

# OPEN KITCHEN COOKLINE 1 (C114)

## PHASE 1

HOOD INFORMATION - JOB#4879395

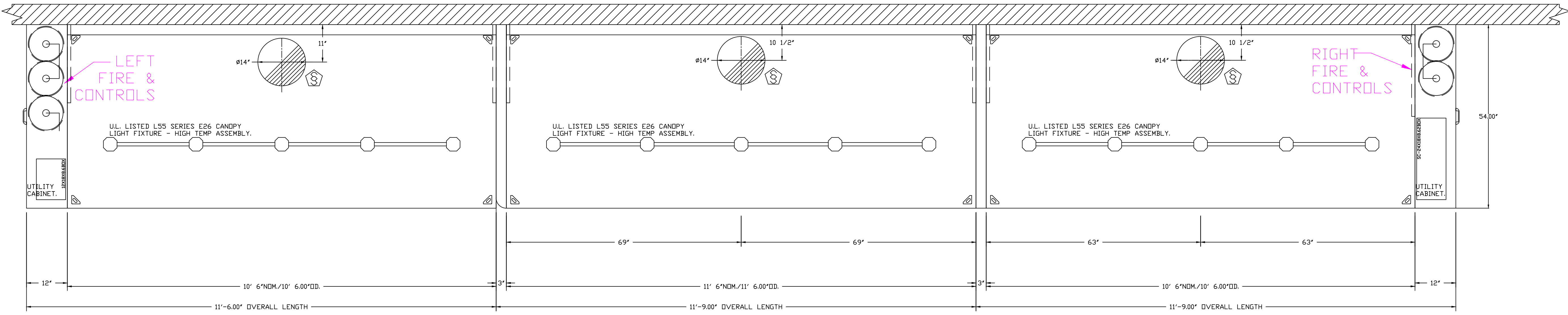
HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)				TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG				
										WIDTH	LENG	HEIGHT	DIA			CFM	VEL	SP	END TO END	RDW
4	HD5-CT114	5424 ND-2	CAPTIVEAIRE	10' 6"	600 DEG	I	HEAVY	175	1838			4'	14"	1838	1719	-0.902"	0	430 SS WHERE EXPOSED	ALONE	ALONE
5	HD6-CT114	5424 ND-2	CAPTIVEAIRE	11' 6"	600 DEG	I	HEAVY	165	1898			4'	14"	1898	1775	-0.926"	0	430 SS WHERE EXPOSED	ALONE	ALONE
6	HD7-CT114	5424 ND-2	CAPTIVEAIRE	10' 6"	600 DEG	I	HEAVY	175	1838			4'	14"	1838	1719	-0.902"	0	430 SS WHERE EXPOSED	ALONE	ALONE

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH UL 710 AND NFPA 96 AND ARE RECOGNIZED BY ONE OR MORE OF THE FOLLOWING:

ETL SANITATION LISTED  
ETL LISTED FILE# 3054804-001

HOOD SYSTEM IS FABRICATED & DESIGNED PER UL-710 STANDARDS

CAPTIVE-AIRE SYSTEMS ARE PRE-ENGINEERED SYSTEMS & ARE LISTED ETL/UL TO MEET ALL GREASE SYSTEMS (TYPE I) APPLICATIONS. THESE DRAWINGS ARE PROVIDED FOR REFERENCE TO H-SHEETS.

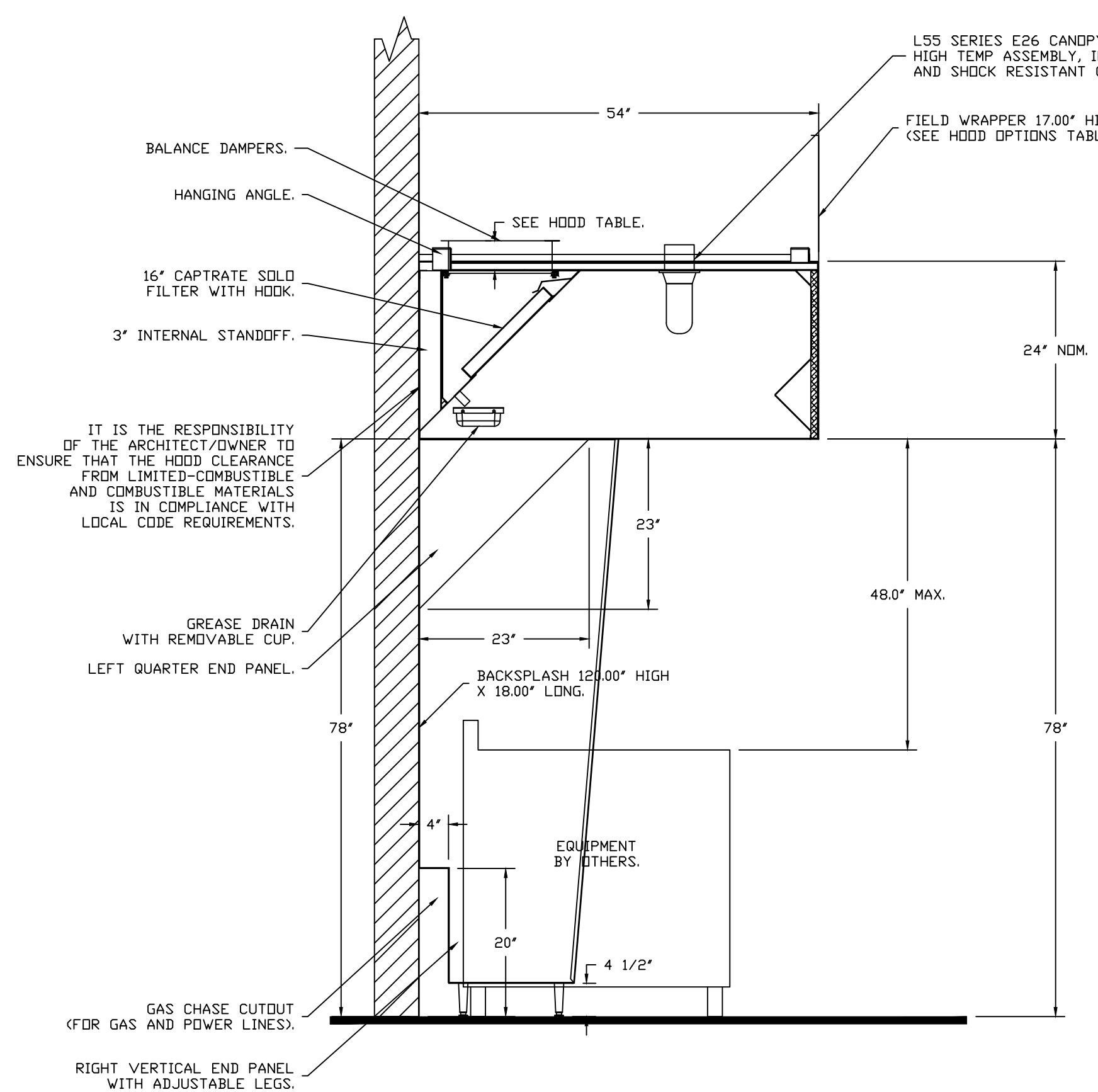


PLAN VIEW - HOOD # (HD7-CT114)  
10' 6.00" LONG 5424ND-2

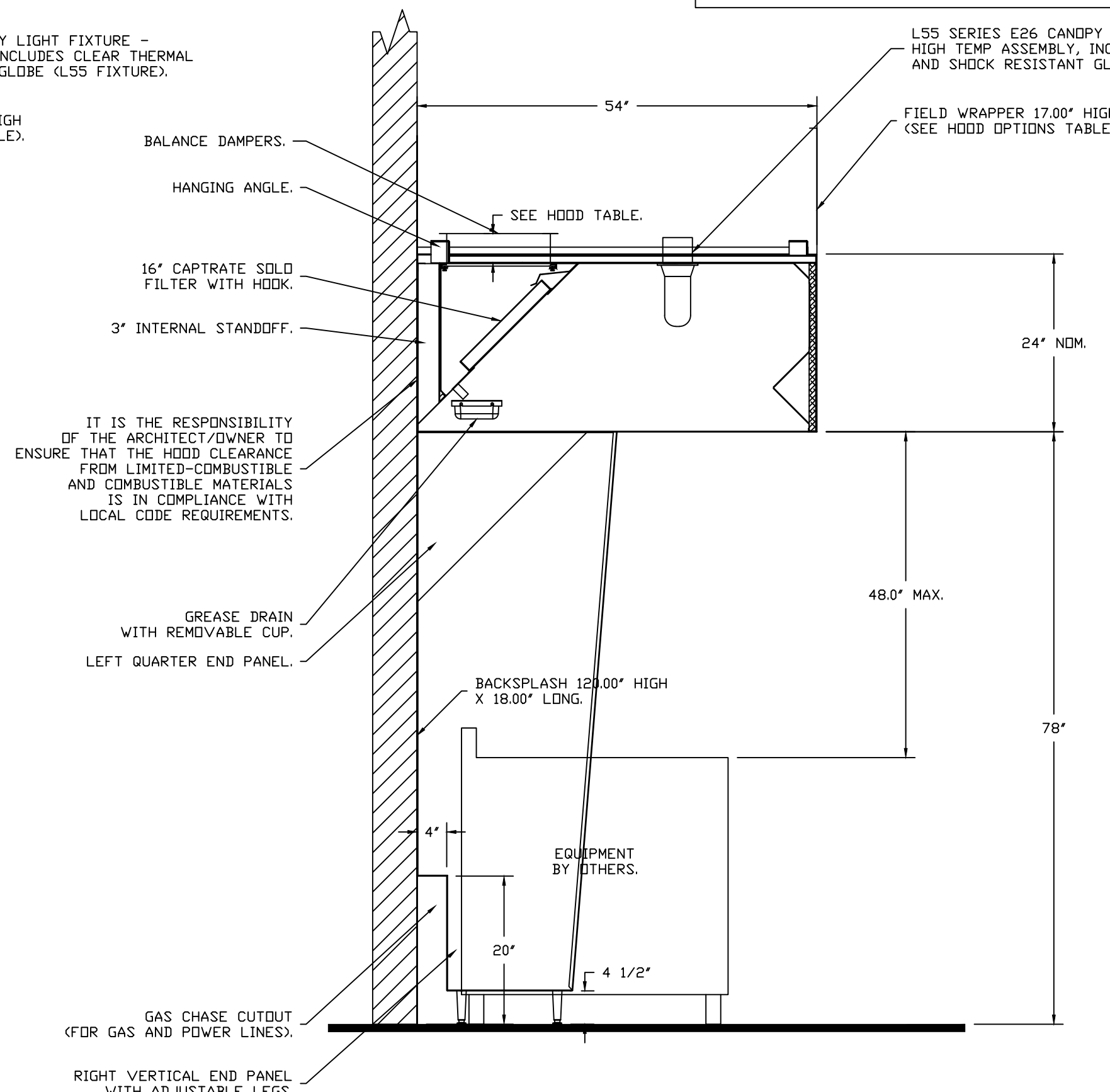
PLAN VIEW - HOOD # (HD6-CT114)  
11' 6.00" LONG 5424ND-2

PLAN VIEW - HOOD # (HD5-CT114)  
10' 6.00" LONG 5424ND-2

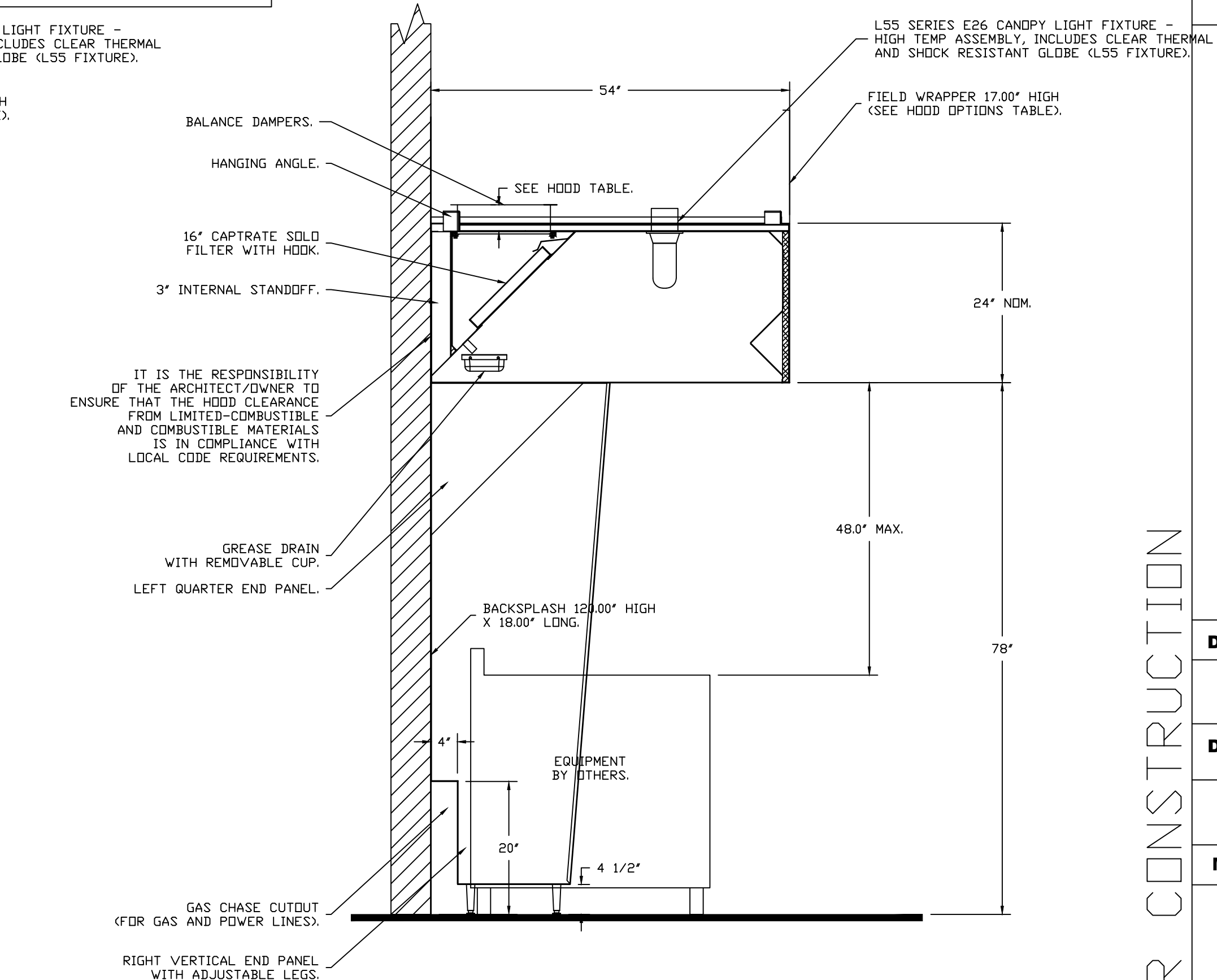
HOODS HAVE (1) EXHAUST FAN THAT OPERATES ALL (3) HOODS. THE FAN IS WALL MOUNTED ON BACK OF BUILDING. THE OUTSIDE AIR REQUIRED TO MAKE UP FOR THE EXHAUST SYSTEM IS TIED INTO THE RTU-DOAS THAT SERVES THIS AREA & PROVIDES THE CONDITIONED SUPPLY AIR THROUGH AIR DEVICES WITHIN THE SPACE.



SECTION VIEW - MODEL 5424ND-2  
HOOD - #7 (HD 7-CT114)



SECTION VIEW - MODEL 5424ND-2  
HOOD - #6 (HD 6-CT114)



SECTION VIEW - MODEL 5424ND-2  
HOOD - #5 (HD 5-CT114)

**REVISIONS**

DESCRIPTION	DATE

**CAPTIVE**  
Air Solutions  
www.captiveaire.com

1329 East Kemper Rd., Ste. 4210, Cincinnati, OH, 45246 PHONE: (513) 860-5555 EMAIL: reg121@captiveaire.com

FOR CONSTRUCTION

6888 KITCHENS HDS-Arcade  
32 South Ludlow Street,  
Dayton, OH, 45402

DATE: 1/5/2023  
DWG.#: 4879395  
DRAWN BY: jcirilli  
SCALE: 3/4" = 1'-0"  
MASTER DRAWING

SHEET NO. 1

# OPEN KITCHEN COOKLINE 2 (C114)

HOOD INFORMATION - JOB#4879395

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)					TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG			
										WIDTH	LENG	HEIGHT	DIA	CFM			VEL	SP	END TO END	ROW
7	HD8-CT114	5424 ND-2	CAPTIVEAIRE	10' 6"	600 DEG	I	HEAVY	175	1838			4'	14"	1838	1719	-0.902"	0	430 SS WHERE EXPOSED	ALONE	ALONE
8	HD9-CT114	5424 ND-2	CAPTIVEAIRE	11' 6"	600 DEG	I	HEAVY	165	1898			4'	14"	1898	1775	-0.926"	0	430 SS WHERE EXPOSED	ALONE	ALONE
9	HD10-CT114	5424 ND-2	CAPTIVEAIRE	10' 6"	600 DEG	I	HEAVY	175	1838			4'	14"	1838	1719	-0.902"	0	430 SS WHERE EXPOSED	ALONE	ALONE

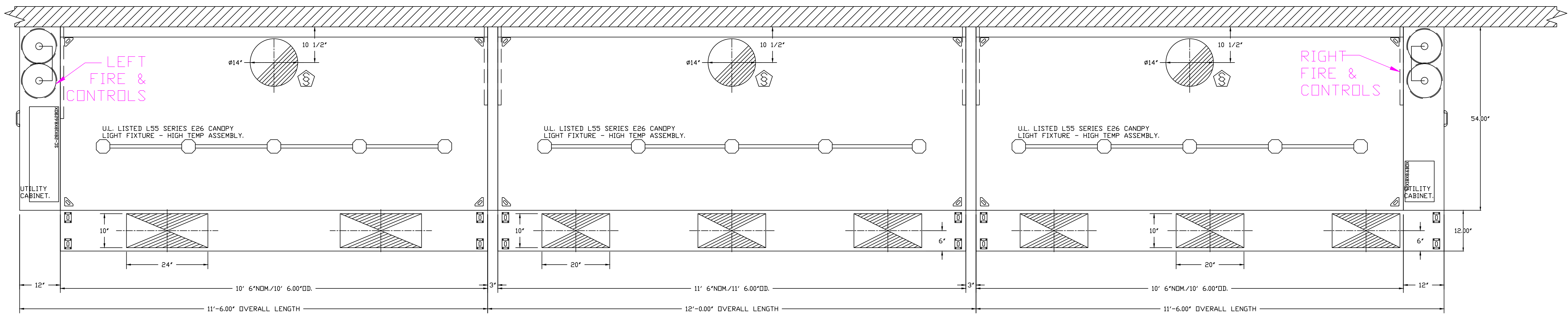
PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				
							WIDTH	LENG	DIA	CFM	SP
11	PSP (HD8)	Front	138'	12'	6'	MUA	10"	20"		485	0.156"
						MUA	10"	20"		485	0.156"
12	PSP (HD 9)	Front	126'	12'	6'	MUA	10"	24"		661	0.200"
						MUA	10"	20"		485	0.156"
13	PSP (HD 10)	Front	138'	12'	6'	MUA	10"	20"		485	0.156"
						MUA	10"	20"		485	0.156"

CAPTIVE-AIRE SYSTEMS ARE PRE-ENGINEERED SYSTEMS & ARE LISTED ETL/UL TO MEET ALL GREASE SYSTEMS (TYPE I) APPLICATIONS. THESE DRAWINGS ARE PROVIDED FOR REFERENCE TO H-SHEETS.

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ETL SANITATION LISTED  
ETL LISTED FILE# 3054804-001  
HOOD SYSTEM IS FABRICATED & DESIGNED PER UL-710 STANDARDS

## PHASE 1

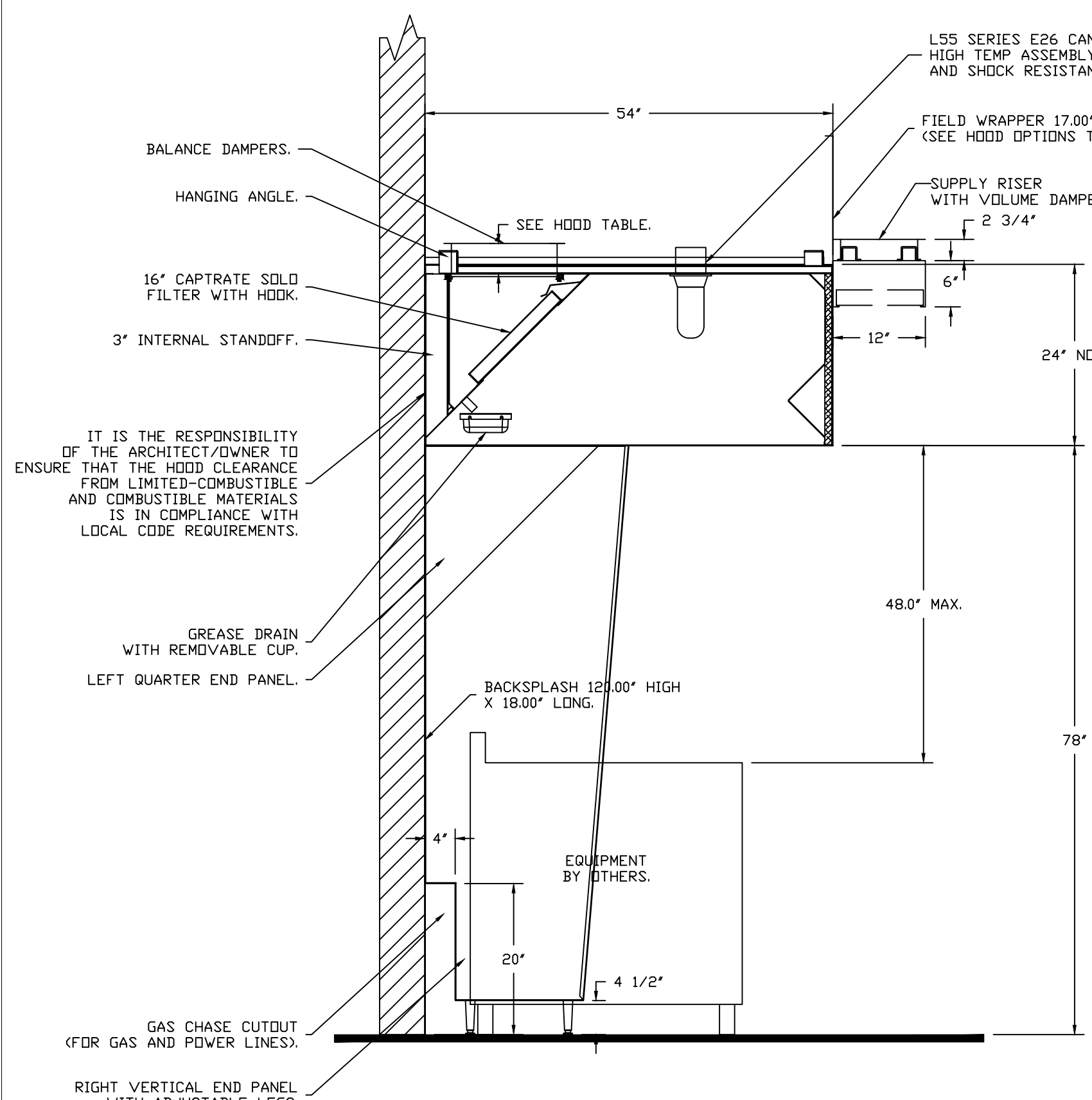


PLAN VIEW - HOOD # (HD8-CT114)  
10' 6.00" LONG 5424ND-2

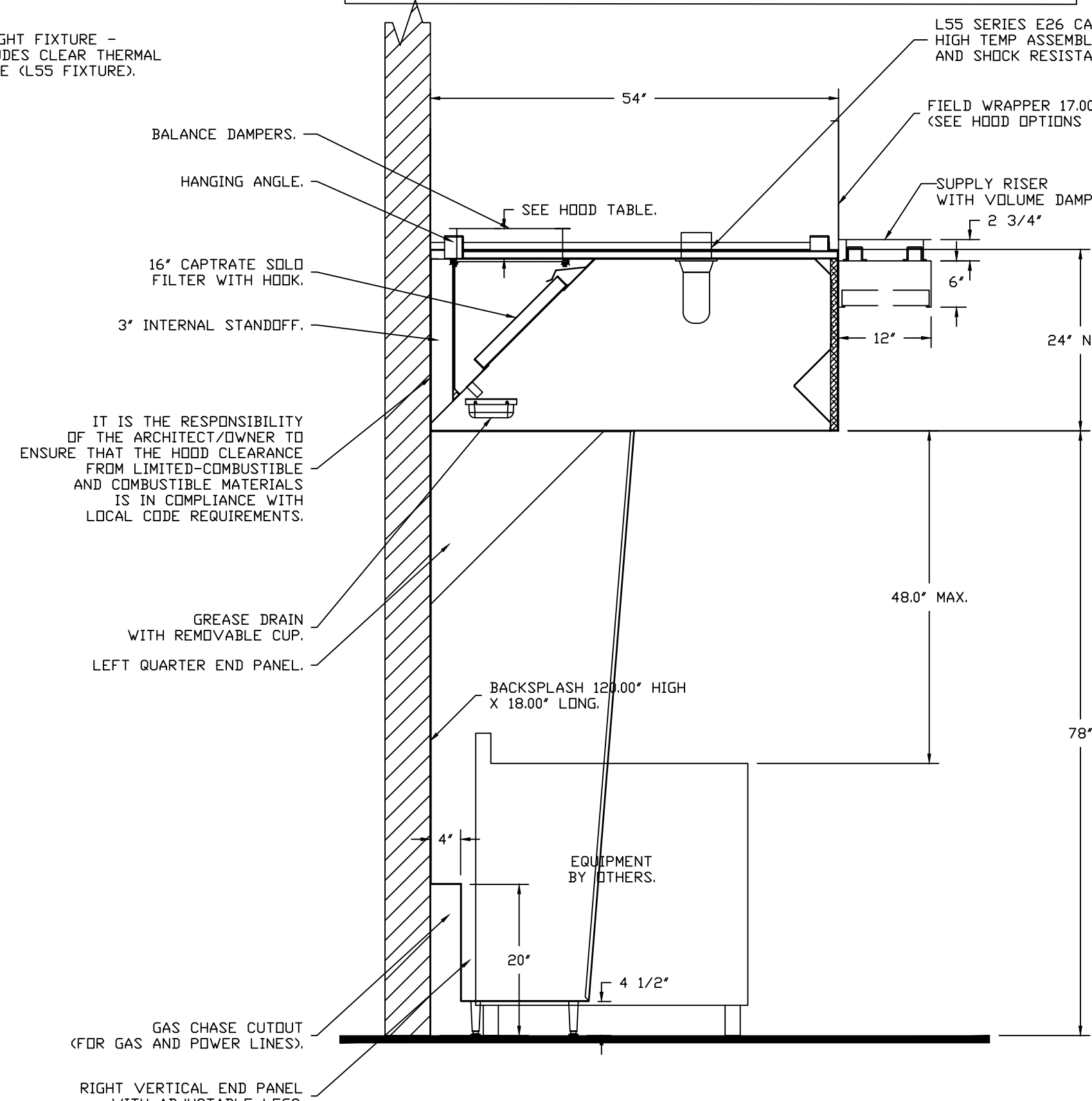
PLAN VIEW - HOOD # (HD9-CT114)  
11' 6.00" LONG 5424ND-2

PLAN VIEW - HOOD # (HD10-CT114)  
10' 6.00" LONG 5424ND-2

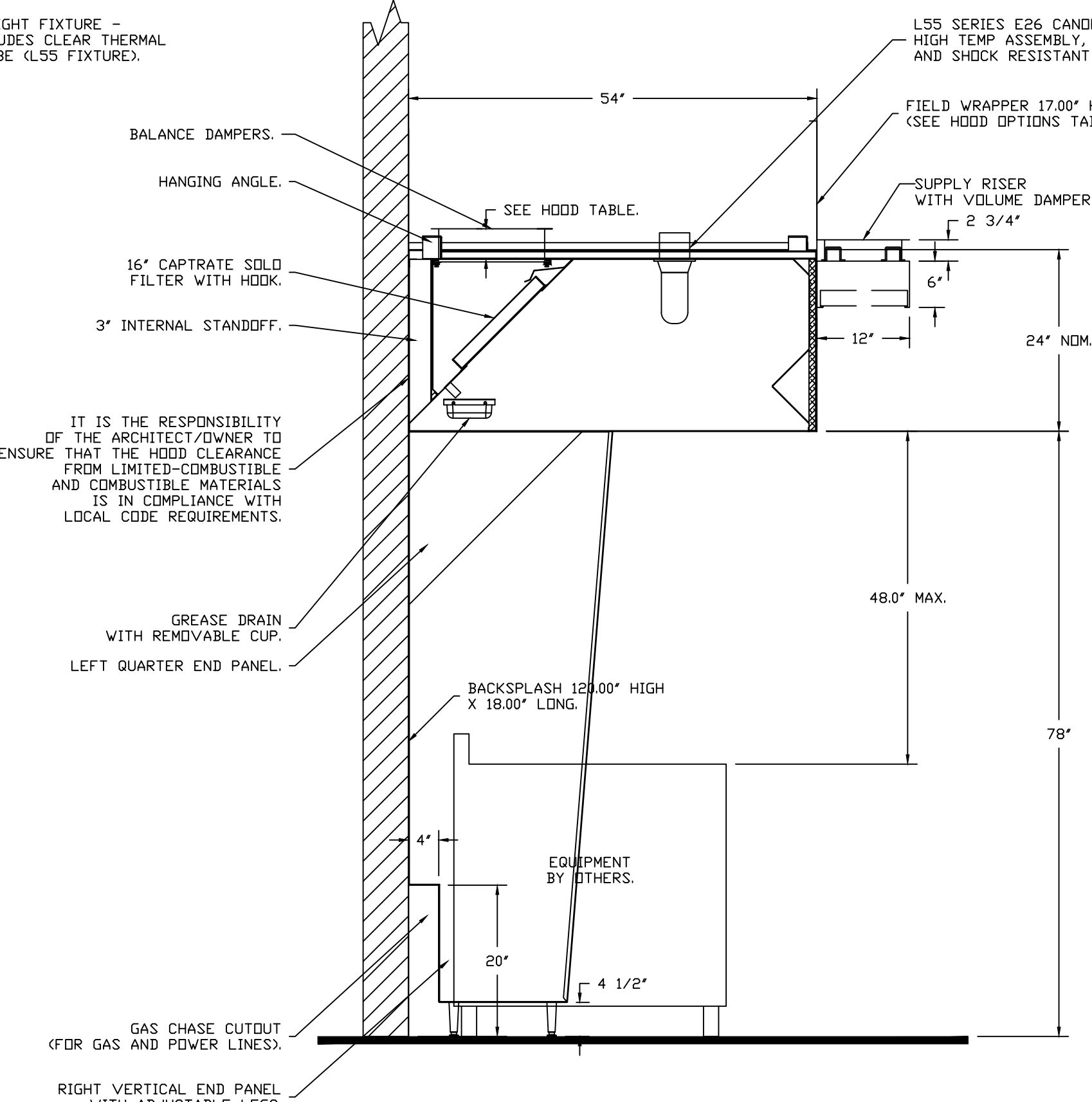
HOODS HAVE (1) EXHAUST FAN THAT OPERATES ALL (3) HOODS. THE FAN IS WALL MOUNTED ON BACK OF BUILDING. THE HOODS HAVE A MUA UNIT THAT SERVES HOODS FOR COOKLINE 1 HOODS 8, 9, & 10 ONLY, THE MUA UNIT IS INLINE (ABOVE COOLERS).  
FINALLY THERE IS A QTY (2) DOAS SYSTEM THAT PROVIDES THE REMAINING OUTSIDE AIR & ALSO PROVIDE CONDITIONING TO SPACE AND COMFORT.



SECTION VIEW - MODEL 5424ND-2  
HOOD - #8 (HD 8-CT114)



SECTION VIEW - MODEL 5424ND-2  
HOOD - #9 (HD 9-CT114)



SECTION VIEW - MODEL 5424ND-2  
HOOD - #10 (HD 10-CT114)

**REVISIONS**

NO.	DESCRIPTION	DATE

**CAPTIVE**  
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DWG.#: 4879395  
DRAWN BY: jcirilli  
SCALE: 3/4" = 1'-0"  
MASTER DRAWING

SHEET NO. 2

# SCULLERY POD A (C-116)

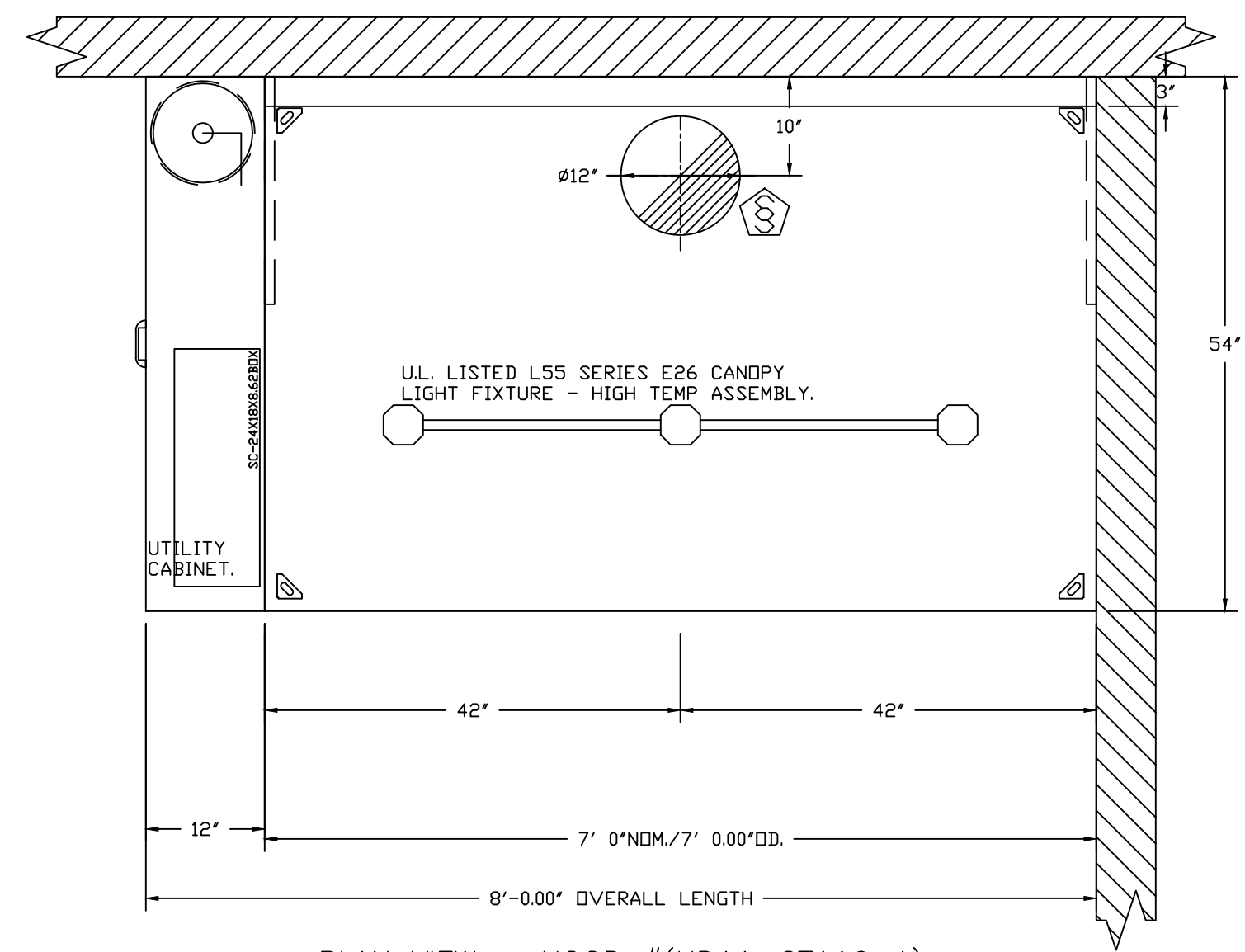
## PHASE 1

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ETL SANITATION LISTED  
ETL LISTED FILE# 3054804-001

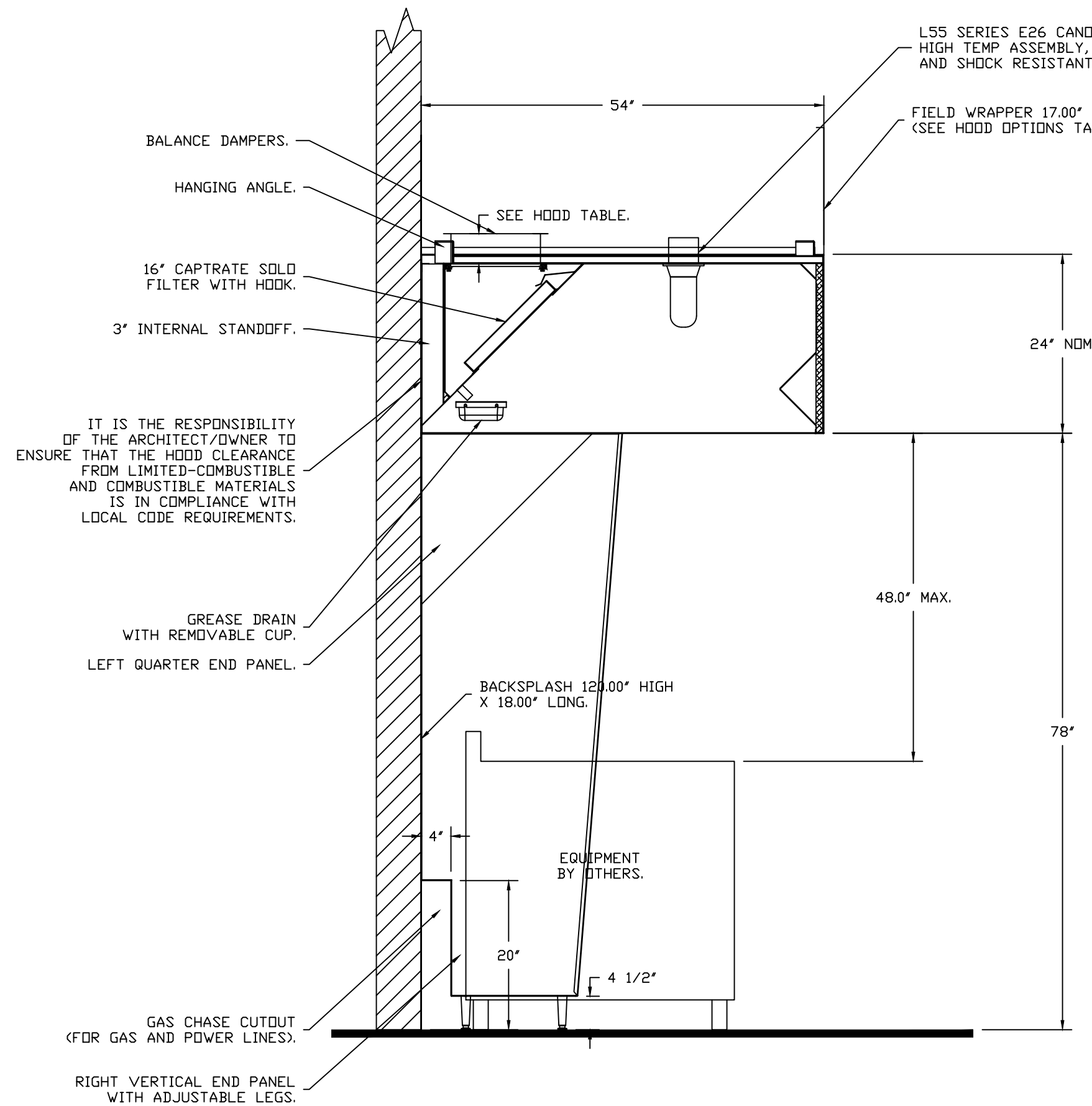
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PLAN VIEW - HOOD # (HD11-CT116-A)  
7'-0.00" LONG 5424ND-2

POD-A



SECTION VIEW - MODEL 5424ND-2  
HOOD - #11 (HD 11-CT116)

### HOOD INFORMATION - JOB#4879395

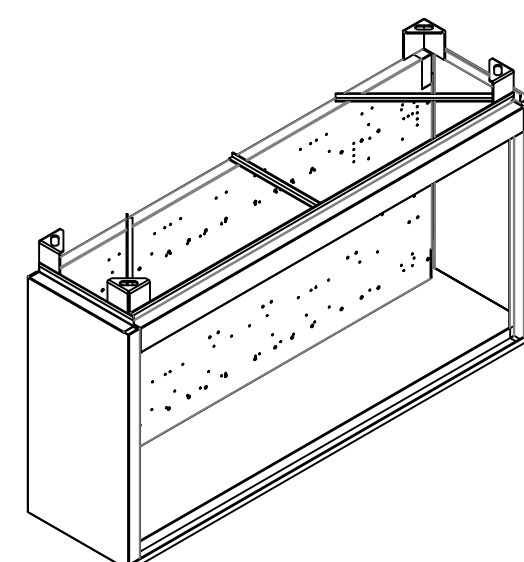
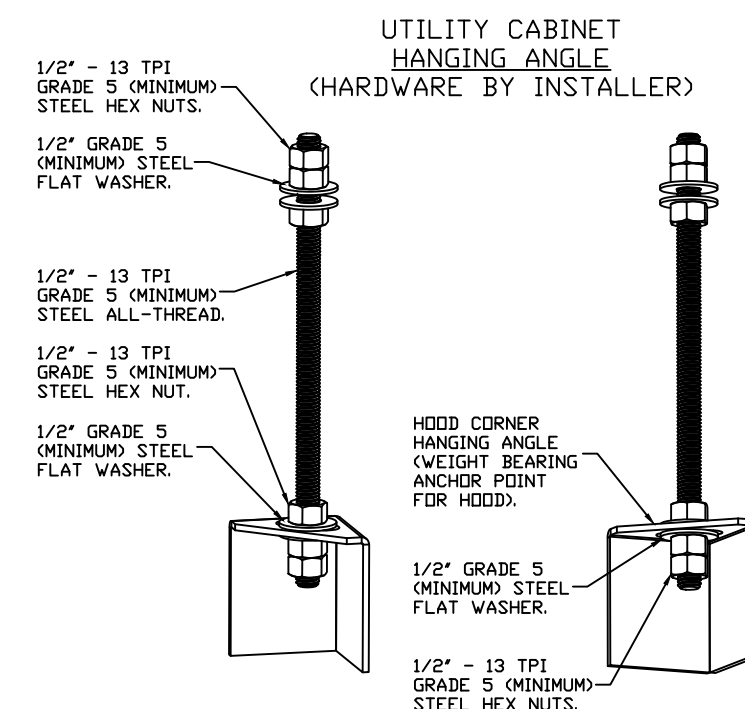
HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)				TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG				
										WIDTH	LENG	HEIGHT	DIA			CFM	VEL	SP	END TO	ROW
10	HD11-CT116-A	5424 ND-2	CAPTIVEAIRE	7' 0"	600 DEG	I	HEAVY	175	1225			4'	12"	1225	1560	-0.474"	0	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD NO	TAG	OPTION
4	HD5-CT114	FIELD WRAPPER 13.00' HIGH FRONT, LEFT, RIGHT.
		BACKSPASH 78.00' HIGH X 141.00' LONG 430 SS VERTICAL.
		BACKSPASH 114.00' HIGH X 18.00' LONG 430 SS VERTICAL.
		LEFT END STANDOFF (FINISHED) 3' WIDE 54' LONG.
		BACKSPASH - OUTSIDE CORNER 114.00' HIGH X 2.00' LEG LENGTH 430 SS VERTICAL.
5	HD6-CT114	FIELD WRAPPER 13.00' HIGH FRONT.
		BACKSPASH 78.00' HIGH X 141.00' LONG 430 SS VERTICAL.
		RIGHT QUARTER END PANEL 23' TOP WIDTH, 0' BOTTOM WIDTH, 23' HIGH 430 SS.
		LEFT QUARTER END PANEL 23' TOP WIDTH, 0' BOTTOM WIDTH, 23' HIGH 430 SS.
		LEFT END STANDOFF (FIN/RND CNR) 3' WIDE 54' LONG.
6	HD7-CT114	FIELD WRAPPER 13.00' HIGH FRONT, LEFT.
		BACKSPASH 78.00' HIGH X 138.00' LONG 430 SS VERTICAL.
		BACKSPASH 114.00' HIGH X 18.00' LONG 430 SS VERTICAL.
		BACKSPASH - OUTSIDE CORNER 114.00' HIGH X 2.00' LEG LENGTH 430 SS VERTICAL.
		LEFT QUARTER END PANEL 23' TOP WIDTH, 0' BOTTOM WIDTH, 23' HIGH 430 SS.
7	HD8-CT114	FIELD WRAPPER 13.00' HIGH FRONT, LEFT, RIGHT.
		BACKSPASH 78.00' HIGH X 141.00' LONG 430 SS VERTICAL.
		BACKSPASH 114.00' HIGH X 18.00' LONG 430 SS VERTICAL.
		BACKSPASH - OUTSIDE CORNER 114.00' HIGH X 2.00' LEG LENGTH 430 SS VERTICAL.
		RIGHT QUARTER END PANEL 23' TOP WIDTH, 0' BOTTOM WIDTH, 23' HIGH 430 SS.
8	HD9-CT114	BALANCE DAMPERS.
		LEFT VERTICAL END PANEL 27' TOP WIDTH, 21' BOTTOM WIDTH, 78' HIGH INSULATED 430 SS.
		SENSOR-CV.
		FIELD WRAPPER 13.00' HIGH FRONT.
		BACKSPASH 78.00' HIGH X 144.00' LONG 430 SS VERTICAL.
9	HD10-CT114	BACKSPASH - INSIDE CORNER 78.00' HIGH X 2.00' LEG LENGTH 430 SS VERTICAL.
		BACKSPASH - INSIDE CORNER 78.00' HIGH X 2.00' LEG LENGTH 430 SS VERTICAL.
		BACKSPASH - INSIDE CORNER 38.00' HIGH X 2.00' LEG LENGTH 430 SS VERTICAL.
		BACKSPASH - INSIDE CORNER 38.00' HIGH X 2.00' LEG LENGTH 430 SS VERTICAL.
		BACKSPASH - OUTSIDE CORNER 114.00' HIGH X 2.00' LEG LENGTH 430 SS VERTICAL.
10	HD11-CT116-A	BACKSPASH - OUTSIDE CORNER 114.00' HIGH X 2.00' LEG LENGTH 430 SS VERTICAL.
		RIGHT QUARTER END PANEL 23' TOP WIDTH, 0' BOTTOM WIDTH, 23' HIGH 430 SS.
		BALANCE DAMPERS.
		SENSOR-CV.
		FIELD WRAPPER 13.00' HIGH FRONT, LEFT.

### WALL-MOUNT UTILITY CABINET 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" - 13 TPI 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 UTILITY CABINET HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

CABINET TO BE HUNG BY HOOD INSTALLER. SEE UTILITY CABINET SCHEDULE FOR CABINET SIZE.



**REVISIONS**

DESCRIPTION	DATE

**CAPTIVE**

Air Solutions

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**FOR CONSTRUCTION**

**DATE:** 1/5/2023

**DWG.#:** 4879395

**DRAWN BY:** jcirilli

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

**MASTER DRAWING**

**SHEET NO.** 3

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KEF2 TO HANDLE PHASE 1 – POD A HOOD FOR NOW & TO BE SET TO 1800 CFM. FUTURE DESIGN WILL ACCOMMODATE INCREASE EXHAUST WITH ADDITIONAL HOOD.

# CT116 (HD11) POD A

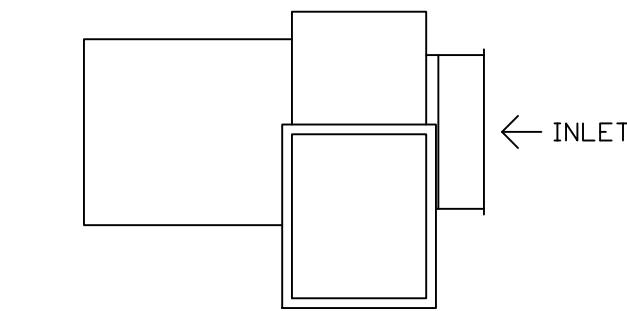
## EXHAUST FAN INFORMATION – JOB#4879395

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MDTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
2	KEF 2	1	USB124DD-RM	CAPTIVEAIRE	1750	2,500	585	DDP,PREMIUM	5,000	2,7750	3	208	15.8	1102 FPM	747	23

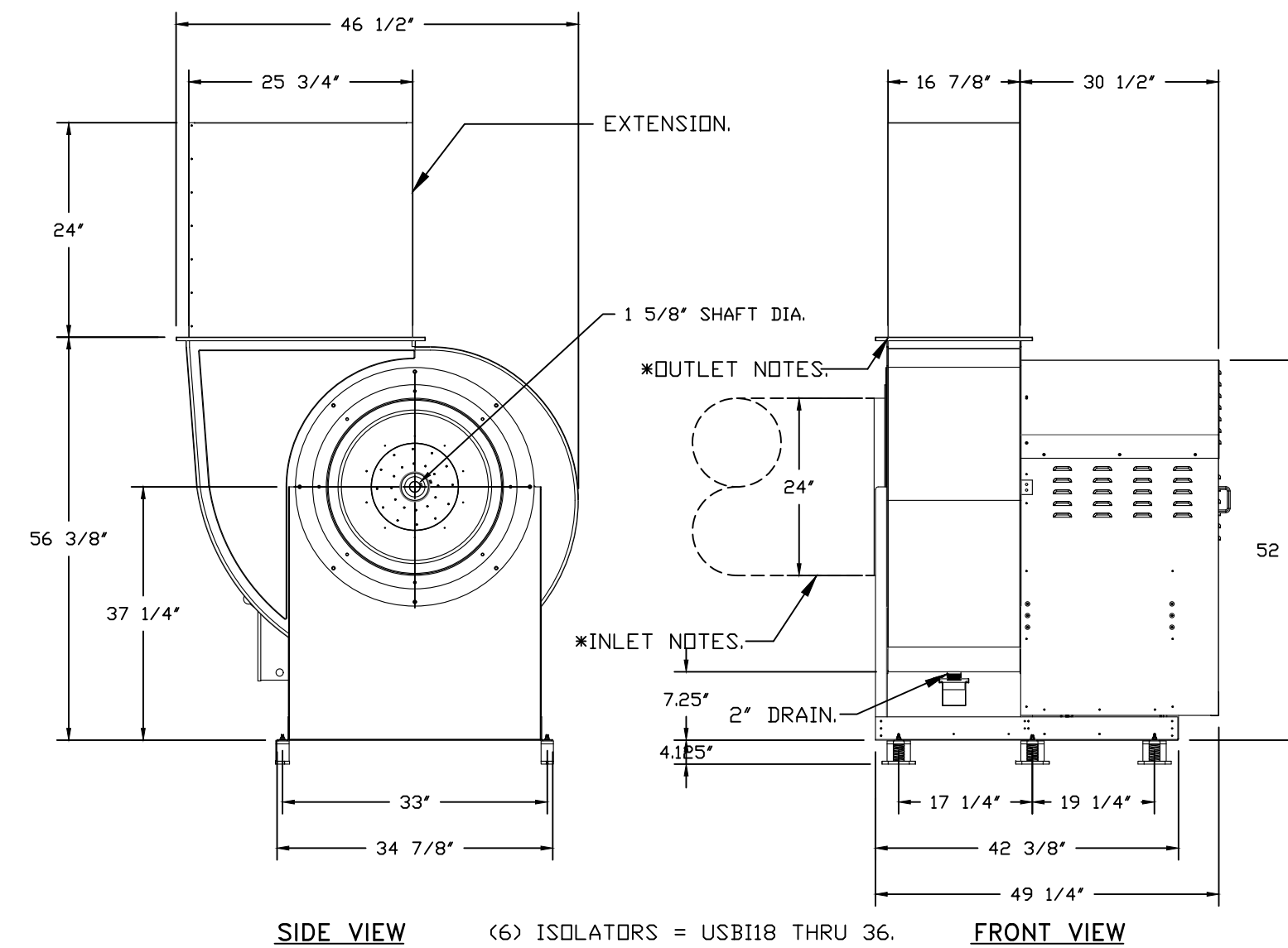
FAN #2 USB124DD-RM-S – EXHAUST FAN (KEF 2)

CORNER WEIGHTS ARE CALCULATED BASED ON VERTICAL DISCHARGE. SUPPORT DUCT PROPERLY BEFORE FAN TO ENSURE CORNER WEIGHTS ARE NOT AFFECTED.

UNIT PLAN VIEW CORNER WEIGHTS:  
 (164 LBS) (134 LBS)



(261 LBS) (187 LBS)



# PHASE 1

### FEATURES:

- ROOF MOUNTED FANS.
- UL705.
- UL762 AND ULC-S645 (RESTAURANT MODEL).
- HIGH HEAT OPERATION DIRECT DRIVE 350°F (176°C).
- HEAT SLINGER.
- NEMA 3R SAFETY DISCONNECT SWITCH.
- GREASE CLASSIFICATION TESTING.
- 2" DRAIN.
- MOTOR WEATHER COVER.
- FULLY SEALED SCROLL HOUSING.
- SCROLL ACCESS DOOR.
- FLANGE 2".

### OPTIONS:

- B124 – INLET SERVICE DUCT CONNECTION. USED TO CONNECT TO STANDARD 24" GREASE DUCT OR FIELD WELDED DUCT. INCLUDES (2) 7" RISERS BOLTED TO STANDARD INLET RISER. UTILITY SET GREASE CUP.
- B124 – 24" DISCHARGE EXTENSION.
- BI – DISCHARGE ORIENTATION VERTICAL UPPER LEFT – CW INLET SIDE.
- B124 – INLET CONNECTION STANDARD 24" FLANGED GREASE DUCT. UTILITY SET – SPRING VIBRATION ISOLATORS – B124 THRU B130 / EQUIVALENT SIZED UTILITY SET / SIF 24-30 + FILTER BANK – INDDOR/OUTDOOR USE. 2 YEAR PARTS WARRANTY.

NORMAL TEMPERATURE TEST DIRECT DRIVE EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 350°F (176°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

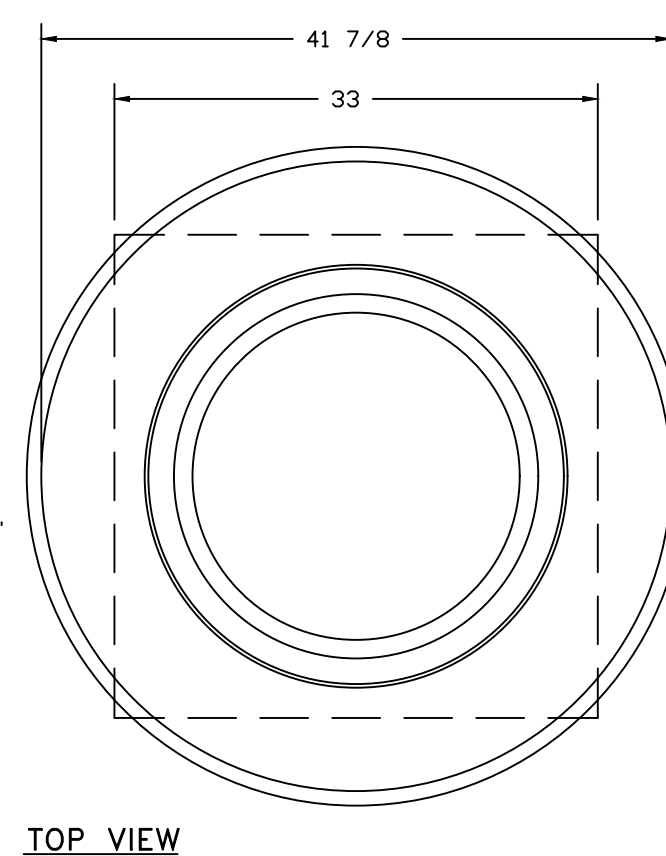
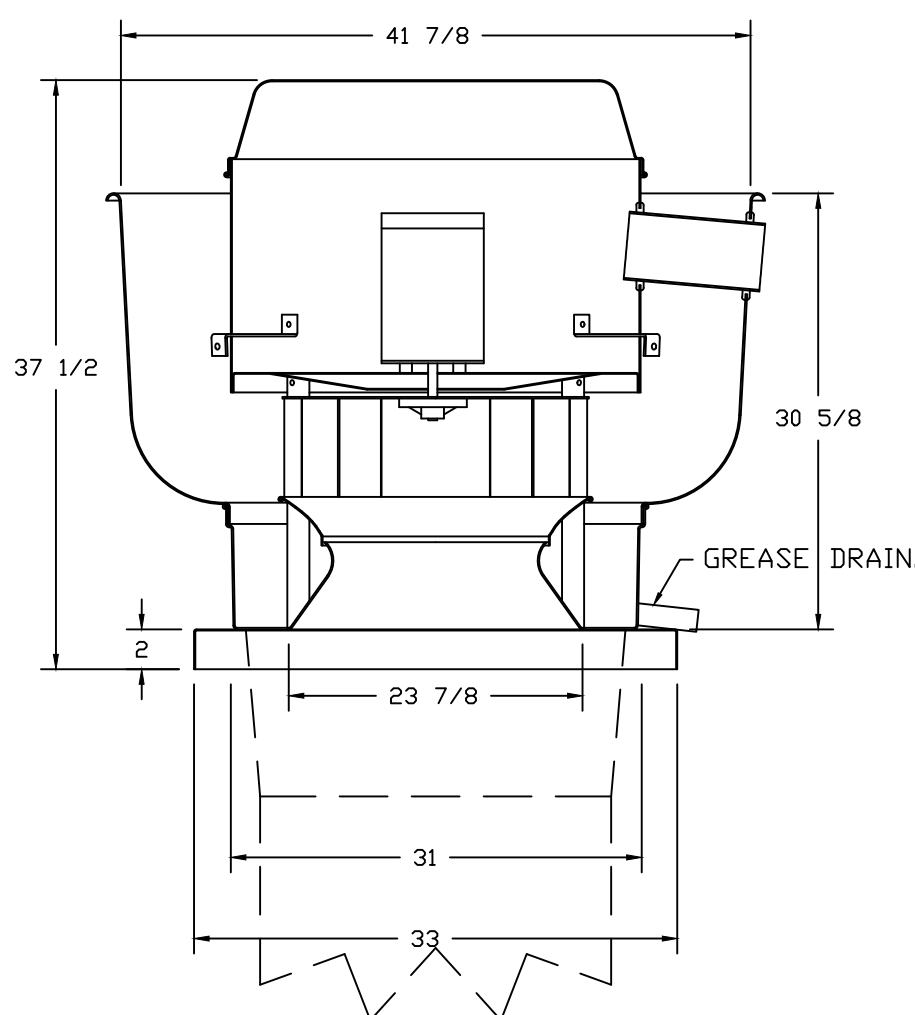
\* INLET/OUTLET NOTES:  
 LENGTH OF THE STRAIGHT DUCT ON THE INLET AND OUTLET TO BE 3 TIMES THE EQUIVALENT DUCT DIAMETER BEFORE CONNECTING TO ANY FITTINGS SUCH AS ELBOWS TO AVOID SYSTEM EFFECT.

# CT114 (QTY 2 FANS FOR TWO SETS OF HOODS)

## EXHAUST FAN INFORMATION – JOB#4879395

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MDTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
3	KEF 3	1	DU240HFA	CAPTIVEAIRE	5514	1,600	1012	TEFC,PREMIUM	5,000	2,9830	3	208	15.5	1253 FPM	358	21
4	KEF 4	1	DU240HFA	CAPTIVEAIRE	5514	1,650	1022	TEFC,PREMIUM	5,000	3,0650	3	208	15.5	1253 FPM	358	22

FANS #3 (KEF 3), #4 (KEF 4) – DU240HFA EXHAUST FAN



### 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:

- FAN BASE CERAMIC SEAL – INSTALLED AT PLANT – FOR GREASE DUCTS.
- SHIP LOOSE DISCONNECT FOR REMOTE MOUNT.
- UPBLAST FAN WHEEL ACCESS PORT.
- INTERCEPTOR 24 – EXTENDED DRAIN FOR FIELD SUPPLIED GREASE INTERCEPTOR.
- 2 YEAR PARTS WARRANTY.

# PHASE 1

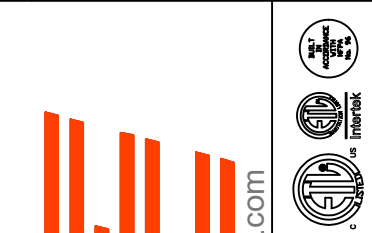
POWER TO UNIT IS 208V, 3 PHASE SYSTEM

## FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	KEF 1	YES						
2	KEF 2	YES						
3	KEF 3	YES						

## REVISIONS

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 Dayton, OH, 45402

DATE: 1/5/2023

DWG.#: 4879395

DRAWN BY: jcirilli

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

MASTER DRAWING

SHEET NO. 4

FOR CONSTRUCTION

# OPEN KITCHEN COOKLINE 2 (HDS 8,9 & 10)

## PHASE 1

### CONDENSER DETAILS

FAN UNIT NO	TAG	FAN UNIT MODEL #	CONDENSER NO	TONNAGE	VOLTAGE	PHASE	FREQUENCY	MCA	RLA	MAX FUSE SIZE	MIN WIRE SIZE	SEER
7	SF-MPU1	A2-D.500-20D-MPU	1	3	208-230	3 PHASE	60 HZ	14.5 AMPS	11.9 AMPS	20 AMPS	14 AWG	14
			2	5	208-230	3 PHASE	60 HZ	21.4 AMPS	17.4 AMPS	30 AMPS	10 AWG	14

### MUA FAN INFORMATION - JOB#4879395

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	MCA	MCCP	WEIGHT (LBS)	SDNES
7	SF-MPU1	1	A2-D.500-20D-MPU	20MF-2-MDD	A2-D.500	2900	4300	0.550	1729	DDP, PREMIUM	5.000	2.8990	3	208	15.0	18.8A	30A	1200/1300 (SIZE 2)	18.5

### COILS - JOB#4879395

FAN UNIT NO	TAG	COIL TYPE	DESIGN CFM	COOLING										
				ENTERING DB TEMP	ENTERING WB TEMP	LEAVING DB TEMP	LEAVING WB TEMP	ENTERING FLUID TEMP	LEAVING FLUID TEMP	FLUID FLOW RATE	PERCENT GLYCOL	TOTAL CAPACITY	SENSIBLE CAPACITY	LATENT CAPACITY
7	SF-MPU1	DX	4300	90.0°F	74.0°F	74.8°F	68.5°F	---	---	---	---	85.7 MBH	67.3 MBH	18.4 MBH

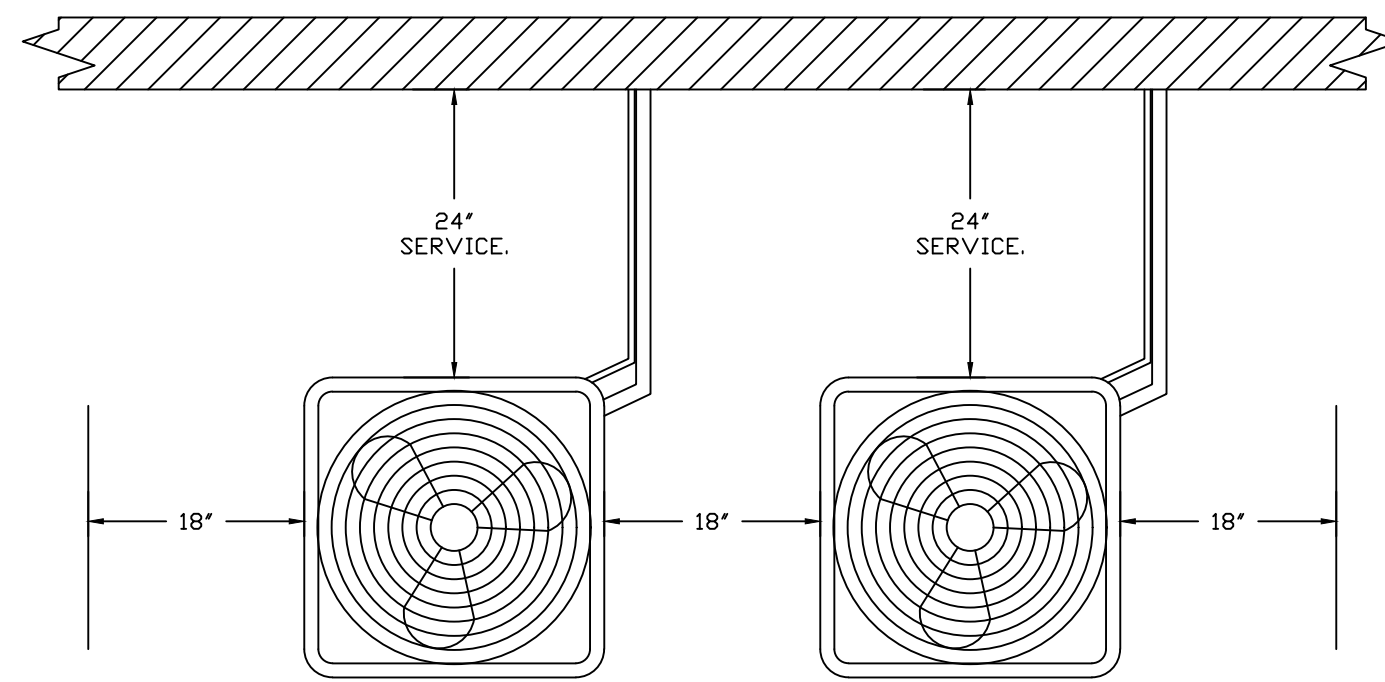
  

HEATING								
ENTERING DB TEMP	LEAVING DB TEMP	ENTERING FLUID TEMP	LEAVING FLUID TEMP	FLUID FLOW RATE	PERCENT GLYCOL	STEAM PRESSURE	TOTAL CAPACITY	SENSIBLE CAPACITY
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### GAS FIRED MAKE-UP AIR UNIT(S)

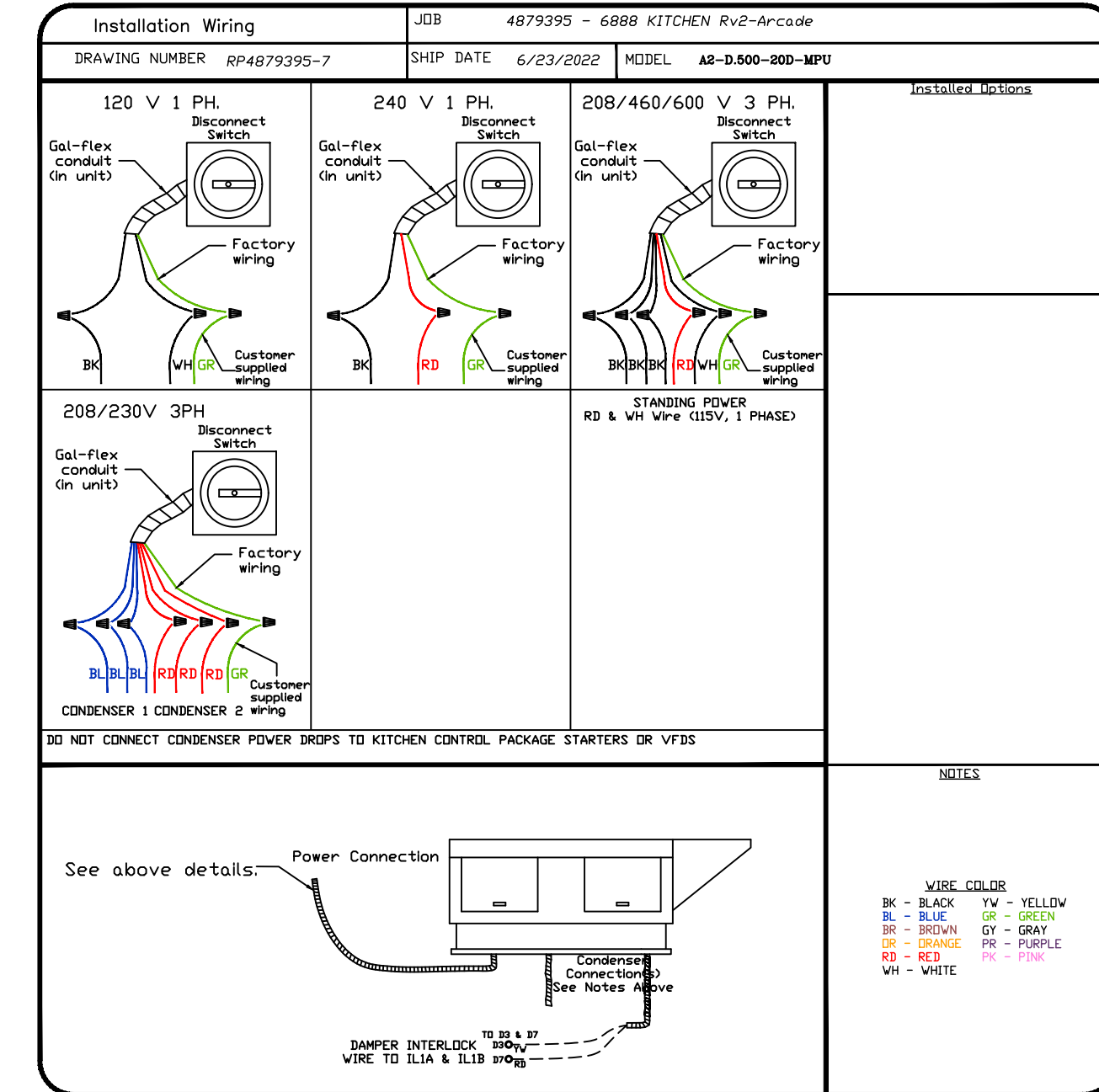
FAN UNIT NO	TAG	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
7	SF-MPU1	320853	295185	66°F	7 IN. W.C. - 14 IN. W.C.	NATURAL	92

POWER TO UNIT IS 208V, 3 PHASE SYSTEM



CONDENSER CLEARANCES  
48" CLEARANCE REQUIRED ABOVE CONDENSERS.  
(NOTE: \*\*CONDENSERS SHOWN HERE ARE NOT DRAWN AT SCALE.)

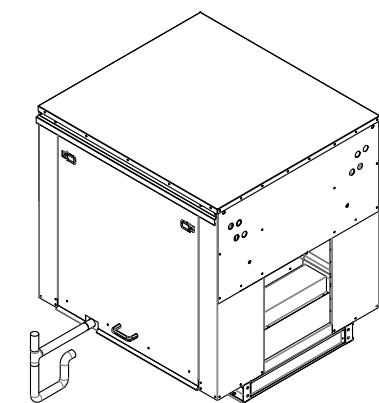
INLINE MUA UNIT (GAS/COOLED) THE CONDENSERS MOUNT OUTSIDE ON BACK EXTERIOR WALL.



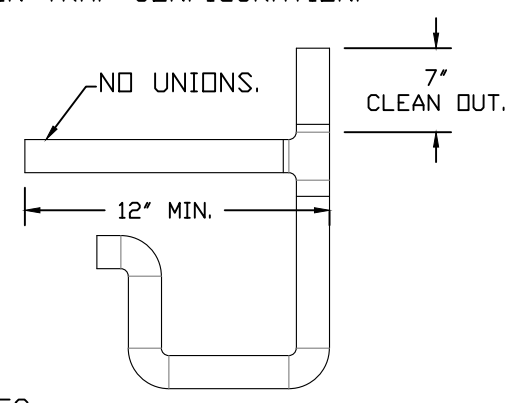
### SUPPLY SIDE HEATER INFORMATION:

WINTER TEMPERATURE = 9°F. TEMP. RISE = 66°F.  
BTUs CALCULATED OFF ACTUAL AIR DENSITY.  
OUTPUT BTUs AT ALTITUDE OF 0.0 FT. = 303195.  
INPUT BTUs AT ALTITUDE OF 0.0 FT. = 329560.  
OUTPUT BTUs AT ALTITUDE OF 739 FT. = 295185.  
INPUT BTUs AT ALTITUDE OF 739 FT. = 320853.

### TYPICAL DRAIN TRAP INSTALL

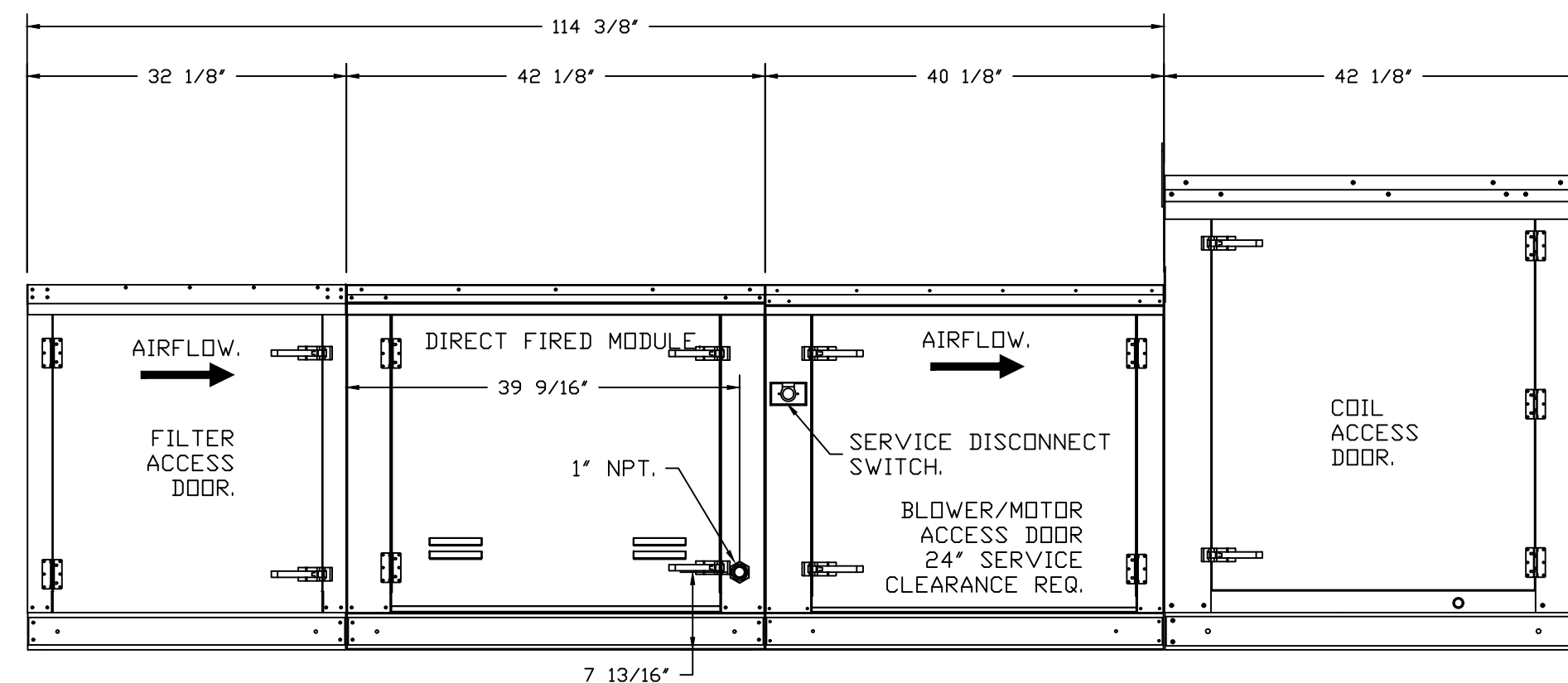
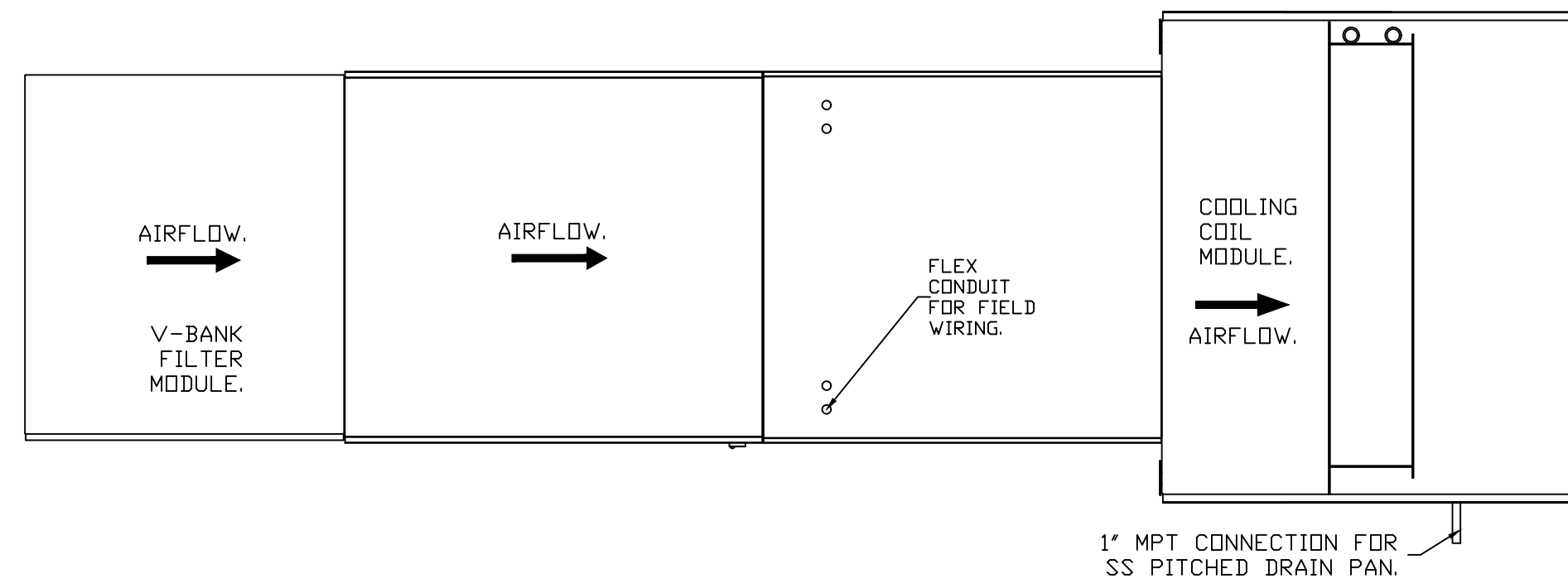
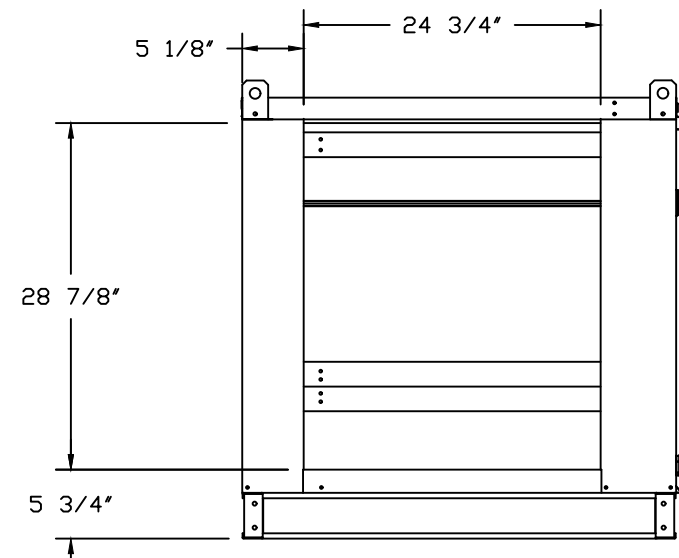


### RECOMMENDED COOLING COIL DRAIN TRAP CONFIGURATION.



### NOTES:

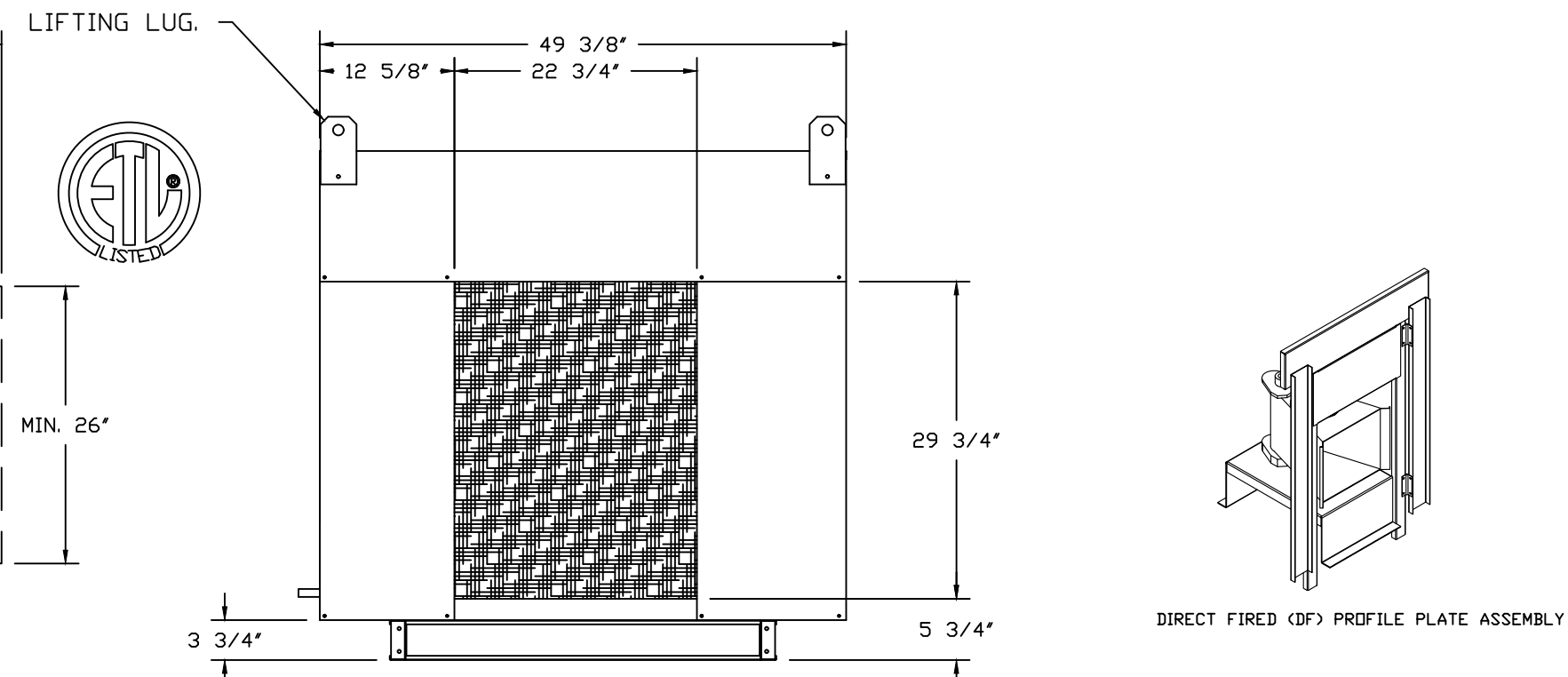
- 1" DIAMETER PVC PIPE ONLY.
- USE ONLY LOW PROFILE COUPLINGS.
- ADD CLEAN OUT AS SHOWN.



### FAN #7 A2-D.500-20D-MPU - HEATER (SF-MPU1)

1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 20" MIXED FLOW DIRECT DRIVE FAN.
2. V-BANK EZ FILTERS - INDOOR.
3. SIDE DISCHARGE - AIR FLOW LEFT -> RIGHT.
4. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE.
5. GAS PRESSURE GAUGE, -5 TO +15 INCHES W.C., 2.5" DIAMETER, 1/4" THREAD SIZE.
6. LOW FIRE START: ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
7. MOTORIZED BACK DRAFT DAMPER 22.75" X 24" FOR SIZE 2 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, LF120S ACTUATOR INCLUDED.
8. MOUNT MOTOR AND CONTROLS ON OPPOSITE SIDE OF HEATER.
9. 8 TON DUAL CIRCUIT (3/5) MODULAR PACKAGED COOLING OPTION FOR SIZE 2 DF/EH MODULAR PACKAGED UNIT. INCLUDES CONDENSER, DX COIL, FILTER/DRYER KIT, THERMAL EXPANSION VALVE, R410A REFRIGERANT, AND REFRIGERANT PIPING (2,900 TO 4,800 CFM) WHEN ORDERED WITH OPPOSITE AIRFLOW CONDENSERS ACCESS AND COIL PIPING WILL REMAIN IN STANDARD POSITION. DRAIN AND SLEDS WILL MOVE TO THE OPPOSITE SIDE. ANY OTHER CHANGE WILL REQUIRE CLI. CONDENSERS REQUIRE SEPARATE 208V, 3 PHASE POWER SUPPLY UNLESS ORDERED WITH SINGLE POINT CONNECTION. COIL = SE21101D.
10. SHIP CONDENSERS LOOSE. THE REFRIGERATION LINES WILL NEED TO BE STUBBED OUT 12 INCHES. THE SUCTION LINES NEEDS TO BE INSULATED INSIDE THE COIL MODULE. ROTARY DISCONNECT SHOULD NOT BE INSTALLED ON THE POST, BLANK POST SHOULD BE USED IN PLACE.
11. INSULATION\* FOR V-BANK INTAKE OPTION.
12. CLOGGED FILTER SWITCH WITH NOTIFICATION ON HMI.
13. SINGLE ELECTRICAL CABINET LED LIGHTS USED ON MODULAR MUA UNITS.
14. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH.
15. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER/MPU SECTION).
16. 2 YEAR PARTS WARRANTY.

\*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 26" X 26".



CAPTIVE-AIRE SYSTEMS ARE PRE-ENGINEERED SYSTEMS & ARE LISTED ETL/UL TO MEET ALL GREASE SYSTEMS (TYPE I) APPLICATIONS. THESE DRAWINGS ARE PROVIDED FOR REFERENCE TO H-SHEETS.

**REVISIONS**

DESCRIPTION	DATE

**CAPTIVE-AIRE**

Air Solutions

1329 East Kemper Rd., Ste. 4210, Cincinnati, OH, 45246 PHONE: (513) 860-5555 EMAIL: reg12@captivate.com

FOR CONSTRUCTION

6888 KITCHENS HDS-Arcade  
32 South Ludlow Street,  
Dayton, OH, 45402

DATE: 1/5/2023  
DWG.#: 4879395  
DRAWN BY: jcirilli  
SCALE: 3/4" = 1'-0"  
MASTER DRAWING

SHEET NO. 5

DOAS/RTU FAN SCHEDULE - JOB#5639932

FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	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	VOLTS	MCA	MDCP	OUTSIDE AIR DB	OUTSIDE AIR WB	MIXED AIR DB	MIXED AIR WB	LEAVING AIR DB	LEAVING AIR WB	DP	TOTAL	CAPACITY	IEER	ISMRE	DISCHARGE DB	DISCHARGE WB		DESIRED CAPACITY	MAX CAPACITY	MOISTURE REMOVAL RATE	GAS TYPE	INPUT BTUS	OUTPUT BTUS	TEMP RISE
5	DOAS-2	1	CASRTU4-1600-30-30T	CAPTIVEAIR	30MF-4-RTU	0	5700	5700	3208	0.800	10.00	3	208	157.4A	175A	82.5°F	76.8°F	---	---	58.6°F	57.2°F	56.4°F	384.0 MBH	143.2 MBH	17.8	4.8	71.0°F	61.8°F	76.8 MBH	260 MBH	217.1 LBS/HR	NATURAL	584506	473450	70°F	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15

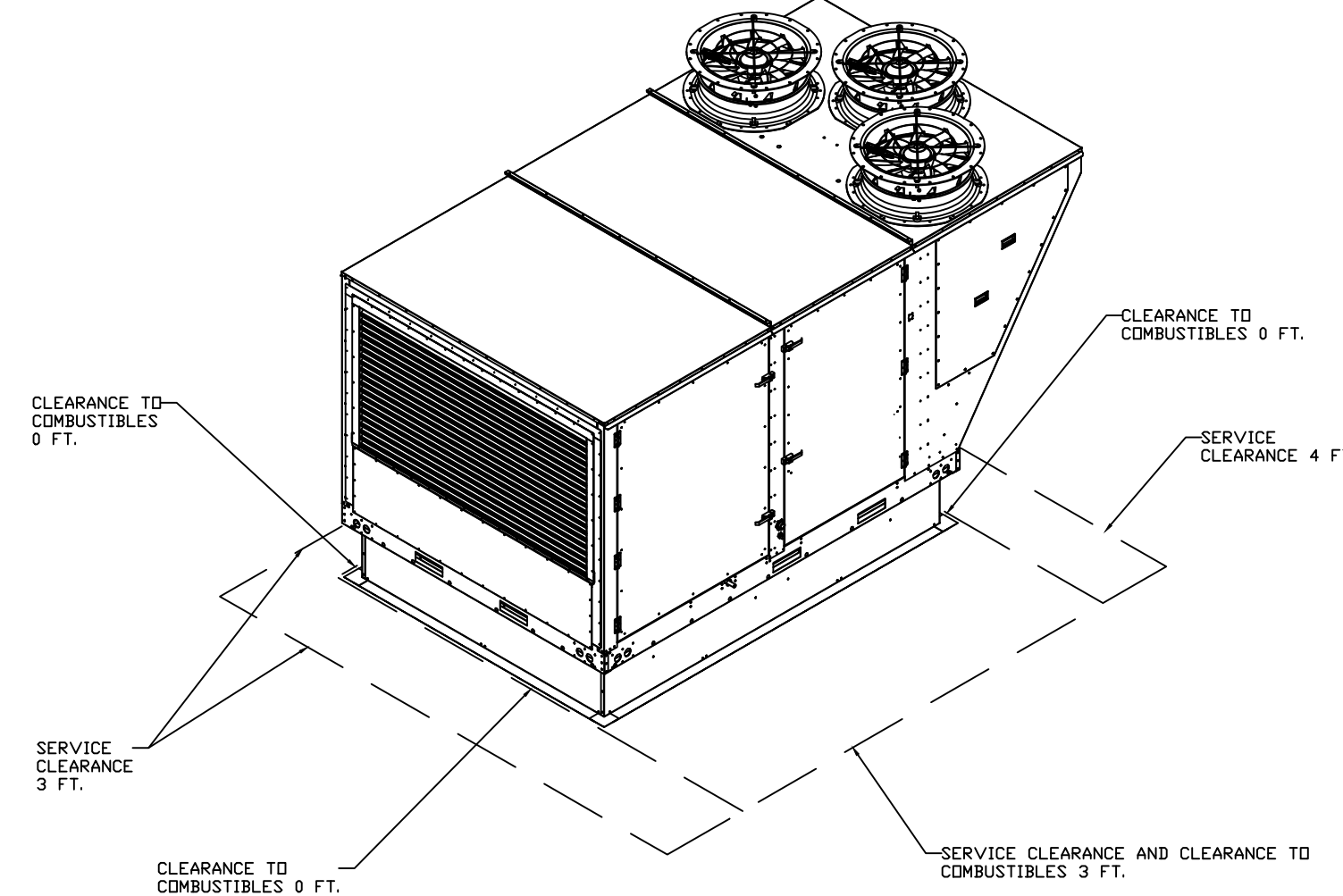
NOTES:

1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL
2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE
3. INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER
4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE
5. ECM MOTOR CONDENSING FANS
6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE
7. SUCTION LINE ACCUMULATOR
8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY, 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER
9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT)
10. 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 20GA EXTERIOR W/ 14GA BASE
11. 81% EFFICIENT FURNACE, WITH MODULATING INDUCER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 6:1 TURNDOWN WITH NG AND 5:1 TURNDOWN WITH LP
12. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE
13. FULLY MODULATING HOT GAS REHEAT
14. FACTORY INSTALLED COMPRESSOR SOUND BLANKET
15. SIDE DISCHARGE/AND RETURN
16. STATIC PRESSURE CONTROLLED OUTSIDE AIR DAMPER
17. SIDE DISCHARGE/SIDE RETURN

5	DOAS-2	1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
		1	INLET PRESSURE GAUGE, 0-35"
		2	RTU TOTAL CFM MONITORING
		1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, #MA, 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	2" MERV 13 FILTERS FOR RTU4 (QTY. 12)
		1	2" MERV 8 FILTERS FOR RTU4 (QTY. 12)
		1	OVERHEAT STAT
		1	VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
		1	CLOGGED FILTER SWITCH - NOTIFICATION ON HMI
		1	RTU4 SIDE DISCHARGE
		1	30 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
		1	30 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL
		1	OCCUPIED SCHEDULING
		1	RTUVZH170 COMPRESSOR SOUND BLANKET 230V - FACTORY INSTALLED
		1	RTU4 CONVENIENCE OUTLET (GFCI), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX
		1	REMOTE TEMPERATURE AND HUMIDITY SPACE SENSOR
1	RTU FIXED 100% OA INTAKE CONTROL		

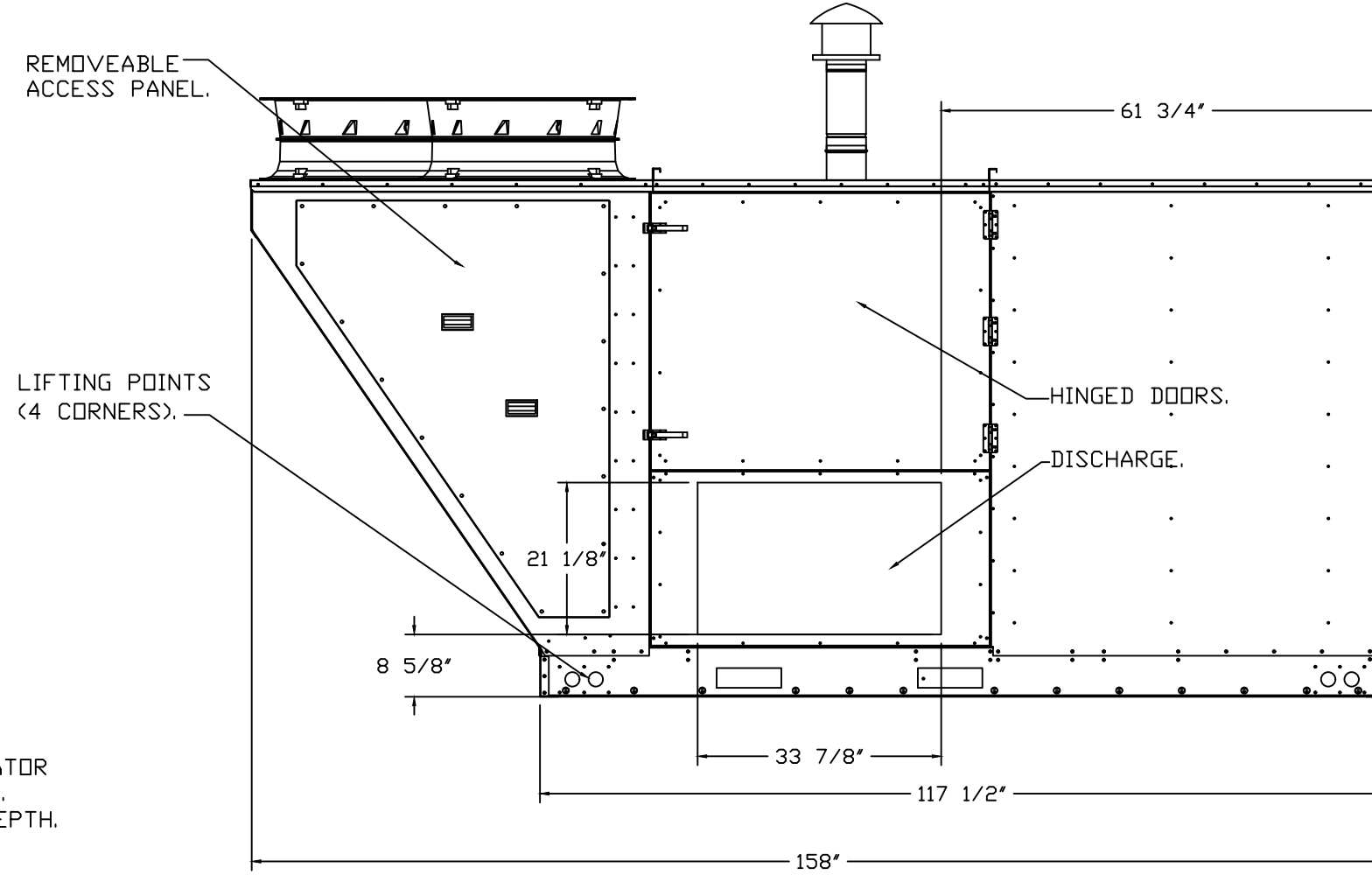
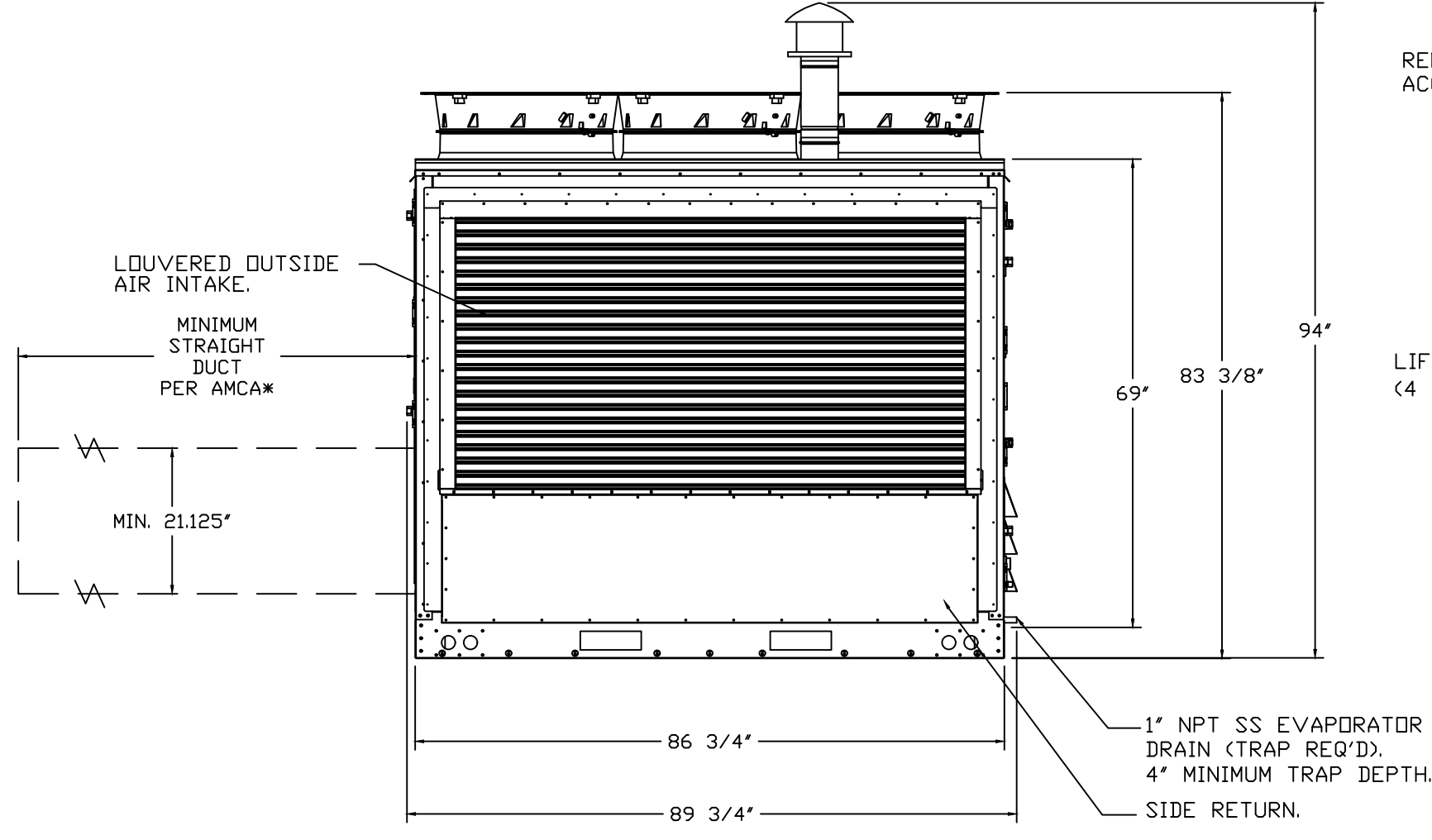
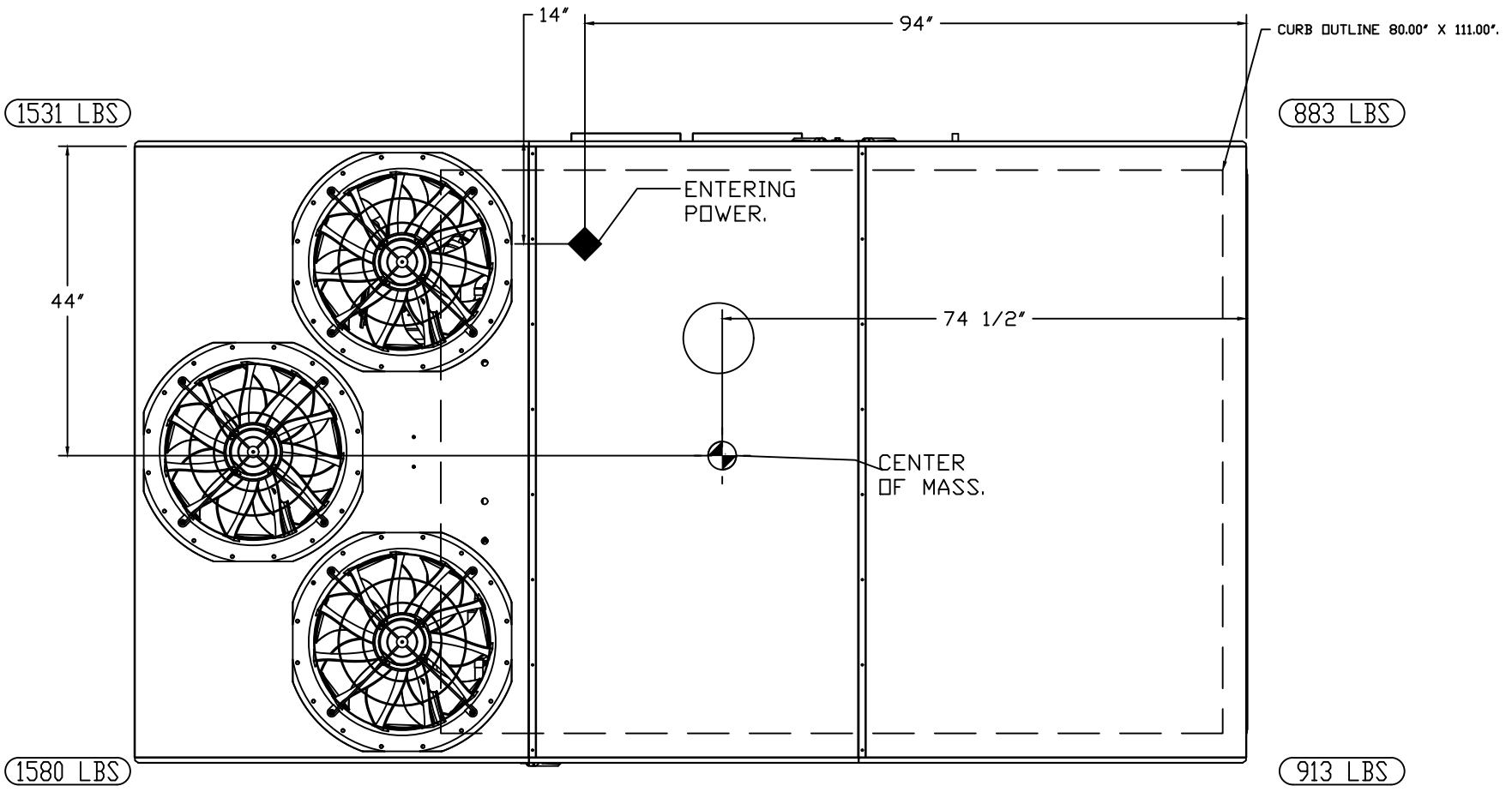
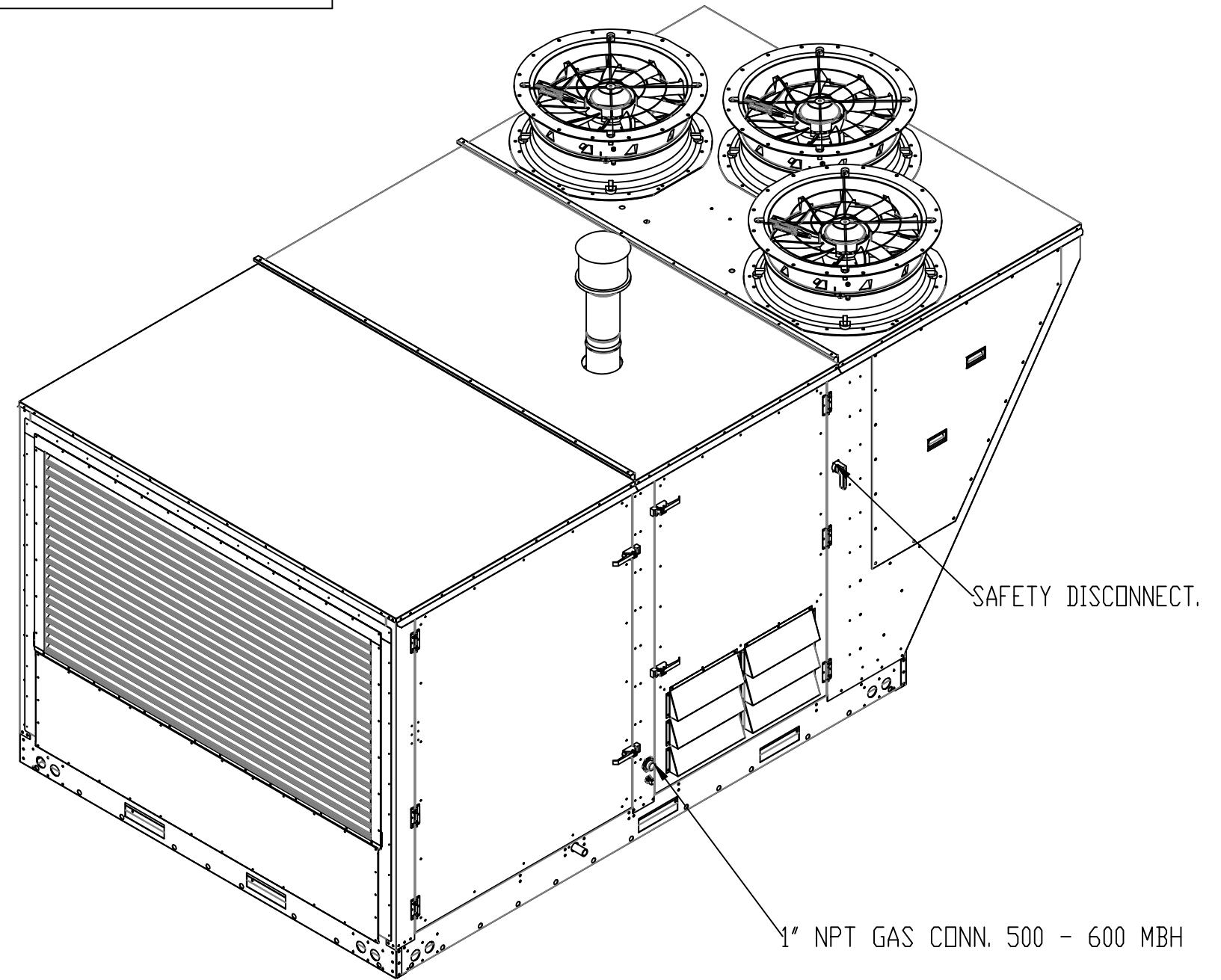
# CLASSROOM PODS

UNIT MOUNTED ON UPPER ROOF AND DUCTED DOWN TO SUPPLY CONDITIONING TO SPACE & ALSO OUTSIDE AIR AS HOOD SYSTEMS ARE TURNED ON. SUPPLY AIR IS DISTRIBUTED THROUGHOUT SPACE WITH CEILING DIFFUSERS.



FAN #5 CASRTU4-1.600-30MF-30T-DOAS - HEATER (DOAS-1)

POWER TO UNIT IS 208V, 3 PHASE SYSTEM



NOTES:

1. DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
2. (Symbol) DENOTES CORNER WEIGHT.

\*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 33.875" x 21.125".

FOR CONSTRUCTION

6888 KITCHENS HDS-Arcade  
32 South Ludlow Street,  
Dayton, OH, 45402

DATE: 1/5/2023  
DWG.#: 4879395  
DRAWN BY: jcirilli  
SCALE: 3/4" = 1'-0"  
MASTER DRAWING

SHEET NO. 6

**REVISIONS**

DESCRIPTION	DATE

**CAPTIVE-AIRE SYSTEMS**  
ARE PRE-ENGINEERED  
SYSTEMS & ARE LISTED  
ETL/UL TO MEET ALL  
GREASE SYSTEMS (TYPE  
D) APPLICATIONS. THESE  
DRAWINGS ARE PROVIDED  
FOR REFERENCE TO  
H-SHEETS.

**CAPTIVE AIR SOLUTIONS**  
www.captiveaire.com  
1329 East Kemper Rd., Ste. 4210, Cincinnati, OH, 45246 PHONE: (513) 860-5555 EMAIL: reg12@captivair.com

DOAS/RTU FAN SCHEDULE - JOB#5639932

FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	FAN INFORMATION								ELECTRICAL INFORMATION								COOLING INFORMATION								REHEAT INFORMATION				GAS HEAT INFORMATION				NOTES
				MANUFACTURER	BLOWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	WEIGHT (LBS)	ESP	HP	PHASE	VOLT	MCA	MDCP	OUTSIDE AIR		MIXED AIR		LEAVING AIR		CAPACITY		IEER	ISMRE	DISCHARGE		CAPACITY		MOISTURE REMOVAL RATE	GAS TYPE	INPUT BTUs	OUTPUT BTUs	TEMP RISE		
																DB	WB	DB	WB	DB	WB	DP	TOTAL			SENS.	DB	WB	DESIRE						MAX	
6	DOAS-RTU1	1	CASRTU4-1.600-30-30T	CAPTIVEAIRE	30MF-4-RTU	0	5700	5700	3218	1200	10.00	3	208	157.4A	175A	82.5°F	76.8°F	82.5°F	76.8°F	58.6°F	57.2°F	56.4°F	384.0 MBH	143.2 MBH	17.8	4.8	71.0°F	61.8°F	76.8 MBH	260 MBH	217.1 LBS/HR	NATURAL	584506	473450	70°F	1,2,3,4,5,6,7,8,9,10,11,12,13,14,16,17

NOTES:

1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL
2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE
3. INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER
4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE
5. EC MOTOR CONDENSING FANS
6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE
7. SUCTION LINE ACCUMULATOR
8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY, 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER
9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT)
10. 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 20GA EXTERIOR W/ 14GA BASE
11. 81% EFFICIENT FURNACE, WITH MODULATING INDUCER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 6:1 TURNDOWN WITH NG AND 5:1 TURNDOWN WITH LP
12. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE
13. FULLY MODULATING HOT GAS REHEAT
14. FACTORY INSTALLED COMPRESSOR SOUND BLANKET
15. SIDE DISCHARGE/NO RETURN
16. STATIC PRESSURE CONTROLLED OUTSIDE AIR DAMPER
17. SIDE DISCHARGE/SIDE RETURN

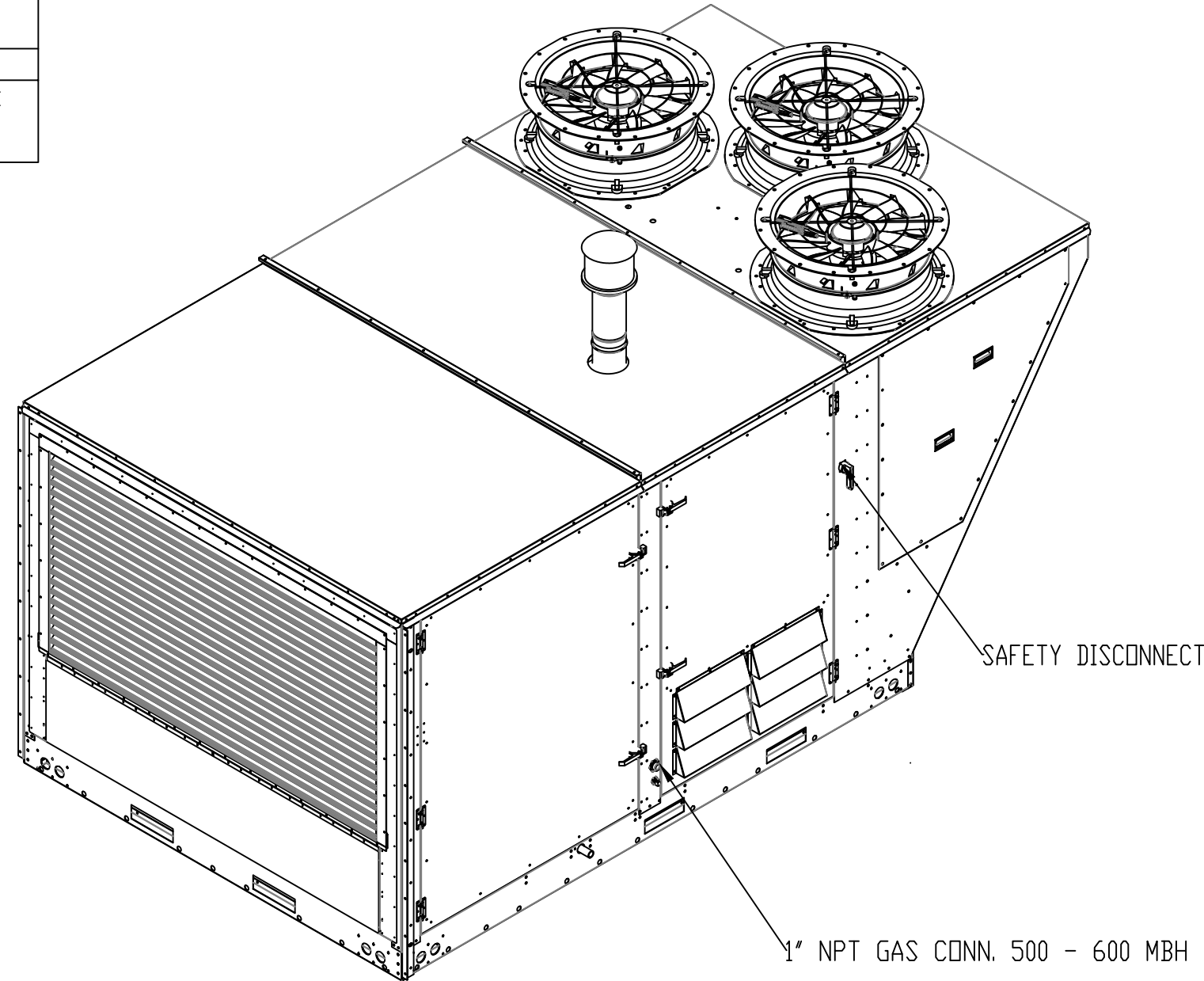
CAPTIVE-AIRE SYSTEMS ARE PRE-ENGINEERED SYSTEMS & ARE LISTED ETL/UL TO MEET ALL GREENE SYSTEMS (TYPE 1) APPLICATIONS. THESE DRAWINGS ARE PROVIDED FOR REFERENCE TO H-SHEETS.

	1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
	1	INLET PRESSURE GAUGE, 0-35"
	2	RTU TOTAL CFM MONITORING
	1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, "MA", 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	2" MERV 13 FILTERS FOR RTU4 (QTY. 12)
	1	2" MERV 8 FILTERS FOR RTU4 (QTY. 12)
	1	OVERHEAT STAT
	1	VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
	1	CLOGGED FILTER SWITCH - NOTIFICATION ON HMI
	1	RTU4 SIDE DISCHARGE
DOAS-RTU1	1	30 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
	1	30 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL
	1	OCCUPIED SCHEDULING
	1	RTUVZHI70 COMPRESSOR SOUND BLANKET 230V - FACTORY INSTALLED
	1	RTU4 CONVENIENCE OUTLET (GFCI), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX
	1	VAV PACKAGE W/ MANUAL/DDC CONTROL (571 VFD INCLUDED)
	1	LINE REACTOR MOUNTED IN FAN
	1	RTU INTAKE/RETURN DAMPER - STATIC PRESSURE CONTROL
	1	RTU4 SIDE RETURN
	1	DUCT MOUNTED SMOKE DETECTOR - SHIPS LOOSE
	1	REMOTE TEMPERATURE AND HUMIDITY SPACE SENSOR
	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)

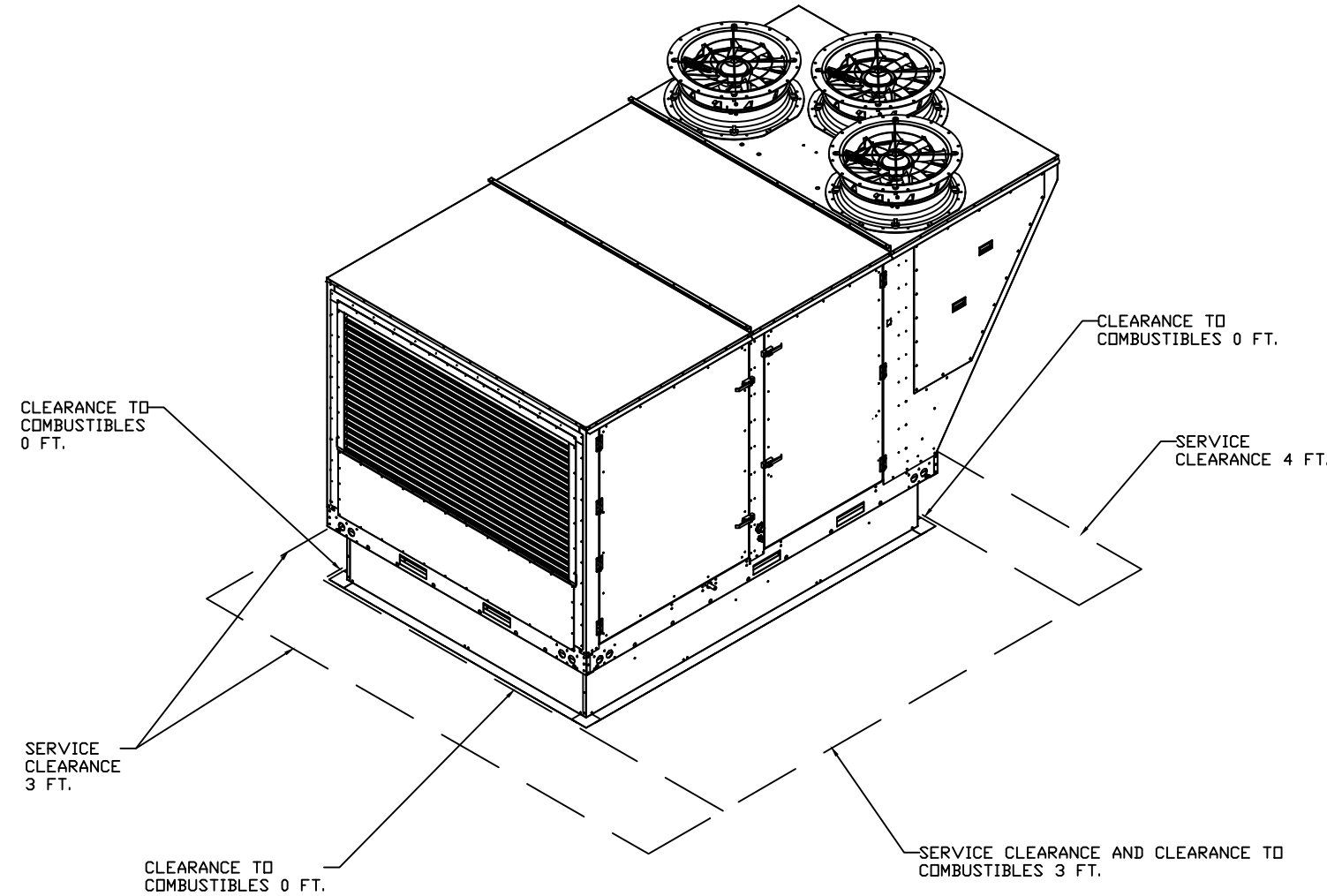
# COOKLINE AREAS

UNIT MOUNTED ON UPPER ROOF AND DUCTED DOWN TO SUPPLY CONDITIONING TO SPACE & ALSO OUTSIDE AIR AS HOOD SYSTEMS ARE TURNED ON. SUPPLY AIR IS DISTRIBUTED THROUGHOUT SPACE WITH CEILING DIFFUSERS. ALSO HAS DUCT RETURN TO ASSIST IN CONDITIONING SPACE.

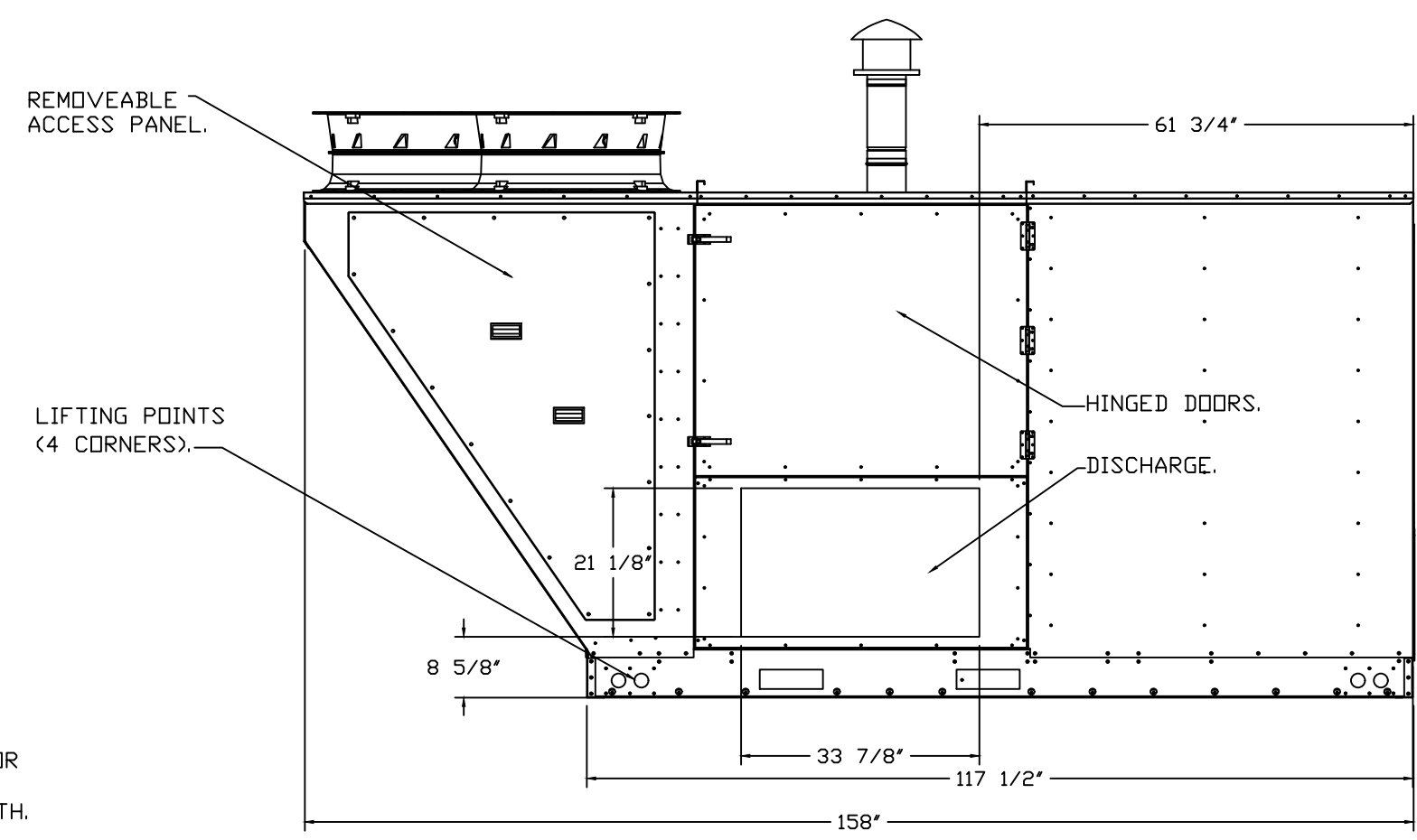
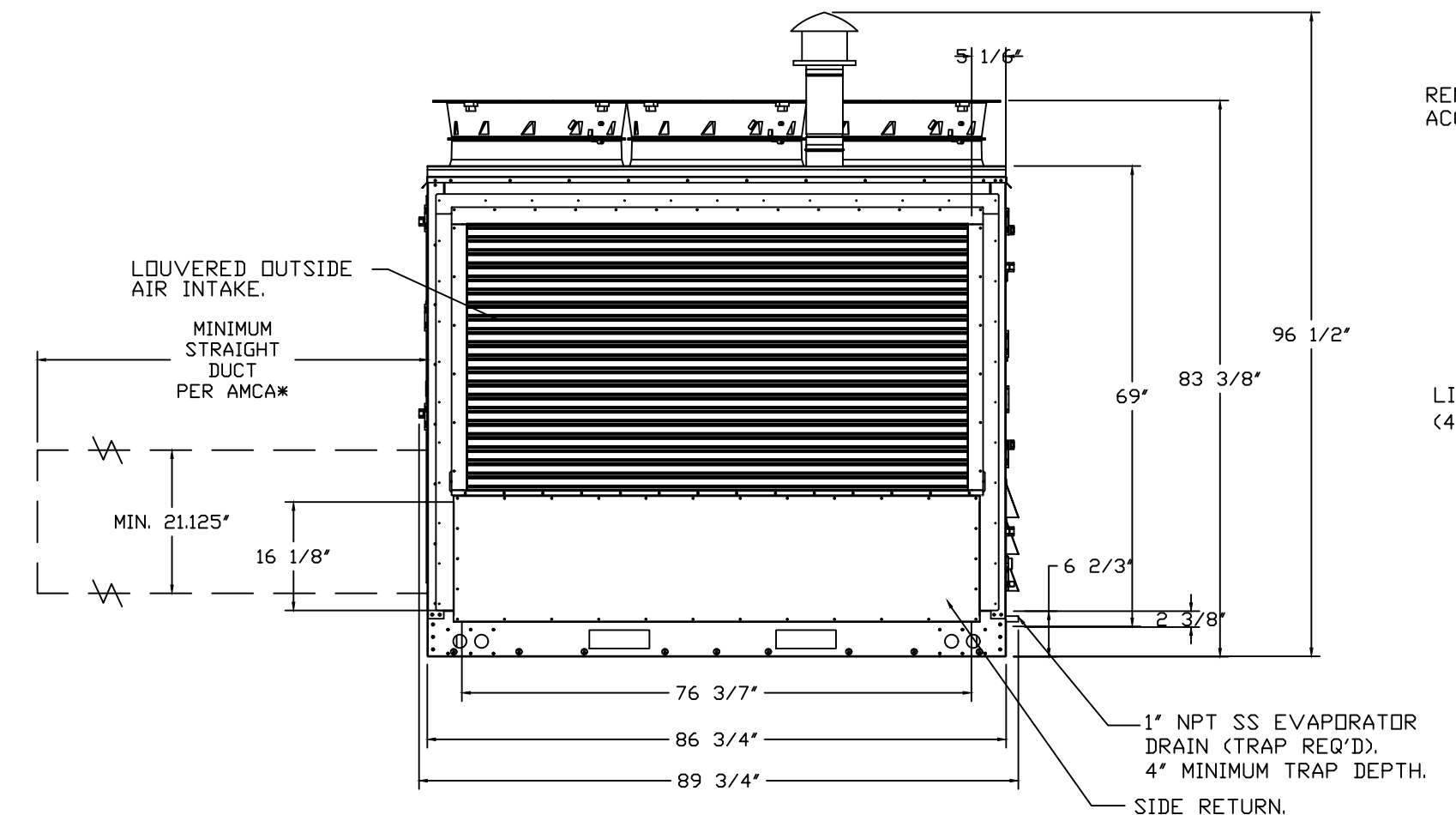
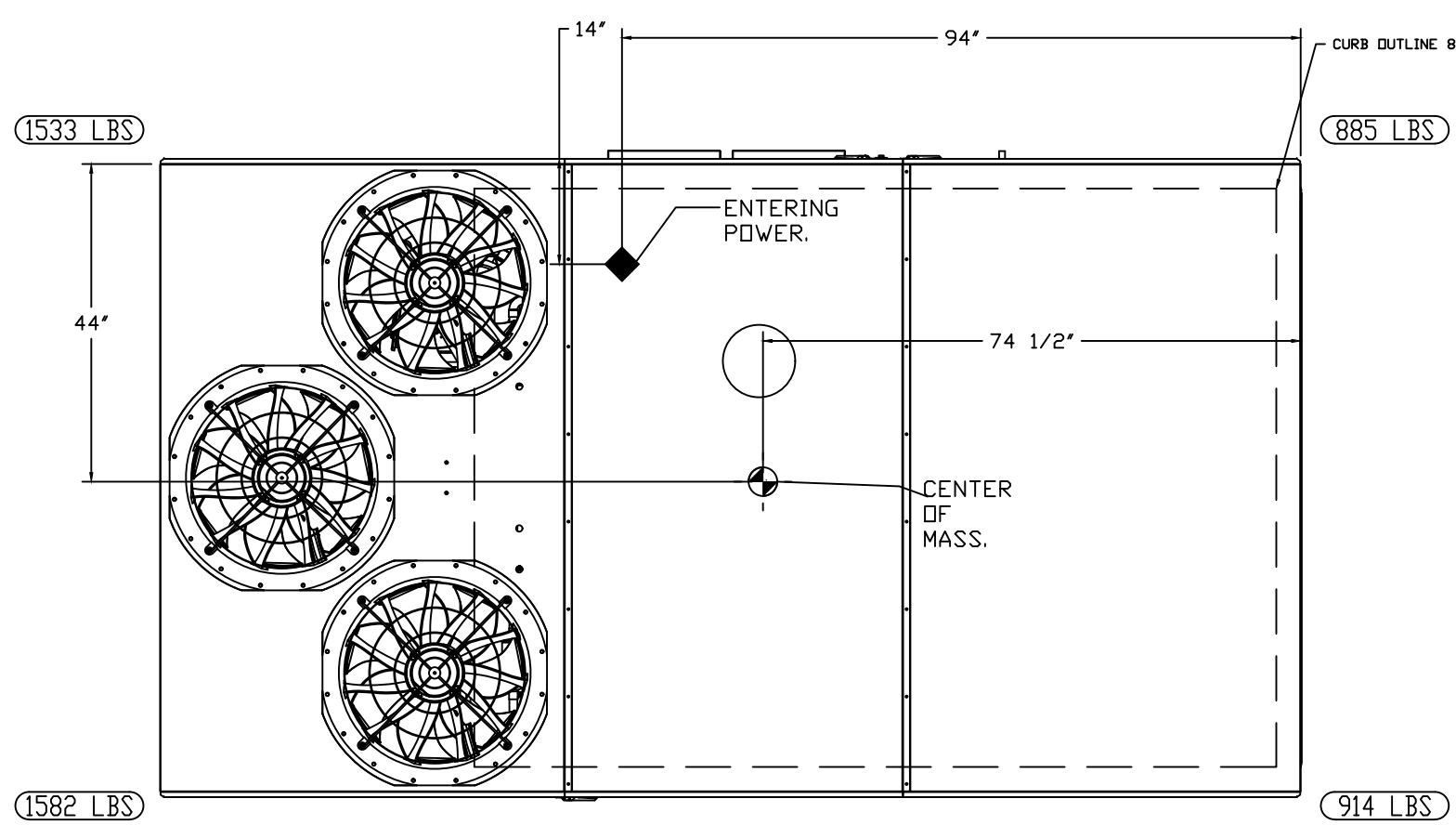
FAN #6 CASRTU4-1.600-30MF-30T-DOAS - HEATER (DOAS-RTU2)



POWER TO UNIT IS 208V, 3 PHASE SYSTEM



- NOTES:
1. DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
  2. DENOTES CORNER WEIGHT.



\*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 33.875" x 21.125".

**REVISIONS**

DESCRIPTION	DATE

**CAPTIVEAIRE**

Air Solutions

1329 East Kemper Rd., Ste. 4210, Cincinnati, OH, 45246 PHONE: (513) 860-5555 EMAIL: reg12@captivaire.com

6888 KITCHENS HDS-Arcade  
32 South Ludlow Street,  
Dayton, OH, 45402

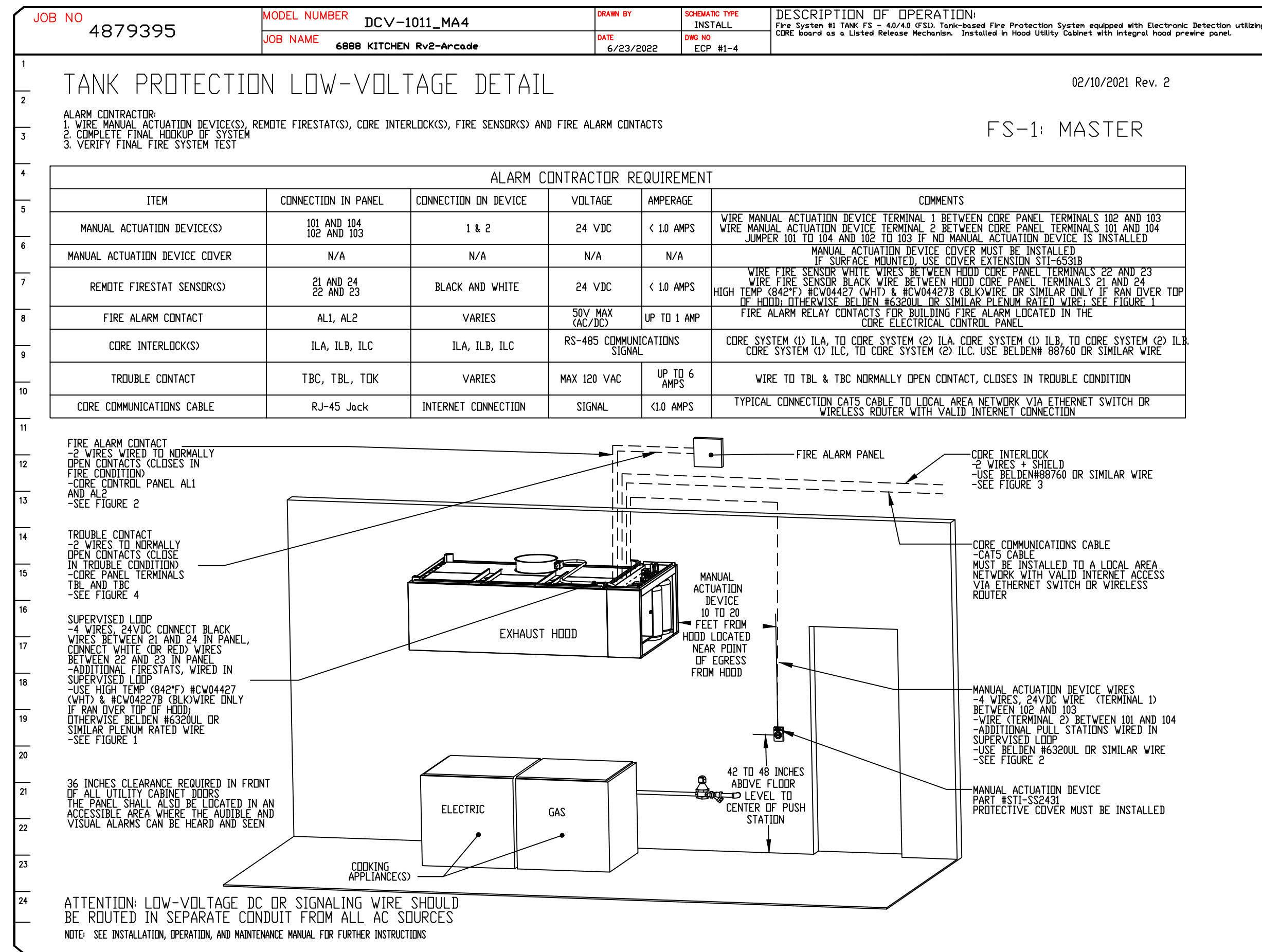
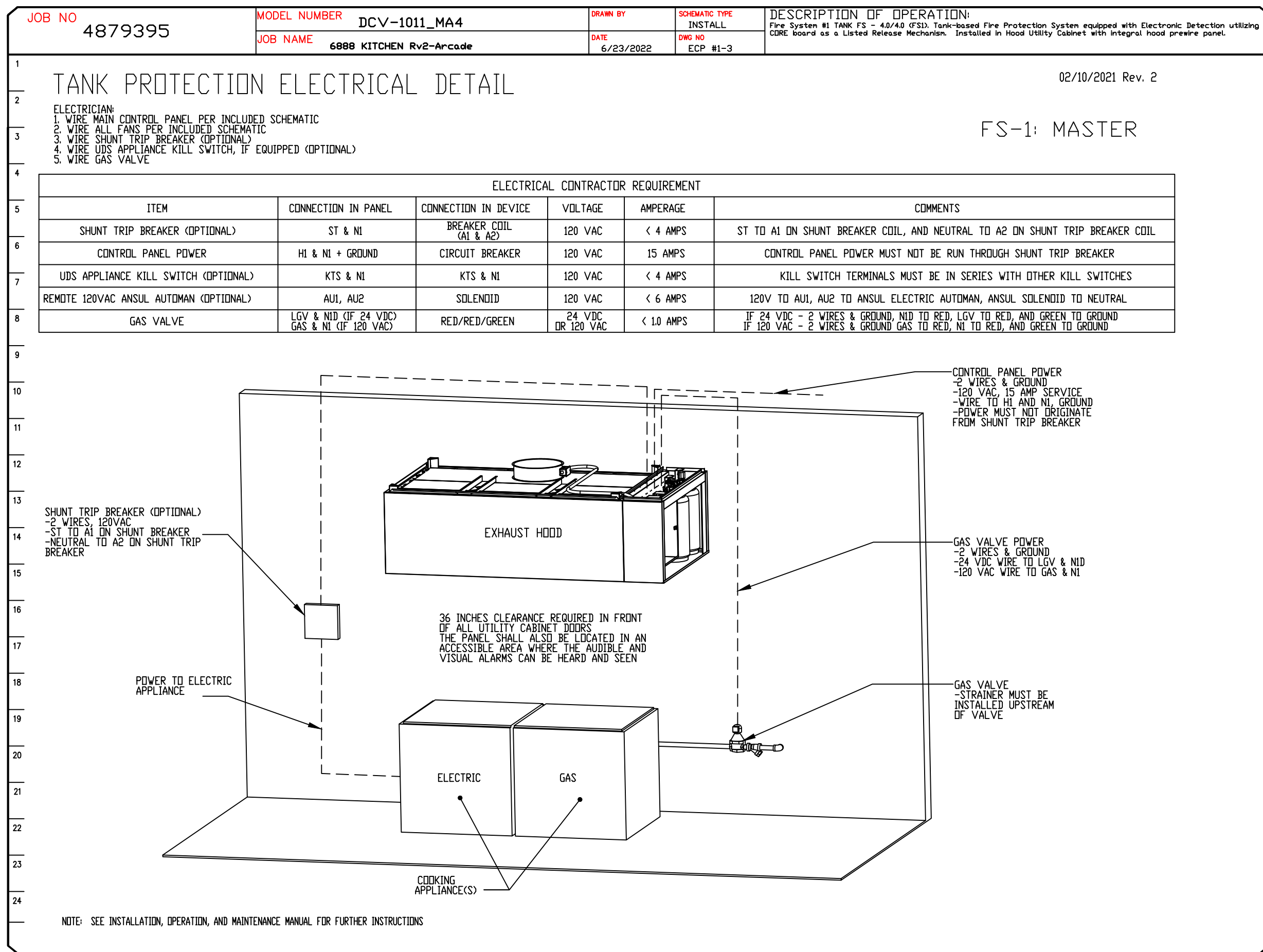
DATE: 1/5/2023  
DWG.#: 4879395  
DRAWN BY: jcirilli  
SCALE: 3/4" = 1'-0"  
MASTER DRAWING

SHEET NO. 7

FOR CONSTRUCTION







CAPTIVE-AIRE SYSTEMS ARE PRE-ENGINEERED SYSTEMS & ARE LISTED ETL/UL TO MEET ALL GREASE SYSTEMS (TYPE 1) APPLICATIONS. THESE DRAWINGS ARE PROVIDED FOR REFERENCE TO H-SHEETS.

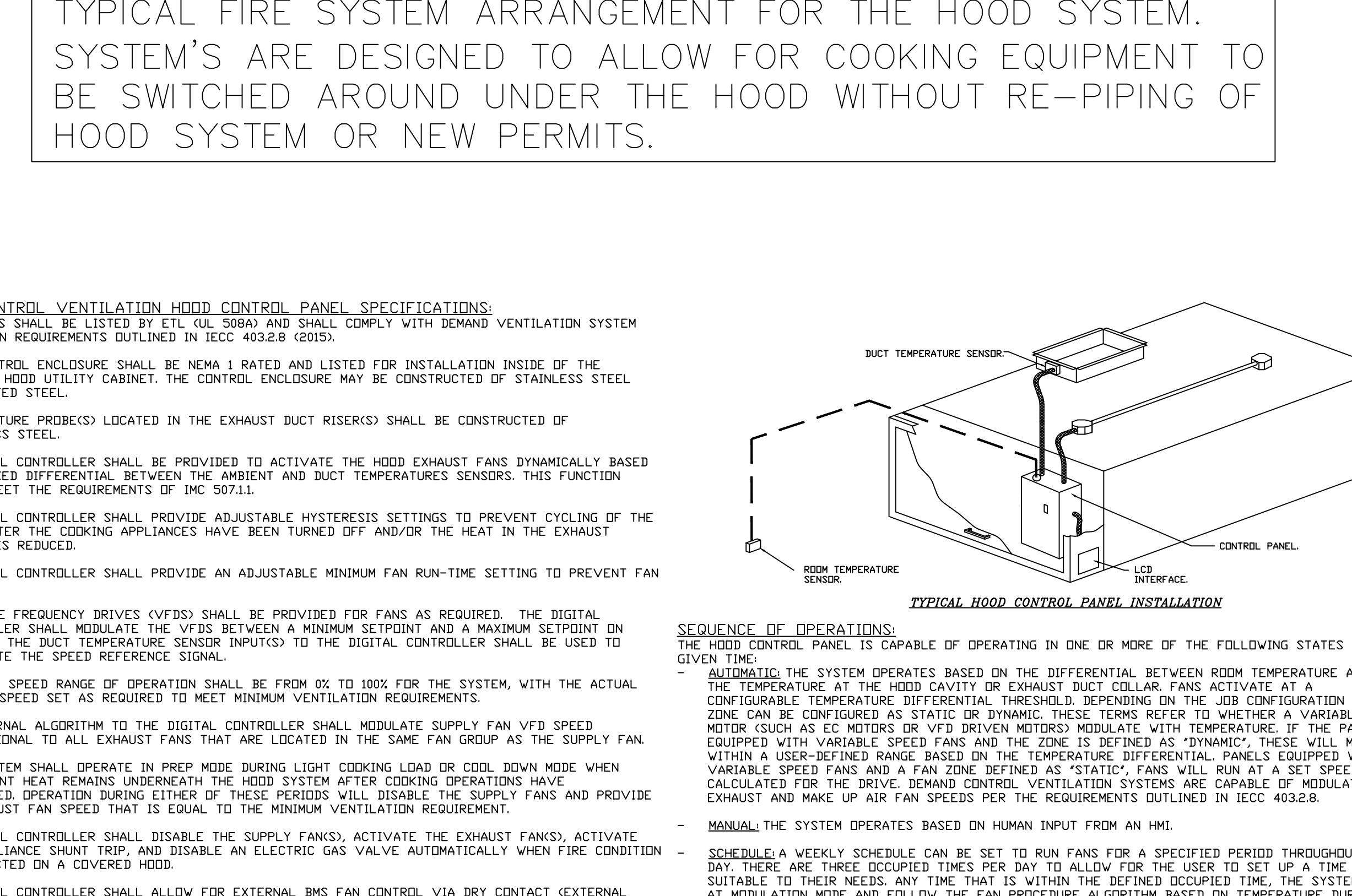
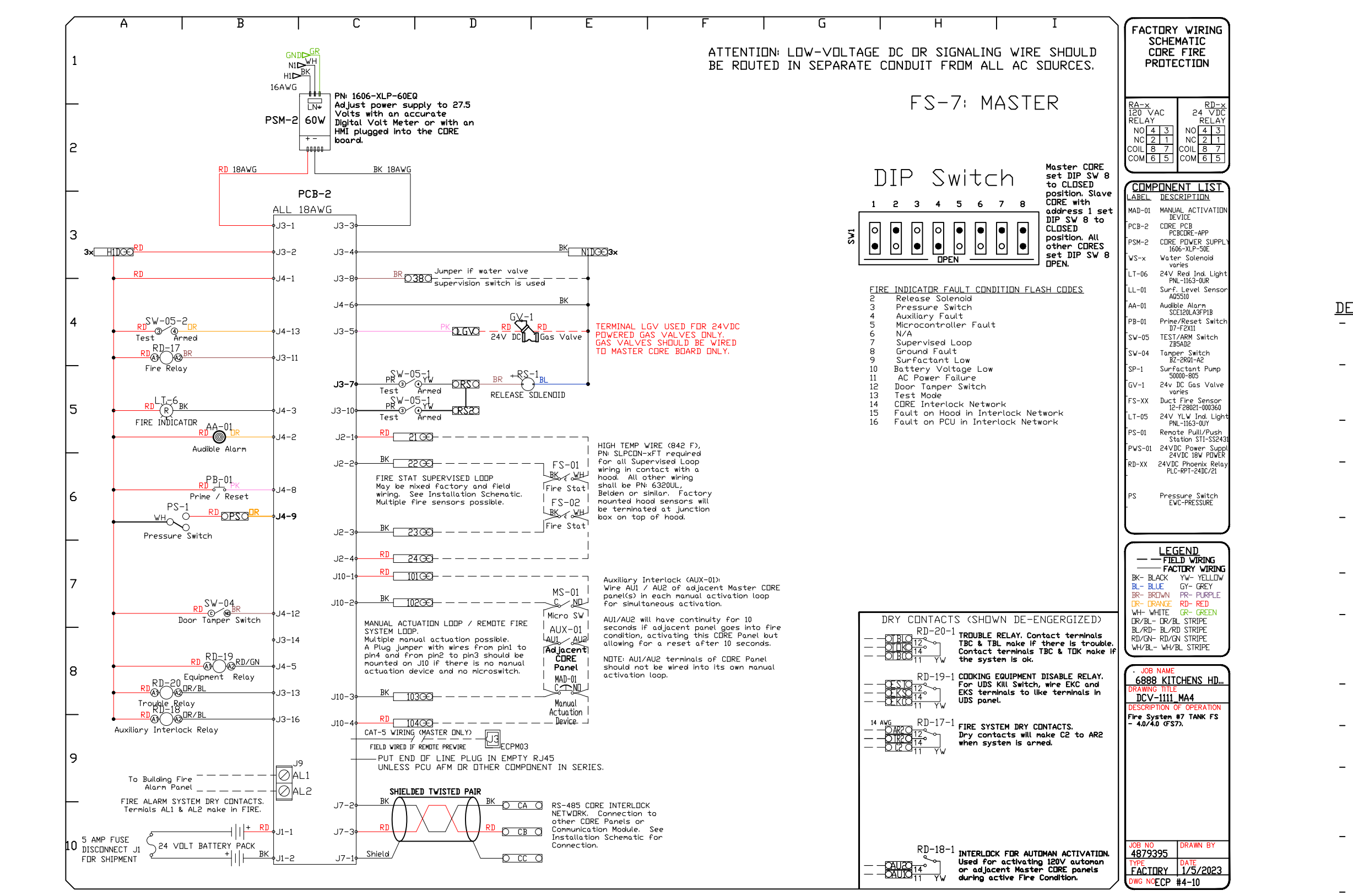
**REVISIONS**

DESCRIPTION	DATE

**CAPCON CONSTRUCTION**

**Air Solutions**

1329 East Kemper Rd., Ste. 4210, Cincinnati, OH, 45246 PHONE: (513) 860-5555 EMAIL: reg12@captivaire.com



**FOR CONSTRUCTION**

6888 KITCHENS HDS-Arcade  
 32 South Ludlow Street,  
 Dayton, OH, 45402

**DATE:** 1/5/2023

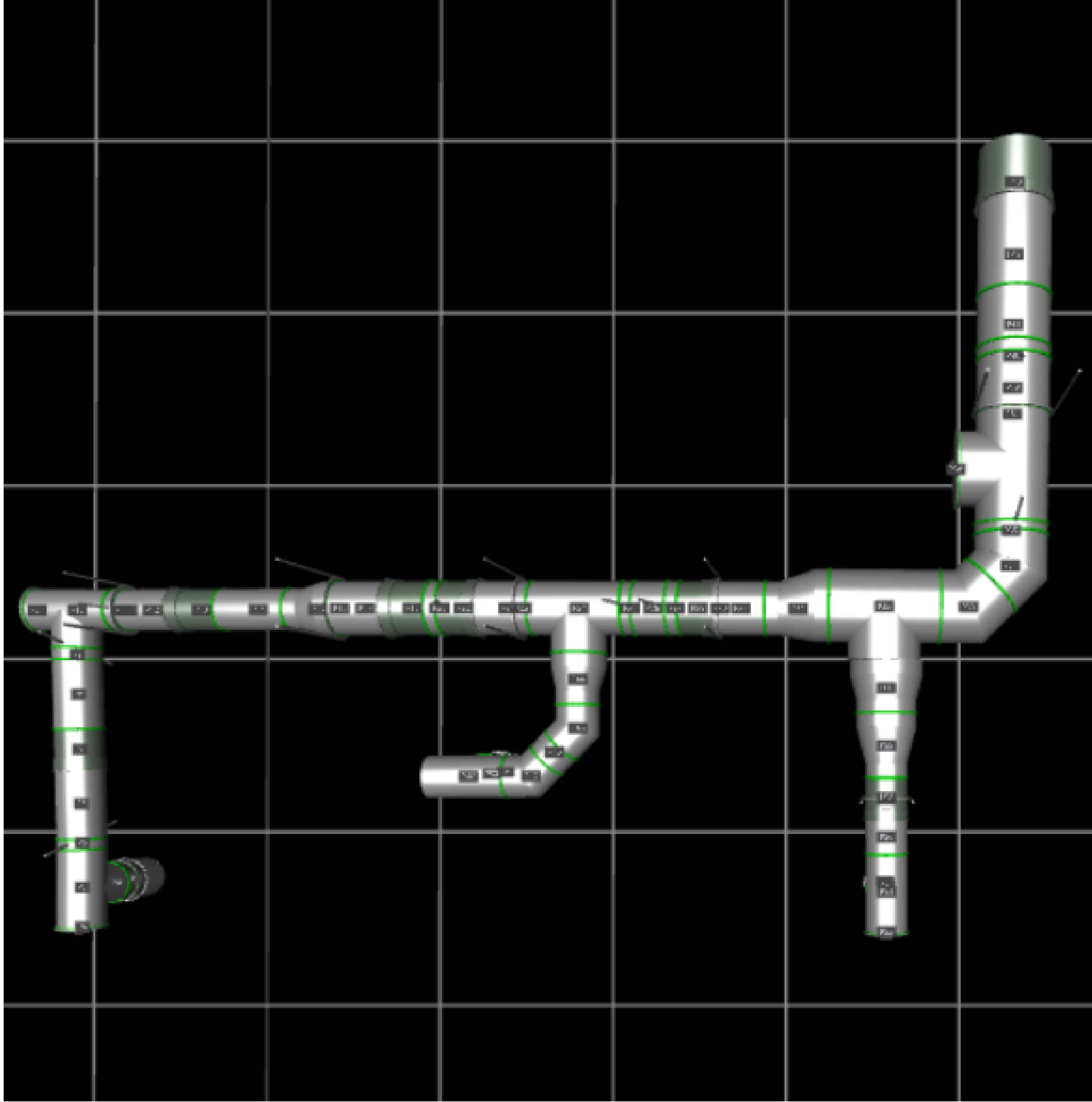
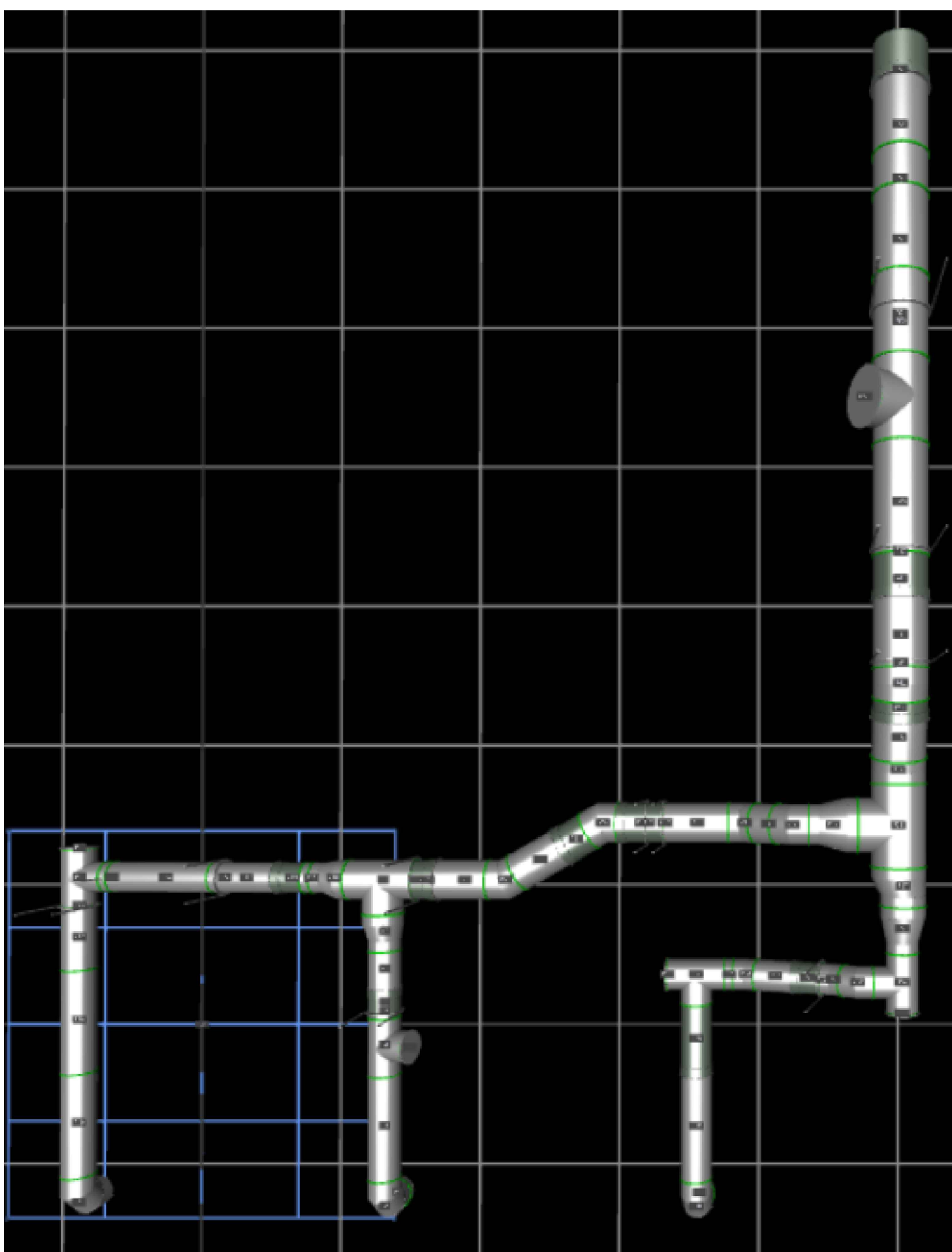
**DWG.#:** 4879395

**DRAWN BY:** jcirilli

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

**MASTER DRAWING**

**SHEET NO.** 10



# PHASE 1

DUCTWORK #2 SE VIEW  
DUCT RUN 2

FOR HOODS 5, 6, 7, 8, 9, & 10

### 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.

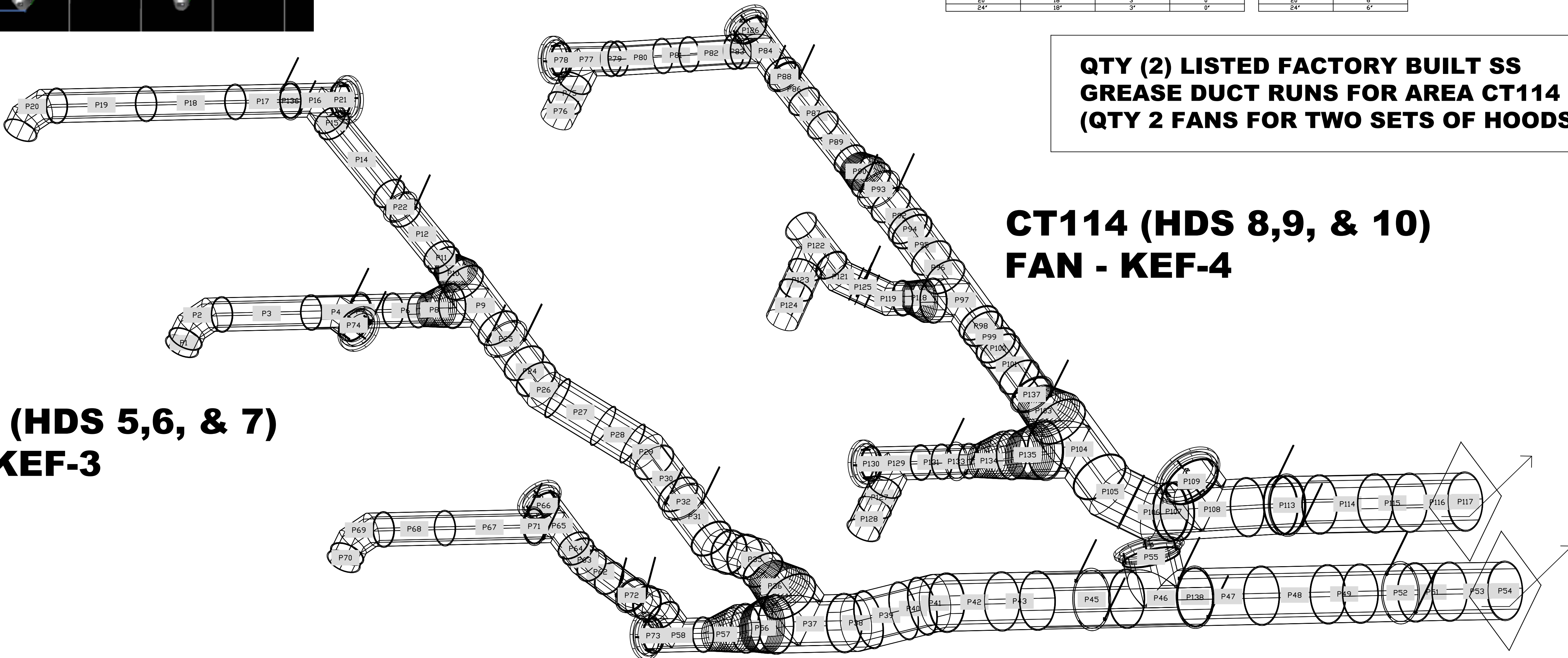
Anchor supports to the structure by welding or bolting steel expansion anchors or concrete inserts. Support horizontally installed grease duct from the building structure using above method or use Duct Mate, Wire Rope & Clutchers, part numbers WR20 & CL20. 1/2" Threaded rod and saddles may also be used 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"	18"	3"	0"
10"	18"	3"	0"
12"	18"	3"	0"
14"	18"	3"	0"
16"	18"	3"	0"
18"	18"	3"	0"
20"	18"	3"	0"
24"	18"	3"	0"

ADJUSTABLE DUCT OVERLAP - MINIMUM	
DIAMETER	OVERLAP
8"	4"
10"	5"
12"	6"
14"	6"
16"	6"
18"	6"
20"	6"
24"	6"

CAPTIVE-AIRE SYSTEMS ARE PRE-ENGINEERED SYSTEMS & ARE LISTED ETL/UL TO MEET ALL GREASE SYSTEMS (TYPE I) APPLICATIONS. THESE DRAWINGS ARE PROVIDED FOR REFERENCE TO H-SHEETS.



**CT114 (HDS 5,6, & 7)  
FAN - KEF-3**

**QTY (2) LISTED FACTORY BUILT SS  
GREASE DUCT RUNS FOR AREA CT114  
(QTY 2 FANS FOR TWO SETS OF HOODS)**

**CT114 (HDS 8,9, & 10)  
FAN - KEF-4**

**REVISIONS**

DESCRIPTION	DATE

**CAPTIVE-AIRE**  
www.captiveaire.com  
Air Solutions  
1329 East Kemper Rd., Ste. 4210, Cincinnati, OH, 45246 PHONE: (513) 860-5555 EMAIL: reg120@captiveaire.com

FOR CONSTRUCTION

6888 KITCHENS HDS-Arcade  
32 South Ludlow Street,  
Dayton, OH, 45402

DATE: 1/5/2023  
DWG.#: 4879395  
DRAWN BY: jcirilli  
SCALE: 3/4" = 1'-0"  
MASTER DRAWING

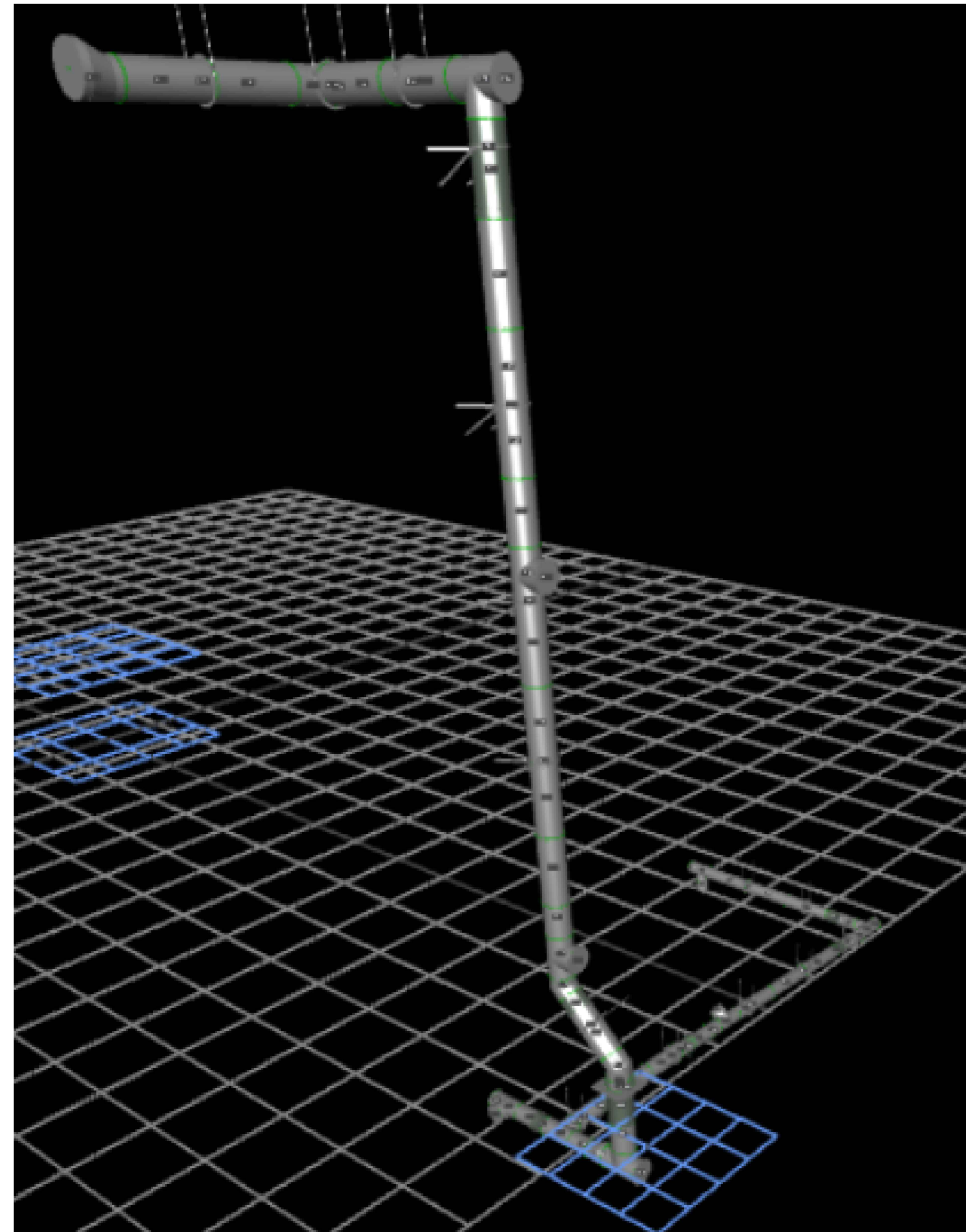
SHEET NO. 11

INTERIOR DUCT ISOMETRIC VIEW  
FOR HOOD(S) GROUP 4 & 11. FROM  
HOODS TO CURB LOCATED IN WELL

**SINGLE WALL FACTORY BUILT DUCTWORK**

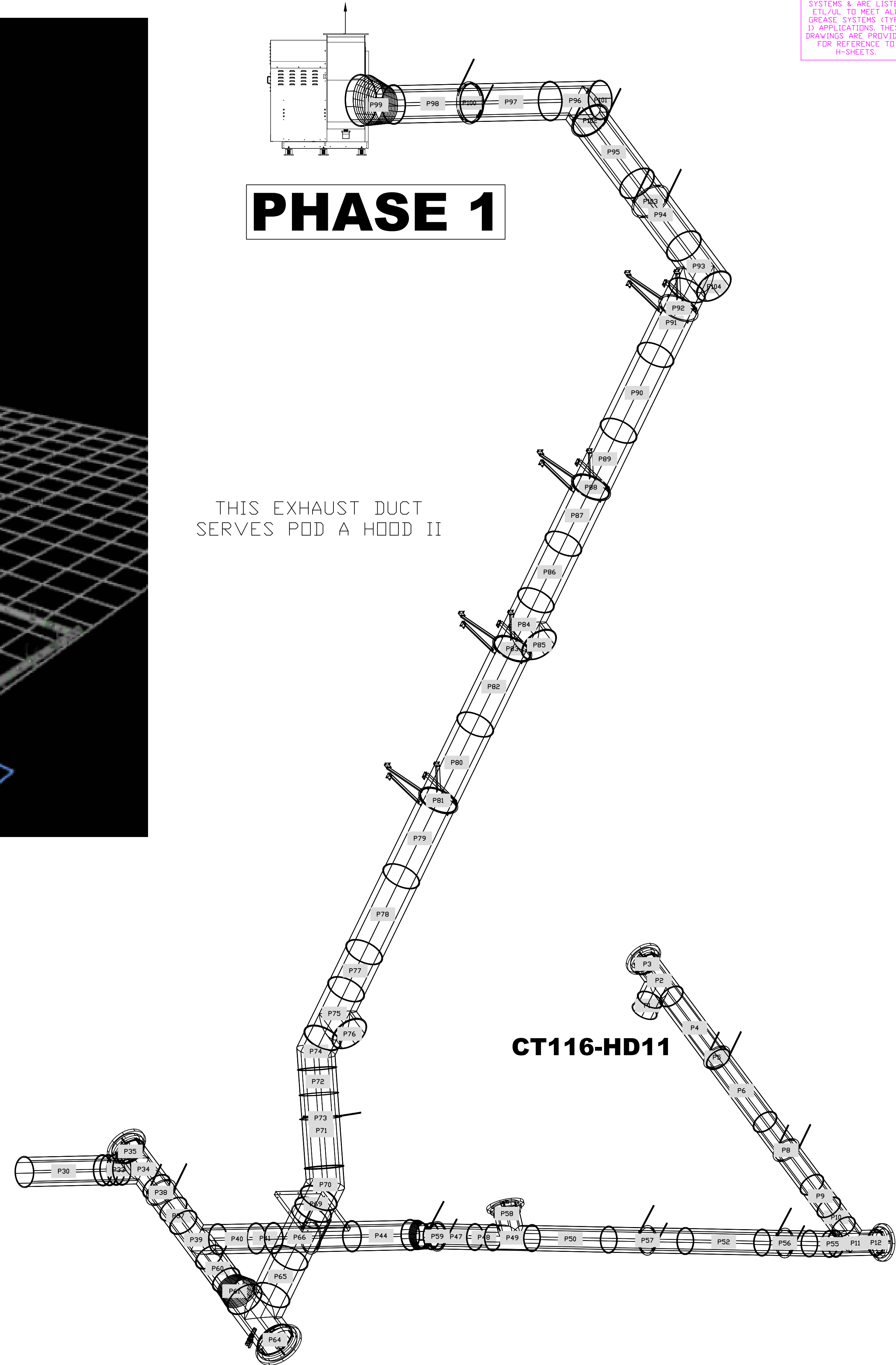
- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE INSTALLATION AND OPERATION MANUAL.
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.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



**PHASE 1**

THIS EXHAUST DUCT  
SERVES POD A HOOD II



CAPTIVE-AIRE SYSTEMS  
ARE PRE-ENGINEERED  
SYSTEMS & ARE LISTED  
ETL/UL TO MEET ALL  
GREASE SYSTEMS (TYPE  
I) APPLICATIONS. THESE  
DRAWINGS ARE PROVIDED  
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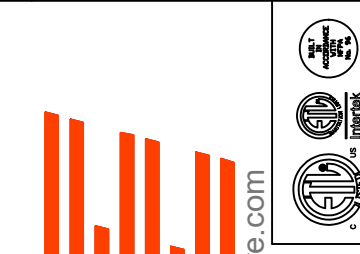
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24"	18"	3"	0"

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DIAMETER	OVERLAP
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20"	6"
24"	6"

**REVISIONS**

DESCRIPTION	DATE



**CAPTIVE AIR**  
Air Solutions  
1329 East Kemper Rd., Ste. 4210, Cincinnati, OH, 45246 PHONE: (513) 860-5555 EMAIL: reg121@captiveaire.com

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MASTER DRAWING

SHEET NO.

FOR CONSTRUCTION