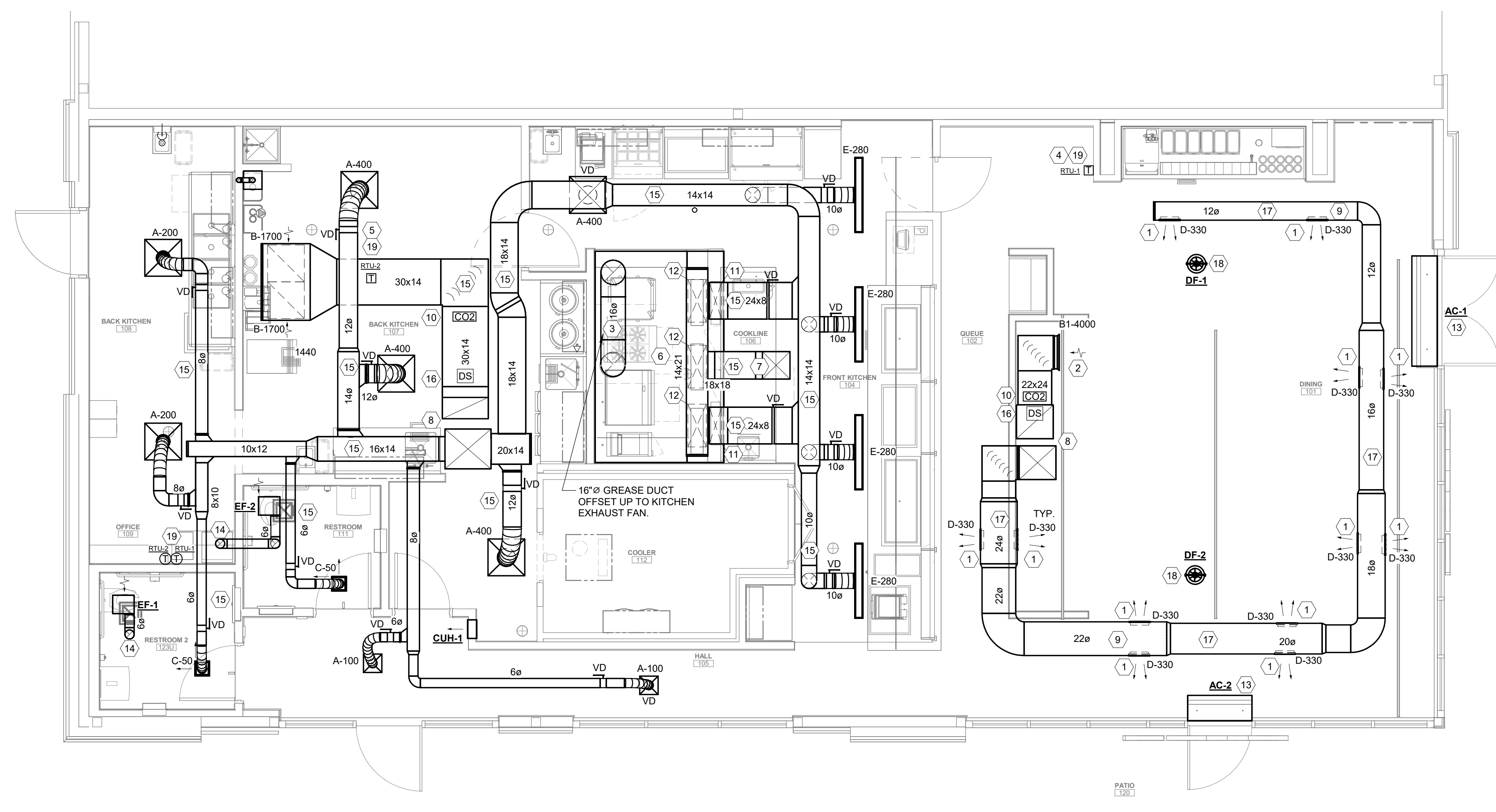


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1 FIRST FLOOR MECHANICAL DUCT PLAN
 1/4" = 1'-0"

GENERAL NOTES

- DO NOT PENETRATE KITCHEN EXHAUST HOODS OR DUCTWORK WITH ANY TYPE OF FASTENING ASSEMBLY (I.E. SCREWS, RIVETS).
- IF NOT PAINTED, ALL DUCTWORK SHALL HAVE GASKET A SEAL.
- EXPOSED DUCTWORK IN THE DINING AREA SHALL BE MADE OF ELECTRO-GALVANIZED STEEL (PAINTLOCK). SEE MECHANICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- COORDINATE ACCESS PANEL LOCATIONS WITH ARCHITECTURAL SHEETS.

FIELD VERIFY ALL CONDITIONS

DESIGN DRAWINGS ARE SCHEMATIC AND ARE BASED ON AS-BUILT/RECORD DRAWINGS PROVIDED BY OWNER. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING OR AWARD OF CONTRACT TO INSPECT EXISTING FIELD CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE ACCURACY OF THESE PLANS AND GATHER ADDITIONAL INFORMATION NECESSARY TO PRODUCE DETAILED SHOP DRAWINGS OF THE CHANGES AND MODIFICATIONS REQUIRED TO RENOVATE THE SPACE. THIS CONTRACT SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR FIELD MODIFICATIONS DUE TO EXISTING CONDITIONS.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST.

BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES. THE PLANS AND SPECIFICATIONS NOT WITHSTANDING, THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

- CODED NOTES** #
- MOUNT REGISTER AT 15° ANGLE ON SIDE OF DUCT. ADJUST DIFFUSER BLADES TO 45° PATTERN. BALANCE AIR SCOOP TO CFM INDICATED. DIRECT AIRFLOW FROM DIFFUSER SO IT DOES NOT BLOW DIRECTLY ONTO HANGING LIGHT FIXTURES.
 - MOUNT RETURN GRILLE AS HIGH AS POSSIBLE.
 - ROUTE 16" Ø CUSTOM FABRICATED TYPE 1 KITCHEN EXHAUST DUCT FROM EXHAUST HOOD, UP THROUGH ROOF ABOVE AND CONNECT TO KITCHEN EXHAUST FAN. REFER TO SHEET M200 FOR CONTINUATION. COORDINATE WITH KES AND CAPTIVE AIRE DRAWINGS. SEAL WEATHER TIGHT. CONTRACTOR SHALL PROVIDE CLEANOUT EVERY 20' AND AT EVERY CHANGE OF DIRECTION IN TYPE 1 EXHAUST DUCT.
 - REMOTE TEMPERATURE AVERAGING SENSOR MOUNTED AT 48" AFF FOR RTU-1. WIRE BACK TO THERMOSTAT AT MANAGERS DESK.
 - REMOTE TEMPERATURE SENSOR MOUNTED WITHIN RETURN DUCT FOR RTU-2. WIRE BACK TO THERMOSTAT AT MANAGERS DESK.
 - TYPE 1 GREASE EXHAUST HOOD, REFER TO KES AND CAPTIVE AIRE DRAWINGS FOR ADDITIONAL INFORMATION.
 - ROUTE 18"x18" MAKE UP AIR DUCT UP THROUGH ROOF ABOVE AND CONNECT TO MAKE UP AIR UNIT. REFER TO SHEET M201 FOR CONTINUATION. COORDINATE WITH KES AND CAPTIVE AIRE DRAWINGS. SEAL WEATHER TIGHT.
 - ROUTE SUPPLY AND RETURN AIR DUCT UP THROUGH ROOF ABOVE AND CONNECT TO ROOF TOP UNIT. REFER TO SHEET M201 FOR CONTINUATION. SEAL WEATHER TIGHT.
 - MOUNT SPIRAL DUCT TIGHT TO BOTTOM OF STRUCTURE.
 - PROVIDE CO2 DETECTORS IN RETURN AIR DUCT FOR DEMAND CONTROL VENTILATION.
 - ROUTE 24"x8" SUPPLY AIR DUCT DOWN FROM CEILING SPACE AND CONNECT TO SUPPLY AIR PLENUM ON HOOD. PROVIDE BALANCING DAMPER AND BALANCE TO 390 CFM. REFER TO KES AND CAPTIVE AIRE DRAWINGS FOR ADDITIONAL INFORMATION.
 - ROUTE 28"x12" MAKEUP AIR DUCT DOWN FROM CEILING SPACE AND CONNECT TO MAKE UP AIR PLENUM ON HOOD. PROVIDE BALANCING DAMPER AND BALANCE TO 673 CFM. REFER TO KES AND CAPTIVE AIRE DRAWINGS FOR ADDITIONAL INFORMATION.
 - PROVIDE AIR CURTAIN ABOVE ENTRANCE DOOR. INSTALL PER MANUFACTURES RECOMMENDATIONS.
 - NEW 6"Ø EXHAUST DUCT UP THROUGH ROOF TERMINATE AT GOOSENECK. SEE DRAWING M200 FOR CONTINUATION.
 - INSULATE ALL SUPPLY AND RETURN AIR DUCT ABOVE FINISHED CEILINGS.
 - DUCT SMOKE DETECTORS TO DE-ENERGIZE HVAC UNIT AND SIGNAL FIRE ALARM SYSTEM. SMOKE DETECTORS ARE FURNISHED AND WIRED BY ELECTRICAL CONTRACTOR, INSTALLED BY MECHANICAL CONTRACTOR.
 - MOUNT SPIRAL ROUND DUCTWORK HIGH ABOVE TRACK LIGHTING AND CLOUD CEILING.
 - MOUNT DESTRATIFICATION FAN SO BOTTOM OF NEZZEL IS AT 15'-0" A.F.F. SUPPORT PER CODE AND MANUFACTURERS WRITTEN INSTRUCTIONS. INSTALL IN A MANNER THAT PREVENTS ANY UNINTENTIONAL MOVEMENT OF UNIT WHEN ACTIVATED.
 - MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL PROGRAMMABLE THERMOSTATS WHERE INDICATED ON PLANS. PROGRAMMABLE THERMOSTATS SHALL BE AS MANUFACTURED BY HONEYWELL Vision PRO 8000 MODEL TH8321WF1001, WITH REMOTE SENSOR MODEL C7188R. MOUNT AND INSTALL THERMOSTATS AND SENSORS PER MANUFACTURE'S RECOMMENDATIONS AND INSTRUCTIONS. LABEL EACH THERMOSTAT AND SENSOR IDENTIFYING THE HVAC UNIT IT CONTROLS USING BLACK ENGRAVED PHENOLIC LABELS WITH 3/16" LETTERS.

THERMOSTAT NOTES

PROGRAM TEMPERATURE SETTINGS AS FOLLOWS:

- OCCUPIED SET POINTS: COOL TO 73°F, HEAT TO 70°F. (OCCUPIED HOURS FROM 2 HOURS PRIOR TO STORE OPENING TO 2 HOURS AFTER CLOSING)
- UNOCCUPIED SET POINTS: COOL TO 85°F, HEAT TO 55°F.



ISSUED

DATE	DESCRIPTION
1-13-23	SD SET
2-17-23	DD SET
4-12-24	CD SET /LLD REVIEW
5-29-24	PERMIT/BID SET
8-19-24	HEALTH COMMENTS
9-10-24	PERMIT/BID ADDENDUM
10-28-24	IEC SET (REVISION 2)

REVISIONS

DATE	DESCRIPTION

OWNER/CLIENT



PROJECT
MARLTON

349 ROUTE 70 West,
 MARLTON NJ 08053

DRAWING TITLE
MECHANICAL DUCT PLAN

DRAWING INFORMATION
 Job Number: 222120
 Checked By: REP
 Drawn By: SJH
 DRAWING NUMBER

M
100

GENERAL NOTES

- A. DO NOT PENETRATE KITCHEN EXHAUST HOODS OR DUCTWORK WITH ANY TYPE OF FASTENING ASSEMBLY (I.E. SCREWS, RIVETS).
- B. IF NOT PAINTED, ALL DUCTWORK SHALL HAVE GASKET A SEAL.
- C. EXPOSED DUCTWORK IN THE DINING AREA SHALL BE MADE OF ELECTRO-GALVANIZED STEEL (PAINTLOCK). SEE MECHANICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.

CODED NOTES #

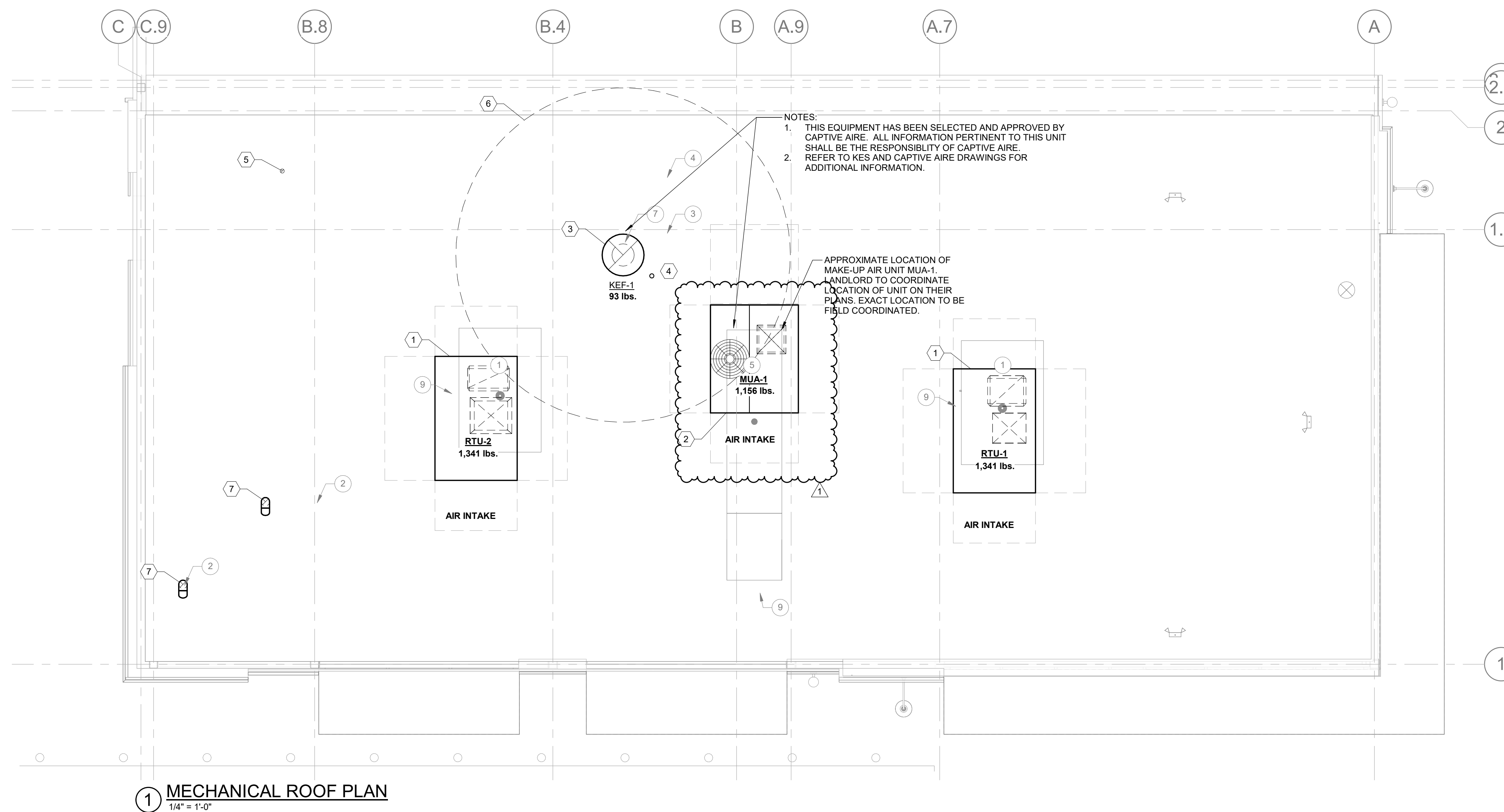
1. INSTALL ROOFTOP UNIT ON MANUFACTURERS ROOF CURB. CONTRACTOR SHALL CUT, PATCH, FLASH, AND AND COUNTER FLASH AROUND ROOF CURB TO MAINTAIN ANY APPLICABLE ROOF WARRANTY.
2. INSTALL MAKE-UP AIR UNIT ON MANUFACTURERS ROOF CURB. CONTRACTOR SHALL CUT, PATCH, FLASH, AND AND COUNTER FLASH AROUND ROOF CURB TO MAINTAIN ANY APPLICABLE ROOF WARRANTY.
3. INSTALL HOOD EXHAUST FAN ON MANUFACTURERS ROOF CURB. ENSURE LOCATION IS A MINIMUM OF 10' - 0" FROM ANY OUTSIDE AIR INTAKES. CONTRACTOR SHALL CUT, PATCH, FLASH, AND AND COUNTER FLASH AROUND ROOF CURB TO MAINTAIN ANY APPLICABLE ROOF WARRANTY.
4. 4" VENT THROUGH ROOF. CONTRACTOR SHALL ENSURE LOCATION IS A MINIMUM OF 10' - 0" FROM ANY OUTSIDE AIR INTAKES.
5. COMBINATION AIR INTAKE AND FLUE EXHAUST FOR WATER HEATER. INSTALL PER MANUFACTURERS RECOMMENDATIONS. CONTRACTOR SHALL ENSURE LOCATION IS A MINIMUM OF 10' - 0" FROM ANY OUTSIDE AIR INTAKES.
6. ENSURE TO MAINTAIN 10'-0" CLEARANCE TO OUTSIDE AIR INTAKES.
7. NEW 6" DIAMETER EXHAUST DUCT UP THROUGH ROOF TERMINATE AT GOOSENECK. ENSURE LOCATION IS A MINIMUM OF 10' - 0" FROM ANY OUTSIDE AIR INTAKES. CONTRACTOR SHALL CUT, PATCH, FLASH, AND AND COUNTER FLASH AROUND ROOF PENETRATION TO MAINTAIN ANY APPLICABLE ROOF WARRANTY.

FIELD VERIFY ALL CONDITIONS

DESIGN DRAWINGS ARE SCHEMATIC AND ARE BASED ON AS-BUILT/RECORD DRAWINGS PROVIDED BY OWNER. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING OR AWARD OF CONTRACT TO INSPECT EXISTING FIELD CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE ACCURACY OF THESE PLANS AND GATHER ADDITIONAL INFORMATION NECESSARY TO PRODUCE DETAILED SHOP DRAWINGS OF THE CHANGES AND MODIFICATIONS REQUIRED TO RENOVATE THE SPACE. THIS CONTRACT SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR FIELD MODIFICATIONS DUE TO EXISTING CONDITIONS.

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1 MECHANICAL ROOF PLAN
1/4" = 1'-0"

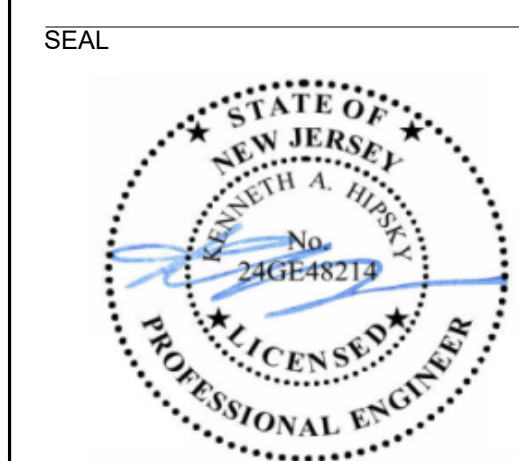


DATE	DESCRIPTION
1-13-23	SD SET
2-17-23	DD SET
4-12-24	CD SET /LLD REVIEW
5-29-24	PERMIT/BID SET
8-19-24	HEALTH COMMENTS
9-10-24	PERMIT/BID ADDENDUM
10-28-24	IFC SET (REVISION 2)

DATE	DESCRIPTION
1 9/10/24	REVISION 1

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CONSULTANT



ISSUED

DATE	DESCRIPTION
1-13-23	SD SET
2-17-23	DD SET
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10-28-24	IFC SET (REVISION 2)

REVISIONS

DATE	DESCRIPTION
1 9/10/24	REVISION 1

OWNER/CLIENT

CAVA

PROJECT
MARLTON

349 ROUTE 70 West,
 MARLTON NJ 08053

DRAWING TITLE
MECHANICAL SCHEDULES

DRAWING INFORMATION
 Job Number: **222120**
 Checked By: REP
 Drawn By: SJH
 DRAWING NUMBER

M

300

ROOFTOP UNIT SCHEDULE WITH GAS HEAT																								
UNIT NO.	MANUFACTURER	MODEL NUMBER	AREA SERVED	TONS	SUPPLY FAN				HEATING SECTION			COOLING COIL			COMPRESSORS		ELECTRICAL				EER (EER2)	IEER (SEER2)	OPER. WEIGHT (LBS)	
					TOTAL CFM	MIN OA CFM	ESP IN. W.C.	MOTOR HP	NO. OF STAGES	INPUT MBH	OUTPUT MBH	TOTAL MBH	SENSIBLE MBH	EAT DB/WB	AMB. AIR	NO.	RLA (EACH)	VOLTS	PHASE	MCA				MOCP
RTU-1	YORK	ZJ120S	TENANT A' CAVA	10	4,000	430	1.5	3.1	2	240.0	194.4	124.4	96.9	80/67	95	2	(25.8)/(9.7)	208	3	61	70	11.0	15.1	1341
RTU-2	YORK	ZJ120S	TENANT A' CAVA	10	4,000	465	1.5	3.1	2	240.0	194.4	124.4	96.9	80/67	95	2	(25.8)/(9.7)	208	3	61	70	11.0	15.1	1341

NOTE:
 THIS SCHEDULE IS FOR REFERENCE ONLY.
 SEE LANDLORD DRAWINGS FOR FINAL SCHEDULE, PERFORMANCE AND ACCESSORIES.

FAN SCHEDULE														
TAG	MANUFACTURER	MODEL	SERVES	TYPE	FAN						ELECTRICAL DATA			REMARKS
					FLOW (CFM)	ESP (in-wg)	RPM	DRIVE TYPE	MOTOR POWER WATTS	SOUND PRESS LEVEL (dBA)	SONES	VOLT	PH	
EF-1	LOREN COOK	GC-186	TOILET RM.	CEILING	125	0.38	796	DIRECT	61.5	42	2.5	120 V	1	
EF-2	LOREN COOK	GC-186	TOILET RM.	CEILING	125	0.38	796	DIRECT	61.5	42	2.5	120 V	1	

NOTES:
 1. ACCEPTABLE MANUFACTURERS BY COOK, GREENHECK AND ACME.
 2. FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR. WIRED BY ELECTRICAL CONTRACTOR.
 3. FAN SHALL RUN CONTINUOUSLY. REFER TO SEQUENCE OF OPERATION.
 4. FAN CONTROLLED BY LIGHT SWITCH. REFER TO SEQUENCE OF OPERATION.

ELECTRIC AIR CURTAIN SCHEDULE													
TAG	MANUFACTURER	MODEL	FAN			DIMENSIONS				ELECTRICAL DATA		REMARKS	
			POWER (hp)	MAX VELOCITY (FPM)	MAX VOLUME (CFM)	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	WEIGHT (LBS)	NOZZLE LENGTH (IN)	VOLT		PH
AC-1	BERNER	AE08-E-1072A	0.5	1870	1988	72	23	11	133	72	120 V	1	FINISH TO MATCH STOREFRONT
AC-2	BERNER	AE08-E-1042A	0.5	2150	1077	42	23	2	82	42	120 V	1	FINISH TO MATCH STOREFRONT

NOTES:
 1. PROVIDE WITH ALL NECESSARY MOUNTING HARDWARE INCLUDING TANDEM MOUNTING KIT.
 2. PROVIDE WITH MANUFACTURER RECOMMENDED DOOR LIMIT SWITCH.
 3. PROVIDE WITH 120V CONTROLLER WITH ADJUSTABLE TIME DELAY.
 4. COORDINATE WITH OWNER FOR DESIRED CONTROL SETTINGS (RECOMMEND TIME DELAY OVERLAP FOR FAN, SEASONAL USAGE, ETC.).
 5. PROVIDE WITH ELECTRIC HEAT OPTION.
 6. INSTALLATION HEIGHT PER MANUFACTURER'S RECOMMENDED INSTALLATION HEIGHT. INCLUDE DETAIL FOR MOUNTING.

ELECTRIC CABINET UNIT HEATER SCHEDULE												
TAG	MANUFACTURER	MODEL	HEATING ELEMENTS			FAN		ELECTRICAL DATA			REMARKS	
			QTY	Btu/h	KW	FLOW (CFM)	QTY	RPM	FLA	VOLT		PH
CUH-1	MARKLE	E3210TRPW	1	5,120	1.5	70	1	2200	12.5 A	120 V	1	

NOTES:
 1. PROVIDE EACH HEATER WITH THE FOLLOWING ACCESSORIES:
 A. 2" SURFACE MOUNTING FRAME FOR SEMI RECESSED INSTALLATION.
 2. HEATERS SHALL HAVE INTEGRAL DISCONNECT SWITCH AND TAMPER-PROOF THERMOSTAT. PROVIDE WIRED THERMOSTAT WHERE SHOWN.

DESTRATIFICATION FAN SCHEDULE										
TAG	MANUFACTURER	MODEL	AIRFLOW (CFM)	TYPE	SERVES	MOTOR WATTS	ELECTRICAL DATA			REMARKS
							VOLT	PH		
DF-1&2	AIRIUS	A-15-SP-SH-120-X	406	DESTRATIFICATION	DINING ROOM	18	120 V	1	1.2	

NOTES:
 1. PROVIDE WITH ALL NECESSARY MOUNTING HARDWARE.
 2. PROVIDE WITH ON/OFF SPEED CONTROLS TO ALLOW FOR VARIABLE OUTPUT.

VENTILATION AIR SCHEDULE											
OCCUPANCY CLASSIFICATION	AREA (SF) AZ	AREA OUTDOOR AIR RATE PER IMC 403.3 Ra	AREA OUTDOOR AIR	OCCUPANT DENSITY RATE PER IMC TABLE 403.3 (PEOPLE/100 ft²)	OCCUPANCY C* F/1000, Pz	OCCUPANT OUTDOOR AIR RATE PER TABLE 403.3 Rp	OCCUPANT OUTDOOR AIR RpPz	BREATHING ZONE OUTDOOR AIR Vbz = RpPz + RaAZ	ZONE AIR DISTRIBUTION EFFECTIVENESS, Ez	ZONE OUTDOOR AIR, Voz = Vbz/Ez	SUPPLY AIR DESIGN, Vpz
DINING ROOM	1442	0.18	260	7.5	11	7.5	83	343	0.8	429	430
CORRIDOR	139	0.06	9	-	-	-	-	-	0.8	12	15
BOH	1297	0.12	156	-	-	-	-	-	0.8	195	195
										TOTAL REQUIRED VENTILATION AIR	636
										TOTAL VENTILATION AIR PROVIDED	895

AIR BALANCE SCHEDULE				
COMPONENT	SUPPLY CFM	RETURN CFM	OUTDOOR MAKE-UP AIR	EXHAUST AIR
RTU-1	4000	3280	430	--
RTU-2	4000	3290	465	--
MAU-1	--	--	1960	--
KEF-1	--	--	--	2275
EF-1	--	--	--	125
EF-2	--	--	--	125
TOTAL	8000	6580	2855	2525

BUILDING PRESSURE
 330

MAKEUP AIR UNIT SCHEDULE																	
UNIT TAG	MODEL	TONS	AIR FLOW				HEATING (MBH)				COOLING (MBH)		UNIT ELECTRIC		WEIGHT (LBS)	NOTES	
			CFM	OA MIN.	ESP	MOTOR HP	INPUT	OUTPUT	AFUE %	TOTAL	SENS.	IEER	ICMCA/MCOP	VOLT			
MAU-1	EARTU1-I-200-16-ST-MPU	5	1,960	1,960	1.00	2.5	170,884	138,416	92	66.0	26.0	17.9	83.3db/77.6wb	27.5/30.0	208/3/60	1,156	1.

NOTE: 1. REFER TO KES AND ECON.AIRE DRAWINGS FOR ADDITIONAL INFORMATION.

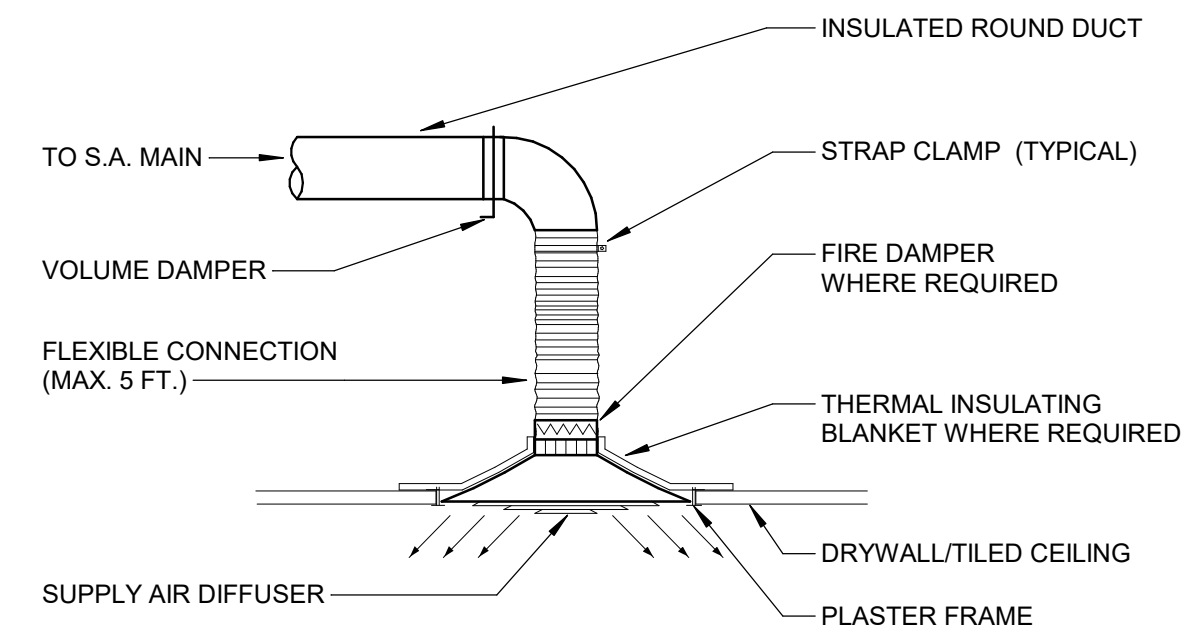
KITCHEN HOOD SCHEDULE									
UNIT DATA					LIGHTS		MISC.		
TAG	MODEL	HOOD LENGTH	MAX COOKING TEMP.	TOTAL EXHAUST CFM	QTY.	TYPE	FIRE SUPP. SYSTEM	HANGING WEIGHT (LBS.)	COMMENTS
H-1	6030 ND-2-ACPSF-F	10'-7"	600°F	2,275	6	L55 SERIES E26	YES	1,152	1

NOTE: 1. REFER TO KES AND CAPTIVEAIRE DRAWINGS FOR ACCESSORY INFORMATION.

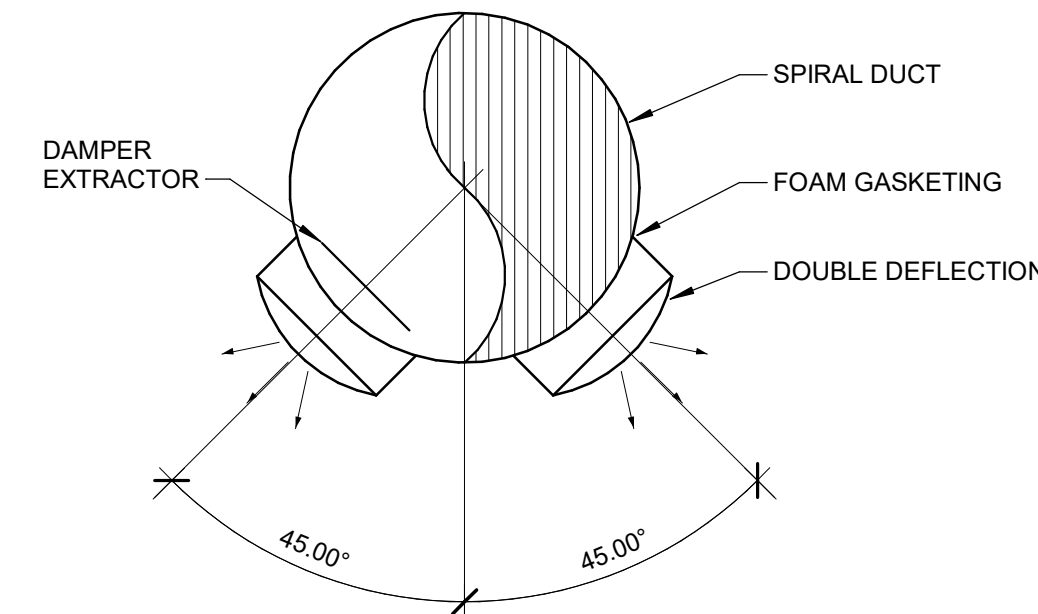
KITCHEN EXHAUST FAN SCHEDULE												
UNIT DATA				PERFORMANCE DATA			MOTOR DATA					
TAG	MODEL	FUNCTION	FAN TYPE	CFM	ESP	DAMPER	BELT OR DIRECT	SONES RATING	HP	VOLT	PHASE	COMMENTS
KEF-1	DU8SHFA	HOOD EXH.	UPBLAST	2,275	1.000	--	BELT	16.2	1.00	120	1	1

NOTE: 1. REFER TO KES AND CAPTIVEAIRE DRAWINGS FOR ADDITIONAL INFORMATION.

GRILLES, DIFFUSERS AND REGISTERS SCHEDULE					
(BASED ON PRICE)					
SEE ARCHITECTURAL DRAWINGS FOR CEILING TYPES AND CONSTRUCTION. SIZE AND CFM INDICATED ON MECHANICAL DRAWINGS					
A - MODEL SMD DIRECTIONAL DIFFUSER, LOUVERED FACE, 4-WAY THROW (UNLESS SHOWN OTHERWISE), 24X24 MODULE SIZE, LAY-IN BORDER, STEEL CONSTRUCTION, WHITE FINISH. PROVIDE MODEL SR ADAPTER. COORDINATE FINISH WITH ARCHITECT.					
A1 - MODEL SMD DIRECTIONAL DIFFUSER, LOUVERED FACE, 4-WAY THROW (UNLESS SHOWN OTHERWISE), SURFACE MOUNT FRAME, STEEL CONSTRUCTION, OPPOSED BLADE DAMPER, COORDINATE FINISH WITH ARCHITECT.					
B - MODEL 530 RETURN GRILLE, 45° FIXED LOUVERS, 3/4" BLADE SPACING, 24X24 MODULE SIZE, LAY-IN BORDER, STEEL CONSTRUCTION, COORDINATE FINISH WITH ARCHITECT.					
B1 - MODEL 530 RETURN GRILLE, 45° FIXED LOUVERS, 3/4" BLADE SPACING PARALLEL TO LONG DIMENSION, SURFACE MOUNT BORDER, STEEL CONSTRUCTION, COORDINATE FINISH WITH ARCHITECT.					
C - MODEL 520D LOUVERED SUPPLY REGISTER, DOUBLE DEFLECTION CORE, 3/4" BLADE SPACING PARALLEL TO LONG DIMENSION, SURFACE MOUNT FRAME, STEEL CONSTRUCTION, OPPOSED BLADE DAMPER, COORDINATE FINISH WITH ARCHITECT.					
D - MODEL SDGE SPIRAL DUCT SUPPLY GRILLE, DOUBLE DEFLECTION CORE, EXTRUDED ALUMINUM CONSTRUCTION, COORDINATE FINISH WITH ARCHITECT. PROVIDE OPTIONAL AIR EXTRACTOR/DAMPER.					
E - MODEL SDS LINEAR SLOT DIFFUSER, (2) 1" SLOTS, SURFACE MOUNT FRAME, ALUMINUM CONSTRUCTION, COORDINATE FINISH WITH ARCHITECT, BLACK PATTERN CONTROLLERS. PROVIDE INSULATED PLENUM.					
CEILING SUPPLY DIFFUSER TYPE A & A1		CEILING RETURN/EXHAUST DIFFUSER TYPE B & B1		FLEXIBLE DUCT SIZE	
CFM	NECK SIZE	CFM	NECK SIZE	CFM	NECK SIZE
0 - 100	6 X 6	0 - 100	6 X 6	0 - 35	4"Ø
101 - 225	9 X 9	101 - 150	8 X 8	36 - 70	5"Ø
226 - 400	12 X 12	151 - 250	10 X 10	71 - 95	6"Ø
401 - 625	15 X 15	251 - 350	12 X 12	96 - 150	8"Ø
626 - 900	18 X 18	351 - 500	14 X 14	151 - 225	9"Ø
		501 - 650	16 X 16	226 - 275	10"Ø
		651 - 800	18 X 18	276 - 400	12"Ø
		801 - 1200	22 X 22	401 - 500	14"Ø
				501 - 700	16"Ø
				701 - 900	18"Ø
				901 - 1100	20"Ø
				1101 - 1300	22"Ø

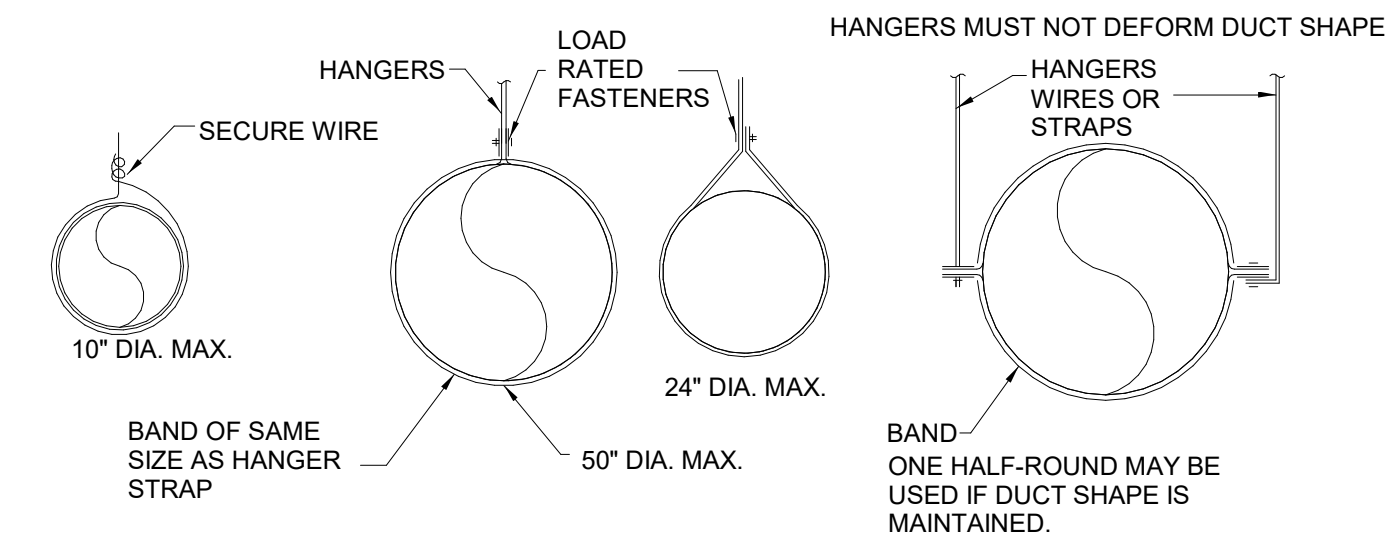


DIFFUSER MOUNTING DETAIL (DROP CEILING)



SPIRAL DUCT SECTION

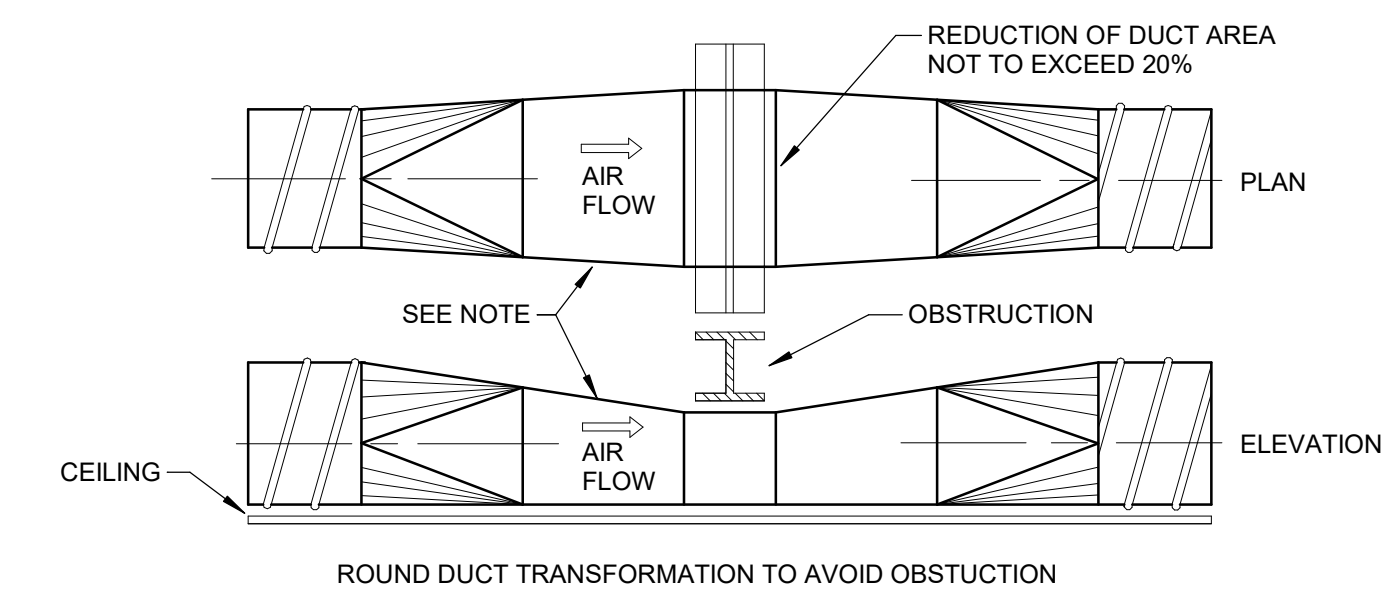
1 SPIRAL DUCT SECTION
NOT TO SCALE



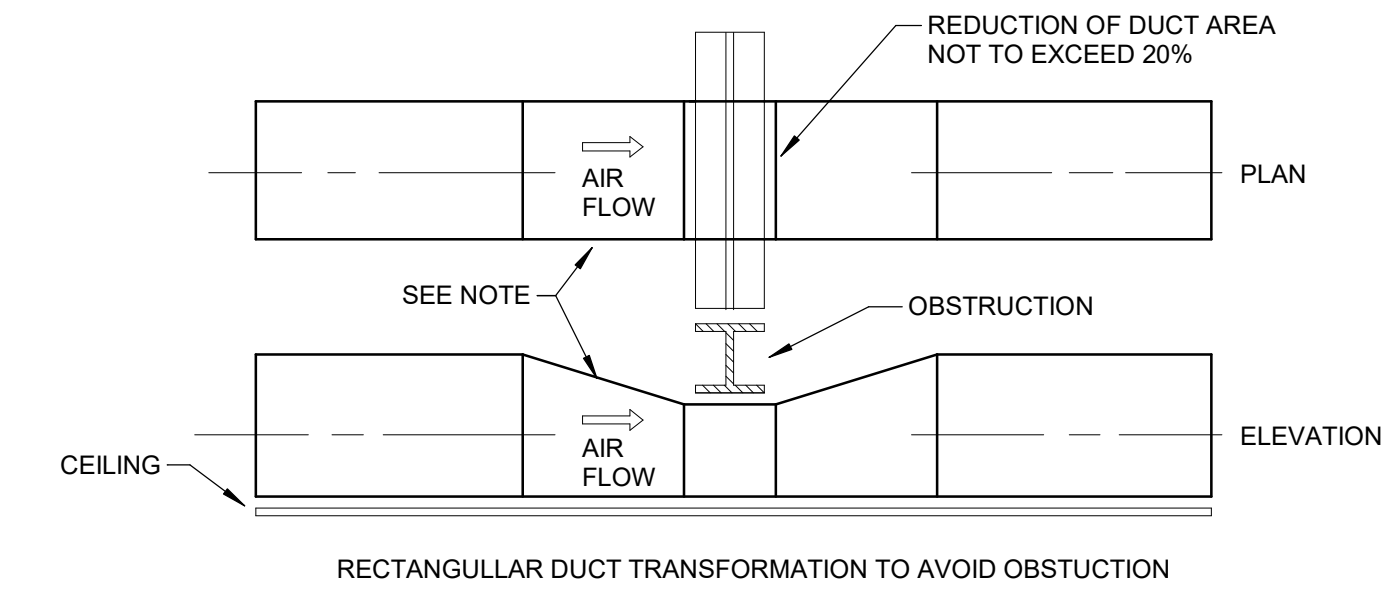
MINIMUM HANGER SIZES FOR ROUND DUCT			
DIA.	MAXIMUM SPACING	WIRE DIA.	STRAP
10" dn	12"	One 12 ga.	1" x 22 ga.
11-18"	12"	Two 12 ga. or One 8 ga.	1" x 22 ga.
19-24"	12"	Two 10 ga.	1" x 22 ga.
25-36"	12"	Two 8 ga.	1" x 20 ga.
37-50"	12"		Two 1" x 20 ga.
51-60"	12"		Two 1" x 18 ga.
61-84"	12"		Two 1" x 16 ga.

FOR ADDITIONAL INFORMATION REFER TO THE LATEST EDITION OF SMACNA

2 TYPICAL ROUND DUCT HANGER DETAIL
NOT TO SCALE



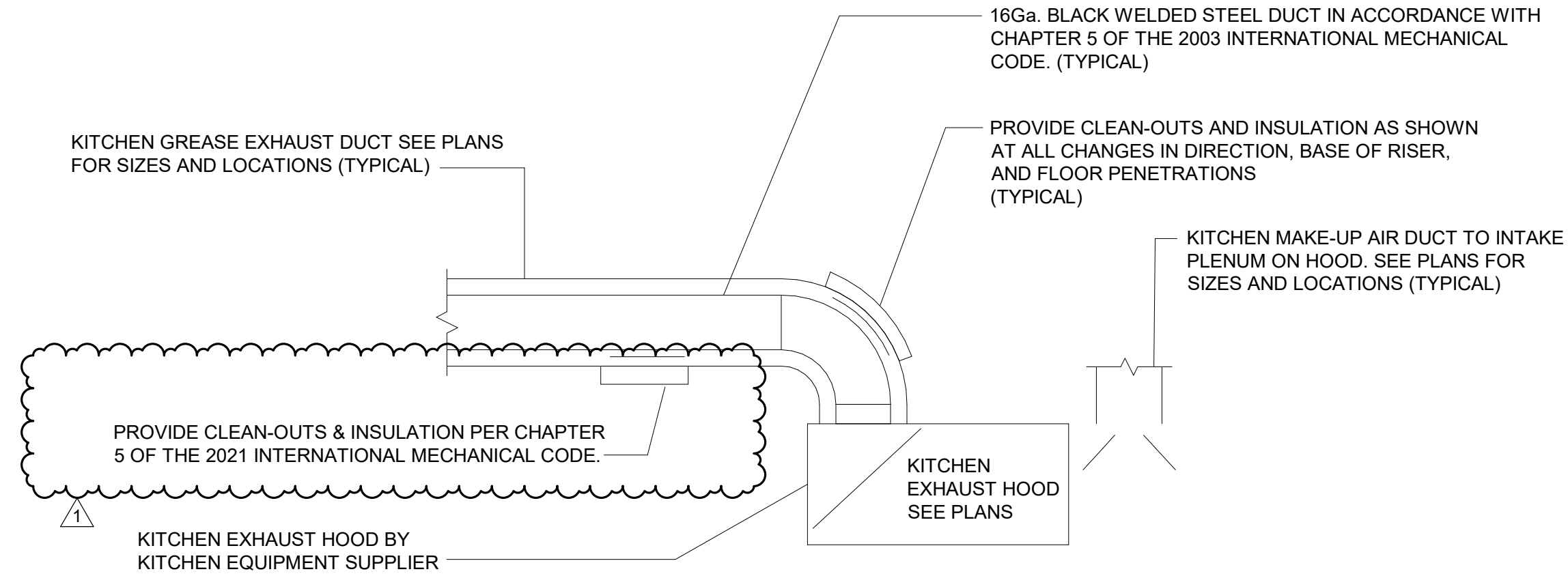
ROUND DUCT TRANSFORMATION TO AVOID OBSTRUCTION



RECTANGULAR DUCT TRANSFORMATION TO AVOID OBSTRUCTION

NOTES:
- 1:7 SLOPE FOR HIGH VELOCITY
- 1:4 SLOPE FOR LOW VELOCITY

3 DUCT OBSTRUCTION TRANSFORMATION DETAILS
NOT TO SCALE



TYPICAL KITCHEN EXHAUST NOTES

- SEE PLANS FOR DUCTWORK LOCATIONS, SIZES & ROUTING.
- ENTIRE KITCHEN EXHAUST SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH UL762, NFPA 96, AND THE 2015 INTERNATIONAL MECHANICAL CODE.
- CLEAN-OUTS AND ACCESS DOORS SHALL MAINTAIN SYSTEM FIRE RESISTANCE RATING.
- INSTALLERS OF FIRE RATED DUCT WRAP SHALL BE TRAINED AND CERTIFIED AS A QUALIFIED INSTALLER BY THE MANUFACTURER.

NOTE:
CONTRACTOR SHALL PROVIDE CLEANOUTS IN EXISTING KITCHEN EXHAUST DUCTWORK AND WRAP THE DUCT AS NOTED.

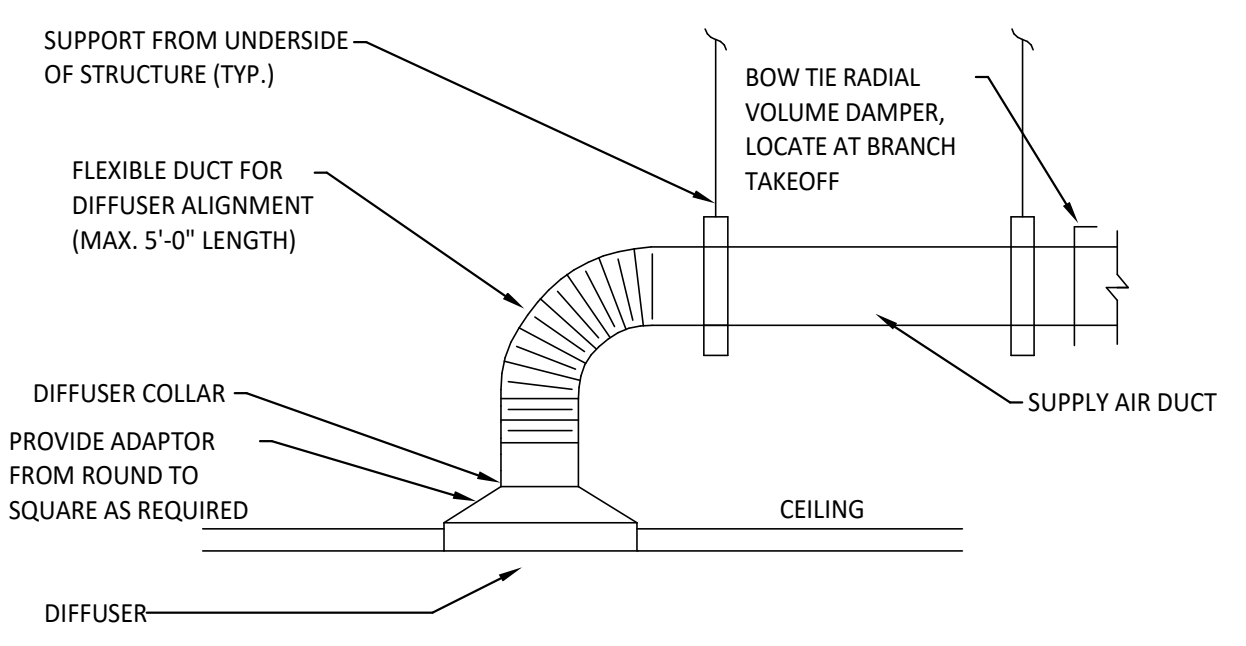
4 KITCHEN EXHAUST SYSTEM DETAIL
1/2" = 1'-0"



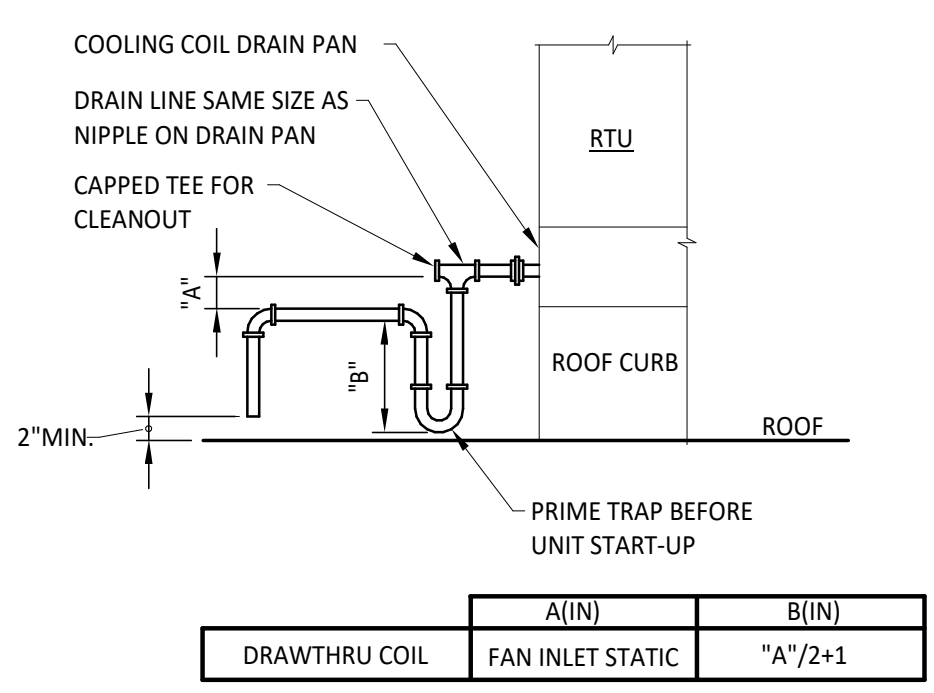
DATE	DESCRIPTION
1-13-23	SD SET
2-17-23	DD SET
4-12-24	CD SET /LLD REVIEW
5-29-24	PERMIT/BID SET
8-19-24	HEALTH COMMENTS
9-10-24	PERMIT/BID ADDENDUM
10-28-24	IFC SET (REVISION 2)

DATE	DESCRIPTION
1 9/10/24	REVISION 1

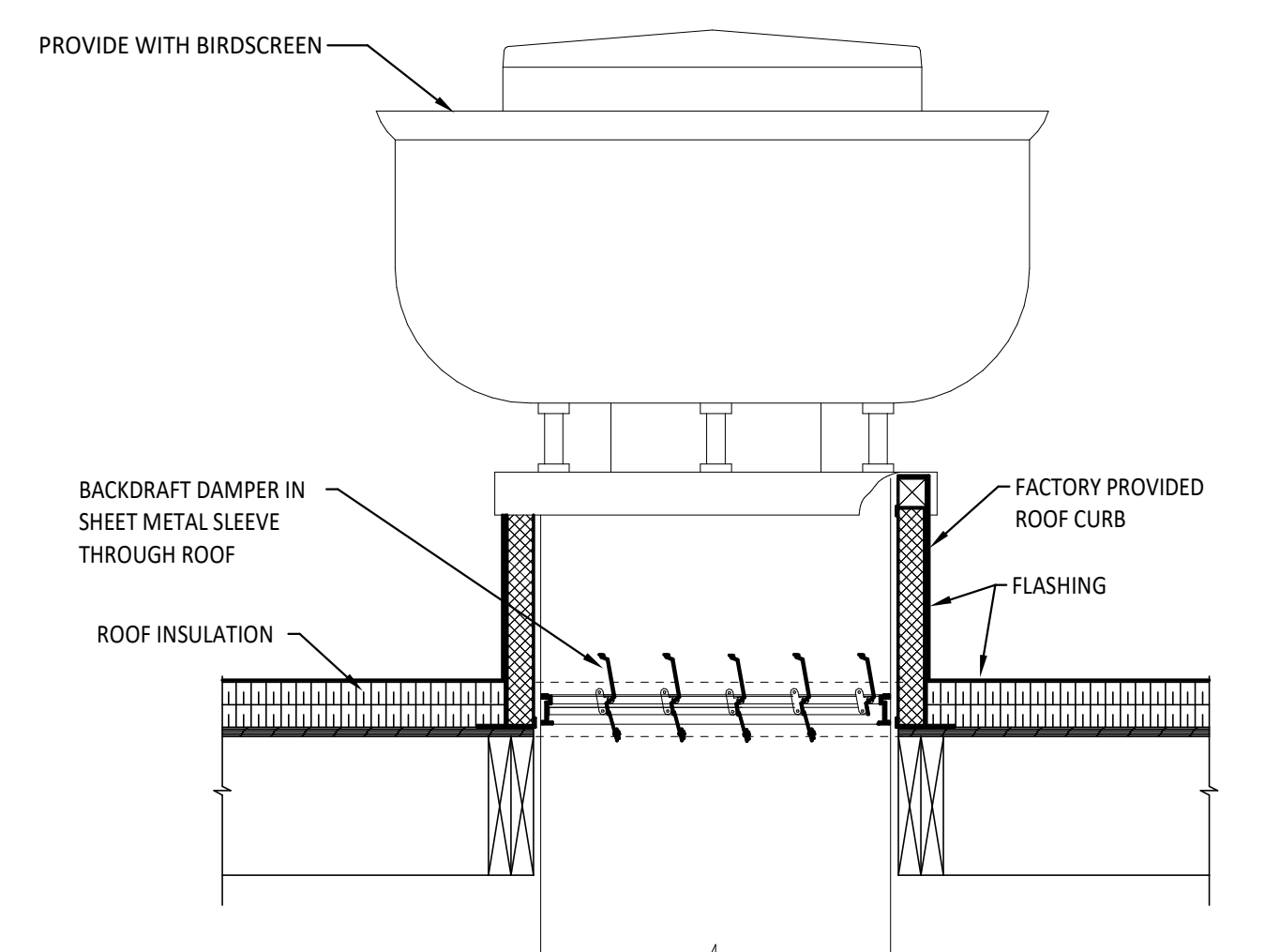
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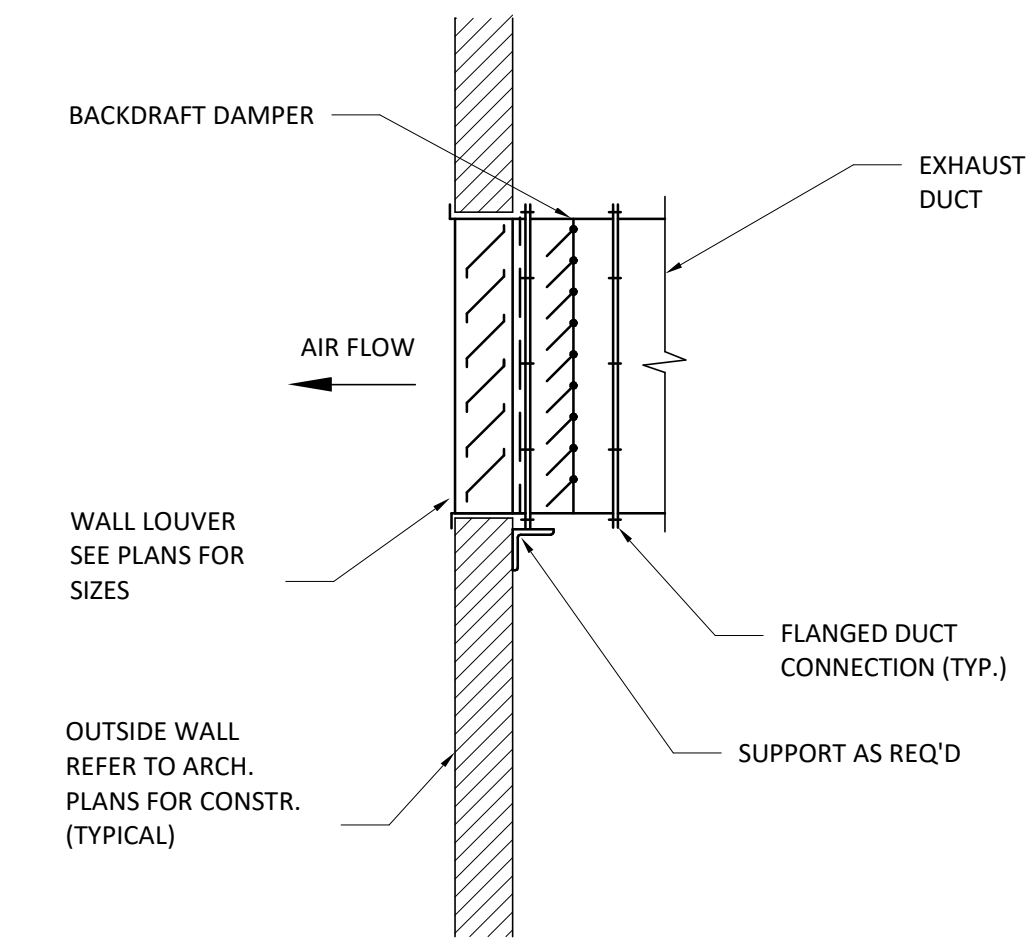
1 DIFFUSER AND VOLUME DAMPER INSTALLATION DETAIL
N.T.S.



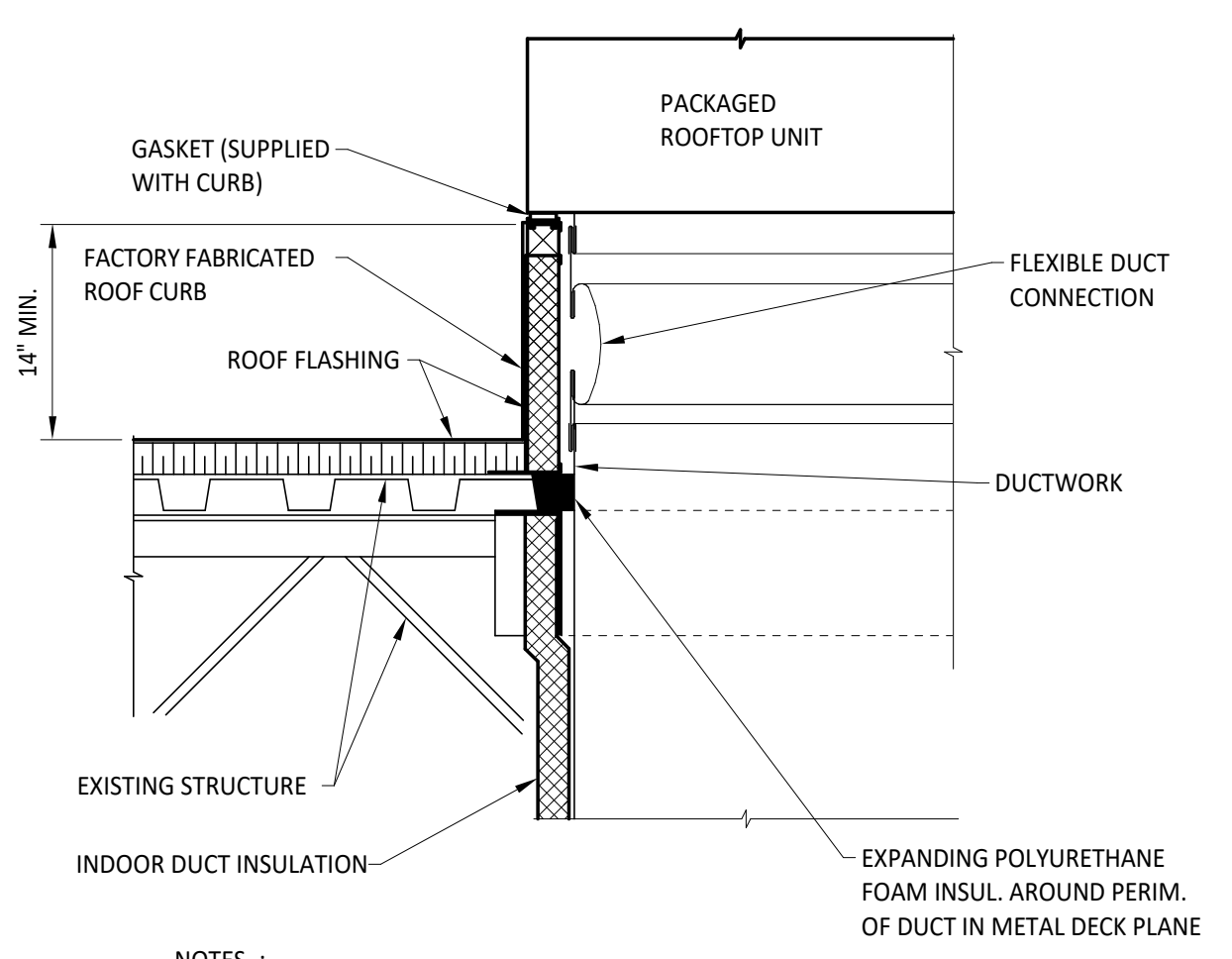
2 RTU CONDENSATE DRAIN DETAIL
N.T.S.



3 GENERAL EXHAUST FAN DETAIL
N.T.S.



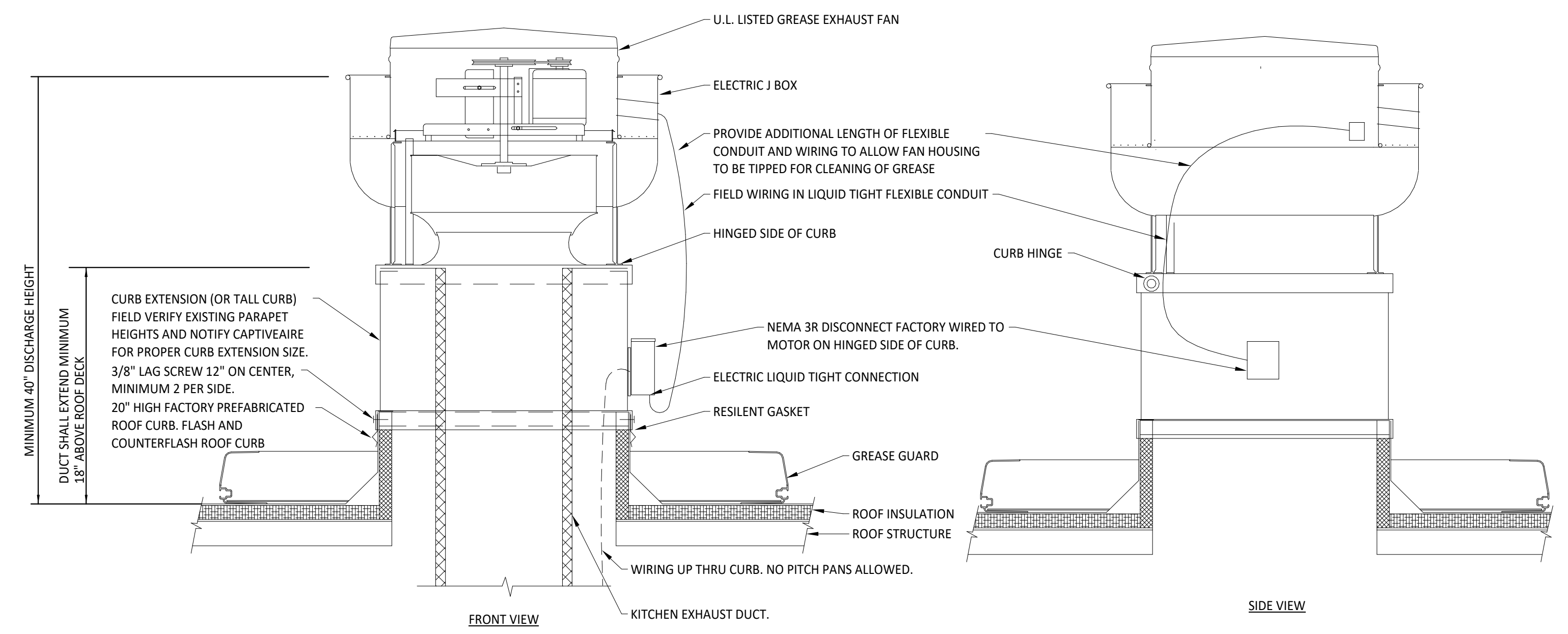
4 LOUVER WITH BACKDRAFT DAMPER
N.T.S.



NOTES:

1. IN-FILL BETWEEN EQUIPMENT CURB AND DUCTWORK, ALL SIDES WITH BATT. INSULATION (TYP.).

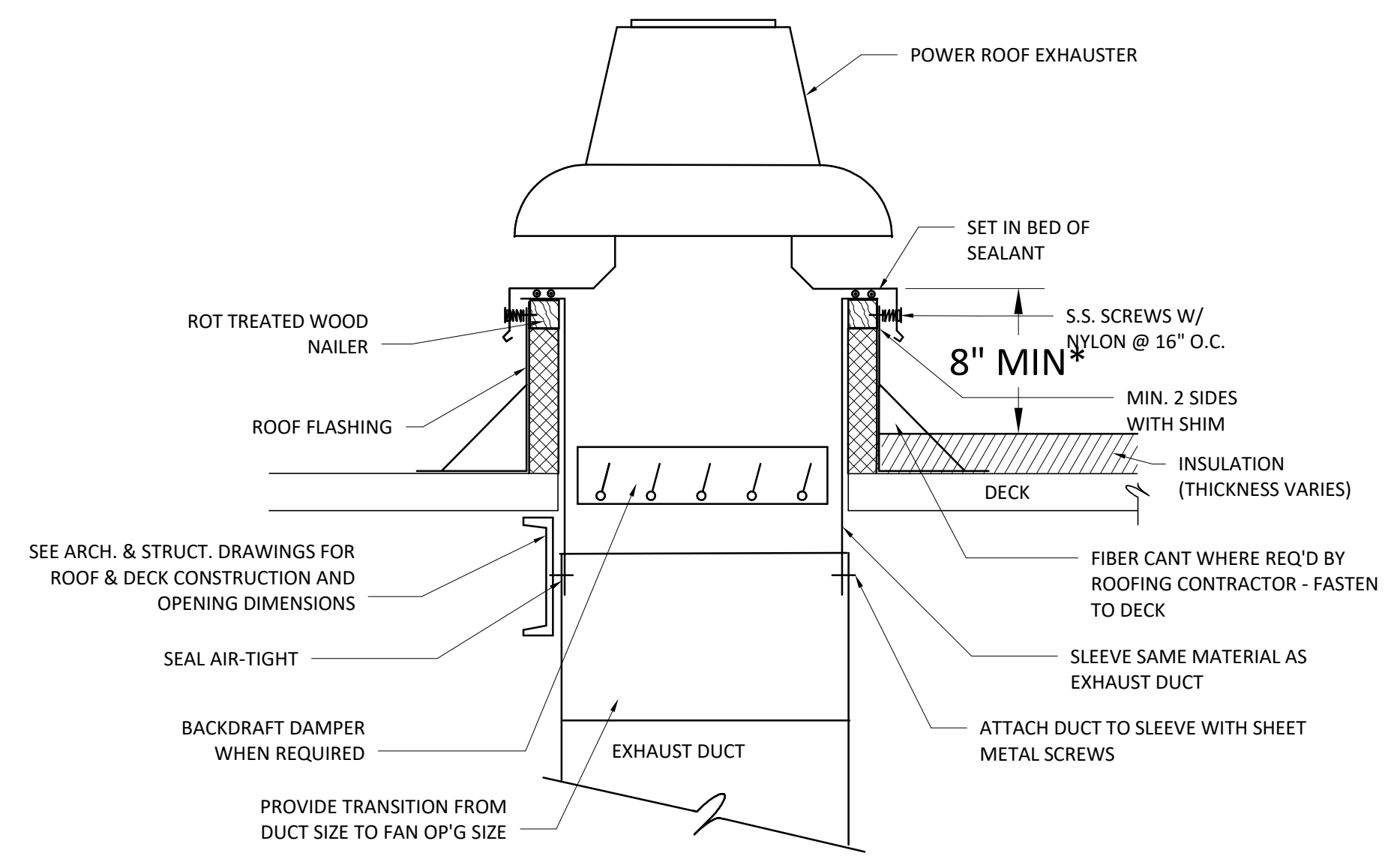
5 PACKAGED ROOFTOP UNIT DETAIL
N.T.S.



NOTES:

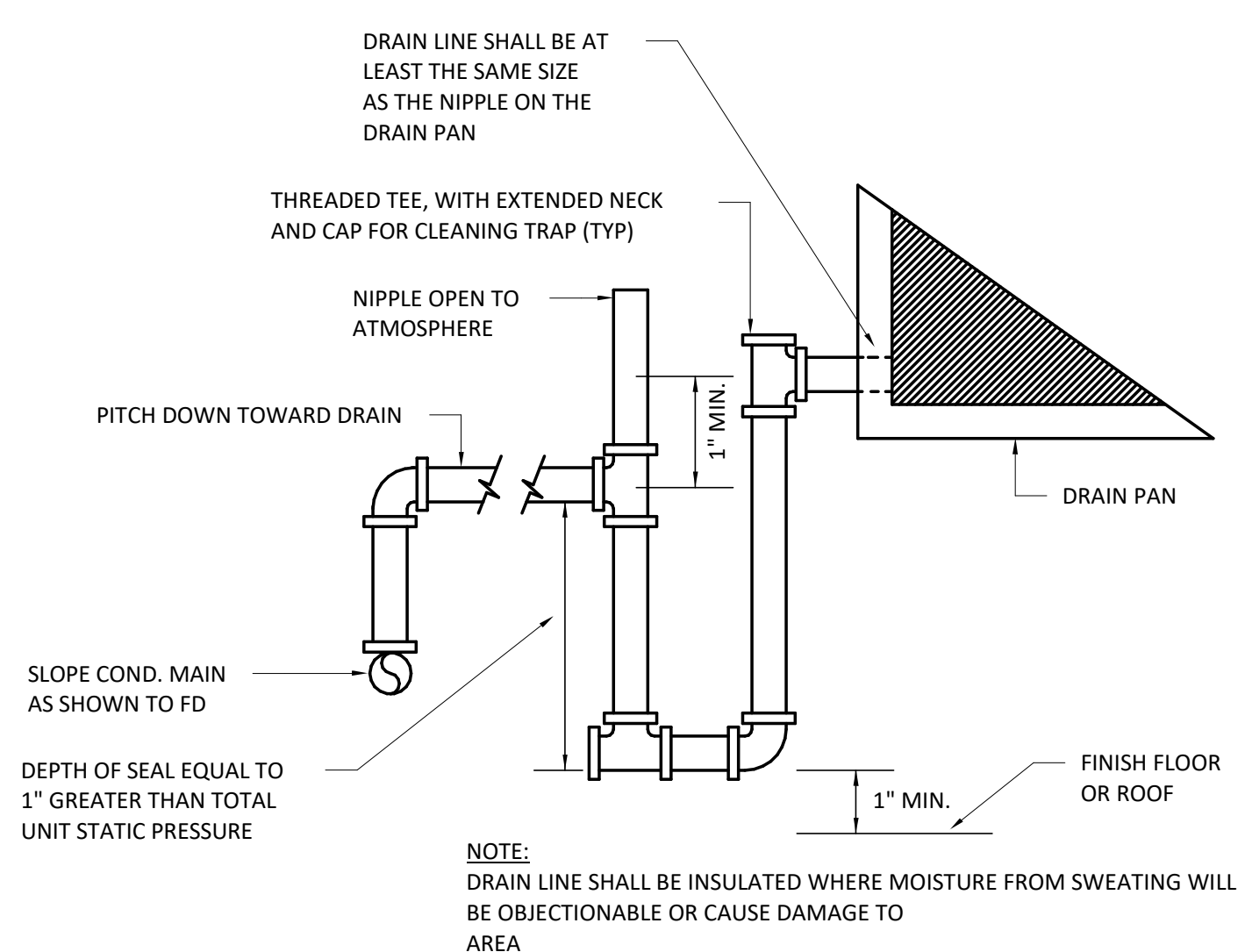
1. INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 96 REQUIREMENTS.
2. CUT AND PATCH EXISTING ROOFING AS REQUIRED FOR NEW CURB INSTALLATION (CONFIRM IF BY LL BASED ON WORK LETTER).
3. CURB SHALL BE TAPERED TYPE AND MATCH THE PITCH OF THE ROOF.
4. CONTRACTOR TO PROVIDE TREATED WOOD BLOCKINGS AND SHIM FLAT ROOF CURB TILL LEVEL FOR ALL EXHAUST FANS AND TO ACHIEVE ROOF CURB HEIGHTS. PROVIDE ROOF CURB EXTENSION IF REQUIRED.

6 GREASE EXHAUST FAN DETAIL
N.T.S.



* MECH CONTRACTOR TO VERIFY INSULATION THICKNESS W/ GENERAL CONTRACTOR.

7 GENERAL EXHAUST FAN DETAIL
N.T.S.



8 AHU CONDENSATE DRAIN DETAIL
N.T.S.



ISSUED

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REVISIONS

DATE	DESCRIPTION

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PROJECT
MARLTON

349 ROUTE 70 West,
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DRAWING TITLE
MECHANICAL
DETAILS

DRAWING INFORMATION
Job Number: 222120
Checked By: REP
Drawn By: SJH
DRAWING NUMBER

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402

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 EMAIL: arturo.mezo@econair.com

PATENT NUMBERS
 AC-PSP (UNITED STATES) - US PATENT 7963830 B2.
 AC-PSP VALL (CANADA) - CA PATENT 2620509.
 AC-PSP ISLAND (CANADA) - CA PATENT 2520330.

HOOD INFORMATION - JOB#6969232

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)					MUA CFM	AC CFM	HOOD CONSTRUCTION	HOOD CONFIG			
										WIDTH	LENG	HEIGHT	DIA	CFM				VEL	SP	END TO END	ROW
1	33	6030 EX-2-ACFSP-F	ECON-AIR	10' 7"	600 DEG	I	HEAVY	215	2275			4'	16'	2275	1629	-0.753"	1960	776	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	TYPE	FILTER(S)			EFFICIENCY @ 7 MICRONS	QTY	LIGHT(S)			WIRE GUARD	LOCATION	SIZE	UTILITY CABINET(S)		ELECTRICAL	SWITCHES	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
			QTY	HEIGHT	LENGTH			TYPE	SIZE	TYPE				SIZE	MODEL #				
1	33	CAPTRATE SOLID FILTER	7	20"	16"	85% SEE FILTER SPEC	6	L55 SERIES E26	ND	RIGHT	12"x60"x30"	TANK FS	4.0/4.0	DCV-1111	1 LIGHT 1 FAN	YES	1175 LBS		

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	33	FIELD WRAPPER 10.00' HIGH FRONT, RIGHT. LEFT END STANDOFF (FINISHED) 1' WIDE 60" LONG INSULATED. RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS. SENSOR-CV. LEFT WALL AS END PANEL.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				
							WIDTH	LENG	DIA	CFM	SP
1	33	Front	140"	24"	6"	MUA	12"	28"	653	0.163"	
						MUA	12"	28"	653	0.163"	
						MUA	12"	28"	653	0.163"	
						AC	8"	24"	388	0.088"	
						AC	8"	24"	388	0.088"	

GREASE DUCT & CHIMNEY SPECIFICATIONS:
 PROVIDE GREASE DUCT EQUAL TO ECON-AIR MODEL "EDW" ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "EDW" IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "EDW" DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER THE MANUFACTURES INSTALLATION GUIDE.
 PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER MANUFACTURES LISTING MODEL "EDW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12". DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE ACCUMULATION IN HORIZONTAL RUNS.
 IF THE DUCT OR CHIMNEY IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE UL-2221 OR UL-103 HT LISTED DOUBLE WALL GREASE DUCT OR DOUBLE WALL CHIMNEY EQUAL TO ECON-AIR MODEL "EDW- 2R, 2R TYPE HT, 3R, OR 3Z" ROUND 20 GAUGE 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

ECON-AIR RECOMMENDS THE USE OF LISTED, PRE-FABRICATED ROUND GREASE EXHAUST DUCT TO REDUCE STATIC PRESSURE IN THE SYSTEM, MINIMIZE INSTALLATION AND INSPECTION TIMES, AND ENSURE DUCT IS LIQUID TIGHT

HVAC DISTRIBUTION NOTE
 HIGH VELOCITY DIFFUSERS OR HVAC RETURNS SHOULD NOT BE PLACED WITHIN TEN (10) FEET OF THE EXHAUST HOOD. PERFORATED DIFFUSERS ARE RECOMMENDED.

VERIFY CEILING HEIGHT
 _____' - _____"
 HEIGHT REQUIRED TO VERIFY THAT HOOD FITS SPACE AND TO SIZE THE ENCLOSURE PANELS

CUSTOMER APPROVAL TO MANUFACTURE:

APPROVED AS NOTED	<input type="checkbox"/>
APPROVED WITH NO EXCEPTION TAKEN	<input type="checkbox"/>
REVISE AND RESUBMIT	<input type="checkbox"/>
SIGNATURE _____	
YOUR TITLE _____	DATE _____

SPECIFICATION: CAPTRATE® GREASE-STOP® SOLID FILTER

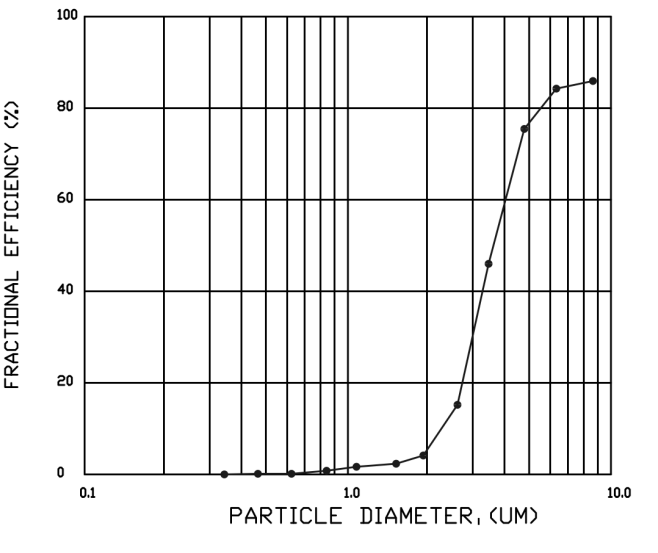
THE CAPTRATE GREASE-STOP SOLID FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).
 UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

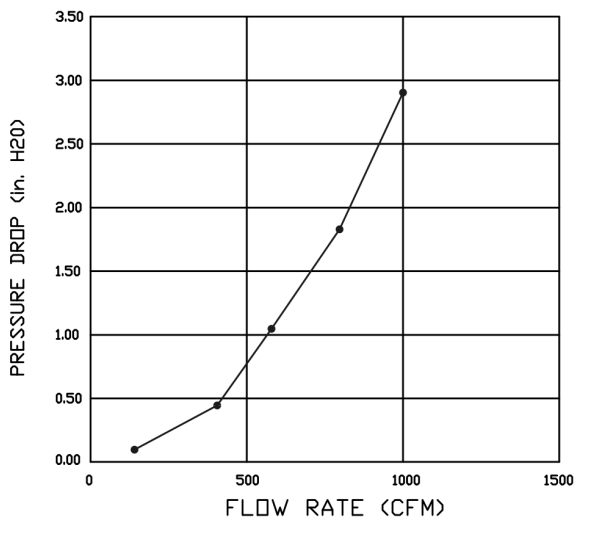
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

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

EFFICIENCY VS. PARTICLE DIAMETER



PRESSURE DROP VS. FLOW RATE



CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:

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



RZ Design Associates, Inc.

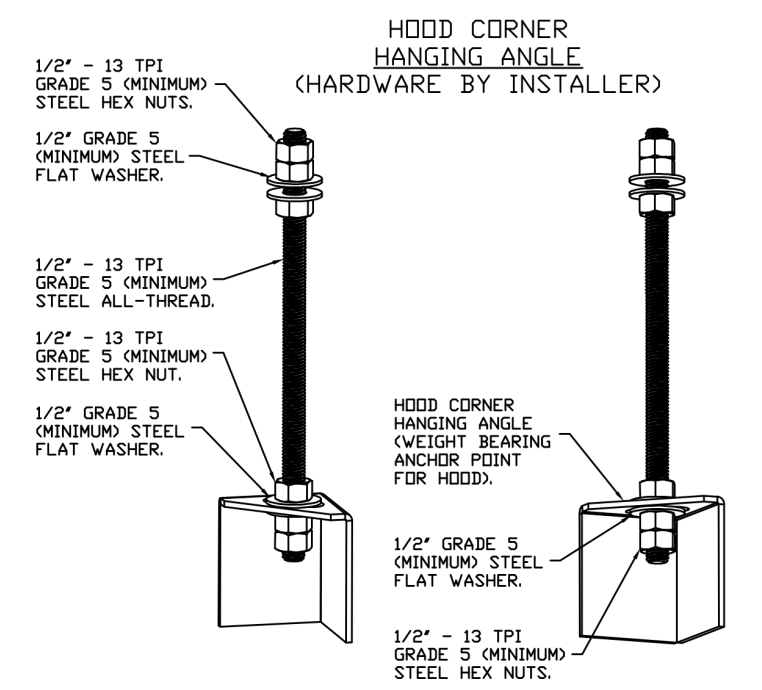
- ___ NO EXCEPTIONS TAKEN
- ___ MAKE CORRECTIONS NOTED
- ___ REVISE AND RESUBMIT
- ___ REJECTED - SEE REMARKS
- FOR REFERENCE

The review is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Corrections or comments made on the shop drawings during the review do not relieve contractor from compliance with the requirements of the plans and specifications. Approval of a specific item shall not include approval of an assembly of which the item is a component. Contractor is responsible for dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication processes or the means, methods, techniques, sequences and procedures of construction, coordination of all trades, and for performing all work in a safe and satisfactory manner.

DATE 08/15/2024 BY SJH

SHOP DRAWING REVIEW BY RZ DESIGN ASSOCIATES IS FOR GENERAL DESIGN CONFORMANCE. FINAL APPROVAL OF THESE SHOP DRAWINGS SHALL BE BY KITCHEN DESIGN CONSULTANT.

EXHAUST FAN AND HOOD ARE IN GENERAL CONFORMANCE WITH THE CAPTIVEAIRE DESIGN INFORMATION. THE MAKE-UP AIR UNIT DOES NOT MEET THE GENERAL CONFORMANCE OF THE CAPTIVEAIRE DESIGN INFORMATION. IT IS A DOAS UNIT WITH SIMILAR PERFORMANCE CHARACTERISTICS BUT DIFFERENT ELECTRICAL REQUIREMENTS, PHYSICAL SIZE AND WEIGHT. THE SIZE AND WEIGHT OF THE ORIGINAL CAPTIVEAIRE SELECTION WAS COORDINATED THE LANDLORD STRUCTURAL ENGINEER FOR ADDITIONAL FRAMING REQUIREMENTS.

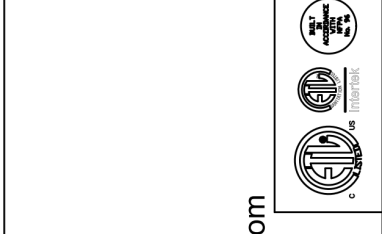


ASSEMBLY INSTRUCTIONS

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.

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REVISIONS

DATE	DESCRIPTION
1	9/10/24 REVISION 1

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 101 Route 70 West,
 Evesham, NJ, 08053

DATE: 8/8/2024
DWG.#: 6969232
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 Boston + Tampa
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CONSULTANT



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REVISIONS

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PROJECT
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 Job Number: 222120
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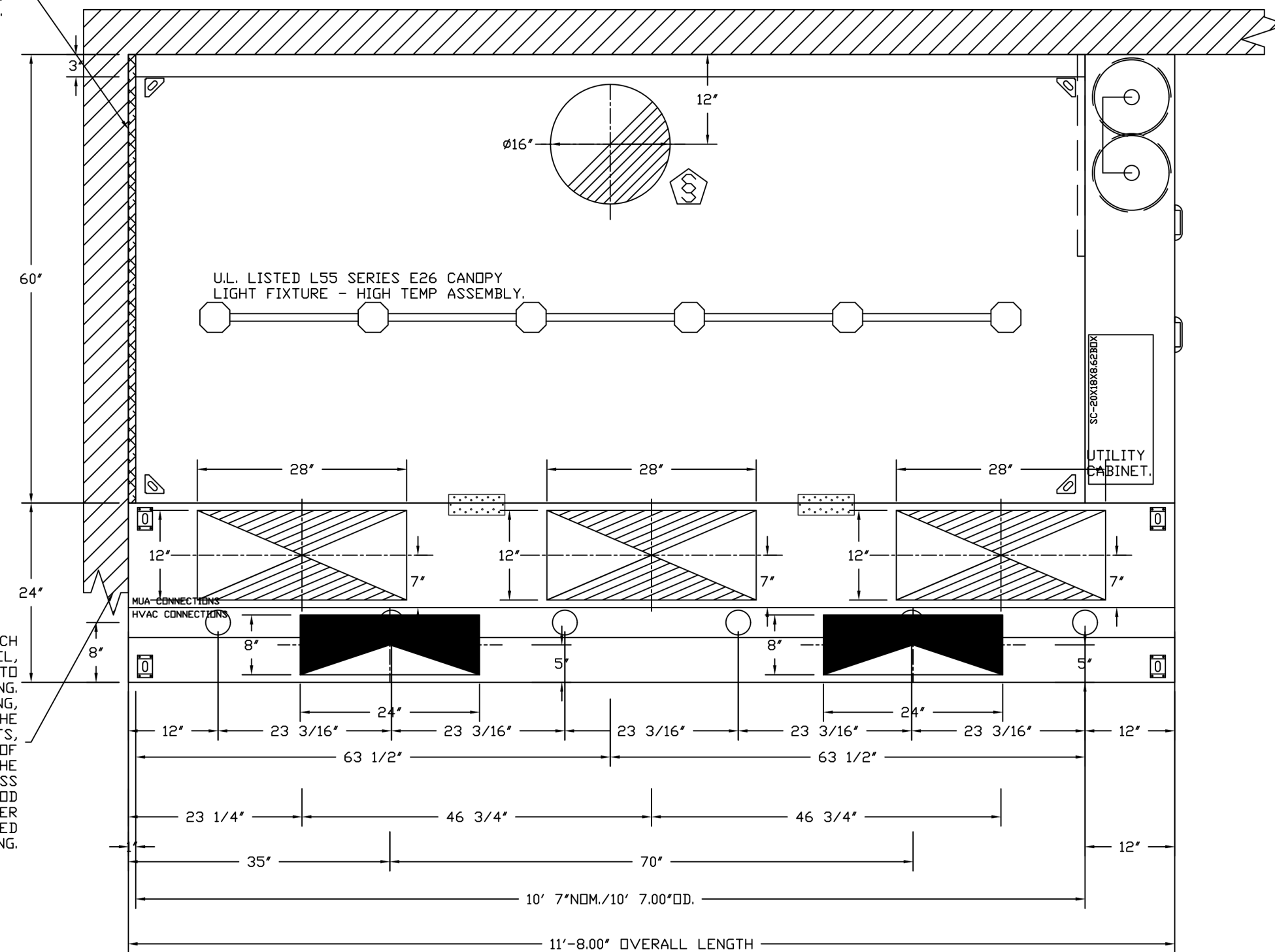
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SCALE:
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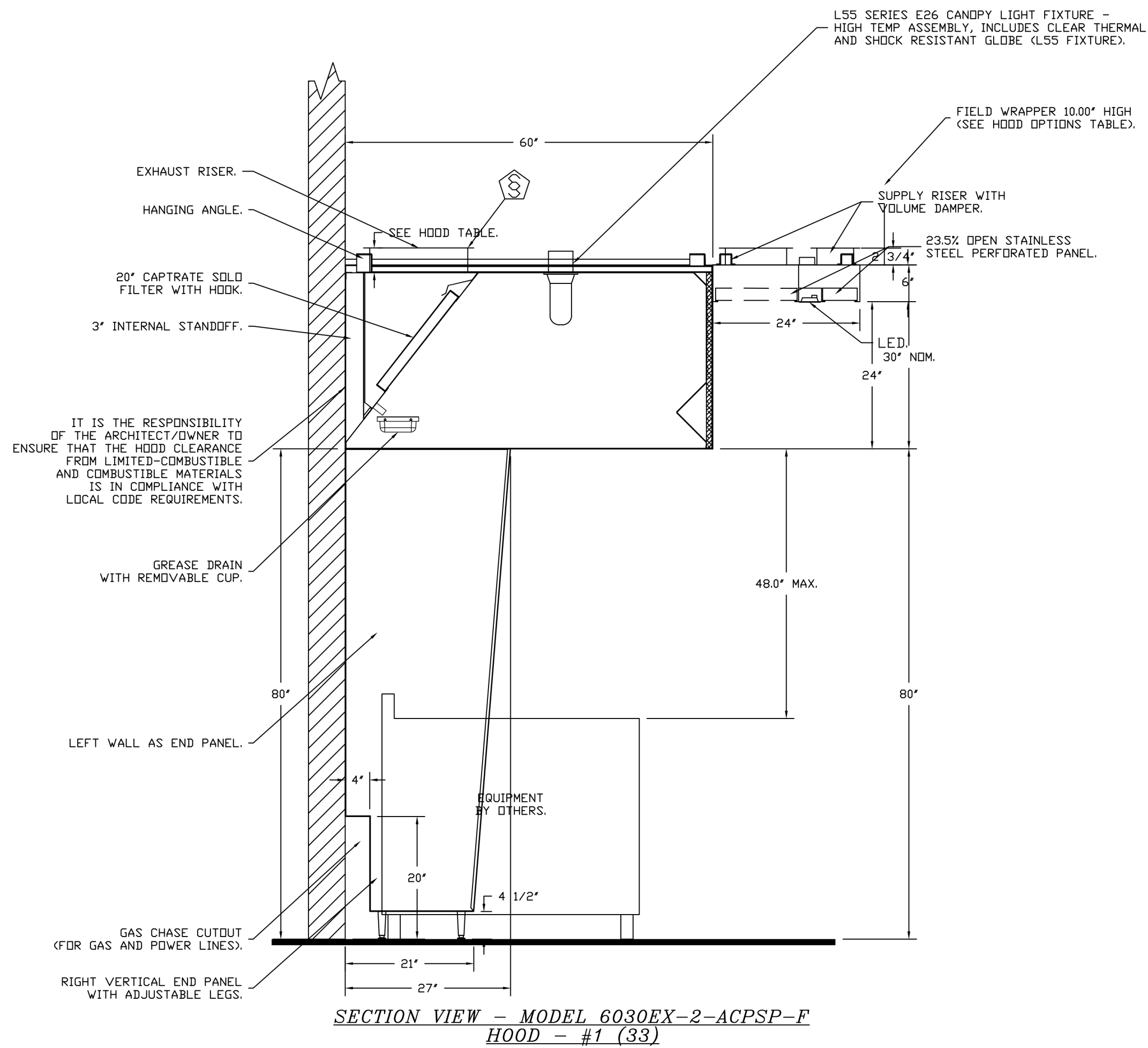
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2

1" LAYER OF INSULATION FACTORY INSTALLED IN 1.00" END STANDOFF MEETS 0" REQUIREMENTS. CLEARANCE TO COMBUSTIBLE SURFACES.



ACPSP SHIPS LOOSE FOR FIELD INSTALLATION

LIGHTING FOR ACPSP JOB # 6969232 - HOOD #1 INPUT 120V AC, 1 PHASE, 50/60HZ, 3.5 WATTS PER LIGHT. TO CONTROL LIGHTS WITH HOOD LIGHT SWITCH, WIRE PER HOOD ELECTRICAL CONTROL PANEL SCHEMATIC. TO CONTROL LIGHTS WITH BUILDING LIGHT SWITCH, WIRE BLACK AND WHITE WIRE TO A 120VAC SERVICE. END TO END ACPSPS REQUIRE 120VAC FIELD WIRING FRDM J-BDX TO J-BDX. REPLACE LIGHTS WITH LED LIGHTS ONLY.



EXHAUST FAN INFORMATION – JOB#6969232

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	33B - KEF-1	1	EADU85H	ECON-AIR	2275	1.000	1533	TEAD-ECM	1.000	0.6460	1	115	11.6	720 FPM	94	16.2

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	33B - KEF-1	1	GREASE BOX
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION
2	33C - MUA-1	1	2 YEAR PARTS WARRANTY
		1	INLET PRESSURE GAUGE, 0-35"
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
		1	TOTAL CFM MONITORING
		1	INTAKE FIRESTAT SET TO 135°F
		1	FREEZE/STAT
		1	DISCHARGE FIRESTAT SET TO 240°F
		1	SHIP LOOSE GAS STRAINER 3/4"
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
		1	2" MERV 13 FILTERS FOR RTU1 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU1 (QTY. 4)
		1	RTU1 DOWN DISCHARGE
		1	RTU1 FIXED 100% OA INTAKE CONTROL
		1	RTU1 NO RETURN - 100% OA - MPU
		1	RTU1 CURB DUCT HANGER
		1	24VAC FIRE INPUT
		1	COMMERCIAL SMOKE DETECTOR/ALARM INTERLOCK - ALARM SUPPLIED BY OTHERS
		1	5 TON MODULATING COOLING OPTION, R20B/230V, R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, DL ECM CONDENSING FAN
		1	ECM FAN DDAS - 3 PHASE
		1	ECM WIRING PACKAGE-RTU/MUA - PWM SIGNAL FROM ECPM03 PREWIRE
		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	IBT ONLY REHEAT		
1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVE/REPAIR SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)		
1	EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET		

FAN ACCESSORIES

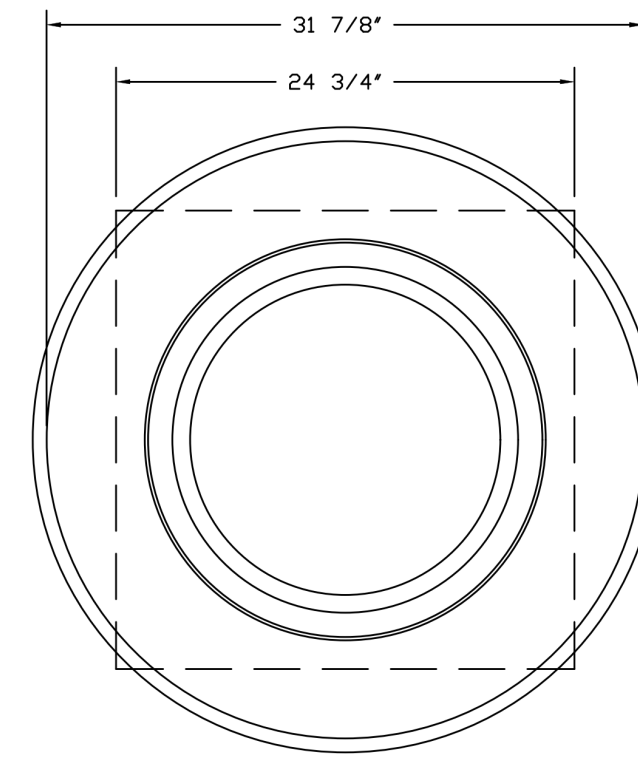
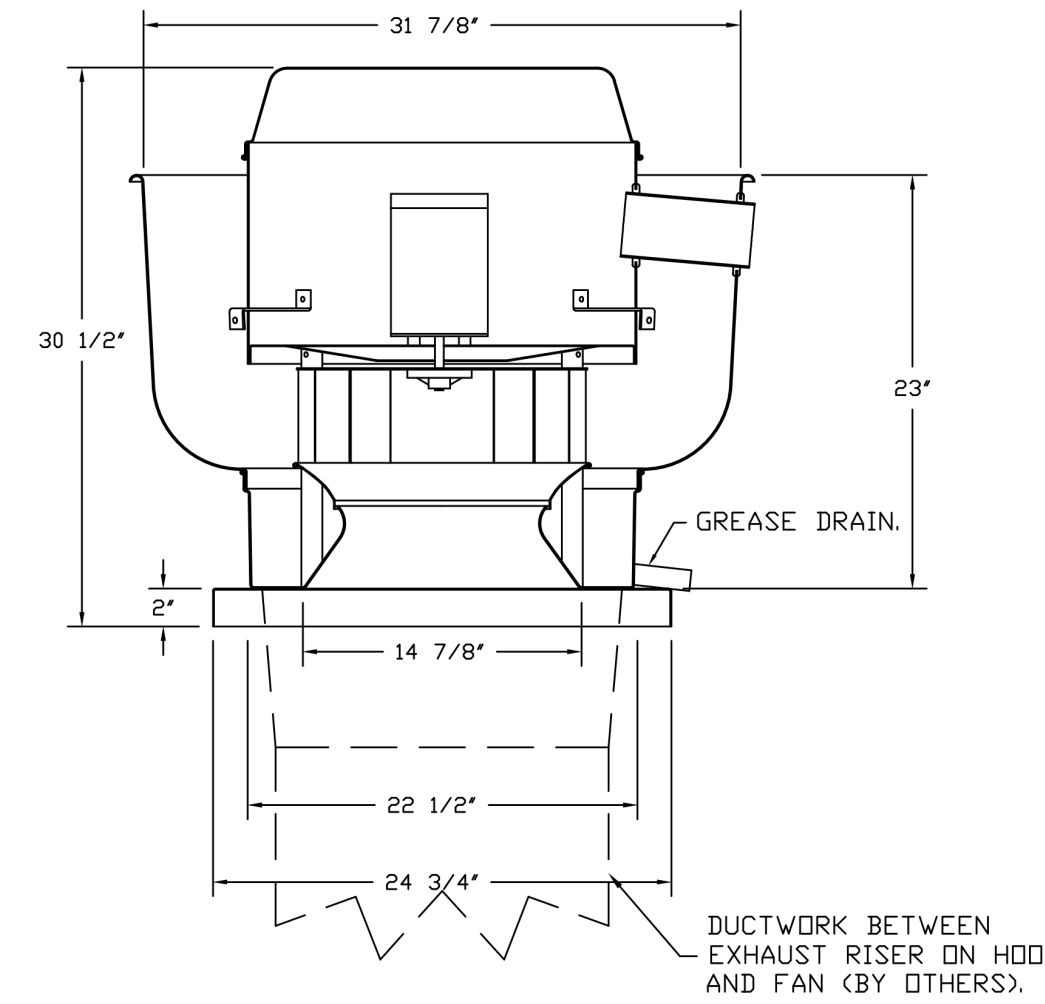
FAN UNIT NO	TAG	EXHAUST				SUPPLY		
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	33B - KEF-1	YES						

CURB ASSEMBLIES

NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	33B - KEF-1	41 LBS	CURB	23.000"W X 23.000"L X 24.000"H VENTED HINGED.
2	# 2	33C - MUA-1	103 LBS	CURB	41.000"W X 71.000"L X 20.000"H INSULATED.

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

FAN #1 EADU85H - EXHAUST FAN (33B - KEF-1)



TOP VIEW

FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST

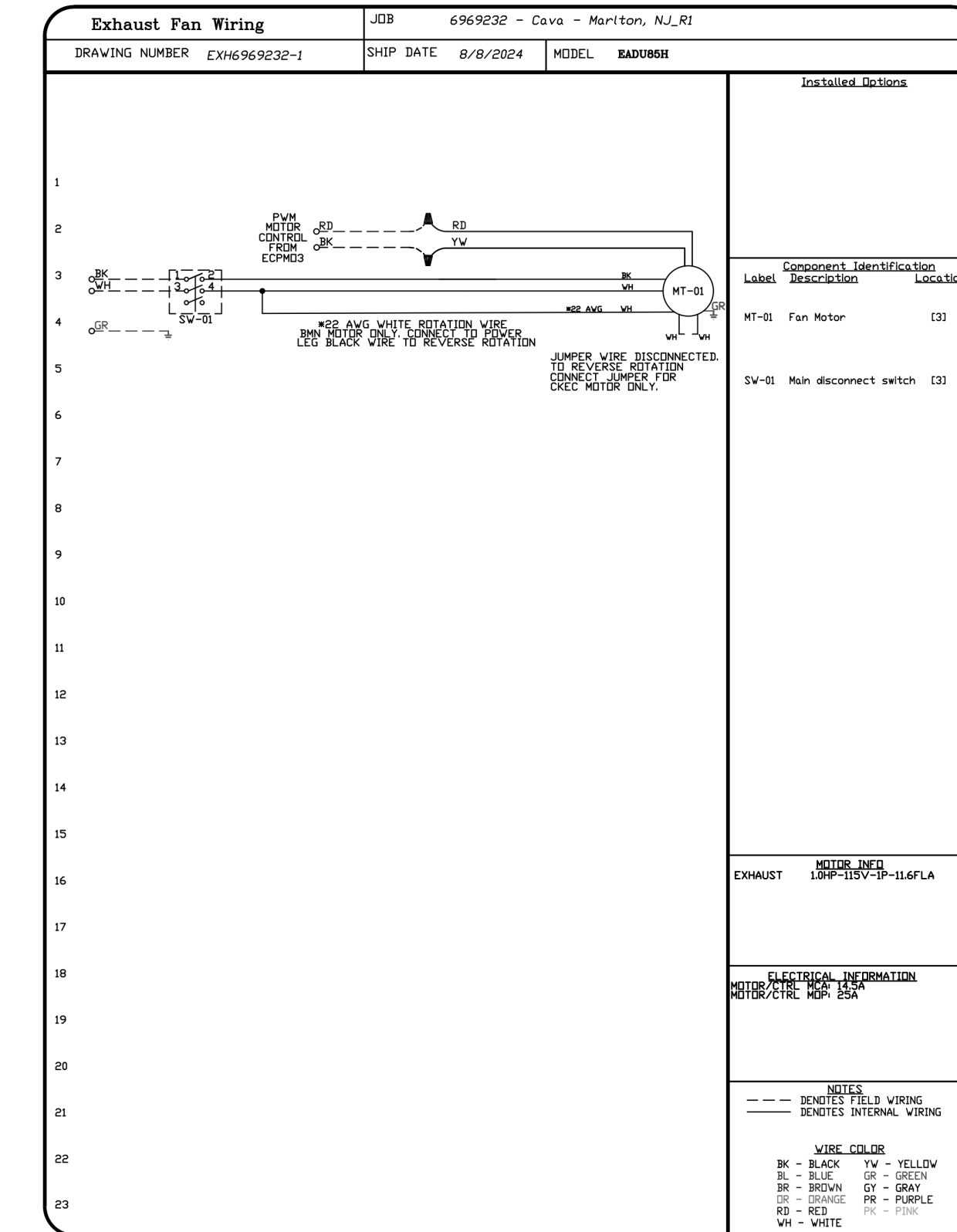
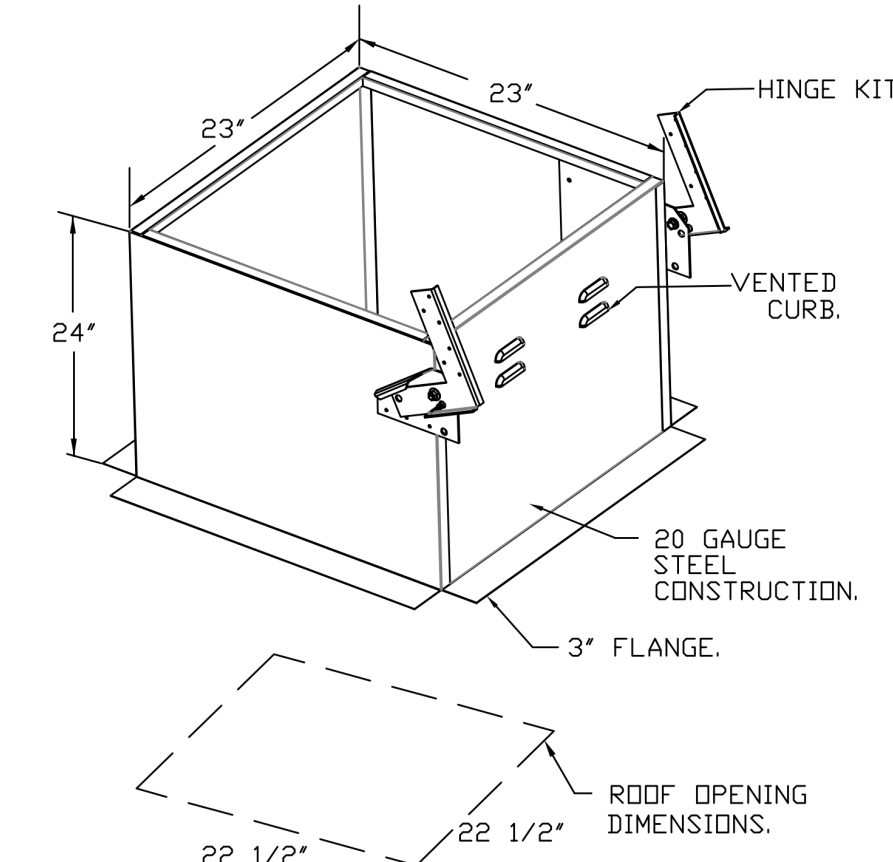
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

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.
- ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION.
- 2 YEAR PARTS WARRANTY.



REVISIONS	
DESCRIPTION	DATE

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REVISIONS

DATE	DESCRIPTION
1	9/10/24 REVISION 1



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DOAS/RTU FAN SCHEDULE - JOB#696232

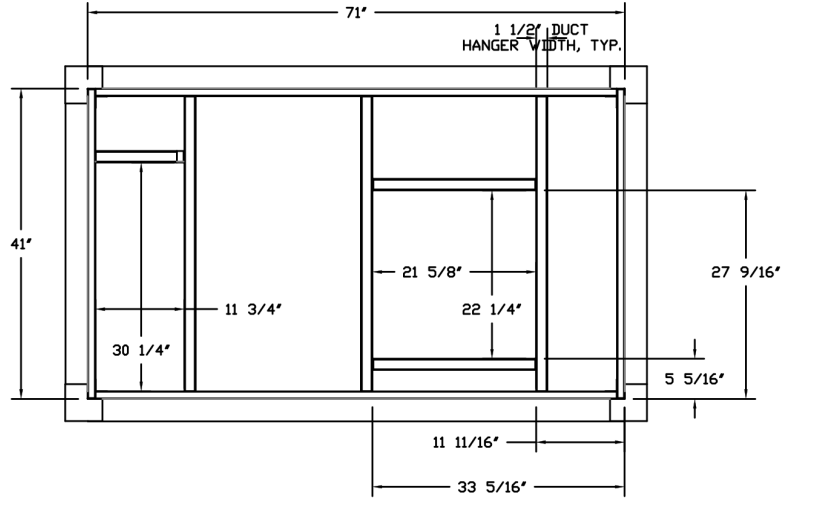
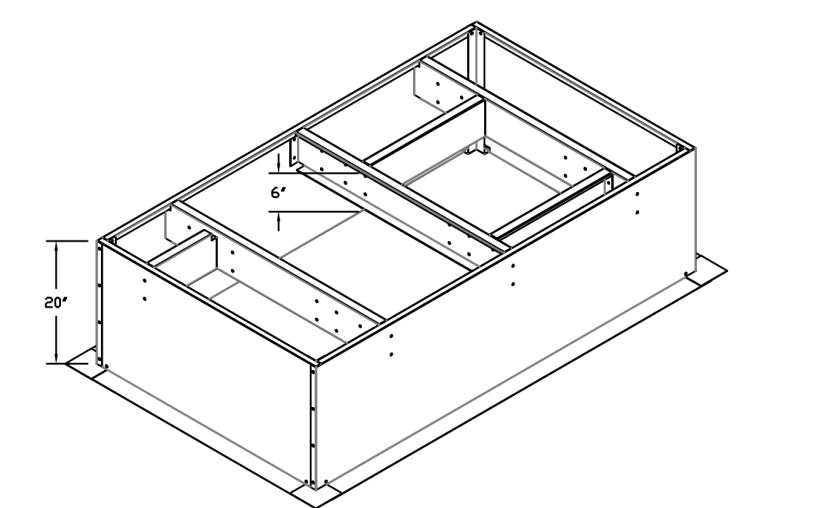
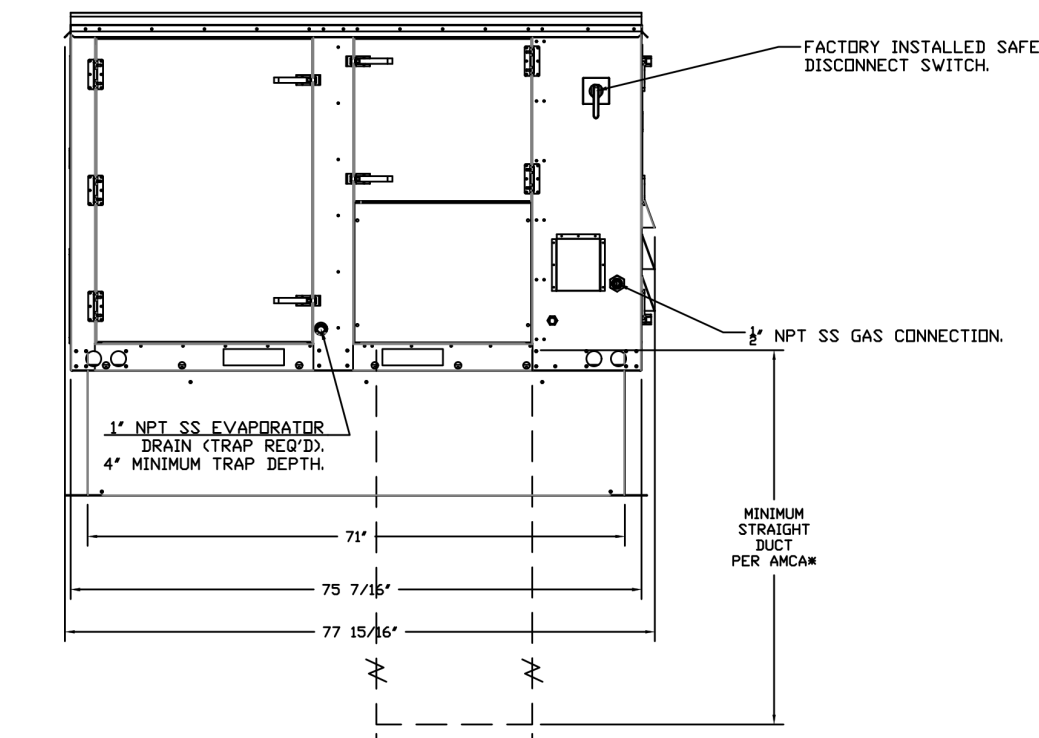
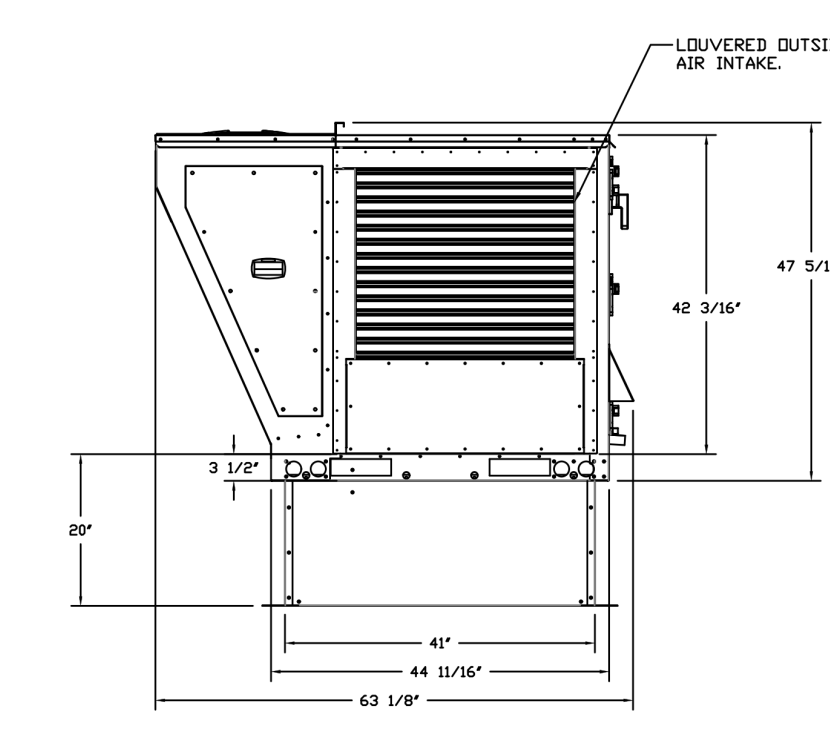
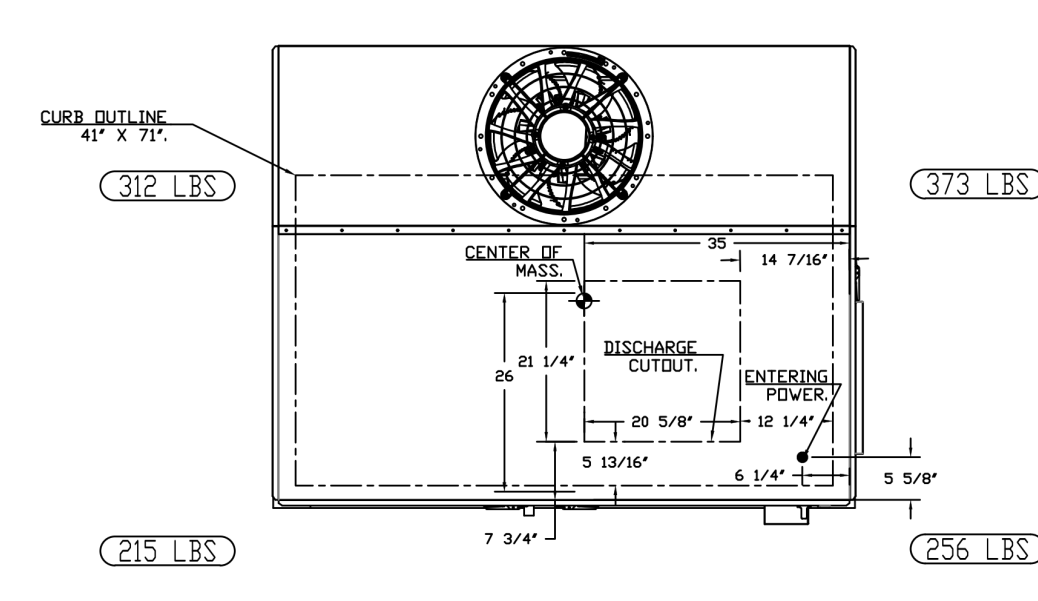
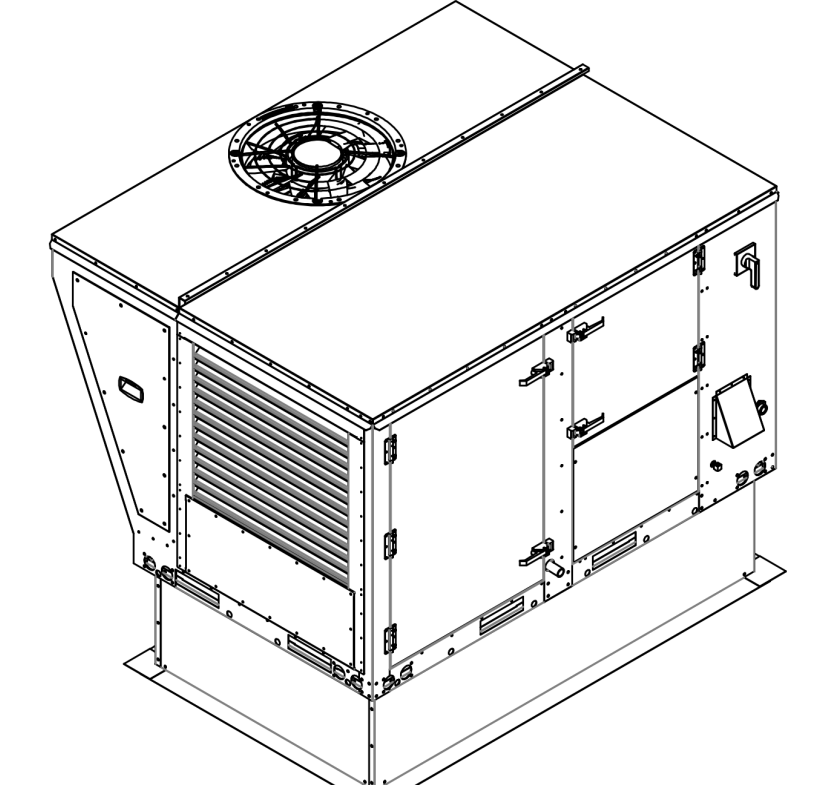
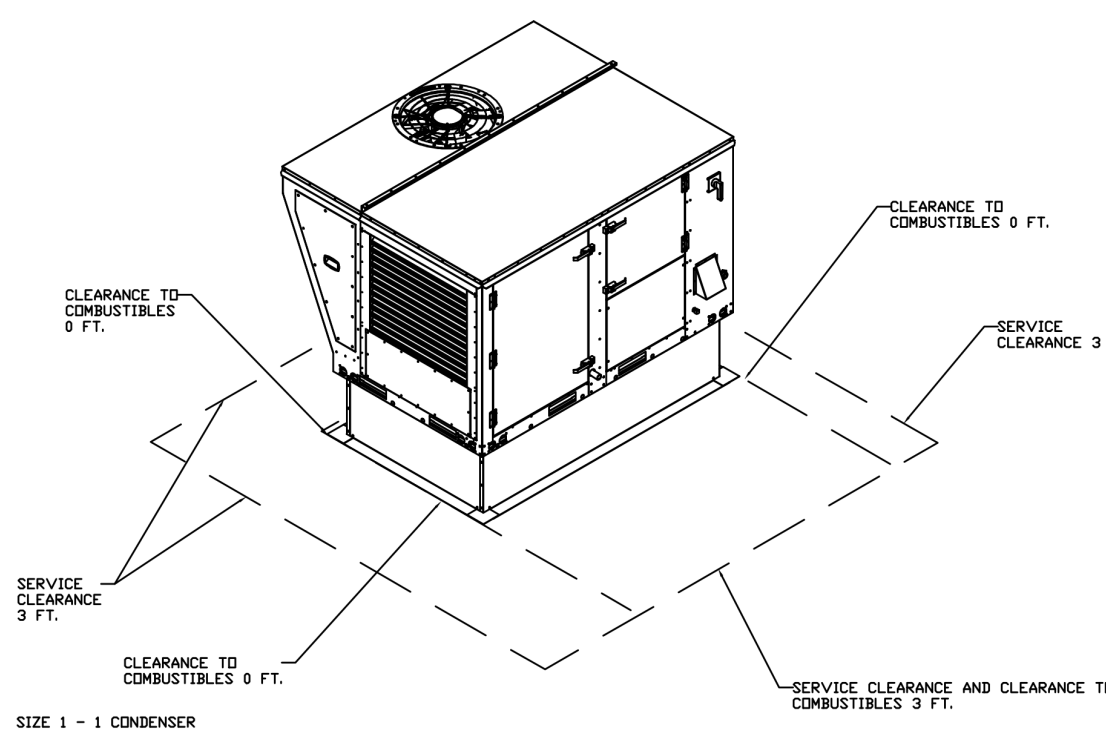
FAN UNIT NO.	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	FAN INFORMATION										ELECTRICAL INFORMATION										COOLING INFORMATION										REHEAT INFORMATION										GAS HEAT INFORMATION										NOTES
					BLOWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	WEIGHT (LBS)	ESP	HP	PHASE	VOL.T	NCA	MCCP	OUTSIDE AIR DB	MIXED AIR DB	LEAVING AIR DB	DISCHARGE DB	DESIRED DB	MAX DB	MOISTURE REMOVAL RATE	GAS TYPE	INPUT BTUH	OUTPUT BTUH	TEMP RISE	REQUIRED INPUT GAS PRESSURE																												
2	33C - MUA-1	1	EARTU1-1200-16-5T-MPU	ECON-AIR	16Z-1	0	1960	1960	1156	1.000	2.50	3	208	27.9A	30A	83.3°F	77.6°F	83.3°F	77.6°F	70.9°F	69.1°F	68.3°F	66.0 MBH	26.0 MBH	17.9	6.1	90.0°F	74.6°F	0.2 MBH	36.0 LBS/HR	NATURAL	170884	138416	59°F	7 IN. W.C. - 14 IN. W.C.	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15																			

- NOTES:**
- INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL.
 - DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE.
 - INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER.
 - REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE.
 - EC MOTOR CONDENSING FANS.
 - ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE.
 - SUCION LINE ACCUMULATOR.
 - FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY, 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER.
 - AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT).
 - 85% EFFICIENT FURNACE, WITH MODULATING BURNERS TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 64 TURNDOWN WITH NG AND 5:1 TURNDOWN WITH LP.
 - SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE.
 - FULLY MODULATING HOT GAS REHEAT.
 - 1" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-4.3 INSULATION-MINIMUM 24GA EXTERIOR W/ 18GA BASE.
 - 100% DISCHARGE AND RETURN.
 - DIRECT DRIVE ECM PLENUM BLOWER. BELT DRIVEN AND NON-ECM BLOWERS ARE NOT ACCEPTABLE.

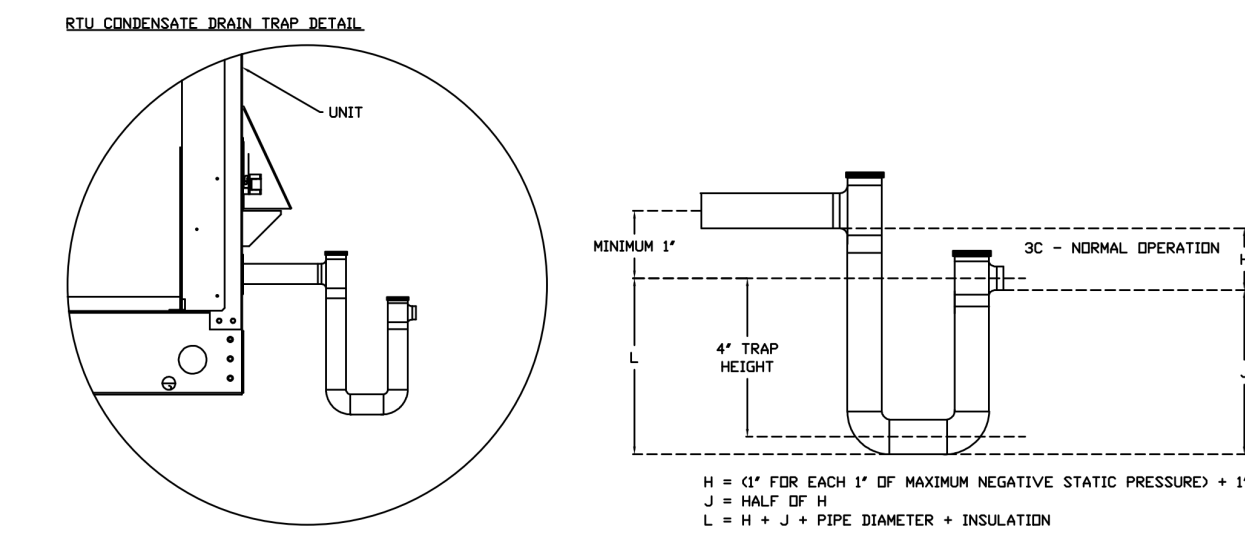
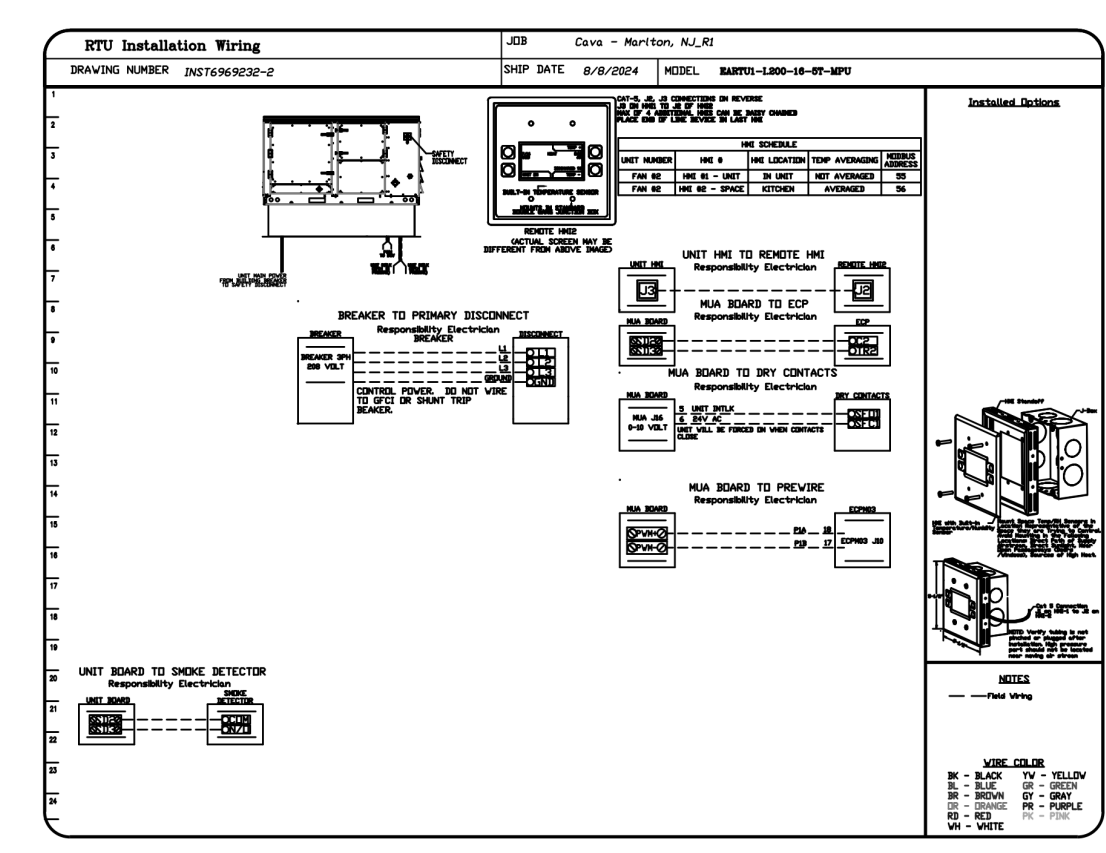
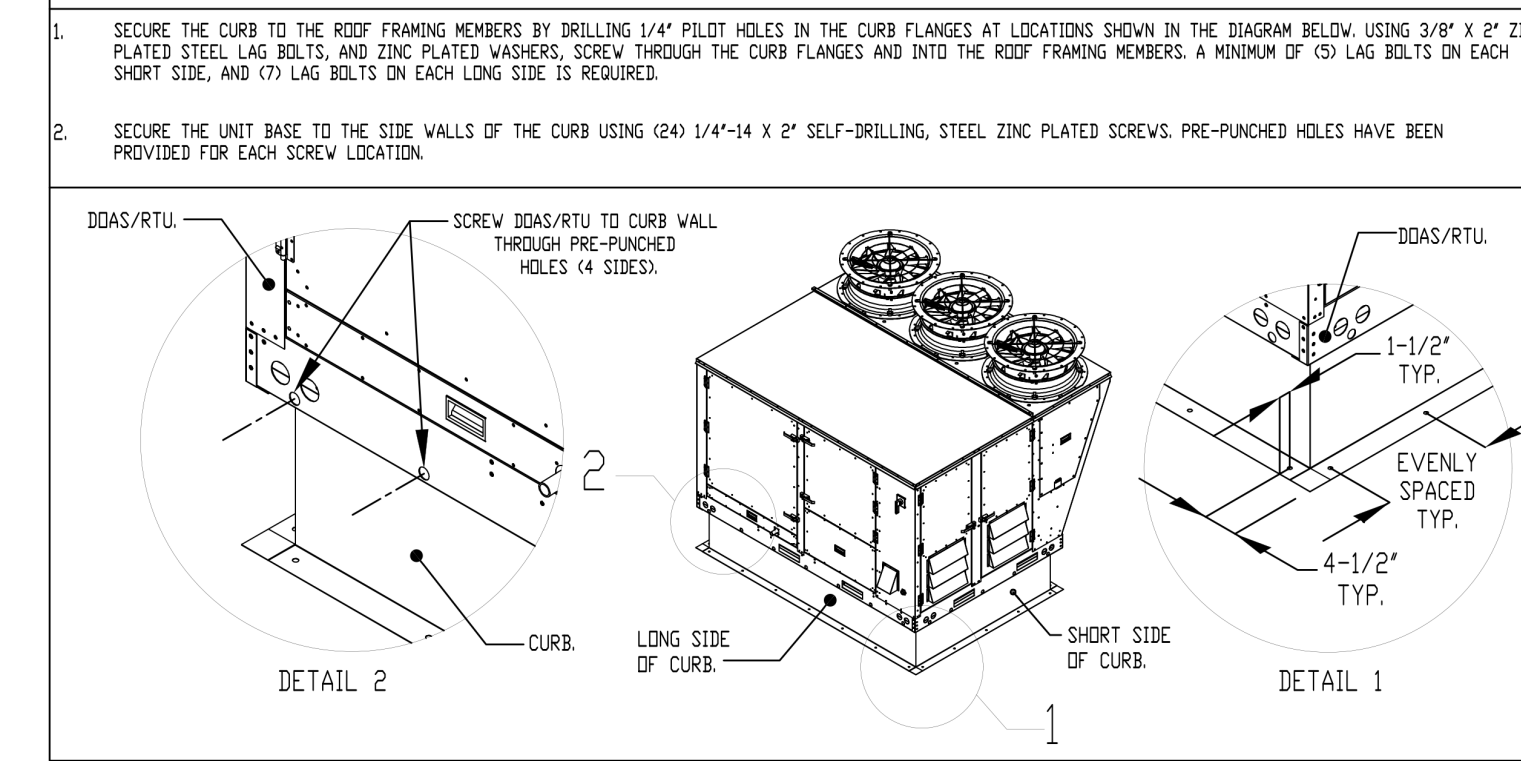
FAN #2 EARTU1-1.200-16Z-5T-MPU - HEATER (33C - MUA-1)

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

*NOTE: 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 20.75" x 21.5".



TYPICAL DOAS/RTU ROOF MOUNTING INSTALLATION INSTRUCTIONS



REVISIONS

NO.	DESCRIPTION	DATE

www.econair.com

MD

MA

www.econair.com

Maryland Office

PHONE: (800) 988-0881 FAX: 9192275931 EMAIL: anuram.meza@econair.com

Cava - Marlton, NJ_R1
 101 Route 70 West,
 Evesham, NJ, 08053

DATE: 8/8/2024
DWG.#: 6969232
DRAWN BY: AM-32
SCALE: 1/2" = 1'-0"
MASTER DRAWING

SHEET NO.
 5

BKA Architects, Inc.
 Boston + Tampa
 bkaarchitects.com

CONSULTANT



ISSUED

DATE	DESCRIPTION
1-13-23	SD SET
2-17-23	DD SET
4-12-24	CD SET / LLD REVIEW
5-29-24	PERMIT/BID SET
8-19-24	HEALTH COMMENTS
9-10-24	PERMIT/BID ADDENDUM
10-28-24	IEC SET (REVISION 2)

REVISIONS

NO.	DATE	DESCRIPTION
1	9/10/24	REVISION 1



PROJECT
MARLTON

349 ROUTE 70 West,
 MARLTON NJ 08053

DRAWING TITLE
ECON.AIRE

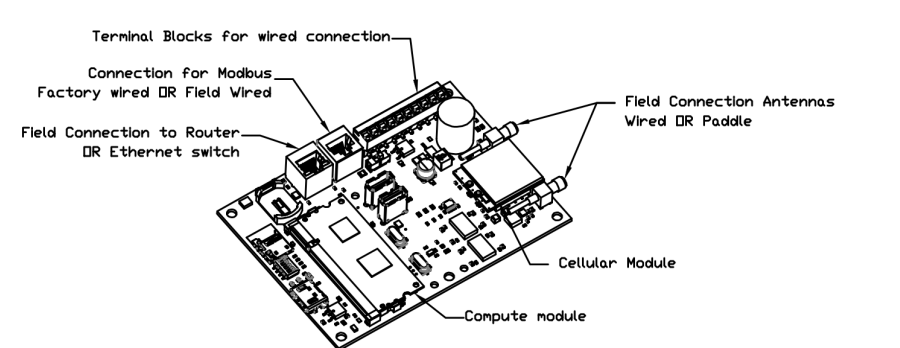
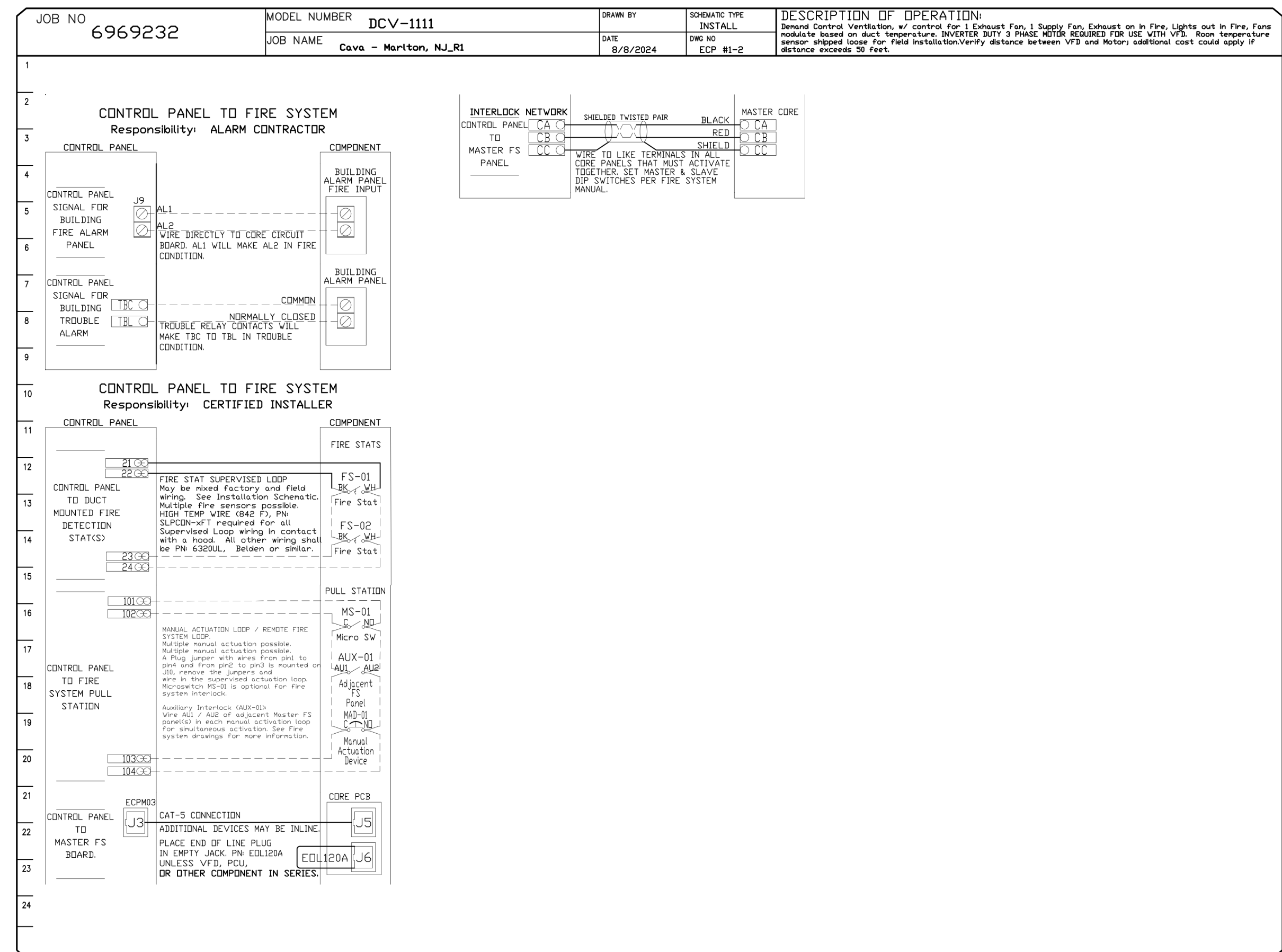
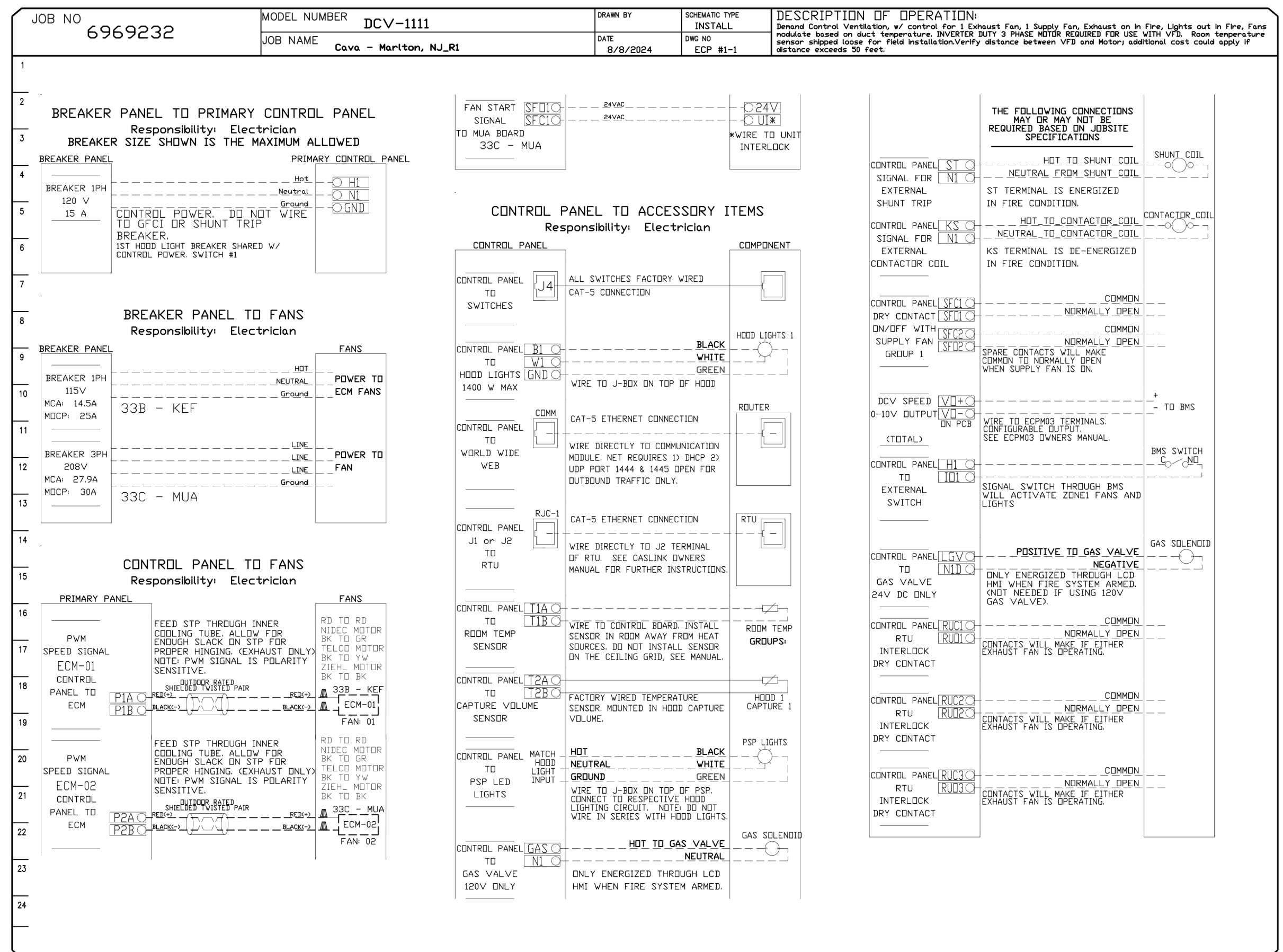
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 Checked By: REP
 Drawn By: SJH
 DRAWING NUMBER

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ELECTRICAL PACKAGE - JOB#6969232

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	HP	VOLTS	FLA	
1		DCV-1111	UTILITY CABINET RIGHT	UTILITY CABINET RIGHT HOOD # 1	1 LIGHT 1 FAN	SMART CONTROLS DCV	33B - KEF-1	EXHAUST	1	1,000	115	11.6
							33C - MUA-1	SUPPLY	3	2,500	208	5.7



CASTlink Monitor and Control

- Hood control panel to support communications to cloud-based Building Management System.
- Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR to the points list.
- Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL to the points list.
- Hood Control Panel to allow cloud-based Building Management System to implement SYSTEM ECONOMIZER control strategies for fully integrated Building Management.

MONITORING AND CONTROL POINTS LIST

DCV Packages	Function	SC Packages	Function
Room Temperature	MONITOR	Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR	Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR	MUA Discharge Temperature	MONITOR
Exhaust RTU Discharge Temperature	MONITOR	Exhaust RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR	Controller Faults	MONITOR
Fan Amperage	MONITOR	Fan Faults	MONITOR
Fan Power	MONITOR	Fan Status	MONITOR
TPZ Faults	MONITOR	PCU Faults	MONITOR
Controller Faults	MONITOR	PCU Filter Clap Percentages	MONITOR
Fan Faults	MONITOR	Fire Condition	MONITOR
Fan Status	MONITOR	COSE Fire System	MONITOR
PCU Faults	MONITOR	Building Pressure	MONITOR
PCU Filter Clap Percentages	MONITOR	Fans Button(s)	MONITOR & CONTROL
Fire Condition	MONITOR	Light(s) Button(s)	MONITOR & CONTROL
COSE Fire System	MONITOR	Flush Button	MONITOR & CONTROL
Building Pressure	MONITOR		
Prep Time Button	MONITOR & CONTROL		
Fans Button	MONITOR & CONTROL		
Light(s) Button	MONITOR & CONTROL		
Flush Button	MONITOR & CONTROL		

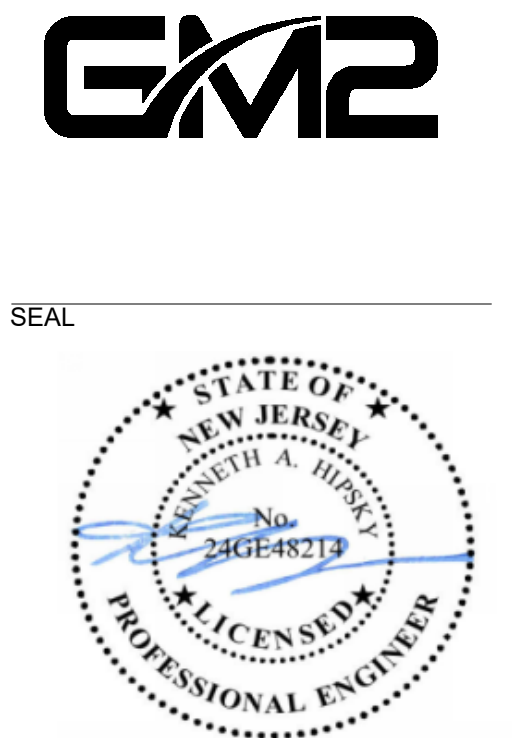
REVISIONS

NO.	DESCRIPTION	DATE

recon·air
 Maryland Office
 PHONE: (800) 968-0881 FAX: 9192275931 EMAIL: info@reconair.com
 www.reconair.com

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DWG.#: 6969232
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DATE	DESCRIPTION
1-13-23	SD SET
2-17-23	DD SET
4-12-24	CD SET / LLD REVIEW
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8-19-24	HEALTH COMMENTS
9-10-24	PERMIT/BID ADDENDUM
10-28-24	IEC SET (REVISION 2)

REVISIONS

NO.	DATE	DESCRIPTION
1	9/10/24	REVISION 1

CAVA

PROJECT
MARLTON
 349 ROUTE 70 West,
 MARLTON NJ 08053

DRAWING TITLE
ECON.AIRE

DRAWING INFORMATION
 Job Number: 222120
 Checked By: REP
 Drawn By: SJH
 DRAWING NUMBER

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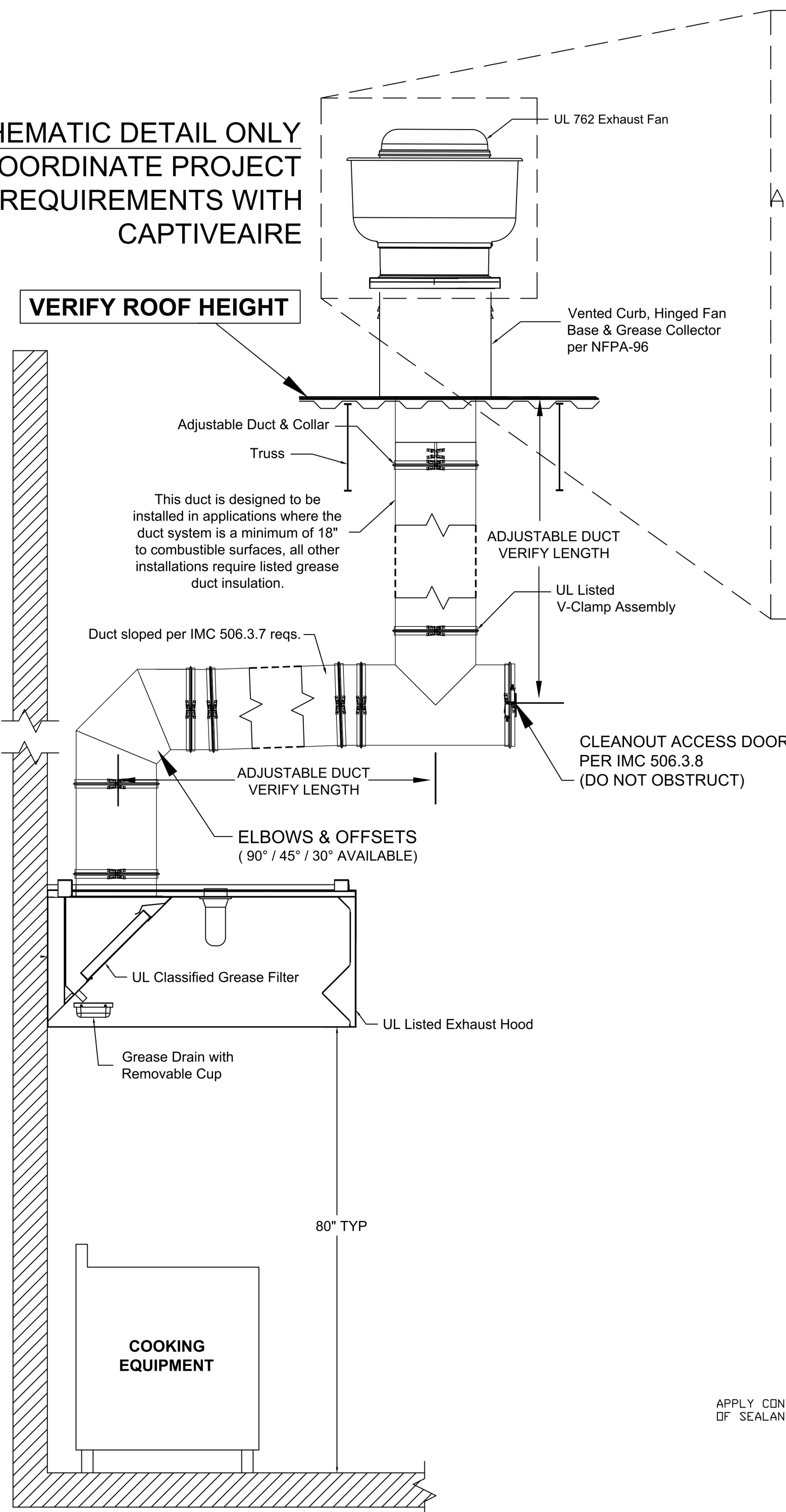
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GREASE EXHAUST DUCT DETAILS

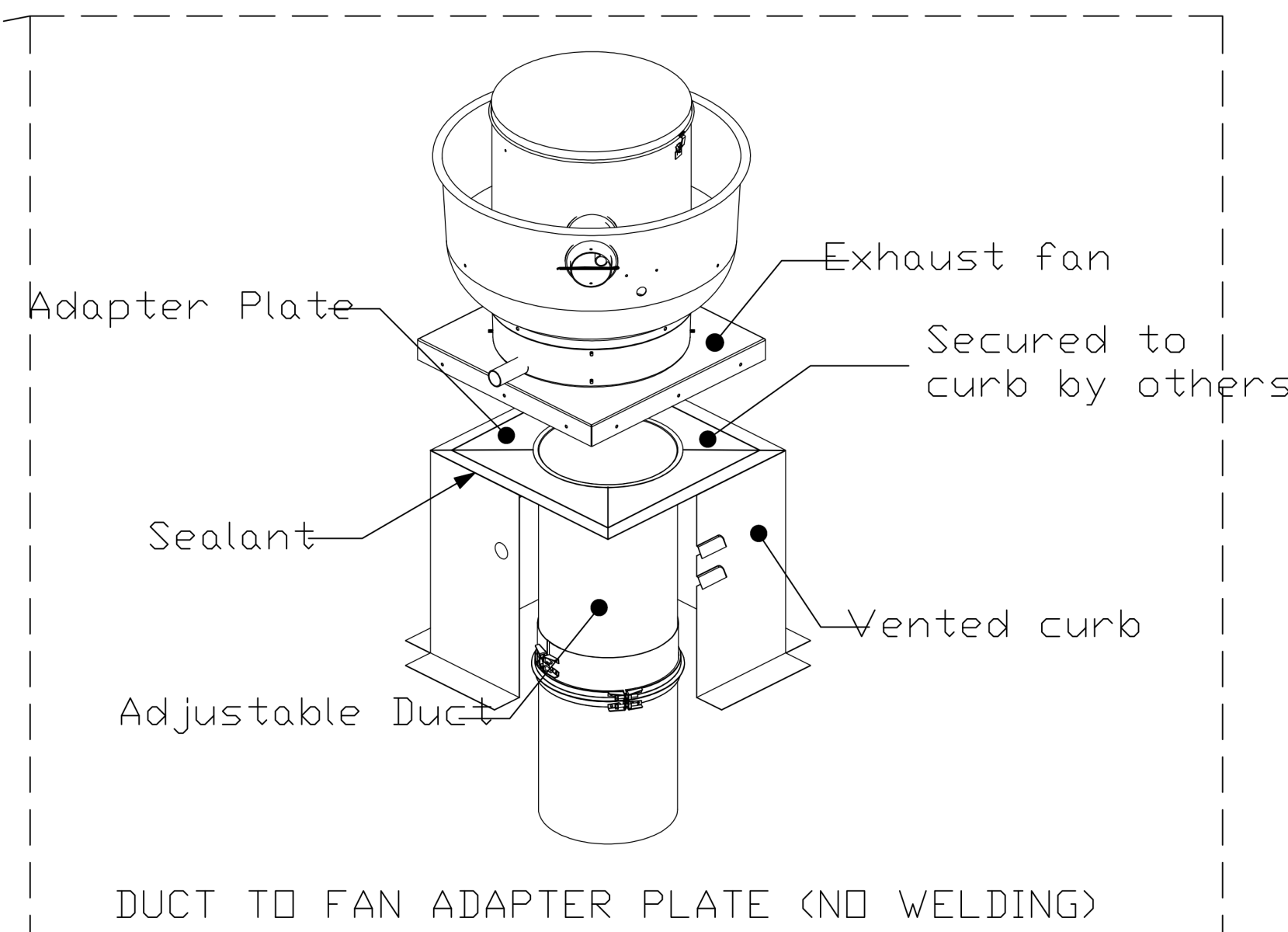
- > CaptiveAire Grease Exhaust Duct is UL Listed and requires no field welding
- > Complies with IMC and NFPA96 requirements
- > Double-wall pre-insulated ductwork is also available

**SCHEMATIC DETAIL ONLY
COORDINATE PROJECT
REQUIREMENTS WITH
CAPTIVEAIRE**

VERIFY ROOF HEIGHT

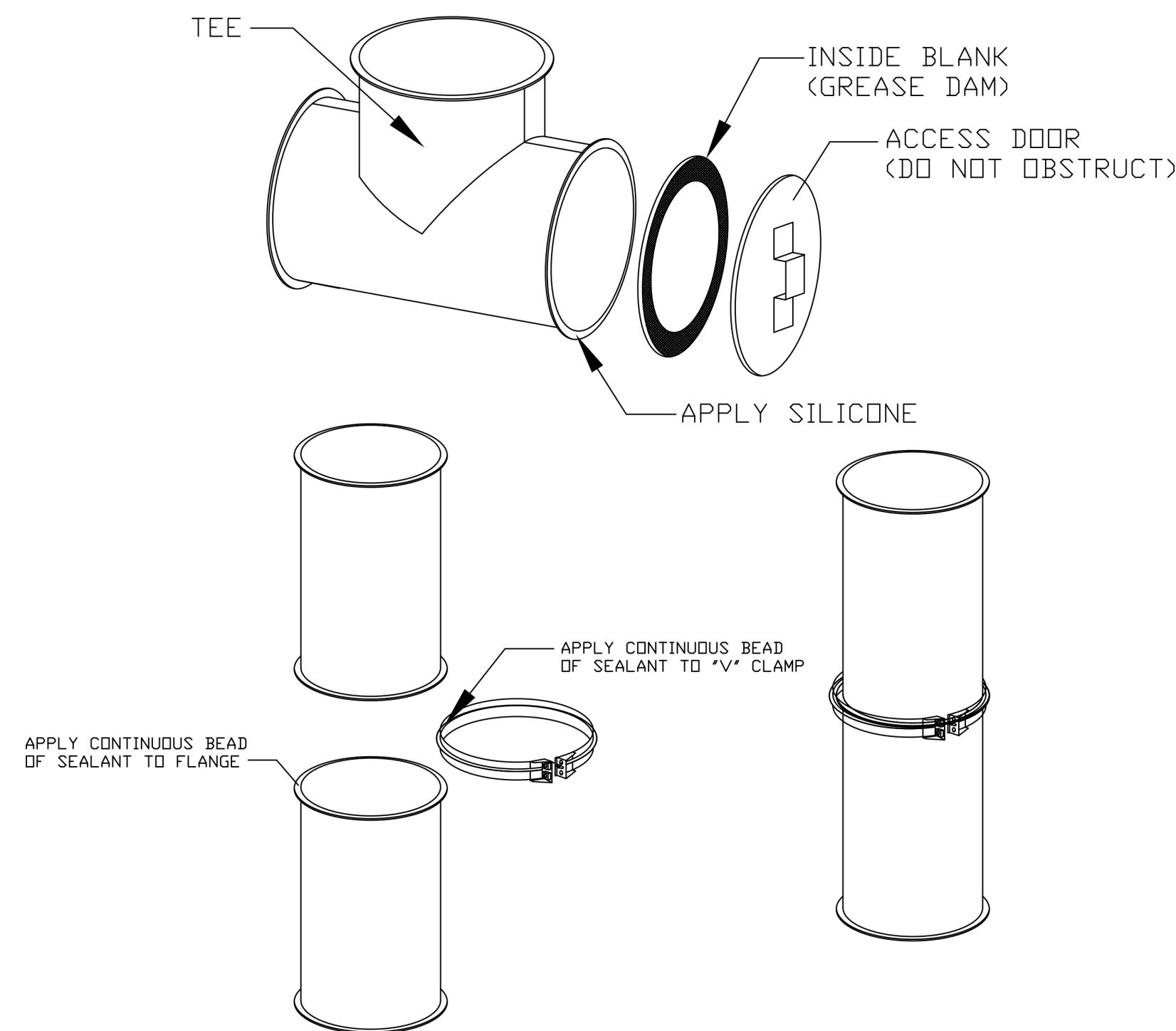


"TYPICAL" HOOD SECTION VIEW
DRAWING NOT TO SCALE



DUCT TO FAN ADAPTER PLATE (NO WELDING)

*** NOTE: CAPTIVEAIRE UTILITY SET FANS ARE ALSO
COMPATIBLE WITH NO-WELD CONNECTIONS FOR
CAPTIVEAIRE FACTORY GREASE EXHAUST DUCT**



GREASE DUCT SPECIFICATION

Furnish single-wall, factory built, grease duct for use with Type I kitchen hoods, which conforms to the requirements of NFPA-96. Products shall be ETL listed to UL-1978 for venting air and grease vapors from commercial cooking operations as described in NFPA-96.

The duct wall shall be constructed of .036 thick type 430 stainless steel and be available in diameters 8" through 24". All supports, fan adapters, hood connections, fittings and expansion joints required to install grease duct shall be included.

Roof penetrations shall comply with listed clearance to combustibles, see "Clearance to Combustibles" guide for details. The grease duct will terminate at the fan adapter plate, will be fully welded to the fan adapter plate and the fan adapter plate will be fastened to the curb using a suitably sized fastener provided by others; see page 12 of the "Installation, Operation and Maintenance Manual" for details.

Grease duct joints shall be held together by means of formed vee clamps and sealed with 3M Fire Barrier 2000+. Screws used to secure the vee clamps shall be of the hex-head type with flanged stops and tapered "lead in" threads for easy starting. Nuts shall be retained by means of a free-floating cage to allow easy alignment.

Single-Wall Grease Duct shall be installed in accordance with the manufacturer's "Installation, Operation and Maintenance Manual", ETL listing and state and local codes. Grease duct installed outside of the building shall be protected against accidental damage or vandalism. Support vertically installed grease duct from the building structure using rigid structural supports. Anchor supports to the structure by welding or bolting steel expansion anchors or concrete inserts. Support horizontally installed grease duct from the building structure using above method or use Duct Mate, Wire Rope & Clutchers, part numbers WR20 & CL20. 1/2" Threaded rod and saddles may also be used for the support of horizontal grease duct. Fans shall be supported independently from the grease duct sections. Protect grease duct from twisting or movement caused by fan torque or vibration.

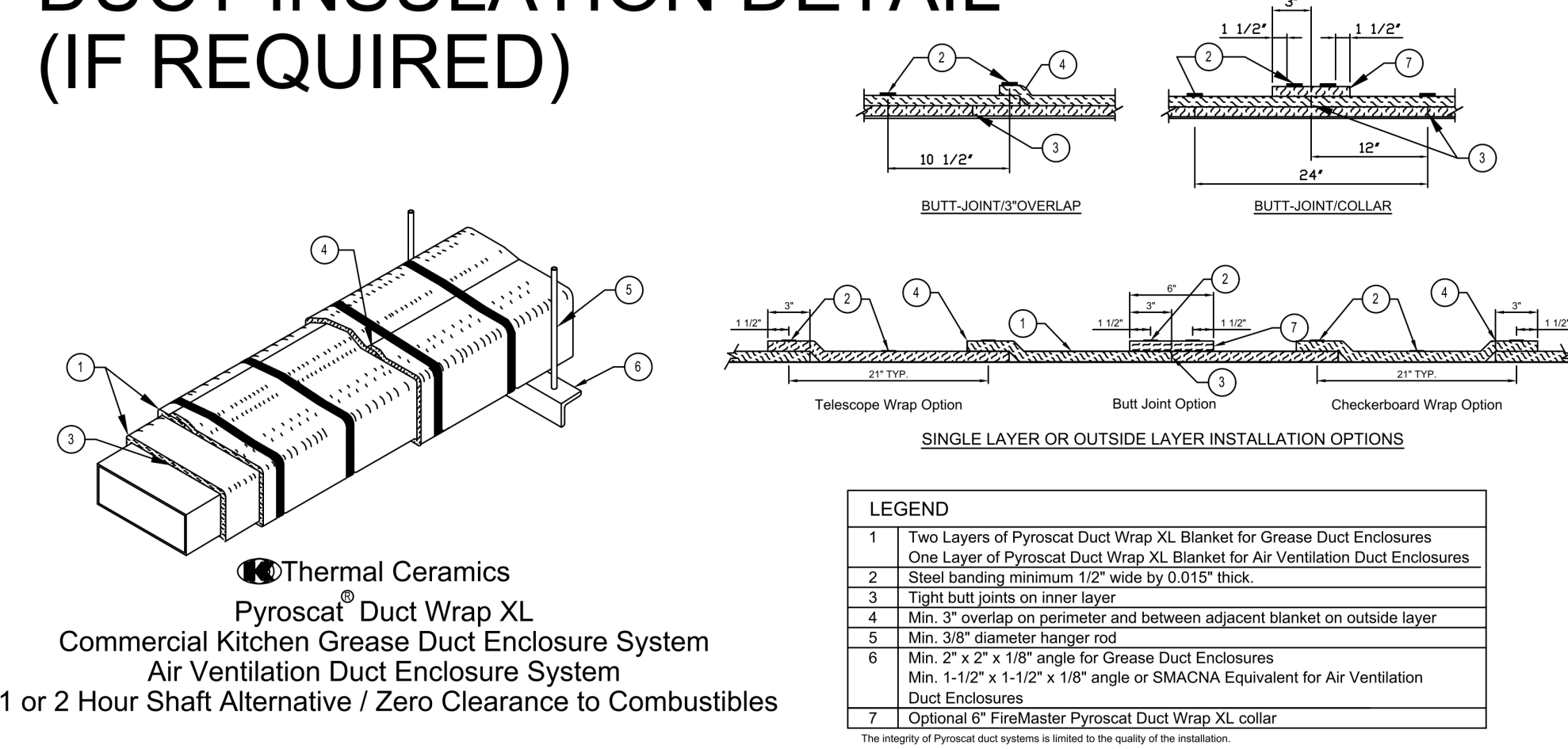
CLEARANCE TO COMBUSTIBLES			
DIAMETER	COMBUSTIBLES	LIMITED COMBUSTIBLES	NON COMBUSTIBLES
8" - 24"	18"	3"	0"

HORIZONTAL CLEANOUT MAXIMUM SPACING		HORIZONTAL SUPPORT MAXIMUM SPACING (FT)	
DUCT DIAMETER	MAXIMUM SPACING	DUCT DIAMETER	MAXIMUM SPACING (FT)
8" - 24"	12"	8" - 24"	10'

VERTICAL CLEANOUT MAXIMUM SPACING		VERTICAL SUPPORT MAXIMUM SPACING (FT)	
DUCT DIAMETER	MAXIMUM SPACING	DUCT DIAMETER	MAXIMUM SPACING (FT)
8" - 24"	ONE PER FLOOR	8" - 24"	10'

**CONTACT CAPTIVEAIRE FOR A
CUSTOMIZED DUCT SUBMITTAL
EMAIL: reg32@captiveaire.com
PHONE: (800) 988-0881**

DUCT INSULATION DETAIL (IF REQUIRED)



REVISIONS	
DESCRIPTION	DATE

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 www.econair.com
 Maryland Office
 PHONE: (800) 988-0881 FAX: 9192275931 EMAIL: aruno.meza@econair.com

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 SHEET NO. 8



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9-10-24	PERMIT/BID ADDENDUM
10-28-24	IFC SET (REVISION 2)

REVISIONS

DATE	DESCRIPTION
1	9/10/24 REVISION 1

OWNER/CLIENT

CAVA

PROJECT
MARLTON

349 ROUTE 70 West,
MARLTON NJ 08053

DRAWING TITLE
ECON.AIRE

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Job Number: 222120
Checked By: REP
Drawn By: SJH
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