

SIGNATURE DATE: 10/31/2025

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 Iowa Certificate of Authority #354056

QuikTrip No. 0516
 1000 EAST UNIVERSITY AVENUE
 DES MOINES, IOWA



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PROTOTYPE	Fryer
DIVISION	Des Moines
VERSION	4600
DATE	06-18-2025

REV	DATE	DESCRIPTION

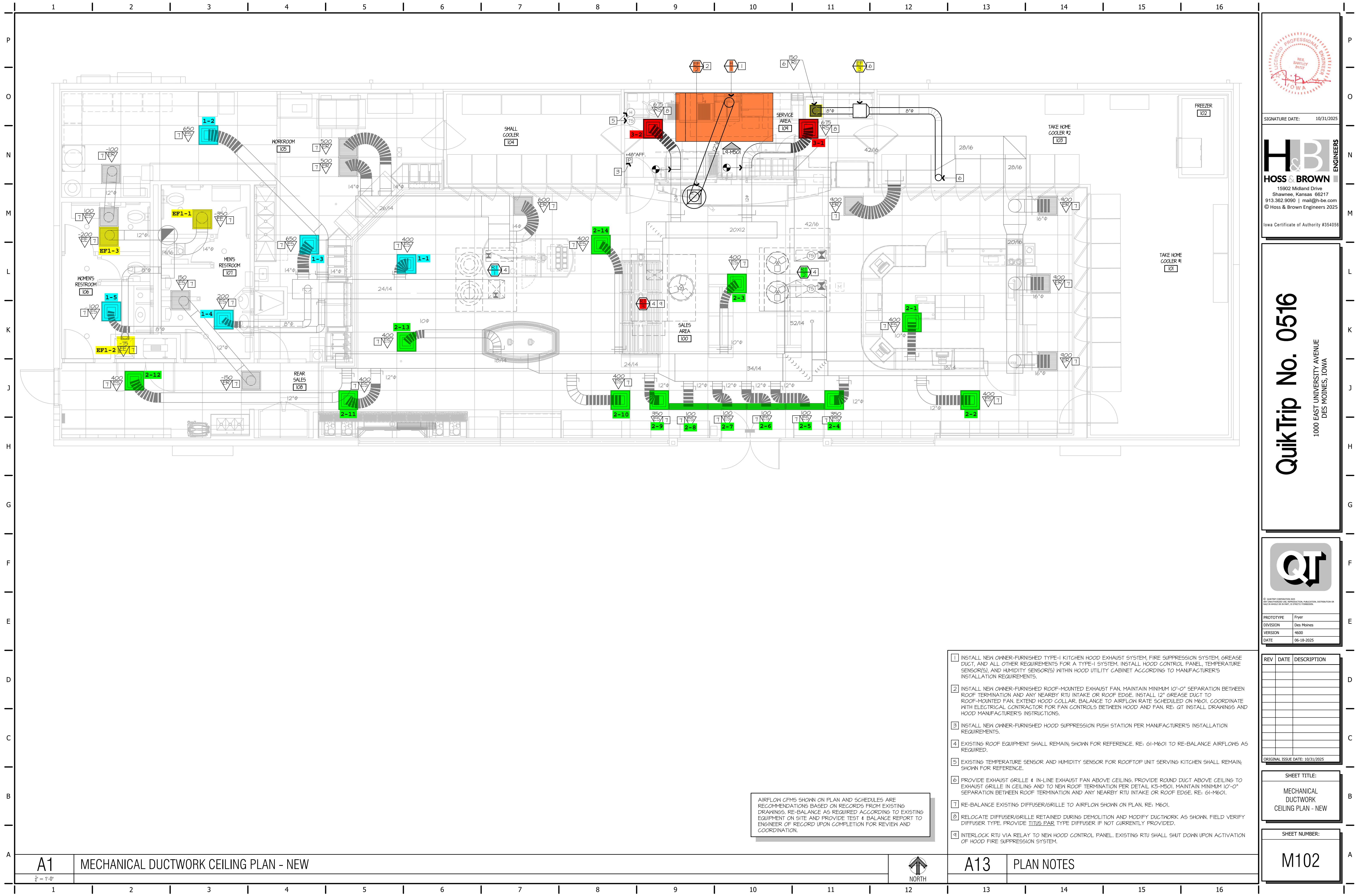
ORIGINAL ISSUE DATE: 10/31/2025

SHEET TITLE:
 MECHANICAL DUCTWORK CEILING PLAN - DEMO

SHEET NUMBER:
 M101

- 1 REMOVE KITCHEN HOOD SYSTEM AND ALL ASSOCIATED GREASE DUCT BETWEEN HOOD AND EXHAUST FAN ON ROOF, RE: M102.
- 2 REMOVE ROOF-MOUNTED EXHAUST FAN AND ALL ASSOCIATED DUCT WORK, RE: M102.
- 3 EXISTING TEMPERATURE SENSOR AND HUMIDITY SENSOR FOR ROOFTOP UNIT SERVING KITCHEN SHALL REMAIN; SHOWN FOR REFERENCE.
- 4 EXISTING ROOF EQUIPMENT SHALL REMAIN; SHOWN FOR REFERENCE.
- 5 REMOVE DIFFUSER AND ASSOCIATED FLEX DUCT BACK TO LOCATION SHOWN AND RETAIN FOR RELOCATION, RE: M102.

BUILDING CODES:
 2024 INTERNATIONAL MECHANICAL CODE



AIRFLOW CFMS SHOWN ON PLAN AND SCHEDULES ARE RECOMMENDATIONS BASED ON RECORDS FROM EXISTING DRAWINGS. RE-BALANCE AS REQUIRED ACCORDING TO EXISTING EQUIPMENT ON SITE AND PROVIDE TEST & BALANCE REPORT TO ENGINEER OF RECORD UPON COMPLETION FOR REVIEW AND COORDINATION.

- 1 INSTALL NEW OWNER-FURNISHED TYPE-I KITCHEN HOOD EXHAUST SYSTEM, FIRE SUPPRESSION SYSTEM, GREASE DUCT, AND ALL OTHER REQUIREMENTS FOR A TYPE-I SYSTEM. INSTALL HOOD CONTROL PANEL, TEMPERATURE SENSOR(S), AND HUMIDITY SENSOR(S) WITHIN HOOD UTILITY CABINET ACCORDING TO MANUFACTURER'S INSTALLATION REQUIREMENTS.
- 2 INSTALL NEW OWNER-FURNISHED ROOF-MOUNTED EXHAUST FAN. MAINTAIN MINIMUM 10'-0" SEPARATION BETWEEN ROOF TERMINATION AND ANY NEARBY RTU INTAKE OR ROOF EDGE. INSTALL 12" GREASE DUCT TO ROOF-MOUNTED FAN. EXTEND HOOD COLLAR. BALANCE TO AIRFLOW RATE SCHEDULED ON M601. COORDINATE WITH ELECTRICAL CONTRACTOR FOR FAN CONTROLS BETWEEN HOOD AND FAN. RE: QT INSTALL MANUFACTURER'S INSTRUCTIONS.
- 3 INSTALL NEW OWNER-FURNISHED HOOD SUPPRESSION PUSH STATION PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
- 4 EXISTING ROOF EQUIPMENT SHALL REMAIN, SHOWN FOR REFERENCE. RE: 61-M601 TO RE-BALANCE AIRFLOWS AS REQUIRED.
- 5 EXISTING TEMPERATURE SENSOR AND HUMIDITY SENSOR FOR ROOFTOP UNIT SERVING KITCHEN SHALL REMAIN, SHOWN FOR REFERENCE.
- 6 PROVIDE EXHAUST GRILLE & IN-LINE EXHAUST FAN ABOVE CEILING. PROVIDE ROUND DUCT ABOVE CEILING TO EXHAUST GRILLE IN CEILING AND TO NEW ROOF TERMINATION PER DETAIL K5-M501. MAINTAIN MINIMUM 10'-0" SEPARATION BETWEEN ROOF TERMINATION AND ANY NEARBY RTU INTAKE OR ROOF EDGE. RE: 61-M601.
- 7 RE-BALANCE EXISTING DIFFUSER/GRILLE TO AIRFLOW SHOWN ON PLAN. RE: M601.
- 8 RELOCATE DIFFUSER/GRILLE RETAINED DURING DEMOLITION AND MODIFY DUCTWORK AS SHOWN. FIELD VERIFY DIFFUSER TYPE. PROVIDE TITUS PAR TYPE DIFFUSER IF NOT CURRENTLY PROVIDED.
- 9 INTERLOCK RTU VIA RELAY TO NEW HOOD CONTROL PANEL. EXISTING RTU SHALL SHUT DOWN UPON ACTIVATION OF HOOD FIRE SUPPRESSION SYSTEM.

REGISTERED PROFESSIONAL ENGINEER
NEE SWITLEY 2022
IOWA

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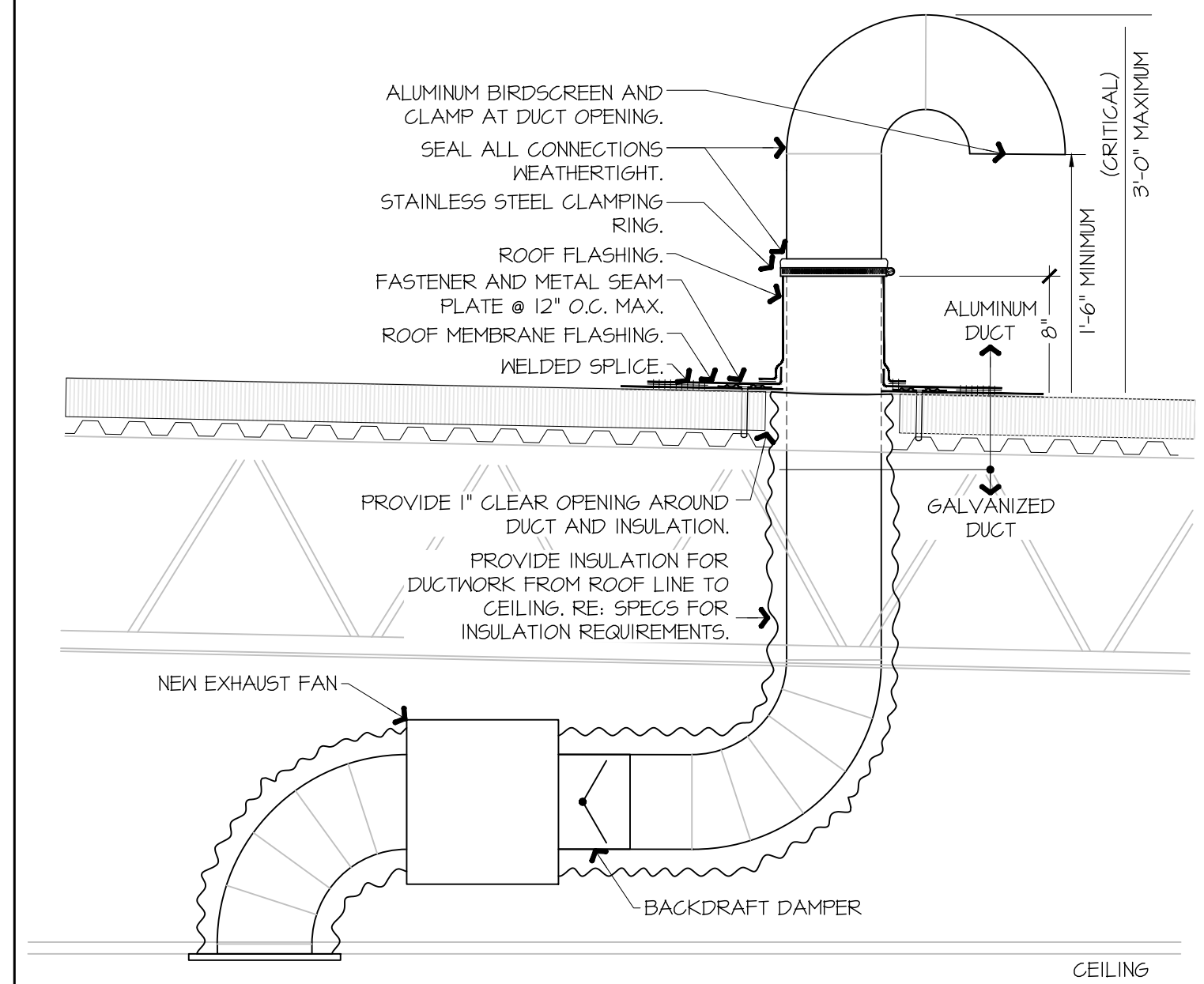
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SHEET TITLE:
MECHANICAL
DUCTWORK
CEILING PLAN - NEW

SHEET NUMBER:
M102





GENERAL NOTES:
KITCHEN EXHAUST HOOD SHALL BE TYPE-I RATED FOR MEDIUM DUTY COOKING APPLIANCES THAT PRODUCE GREASE OR SMOKE AS A RESULT OF THE COOKING PROCESS. HOOD SHALL BE PROVIDED WITH AUTOMATIC FIRE SUPPRESSION SYSTEM INTERLOCKED WITH EQUIPMENT SHUTDOWN CONTROLS. HOOD SHALL BE PROVIDED WITH UL1046 GREASE FILTERS. HOOD SHALL BE LISTED AND LABELED FOR 0" CLEARANCE REQUIREMENTS TO COMBUSTIBLES.

HEAT AND MOISTURE LOADS FOR APPLIANCES THAT DO NOT PRODUCE GREASE OR SMOKE AS A RESULT OF THE COOKING PROCESS AND ARE NOT LOCATED UNDER THE HOOD, HAVE BEEN INCORPORATED INTO THE HVAC SYSTEM CAPACITY SERVING THE KITCHEN.

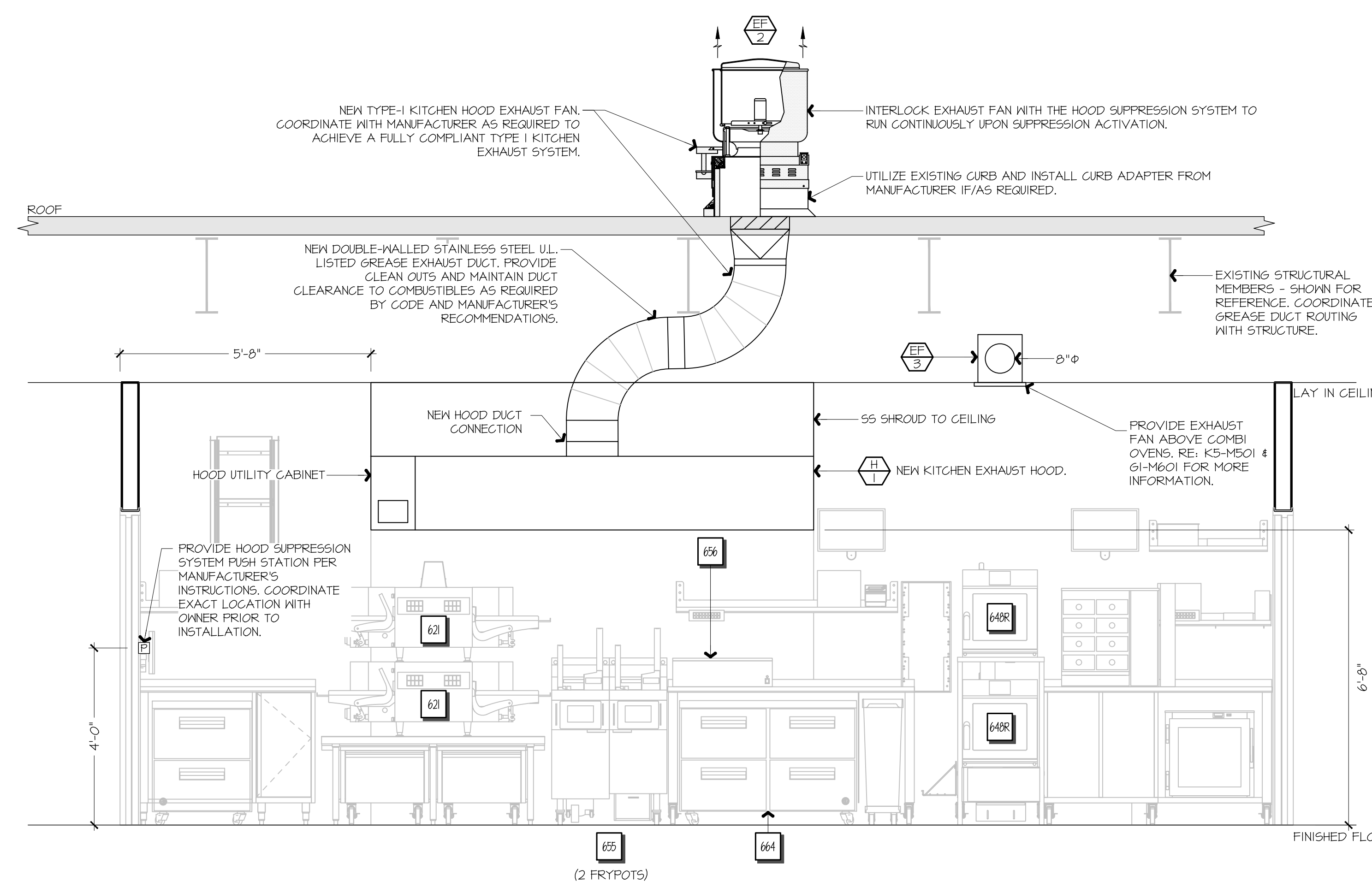
ALL OVENS NOT LOCATED UNDERNEATH A HOOD ARE UL1010 LISTED FOR VENTLESS OPERATION.

SEQUENCE OF OPERATION:
THE FOLLOWING KITCHEN EQUIPMENT SHALL BE INTERLOCKED WITH CURRENT TRANSFORMERS THAT AUTOMATICALLY ACTIVATE THE HOOD EXHAUST FAN UPON THE KITCHEN EQUIPMENT BEING ENERGIZED: [62] PIZZA OVENS, [648] COMBI OVENS, [647] STEAM DRAWER, [655] FRYER, [656] FRY HOLDING STATION.

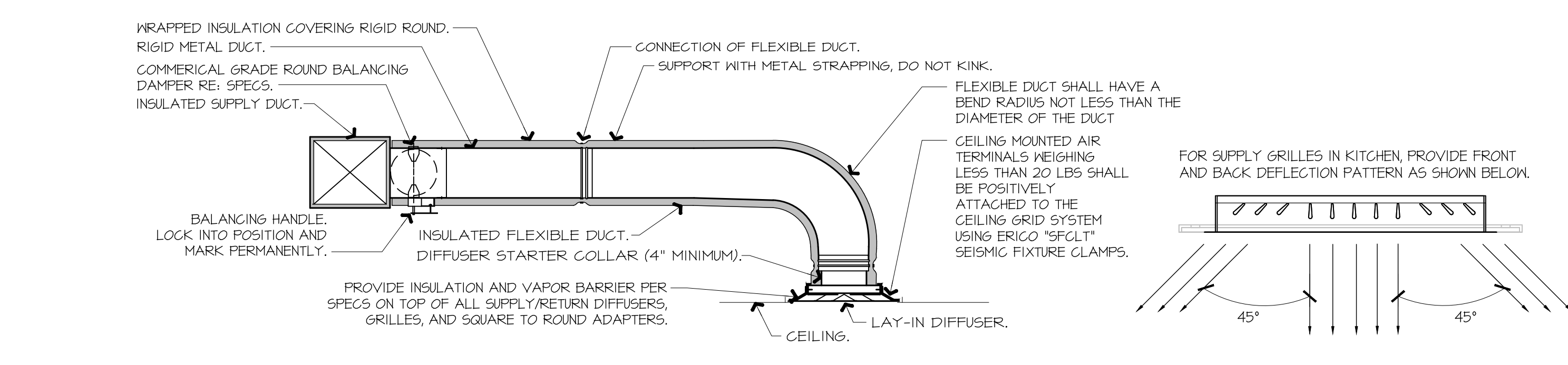
AS HOOD EXHAUST FAN ENERGIZES, RTU'S SHALL MODULATE OUTSIDE AIR TO MAINTAIN BUILDING PRESSURIZATION. RE: M601.

HEAT SENSORS SHALL BE PROVIDED WITHIN HOOD CANOPY FOR TEMPERATURE AND HUMIDITY MONITORING. RE: MANUFACTURER DRAWINGS.

UPON ACTIVATION OF THE FIRE SUPPRESSION SYSTEM, ALL EQUIPMENT LOCATED UNDER THE HOOD SHALL BE SHUTDOWN VIA CONTACTORS LOCATED WITHIN THE HOOD UTILITY CABINET, AND RTU SERVING KITCHEN SPACE SHALL BE AUTOMATICALLY SHUTDOWN. RE: A13-E601.



F9 FSC REAR WALL ELEVATION - NEW
NOT TO SCALE A1-M102



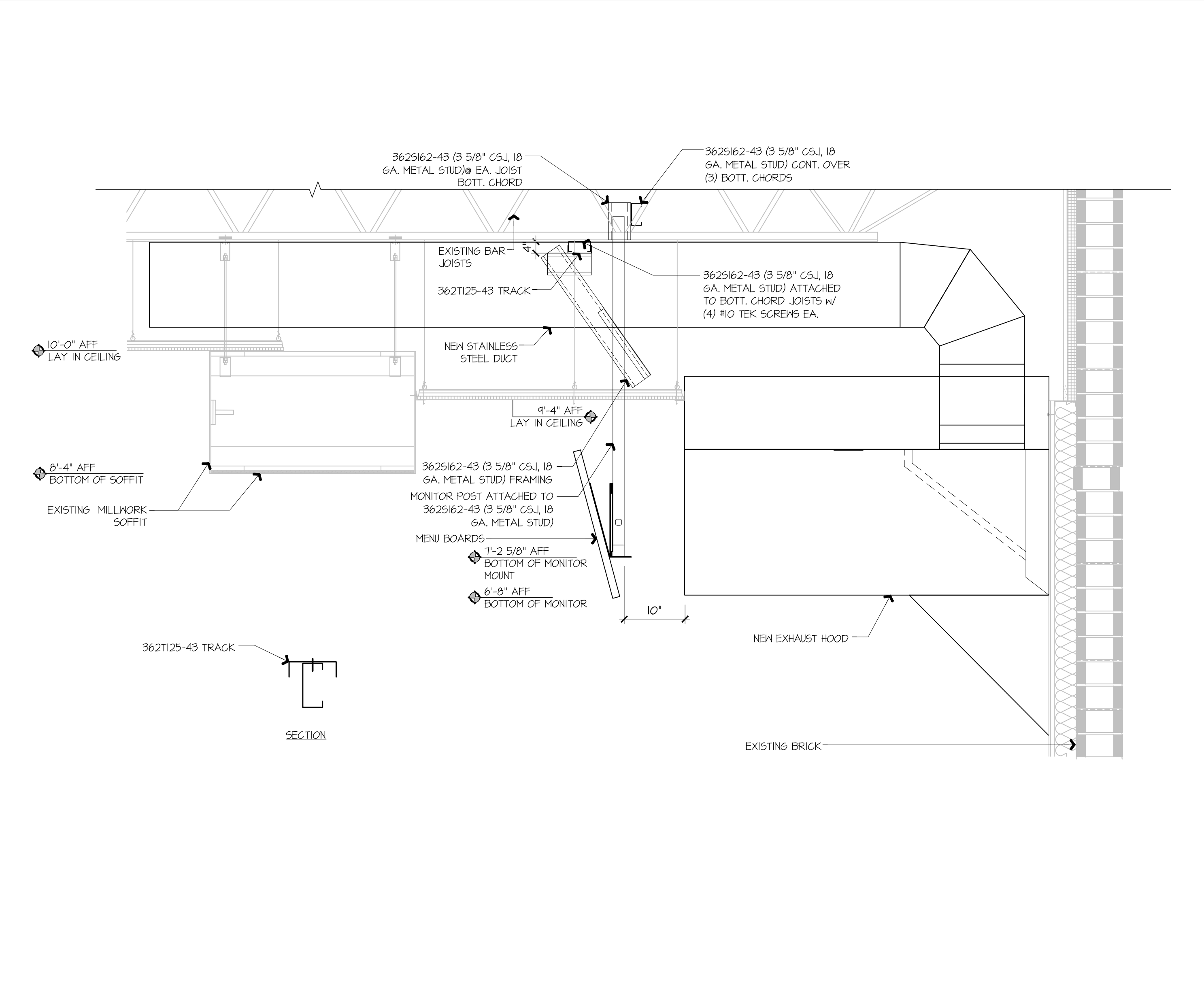
NOTES:
1. PROVIDE AT FLEXIBLE DUCT CONNECTION METAL OR "PANDUIT" DRAMBAND ON THE INTERIOR FLEXIBLE DUCT HELIX. SECURE THE INSULATION OVER THE DRAMBAND WITH AN ADDITIONAL DRAMBAND.
2. PROVIDE BEADING ON ROUND METAL DUCT 12" OR LARGER IN DIAMETER.
3. PROVIDE MINIMUM 4" COLLARS FOR ATTACHMENT OF THE FLEX DUCT TO ROUND DUCT, DAMPERS AND DIFFUSERS.
4. BAND RIGID ROUND DUCT INSULATION TO DUCT AND PROVIDE FIBER REINFORCED FOIL BACKED TAPE FOR INSULATION OVERLAP.

A9 DIFFUSER CONNECTION DETAIL
NOT TO SCALE A1-M102



K1 NOT USED
NOT TO SCALE

K5 COMBI OVEN FAN EXHAUST DUCTWORK
NOT TO SCALE A1-M102



A1 KITCHEN EXHAUST HOOD SUPPORT DETAIL
NOT TO SCALE

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SHEET TITLE:
MECHANICAL SECTIONS & DETAILS

SHEET NUMBER:
M501

HOOD INFORMATION - JOB#7284466

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM
1		6030 ND-2	CAPTIVEAIRE	9' 0"	450 DEG	I	MEDIUM	150	1350

FIRE SYSTEM INFORMATION - JOB#7284466

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0	20	20	FIRE CABINET LEFT	LEFT, HOOD I

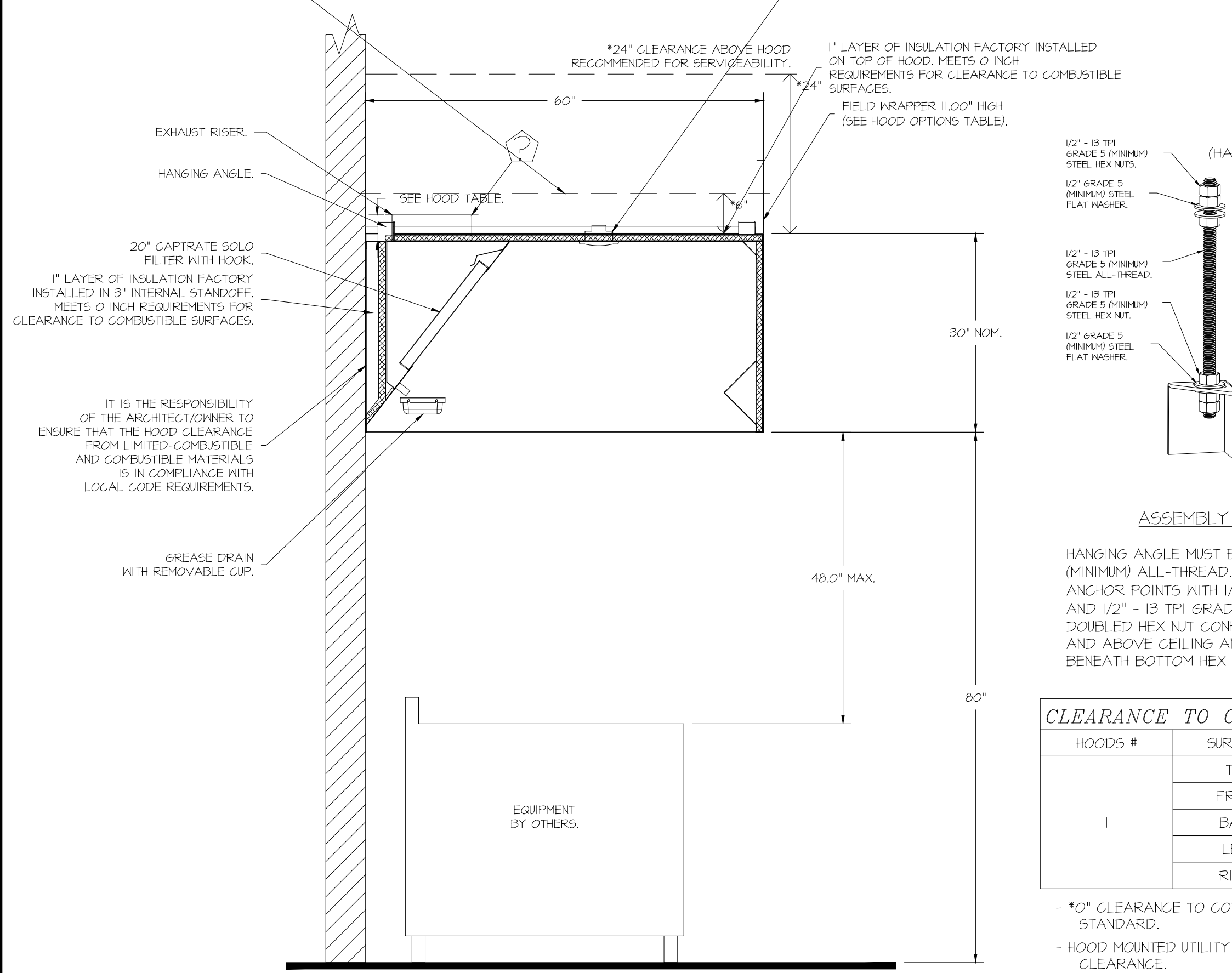
HOOD INFORMATION

HOOD NO	TAG	TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	AVERAGE FOOT CANDLES @ 36" AFF	LOCATION	SIZE	TYPE	SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
1		CAPTRATE SOLO FILTER	6	20"	16"	85% SEE FILTER SPEC	6	RECESSED ROUND	NO	66	LEFT	12"x6.0"x3.0"	TANK FS	4.0	DCV-1011	1 LIGHT 1 FAN	YES	88T LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1		FIELD WRAPPER 11.00" HIGH FRONT, LEFT, RIGHT, RIGHT END STANDOFF (FINISHED) 1" WIDE 60" LONG INSULATED. INSULATION FOR TOP OF HOOD. INSULATION FOR BACK OF HOOD. SENSOR-CV.

*6" CLEARANCE ABOVE HOOD REQUIRED FOR FIRE SYSTEM PIPING.

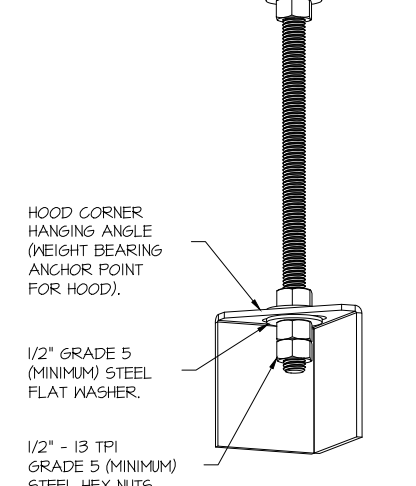


CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH

NSF
NFPA #96
ETL LISTED 3054804-001 TO UL 710 & ULCT10 STANDARDS

HOOD CORNER HANGING ANGLE (HARDWARE BY INSTALLER)

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 1.5 FT OF EQUIVALENT LENGTH. SEE MANUAL FOR DETAILS.



ASSEMBLY INSTRUCTIONS

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

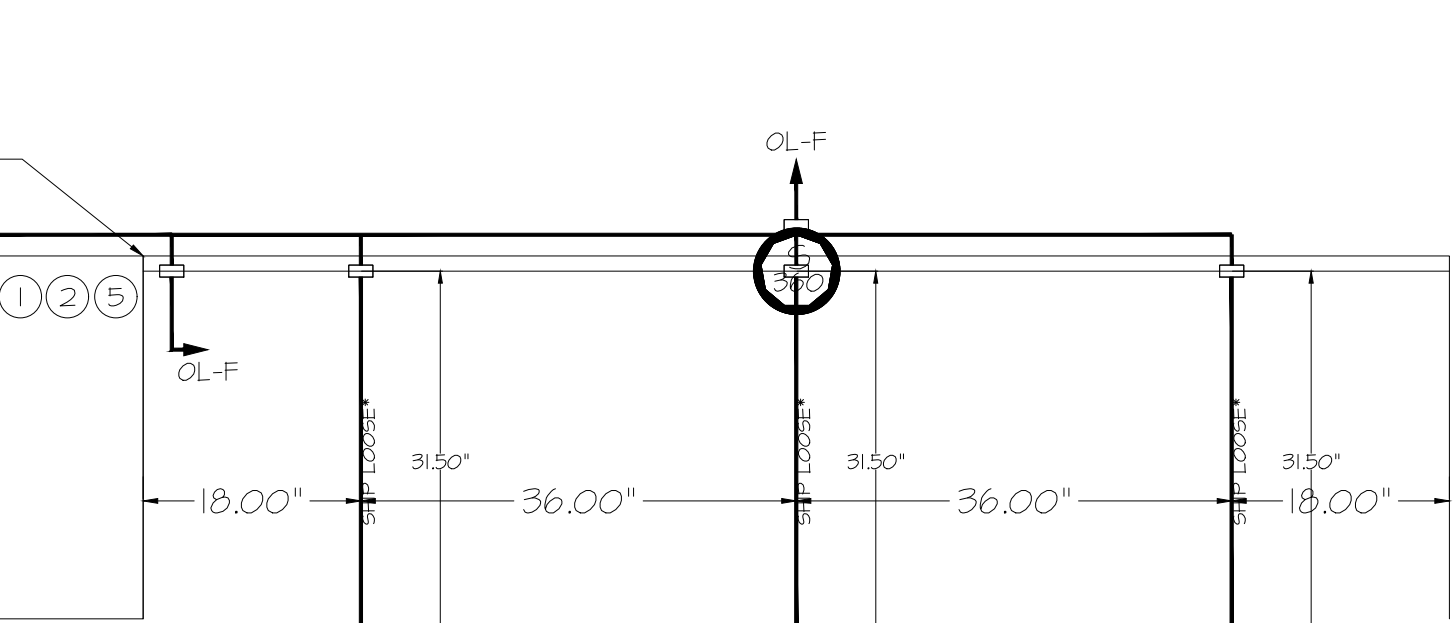
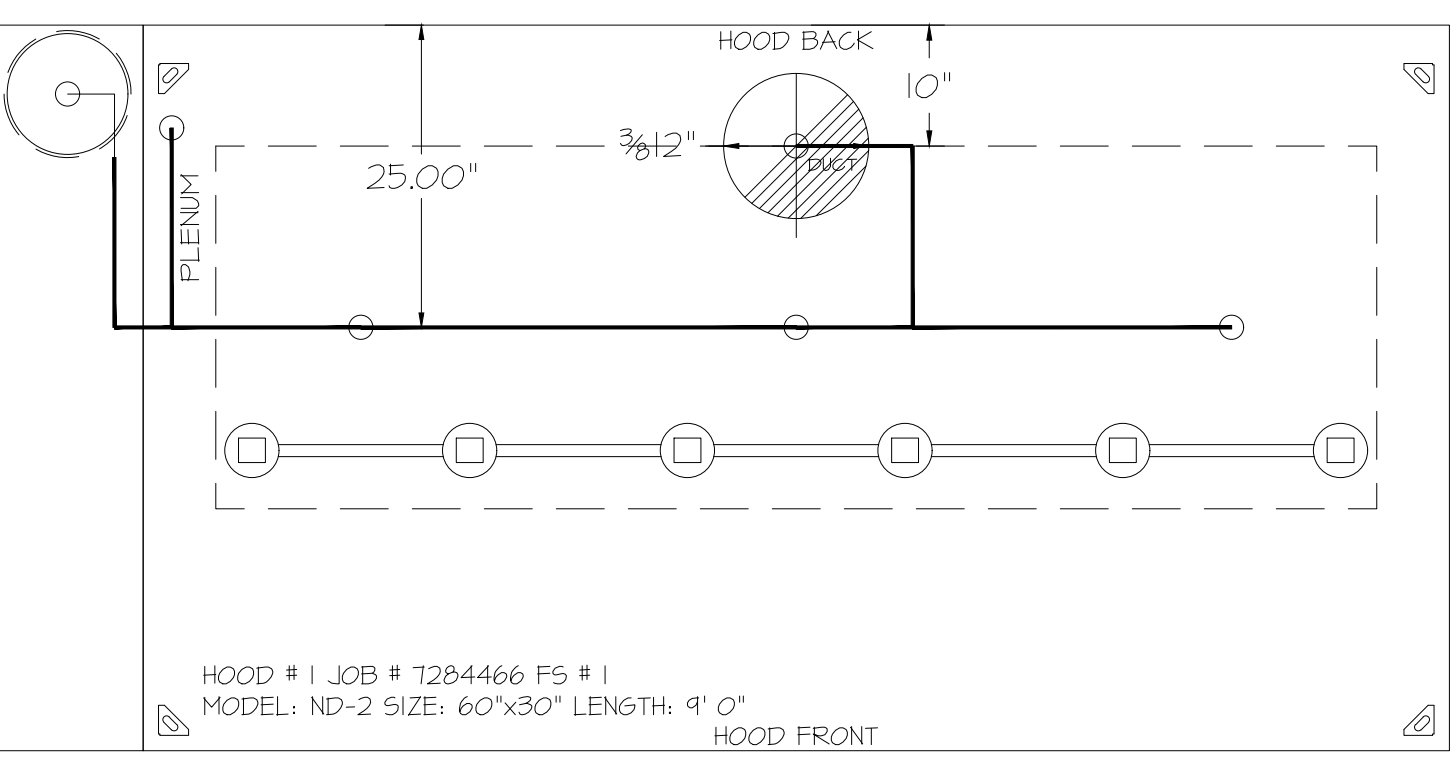
CLEARANCE TO COMBUSTIBLES

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

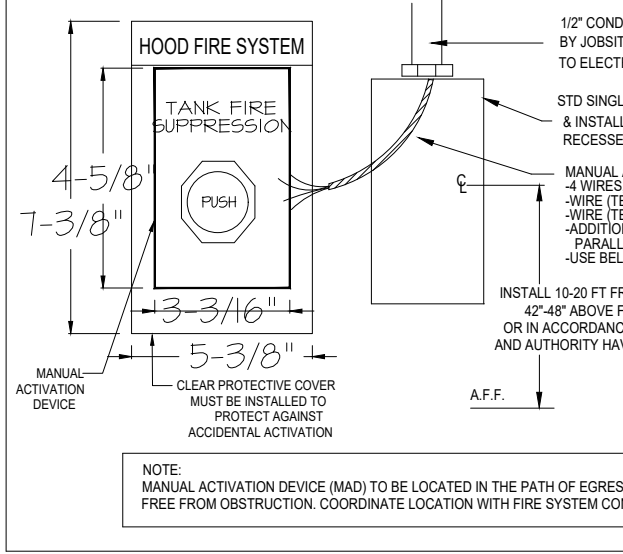
*0" CLEARANCE TO COMBUSTIBLES CONFORMS TO UL710 STANDARD.
- HOOD MOUNTED UTILITY CABINETS REQUIRE 36" SERVICE CLEARANCE.

FIRE SYSTEM PARTS LIST KEY

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
0	0	TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
0	0	TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
0	0	12-F28021-32144-01-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO. CLOSE ON TEMP RISE AT 360°F. (A0094B10).	1	0
0	0	32-00002 QUIK SEAL - 1/2" (UL)	1	0
0	0	442K422 1/2" X 1/4" BRASS REDUCING BUSHING.	1	0
0	0	78525 1/2" 40 PRO-PRESS ELBOW WITH 1/2" ANPT FEMALE CONNECTION, VIEGA.	1	0
0	0	78680 1/2" X 1/2" PRO-PRESS TEE X 1/2" ANPT FEMALE CONNECTION, VIEGA.	1	0
0	0	81-30001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	1	0
0	0	81-30003-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM SUPERVISED. TANK FIRE SUPPRESSION.	1	0
0	0	81-30003-001 DIN CONNECTOR, CANFIELD PART #5,560-201-EUOA, TANK FIRE SUPPRESSION, SUBMERSIBLE SOLENOID CONNECTION (SEE VENDOR 30371).	1	0
0	0	81-30005-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	4	0
0	0	4055459C PRO PRESS 1/2 PRESS X PRESS 90 ELBOW LD.	4	0
0	0	401200C PRO PRESS PC611 1/2 PRESS TEE LD.	4	0
0	0	48644A15 HARDWARE, DATANLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	2	0
0	0	A0024592 JUNCTION BOX FOR MANUAL PULL STATION, 1.5" DEEP BACK BOX, RED COLOR.	1	0
0	0	A31484 1/4" NPT SCHROEDER VALVE AND CAP, JB INDUSTRIES. 1/4" FLARE X 1/4" MPT HALF UNION. USED ON TANK SERVICE PORT.	1	0
0	0	B145 3/8" BLACK IRON 90 ELL.	2	0
0	0	DATANLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	1	0
0	0	TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	3	0
0	0	TFS-UC1 TANK BRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	1	0
0	0	PK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	1	0
16	16	14210 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	5	0
16	16	OL-F NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANTARD, USED WITH CHROME-PLATED PIPE).	5	0
26	26	05A-3/8 QUIK SEAL - 3/8" (UL)	5	0
34	34	A0034918 PAVING SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT, RED COLOR.	1	0



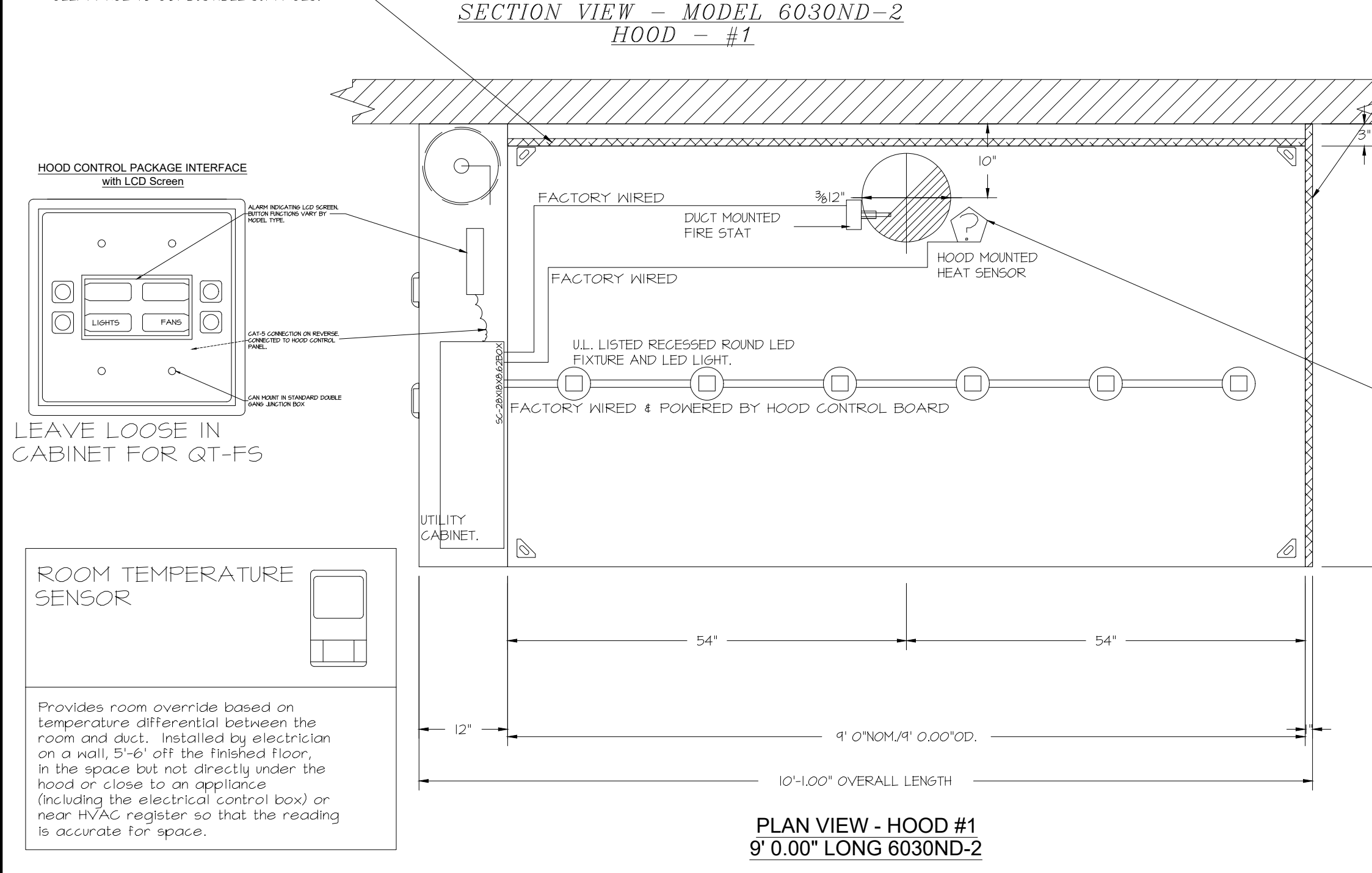
TANK MANUAL ACTIVATION DEVICE DETAIL



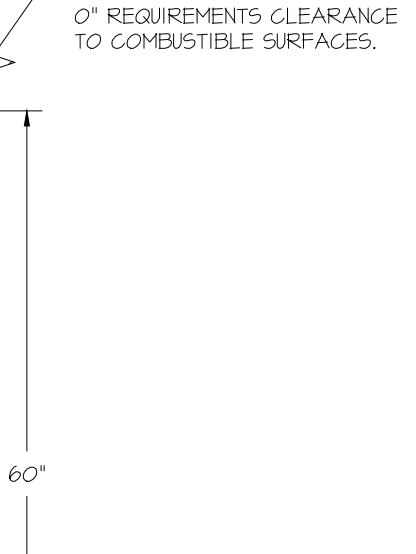
NOTES

- FIELD PIPE DROPS AS SHOWN
- PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROPS: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
- SHIP LOOSE DROPS: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAD BARRENDS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED FIRE-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.
- OL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS
- JOB #: 1284466
- JOB NAME: QT - G3 NEW STORE PKG GOING FORWARD (DW) (450F).
- SYSTEM SIZE: TANK-SP-1 DESIGN FP: 20, MAXIMUM FP: 20, HOOD # 1 1' 0.00\"/>

SECTION VIEW - MODEL 6030ND-2 HOOD - #1



DUCT TEMPERATURE SENSOR (TYPICAL)



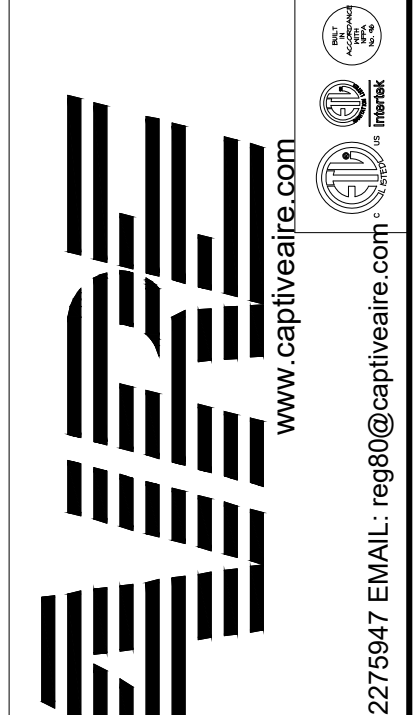
LEGEND - FIRE CABINET TANK SYSTEM

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

- 4 GALLON TANK.
- PRIMARY ACTUATOR RELEASE.
- SECONDARY ACTUATOR RELEASE.
- PRESSURE SUPERVISION SWITCH.
- PRIMARY HOSE ASSEMBLY.
- SECONDARY HOSE ASSEMBLY.
- REMOTE MANUAL ACTUATION DEVICE.

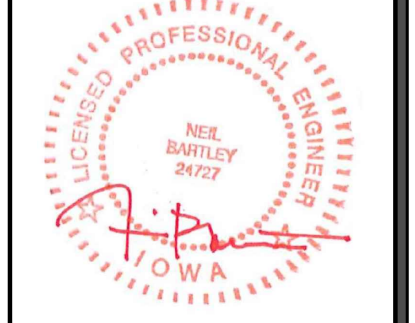
REVISIONS

NO.	DESCRIPTION	DATE



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SHEET TITLE:
MECHANICAL HOOD DETAILS

SHEET NUMBER:
M510

QT - Fryer Addition Remodel Pkg Going Forward (DW) (450F)

Various Locations,
Tulsa, OK, 74136

DATE: 4/29/2025

DWG.#: 1284466

DRAWN BY: RJH-80

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

MASTER DRAWING

SHEET NO.
1

EXHAUST FAN INFORMATION - JOB#7284466

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	EF-3 (TYPE I)	1	DU50HFA	CAPTIVEAIRE	1350	0.750	1543	TEAO-ECM	0.500	0.3710	1	208	3.8	513 FPM	79	16.6
2	EF-1 - RR FAN	1	DR33HFA	CAPTIVEAIRE	600	0.500	1304	TEAO-ECM	0.333	0.1530	1	115	4.3	297 FPM	58	8.8
3	TF-1 - TRANS FAN	1	GFA 500CA	CAPTIVEAIRE	350	0.500	725	GENERAL PURPOSE	0.310	0.2220	1	115	2.2		35	N/A
4	VF-1 - CO2 FAN	1	DFA-300-CA	CAPTIVEAIRE	600	0.100	1846	GENERAL PURPOSE	0.333	0.1480	1	115	2.6		12	12.9

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	EF-3 (TYPE I)	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR50HFA - SHIP LOOSE - FOR GREASE DUCTS
		1	ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -M5C- (TELCO), CCM ROTATION
		1	2 YEAR PARTS WARRANTY
2	EF-1 - RR FAN	1	1 IS-BDD DAMPER
		1	ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -RTG- (TELCO MOTOR), CCM ROTATION
		1	2 YEAR PARTS WARRANTY
3	TF-1 - TRANS FAN	1	FAN CONTROL - 3 AMP FAN MOUNTED SPEED CONTROL FOR GFA CEILING FANS
		1	2 YEAR PARTS WARRANTY
4	VF-1 - CO2 FAN	1	FAN CONTROL - 3 AMP WHITE SPEED CONTROL FOR GFA CEILING FAN
		1	2 YEAR PARTS WARRANTY

FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE DAMPER	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	EF-3 (TYPE I)	YES						
2	EF-1 - RR FAN		YES					
3	TF-1 - TRANS FAN							
4	VF-1 - CO2 FAN							

CURB ASSEMBLIES

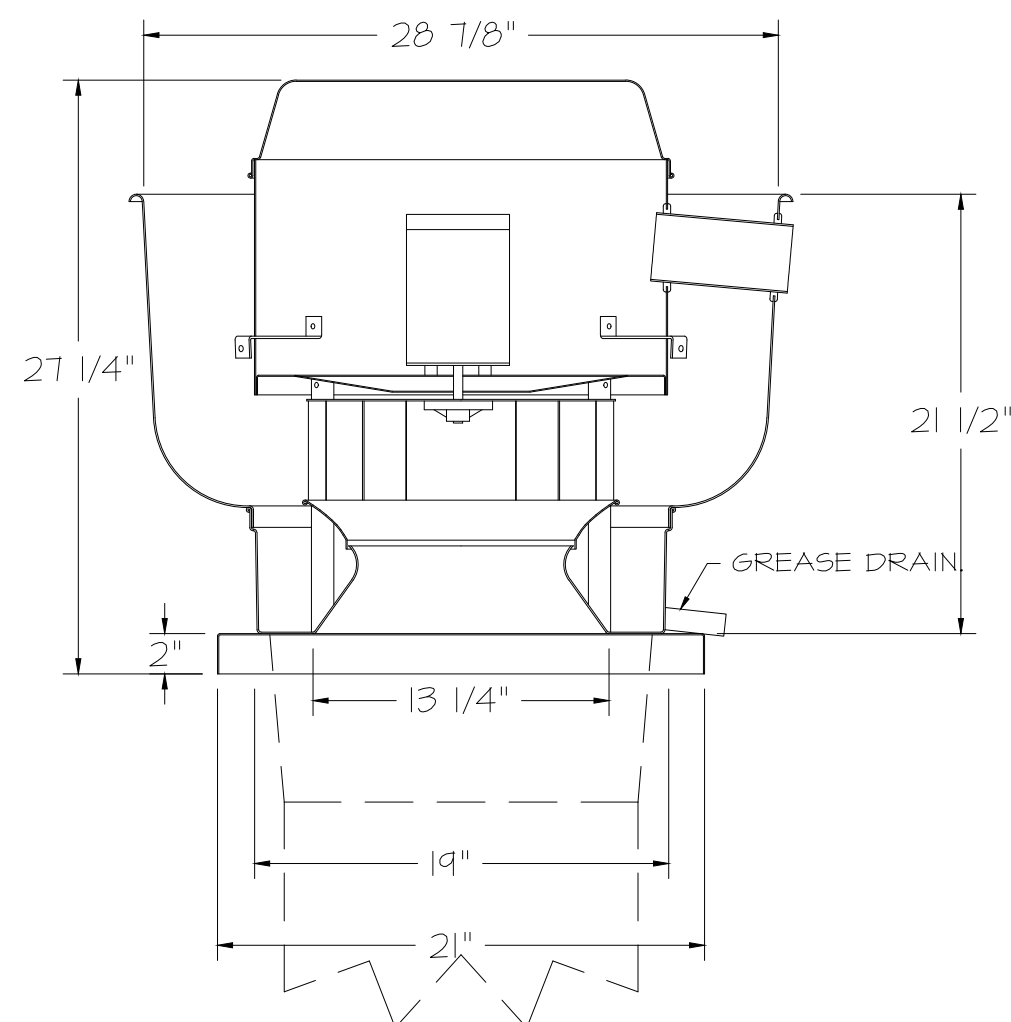
NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	EF-3 (TYPE I)	34 LBS	CURB	19,500"W X 19,500"L X 24,000"H VENTED HINGED.
2	# 2	EF-1 - RR FAN	31 LBS	CURB	19,500"W X 19,500"L X 20,000"H HINGED.

FAN SOUND DATA

FAN UNIT NO	TAG	MOTOR	SOUND DATA			OCTAVE BAND SOUND DATA								
			LWA	SONES @ 5 FT	DBA @ 5 FT	DISTANCE (FT)	63 HZ	125 HZ	250 HZ	500 HZ	1 KHZ	2 KHZ	4 KHZ	8 KHZ
1	EF-3 (TYPE I)	EXHAUST	80	16.5	126.5	5	76.6	78	85	76.5	71.9	69.8	66	57
2	EF-1 - RR FAN	EXHAUST	70.9	8.8	26.3	5	68.3	75.1	73.9	67.5	64.2	62.8	55.9	44.9
4	VF-1 - CO2 FAN	EXHAUST	76.4	12.4	25.3	5	65.8	74	74	72.2	69.8	68.5	68	68.2

FAN #3 GFA 500CA - EXHAUST FAN (TF-1 - TRANS FAN)

FAN #1 DU50HFA - EXHAUST FAN (EF-3 (TYPE I))



FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULG-5645
- 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.

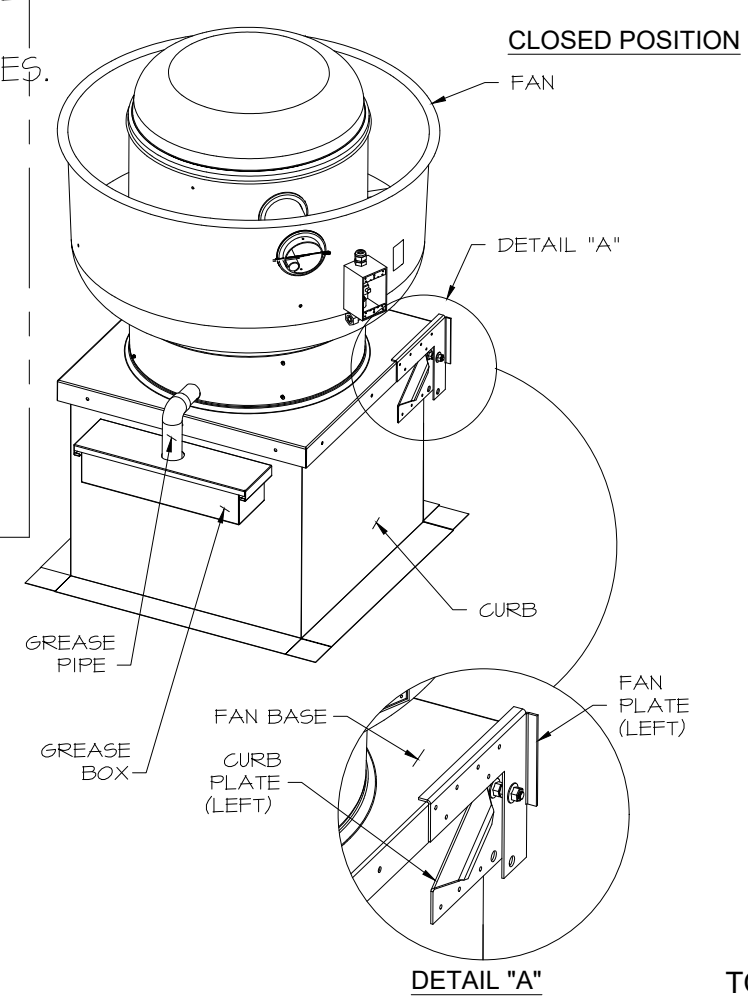
NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DEGRADING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

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.

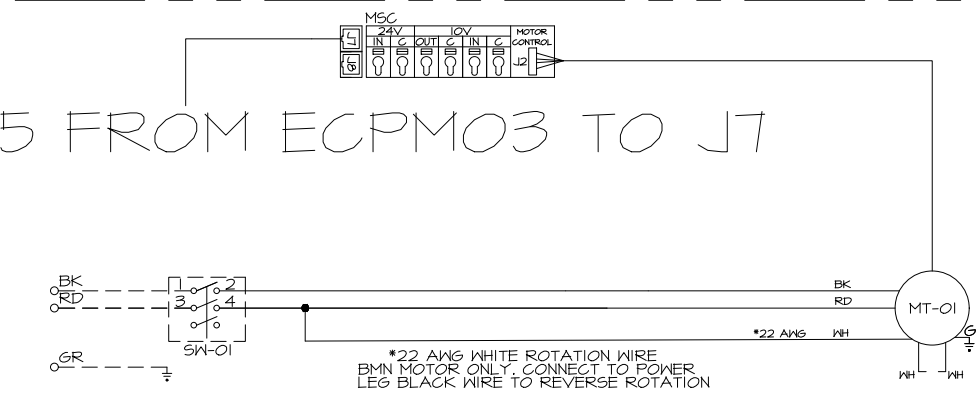
OPTIONS

- GREASE BOX.
- FAN BASE CERAMIC SEAL - DU/DR50HFA
- SHIP LOOSE - FOR GREASE DUCTS.
- ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -M5C- (TELCO), CCM ROTATION.
- 2 YEAR PARTS WARRANTY.

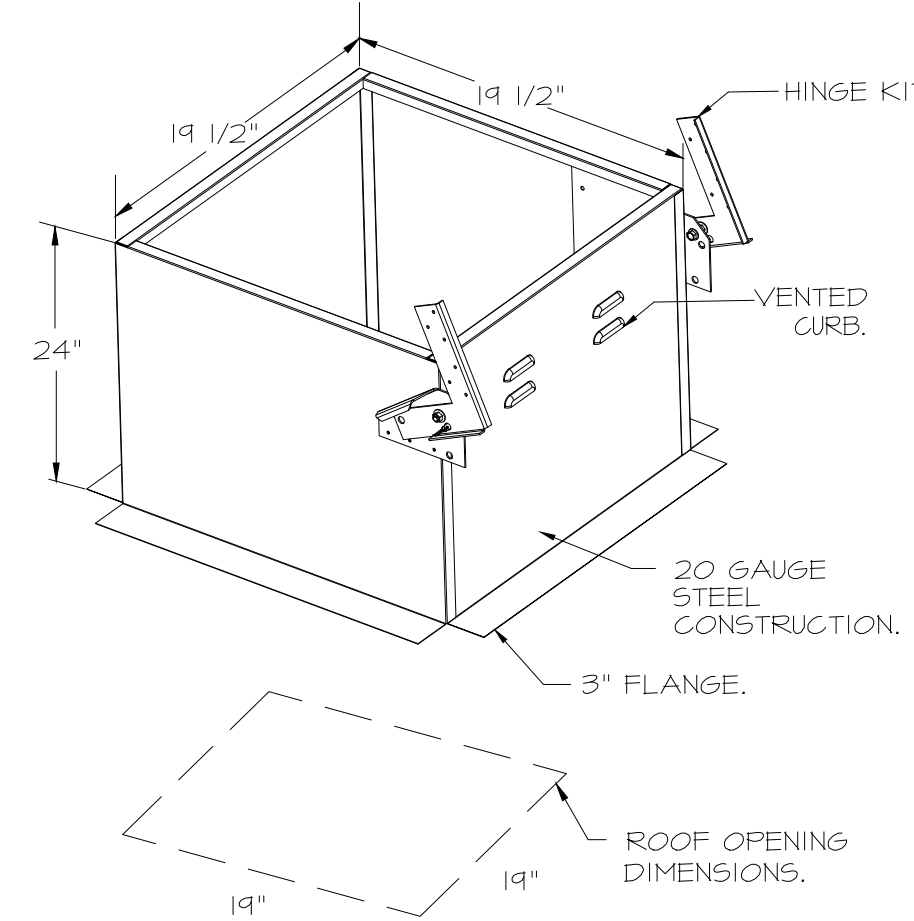
HINGE KIT INSTALLATION



J5 FROM ECPM03 TO J7



*22 AWG WHITE ROTATION WIRE B/MN MOTOR ONLY. CONNECT TO POWER LEG BLACK WIRE TO REVERSE ROTATION. JUMPER WIRE DISCONNECTED. TO REVERSE ROTATION CONNECT JUMPER FOR KECC MOTOR ONLY.



FAN #2 DR33HFA - EXHAUST FAN (EF-1 - RR FAN)

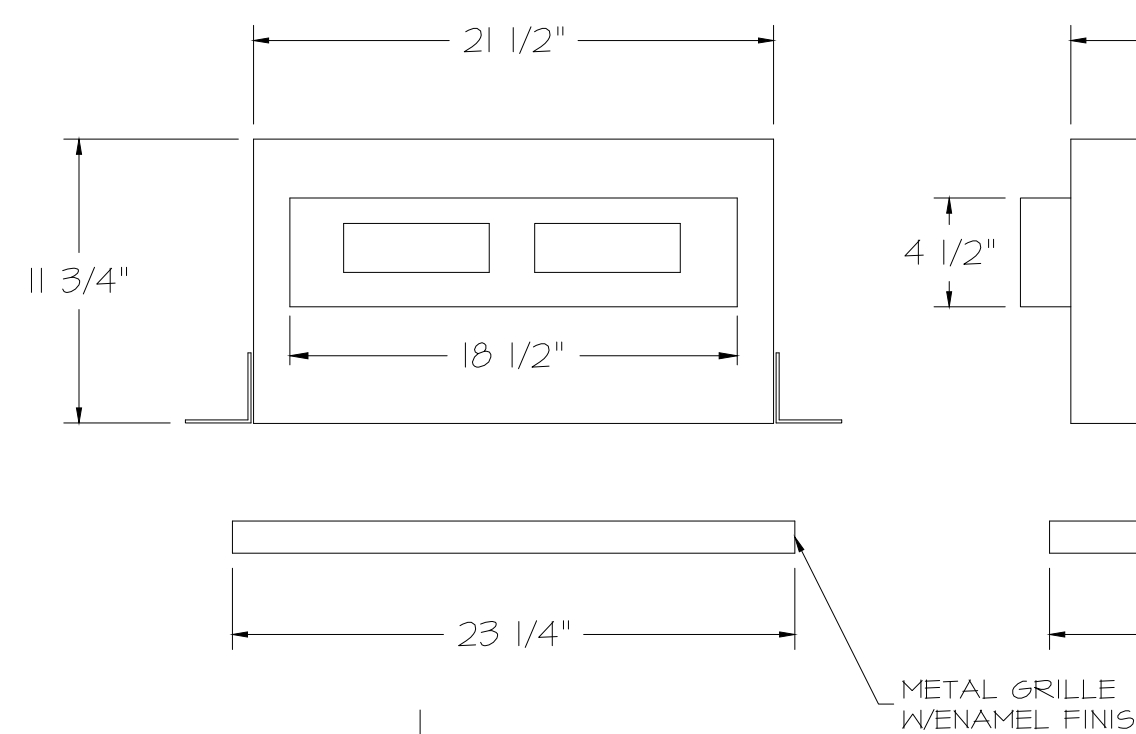
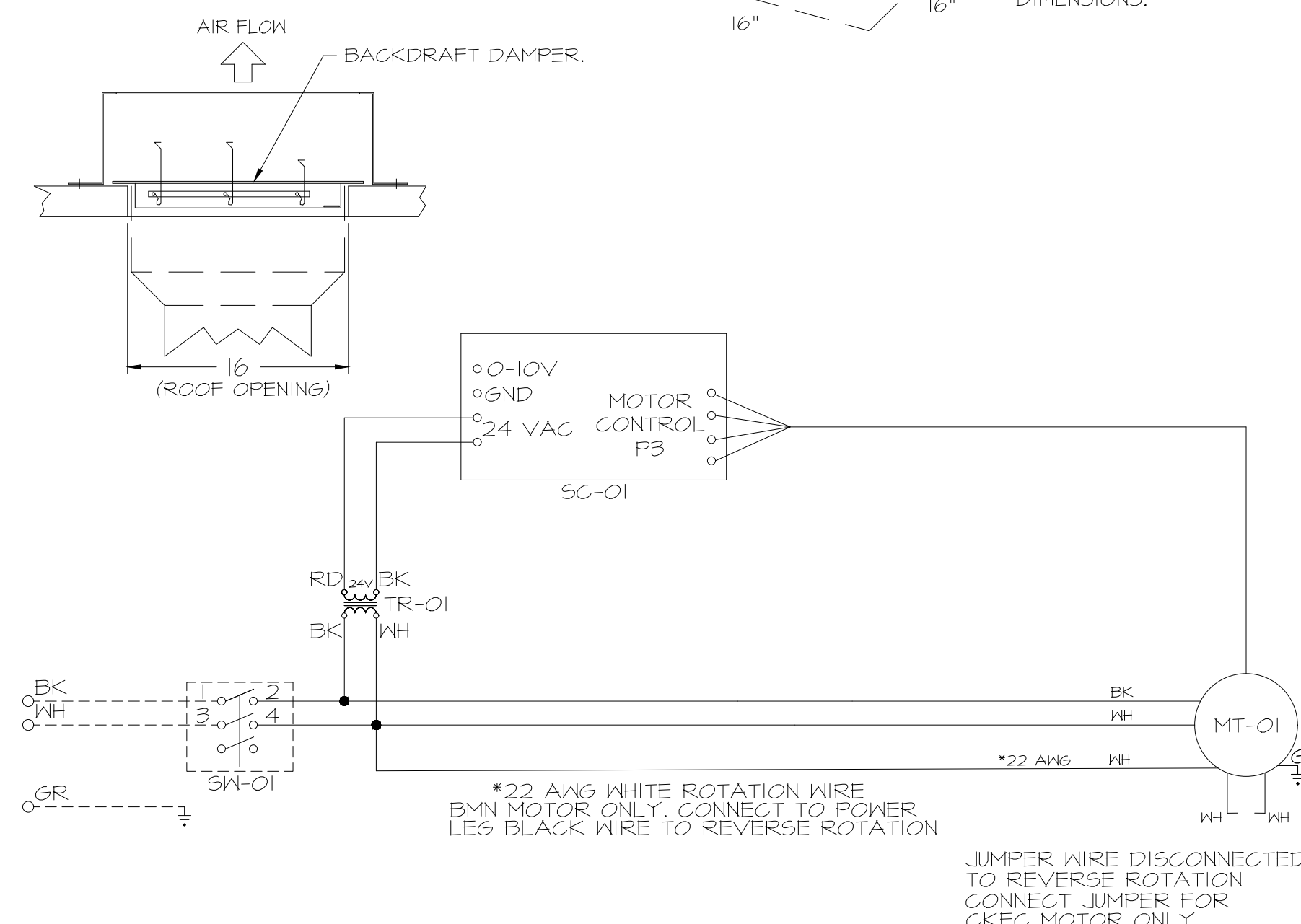
FEATURES:

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

OPTIONS

- 1 IS-BDD DAMPER.
- ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -RTG- (TELCO MOTOR), CCM ROTATION.
- 2 YEAR PARTS WARRANTY.

BACKDRAFT DAMPER INSTALLATION



FEATURES:

- 1/2" ACOUSTIC HOUSING INSULATION.
- 20 GA. GALVANIZED STEEL HOUSING.
- PLUG TYPE DISCONNECT.
- BUILD IN AUTOMATIC BACKDRAFT DAMPER.
- AMCA SOUND 4 AIR CERTIFIED.
- UL LISTED.
- CAN BE INSTALLED IN CEILING OR WALL.
- 8 POSITION MOUNTING BRACKETS.

OPTIONS

- FAN CONTROL - 3 AMP FAN MOUNTED SPEED CONTROL FOR GFA CEILING FANS.
- 2 YEAR PARTS WARRANTY.

REVISIONS

NO	DESCRIPTION	DATE

SIGNATURE DATE: 10/31/2025

15902 Midland Drive
Shawnee, Kansas 66217
913.382.9090 | mail@hb-engineers.com
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Iowa Certificate of Authority #354056

12101 East 51st Street, Suite 101A, Tulsa, OK, 74136
PHONE: (918) 258-0291 FAX: 918-272-6947 EMAIL: reg@captivaire.com

QUICK TRIP NO. 0516
1000 EAST UNIVERSITY AVENUE
DES MOINES, IOWA

DATE: 4/29/2025
DWG.#: 7284466
DRAWN BY: R.J.H-80
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET TITLE: MECHANICAL HOOD DETAILS
SHEET NUMBER: M511

REV DATE DESCRIPTION

ORIGINAL ISSUE DATE: 10/31/2025

DATE: 4/29/2025
DWG.#: 7284466
DRAWN BY: R.J.H-80
SCALE: 3/4" = 1'-0"
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SHEET NUMBER: M511

REV DATE DESCRIPTION

ORIGINAL ISSUE DATE: 10/31/2025

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DWG.#: 7284466
DRAWN BY: R.J.H-80
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET TITLE: MECHANICAL HOOD DETAILS
SHEET NUMBER: M511

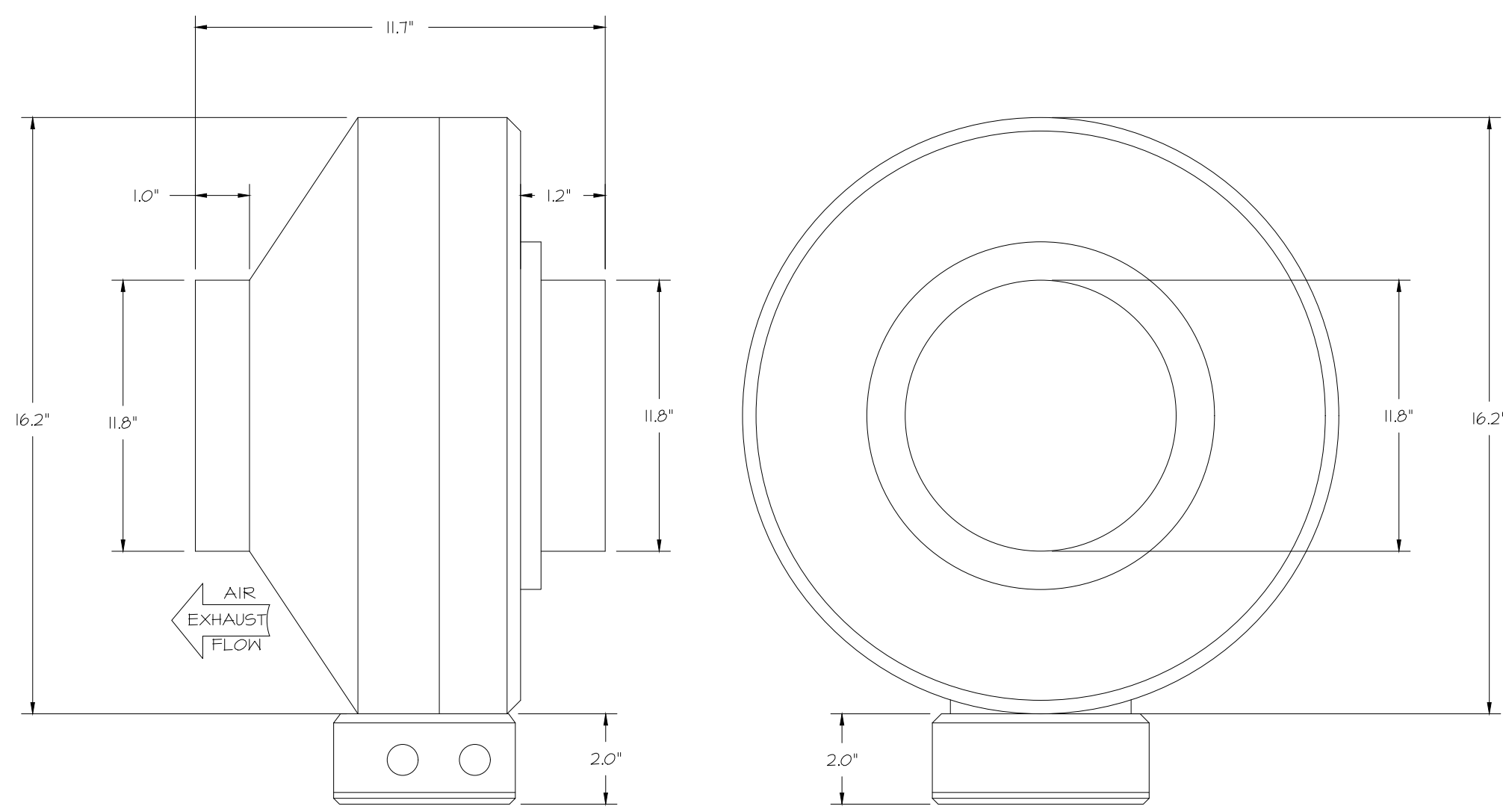
REV DATE DESCRIPTION

ORIGINAL ISSUE DATE: 10/31/2025

DATE: 4/29/2025
DWG.#: 7284466
DRAWN BY: R.J.H-80
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET TITLE: MECHANICAL HOOD DETAILS
SHEET NUMBER: M511

FAN #4 DFA-300-GA - EXHAUST FAN (VF-1 - C02 FAN)

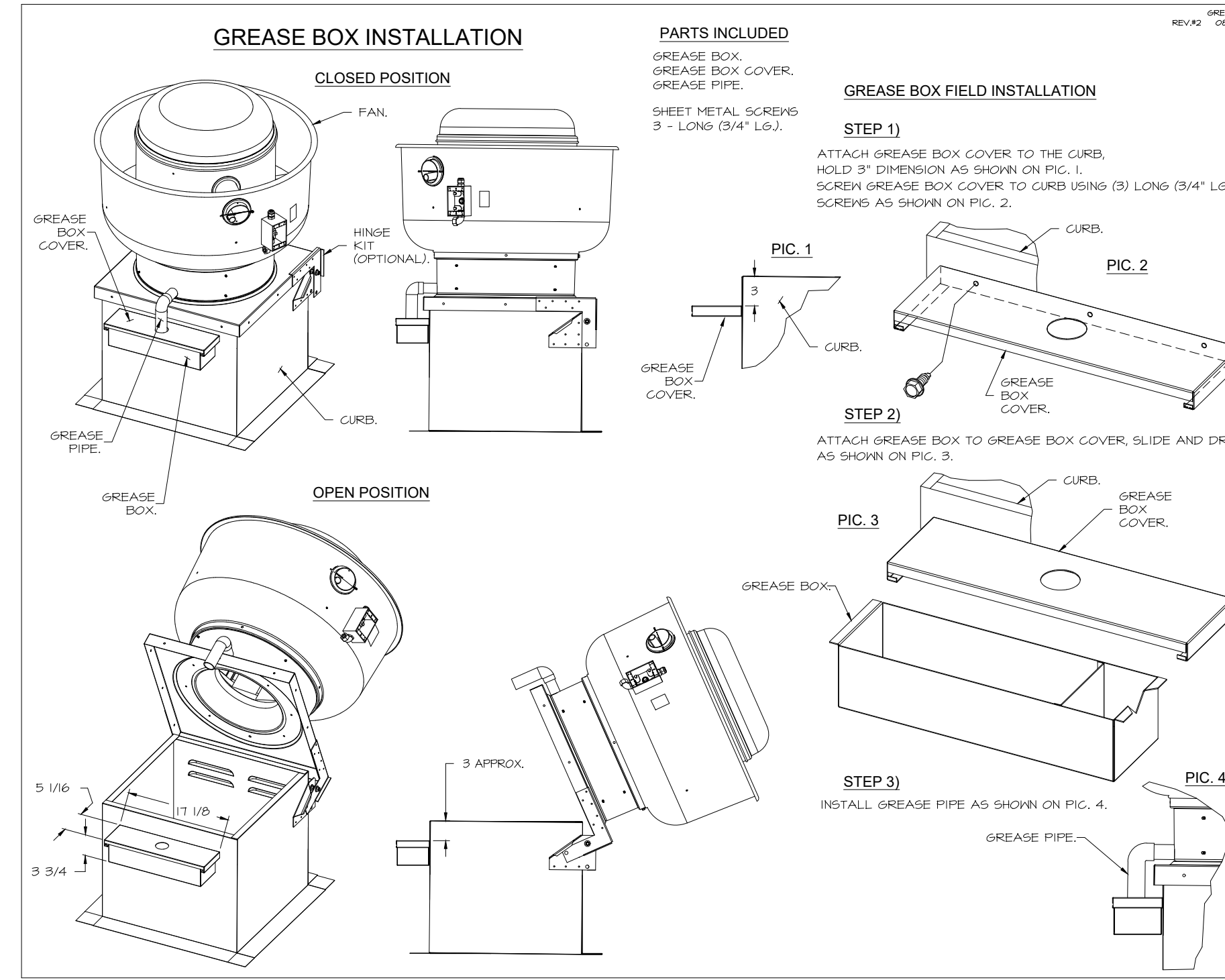


FEATURES:

- 20 GA. GALVANIZED STEEL HOUSING.
- STANDARD 4" - 12" ROUND DUCT CONNECTIONS.
- EASILY ACCESSIBLE J-BOX.
- UL507 LISTED.
- EXTREMELY QUIET OPERATION.

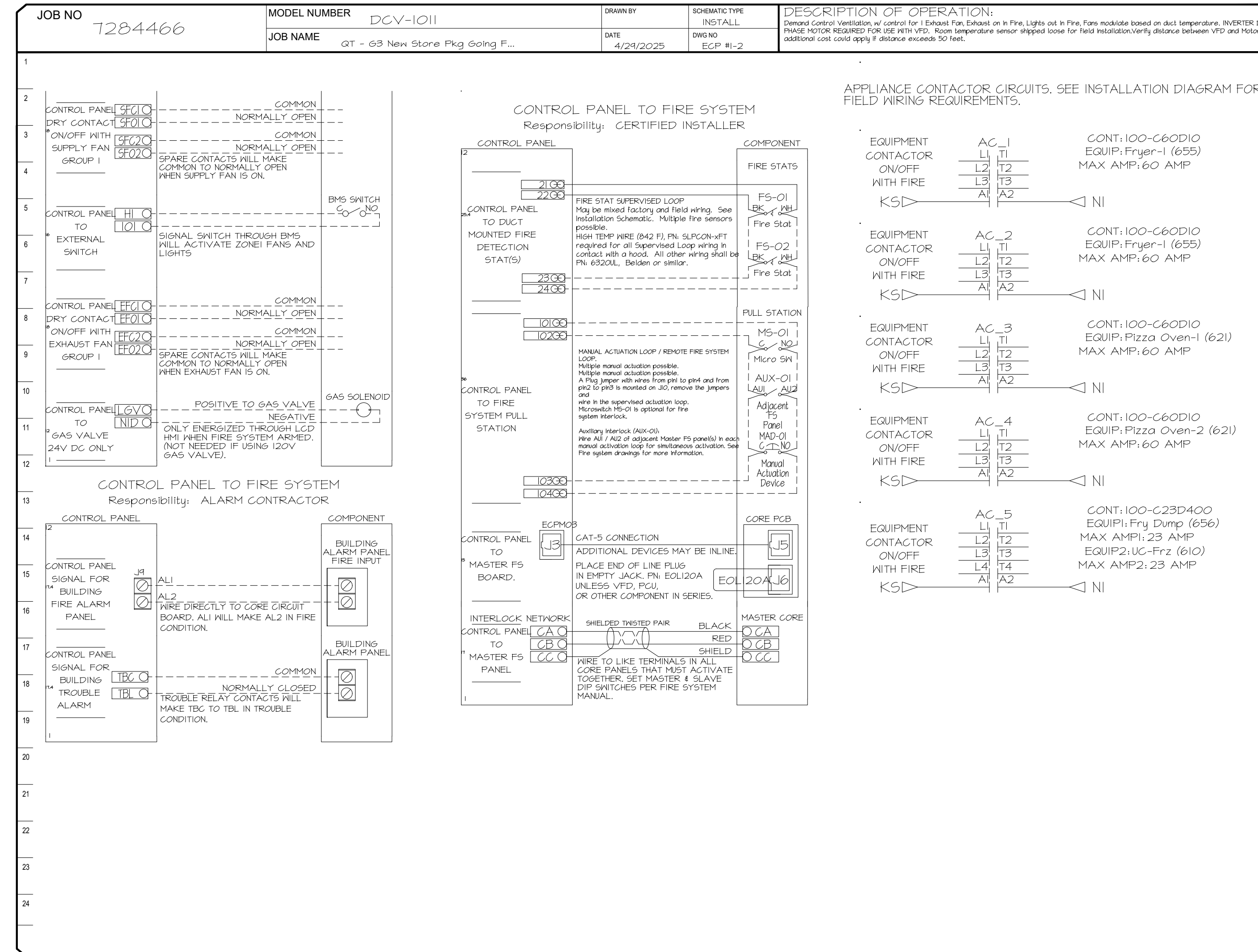
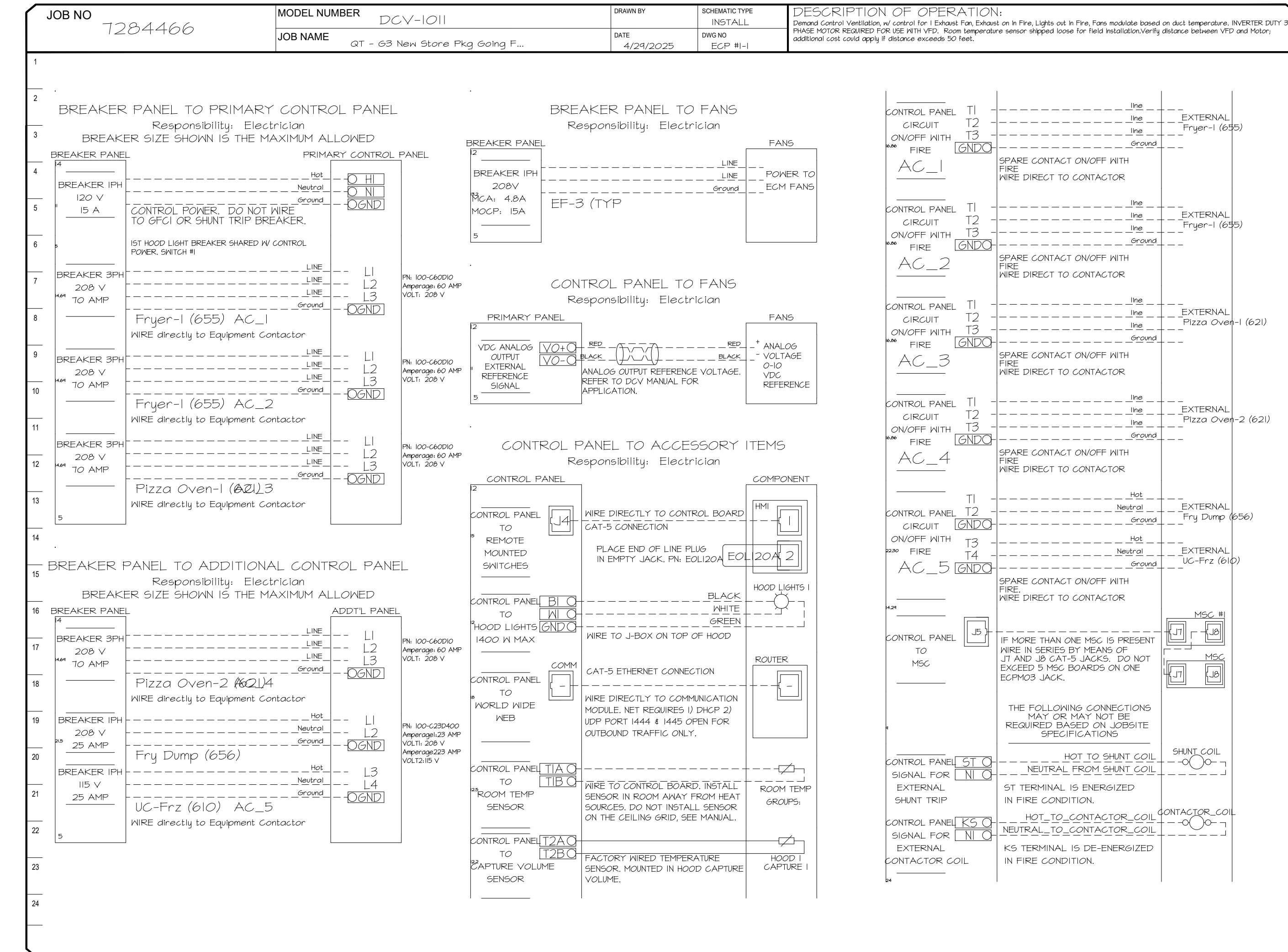
OPTIONS:

- FAN CONTROL - 3 AMP WHITE SPEED CONTROL FOR CFA CEILING FAN.
- 2 YEAR PARTS WARRANTY.



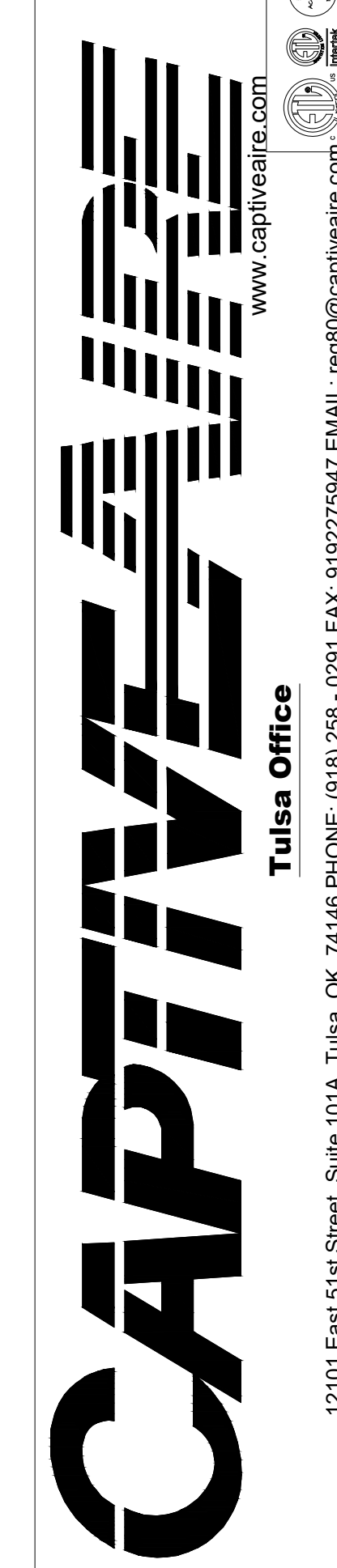
ELECTRICAL PACKAGE - JOB#7284466

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	Φ	HP	VOLT	FLA
1	TYPE I ECP	DCV-1011	UTILITY CABINET LEFT	SHIP LOOSE W/ PREWIRE	1 LIGHT 1 FAN	SMART CONTROLS DCV	EF-3 (TYPE I)	EXHAUST	1	0.500	208	3.8



REVISIONS

NO.	DESCRIPTION	DATE



QT - Fryer Addition Remodel Pkg Going Forward (DW) (450F)
Various Locations,
Tulsa, OK, 74136

DATE: 4/29/2025

DWG.#: 7284466

DRAWN BY: RJH-80

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

MASTER DRAWING

SHEET NO. 3



SIGNATURE DATE: 10/31/2025

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Shawnee, Kansas 66217
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QuikTrip No. 0516
1000 EAST UNIVERSITY AVENUE
DES MOINES, IOWA

QT

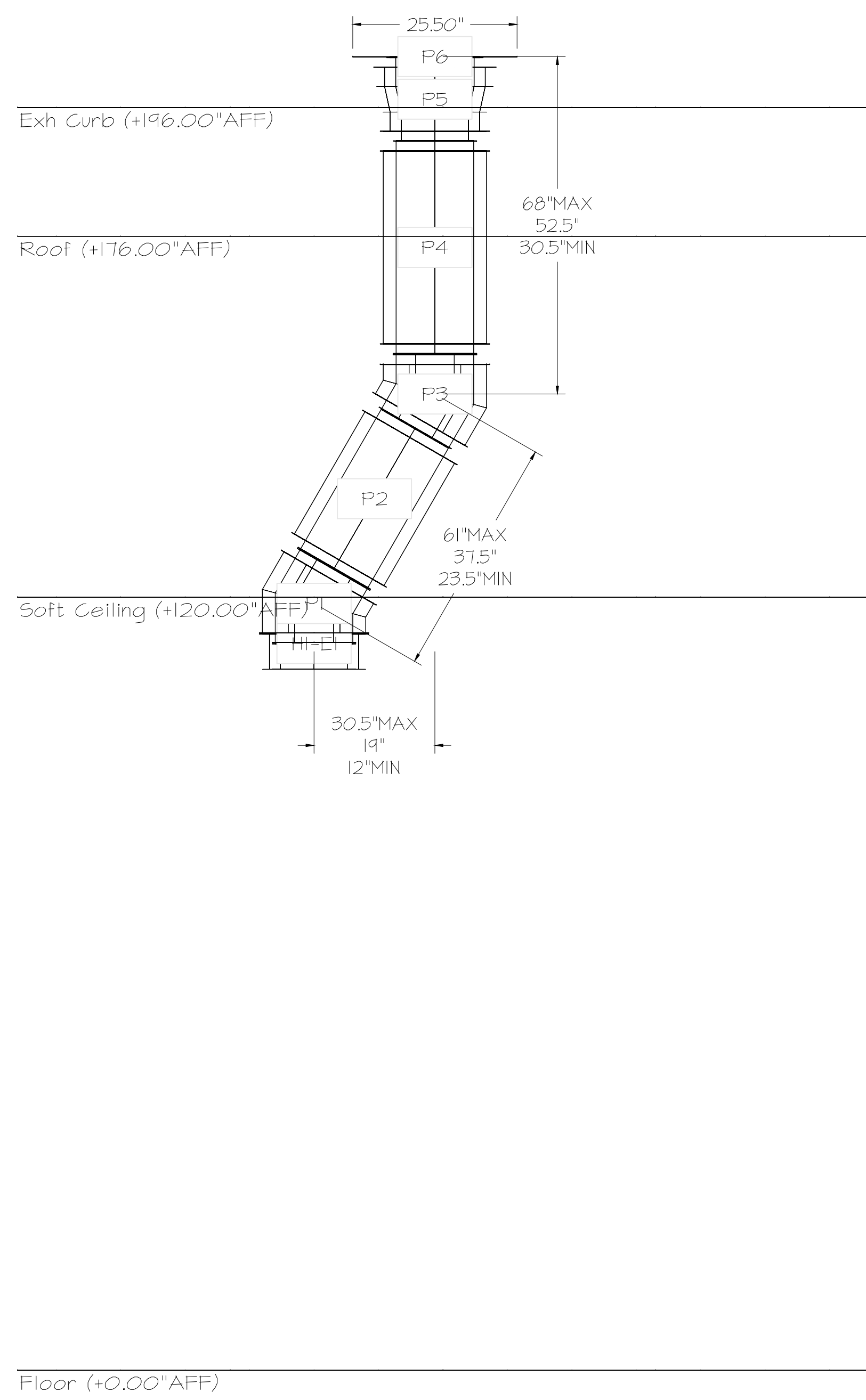
PROTOTYPE	Fryer
DIVISION	Des Moines
VERSION	4600
DATE	06-18-2025

REV	DATE	DESCRIPTION

SHEET TITLE:
MECHANICAL HOOD
DETAILS

SHEET NUMBER:
M512

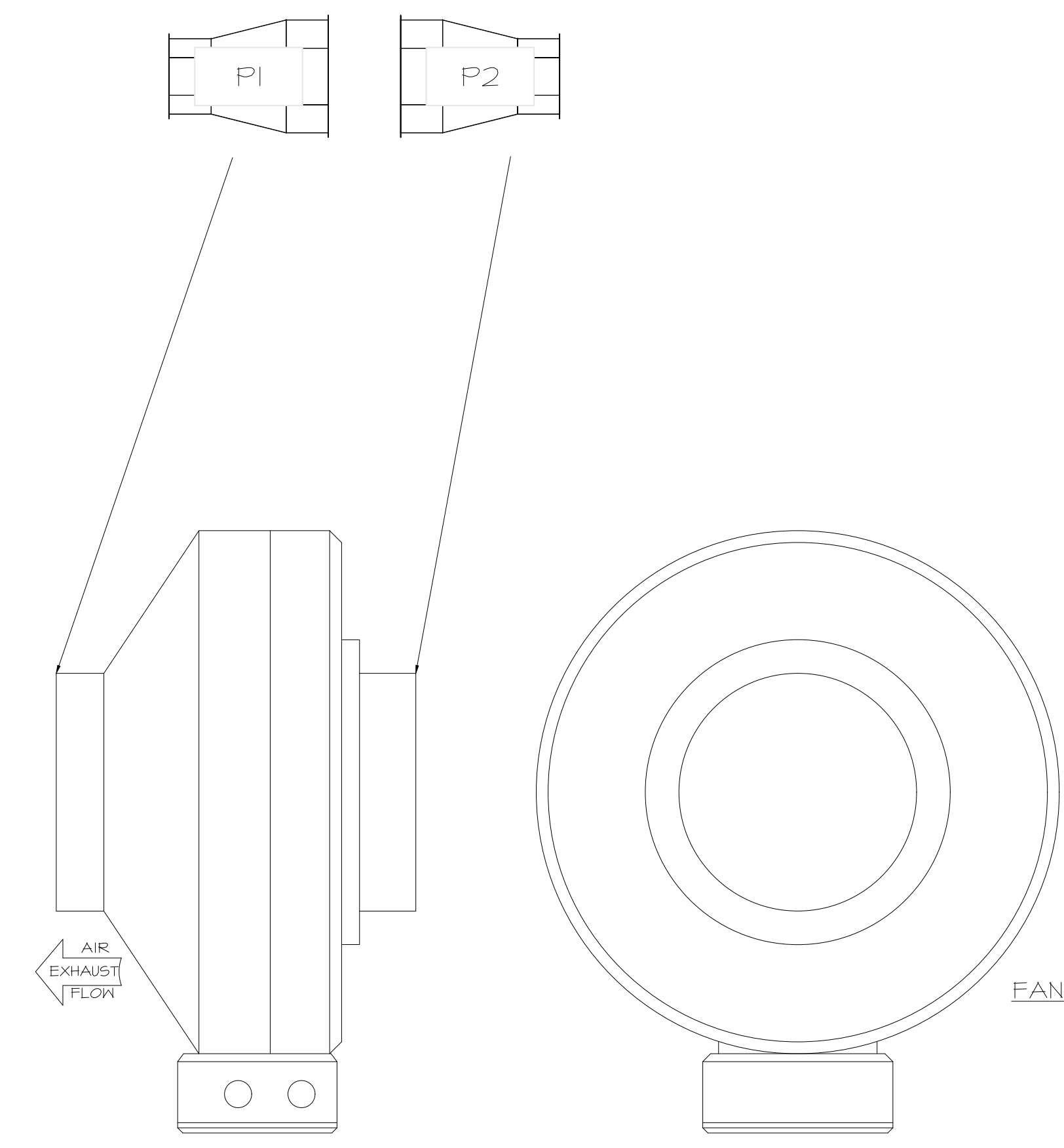
DUCTWORK #1 SIDE VIEW
OFFSET



DUCTWORK #2 PARTS - JOB#7284466

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	DW08I2ADPIT						6.74		1	SINGLE WALL DUCT ADAPTER, 8" DUCT DIA TO 12" DUCT DIA, ASSEMBLY - 430 STAINLESS STEEL.
P2	DW08I2ADPIT						6.74		1	SINGLE WALL DUCT ADAPTER, 8" DUCT DIA TO 12" DUCT DIA, ASSEMBLY - 430 STAINLESS STEEL.
TOTAL WEIGHT							13.48			

DUCTWORK #2 FRONT VIEW



FAN #4 DFA-300-CA - EXHAUST FAN (VF-1 - CO2 FAN)

SYSTEM DESIGN VERIFICATION (SDV)

IF ORDERED, GAS 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 GAS 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, GAS 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.

REVISIONS

NO.	DESCRIPTION	DATE

CAPTIVE

Tulsa Office
www.captiveair.com
12101 East 51st Street, Suite 101A, Tulsa, OK, 74146 PHONE: (918) 258-0251 FAX: 9192275947 EMAIL: reg@captveair.com

QT - Fryer Addition Remodel Pkg Going Forward (DW) (450F)
Various Locations,
Tulsa, OK, 74136

DATE: 4/29/2025
DWG.#: 7284466
DRAWN BY: R-JH-80
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 5



SIGNATURE DATE: 10/31/2025

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Shawnee, Kansas 66217
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Iowa Certificate of Authority #354056

QuikTrip No. 0516
1000 EAST UNIVERSITY AVENUE
DES MOINES, IOWA

QT

PROTOTYPE Fryer
DIVISION Des Moines
VERSION 4600
DATE 06-18-2025

REV	DATE	DESCRIPTION

SHEET TITLE:
MECHANICAL HOOD
DETAILS

SHEET NUMBER:
M514

