

SEAL



PROJECT



CAVA
 300 NJ-18
 East Brunswick, NJ 08816

DATE	DESCRIPTION
03/13/24	PERMIT SET
05/28/24	BID SET
07/26/24	PC COMMENTS 1
08/12/24	CONSTRUCTION SET

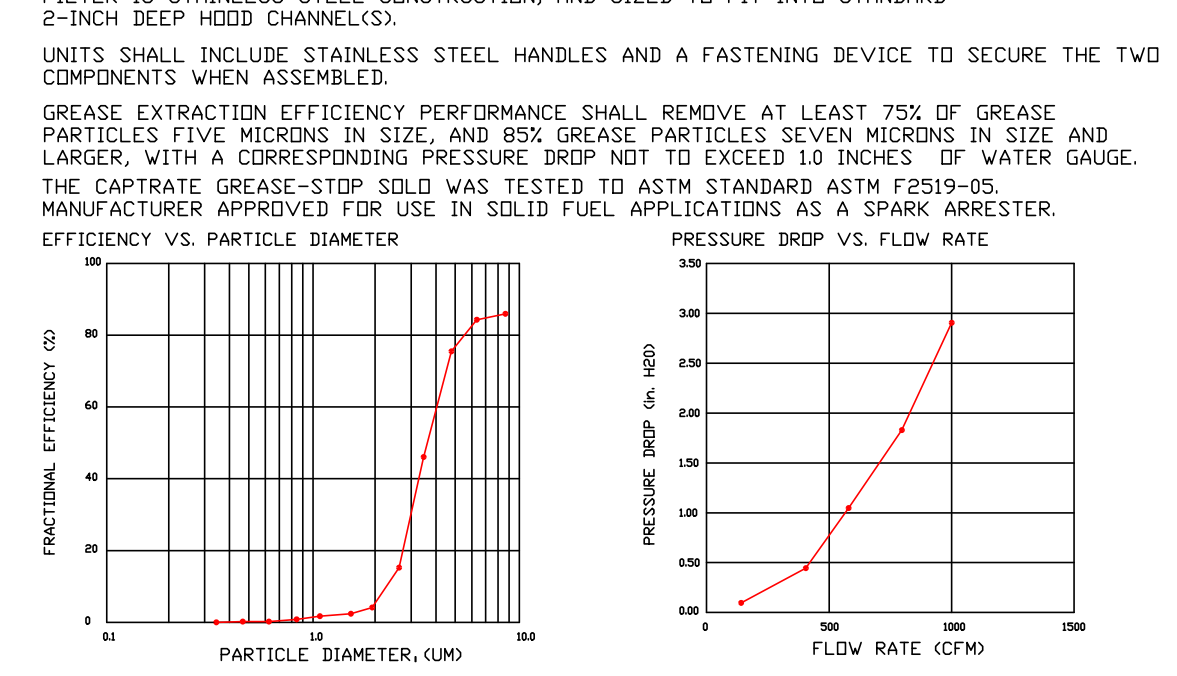
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Kitchen Hood Drawings

Date Modified: 02/16/24
 Date Created: AS SHOWN
 Project No.: 3463-23-208
 Drawn By: MV
 CAD File: 3463-240812- Construction Set- MV.vwx

REVISIONS
 DESCRIPTION DATE
 CAPTIVEAIRE
 Maryland Office
 8120 Woodmont Avenue, Suite 1720, Bethesda, MD, 20814 PHONE: (800) 988-0881 FAX: 9192275931 EMAIL: reg32@captiveaire.com

SPECIFICATION: CAPTRATE® GREASE-STOP® SOLO FILTER
 THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-Baffle DESIGN IN CONJUNCTION WITH A SLOTTED REAR Baffle DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.
 FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNELS.
 UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.
 GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE. THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05. MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.
 EFFICIENCY VS. PARTICLE DIAMETER PRESSURE DROP VS. FLOW RATE



CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
 NSF STANDARD #2,
 UL STANDARD #1046,
 INT. MECH. CODE (IMC),
 ULC-S649.



FOR QUESTIONS, CALL THE
 Maryland Office
 REGION 32
 PHONE: (800) 988-0881
 EMAIL: reg32@captiveaire.com

PATENT NUMBERS
 AC-PSP (UNITED STATES) - US PATENT 7963830 B2.
 AC-PSP WALL (CANADA) - CA PATENT 2820509.
 AC-PSP ISLAND (CANADA) - CA PATENT 2520330.

HOOD INFORMATION - JOB#6603938

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	RDW
1		6030 ND-2-ACPSP-F	CAPTIVEAIRE	11' 7"	600 DEG	I	HEAVY	215	2490			4'	18'	2490	1409	-0.662"	2116	838	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	TYPE	FILTER(S)				LIGHT(S)				UTILITY CABINET(S)				FIRE SYSTEM	HOOD HANGING WEIGHT	
			QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	TYPE	SIZE	ELECTRICAL			SWITCHES
1		CAPTRATE SOLO FILTER	8	20"	16'	85% SEE FILTER SPEC	5	L55 SERIES E26	NO	LEFT	12"x60"x30"	TANK FS	4.0/4.0	DCV-1111	1 LIGHT 1 FAN	YES	1180 LBS

HOOD OPTIONS

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

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				
							WIDTH	LENG	DIA	CFM	SP
1		Front	152'	24'	6'	MUA	12"	28"		705	0.188"
						MUA	12"	28"		705	0.188"
						MUA	12"	28"		705	0.188"
						AC	8"	26"		419	0.094"
						AC	8"	26"		419	0.094"

GREASE DUCT & CHIMNEY SPECIFICATIONS:
 PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW" ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "DW" IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "DW" DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER THE MANUFACTURERS INSTALLATION GUIDE.
 PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER MANUFACTURERS LISTING MODEL "DW" 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 CAPTIVEAIRE SYSTEMS MODEL "DW- 2R, 2R TYPE HT, 3R, OR 3Z" ROUND 20 GAUGE 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

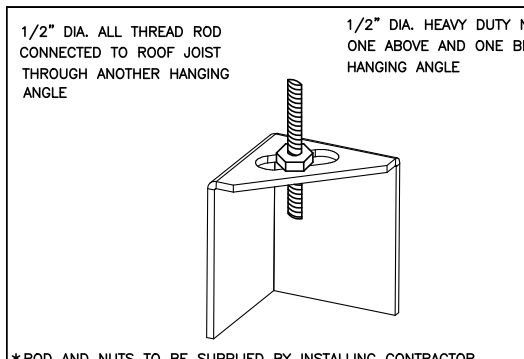
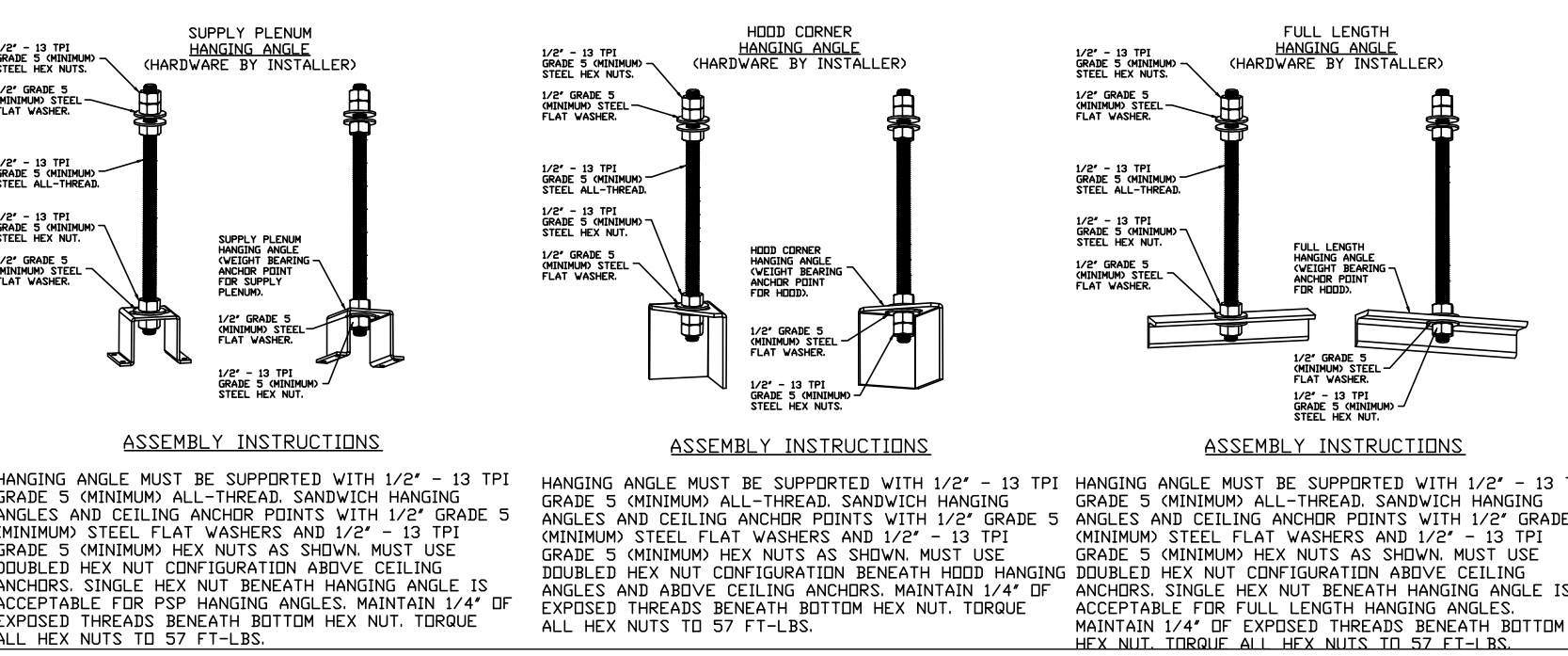
CAPTIVEAIRE SYSTEMS RECOMMENDS THE USE OF LISTED, PRE-FABRICATED ROUND GREASE EXHAUST DUCT TO REDUCE STATIC PRESSURE IN THE SYSTEM, MINIMIZE INSTALLATION AND INSPECTION TIMES, AND ENSURE DUCT IS LIQUID TIGHT

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
 APPROVED WITH NO EXCEPTION TAKEN
 REVISE AND RESUBMIT
 SIGNATURE _____
 YOUR TITLE _____ DATE _____

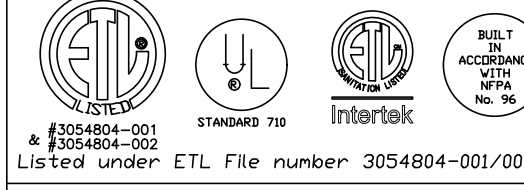


HANGING ANGLE DETAILS

HOOD STYLE / MODEL	450 DEGREES CFM/FT.	600 DEGREES CFM/FT.	700 DEGREES CFM/FT.
CANOPY ND2	150	200	250
WITH END PANELS (15% reduction)	127.5	170	212.5
SLOPED END-2	228	294	-
ISLAND ND-ZWI	269	300	350
NDI	346	422	475

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

*CAPTIVEAIRE VENTILATOR DUCT SIZES ARE CALCULATED USING AN EXHAUST VELOCITY OF 1500-1800 FPM AND A SUPPLY VELOCITY OF 1000 FPM.
CALCULATIONS UTILIZED
 CAPTIVEAIRE HOODS ARE BUILT IN COMPLIANCE WITH:



BUILDING CODES
 CAPTIVEAIRE HOODS HAVE OPTIONAL CLEARANCE REDUCTION SYSTEMS AVAILABLE AS FOLLOWS:
 MATERIAL CLEARANCE REDUCTION SYSTEM
 NON-COMBUSTIBLE NONE REQUIRED
 LIMITED-COMBUSTIBLE 3" UNINSULATED STANDOFF
 COMBUSTIBLE 1" INSULATED STANDOFF

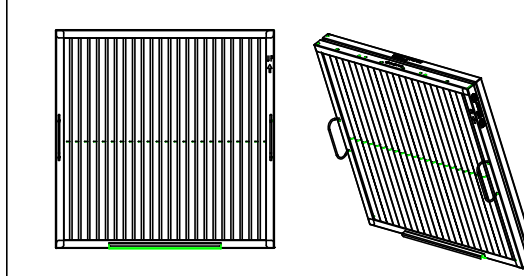
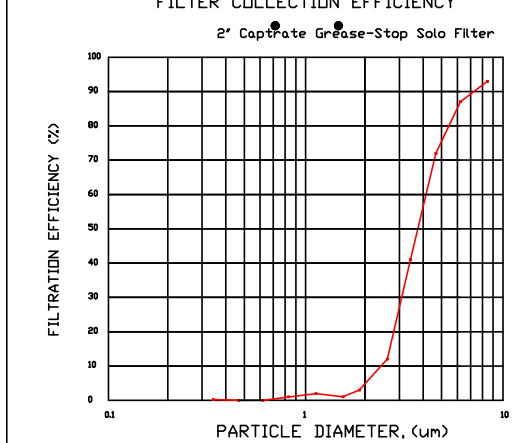
CLEARANCE TO COMBUSTIBLES

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

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

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

GENERAL NOTES



CaptiveAire Captrate Solo Filter
 ETL Listed Grease Extracting Filters
 Made From 430 Stainless Steel

FILTER DETAIL

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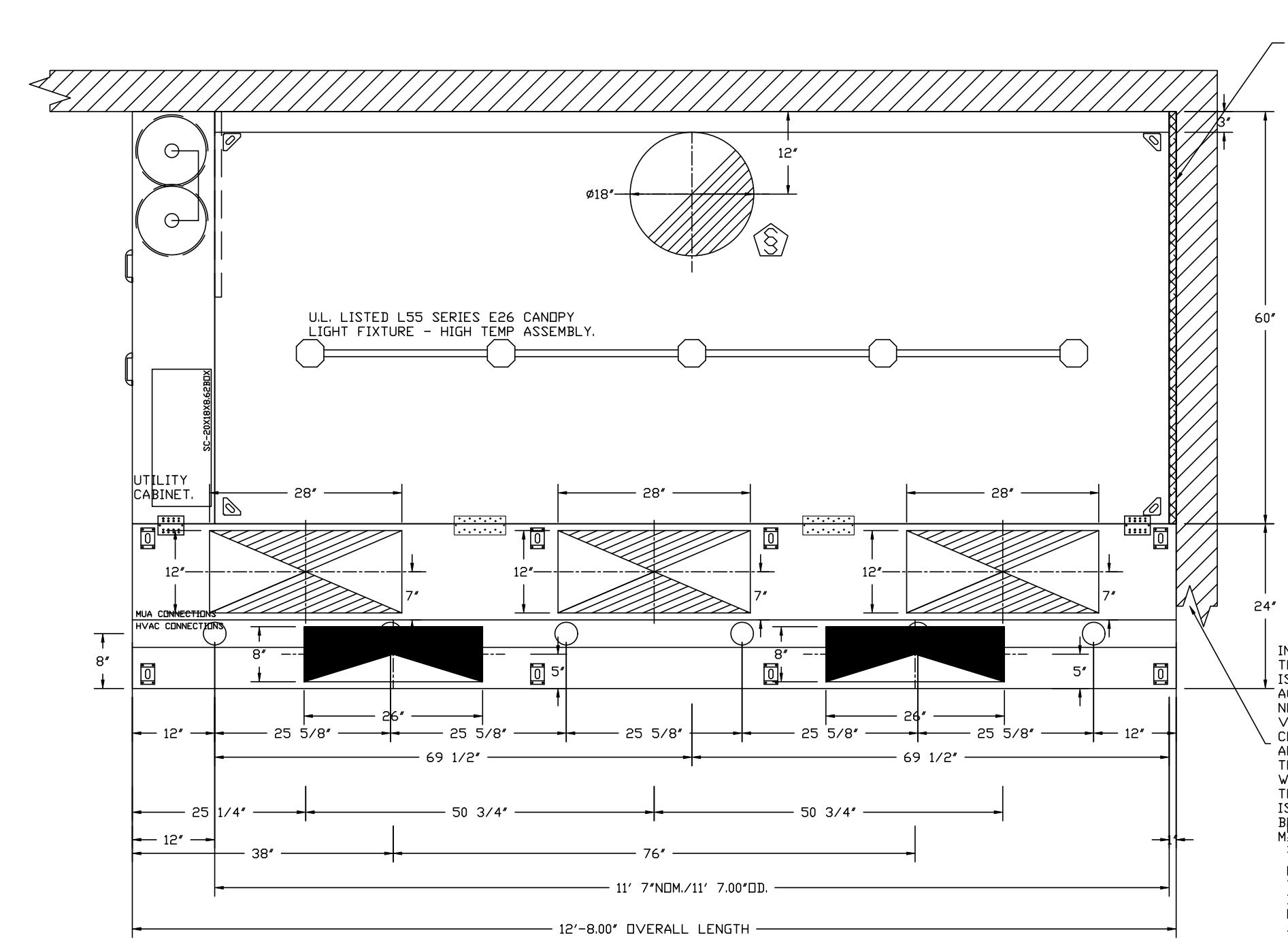
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 8120 Woodmont Avenue, Suite 720, Bethesda, MD, 20814 PHONE: (800) 988-0881 FAX: 9192275931 EMAIL: mg32@captiveware.com

Cava - East Brunswick, NJ_R1
 300 New Jersey 18,
 East Brunswick, NJ, 08816

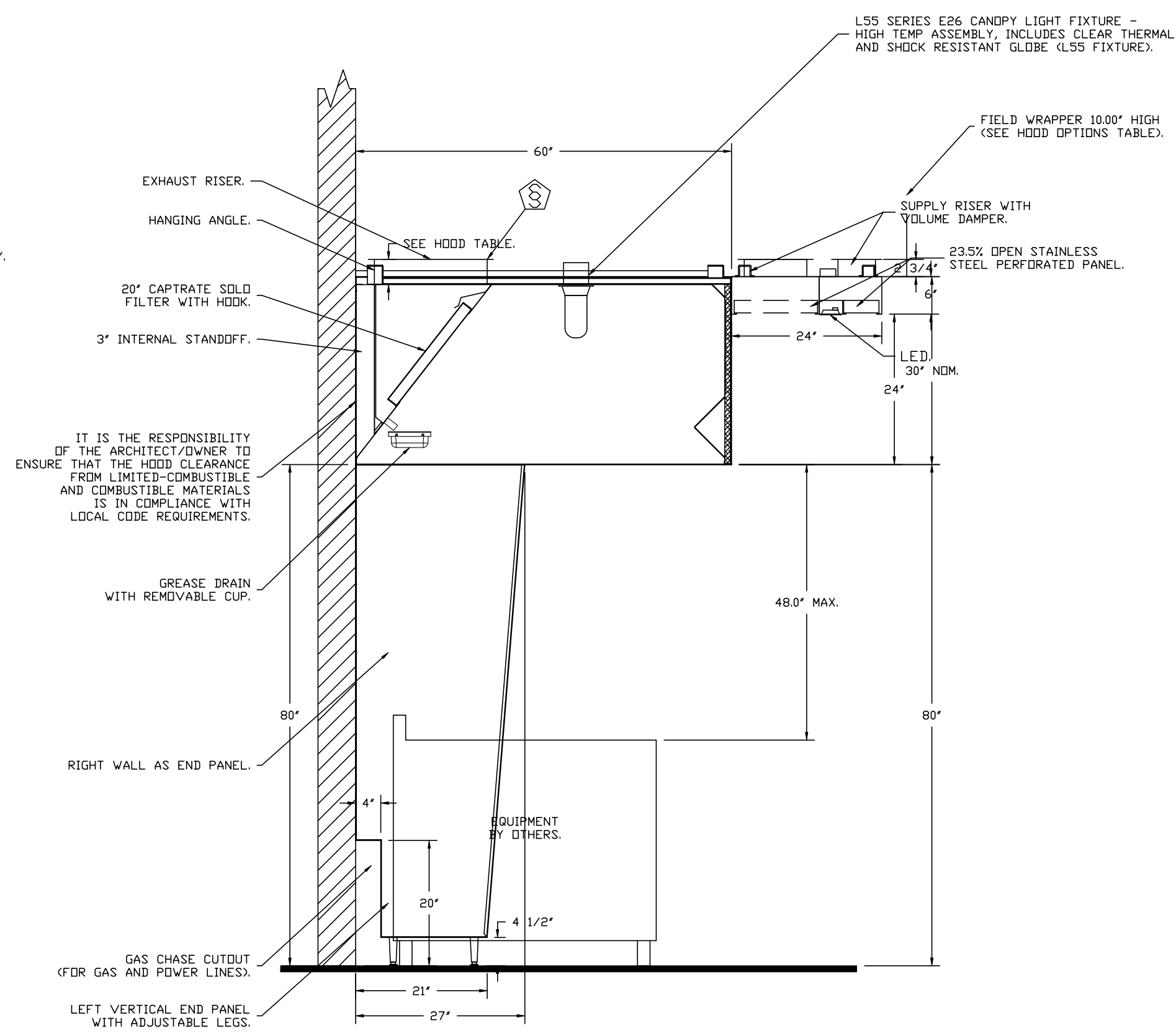
DATE: 2/7/2024
 DWG.#: 6603938
 DRAWN BY: AS-32
 SCALE: 3/4" = 1'-0"
 MASTER DRAWING

SHEET NO.
 2



PLAN VIEW - HOOD #1
 11' 7.00" LONG 6030ND-2-ACPSP-F
 ACPSP SHIPS LOOSE FOR FIELD INSTALLATION

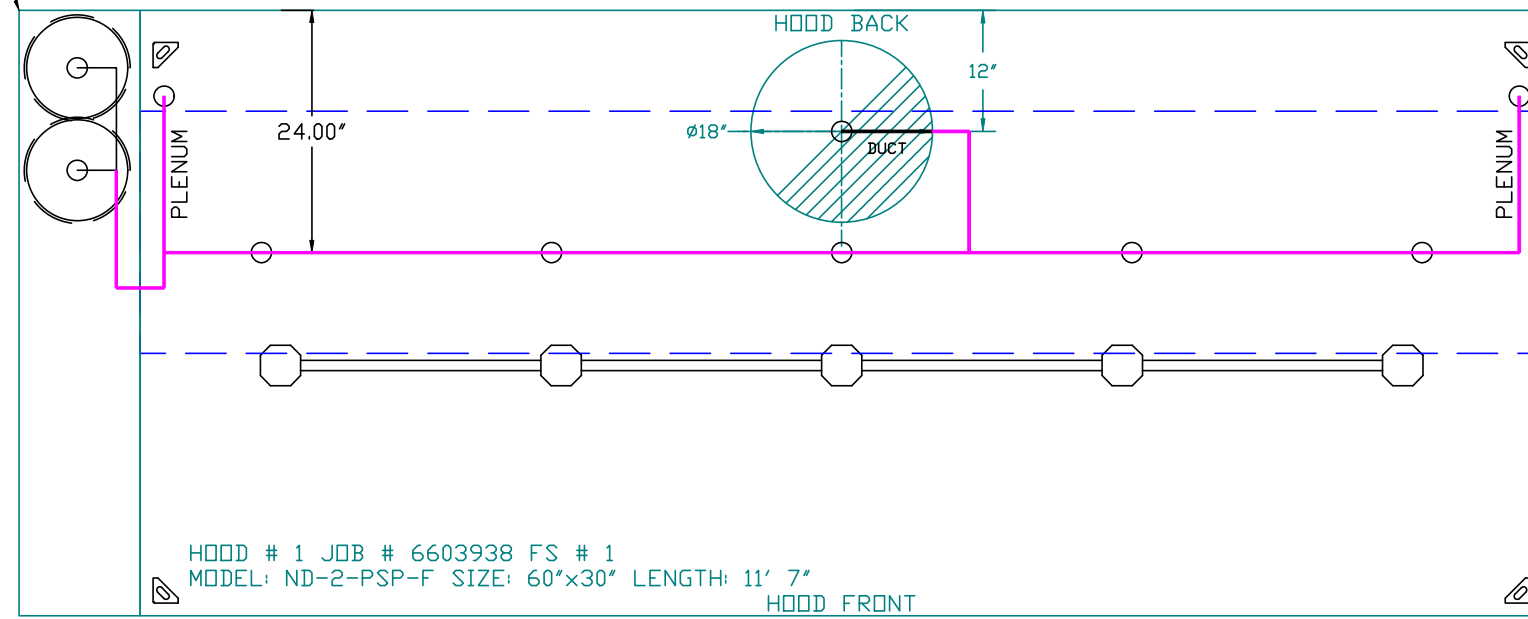
INSTALLER MUST CONFIRM HOOD IS INSTALLED SUCH THAT THE SPECIFIED WALL, ACTING AS AN END PANEL, IS MATED TIGHT TO THE CORRECT END OF HOOD TO ACHIEVE A REDUCED MINIMUM EXHAUST CFM LISTING. NON-COMPLIANCE WILL NULLIFY THE ETL LISTING, VOID THE MANUFACTURER'S WARRANTY, AND HOLD THE CONTRACTOR LIABLE FOR ANY AND ALL LOSSES, COSTS, AND EXPENSES RELATED TO THE NON-COMFORMANCE OF THE MANUFACTURER'S SPECIFIED INSTRUCTION. THE WALL ACTING AS AN END PANEL MUST EXTEND NO LESS THAN 20" FROM THE INTERSECTING WALL ON WHICH HOOD IS MOUNTED AND MUST EXTEND NO LESS THAN 20" UNDER BOTTOM OF HOOD TO BE ELIGIBLE FOR BEARING. MINIMUM BEARING CAPACITY 100/60HZ, 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 FROM J-BOX TO J-BOX. REPLACE LIGHTS WITH LED LIGHTS ONLY.



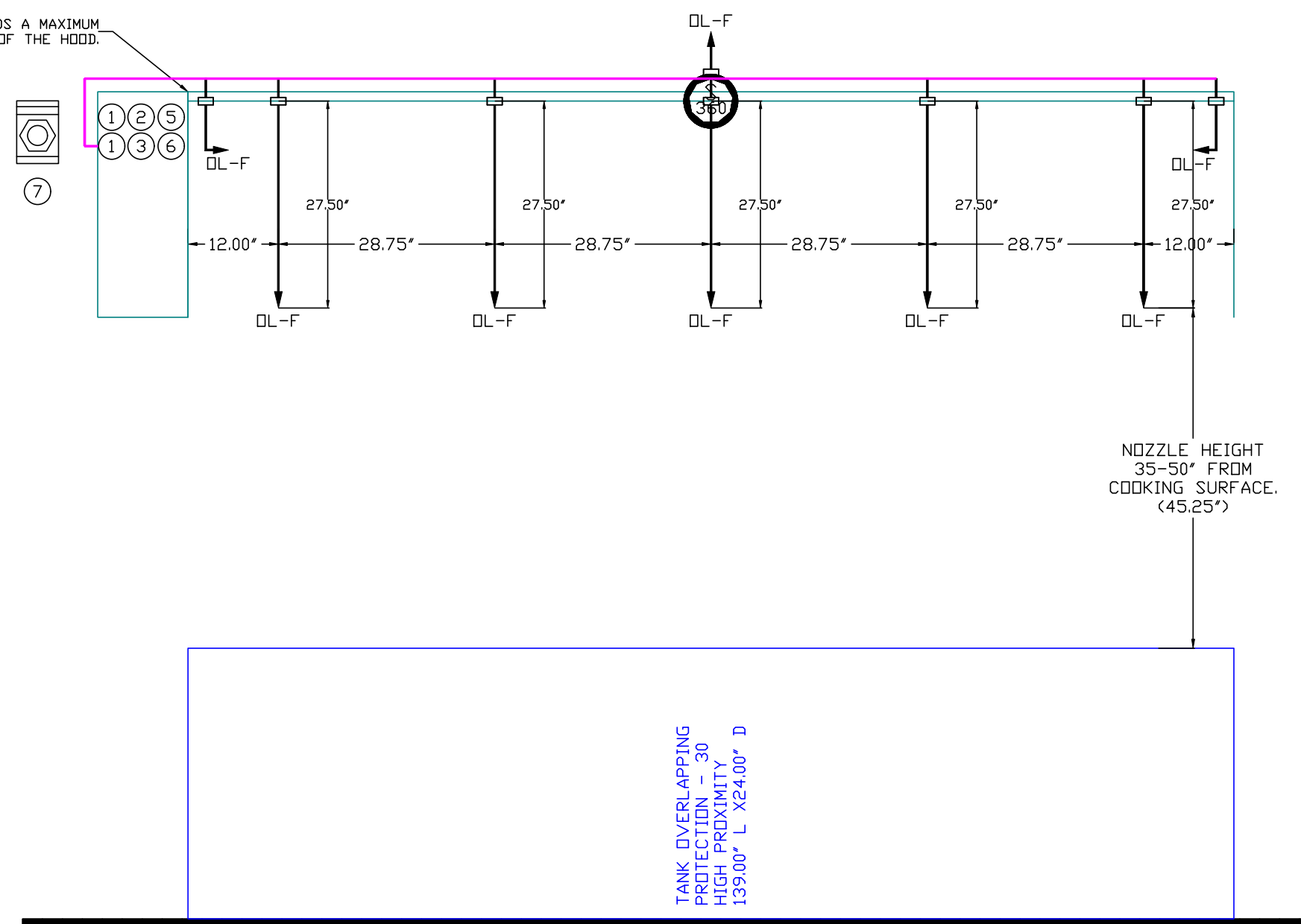
FIRE SYSTEM INFORMATION - JOB#6603938

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION	
						SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0/4.0	40	37	FIRE CABINET LEFT	LEFT, HOOD 1

- SYSTEM REQUIRES A MINIMUM OF 7 FT OF EQUIVALENT PIPE LENGTH BETWEEN TANK AND NEAREST APPLIANCE NOZZLE FOR MOST APPLIANCES. EACH 90 DEGREE ELBOW ADDS 1.3 FT OF EQUIVALENT LENGTH. SEE MANUAL FOR DETAILS



FACTORY PIPING EXTENDS A MAXIMUM OF 6' ABOVE THE TOP OF THE HOOD.



NOTES

- FIELD PIPE DROPS AS SHOWN
- PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROP: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
- SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6' ABOVE THE TOP OF THE HOOD.

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.

- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.

- DL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

JOB #: 6603938
JOB NAME: CAVA - EAST BRUNSWICK, NJ_R1.

SYSTEM SIZE: TANK-SP-2 DESIGN FP: 37. MAXIMUM FP: 40.
HOOD # 1 11' 7.00" LONG x 60" WIDE x 30" HIGH.
RISER # 1 SIZE: 18" DIA.
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

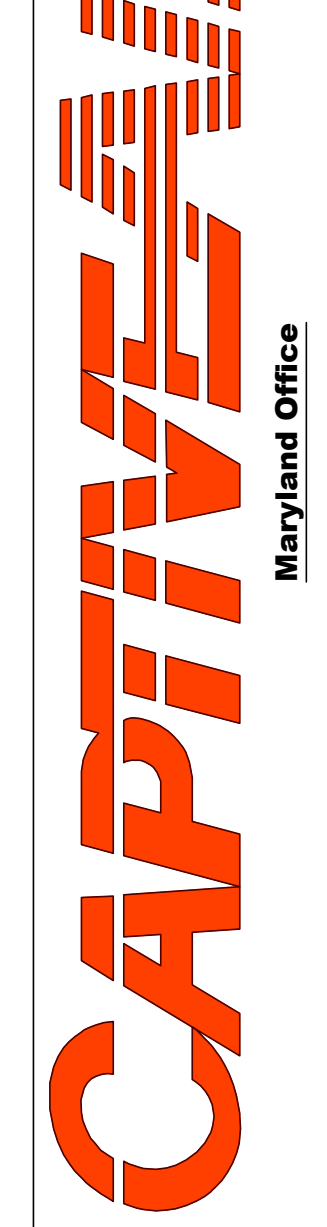
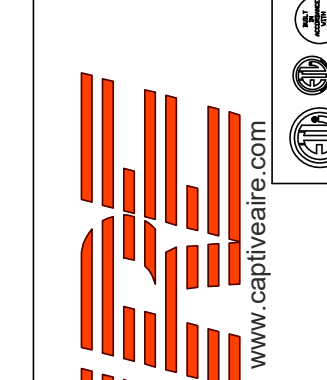
- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

LEGEND - FIRE CABINET TANK SYSTEM

- | | |
|---|---------------------------------|
| 1 | 4 GALLON TANK. |
| 2 | PRIMARY ACTUATOR RELEASE. |
| 3 | SECONDARY ACTUATOR RELEASE. |
| 4 | PRESSURE SUPERVISION SWITCH. |
| 5 | PRIMARY HOSE ASSEMBLY. |
| 6 | SECONDARY HOSE ASSEMBLY. |
| 7 | REMOTE MANUAL ACTUATION DEVICE. |

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Cava - East Brunswick, NJ_R1
300 New Jersey 18,
East Brunswick, NJ, 08816

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DWG.#:
6603938

DRAWN BY: AS-32

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

MASTER DRAWING

SHEET NO.
3



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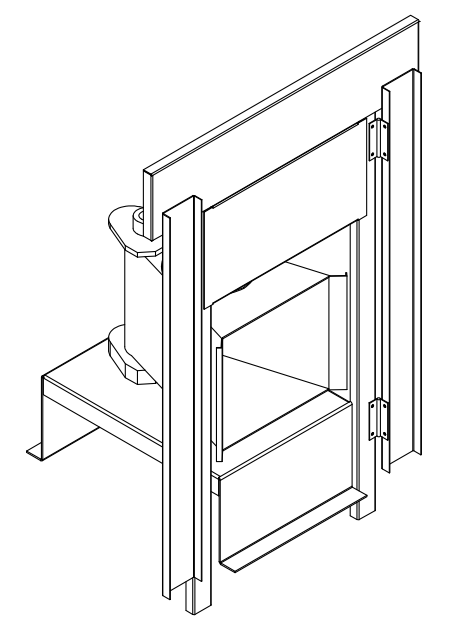
A9.3

- FAN #2 A1-D250-16Z-MPU - HEATER
1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 16" DIRECT DRIVE FAN.
 2. INTAKE HOOD WITH EZ FILTERS.
 3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
 4. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE.
 5. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC, 2.5" DIAMETER, 1/4" THREAD SIZE.
 6. SHIP LOOSE GAS STRAINER TO BE INSTALLED UPSTREAM OF UNIT CONNECTION. 3/4" CONNECTION.
 7. CASLINK BUILDING MONITORING SYSTEM COMMUNICATIONS MODULE. REQUIRES INTERNET & FIELD WIRED ETHERNET CONNECTION OR 30 CELLULAR SERVICE. INCLUDES REV 3 COM MODULE, R445 TO MODBUS CONVERTER, 3 FT CAT5 CABLE, AND 1 FT OF SHIELDED TWISTED PAIR.
 8. MOTORIZED BACK DRAFT DAMPER 16" X 18" FOR SIZE 1 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, FF920S ACTUATOR INCLUDED.
 9. 5 TON, DUAL CIRCUIT (2.5/2.5) MODULAR PACKAGED COOLING OPTION FOR SIZE 1 DF/CH MODULAR PACKAGED UNIT. INCLUDES CONDENSER, DX COIL, FILTER/DRYER KIT, THERMAL EXPANSION VALVE, R410A REFRIGERANT, AND REFRIGERANT PIPING. (1800 TO 3000 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 = 6Z0902M).
 10. DOWNTURN PLENUM FOR SIZE 1 COOLING COIL MODULE - REQUIRED FOR DOWN DISCHARGE COOLING COIL APPLICATIONS.
 11. ECM WIRING PACKAGE FOR ZIEHL SUPPLY MOTORS WITH PWM SIGNAL FROM ECM03 PREWIRE.
 12. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER/MPU SECTION).
 13. 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 14" X 14".

SUPPLY SIDE HEATER INFORMATION

WINTER TEMPERATURE = 16°F. TEMP. RISE = 59°F.
 BTUs CALCULATED OFF ACTUAL AIR DENSITY.
 OUTPUT BTUs AT ALTITUDE OF 0.0 FT. = 134992.
 INPUT BTUs AT ALTITUDE OF 0.0 FT. = 146687.
 OUTPUT BTUs AT ALTITUDE OF 131 FT. = 134214.
 INPUT BTUs AT ALTITUDE OF 131 FT. = 145994.



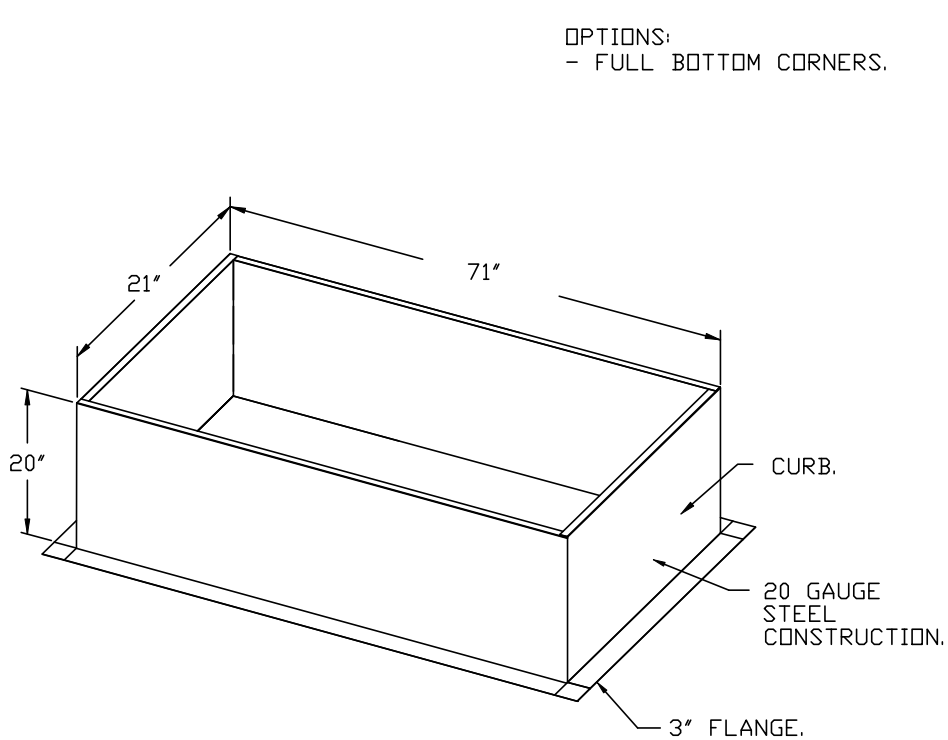
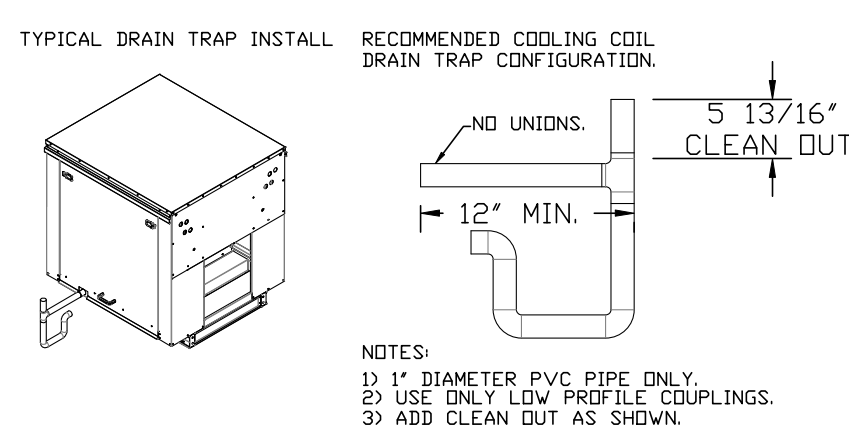
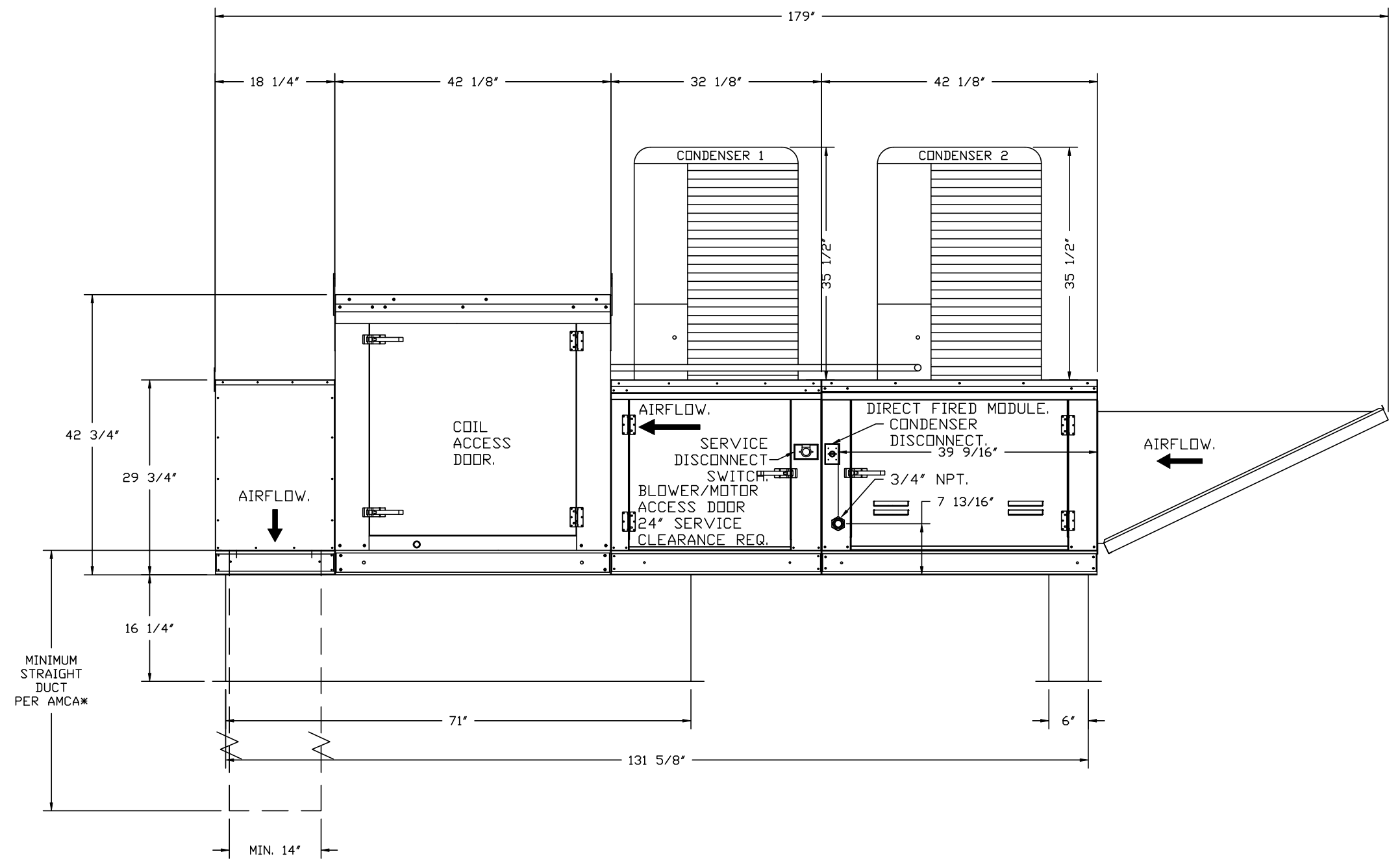
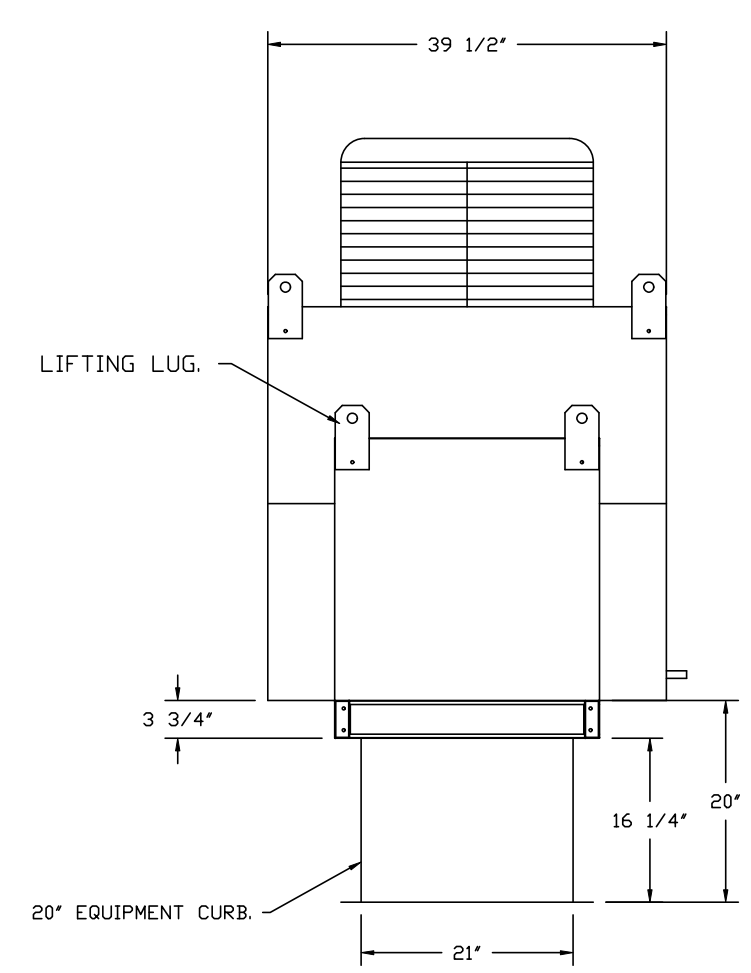
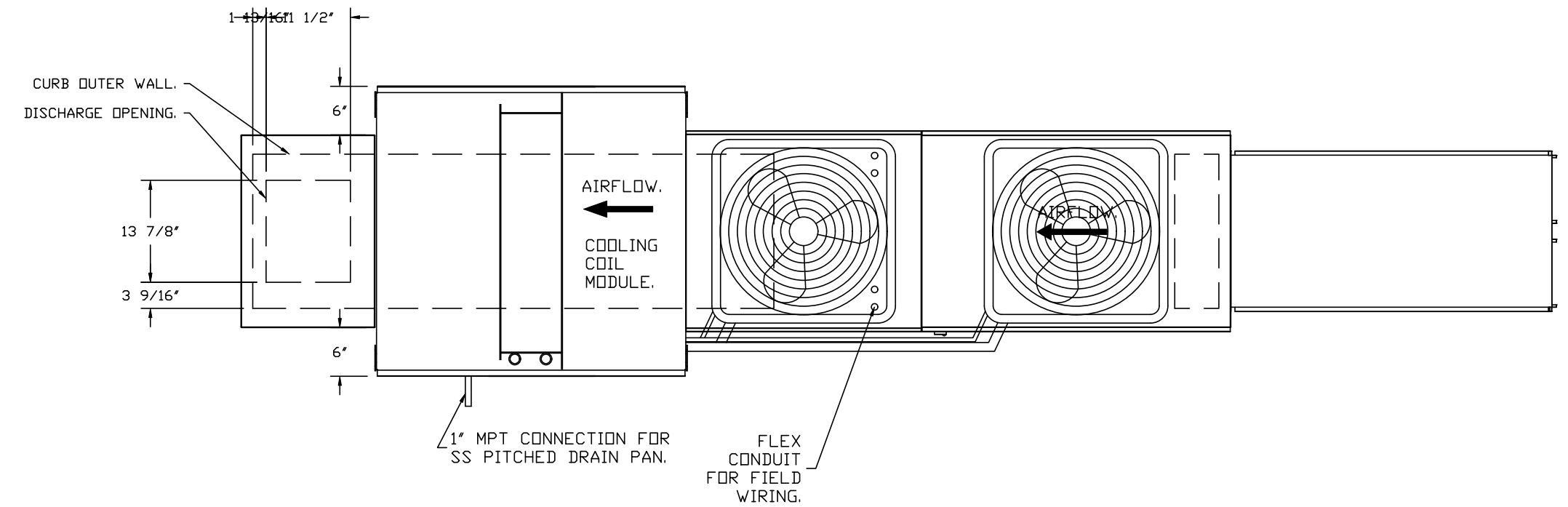
DIRECT FIRED (DF) PROFILE PLATE ASSEMBLY

DESCRIPTION:
 DIRECT FIRED BURNERS SHALL HAVE PATENTED (US PATENT NO. US6629523B2), SELF-ADJUSTING PROFILE PLATES DESIGNED TO ENSURE PROPER AIR VELOCITY AND PRESSURE DROP ACROSS THE BURNER. PROFILE PLATES SHALL ALLOW BURNERS TO ACHIEVE CLEAN COMBUSTION BY LIMITING BY-PRODUCT LEVELS TO A MAXIMUM OF 0.5PPM OF CARBON MONOXIDE (CO) AND 0.5PPM OF NITROGEN DIOXIDE (NO2). DIRECT FIRED UNITS SHALL BE CONFIGURED WITH THE BLOWER MOUNTED DOWNSTREAM OF THE BURNER. THIS ARRANGEMENT WILL ENSURE A CONSISTENT AIRFLOW, REGARDLESS OF INLET AIR TEMPERATURE.

APPLICATION:
 SPRING-LOADED BURNER PROFILE PLATES ARE ENGINEERED TO AUTOMATICALLY REACT TO THE MOMENTUM OF A FRESH AIR STREAM, WITHOUT THE NEED FOR ANY MOTORS OR ACTUATORS TO MECHANICALLY ADJUST THEM. WITH THIS FEATURE, ALL DF UNITS ARE DESIGNED FOR DEMAND CONTROL VENTILATION (DCV) REQUIREMENTS.

CERTIFICATIONS:
 ALL PROFILE PLATE ASSEMBLIES SHALL BE INCLUDED IN THE DF UNIT'S ETL LISTING AND COMPLY WITH COMBINED SAFETY STANDARDS ANSI Z83.4 AND CSA 3.7 (NDN-RECIRCULATING DF HEATERS) AND ANSI Z83.18 (RECIRCULATING DF HEATERS).

GENERAL CONSTRUCTION:
 -PROFILE PLATES SHALL BE FORMED FROM G90 GALVANIZED STEEL.
 -PROFILE PLATES SHALL VARY IN SIZE PER UNIT.
 -PROFILE PLATES SHALL BE MOUNTED ALONG THE SAME PLANE AS THE DISCHARGE OF THE BURNER.
 -DESIGN SHALL INCORPORATE PROPERLY TORQUED, PERMANENTLY MOUNTED SPRING HINGES.
 -SPRING HINGES SHALL BE MADE FROM PLATED STEEL.



REVISIONS

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CAPTIVE

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Cava - East Brunswick, NJ_R1
 300 New Jersey 18,
 East Brunswick, NJ, 08816

DATE: 2/7/2024
DWG.#: 6603938
DRAWN BY: AS-32
SCALE: 3/4" = 1'-0"
MASTER DRAWING

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SEAL

PROJECT

CAVA
 300 NJ-18
 East Brunswick, NJ 08816

DATE	DESCRIPTION
03/13/24	PERMIT SET
05/28/24	BID SET
07/26/24	PC COMMENTS 1
08/12/24	CONSTRUCTION SET

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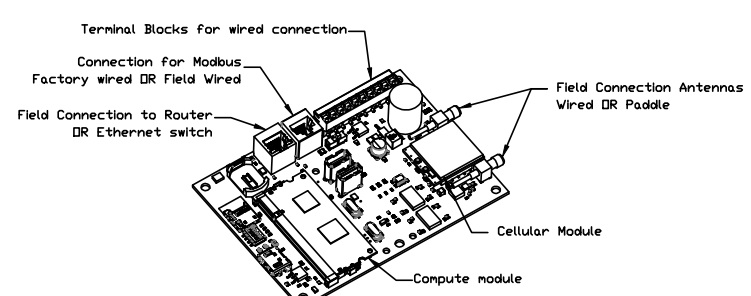
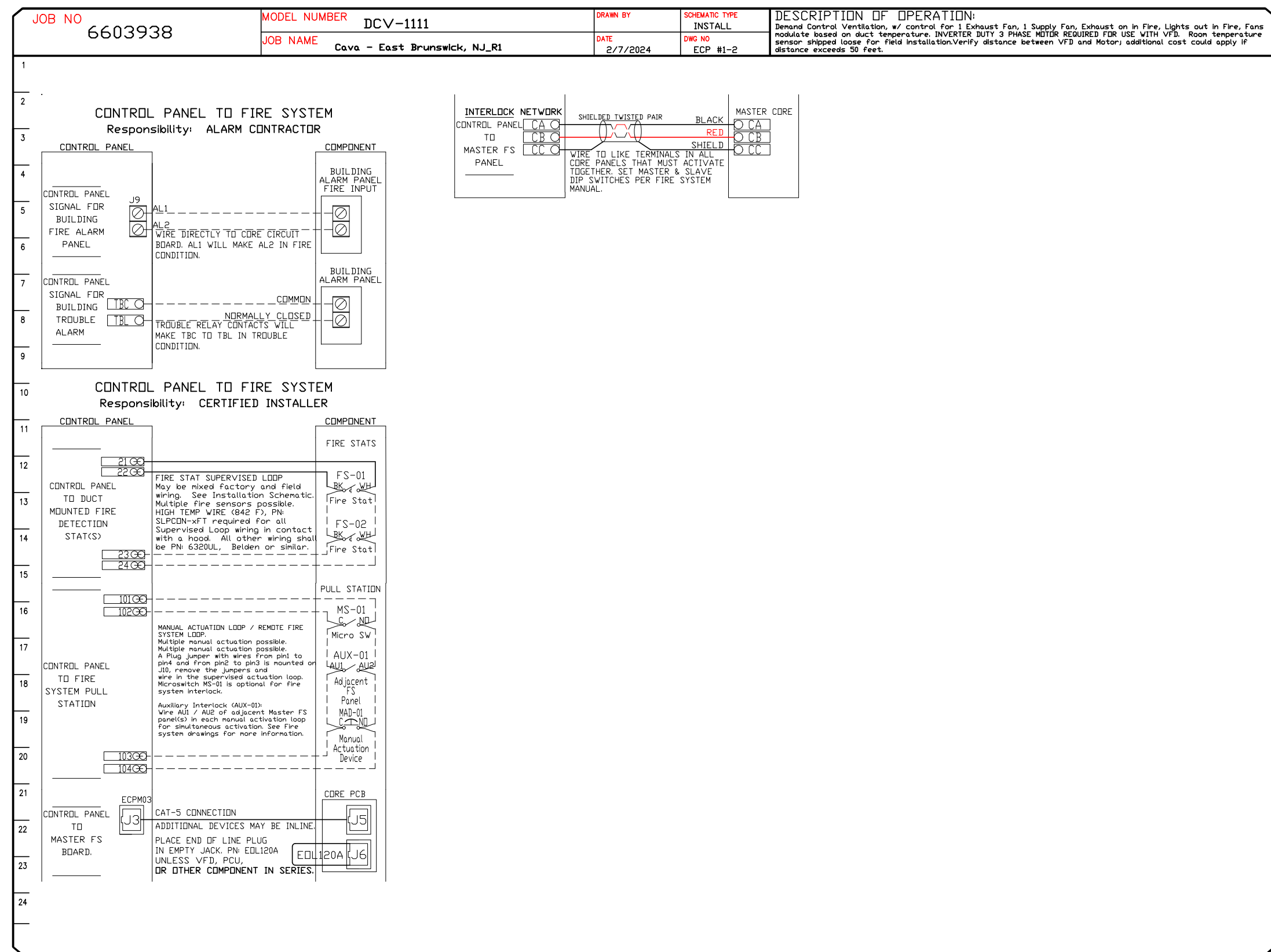
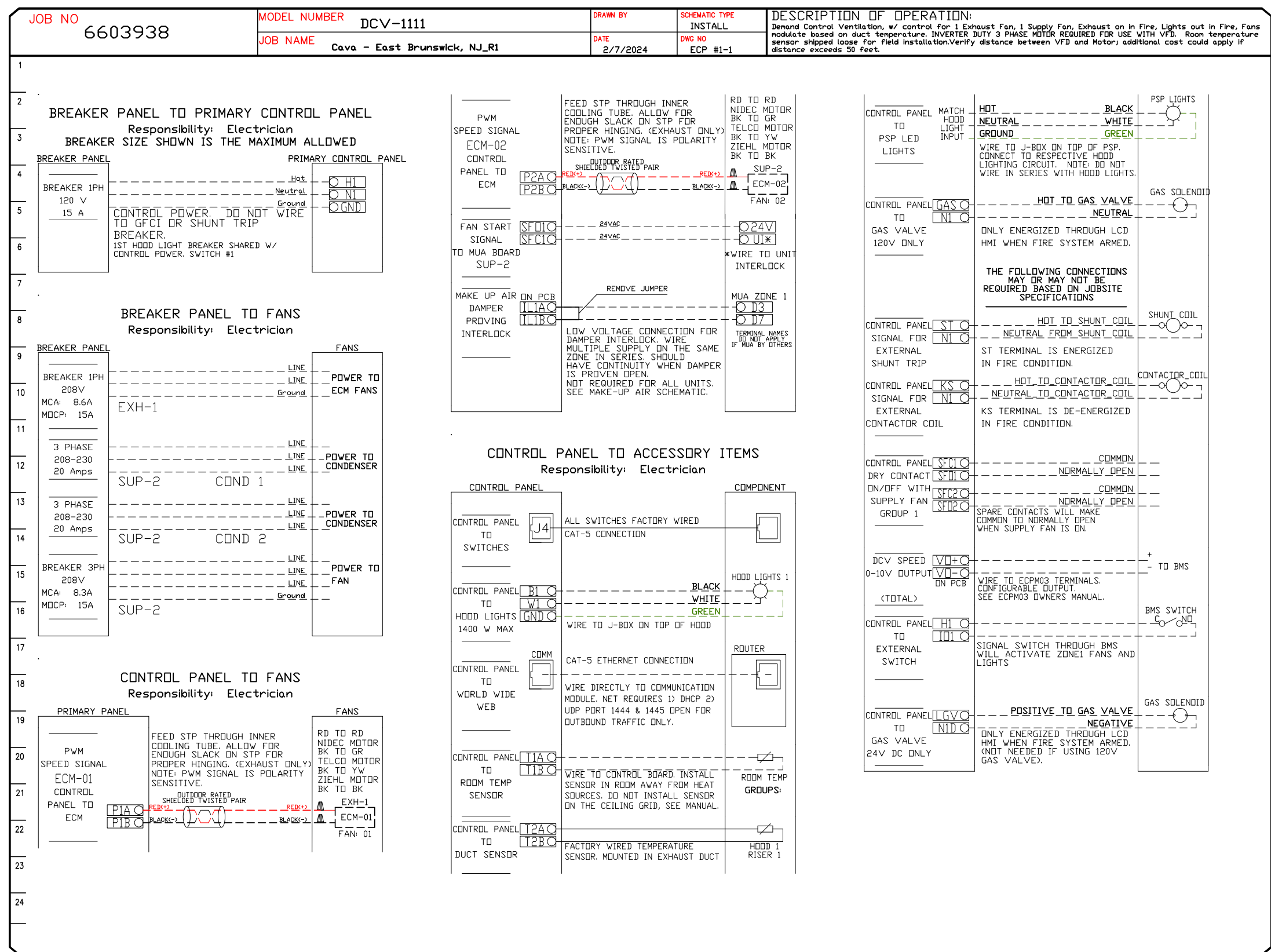
Kitchen Hood Drawings

Date Modified: 02/16/24
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 Scale: 3463-23-208
 Project No.: MV
 Drawn By: 3463-240812- Construction Set-MV.vwx
 CAD File:

A9.5

ELECTRICAL PACKAGE - JOB#6603938

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	#	HP	VOLTS	FLA
1		DCV-1111	UTILITY CABINET LEFT	UTILITY CABINET LEFT	1 LIGHT	SMART CONTROLS DCV	EXHAUST	1	1.000	208	6.9
				HOOD # 1	1 FAN		SUPPLY	3	2.500	208	5.7



CASlink 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 in the points list.
- Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in 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	DC Packages	Function
Room Temperature	MONITOR	Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR	Duct Temperature(s)	MONITOR
MHA Discharge Temperature	MONITOR	MHA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR	Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR	Controller Fan(s)	MONITOR
Fan Ampage	MONITOR	Fan Status	MONITOR
Fan Power	MONITOR	Fan Status	MONITOR
VFD Faults	MONITOR	PCV Faults	MONITOR
Controller Faults	MONITOR	PCV Filter Clap Percentages	MONITOR
Fan Faults	MONITOR	Fine Condition	MONITOR
Fan Status	MONITOR	COSE Fire System	MONITOR
PCV Faults	MONITOR	Building Pressure	MONITOR
PCV Filter Clap Percentages	MONITOR	Fans Status(s)	MONITOR & CONTROL
Fine Condition	MONITOR	Light(s) Status(s)	MONITOR & CONTROL
COSE Fire System	MONITOR	Flash Button	MONITOR & CONTROL
Building Pressure	MONITOR		
Prog. Fine Button	MONITOR & CONTROL		
Fine Button	MONITOR & CONTROL		
Light(s) Button	MONITOR & CONTROL		
Flash Button	MONITOR & CONTROL		

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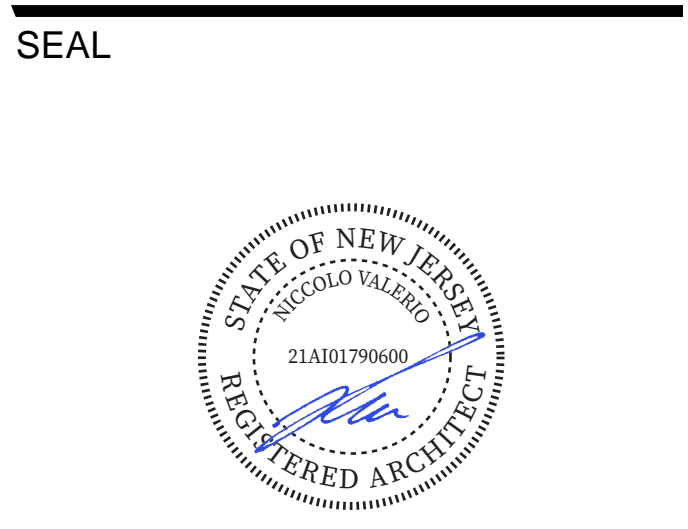
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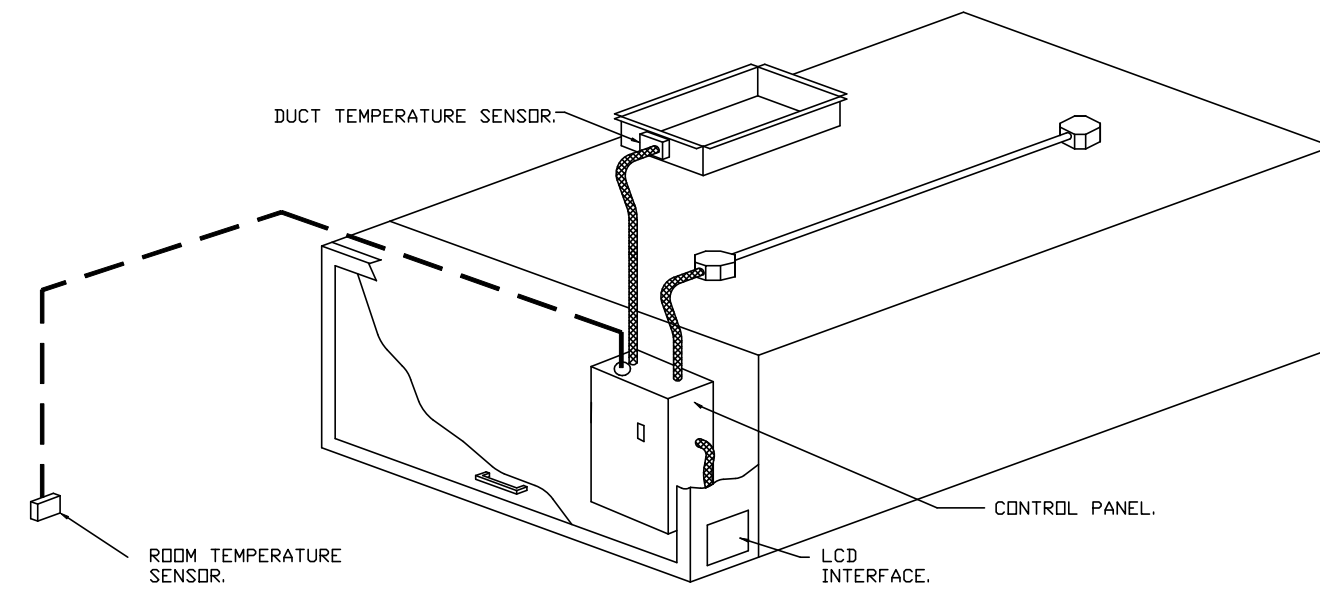
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DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS:

- CONTROLS SHALL BE LISTED BY ETL (UL 508A) AND SHALL COMPLY WITH DEMAND VENTILATION SYSTEM TURNDOWN REQUIREMENTS OUTLINED IN IECC 403.7.5 (2021).
- THE CONTROL ENCLOSURE SHALL BE NEMA 1 RATED AND LISTED FOR INSTALLATION INSIDE OF THE EXHAUST HOOD UTILITY CABINET. THE CONTROL ENCLOSURE MAY BE CONSTRUCTED OF STAINLESS STEEL OR PAINTED STEEL.
- TEMPERATURE PROBES(S) LOCATED IN THE EXHAUST DUCT RISER(S) SHALL BE CONSTRUCTED OF STAINLESS STEEL.
- A DIGITAL CONTROLLER SHALL BE PROVIDED TO ACTIVATE THE HOOD EXHAUST FANS DYNAMICALLY BASED ON A FIXED DIFFERENTIAL BETWEEN THE AMBIENT AND DUCT TEMPERATURES SENSORS. THIS FUNCTION SHALL MEET THE REQUIREMENTS OF IMC 507.1.1.
- A DIGITAL CONTROLLER SHALL PROVIDE ADJUSTABLE HYSTERESIS SETTINGS TO PREVENT CYCLING OF THE FANS AFTER THE COOKING APPLIANCES HAVE BEEN TURNED OFF AND/OR THE HEAT IN THE EXHAUST SYSTEM IS REDUCED.
- A DIGITAL CONTROLLER SHALL PROVIDE AN ADJUSTABLE MINIMUM FAN RUN-TIME SETTING TO PREVENT FAN CYCLING.
- VARIABLE FREQUENCY DRIVES (VFDs) SHALL BE PROVIDED FOR FANS AS REQUIRED. THE DIGITAL CONTROLLER SHALL MODULATE THE VFDs BETWEEN A MINIMUM SETPOINT AND A MAXIMUM SETPOINT ON DEMAND. THE DUCT TEMPERATURE SENSOR INPUT(S) TO THE DIGITAL CONTROLLER SHALL BE USED TO CALCULATE THE SPEED REFERENCE SIGNAL.
- THE VFD SPEED RANGE OF OPERATION SHALL BE FROM 0% TO 100% FOR THE SYSTEM, WITH THE ACTUAL MINIMUM SPEED SET AS REQUIRED TO MEET MINIMUM VENTILATION REQUIREMENTS.
- AN INTERNAL ALGORITHM TO THE DIGITAL CONTROLLER SHALL MODULATE SUPPLY FAN VFD SPEED PROPORTIONAL TO ALL EXHAUST FANS THAT ARE LOCATED IN THE SAME FAN GROUP AS THE SUPPLY FAN.
- THE SYSTEM SHALL OPERATE IN PREP MODE DURING LIGHT COOKING LOAD OR COOL DOWN MODE WHEN SUFFICIENT HEAT REMAINS UNDERNEATH THE HOOD SYSTEM AFTER COOKING OPERATIONS HAVE COMPLETED. OPERATION DURING EITHER OF THESE PERIODS WILL DISABLE THE SUPPLY FANS AND PROVIDE AN EXHAUST FAN SPEED THAT IS EQUAL TO THE MINIMUM VENTILATION REQUIREMENT.
- A DIGITAL CONTROLLER SHALL DISABLE THE SUPPLY FAN(S), ACTIVATE THE EXHAUST FAN(S), ACTIVATE THE APPLIANCE SHUNT TRIP, AND DISABLE AN ELECTRIC GAS VALVE AUTOMATICALLY WHEN FIRE CONDITION IS DETECTED ON A COVERED HOOD.
- A DIGITAL CONTROLLER SHALL ALLOW FOR EXTERNAL BMS FAN CONTROL VIA DRY CONTACT (EXTERNAL CONTROL SHALL NOT OVERRIDE FAN OPERATION LOGIC AS REQUIRED BY CODE).
- AN LCD INTERFACE SHALL BE PROVIDED WITH THE FOLLOWING FEATURES:
 - ON/OFF PUSH BUTTON FAN & LIGHT SWITCH ACTIVATION.
 - INTEGRATED GAS VALVE RESET FOR ELECTRONIC GAS VALVES (NO RESET RELAY REQUIRED).
 - VFD FAULT DISPLAY WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
 - DUCT TEMPERATURE SENSOR FAILURE DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
 - MIS-WIRED DUCT TEMPERATURE SENSOR DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
 - A SINGLE LOW VOLTAGE CAT-5 RJ45 WIRING CONNECTION.
 - AN ENERGY SAVINGS INDICATOR THAT UTILIZES MEASURED KWH FROM THE VFDs.



TYPICAL HOOD CONTROL PANEL INSTALLATION

SEQUENCE OF OPERATIONS:

- THE HOOD CONTROL PANEL IS CAPABLE OF OPERATING IN ONE OR MORE OF THE FOLLOWING STATES AT ANY GIVEN TIME:
- **AUTOMATIC:** THE SYSTEM OPERATES BASED ON THE DIFFERENTIAL BETWEEN ROOM TEMPERATURE AND THE TEMPERATURE AT THE HOOD CAVITY OR EXHAUST DUCT COLLAR. FANS ACTIVATE AT A CONFIGURABLE TEMPERATURE DIFFERENTIAL THRESHOLD. DEPENDING ON THE JOB CONFIGURATION EACH FAN ZONE CAN BE CONFIGURED AS 'STATIC' OR 'DYNAMIC'. THESE TERMS REFER TO WHETHER A VARIABLE MOTOR (SUCH AS EC MOTORS OR VFD DRIVEN MOTORS) MODULATE WITH TEMPERATURE. IF THE PANEL IS EQUIPPED WITH VARIABLE SPEED FANS AND THE ZONE IS DEFINED AS 'DYNAMIC', THESE WILL MODULATE WITHIN A USER-DEFINED RANGE BASED ON THE TEMPERATURE DIFFERENTIAL. PANELS EQUIPPED WITH VARIABLE SPEED FANS AND A FAN ZONE DEFINED AS 'STATIC', FANS WILL RUN AT A SET SPEED CALCULATED FOR THE DRIVE. DEMAND CONTROL VENTILATION SYSTEMS ARE CAPABLE OF MODULATING EXHAUST AND MAKE UP AIR FAN SPEEDS PER THE REQUIREMENTS OUTLINED IN IECC 403.7.5 (2021).
 - **MANUAL:** THE SYSTEM OPERATES BASED ON HUMAN INPUT FROM AN HMI.
 - **SCHEDULE:** A WEEKLY SCHEDULE CAN BE SET TO RUN FANS FOR A SPECIFIED PERIOD THROUGHOUT THE DAY. THERE ARE THREE OCCUPIED TIMES PER DAY TO ALLOW FOR THE USER TO SET UP A TIME THAT IS SUITABLE TO THEIR NEEDS. ANY TIME THAT IS WITHIN THE DEFINED OCCUPIED TIME, THE SYSTEM WILL RUN AT MODULATION MODE AND FOLLOW THE FAN PROCEDURE ALGORITHM BASED ON TEMPERATURE DURING THIS TIME. DURING UNOCCUPIED TIME, THE SYSTEM WILL HAVE AN EXTRA OFFSET TO PREVENT UNINTENDED ACTIVATION OF THE SYSTEM DURING A TIME WHERE THE SYSTEM IS NOT BEING OCCUPIED.
 - **OTHER:** THE SYSTEM OPERATES BASED ON THE INPUT FROM AN EXTERNAL SOURCE (DDC, BMS OR HARD-WIRED INTERLOCK).
 - **FIRE:** UPON ACTIVATION OF THE HOOD FIRE SUPPRESSION SYSTEM, THE EXHAUST FAN WILL COME ON OR CONTINUE TO RUN, THE HOOD MAKEUP AIR WILL SHUTDOWN, AND A SIGNAL WILL BE SENT FOR ACTIVATING THE SHUNT TRIP BREAKER PROVIDED BY THE ELECTRICIAN. FUEL GAS WILL SHUT OFF VIA A MECHANICAL/ELECTRICAL GAS VALVE ACTUATED BY THE HOOD FIRE SUPPRESSION SYSTEM.

SYSTEM DESIGN VERIFICATION (SDV)

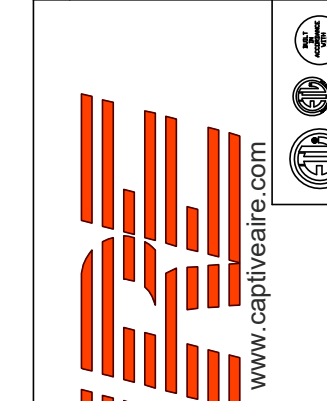
IF ORDERED, CAS SERVICE WILL PERFORM A SYSTEM DESIGN VERIFICATION (SDV) ONCE ALL EQUIPMENT HAS HAD A COMPLETE START UP PER THE OPERATION AND INSTALLATION MANUAL. TYPICALLY, THE SDV WILL BE PERFORMED AFTER ALL INSPECTIONS ARE COMPLETE.

ANY FIELD RELATED DISCREPANCIES THAT ARE DISCOVERED DURING THE SDV WILL BE BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR AND CORRESPONDING TRADES ON SITE. THESE ISSUES WILL BE DOCUMENTED AND FORWARDED TO THE APPROPRIATE SALES OFFICE. IF CAS SERVICE HAS TO RESOLVE A DISCREPANCY THAT IS A FIELD ISSUE, THE GENERAL CONTRACTOR WILL BE NOTIFIED AND BILLED FOR THE WORK. SHOULD A RETURN TRIP BE REQUIRED DUE TO ANY FIELD RELATED DISCREPANCY THAT CANNOT BE RESOLVED DURING THE SDV, THERE WILL BE ADDITIONAL TRIP CHARGES.

DURING THE SDV, CAS SERVICE WILL ADDRESS ANY DISCREPANCY THAT IS THE FAULT OF THE MANUFACTURER. SHOULD A RETURN TRIP BE REQUIRED, THE GENERAL CONTRACTOR AND APPROPRIATE SALES OFFICE WILL BE NOTIFIED. THERE WILL BE NO ADDITIONAL CHARGES FOR MANUFACTURER DISCREPANCIES.

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