENUM
3	DISH HD	FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT

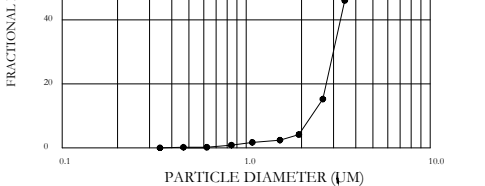
**SPECIFICATION: CAPTRATE GREASE-STOP SOLO FILTER**

THE CAPTRATE GREASE-STOP SOLO 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.

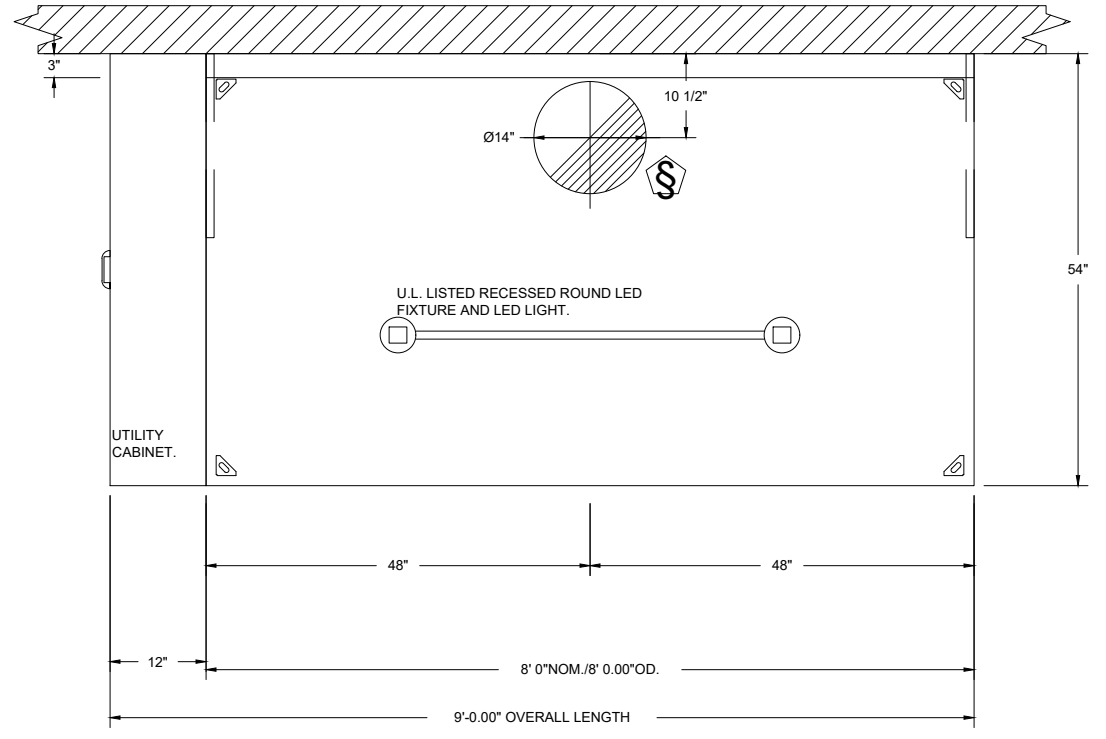
THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05. MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.



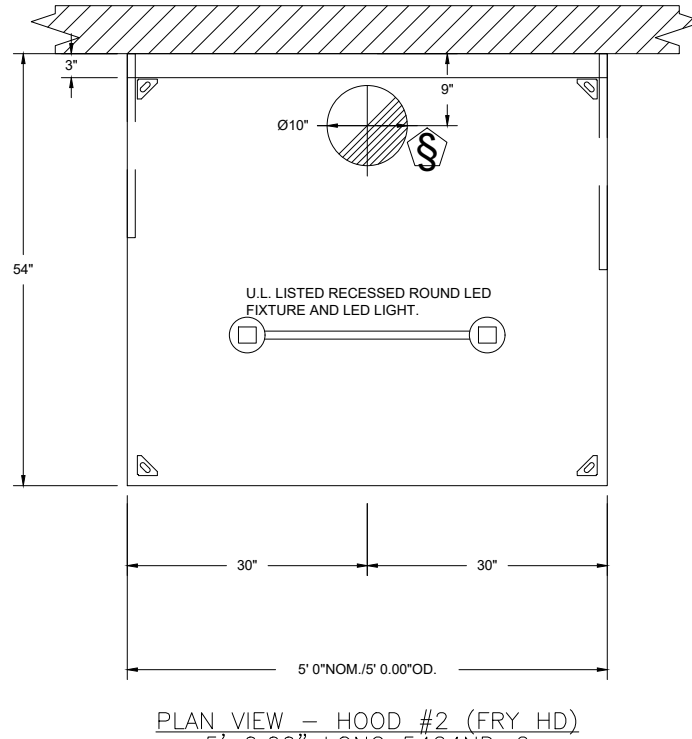
EFFICIENCY VS PARTICLE DIAMETER

CAPTIVE FILTERS ARE BUILT IN COMPLIANCE WITH:

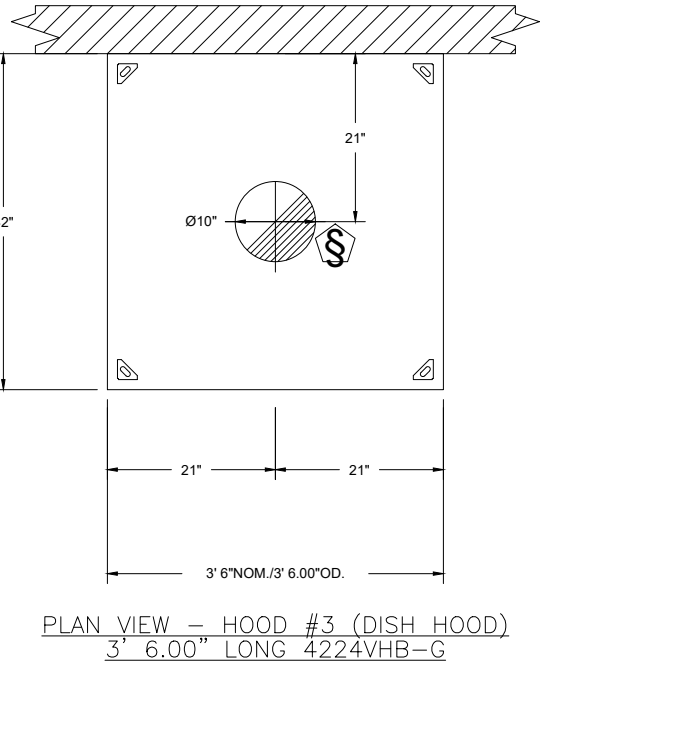
- NEPSI 806
- NSF STANDARD #2
- UL STANDARD #166
- INT. MECH. CODE (IMC)
- ULC-S649



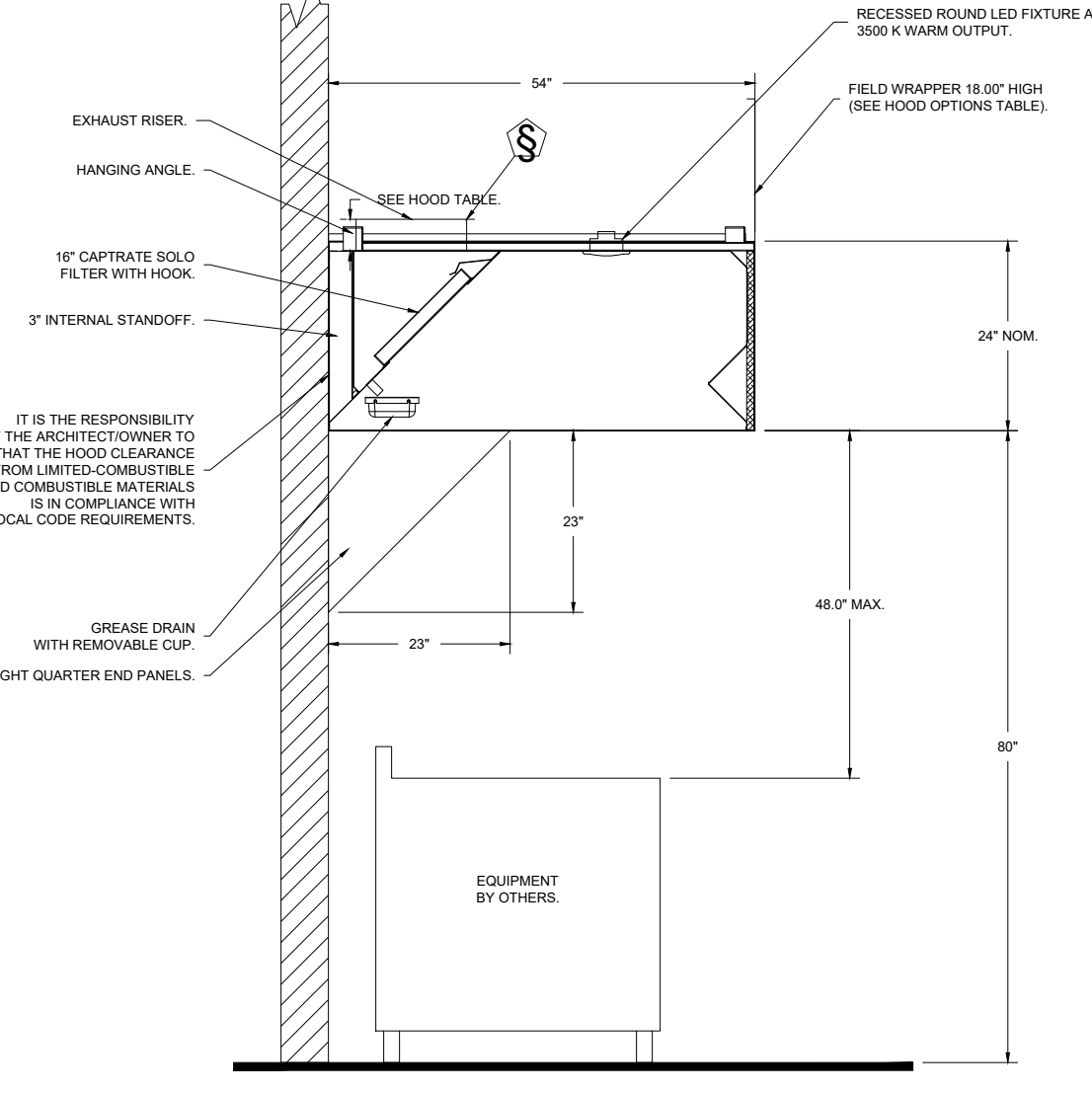
PLAN VIEW - HOOD #1 (GRIDDLE HD)  
 8' 0.00" LONG 5424ND-2



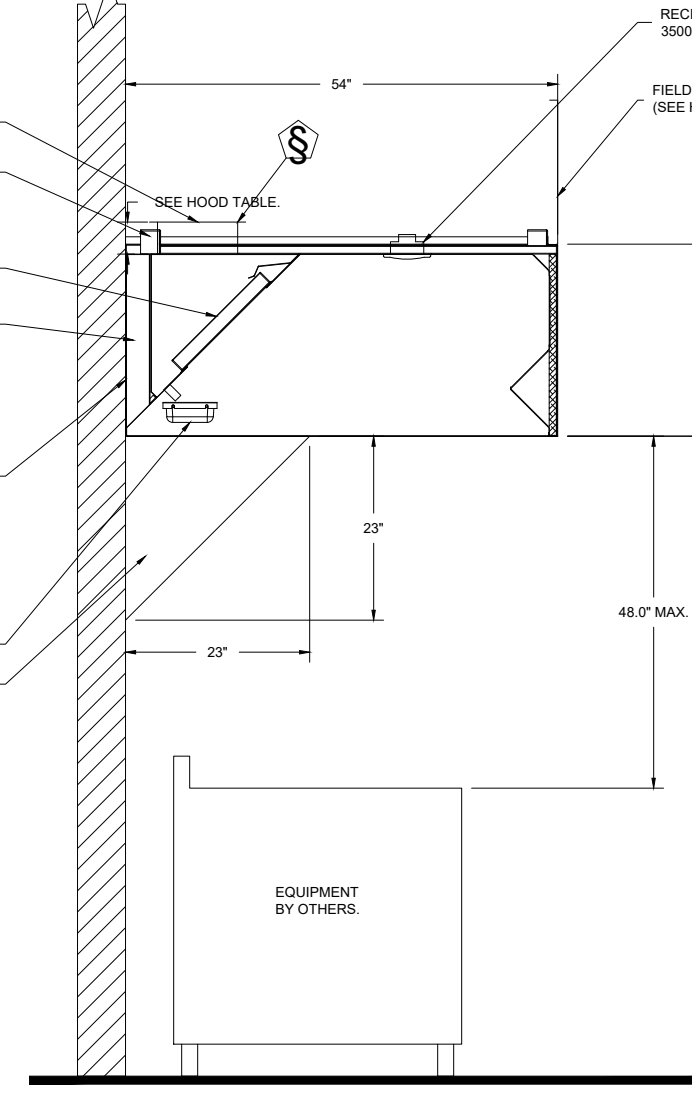
PLAN VIEW - HOOD #2 (FRY HD)  
 5' 0.00" LONG 5424ND-2



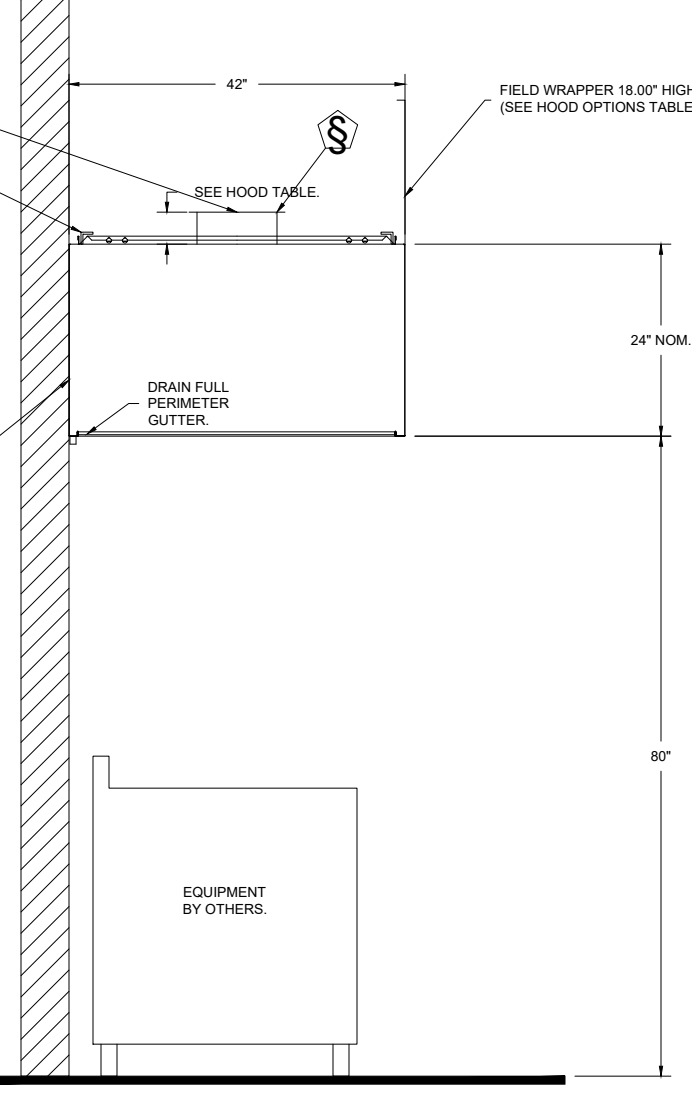
PLAN VIEW - HOOD #3 (DISH HOOD)  
 3' 6.00" LONG 4224VHB-G



SECTION VIEW - MODEL 5424ND-2  
 HOOD - #1 (GRIDDLE HD)



SECTION VIEW - MODEL 5424ND-2  
 HOOD - #2 (FRYER HOOD)



SECTION VIEW - MODEL 4224VHB-G  
 HOOD - #3 (DISH HOOD)

**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:  
 KANSAS CITY REGIONAL OFFICE  
 1126 SWIFT STREET, KANSAS CITY, MO 64116  
 PHONE: (816) 221-8375  
 FAX: (816) 221-8311

CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted   
 Approved with NO Exception Taken   
 Revised and Reissued   
 SIGNATURE: \_\_\_\_\_  
 Title: \_\_\_\_\_

\*\*\* NOTE \*\*\*  
 ALL WALLS AND STRUCTURES THAT COME WITHIN 18" OF HOOD MUST BE METAL, STUDS AND SHEETROCK. WOOD STUDS OR ANY OTHER COMBUSTIBLE MATERIAL WITHIN 18" OF HOOD NOT ALLOWED.

\*\*\* NOTE \*\*\*  
 HOOD MANUFACTURER RECOMMENDS NO RETURNS OR 4-WAY DIFFUSERS WITHIN 10 FEET OF HOOD IN ALL DIRECTIONS.

\*\*\* NOTE \*\*\*  
 MAKEUP AIR SHALL BE DELIVERED INTO SPACE IN MANNER THAT WILL NOT DISRUPT HOODS ABILITY TO CAPTURE AND CONTAIN.

**HBT Foodservice**

104 W 9th St Suite 204, Kansas City, MO. 64105 PHONE: (816) 221-8875 FAX: (816) 221-8311 EMAIL: req@99@captiveaire.com

DESCRIPTION	DATE

Freddy's - Lufkin, TX  
 LUFKIN, TX, 75901

7/20/2022

5565377

michael.co

1/2" = 1'-0"

**MASTER DRAWING**

**WT GROUP**  
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 T: 224.293.6333 | F: 224.293.6444  
 wtengineering.com

**WT Group**  
 Engineering • Design • Consulting

STATE OF TEXAS  
 MARK VENTRELLI  
 108358

**FREDDY'S FROZEN CUSTARD AND STEAKBURGERS**

**Freddy's**  
 FROZEN CUSTARD STEAKBURGERS

PLAZA STREET PARTNERS

ISSUE DATE  
 TO CONCEPT 6.1.22  
 CONCEPT 6.9.22  
 CLIENT 8.25.22  
 PERMIT 9.1.22  
 PERMIT 10.17.22  
 CONST. 11.21.22

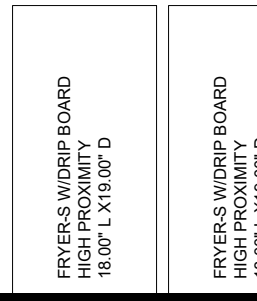
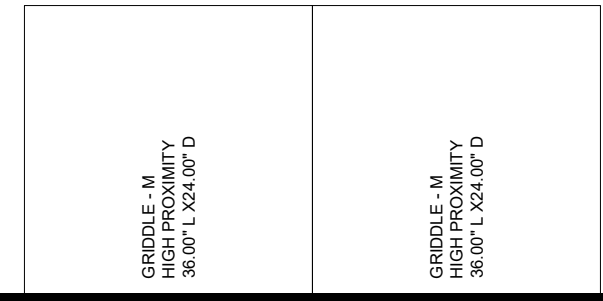
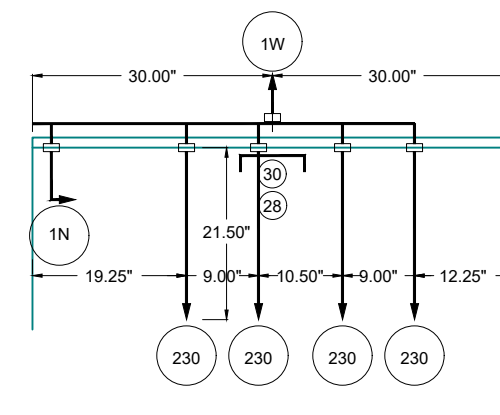
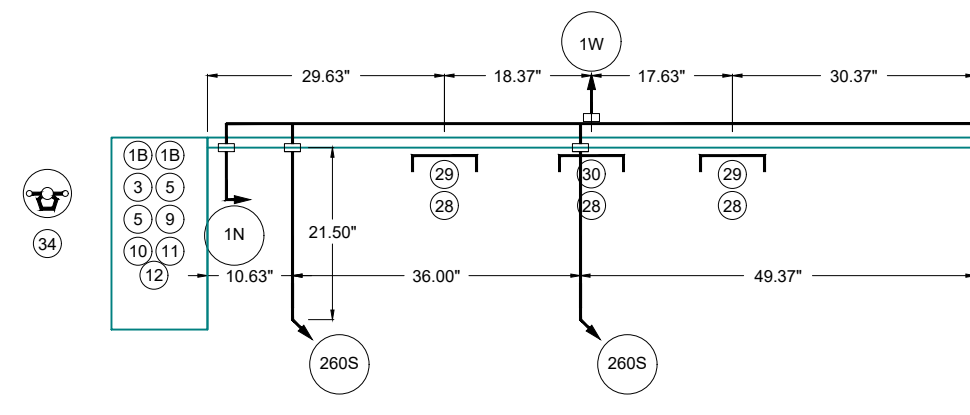
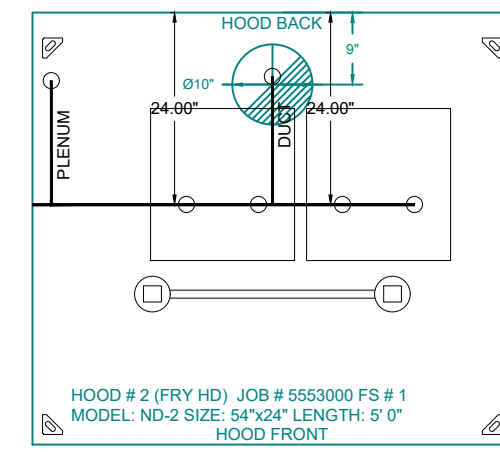
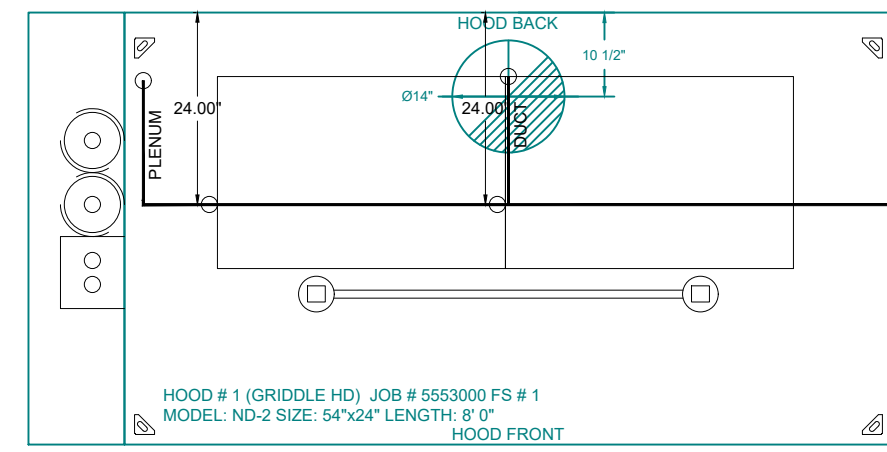
CHECK/CX  
 DRAWN:CS, CX  
 JOB:D22000

**M3**  
 MECHANICAL HOOD PLANS

FIRE SYSTEM INFORMATION - JOB#5565377					
FIRE SYSTEM NO	TAG	TYPE	SIZE	FLOW POINTS	INSTALLATION
1		ANSUL R102	3.0/3.0	16	FIRE CABINET LEFT LOCATION ON HOOD

GAS VALVE(S)			
FIRE SYSTEM NO	TAG	TYPE	SUPPLIED BY
1		SC ELECTRICAL	1.000 CAPTIVEAIRE SYSTEMS

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
0 - 0		43981 LARGE BLOWOFF CAP. METAL. TO FIT NEW LASERETCHED ANSUL NOZZLES. A0024201.	10	0
0 - 0		TANK STRAP TANK CAP. USED FOR ANSUL TANKS.	2	0
0 - 0		UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS.	2	0
1 - 1		AT - 3.0 TANK(R18) - 3.0 GALLON SS TANK (FOR USE WITH AUTOMAN RELEASE, ACTUATOR, OR SS ENCLOSURE (U.L.A.C.) MACOLA # 5142962).	2	0
3 - 3		ANS-DEM REGULATED RELEASE - ANSUL REGULATED MECHANICAL RELEASE/BRAKETS ASSEMBLY, OEM. R-102, CARTRIDGE DETECTION INCLUDED, ANSUL PART # 79493.	1	0
5 - 5		1-10-10 AGENT - ANSULEX LOW PH WET CHEMICAL AGENT, 3 GALLON (UL) 79372.	2	0
9 - 9		101-30 CARTRIDGE - CARBON DIOXIDE, 101-30, CARTRIDGE (R-102) 19-15851.	1	0
10 - 10		TLINK LINK - TEST LINK (1 TEST LINK) ANSUL PART # 24916, MACOLA # 20-24916.	1	0
11 - 11		MICRO-SDA MICROSWITCH KIT. INCLUDES 2 SWITCHES AND MOUNTING HARDWARE. SINGLE DUAL ELECTRIC SWITCH, ONE STANDARD SWITCH, ONE ALARM DUTY SWITCH ANSUL PART # 437155, MACOLA # 08-437155.	1	0
12 - 12		HOSE HOSE - RUBBER HOSE	1	0
14 - 14		419336 NOZZLE - 1W NOZZLE, DUCT/APPLIANCE (REPLACES ANSUL PART# 419347, CAS PART# 419336) A0001265.	2	0
16 - 16		419333 NOZZLE - 1N NOZZLE, PLENUM/APPLIANCE (REPLACES ANSUL PART# 419346, CAS PART# 419333) A0001265.	2	0
21 - 21		419339 NOZZLE - 230 NOZZLE, APPLIANCE (REPLACES ANSUL PART# 419350, CAS PART# 419339) A0001265.	4	0
24 - 24		419341 NOZZLE - 260 NOZZLE, APPLIANCE (REPLACES ANSUL PART# 419352, CAS PART# 419341) A0001271.	2	0
25 - 25		418569 NOZZLE ADAPTOR - SWIVEL NOZZLE ADAPTOR (REPLACES CAS PART # 418569) A0001274.	2	0
26 - 26		QSA-3R QUM SEAL - 3/8" (UL)	10	0
27 - 27		QSA-1/2 PULLEY SEAL - 1/2" HOOD SEAL (UL) ANSUL PART # 423253, MACOLA # 52-79768.	5	0
28 - 28		S-DET DETECTOR - SERIES (SCISSOR LINKAGE) ANSUL PART # 435547/435548 (OLD # 417384/4481), MACOLA # 05-417389.	4	0
29 - 29		ANS-300FL FUSIBLE LINK - 300DEG F, R-102 AND PIRANHA, ANSUL PART # 439088.	2	0
30 - 30		ANS-500FL FUSIBLE LINK - 500DEG F, R-102 AND PIRANHA, ANSUL PART # 439232.	2	0
34 - 34		RPS-A REMOTE PULL STATION - RED COMPOSITE (WITHOUT WIRE ROPE) 434618 (OLD MACOLA #08-4355).	1	0
35 - 35		PE-LT PULLEY ELBOW - LOW TEMP. PULLEY ELBOW, SET SCREW TYPE ANSUL PART # 416070, MACOLA # 11-416071.	5	0
36 - 36		PE-HT PULLEY ELBOW - HIGH TEMP PULLEY ELBOW, COMPRESSION TYPE, ANSUL PART # 423251, MACOLA # 10-45771.	4	0

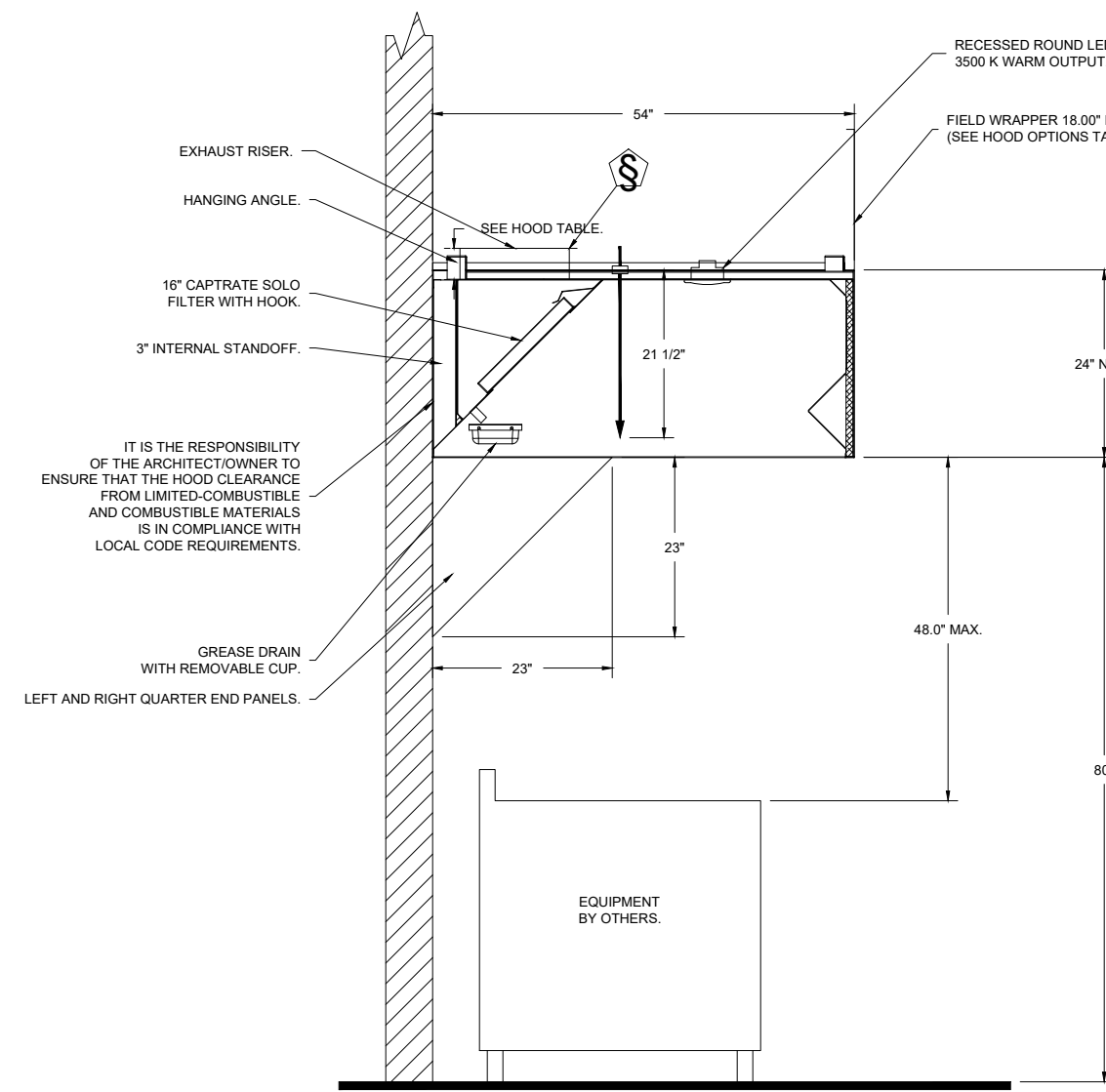


- NOTES
- FIELD PIPE DROPS AS SHOWN
  - SLEEVING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS
  - FIELD INSTALLED DROP. FACTORY WILL PROVIDE QTY 1 80IN LONG PIECE OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
  - SHIP LOOSE DROP. FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
  - RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELING, 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 CHARBOLLER DROPS ARE SHIPPED LOOSE
  - FACTORY PIPING EXTENDS A MAXIMUM OF 6\"/>
- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.
- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.

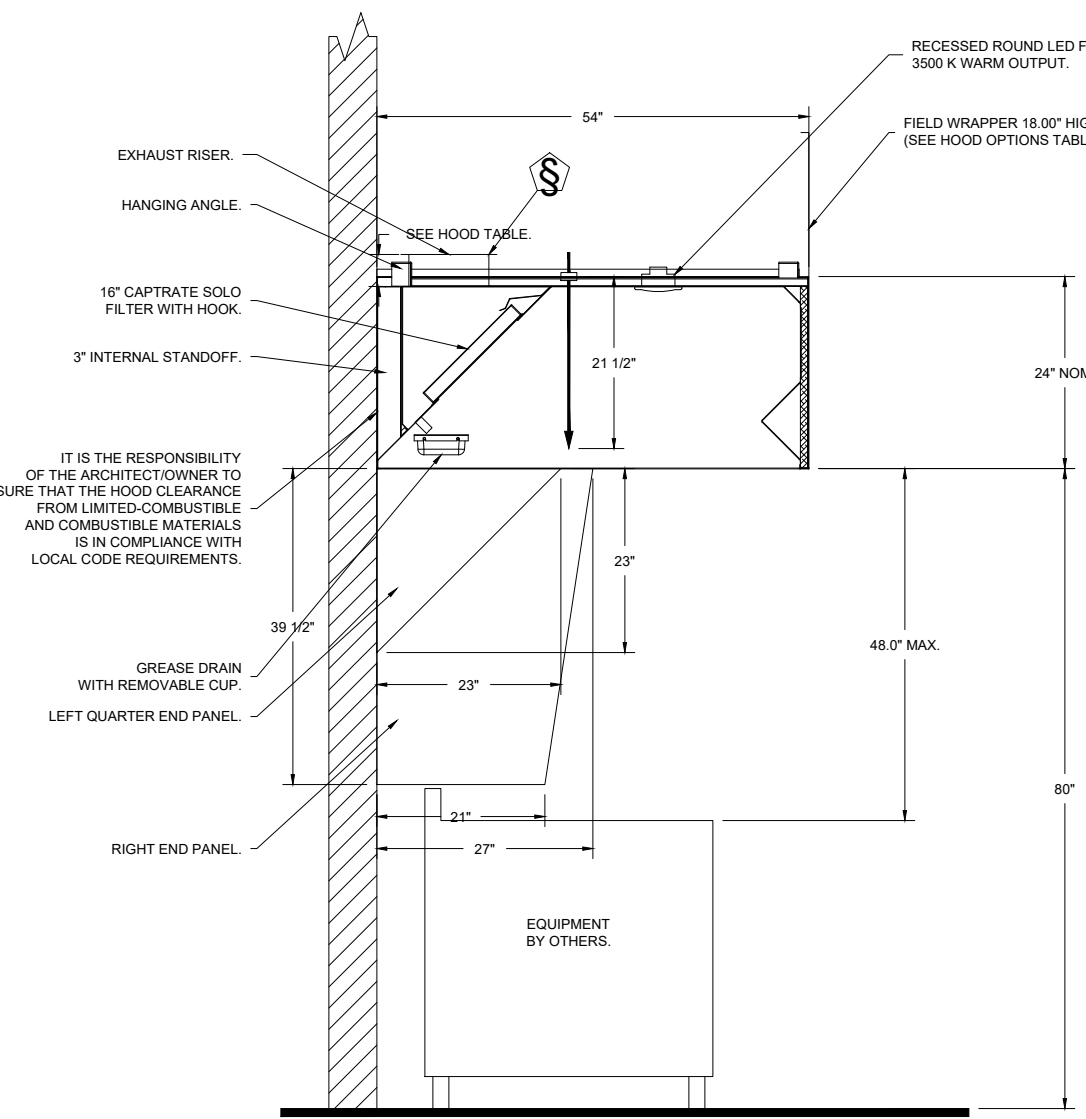
JOB # 5553000  
 JOB NAME: FREDDY'S - MONROE, LA  
 SYSTEM SIZE: ANSUL-3.0/3.0 TOTAL FP REQUIRED: 16.  
 HOOD # 1 8' 0.00' LONG X 54\"/>

LEGEND - FIRE CABINET ANSUL SYSTEM

- 1A 1.5 GALLON TANK
- 1B 3 GALLON TANK
- 2 OEM AUTOMAN RELEASE
- 3 OEM REGULATED RELEASE
- 4 OEM 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
- 12 HOSE ASSEMBLY
- 1100 DUCT NOZZLE (430913)
- 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)
- 280 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



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

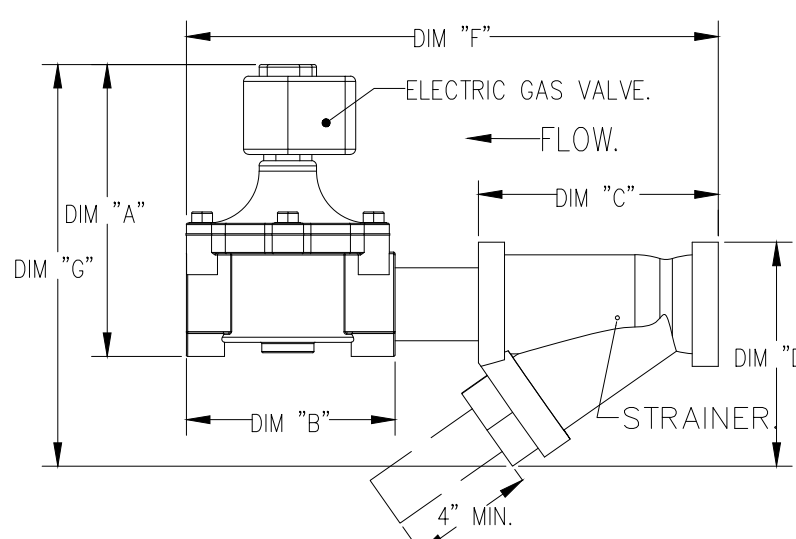


SECTION VIEW - MODEL 5424ND-2 HOOD - #2

DUCT NOZZLE AND PLENUM SPRAY BAR LOCATION

DUCT NOZZLE AND PLENUM SPRAY BAR LOCATION

GAS VALVES AND STRAINERS																
TYPE	SIZE	VOLTAGE	GAS VALVE SIZING		GAS VALVE DIMENSIONS					INSTALLATION	PART NUMBERS					
			MIN. INLET PRESSURE	MAX. INLET PRESSURE	FLOW AT 1 IN.W.C. DROP NATURAL GAS	FLOW AT 1 IN.W.C. DROP PROPANE	DM "A"	DM "B"	DM "C"		DM "D"	DM "E"	MOUNTING ORIENTATION	GAS VALVE PART NUMBER	STRAINER PART NUMBER	GAS VALVE/STRAINER KIT
ELECTRICAL	1"	120 VAC	0 PSI (0 IN.W.C.)	138 IN.W.C.	1,132,300 BTU/HR	234,733 BTU/HR	6-15/16"	5-15/16"	4-7/8"	5-3/16"	12-13/16"	10-11/16"	HORIZONTAL/VERTICAL	8214250	4413965	(SC)EGVHT



Freddy's - Lufkin, TX  
 LUFKIN, TX, 75901

7/20/2022  
 5565377  
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1/2" = 1'-0"  
**MASTER DRAWING**



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 wtengineering.com

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STATE OF TEXAS  
 MARK VENTURELLI  
 108354

**FREDDY'S FROZEN CUSTARD AND STEAKBURGERS**  
 4101 S. MEDFORD DRIVE  
 LUFKIN, TEXAS 75901

**Freddy's**  
 FROZEN CUSTARD  
 STEAKBURGERS

PLAZA STREET PARTNERS

ISSUE DATE  
 TO CONCEPT 6.1.22  
 CONCEPT 6.9.22  
 CLIENT 8.25.22  
 PERMIT 9.1.22  
 PERMIT 10.17.22  
 CONST. 11.21.22

CHECK/CX  
 DRAWN:CS, CX  
 JOB:D220000

**M4**  
 MECHANICAL HOOD PLANS

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL.	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	EF-1 (GRIDDLE)	1	CASRE180D	CAPTIVEAIRE	1600	1.400	1243	ODP-PREMIUM	1.000	0.9520	3	208	3.8	628 FPM	282	16.9
2	EF-2 (FRYER)	1	DUS3HFA	CAPTIVEAIRE	775	1.250	1532	TEAD-ECM	0.500	0.3950	1	115	6.3	265 FPM	105	16.6
3	EF-3 (DISH)	1	DUS3HFA	CAPTIVEAIRE	625	0.800	1517	TEAD-ECM	0.333	0.2010	1	115	4.3	260 FPM	67	15.1

**DOAS/RTU FAN SCHEDULE - JOB#5565377**

FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	FAN INFORMATION		ELECTRICAL INFORMATION		COOLING INFORMATION		REHEAT INFORMATION		GAS HEAT INFORMATION		NOTES																					
					BLOWER	RETURN AIR CFM	ESP	HP	DISCHARGE DB	WBT	DESIRED	MAX	DISCHARGE DB	WBT		TEMP ROSE																				
4	DOAS-1	1	CASRTU3-200-15-20T-DOAS	CAPTIVEAIRE	15P-3	0	2650	2650	2498	0.500	2.00	3	208	76.4A	80A	82.8°F	78.7°F	82.8°F	78.7°F	52.0°F	48.1°F	44.7°F	204.0 MBH	87.3 MBH	18.2	6.0	70.0°F	55.8°F	53.2 MBH	129.6 MBH	159.0 LBSHR	NATURAL	193138	156442	51°F	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15
5	DOAS-2	1	CASRTU2-250-18-10T-DOAS	CAPTIVEAIRE	18MF-2-RTU	3200	800	4000	2043	0.500	5.00	3	208	67.8A	80A	82.8°F	78.7°F	76.6°F	65.9°F	54.8°F	54.9°F	132.2 MBH	93.1 MBH	18.6	4.3	70.0°F	60.7°F	67.6 MBH	96 MBH	36.0 LBSHR	NATURAL	228651	185207	40°F	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18	

- NOTES:**
- INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL
  - DIRECT DRIVE PL ENBL 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
  - SUCTON LINE ACCUMULATOR
  - FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY. 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER
  - AVERAGING INTAKE. DVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE TEMPERATURE TO BE FACTORY MOUNTED WITHIN UNIT)
  - 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION MINIMUM 20GA EXTERIOR W/ 14GA BASE
  - 80% EFFICIENT FURNACE. WITH MODULATING BURNER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 6:1 TURNDOWN WITH HG AND 5:1 TURNDOWN WITH LP
  - SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE
  - FULLY MODULATING REHEAT GAS REHEAT
  - HAIR GUARD FOR CONDENSING COIL
  - DOWN DISCHARGE/DOWN RETURN
  - 1/2 DEGREE LOW AMBIENT OPERATION
  - RTU ECONOMIZER WITH DIFFERENTIAL ENTHALPHY CONTROL

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	EF-1 (GRIDDLE)	1	UTILITY SET GREASE CUP
		1	RE18- DISCHARGE EXTENSION ASSEMBLY WITH HARDWARE
		1	2 YEAR PARTS WARRANTY
2	EF-2 (FRYER)	1	UPRLST FAN WHEEL ACCESS PORT
		1	36" TALL STRAIGHT WIND BAND EXTENSION 13 (SHIPS LOOSE)
		1	FAN BASE CERAMIC SEAL - SHIP LOOSE - FOR GREASE DUCTS
3	EF-3 (DISH)	1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECM03 PREWIRE (TELECO MOTOR), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
		1	SCR-11 BIRD SCREEN
4	DOAS-1	1	115-BSD DAMPER
		1	2 YEAR PARTS WARRANTY
		1	INLET PRESSURE GAUGE, 0-30"
		1	MANFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
		1	RTU TOTAL CFM MONITORING
		1	SHIP LOOSE GAS STRAINER 3/4"
		1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU 750VA TRANSFORMER USED IF A NON-DCV PREWIRE CONTROLS THIS UNIT. THE #28, #47, "M", OR "E2" PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
		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	VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
		1	RTU3 CURB DUCT HANGER
		1	RTU3 DOWN RETURN
1	RTU RETURN MOUNTED SMOKE DETECTOR AND SAMPLING TUBE - FACTORY INSTALLED		
1	OCCUPIED SCHEDULING		
1	CLOGGED FILTER SWITCH - NOTIFICATION ON HMI		
1	20 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR. ECM CONDENSING FANS		
1	20 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL		
1	RTU INTAKE-RETURN DAMPER - MANUAL CONTROL VIA HMI		
1	RTU3 HAIR GUARD		
1	VAV PACKAGE W/ 0-10VDC INPUT 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)		
5	DOAS-2	1	INLET PRESSURE GAUGE, 0-30"
		1	MANFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
		1	RTU TOTAL CFM MONITORING
		1	SHIP LOOSE GAS STRAINER 3/4"
		1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU 750VA TRANSFORMER USED IF A NON-DCV PREWIRE CONTROLS THIS UNIT. THE #28, #47, "M", OR "E2" PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
		1	LOW AMBIENT COOLING OPERATION - DOWN TO 15F AMBIENT
		1	RTU2 DOWN DISCHARGE
		1	2" MERV 13 FILTERS FOR RTU2 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU2 (QTY. 4)
		1	OVERHEAT STAT
		1	VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
		1	10 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR. ECM CONDENSING FANS
		1	10 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL
		1	RTU2 DOWN RETURN
1	FREEZE/STAT		
1	OCCUPIED SCHEDULING		
1	CLOGGED FILTER SWITCH - NOTIFICATION ON HMI		
1	RTU2 CURB DUCT HANGER		
1	RTU RETURN MOUNTED SMOKE DETECTOR AND SAMPLING TUBE - FACTORY INSTALLED		
1	CLOGGED FILTER SWITCH - NOTIFICATION ON HMI		
1	RTU ECONOMIZER - DIFFERENTIAL ENTHALPHY CONTROL		
1	RTU2 ECONOMIZER BAROMETRIC RELIEF		
1	RTU2 HAIR GUARD		
1	RTU INTAKE-RETURN DAMPER - MANUAL CONTROL VIA HMI		
1	VAV PACKAGE W/ MANUAL/0DC 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)		

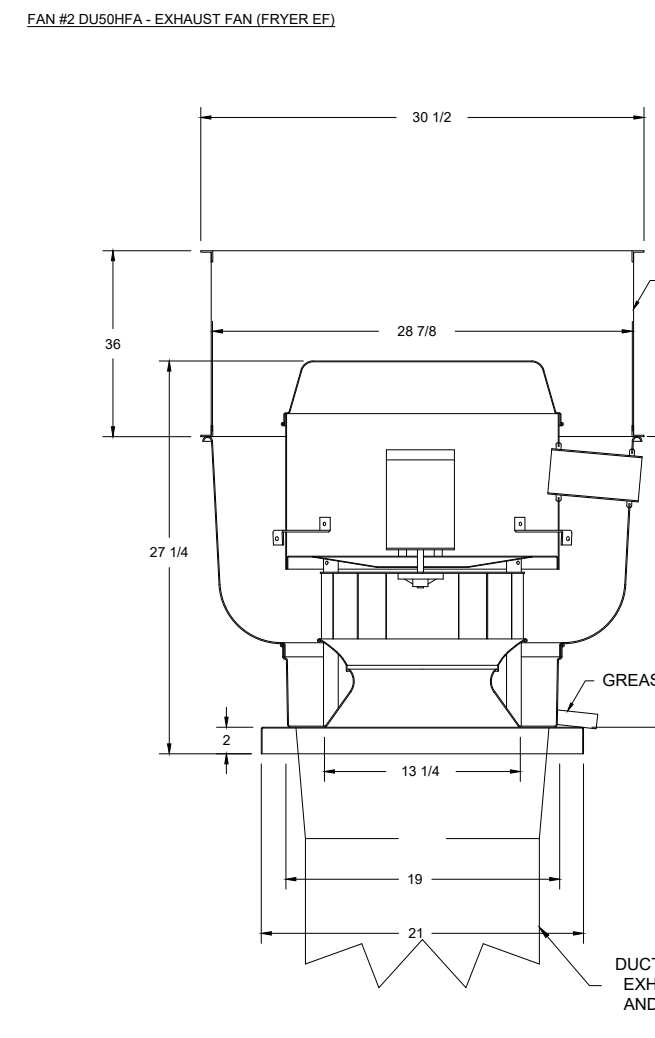
**FAN ACCESSORIES**

FAN UNIT NO	TAG	EXHAUST GREASE CUP	SUPPLY GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	EF-1 (GRIDDLE)	YES						
2	EF-2 (FRYER)	YES						
3	EF-3 (DISH)	YES						

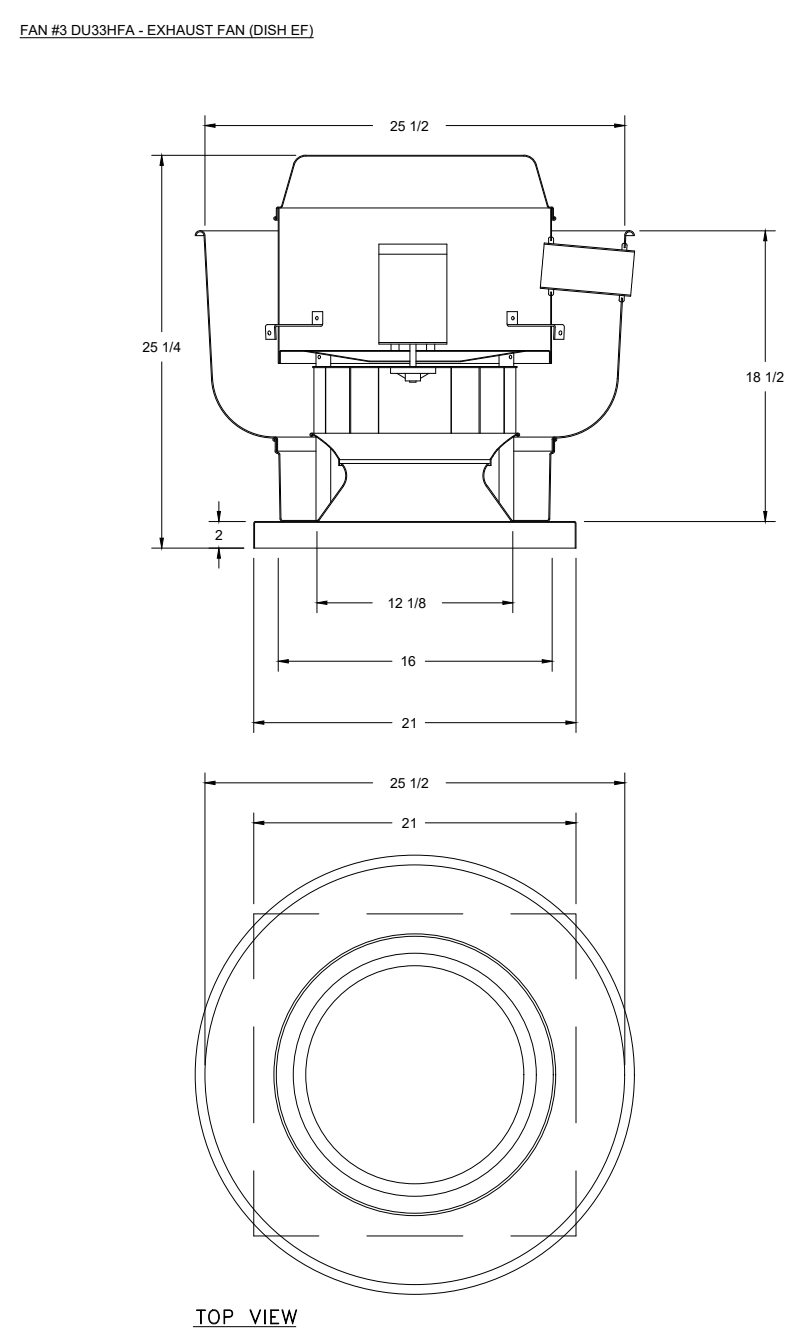
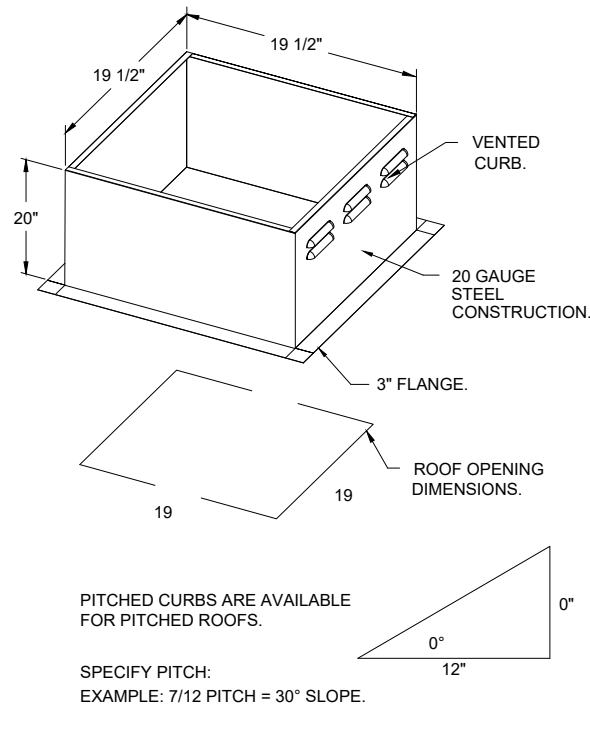
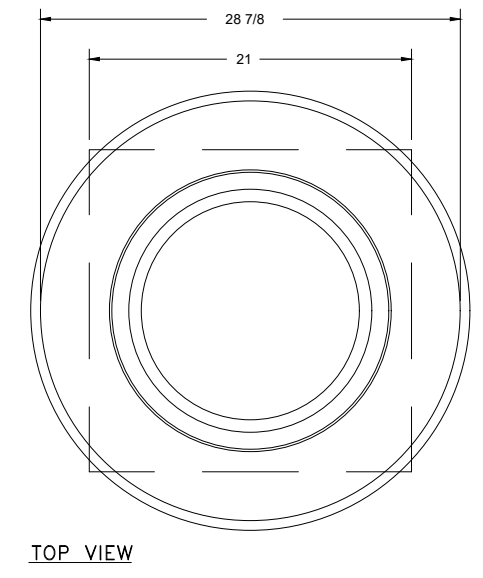
**CURB ASSEMBLIES**

NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	#1	EF-1 (GRIDDLE)	38 LBS	CURB	26.500"W X 26.500"L X 24.000"H ALONG LENGTH, RIGHT VENTED HINGED.
2	#2	EF-2 (FRYER)	31 LBS	CURB	19.500"W X 19.500"L X 20.000"H ALONG LENGTH, RIGHT VENTED HINGED.
3	#3	EF-3 (DISH)	27 LBS	CURB	19.500"W X 19.500"L X 20.000"H ALONG LENGTH, RIGHT VENTED HINGED.
4	#4	DOAS-1	78 LBS	CURB	59.500"W X 91.000"L X 14.000"H ALONG WIDTH, RIGHT INSULATED.
5	#5	DOAS-2	60 LBS	CURB	49.500"W X 75.000"L X 14.000"H ALONG WIDTH, RIGHT INSULATED.

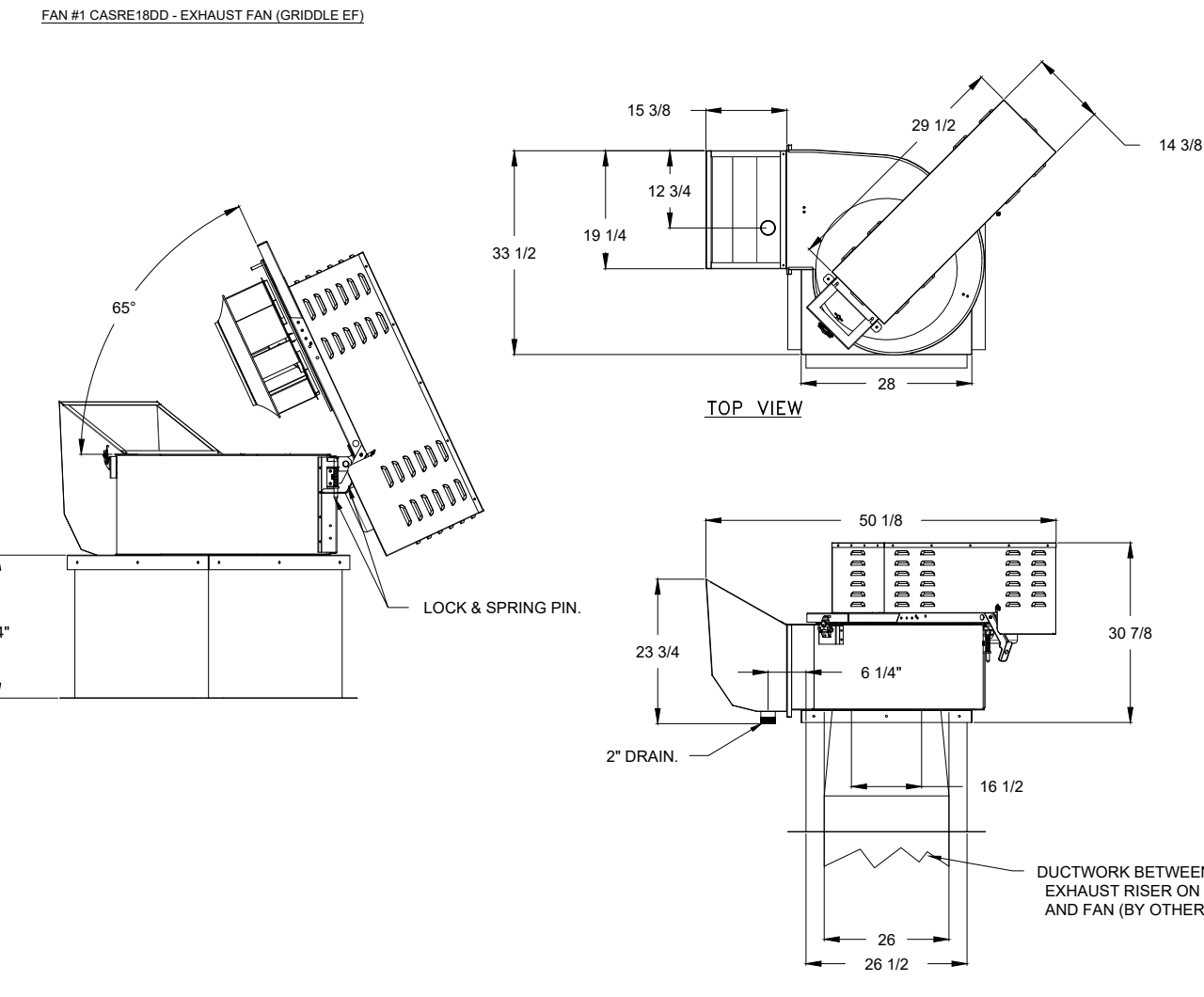
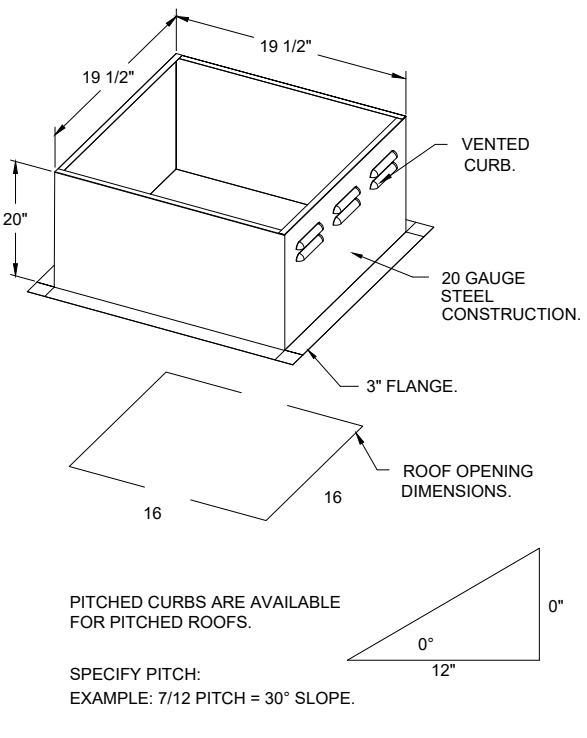
**CAPTIVEAIRE CONTACT:**  
**MIKE CONROY TECHNICAL SALES REGION 120**  
**CAPTIVEAIRE DOAS & COMMERCIAL KITCHEN VENTILATION**  
**1126 SWIFT ST, NORTH KANSAS CITY, MO 64116**  
**P: 816-221-8575 X1 M: 816-877-1896 F: 816-221-8311**  
**REG120@CAPTIVEAIRE.COM WWW.CAPTIVEAIRE.COM**



- FEATURES:**
- DIRECT DRIVE CONSTRUCTION (NO BELT/SPLLEYS)
  - ROOF MOUNTED FANS
  - RESTAURANT MODEL
  - UL705 AND UL702 AND ILC-9649
  - 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
  - 36" TALL STRAIGHT WIND BAND EXTENSION (3 SHIPS LOOSE)
  - ECM WIRING PACKAGE - PWM SIGNAL FROM SCROLL PREWIRE (TELECO MOTOR), CCW ROTATION
  - 2 YEAR PARTS WARRANTY



- FEATURES:**
- DIRECT DRIVE CONSTRUCTION (NO BELT/SPLLEYS)
  - ROOF MOUNTED FANS
  - UL705
  - VARIABLE SPEED CONTROL
  - INTERNAL WIRING
  - THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
  - NEMA 3R SAFETY DISCONNECT SWITCH
- OPTIONS**
- ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL (TELECO MOTOR), CCW ROTATION
  - SCR-11 BIRD SCREEN
  - 115 BSD DAMPER
  - 2 YEAR PARTS WARRANTY



- FEATURES:**
- ROOF MOUNTED FANS
  - RESTAURANT MODEL
  - UL702 AND ILC-9649
  - HIGH HEAT OPERATION DIRECT DRIVE 300°F (149°C)
  - HEAT SLINGER
  - GREASE CLASSIFICATION TESTING
  - TILT OUT WHEEL
  - LOCKING PIN FOR POWER PACK
  - MOTOR WEATHER COVER
  - INTERLOCKED DISCONNECT SWITCH
  - NEMA 4X 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**
- UTILITY SET GREASE CUP
  - UPRST FAN WHEEL ACCESS PORT
  - 2 YEAR PARTS WARRANTY

**Freddy's - Lufkin, TX**  
**LUFKIN, TX, 75901**

**CAPTIVEAIRE**

**HBT Foodservice**

104 W 9th St Suite 204, Kansas City, MO, 64105 PHONE: (816) 221-8575 FAX: (816) 221-4311 EMAIL: reg120@captivaire.com

DESCRIPTION DATE:

7/20/2022
5565377
michael.co

1/2" = 1'-0"

**MASTER DRAWING**

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**STATE OF TEXAS**  
 MARK VENTRELLI  
 108358

**FREDDY'S FROZEN CUSTARD AND STEAKBURGERS**  
 4101 S. MEDFORD DRIVE  
 LUFKIN, TEXAS 75901

**PLAZA STREET PARTNERS**

**ISSUE DATE**

CONCEPT	6.1.22
CONCEPT	6.9.22
CLIENT	8.25.22
PERMIT	9.1.22
PERMIT	10.17.22
CONST.	11.21.22


3

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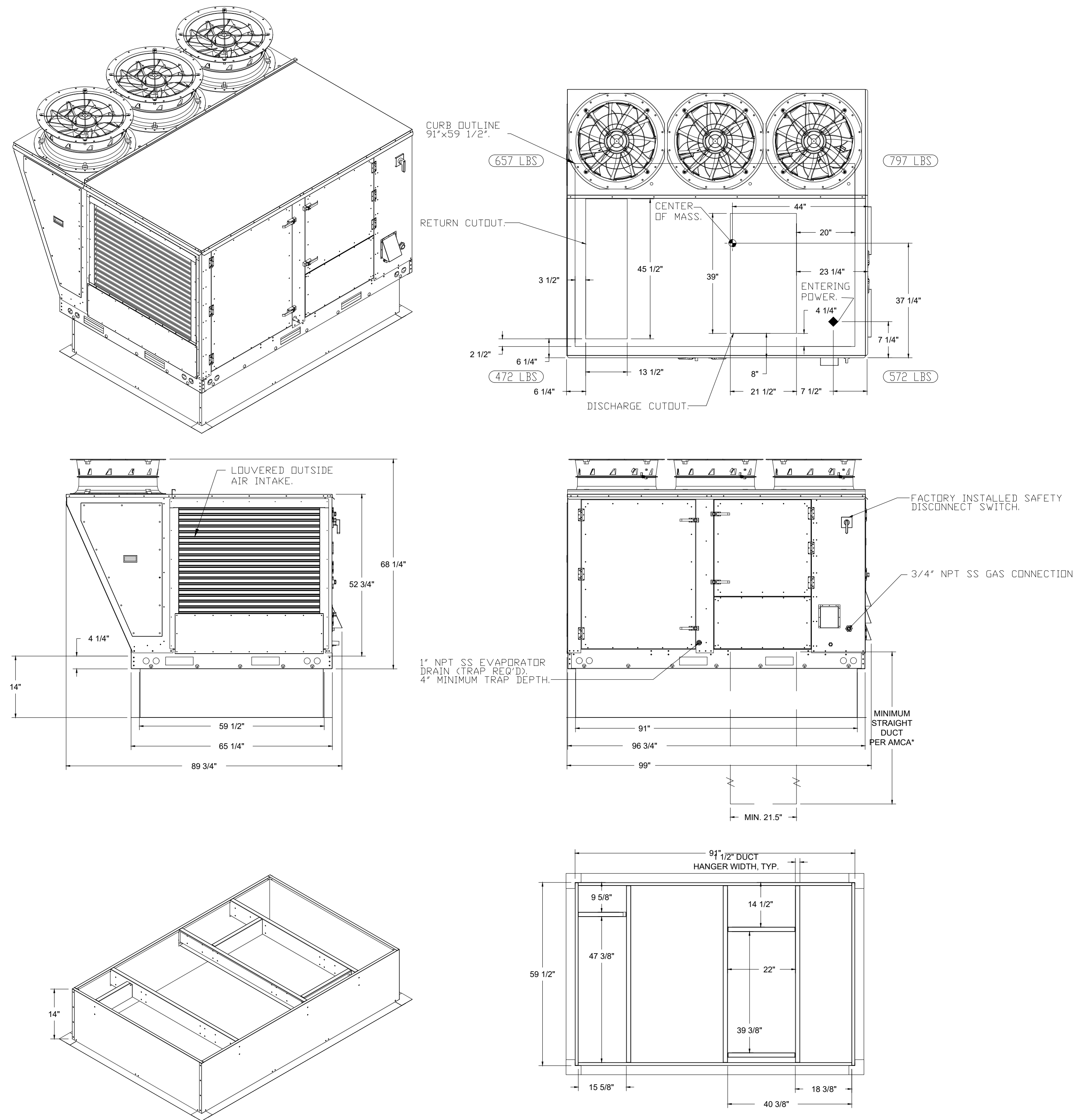
**M5**  
 MECHANICAL HOOD PLANS

FAN #4 CASRTU3-I.200-15-20T-DOAS - HEATER (DOAS-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.

\*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 21.5" x 39".



Freddy's - Lufkin, TX  
LUFKIN, TX, 75901

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1/2" = 1'-0"

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**CAPTIVE**  
HBT Foodservice

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DESCRIPTION	DATE

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2875 Parker Avenue | Hickman, Missouri, U.S.A. 64112  
T: 224.293.6333 | F: 224.293.6444  
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108358

**FREDDY'S FROZEN CUSTARD AND STEAKBURGERS**  
4101 S. MEDFORD DRIVE  
LUFKIN, TEXAS 75901

**Freddy's**  
FROZEN CUSTARD & STEAKBURGERS

PLAZA STREET PARTNERS


ISSUE	
TO	DATE
CONCEPT	6.1.22
CONCEPT	6.9.22
CLIENT	8.25.22
PERMIT	9.1.22
PERMIT	10.17.22
CONST.	11.21.22

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JOB:D220000

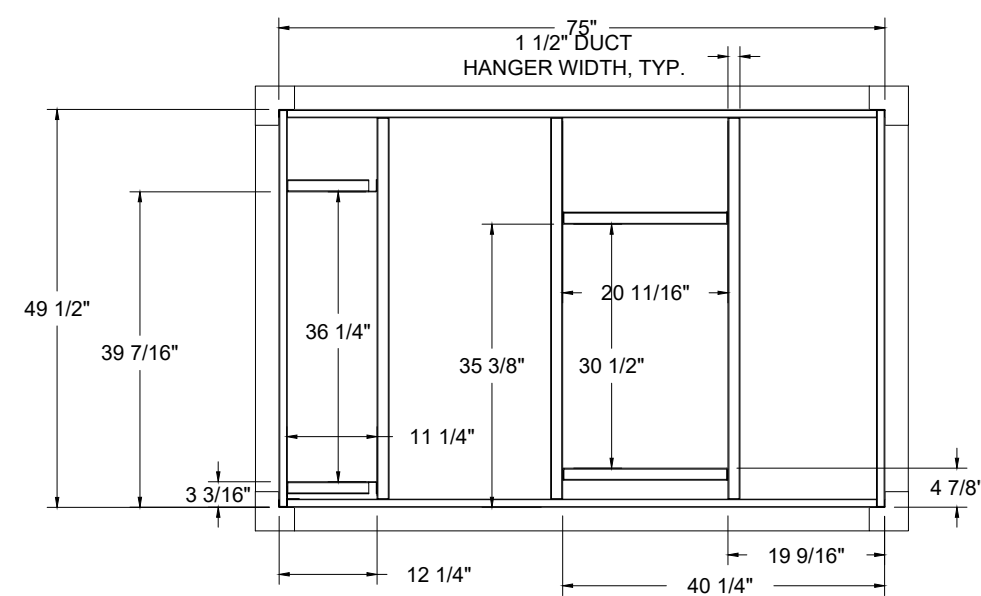
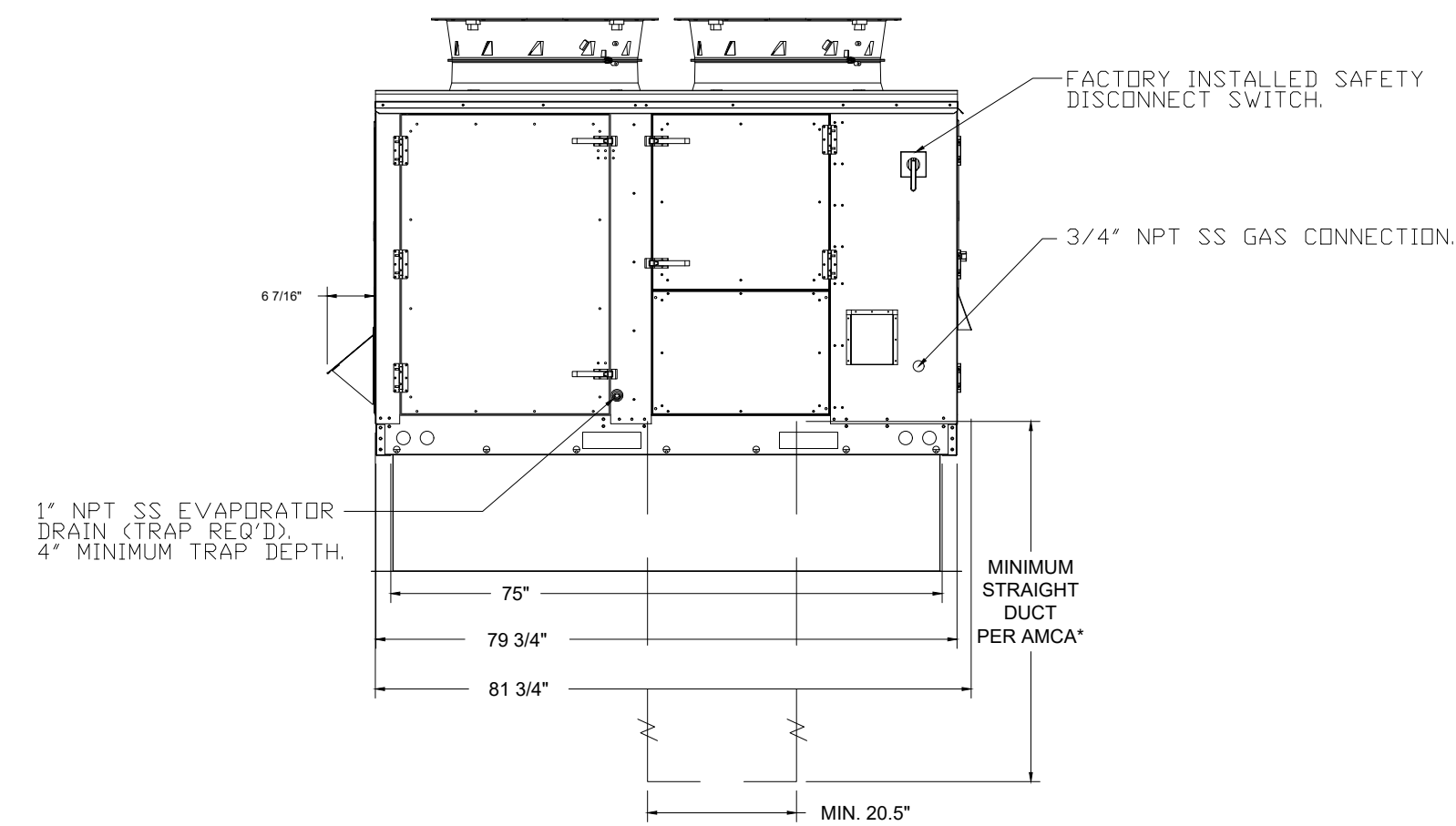
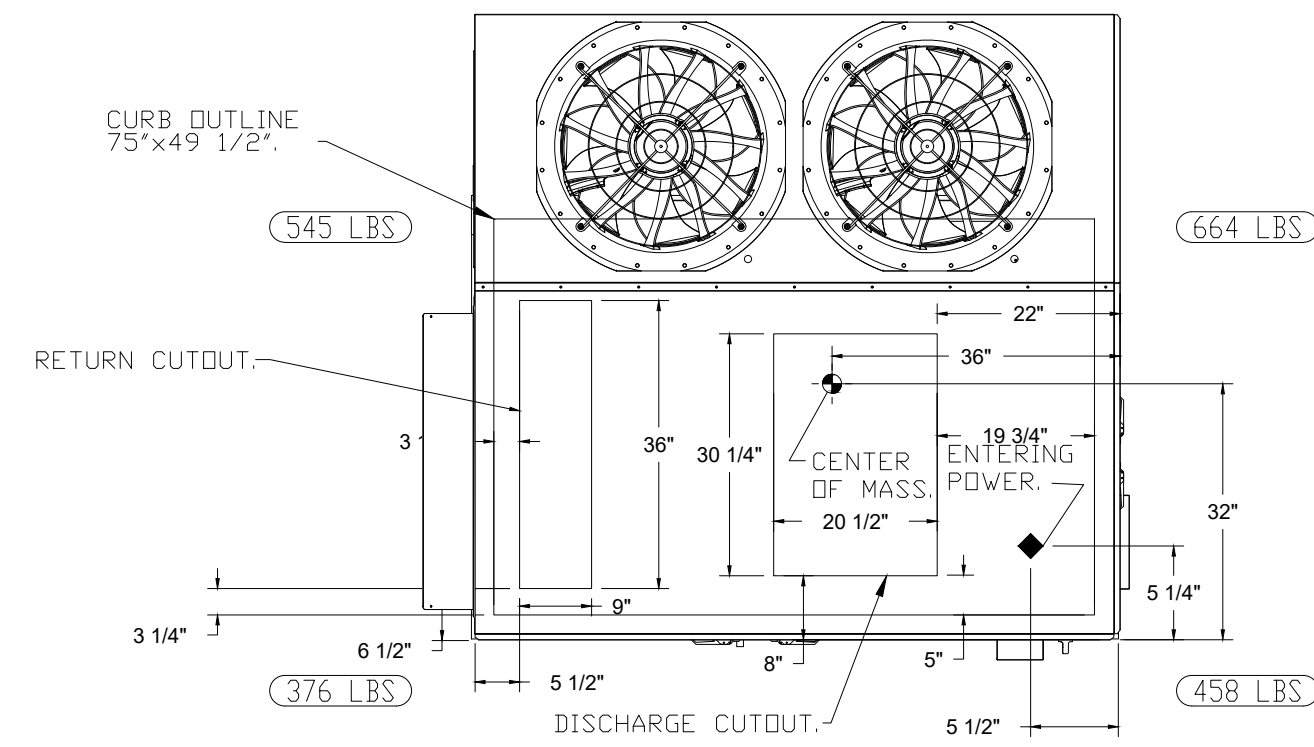
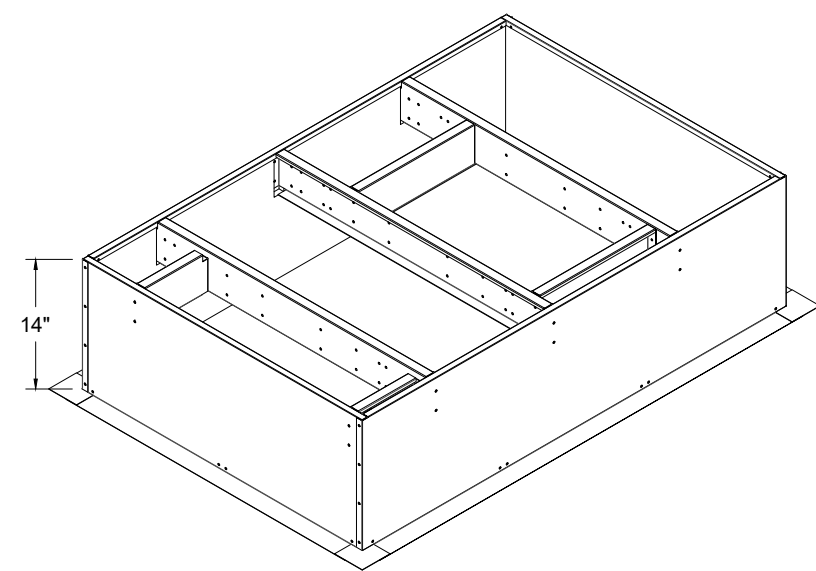
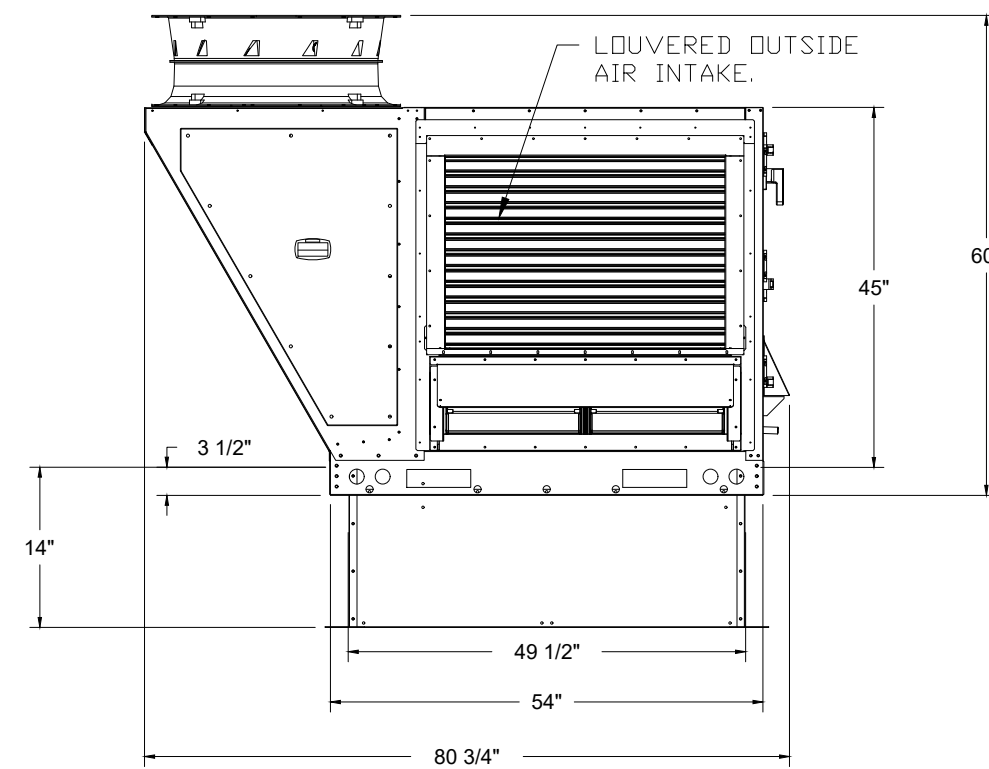
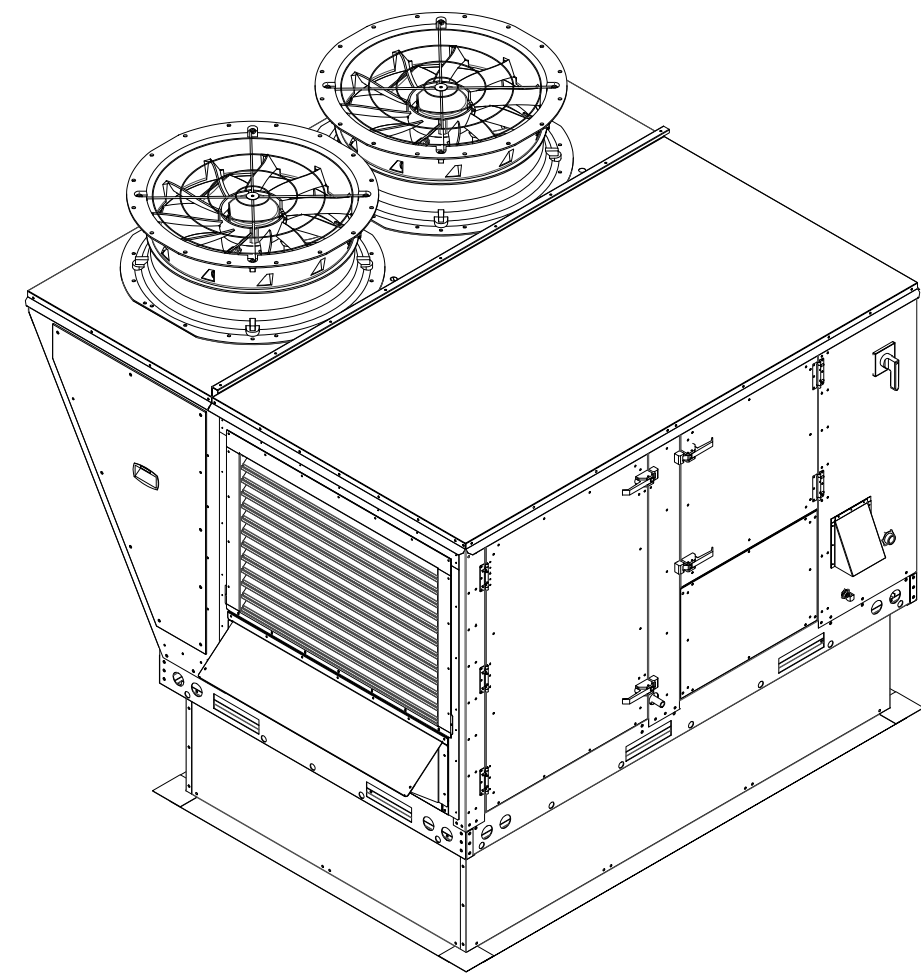
**M6**  
MECHANICAL HOOD PLANS

FAN #5 CASRTU2-I.250-18MF-10T-DOAS - HEATER (DOAS-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.

\*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 20.5" x 30.25".



DESCRIPTION	DATE

# CAPTIVE

HBT Foodservice

Freddy's - Lufkin, TX  
LUFKIN, TX, 75901

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5565377  
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1/2" = 1'-0"  
**MASTER DRAWING**

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108358

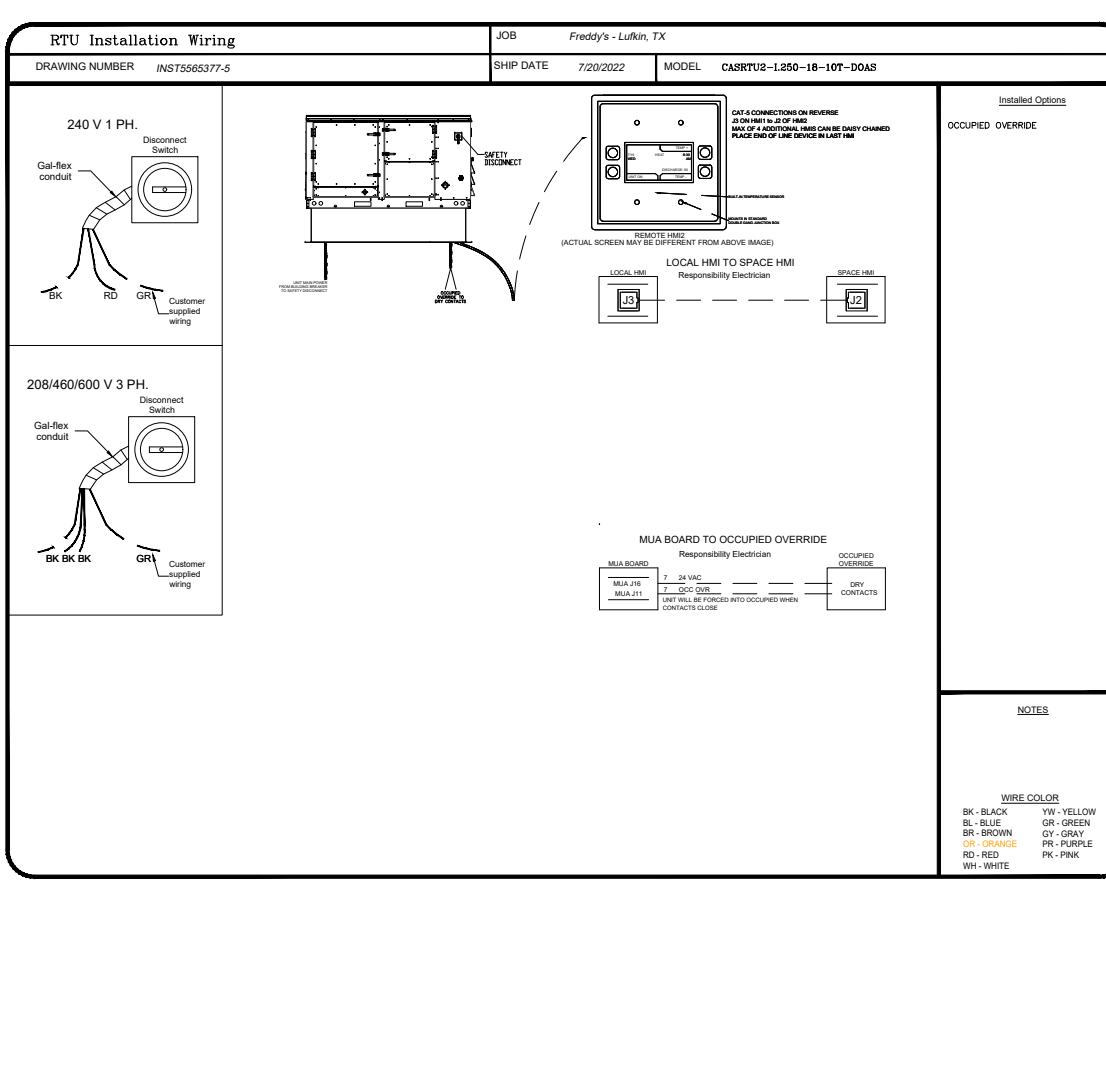
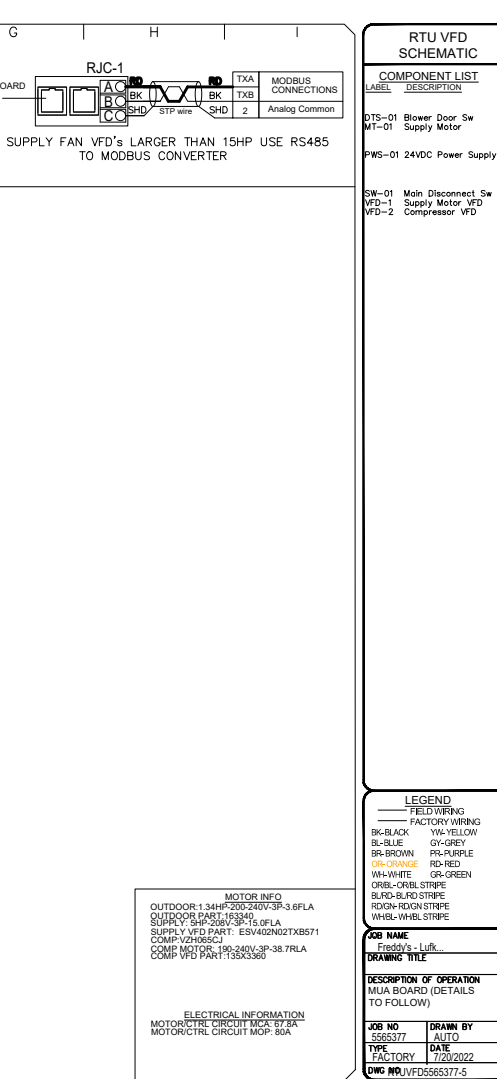
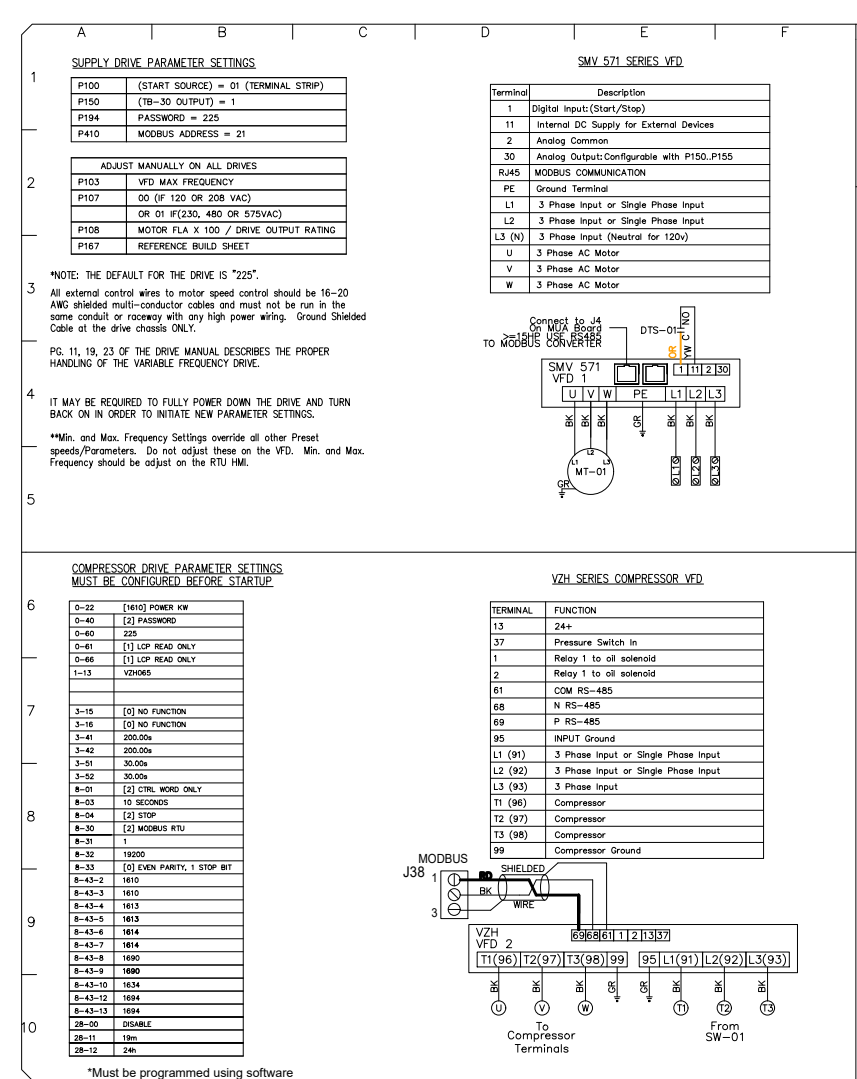
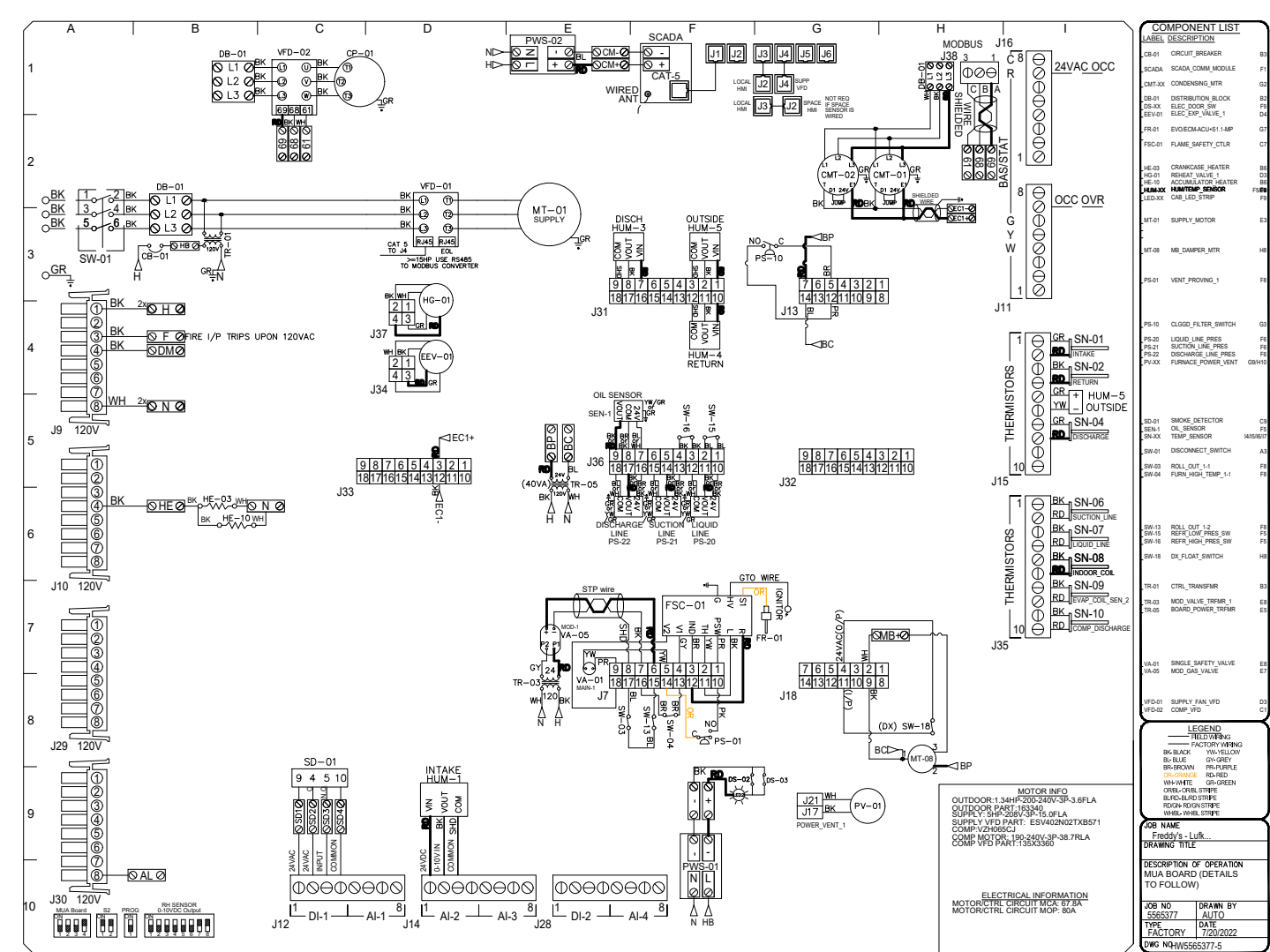
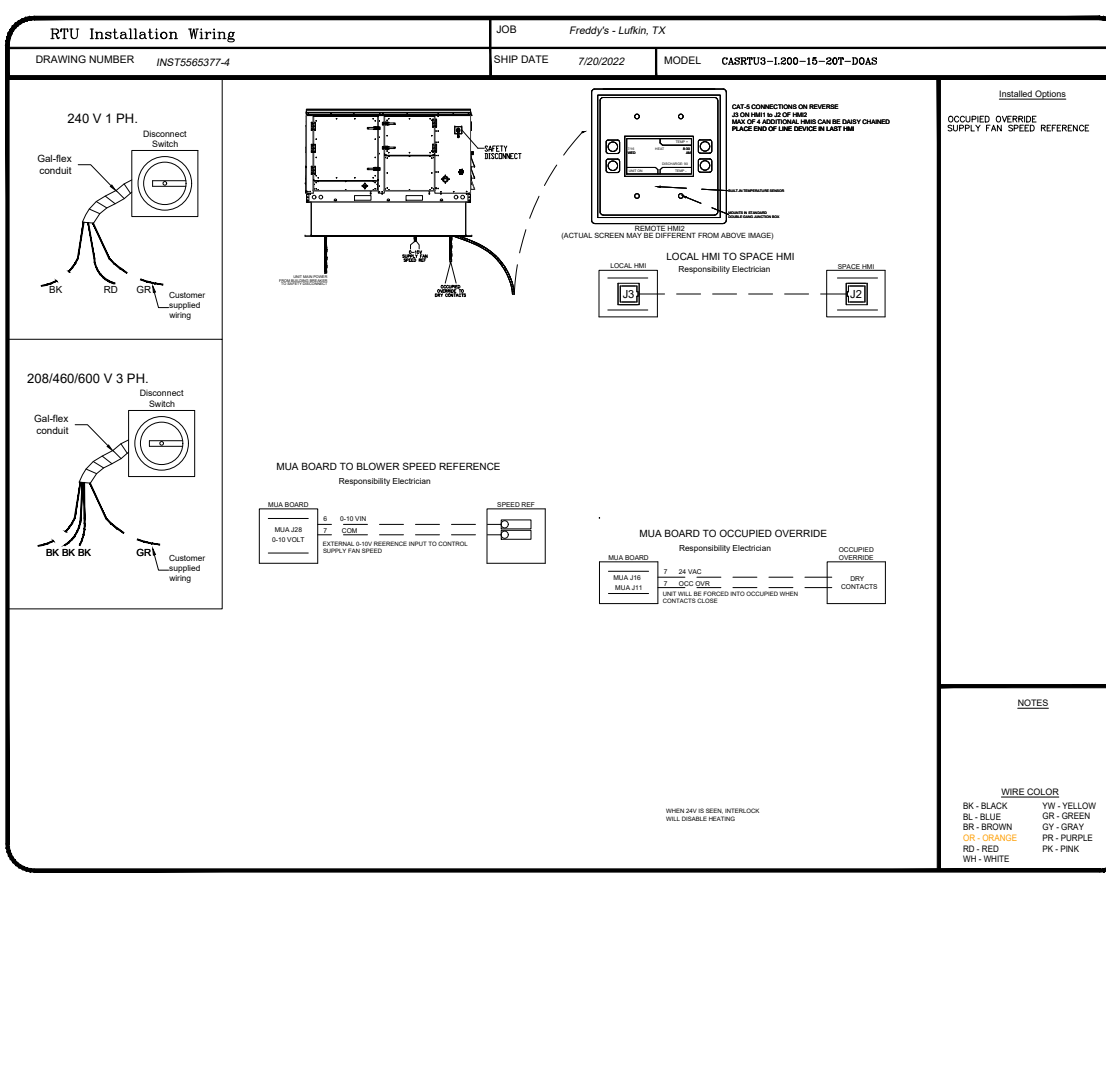
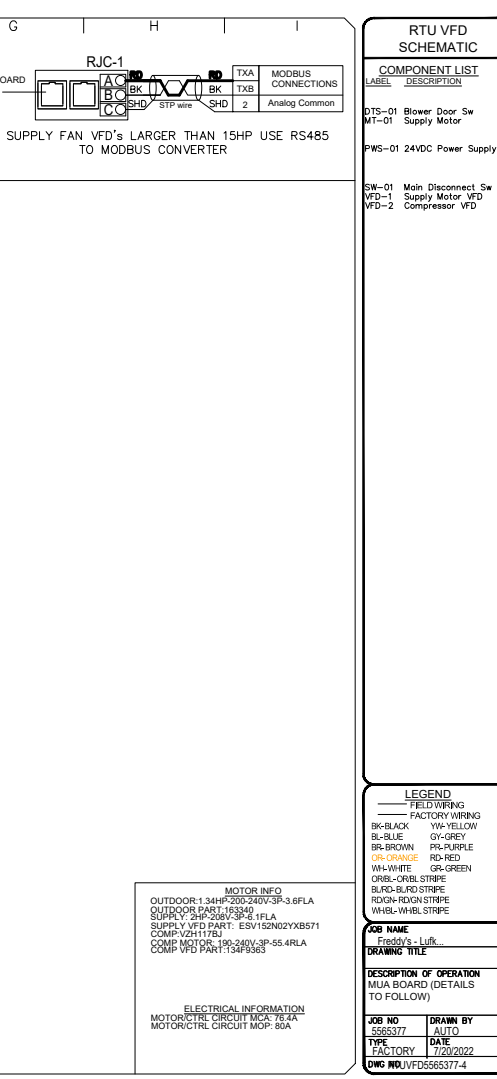
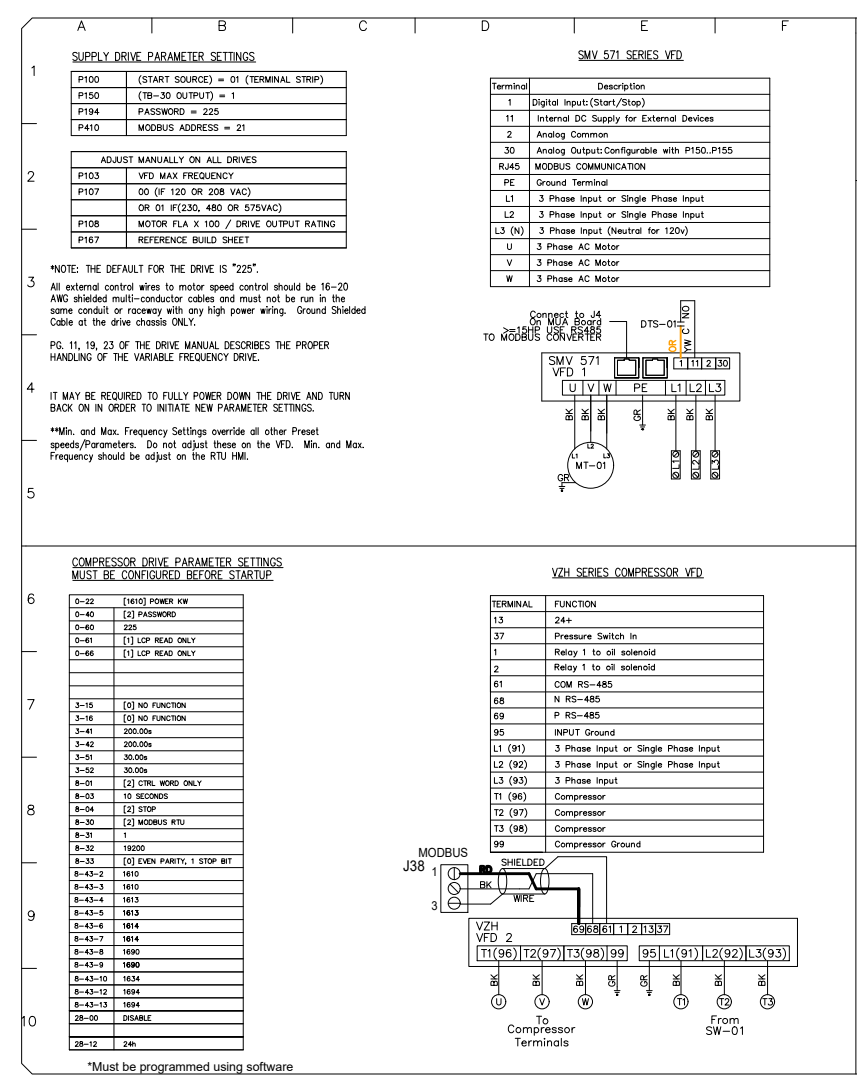
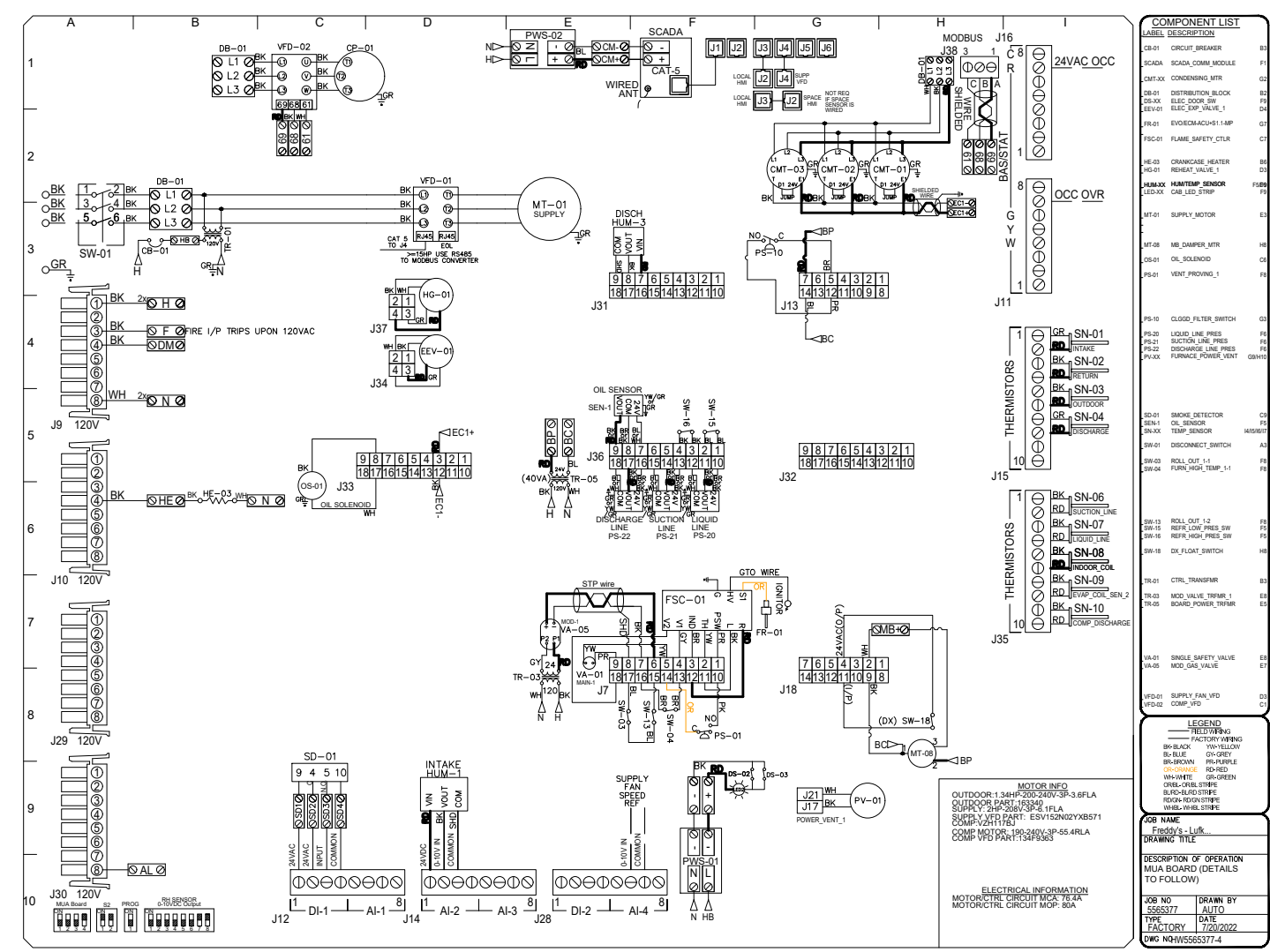
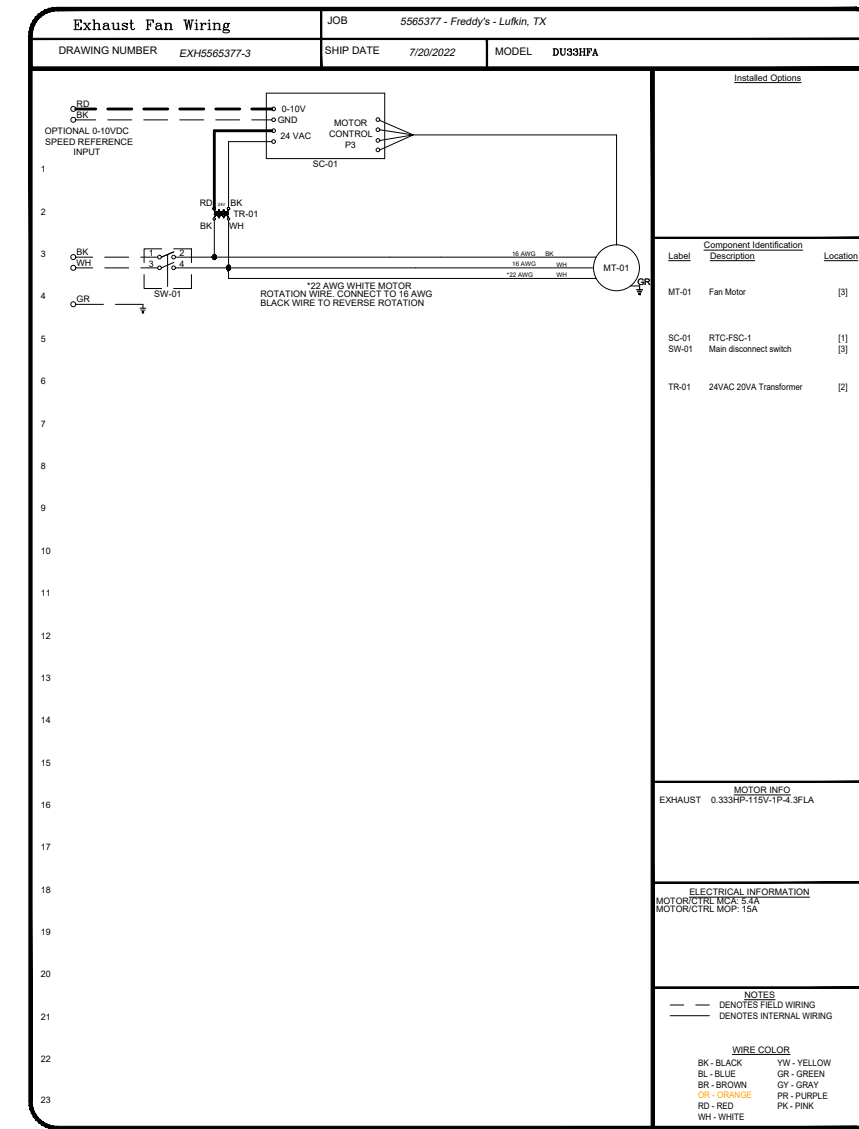
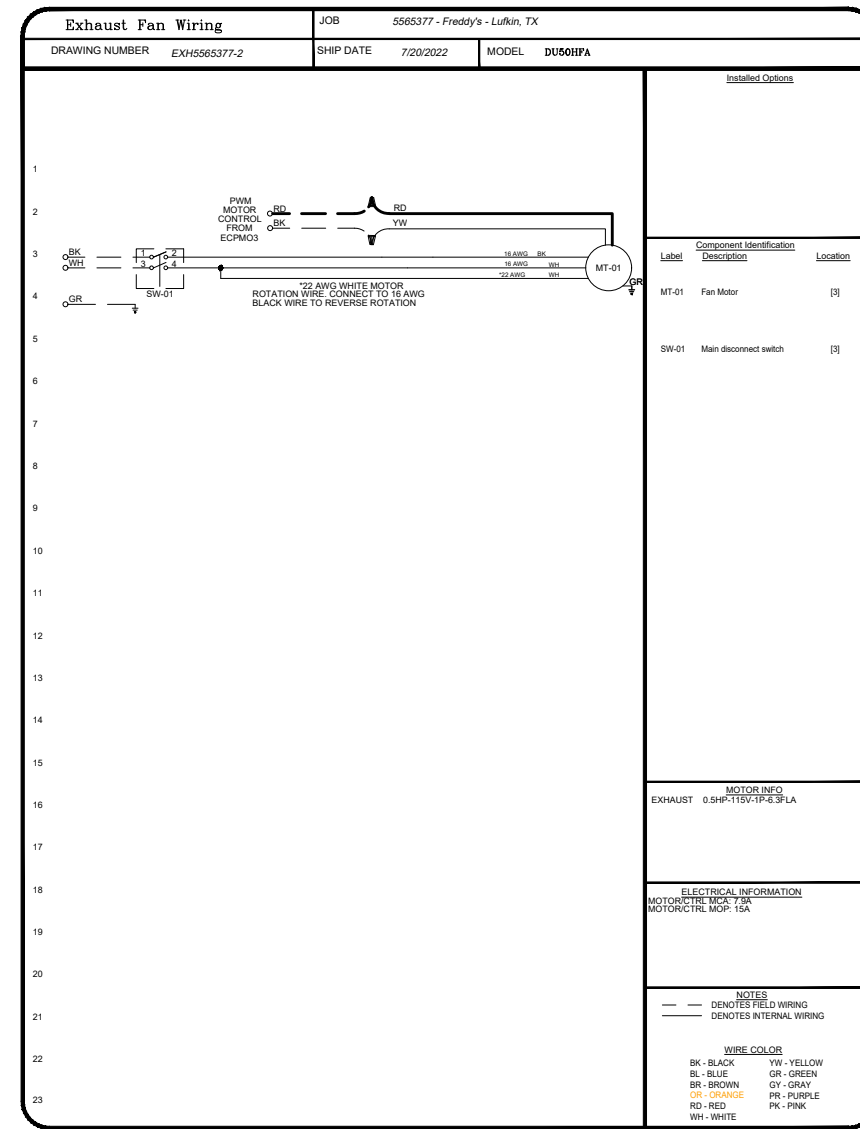
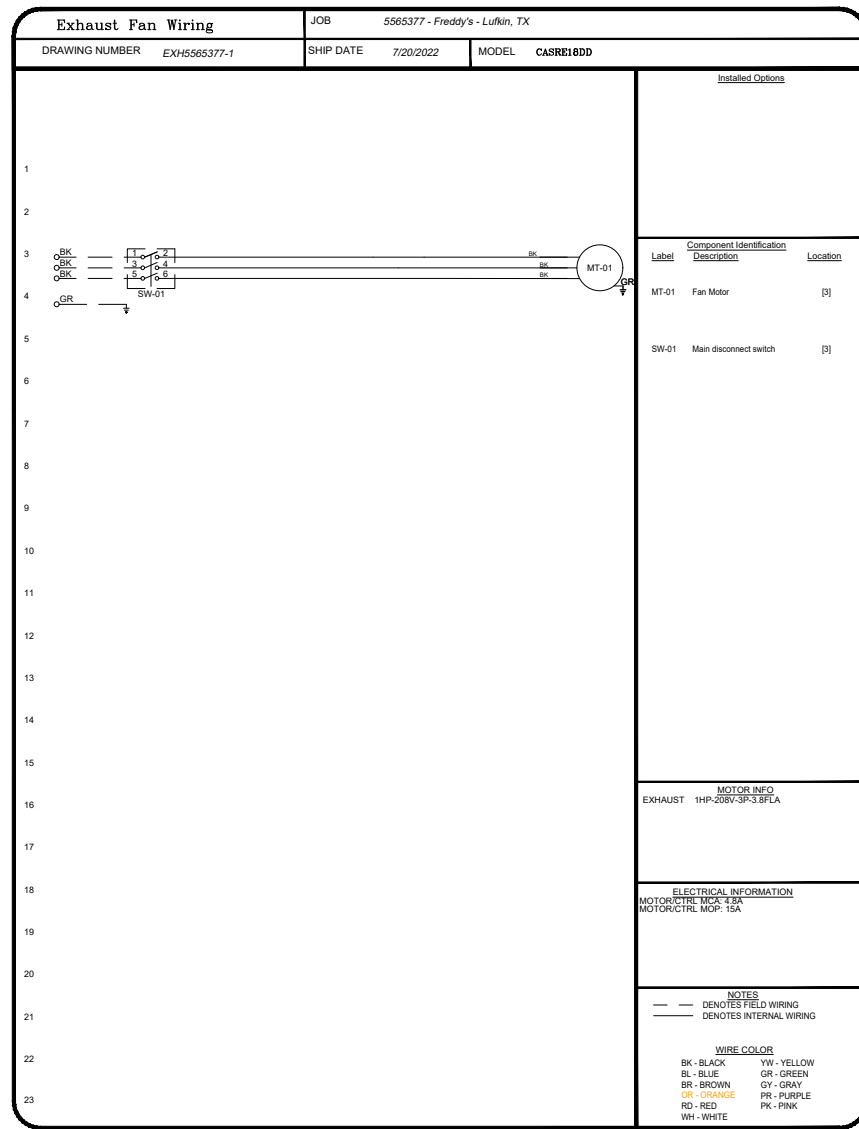
**Freddy's FROZEN CUSTARD AND STEAKBURGERS**  
4101 S. MEDFORD DRIVE  
LUFKIN, TEXAS 75901

**PLAZA STREET PARTNERS**

ISSUE  
TO DATE  
CONCEPT 6.1.22  
CONCEPT 6.9.22  
CLIENT 8.25.22  
PERMIT 9.1.22  
PERMIT 10.17.22  
CONST. 11.21.22

CHECK/CK  
DRAWN:CS, CK  
JOB: D220000

**M7**  
MECHANICAL HOOD PLANS



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LUFKIN, TX, 75901

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1/2" = 1'-0"  
**MASTER DRAWING**

6



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STATE OF TEXAS  
MARK VENTRELLI  
108354

FREDDY'S FROZEN CUSTARD AND STEAKBURGERS  
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JOB: D220000

M8  
MECHANICAL HOOD PLANS

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DUCTWORK #1 PARTS - JOB#5565377 DOUBLE WALL GRIDDLE DUCT										
TAG	PART #	CFM	GPM	ZON E	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	DW1400DWASY-2R-S	1600					-0.112	33.30	1496.71	1 DOUBLE WALL DUCT - 14" INNER 90 DUCT - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL
P2	DW1447DWLT-2R-S	1600					-0.018	62.39	1496.71	1 DOUBLE WALL DUCT - 14" INNER DUCT, 47" LONG - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL
P3	ASSEMBLED WP4	DW14DWTEASY-2R-S	1600		1		-0.0896	41.37	1496.71	1 DOUBLE WALL DUCT - 14" INNER TEE DUCT - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL
P4	ASSEMBLED WP3 OHS	DW14DWACCCDOORCOV-2R-S						22.25	1	1 DOUBLE WALL DUCT - 14" INNER ACCESS DOOR & 18" ACCESS DOOR COVER WITH CLAMPS - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL
P5	DW1447DWLT-2R-S	1600					-0.0154	62.39	1496.71	1 DOUBLE WALL DUCT - 14" INNER DUCT, 47" LONG - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL
P6	DW1447DWADJ-2R-S	1600					-0.0126	93.18	1496.71	1 DOUBLE WALL ADJUSTABLE DUCT - 14" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL - MIN LENGTH = 11" MAX LENGTH = 48.5" ADJUSTMENT = 30.5" ADJUSTABLE SECTION MAY NEED TO BE CUT - INCLUDES SINGLE AND DOUBLE WALL "V" CLAMPS
P7	ASSEMBLED WP8	DW142150DWLTP-2R-S	1600				-0.007	29.35	1496.71	1 DOUBLE WALL DUCT - 14" INNER DUCT, 21.5" LONG - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL - USED WITH TRANSITION PLATE
P8	ASSEMBLED WP7	DW2614TP	1600					12.53	1496.71	1 DUCT TO CURB TRANSITION, 26-1/2" CURB TO 14" DUCT, 16 GA ALUMINIZED, USED ON BDU16
SYSTEM AT P8							-0.9866	0.00		
P9	DW1822SADKIT							7.25	1	1 DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 18" OD - INCLUDES UNI-STRUT CUT TO LENGTH, DW1822SAD, & HARDWARE BAG 4
P10	DW1822SADKIT							7.25	1	1 DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 18" OD - INCLUDES UNI-STRUT CUT TO LENGTH, DW1822SAD, & HARDWARE BAG 4
	3M-2000PLUS							0.80	2	2 DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS
	DW14DWCLASY-2R-S							7.21	3	3 DUCT - 14" DUCT - 18" DOUBLE "V" CLAMP - 2R INSULATION & SINGLE "V" CLAMP INCLUDED - REDUCED CLEARANCE
TOTAL WEIGHT									384.49	

**DOUBLE WALL FACTORY BUILT DUCTWORK**

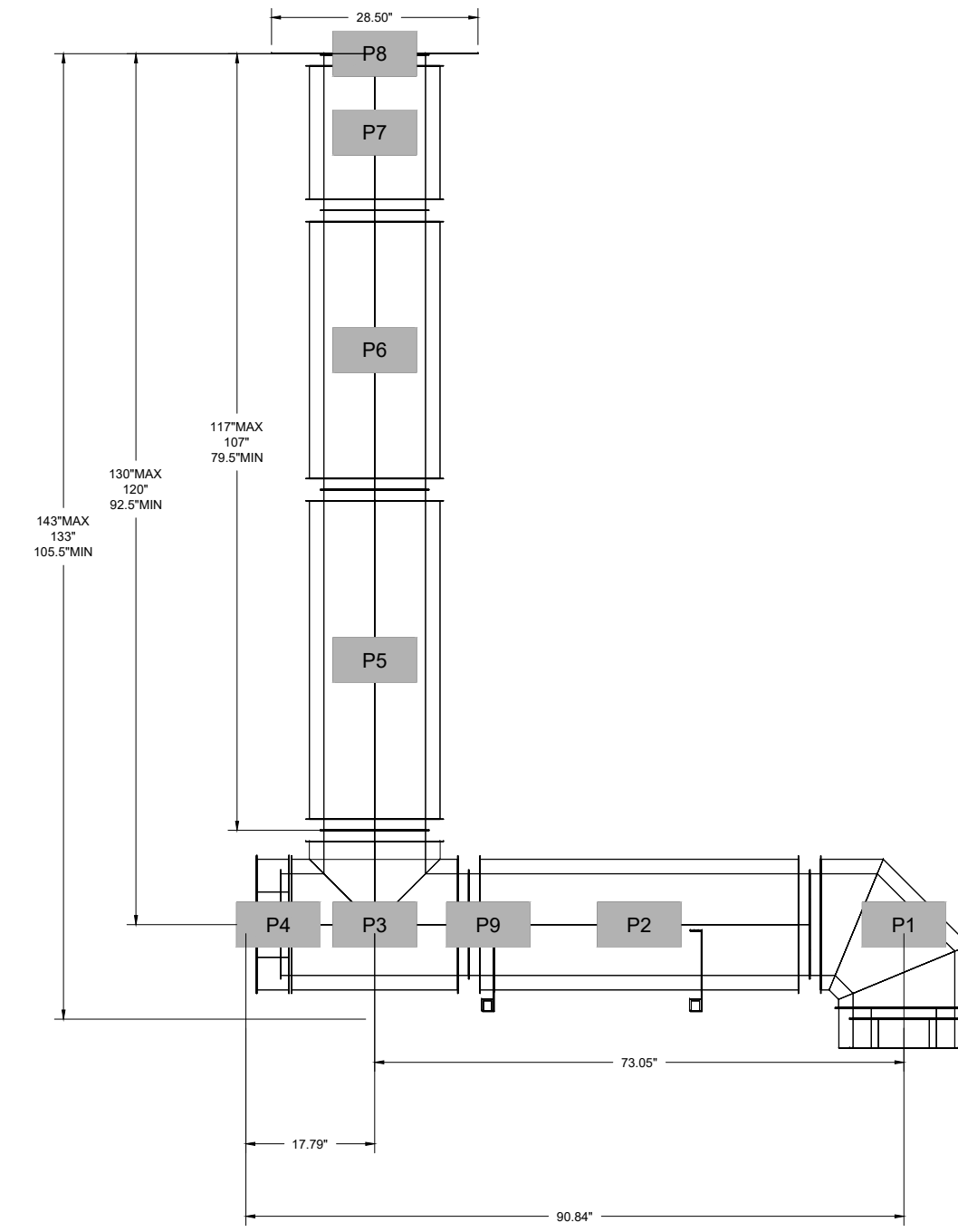
- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE ENTIRE INSTALLATION AND OPERATION MANUAL.
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

HORIZONTAL	
DUCT DIAMETER	SUPPORT SPACING (FT)
5"	7'
6"	7'
7"	7'
8"	7'
10"	7'
12"	7'
14"	7'
16"	7'
18"	5'
20"	5'
22"	5'
24"	5'
26"	5'
28"	5'
30"	5'
32"	5'
34"	5'
36"	5'

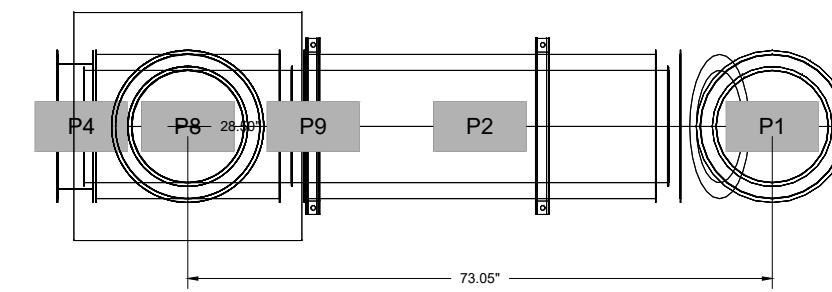
VERTICAL			
TYPE	WALL SUPPORT (FT)	CURB SUPPORT (FT)	FLOOR SUPPORT (FT)
2R & 2R HT (5'-18")	20'	24'	24'
2R (18")	18'	24'	24'
3R & 3Z (5'-24")	10'	24'	24'
3Z (26'-36")	10'	20'	20'

DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIRE FOR PROPER LEAK TESTING METHODS.

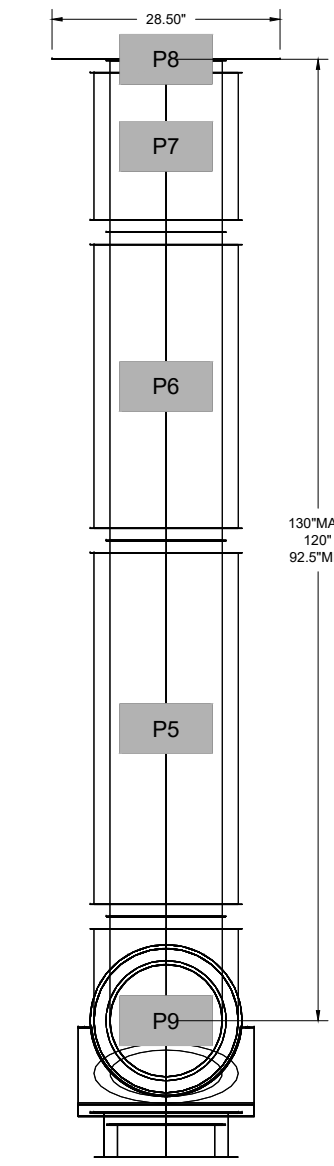
DUCTWORK #1 FRONT VIEW GRIDDLE DUCT



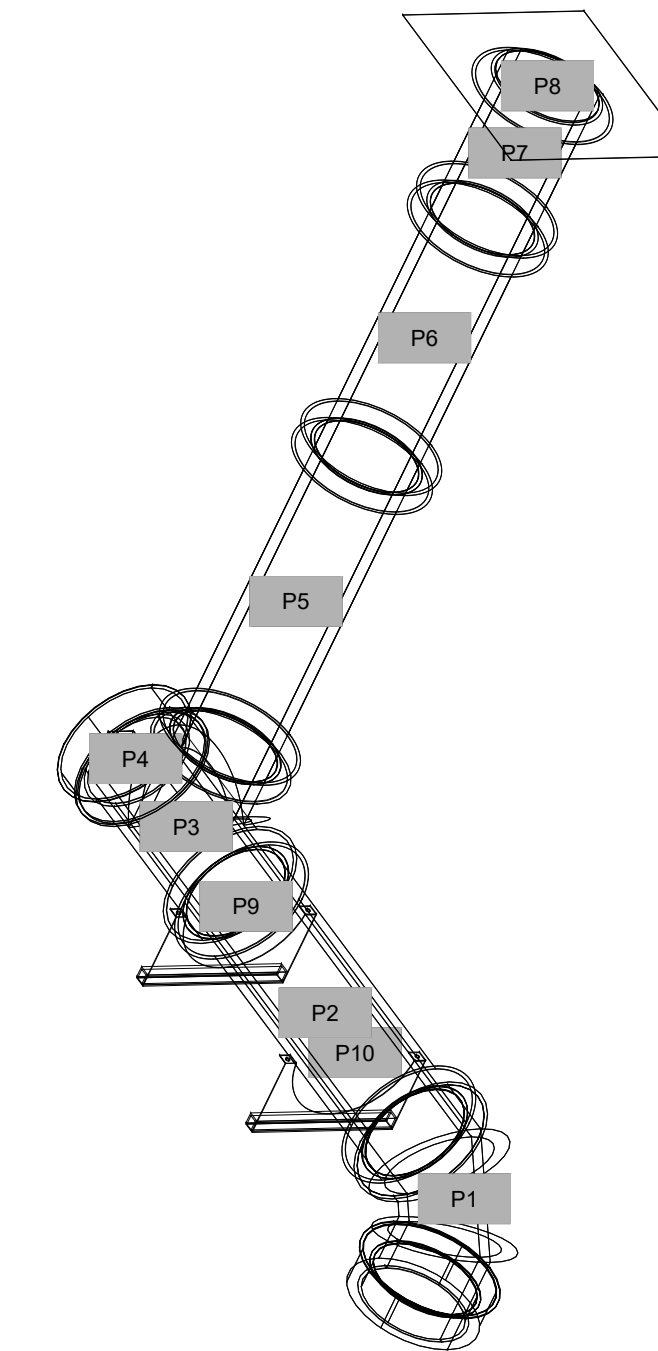
DUCTWORK #1 TOP VIEW GRIDDLE DUCT



DUCTWORK #1 SIDE VIEW GRIDDLE DUCT



DUCTWORK #1 SE VIEW GRIDDLE DUCT



DESCRIPTION	DATE



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108358

**FREDDY'S FROZEN CUSTARD AND STEAKBURGERS**  
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LUFKIN, TEXAS 75901

**PLAZA STREET PARTNERS**

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JOB: D220000

**M10**  
MECHANICAL HOOD PLANS

DUCTWORK #2 PARTS - JOB#5565377 DOUBLE WALL FRYER DUCT										
TAG	PART #	CFM	GPM	ZON E	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	DW1045DWASY-2R-S	775					-0.0333	13.60	1420.94	1 DOUBLE WALL DUCT - 10" INNER 45 DUCT - 2 LAYERS REDUCED CLEARANCE - 14" STAINLESS STEEL OUTER SHELL
P2	DW1027DWAD-2R-S	775					-0.005	39.87	1420.94	1 DOUBLE WALL ADJUSTABLE DUCT - 10" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 14" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 25.5' / ADJUSTMENT = 14.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL "Y" CLAMPS.
P3	DW1418SADKIT							5.82		1 DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 14" OD - INCLUDES UNI-STRUT CUT TO LENGTH, DW1418SAD, & HARDWARE BAG.
P4	DW1045DWASY-2R-S	775					-0.0475	13.60	1420.94	1 DOUBLE WALL DUCT - 10" INNER 45 DUCT - 2 LAYERS REDUCED CLEARANCE - 14" STAINLESS STEEL OUTER SHELL
P5	DW1035DWL1-2R-S	775					-0.0149	35.34	1420.94	1 DOUBLE WALL DUCT - 10" INNER DUCT, 35" LONG - 2 LAYERS REDUCED CLEARANCE - 14" STAINLESS STEEL OUTER SHELL.
P6	DW1047DWAD-2R-S	775					-0.0191	72.54	1420.94	1 DOUBLE WALL ADJUSTABLE DUCT - 10" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 14" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 49.5' / ADJUSTMENT = 31.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL "Y" CLAMPS.
P7	DW102150DWLTP-2R-S	775					-0.009	22.43	1420.94	1 DOUBLE WALL DUCT - 10" INNER DUCT, 21.5" LONG - 2 LAYERS REDUCED CLEARANCE - 14" STAINLESS STEEL OUTER SHELL - USED WITH TRANSITION PLATE.
P8	DW1910TP	775						6.62	1420.94	1 DUCT TO CURB TRANSITION, 19-1/2" CURB TO 10" DUCT, 16 GA ALUMINIZED STEEL, MISC. NON-STANDARD TRANSITION PLATE.
SYSTEM AT P8							-0.5648	0.00		
	3M-2000PLUS							0.80	2	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	DW100DWCLASY-2R-S							5.67	1	DUCT - 10" DUCT - 14" DOUBLE "Y" CLAMP - 2R INSULATION & SINGLE "Y" CLAMP INCLUDED - REDUCED CLEARANCE.
TOTAL WEIGHT										217.09

**SINGLE WALL FACTORY BUILT DUCTWORK**

- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE INSTALLATION AND OPERATION MANUAL.
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

DUCT DIAMETER	HORIZONTAL SUPPORT (FT)	VERTICAL WALL SUPPORT (FT)	VERTICAL CURB SUPPORT (FT)
5"	10'	10'	24'
6"	10'	10'	24'
7"	10'	10'	24'
8"	10'	10'	24'
10"	10'	10'	24'
12"	10'	10'	24'
14"	10'	10'	24'
16"	10'	10'	24'
18"	10'	10'	24'
20"	10'	10'	24'
22"	10'	10'	24'
24"	10'	10'	24'
26"	10'	10'	24'
28"	10'	10'	24'
30"	10'	10'	24'
32"	10'	10'	24'
34"	10'	10'	24'
36"	10'	10'	24'

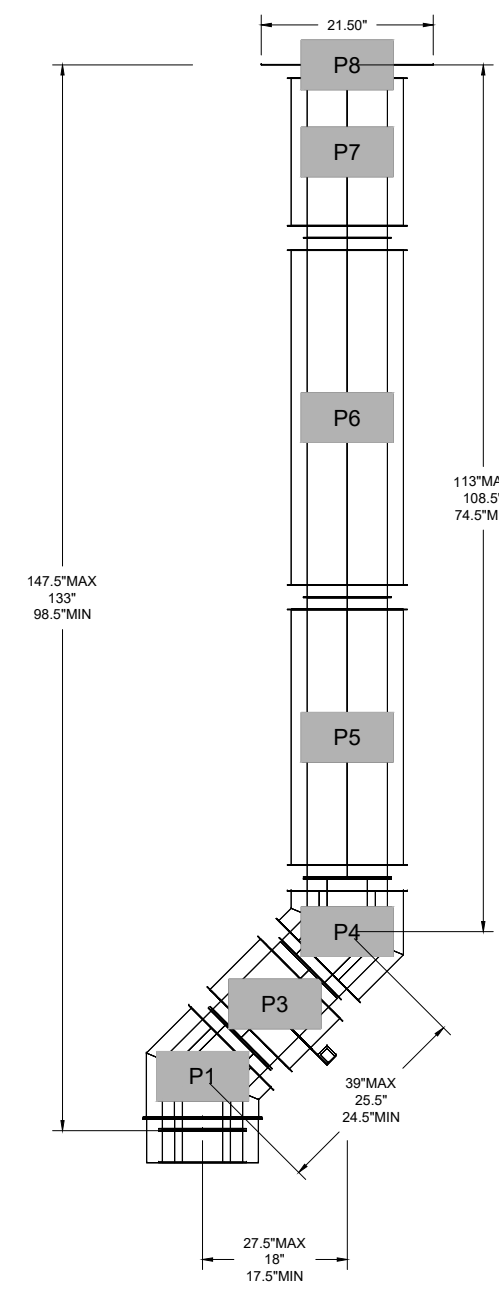
**DOUBLE WALL FACTORY BUILT DUCTWORK**

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- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE ENTIRE INSTALLATION AND OPERATION MANUAL.
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

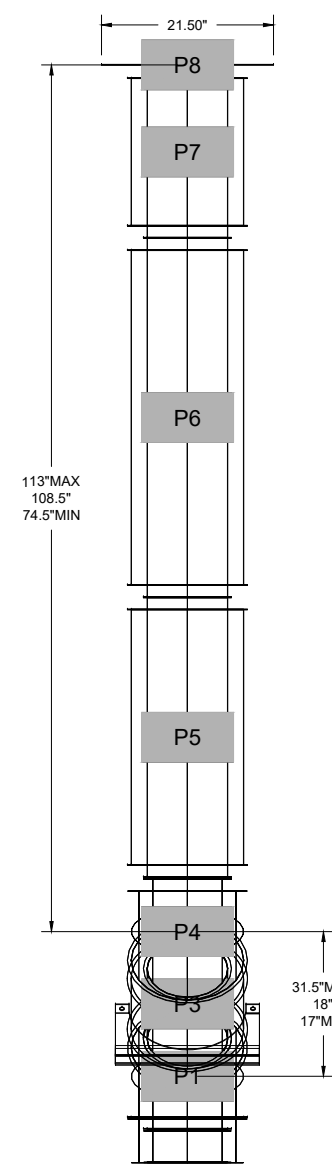
HORIZONTAL	
DUCT DIAMETER	SUPPORT SPACING (FT)
5"	7'
6"	7'
7"	7'
8"	7'
10"	7'
12"	7'
14"	7'
16"	7'
18"	5'
20"	5'
22"	5'
24"	5'
26"	5'
28"	5'
30"	5'
32"	5'
34"	5'
36"	5'

VERTICAL			
TYPE	WALL SUPPORT (FT)	CURB SUPPORT (FT)	FLOOR SUPPORT (FT)
2R & 2R HT (5'-16")	20'	24'	24'
2R (18")	18'	24'	24'
3R & 3Z (5'-24")	10'	24'	24'
3Z (26"-38")	10'	20'	20'

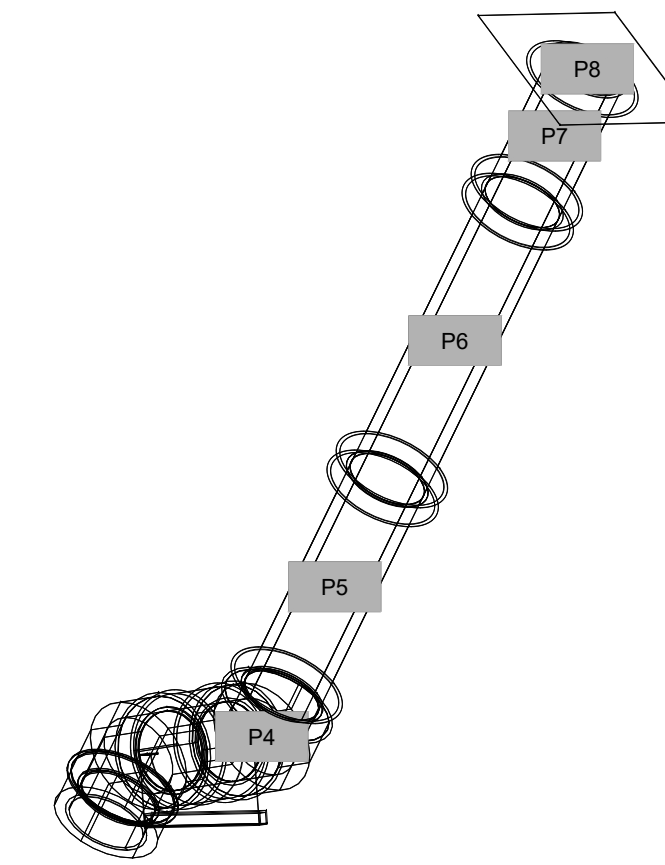
DUCTWORK #2 FRONT VIEW FRYER DUCT



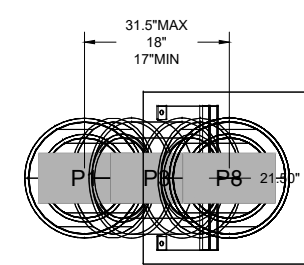
DUCTWORK #2 SIDE VIEW FRYER DUCT



DUCTWORK #2 SE VIEW FRYER DUCT



DUCTWORK #2 TOP VIEW FRYER DUCT



DESCRIPTION	DATE

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1/2" = 1'-0"

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JOB: D220000

**M11**  
MECHANICAL HOOD PLANS

DUCTWORK #3 PARTS - JOB#5565377 DISH DUCT										
TAG	PART #	CFM	GPM	ZON E	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	DW1047LT	525				-0.0092	15.72	962.57	1	SINGLE WALL DUCT 10" DIAMETER, 47" LONG, FLANGE AT BOTH ENDS, STAINLESS STEEL.
P2	DW1047LT	525				-0.0092	15.72	962.57	1	SINGLE WALL DUCT 10" DIAMETER, 47" LONG, FLANGE AT BOTH ENDS, STAINLESS STEEL.
ASSEMBLED WP4	DW1048AJDKIT	525				-0.0076	18.63	962.57	1	SINGLE WALL DUCT ADJUSTABLE, 10" DIAMETER, 47.5" LONG, FLANGE AT ONE END WITH A 10" ADJUSTABLE COLLAR - STAINLESS STEEL.
P4	DW1910TP	525					6.62	962.57	1	DUCT TO CURB TRANSITION, 19-1/2" CURB TO 10" DUCT, 16 GA ALUMINIZED STEEL, MISC. NON-STANDARD TRANSITION PLATE.
SYSTEM AT P4						-0.095	0.00			
	3M-2000PLUS						0.80		1	DUCT -3M FIRE BARRIER 2000 PLUS SILICONE, USED AS SEALANT TO SEAL DUCT JOINTS.
	DW10CLASY						0.82		3	DUCT "X" CLAMP WITH NEW DESIGN 14 GA BRACKETS, 10" DUCT, ASSEMBLY.
TOTAL WEIGHT							59.95			

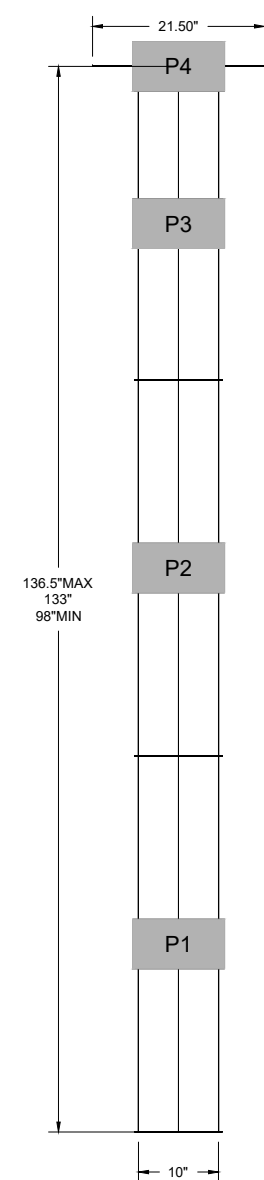
**SINGLE WALL FACTORY BUILT DUCTWORK**

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- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE INSTALLATION AND OPERATION MANUAL.
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

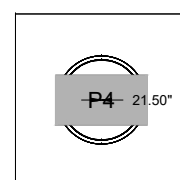
DUCT DIAMETER	HORIZONTAL SUPPORT (FT)	VERTICAL WALL SUPPORT (FT)	VERTICAL CURB SUPPORT (FT)
5"	10'	10'	24'
6"	10'	10'	24'
7"	10'	10'	24'
8"	10'	10'	24'
10"	10'	10'	24'
12"	10'	10'	24'
14"	10'	10'	24'
16"	10'	10'	24'
18"	10'	10'	24'
20"	10'	10'	24'
22"	10'	10'	24'
24"	10'	10'	24'
26"	10'	10'	24'
28"	10'	10'	24'
30"	10'	10'	24'
32"	10'	10'	24'
34"	10'	10'	24'
36"	10'	10'	24'

DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIRE FOR PROPER LEAK TESTING METHODS.

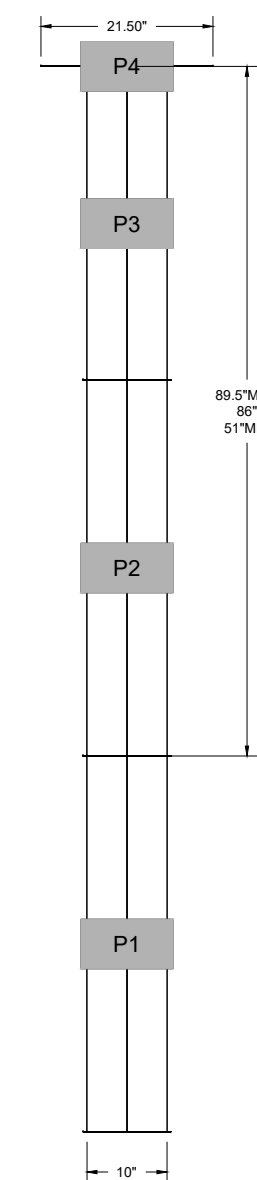
DUCTWORK #3 FRONT VIEW DISH DUCT



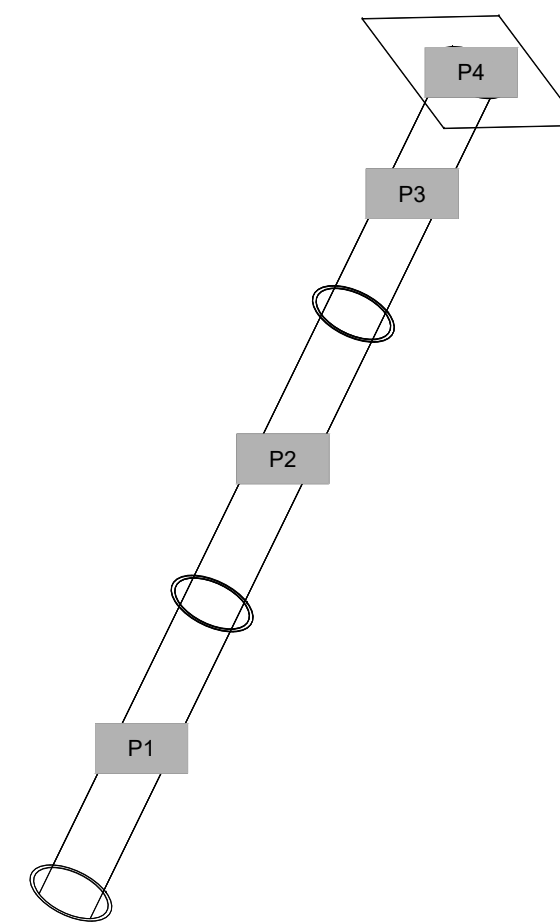
DUCTWORK #3 TOP VIEW DISH DUCT



DUCTWORK #3 SIDE VIEW DISH DUCT



DUCTWORK #3 SE VIEW DISH DUCT



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1/2" = 1'-0"

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**M12**  
MECHANICAL HOOD PLANS