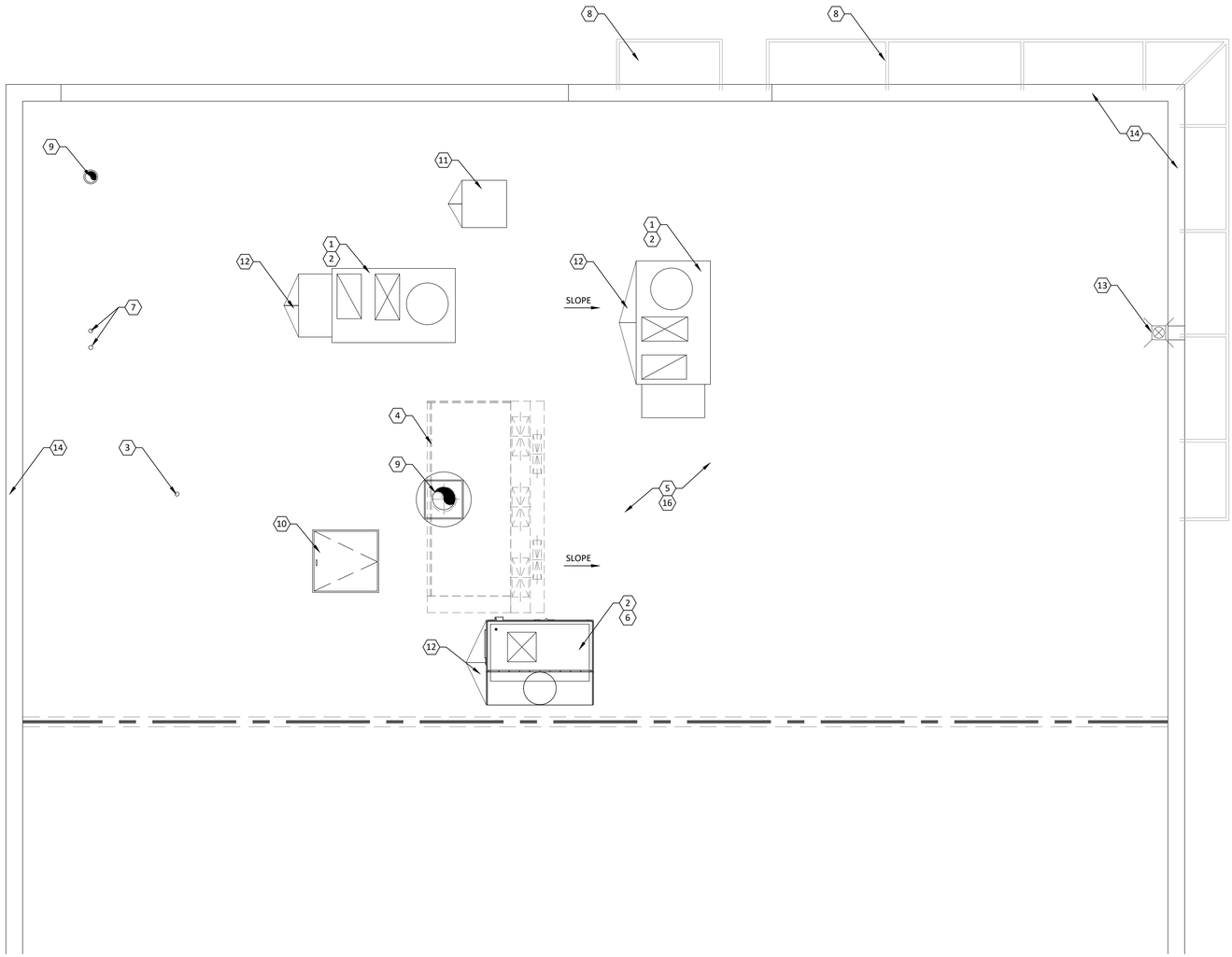

1 A150 ROOF PLAN

1/4" = 1'-0"

ROOF PLAN GENERAL NOTES

1. ROOF REINFORCEMENT FOR RTUS HAS BEEN DESIGNED AND INSTALLED BY THE PROPERTY OWNER UNDER A SEPARATE PERMIT. IF LOCATION OR ORIENTATION OF A UNIT MUST CHANGE, NOTIFY ARCHITECT IMMEDIATELY.
2. REFER TO MECHANICAL PLANS FOR ADDITIONAL ROOF TOP EQUIPMENT DETAILS AND NOTES.
3. CONTRACTOR TO ADJUST AS NECESSARY IN FIELD TO MAINTAIN WORKING CLEARANCES AND TO COORDINATE BEST WITH EXISTING STRUCTURAL REINFORCEMENTS MEMBERS. CONTACT ARCHITECT WITH AN DISCREPANCIES.
4. LANDLORD ROOFING CONTRACTOR TO PROVIDE ALL ROOF PENETRATIONS TO MAINTAIN WARRANTY. COORDINATE ALL ROOFTOP PENETRATIONS, FLASHING AND REPAIR WITH CAVA CONSTRUCTION MANAGER PRIOR TO COMMENCEMENT OF WORK.
5. DIMENSIONS ARE TO CENTER OF PENETRATION AND ARE FOR REFERENCE ONLY. ROOFING CONTRACTOR TO ADJUST AS NECESSARY IN FIELD. CONTACT ENGINEERING CONSULTANTS FOR ANY MAJOR MODIFICATIONS TO LAYOUT.
6. JOISTS FOR SHELL BUILDING WERE DESIGNED FOR THE RTU WEIGHTS AND PLACEMENT EXHIBITED. IF LOCATION OR ORIENTATION OF A UNIT MUST CHANGE, NOTIFY ARCHITECT IMMEDIATELY.

CODED NOTES ⟨#⟩

1. NEW ROOF TOP UNIT. REFER TO MECHANICAL DRAWINGS.
2. GC TO PROVIDE AND ASSEMBLE EQUIPMENT RAIL PRIOR TO MOUNTING CONDENSING UNITS. MAINTAIN CONTINUOUS FLASHING AND ROOF INTEGRITY THROUGHOUT.
3. PLUMBING VENTS. REFER TO PLUMBING DRAWINGS.
4. OUTLINE OF HOOD BELOW.
5. EXISTING ROOF JOISTS BELOW TO BE VERIFIED. GC TO NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW EQUIPMENT LOCATIONS OR IF ADDITIONAL SUPPORT WILL NEED TO BE ADDED FOR THE NEW EQUIPMENT LOADS.
6. NEW MAKEUP AIR UNIT. REFER TO MECHANICAL DRAWINGS.
7. NEW COMBINATION AIR INTAKE AND FLUE EXHAUST FOR WATER HEATER. REFER TO MECHANICAL DRAWINGS.
8. EXISTING CANOPY BELOW TO REMAIN.
9. NEW EXHAUST FAN. REFER TO MECHANICAL DRAWINGS.
10. EXISTING ROOF HATCH TO REMAIN. GC TO TEST SEALS FOR LEAKAGE AND REPAIR AS NEEDED.
11. REMOTE WALK-IN COOLER CONDENSING UNIT BY KES.
12. PROVIDE TAPERED INSULATION AND CRICKETS AT ALL EQUIPMENT CURBS TO ALLOW FOR POSITIVE DRAINAGE.
13. EXISTING ROOF DRAIN: GC TO VERIFY THEY ARE IN WORKING CONDITION AND FREE OF DEBRIS.
14. EXISTING COPING TO REMAIN.
16. EXISTING METAL DECKING TO BE PATCHED AND REPAIRED AS REQUIRED AFTER DEMOLITION OF EXISTING ROOF EQUIPMENT.

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AOR PROJECT NUMBER:
CAV.39322

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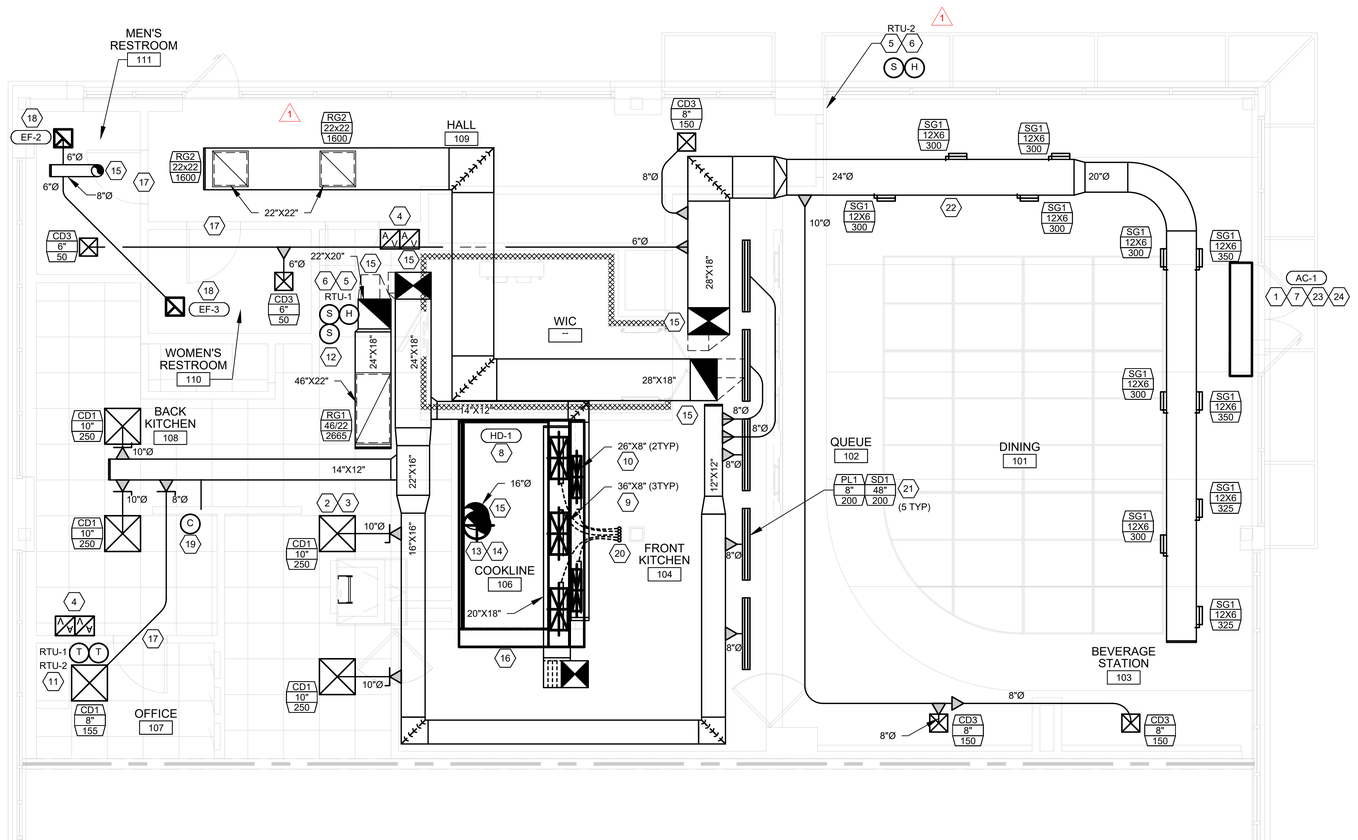
1 BID SET	DEC 16, 2024
2 IFC SET	MAR 14, 2025

ROOF PLAN

SHEET:
A150

3/14/2025 2:30 PM



1 **HVAC PLAN**
1/4" = 1'-0"

CODED NOTES

1. PROVIDE EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTION AND PER THE STRUCTURAL DETAILS.
2. PROVIDE SUPPLY DIFFUSER CONNECTION PER DETAIL 6/M300.
3. REFER TO THE ARCHITECTURAL RCP FOR CEILING MOUNTED EQUIPMENT LOCATION. TYPICAL.
4. PROVIDE AUDIOVISUAL REMOTE SMOKE DETECTOR ANNUNCIATOR WITH REMOTE KEY OPERATED RESET. WIRE A UNIT BACK TO EACH SMOKE DETECTOR. MOUNT UNIT 60" AFF. TYPICAL.
5. PROVIDE A REMOTE TEMPERATURE SENSOR FOR THE HVAC EQUPMENT NOTED AT THIS LOCATION AT 5'-0" AFF. COORDINATION LOCATION WITH EQUIPMENT AND WALL-MOUNTED FIXTURES AS REQUIRED SUCH THAT THE SENSOR IS NOT BLOCKED.
6. INSTALL THE REMOTE HUMIDISTAT FOR THE HVAC EQUIPMENT NOTED AT THIS LOCATION IMMEDIATELY ABOVE THE TEMPERATURE SENSOR. COORDINATE LOCATION WITH EQUIPMENT AND WALL-MOUNTED FIXTURES AS REQUIRED SUCH THAT THE SENSOR IS NOT BLOCKED. ADJUST THE SENSOR FOR A DEADBAND TO ENERGIZE HOT GAS REHEAT WHEN THE HUMIDITY EXCEEDS 60% RELATIVE HUMIDITY AND TO DE-ENERGIZE WHEN THE HUMIDITY DROPS BELOW 50%.
7. ADJUST THE DOOR SWITCH SO THAT THE AIR CURTAIN'S FAN REMAINS ENERGIZED FOR TWO SECONDS AFTER THE DOOR IS SHUT.
8. INSTALL TYPE I KITCHEN HOOD FURNISHED BY THE KITCHEN EQUIPMENT SUPPLIER. SUPPORT PER THE MANUFACTURER'S INSTRUCTIONS AND PER THE STRUCTURAL DRAWINGS. INSTALL HOOD IN ACCORDANCE WITH THE REQUIREMENTS OF IT'S LISTING AND IN ACCORDANCE WITH THE NFPA AND ALL APPLICABLE BUILDING CODES. HOOD SHALL HAVE AN INTEGRAL DUCT COLLAR TEMPERATURE SENSOR AND SHALL AUTOMATICALLY ENERGIZE THE EXHAUST AND MAKEUP AIR SYSTEMS IF COOKING TEMPERATURES ARE DETECTED. EXHAUST DUCTWORK SHALL BE FACTORY-MANUFACTURED, WATER AND AIR TIGHT OR WELDED STEEL. UPON INSTALLATION OF THE SYSTEM, PROVIDE GREASE DUCT TEST IN ACCORDANCE WITH SECTION 506.3.2.5 OF THE MECHANICAL CODE.
9. PROVIDE DUCT DROP FOR MAKEUP AIR AND CONNECT TO THE HOOD'S INTEGRAL MAKEUP AIR PLENUM.
10. PROVIDE DUCT DROP FOR CONDITIONED AIR AND CONNECT TO THE HOOD'S INTEGRAL AC PLENUM CONNECTION.
11. PROVIDE A HONEYWELL WIFI VISION PRO 8000 TOUCHSCREEN 7-DAY PROGRAMMABLE WITH AUTO-CHANGEOVER AND AUTOMATIC STATE CAPABILITY SERIES THERMOSTATS, COMPATIBLE WITH THE HVAC EQUIPMENT AT THIS LOCATION AT 48" A.F.F. ADJUST THE SETPOINT OVERLAP, DEADBAND AND OPTIMUM START SETTINGS AS REQUIRED PER THE ENERGY CODE. COORDINATE WITH ELECTRICAL DEVICES AND ARCHITECTURAL ELEMENTS IN THE AREA. EXTEND THE CONTROLS WIRING TO THE MECHANICAL EQUIPMENT AND ASSOCIATED SENSORS AS REQUIRED. COORDINATE LOCATION SO THAT THERMOSTATS ARE NOT BLOCKED. COORDINATE FINAL INSTALLATION LOCATION OF THERMOSTAT WITH OWNER'S REPRESENTATIVE. COORDINATE WITH CAVA REPRESENTATIVE FOR PASSWORD AND LOCKING THERMOSTAT.
12. INSTALL THE REMOTE TEMPERATURE SENSOR FOR THE HOOD. HD-1 AT THIS LOCATION AT 5'-0" AFF. PROVIDE CABLING TO THE HOOD CONTROL PANEL AS NOTED IN THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
13. INSTALL OWNER FURNISHED UL-1978 AND UL-2221 LISTED DOUBLE-WALL GREASE DUCT, FROM HOOD COLLAR TO EXHAUST FAN ON ROOF. INSTALL EXHAUST DUCT PER MANUFACTURER'S INSTRUCTIONS. PROVIDE CLEANOUTS AT EVERY CHANGE OF DIRECTION IN THE DUCT AND/OR EVERY 10 FEET WITH MINIMUM OF 3 FEET OF CLEARANCE IN FRONT OF CLEAN-OUT. COORDINATE ROUTING OF DUCTWORK WITH OWNER'S CAPTIVEAIRE REPRESENTATIVE.
14. ALL GREASE DUCT BRACING AND SUPPORTS SHALL BE OF NON-COMBUSTIBLE MATERIAL SECURELY ATTACHED TO THE STRUCTURE, BOLTS, SCREWS, RIVETS AND OTHER MECHANICAL FASTENERS SHALL NOT PENETRATE DUCT WALLS.
15. DUCTWORK TO/FROM ROOF. REFER TO THE HVAC ROOF PLAN FOR CONTINUATION.
16. HOOD CONTROL PANEL WITH INTEGRAL FIRE SUPPRESSION CABINET. COORDINATE EXACT MOUNTING LOCATION, FIRE SUPPRESSION PIPING AND ALL OTHER REQUIREMENTS WITH THE KITCHEN EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
17. UNDERCUT DOOR 1" FOR TRANSFER AIR.
18. PROVIDE CEILING MOUNTED EXHAUST FAN. TRANSITION FROM FAN DISCHARGE TO DUCT SIZE SHOWN AND EXTEND UP THROUGH ROOF.
19. PROVIDE CO2 MEASUREMENT SPECIALISTS RAD-0102-6 REMOTE CO2 STORAGE SAFETY ALARM (OR EQUAL). INSTALL PER MANUFACTURER'S RECOMMENDATIONS ON WALL.
20. REMOTE BALANCING DAMPER, TYPICAL FOR BALANCING DAMPERS IN HARD CEILING APPLICATIONS.
21. MOUNT SLOT DIFFUSER IN HORIZONTAL FACE AS SHOWN AND PER THE ARCHITECTURAL REFLECTED CEILING PLAN. PROVIDE BLANK OFF PLATES WHERE NO PLENUM IS SHOWN.
22. PROVIDE EXPOSED DUCTWORK AS SHOWN, PER THE SPECIFICATIONS AND PER DETAIL 1/M300. MOUNT EXPOSED DUCT TIGHT TO BOTTOM OF STRUCTURE.
23. PROVIDE AIR CURTAIN. MOUNT UNIT ON WALL DIRECTLY ABOVE DOOR PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
24. PROVIDE TEMPERATURE SENSOR ON THE EXTERIOR OF THE BUILDING TO SERVE THE AIR CURTAIN. INTERLOCK THE SENSOR WITH THE EQUIPMENT SUCH THAT THE HEATER SHALL BE DE-ENERGIZED WHEN THE OUTDOOR AIR TEMPERATURE IS GREATER THAN 60°F, FAN TO CONTINUE TO ENERGIZE UPON DOOR OPEN.

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FOR
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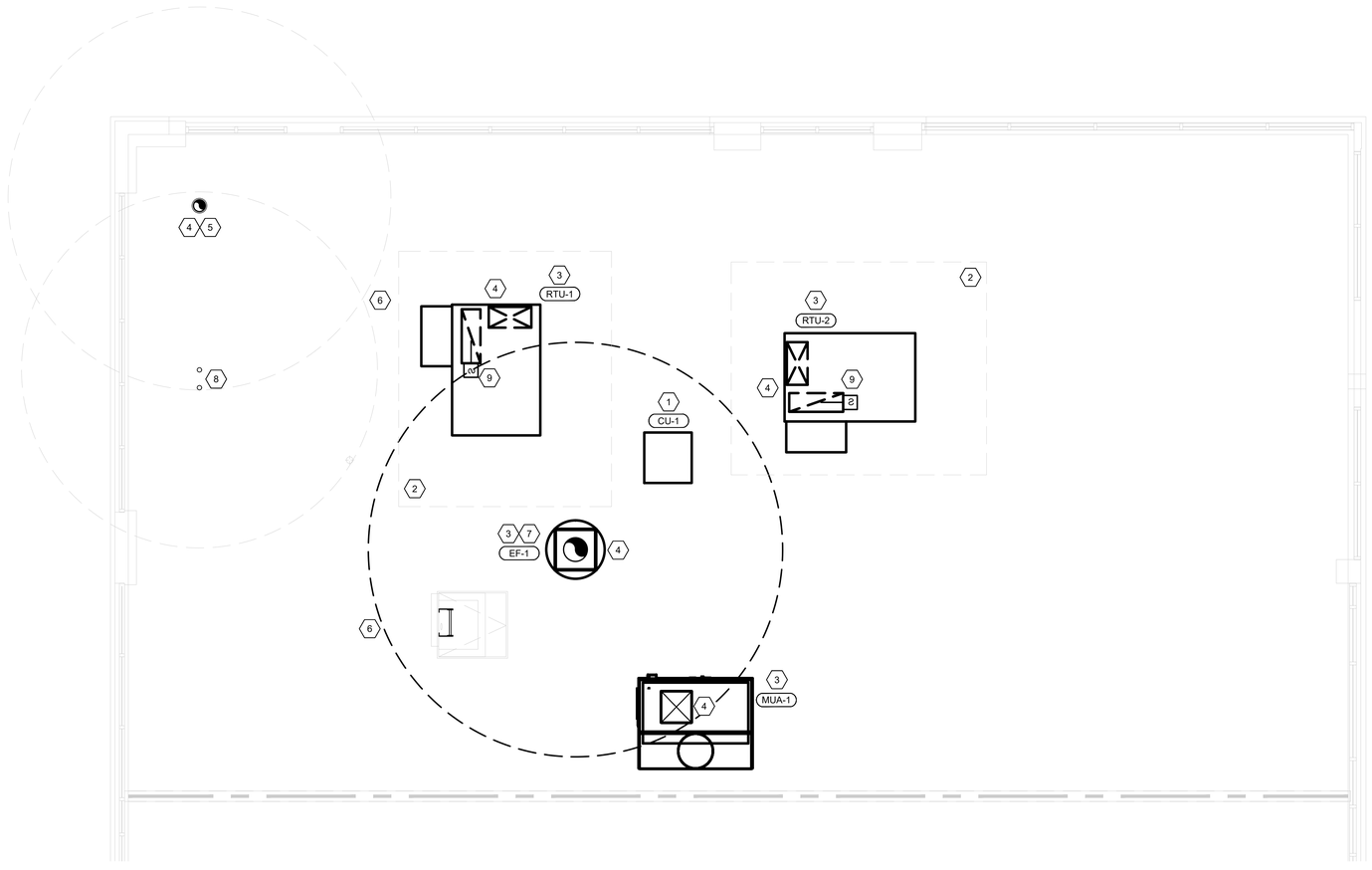
PROJECT NUMBER: 2401215

ISSUE	DATE
PERMIT SET	NOV 8, 2024
BID SET	DEC 16, 2024
IFC SET	MAR 14, 2024

MECHANICAL PLAN

SHEET: M100

3/14/2025 10:32 AM



1 **HVAC ROOF PLAN**
1/4" = 1'-0"

CODED NOTES

1. COORDINATE MOUNTING LOCATION OF THE WALK-IN COOLER CONDENSING UNIT WITH THE KITCHEN EQUIPMENT SUPPLIER AND INSTALL THE WALK-IN COOLER CONDENSING UNIT, CU-1 ON THE ROOF. ENSURE ALL CLEARANCE REQUIREMENTS FOR THE UNIT ARE MAINTAINED THROUGH CONSTRUCTION. COORDINATE ALL INSTALLATION REQUIREMENTS WITH THE KITCHEN EQUIPMENT SUPPLIER AS NOTED.
2. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCE ZONES. NO DUCTWORK, PIPING, CONDUIT OR OTHER SYSTEMS SHALL BE PERMITTED IN THIS AREA. COORDINATE WITH SITE CONDITIONS AND WORK OF OTHER TRADES AS REQUIRED. TYPICAL.
3. G.C. TO PROVIDE ALLOWANCE IN BID FOR STRUCTURAL REINFORCEMENTS FOR ALL NEW EQUIPMENT INSTALLED UPON THE ROOF. INSTALL THE HVAC EQUIPMENT PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND ALL STRUCTURAL DETAILS.
4. DUCTWORK TO/FROM SPACE. REFER TO THE HVAC MECHANICAL PLAN FOR CONTINUATION.
5. EXTEND EXHAUST DUCT UP THROUGH ROOF. PROVIDE A ROOF JACK, STORM COLLAR, AND ALL-WEATHER CAP.
6. EXHAUST DISCHARGE SHALL BE NO LESS THAN 10'-0" FROM ALL MECHANICAL INTAKES AND OPERABLE OPENINGS INTO THE BUILDING.
7. INSTALL EXHAUST FAN EF-1 PER DETAIL 4/M300 AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
8. MAINTAIN 10' CLEARANCE BETWEEN WATER HEATER FLUE TERMINATION AND OUTSIDE AIR INTAKES. MAINTAIN 10' CLEARANCE BETWEEN WATER HEATER COMBUSTION AIR INTAKE AND EXHAUST FAN EF-1 DISCHARGE. SEE PLUMBING DRAWINGS FOR MORE INFORMATION ON WATER HEATER FLUE AND COMBUSTION AIR TERMINATIONS.
9. SMOKE DETECTOR INTEGRAL TO THE RETURN AIR OF THE UNIT. UPON DETECTION OF SMOKE THE SUPPLY AIR FAN SHALL DE-ENERGIZE.

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1 BID SET	DEC 16, 2024
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MECHANICAL ROOF PLAN

SHEET: M200

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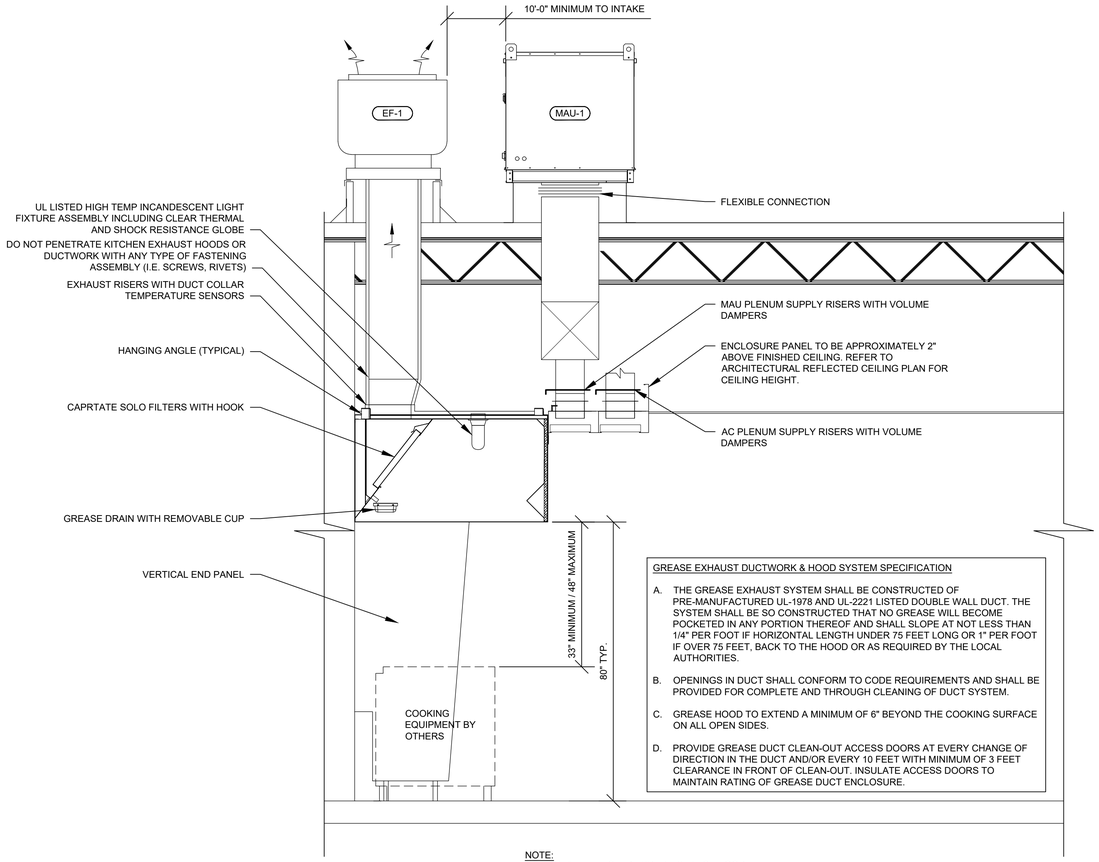


GREASE EXHAUST DUCTWORK & HOOD SYSTEM SPECIFICATION

A. THE GREASE EXHAUST SYSTEM SHALL BE CONSTRUCTED OF PRE-MANUFACTURED UL-1978 AND UL-2221 LISTED DOUBLE WALL DUCT. THE SYSTEM SHALL BE SO CONSTRUCTED THAT NO GREASE WILL BECOME POCKETED IN ANY PORTION THEREOF AND SHALL SLOPE AT NOT LESS THAN 1/4" PER FOOT IF HORIZONTAL LENGTH UNDER 75 FEET LONG OR 1" PER FOOT IF OVER 75 FEET, BACK TO THE HOOD OR AS REQUIRED BY THE LOCAL AUTHORITIES.

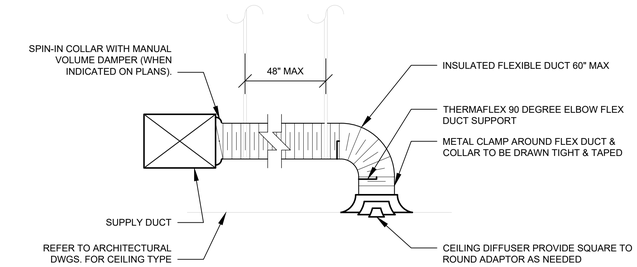
B. OPENINGS IN DUCT SHALL CONFORM TO CODE REQUIREMENTS AND SHALL BE PROVIDED FOR COMPLETE AND THROUGH CLEANING OF DUCT SYSTEM.

C. GREASE HOOD TO EXTEND A MINIMUM OF 6" BEYOND THE COOKING SURFACE ON ALL OPEN SIDES.

D. PROVIDE GREASE DUCT CLEAN-OUT ACCESS DOORS AT EVERY CHANGE OF DIRECTION IN THE DUCT AND/OR EVERY 10 FEET WITH MINIMUM OF 3 FEET CLEARANCE IN FRONT OF CLEAN-OUT. INSULATE ACCESS DOORS TO MAINTAIN RATING OF GREASE DUCT ENCLOSURE.

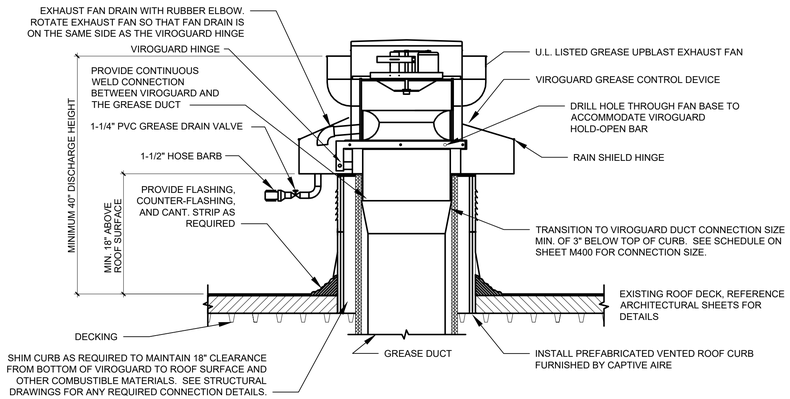
NOTE:
1. INSTALL UL LISTED TYPE 1 EXHAUST HOOD.
2. THE GREASE HOOD SHALL MEET THE REQUIREMENTS OF THE MECHANICAL CODE, NSF AND NFPA FOR A TYPE I HOOD.
3. FIRE DEPARTMENT APPROVAL SHALL BE REQUIRED ON FIRE PROTECTION SYSTEM FOR GREASE HOODS AND DUCTS AS REQUIRED BY THE MECHANICAL CODE AND AS REQUIRED BY THE FIRE CODE.
4. INTEGRAL CHEMICAL FIRE SUPPRESSION SYSTEM AS REQUIRED BY NFPA 17A.
5. PERFORM SMOKE CAPTURE TEST ON TYPE I HOOD SYSTEM PER THE REQUIREMENTS OF LOCAL CODE AUTHORITIES.

5 KITCHEN HOOD SCHEMATICS
N.T.S.



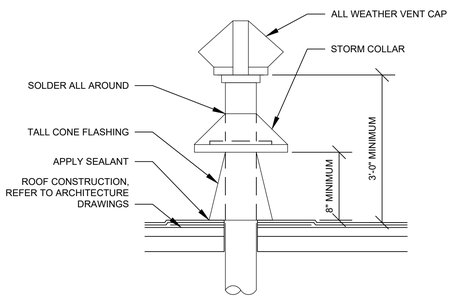
NOTE:
1. METHOD OF INSTALLATION FOR AIRTIGHT SEAL IS TYPICAL FOR ALL FLEX CONNECTIONS TO AIR DISTRIBUTION DEVICES.

6 DIFFUSER CONNECTION
N.T.S.



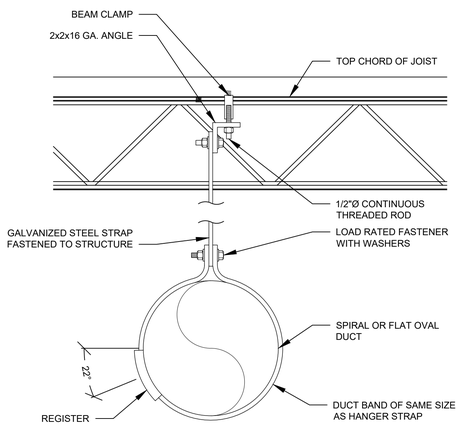
NOTES:
1. INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 96 REQUIREMENTS.
2. CUT AND PATCH EXISTING ROOFING AS REQUIRED FOR NEW CURB INSTALLATION.
3. CURB SHALL BE TAPERED TYPE AND MATCH THE PITCH OF THE ROOF.
4. CONTRACTOR TO PROVIDE TREATED WOOD BLOCKINGS AND SHIM FLAT ROOF CURB TILL LEVEL FOR ALL EXHAUST FANS AND TO ACHIEVE ROOF CURB HEIGHTS. PROVIDE ROOF CURB EXTENSION IF REQUIRED.
5. HINGE FAN SO IT TIPS BACK TOWARD FAN DRAIN AND TOWARD VIROGUARD DRAIN.

4 ROOF MOUNTED GREASE EXHAUST FAN DETAIL
N.T.S.



3 DUCT THROUGH ROOF
N.T.S.

2 NOT USED
N.T.S.



1 SPIRAL DUCT SUPPORT DETAIL
N.T.S.

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MECHANICAL DETAILS

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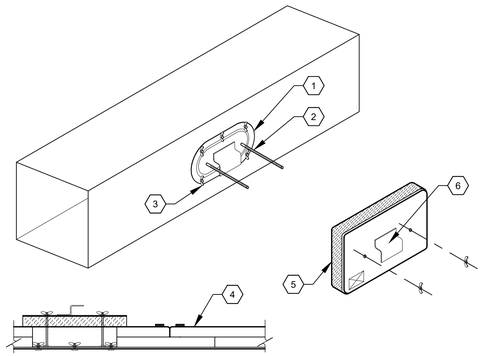
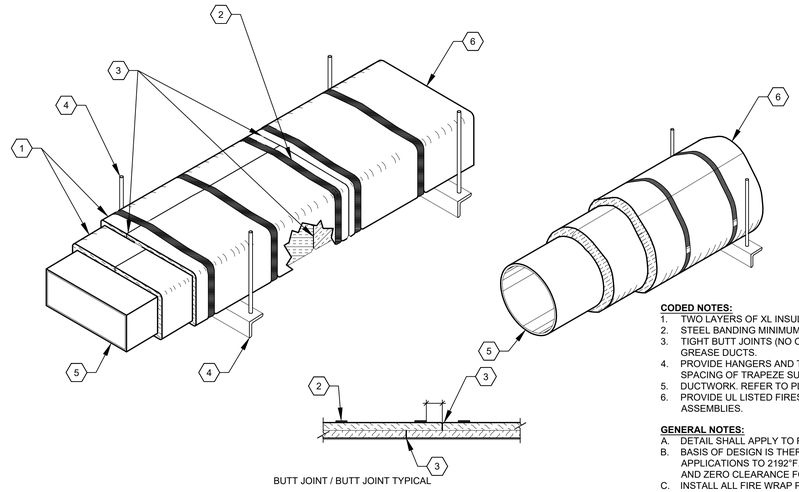


CODED NOTES:
1. UL LISTED FASTDOOR XL ACCESS PANEL.
2. ALL THREAD RODS AND WING NUTS PER THE MANUFACTURER'S INSTRUCTIONS.
3. RETAINER CLIPS WITH THREADED NUTS AND WING BOLTS.
4. INSULATION LAYERS AS REQUIRED BY THE UL LISTING.
5. FASTDOOR XL; 1-1/2" THICK SINGLE LAYER INSULATION.
6. PROVIDE THE FOLLOWING SIGN ON THE ACCESS PANEL: "ACCESS PANEL. DO NOT OBSTRUCT."

GENERAL NOTES:
A. DETAIL SHALL APPLY TO FIELD-FABRICATED DUCTWORK ONLY.
B. THE ACCESS PANEL SHALL HAVE A FIRE-RESISTIVE PROTECTION EQUAL TO THAT OF THE ENCLOSURE.

4 GREASE DUCT CLEANOUT DETAIL (FIELD-FABRICATED DUCTWORK)
N.T.S.



BUTT JOINT / BUTT JOINT TYPICAL

CODED NOTES:
1. TWO LAYERS OF XL INSULATION FOR ASTM E2336 GREASE DUCT ENCLOSURES.
2. STEEL BANDING MINIMUM OF 1/2" WIDE BY 0.015" THICK.
3. TIGHT BUTT JOINTS (NO OVERLAP) AT PERIMETER AND LONGITUDINAL JOINTS, BOTH LAYERS FOR GREASE DUCTS.
4. PROVIDE HANGERS AND TRAPEZE SUPPORTS PER THE MANUFACTURER'S RECOMMENDATIONS. SPACING OF TRAPEZE SUPPORTS SHALL NOT EXCEED 60" ON CENTER.
5. DUCTWORK. REFER TO PLANS FOR SIZE.
6. PROVIDE UL LISTED FIRESTOP SYSTEM WITH EQUAL F AND T-RATING AT PENETRATIONS OF RATED ASSEMBLIES.

GENERAL NOTES:
A. DETAIL SHALL APPLY TO FIELD-FABRICATED DUCTWORK ONLY.
B. BASIS OF DESIGN IS THERMAL CERAMICS FIREMASTER FASTWRAP XL, CLASSIFIED FOR APPLICATIONS TO 2192°F. UL LISTED FOR 1 AND 2 HOUR FIRE RESISTIVE ENCLOSURE PROTECTION AND ZERO CLEARANCE FOR KITCHEN EXHAUST DUCT.
C. INSTALL ALL FIRE WRAP PER THE MANUFACTURER'S INSTRUCTIONS AND IN ACCORDANCE WITH IT'S UL LISTING.
D. ALL INSULATION SHALL BE APPLIED IN TWO LAYERS WITH TIGHT COMPRESSION JOINTS.
E. DUCT WRAP SHALL BE INSTALLED DIRECTLY ONTO THE DUCT, APPLIED FROM THE HOOD CONNECTION TO THE CONNECTION TO ANY MECHANICAL EQUIPMENT.

3 DUCT WRAP DETAIL (FIELD-FABRICATED DUCTWORK)
N.T.S.

AIR BALANCE SCHEDULE

TAG	SUPPLY FLOW (CFM)	RETURN FLOW (CFM)	OUTSIDE AIRFLOW (CFM)	EXHAUST FLOW (CFM)	SUBTOTAL (CFM)
EF-1	0	0	0	2,317	-2,317
EF-2	0	0	0	75	-75
EF-3	0	0	0	75	-75
MAU-1	1,432	0	1,432	0	1,432
RTU-1	3,000	2,665	335	0	335
RTU-2	4,000	3,200	800	0	800
NET PRESSURE (CFM)					100

VENTILATION SCHEDULE, RTU-2
PER TABLE 403.3.1.1 OF THE INTERNATIONAL MECHANICAL CODE

CATEGORY	AREA	OCCUPANT DENSITY (PPL / 1000 SF)	OCCUPANT LOAD (PEOPLE)	AIR RATE		EFFECTIVENESS	VENTILATION REQUIRED (CFM)	VENTILATION PROVIDED (CFM)
				CFM / PERSON	CFM / SF			
DINING ROOM	900.0	70.00	63	7.50	0.18	0.8	793.1	800
CORRIDOR	133.0	0.00	0	0.00	0.06	0.8	10.0	10

VENTILATION SCHEDULE, RTU-1
PER TABLE 403.3.1.1 OF THE INTERNATIONAL MECHANICAL CODE

CATEGORY	AREA	OCCUPANT DENSITY (PPL / 1000 SF)	OCCUPANT LOAD (PEOPLE)	AIR RATE		EFFECTIVENESS	VENTILATION REQUIRED (CFM)	VENTILATION PROVIDED (CFM)
				CFM / PERSON	CFM / SF			
KITCHEN	980.0	20.00	20	7.50	0.12	0.8	334.5	335.0
OFFICE	56.0	5.00	1	5.00	0.06	0.8	10.5	15.0

EXHAUST SCHEDULE
PER TABLE 403.3.1.1 OF THE INTERNATIONAL MECHANICAL CODE

CATEGORY	AREA	NUMBER OF FIXTURES	AIR RATE		EXHAUST REQUIRED (CFM)	EXHAUST PROVIDED (CFM)
			CFM / SF	CFM / FIXTURE		
KITCHEN	980.0	0	-0.70	0.00	-686.0	-2317.0
RESTROOM 04	62.0	1	0.00	-50.00	-50.0	-75.0
RESTROOM 05	62.0	1	0.00	-50.00	-50.0	-75.0

COMMISSIONING REQUIREMENTS

THE GENERAL CONTRACTOR SHALL PROVIDE COMMISSIONING OF THE FOLLOWING EQUIPMENT IN ACCORDANCE WITH SECTION 408 OF THE 2018 INTERNATIONAL ENERGY CONSERVATION CODE:

- RTU-1
- RTU-2
- MAU-1

EQUIPMENT FUNCTIONAL TESTING SHALL DEMONSTRATE THE OPERATION OF COMPONENTS, SYSTEMS, INTERFACING RELATIONSHIPS SUCH THAT THE OPERATION, FUNCTION AND MAINTENANCE SERVICEABILITY FOR THE COMMISSIONED SYSTEMS IS CONFIRMED. TESTS SHALL INCLUDE ALL MODES AND SEQUENCE OF OPERATION, INCLUDING FULL-LOAD, PART-LOAD AND THE FOLLOWING EMERGENCY CONDITIONS.

- ALL MODES DESCRIBED IN THE SEQUENCE OF OPERATIONS
- AUTOMATIC BACK-UP MODES AS DESCRIBED BY THE MANUFACTURER
- PERFORMANCE OF ALARMS.
- MODE OF OPERATION UPON A LOSS OF POWER AND RESTORATION OF POWER.

THE HVAC CONTROL SYSTEMS SHALL BE TESTED TO DOCUMENT THAT CONTROL DEVICES, COMPONENTS AND EQUIPMENT SYSTEMS ARE CALIBRATED AND ADJUSTED AND OPERATE IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS.

AIR ECONOMIZERS SHALL UNDERGO FUNCTIONING TESTING TO DETERMINE THAT THEY OPERATE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE GENERAL CONTRACTOR SHALL PROVIDE A PRELIMINARY COMMISSIONING REPORT INDICATING THE TEST PROCEDURES AND RESULTS. THIS REPORT SHALL INDICATE THE FOLLOWING:

ITEMIZED LIST OF DEFICIENCIES FOUND DURING TESTING THAT HAVE NOT BEEN CORRECTED AT THE

TIME OF THE REPORT PREPARATION.

- DEFERRED TESTS THAT CANNOT BE PERFORMED AT THE TIME OF THE REPORT BECAUSE OF CLIMATIC CONDITIONS.
- CLIMATIC CONDITIONS REQUIRED FOR THE PERFORMANCE OF DEFERRED TESTS.
- RESULTS OF FUNCTIONAL TESTS.
- FUNCTIONAL PERFORMANCE TEST PROCEDURES USED DURING THE COMMISSIONING PROCESS INCLUDING MEASURABLE CRITERIA FOR TEST ACCEPTANCE.

THE SPACE SHALL NOT BE CONSIDERED AS ACCEPTABLE FOR FINAL INSPECTION UNTIL THE CODE OFFICIAL HAS RECEIVED THE PRELIMINARY COMMISSIONING REPORT.

WITHIN 90 DAYS OF THE RECEIPT OF THE CERTIFICATE OF OCCUPANCY, THE GENERAL CONTRACTOR SHALL PROVIDE A FINAL COMMISSIONING REPORT AND SHALL INCLUDE THE FOLLOWING:

- RESULTS OF THE PERFORMANCE TESTS.
- DISPOSITION OF DEFICIENCIES FOUND DURING TESTING, INCLUDING THE DETAILS OF CORRECTIVE MEASURES USED OR PREPARED.
- FUNCTIONAL PERFORMANCE TEST PROCEDURES USED DURING THE COMMISSIONING PROCESS INCLUDING MEASURABLE CRITERIA FOR TEST ACCEPTANCE.
- DEFERRED TESTS THAT CANNOT BE PERFORMED AT THE TIME OF THE REPORT PREPARATION DUE TO CLIMATIC CONDITIONS ARE NOT REQUIRED AS PART OF THIS REPORT.

2 COMISSIONING REQUIREMENTS
N.T.S.

SEQUENCE OF OPERATIONS EF-2 & EF-3

OCCUPIED MODE:

FAN OPERATION: WHEN SCHEDULED BY THE TIMECLOCK TO BE IN OCCUPIED MODE, THE EXHAUST FANS ARE TO START AND RUN CONTINUOUSLY.

UNOCCUPIED MODE:

FAN OPERATION: WHEN SCHEDULED BY THE TIMECLOCK TO BE IN UNOCCUPIED MODE, THE EXHAUST FANS SHALL REMAIN OFF

EMERGENCY MODE:

FAN/DAMPER OPERATION: UPON A SIGNAL FROM THE FIRE ALARM SYSTEM, THE FANS SHALL STOP.

SEQUENCE OF OPERATIONS EF-1 & MAU-1

STANDARD OPERATION

FAN OPERATION: WHEN ACTIVATED BY A BUTTON PRESS ON THE HOOD CONTROL PANEL, OR WHEN COOKING TEMPERATURES ARE DETECTED, THE EXHAUST FAN SHALL START, THE MOTORIZED DAMPER SERVING THE MAKEUP AIR UNIT SHALL OPEN AND THE MAKEUP AIR UNIT FAN SHALL START. INTERLOCK ROOFTOP UNITS SO THAT THE PACKAGED ROOFTOP UNIT FANS START AND THE OUTSIDE AIR DAMPERS POWER OPEN WHEN THE EXHAUST FAN BECOMES ENERGIZED.

EMERGENCY MODE:

FAN/DAMPER OPERATION: UPON A SIGNAL FROM THE FIRE ALARM SYSTEM, THE FAN SHALL STOP AND ALL DAMPERS SHALL CLOSE.

1 SEQUENCE OF OPERATIONS
N.T.S.

SEQUENCE OF OPERATIONS RTU-1 & RTU-2

OCCUPIED MODE:

FAN OPERATION/OUTSIDE AIR DAMPER: WHEN SCHEDULED BY THE THERMOSTAT TO BE IN OCCUPIED MODE, THE ROOFTOP UNIT FANS ARE TO START AND RUN CONTINUOUSLY AND THE OUTSIDE AIR DAMPERS SHALL MODULATE TO THE MINIMUM POSITION.

HEATING: ON A FALL IN SPACE TEMPERATURE BELOW THE SETPOINT OF 70 DEGREES (ADJUSTABLE) THE HEATING SHALL BE ENERGIZED TO MAINTAIN THE SETPOINT. UPON A CONTINUED FALL IN SPACE TEMPERATURE, THE SECOND STAGE HEAT (WHEN APPLICABLE) SHALL BE ENERGIZED TO MAINTAIN THE SETPOINT.

COOLING: ON A RISE IN SPACE TEMPERATURE ABOVE THE SETPOINT OF 72 DEGREES (ADJUSTABLE), WHEN THE ENTHALPY OF THE OUTSIDE AIR IS FAVORABLE, THE OUTSIDE AIR DAMPER SHALL MODULATE OPEN UP TO 100% TO PROVIDE COOLING FOR THE SPACE. WHEN THE ENTHALPY OF THE OUTSIDE AIR IS NOT FAVORABLE, OR THERE IS A SUDDEN DEMAND FOR SPACE COOLING, THE OUTSIDE AIR DAMPER SHALL MODULATE TO THE MINIMUM POSITION AND THE COOLING SHALL BE ENERGIZED AS REQUIRED TO MAINTAIN THE SETPOINT.

DEHUMIDIFICATION: UPON A SIGNAL FROM THE HUMIDISTAT THAT DEHUMIDIFICATION IS REQUIRED, THE COOLING COIL SHALL BE ENERGIZED TO SATISFACTORILY DEHUMIDIFY THE AIR AND THE HOT GAS REHEAT COIL SHALL BE ENGAGED AS REQUIRED TO MAINTAIN THE SPACE SETPOINT.

UNOCCUPIED MODE:

FAN OPERATION/OUTSIDE AIR DAMPER: WHEN SCHEDULED BY THE THERMOSTAT TO BE IN UNOCCUPIED MODE, THE ROOFTOP UNIT FANS ARE TO BE OFF AND THE OUTSIDE AIR DAMPERS SHALL REMAIN CLOSED.

HEATING: ON A FALL IN SPACE TEMPERATURE BELOW THE SETPOINT OF 55 DEGREES (ADJUSTABLE) THE ROOFTOP UNIT FAN SHALL START AND THE HEATING SHALL BE ENERGIZED TO MAINTAIN THE SETPOINT. UPON A CONTINUED FALL IN SPACE TEMPERATURE, THE SECOND STAGE HEAT (WHEN APPLICABLE) SHALL BE ENERGIZED TO MAINTAIN THE SETPOINT.

COOLING: ON A RISE IN SPACE TEMPERATURE ABOVE THE SETPOINT OF 85 DEGREES (ADJUSTABLE) THE ROOFTOP UNIT FAN SHALL START. WHEN THE ENTHALPY OF THE OUTSIDE AIR IS FAVORABLE, THE OUTSIDE AIR DAMPER SHALL MODULATE OPEN UP TO 100% TO PROVIDE COOLING FOR THE SPACE. WHEN THE ENTHALPY OF THE OUTSIDE AIR IS NOT FAVORABLE, OR THERE IS A SUDDEN DEMAND FOR SPACE COOLING, THE OUTSIDE AIR DAMPER SHALL REMAIN IN THE CLOSED POSITION AND THE COOLING SHALL BE ENERGIZED AS REQUIRED TO MAINTAIN THE SETPOINT.

DEHUMIDIFICATION: UPON A SIGNAL FROM THE HUMIDISTAT THAT DEHUMIDIFICATION IS REQUIRED THE ROOFTOP UNIT FAN SHALL START, THE COOLING COIL SHALL BE ENERGIZED TO SATISFACTORILY DEHUMIDIFY THE AIR AND THE HOT GAS REHEAT COIL SHALL BE ENGAGED AS REQUIRED TO MAINTAIN THE SPACE SETPOINT.

EMERGENCY MODE:

FAN OPERATION/OUTSIDE AIR DAMPER: UPON A SIGNAL FROM THE SMOKE DETECTOR OR FIRE ALARM SYSTEM, THE FAN SHALL STOP AND THE OUTSIDE AIR DAMPER SHALL CLOSE

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1 BID SET	DEC 16, 2024
1 IFC SET	MAR 14, 2024

MECHANICAL DETAILS

SHEET: M301

1/8/2025 8:29 PM

MATERIAL SCHEDULE

CATEGORY	APPLICATION	ALLOWABLE MATERIAL
DUCT	CONCEALED SUPPLY	RECTANGULAR OR ROUND. INSULATED
	CONCEALED RETURN	RECTANGULAR OR ROUND. INSULATED
	CONCEALED GENERAL EXHAUST	RECTANGULAR OR ROUND. INSULATED
	CONCEALED, TYPE I HOOD EXHAUST	FACTORY-BUILT, COMMERCIAL KITCHEN, DOUBLE-WALL GREASE DUCT WITH 0" CLEARANCE TO COMBUSTIBLES. LISTED AND LABELED IN ACCORDANCE WITH UL1978/UL2221 AND INSTALLED IN ACCORDANCE WITH THE MECHANICAL CODE AND THE MANUFACTURER'S UL LISTING OR WELDED RECTANGULAR 16 GAUGE STEEL WITH ZERO CLEARANCE TO COMBUSTIBLE DUCT WRAP.
	EXPOSED SUPPLY	DOUBLE-WALL INSULATED ROUND OR OVAL AS NOTED

FAN SCHEDULE

TAG	DESCRIPTION	EXHAUST AIRFLOW (CFM)	E.S.P. (IN. W.C.)	DRIVE TYPE	MOTOR POWER (HP)	WEIGHT (LB)	ELECTRICAL			FURNISHED BY	INSTALLED BY	MANUFACTURER	MODEL	REMARKS
							MCA (A)	MOCP (A)	V/P/H					
EF-1	UPBLAST EXHAUST FAN	2,317	1.0	DIRECT	1.0	350.0	14.5	20	120/1/60	OWNER	GC	CAPTIVEAIRE	DU85HFA	UL762 FAN, FURNISHED WITH VARIABLE SPEED CONTROL, GREASE DRAIN AND CUP, VENTED ROOF CURB AND NEMA 3R DISCONNECT SWITCH. GC TO INSTALL ENVIROMATIC VIROGUARD.
EF-2 EF-3	CEILING MOUNTED EXHAUST FAN	75	0.3	DIRECT	-	15.0	0.4	15	120/1/60	GC	GC	LOREN COOK	GC-148	FURNISHED WITH DISCONNECT SWITCH, BACKDRAFT DAMPER, BIRDSCREEN, SPEED CONTROLLER AND WHITE ALUMINUM GRILLE

AIR CURTAIN SCHEDULE

TAG	DESCRIPTION	NOZZLE WIDTH (INCHES)	AIRFLOW			ELECTRICAL				FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
			MAX VELOCITY (FPM)	AVERAGE VELOCITY (FPM)	AIRFLOW (CFM)	HEATER kW	MOCP (A)	MCA (A)	V/P/H			MANUFACTURER	MODEL	
AC-1	PRIMARY DINING ROOM DOOR	84.00	2,317	1,728	2,268	15	60	43.3	208/3/60	GC	GC	BERNER	AI08-E-2084E	FURNISHED WITH MAGNETIC DOOR SWITCH INTERLOCKED WITH DOOR. PROVIDE DISCONNECT SWITCH. PROVIDE THERMOSTAT TO TURN ON AIR CURTAIN HEATER WHEN TEMPERATURE IS BELOW 60 DEG.

1

MAKEUP AIR UNIT SCHEDULE

TAG	DESCRIPTION	AIRFLOW (CFM)	E.S.P. (IN. W.C.)	HEATING			COOLING				ELECTRICAL				WEIGHT (LB)	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
				EAT (DEG. F)	GAS INPUT (MBH)	OUTPUT (MBH)	EAT		TOTAL COOLING CAPACITY		MOTOR POWER (HP)	V/P/H	MCA (A)	MOCP (A)				MANUFACTURER	MODEL	
							DB (DEG. F)	WB (DEG. F)	TOTAL (MBH)	SENSIBLE (MBH)										
MAU-1	GAS FIRED MAKEUP AIR UNIT WITH AIR CONDITIONING	1,432	0.50	10.0	157.785	127.806	93.0	74.0	64.0	30.0	1.5	208/3/60	26.3	30	1,300	OWNER	GC	ECON-AIR	EARTU1-I.200-15-5T-MPU	FURNISHED WITH DISCONNECT, FULLY MODULATING GAS RE-HEAT, ROOF CURB, SCREEN INTAKE AND WASHABLE ALUMINUM FILTERS.

KITCHEN HOOD SCHEDULE

TAG	DESCRIPTION	MAX COOKING TEMP. (DEG. F)	MATERIAL	EXHAUST PLENUM						PERFORATED SUPPLY PLENUMS										NO. OF LIGHT FIXTURES	WEIGHT (LB)	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
				AIRFLOW (CFM)	E.S.P (IN. W.C.)	DUCT COLLARS		LENGTH (IN.)	WIDTH (IN.)	LENGTH (IN.)	WIDTH (IN.)	MAU PLENUM				AC PLENUM										MANUFACTURER	MODEL	
						NO.	DIAMETER (IN.)					AIRFLOW (CFM)	DUCT COLLARS			AIRFLOW	DUCT COLLARS										
													NO.	WIDTH (IN.)	LENGTH (IN.)		NO.	WIDTH (IN.)	LENGTH (IN.)							
HD-1	TYPE 1 CANOPY HOOD WITH PERFORATED MAU AND AC SUPPLY PLENUMS	600	4030 STAINLESS STEEL	2,317	.765	1	16	139.00	57.00	152.00	22.00	1,432	3	36	8	845	2	26	8	6	1,250	OWNER	GC	CAPTIVEAIRE	6030 ND-2-ACPSP-F	FURNISHED WITH FIELD WRAPPER, LEFT VERTICAL END PANEL, RIGHT END STANDOFF, VAPORPROOF INCANDESCENT LIGHT FIXTURES, STAINLESS STEEL FILTERS, INTEGRAL UTILITY CABINET, TANK FIRE SUPPRESSION SYSTEM AND DUCT COLLAR TEMPERATURE SENSOR

ROOFTOP UNIT SCHEDULE

TAG	DESCRIPTION	COOLING CAPACITY (TONS)	EER (IEER)	AIRFLOW				COOLING					HEATING			NUMBER OF COMPRESSORS	NUMBER OF CIRCUITS	REFRIGERANT CHARGE (LB)	WEIGHT (LB)	ELECTRICAL			FURNISHED BY	INSTALLED BY	MANUFACTURER	MODEL	REMARKS
				TOTAL (CFM)	RETURN (CFM)	OA (CFM)	E.S.P. (IN. W.C.)	GROSS TOTAL (MBH)	GROSS SENSIBLE (MBH)	EAT DB (DEG. F)	EAT WB (DEG. F)	O.A.T. (DEG. F)	INPUT (MBH)	OUTPUT (MBH)	EAT (DEG. F)					MOCP (A)	MCA (A)	V/P/H					
RTU-1	KITCHEN ROOFTOP UNIT	8.5	11.2 (15.0)	3,000	2,665	335	0.80	97.1	71.4	76.4	65.7	97.0	125	103	62.5	2	1	--	1,150	50	39	208/3/60	OWNER	GC	CARRIER	48FEDN09	FURNISHED WITH HOT GAS REHEAT WITH REMOVE HUMIDISTAT. COMPARATIVE ENTHALPY ECONOMIZER WITH FAULT DETECTION AND DIAGNOSTICS, SMOKE DETECTOR IN RETURN AIR STREAM, BAROMETRIC RELIEF, HINGED PANELS, MERV 8 FILTERS, HAIL GUARD, MULTI-SPEED FAN, AND 24" TALL ROOF CURB
RTU-2	DINING ROOM ROOFTOP UNIT	10.0	11.0 (15.0)	4,000	3,200	800	0.80	126.8	95.9	78.3	66.0	97.0	180	148	54.6	2	1	--	1,175	70	58	208/3/60	OWNER	GC	CARRIER	48FEDN12	FURNISHED WITH HOT GAS REHEAT WITH REMOVE HUMIDISTAT. COMPARATIVE ENTHALPY ECONOMIZER WITH FAULT DETECTION AND DIAGNOSTICS, SMOKE DETECTOR IN RETURN AIR STREAM, BAROMETRIC RELIEF, HINGED PANELS, MERV 8 FILTERS, HAIL GUARD, MULTI-SPEED FAN, AND 24" TALL ROOF CURB

GRILLES, REGISTERS & DIFFUSERS SCHEDULE

TAG	DESCRIPTION	FACE SIZE	MATERIAL	FINISH	MOUNTING	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
								MANUFACTURER	MODEL	
CD1	PERFORATED CEILING DIFFUSER	24"x24"	STEEL	TO MATCH CEILING	LAY-IN CEILING	GC	GC	TITUS	PAS	
CD3	PLAQUE FACE DIFFUSER	12"x12"	STEEL	TO MATCH CEILING	GYP CEILING	GC	GC	TITUS	OMNI	PROVIDE WITH OBD.
PL1	SLOT DIFFUSER PLENUM	HEIGHT: 2" LENGTH: 48"	STEEL	MILL	FIXTURE	GC	GC	TITUS	FBPI-20	FURNISH WITH FACE-OPERATED INLET DAMPER
SD1	LINEAR SLOT DIFFUSER	WIDTH = 2"	ALUMINUM	TAPE & SPACKLE	GYP CEILING	GC	GC	TITUS	FL-20-22	FURNISH WITH JET THROW PATTERN
SG1	DIRECT SPIRAL DUCT MOUNTED LOUVERED SUPPLY GRILLE	REFER TO NECK SIZE	ALUMINUM	TO MATCH DUCT	DUCT MOUNT	GC	GC	TITUS	S300FS	PROVIDE WITH NECK MOUNTED OBD. PROVIDE MODEL "ASD" AIR SCOOP DEVICE
RG1	LOUVERED RETURN GRILLE. BLADES PARALLEL TO LONG DIMENSION	REFER TO NECK SIZE	STEEL	TO MATCH CEILING	LAY-IN CEILING	GC	GC	TITUS	350RL	
RG2	LOUVERED RETURN GRILLE. BLADES PARALLEL TO LONG DIMENSION	REFER TO NECK SIZE	STEEL	TO MATCH CEILING	SURFACE	GC	GC	TITUS	350RL	

VIROGUARD SCHEDULE

TAG	DESCRIPTION	DUCT CONNECTION SIZE	FAN	FURNISHED BY	INSTALLED BY	MANUFACTURER	REMARKS
VG-1	VIRGOUARD HOOD EXHAUST FAN ROOFTOP CONTAINMENT SYSTEM	16" X 16"	DU85HFA	OWNER	GC	ENVIROMATIC	GC TO INSTALL ON EF-1. ENVIROMATIC VIROGUARD HOOD EXHAUST FAN ROOFTOP CONTAINMENT SYSTEM.

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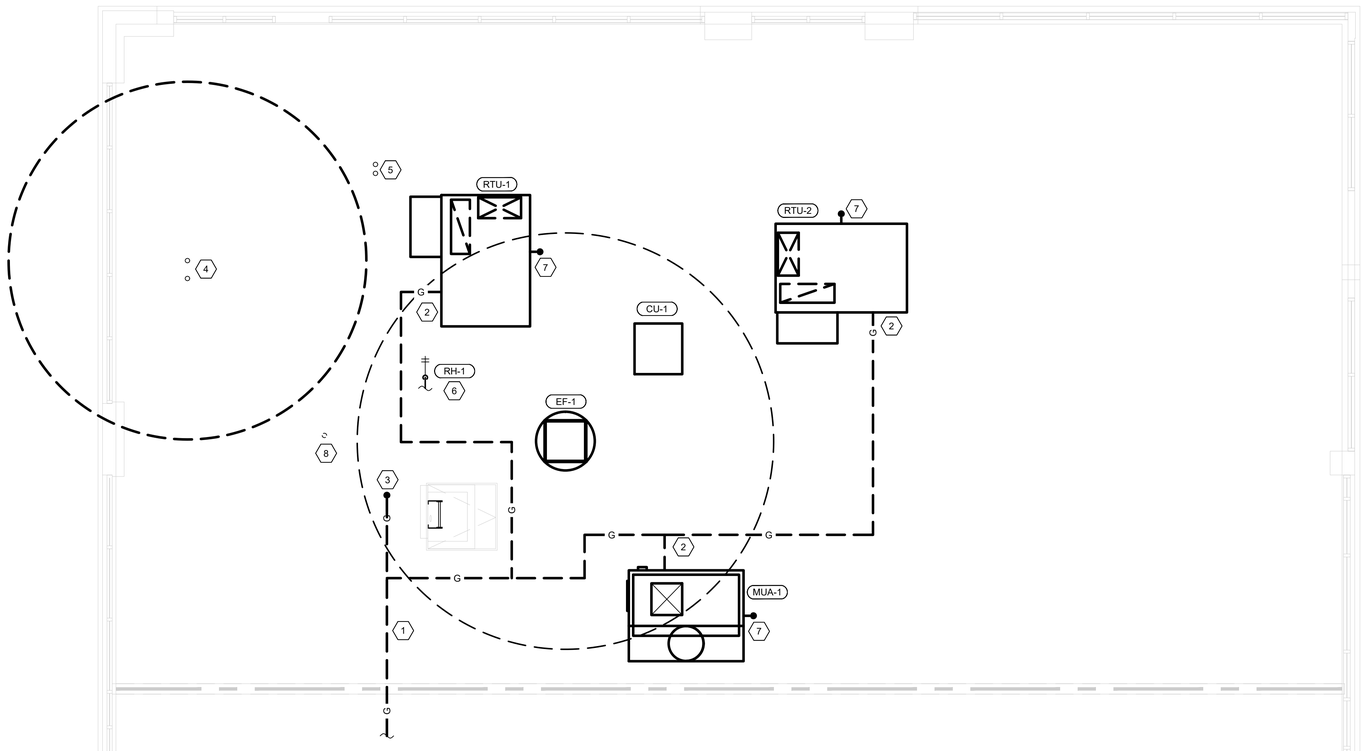
1 BID SET	DEC 16, 2024
2 IFC SET	MAR 14, 2024

MECHANICAL SCHEDULES

SHEET: M400

3/14/2025 10:37 AM



1 **PLUMBING ROOF PLAN**
1/4" = 1'-0"

CODED NOTES

1. SUPPORT THE GAS PIPE ON THE ROOF PER DETAIL 5/P202. WOOD BLOCKING IS NOT AN ACCEPTABLE METHOD OF SUPPORTING THE GAS PIPE.
2. PROVIDE ACCESSIBLE LINE-SIZED GAS VALVE, DIRT LEG, AND UNION AT GAS CONNECTION TO EQUIPMENT PER DETAIL 7/P202.
3. ROUTE GAS PIPING THROUGH ROOF PER DETAIL 2/P202. REFER TO SHEET P100 FOR CONTINUATION.
4. WATER HEATER FLUE THROUGH ROOF.
5. WATER HEATER COMBUSTION AIR INTAKE.
6. PROVIDE ROOF HYDRANT (RH-1) WITH BOTTOM OF NOZZLE INSTALLED 24" ABOVE THE BOTTOM OF THE ROOF DECK. PROVIDE ACCESSIBLE ISOLATION VALVE IN WATER SUPPLY TO ROOF HYDRANT. SUPPORT ROOF HYDRANT PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO SHEET P100 FOR CONTINUATION.
7. PROVIDE CONDENSATE DRAIN FROM THE MECHANICAL EQUIPMENT TO A SPLASH BLOCK ON THE ROOF PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. ROUTE SUCH THAT THE DRAIN DOESN'T BLOCK ACCESS TO ANY ACCESS PANELS TO THE EQUIPMENT. TYPICAL OF ROOF TOP UNITS AND MAKEUP AIR UNIT.
8. SANITARY VENT THROUGH ROOF.

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PLUMBING ROOF PLAN

SHEET: P120

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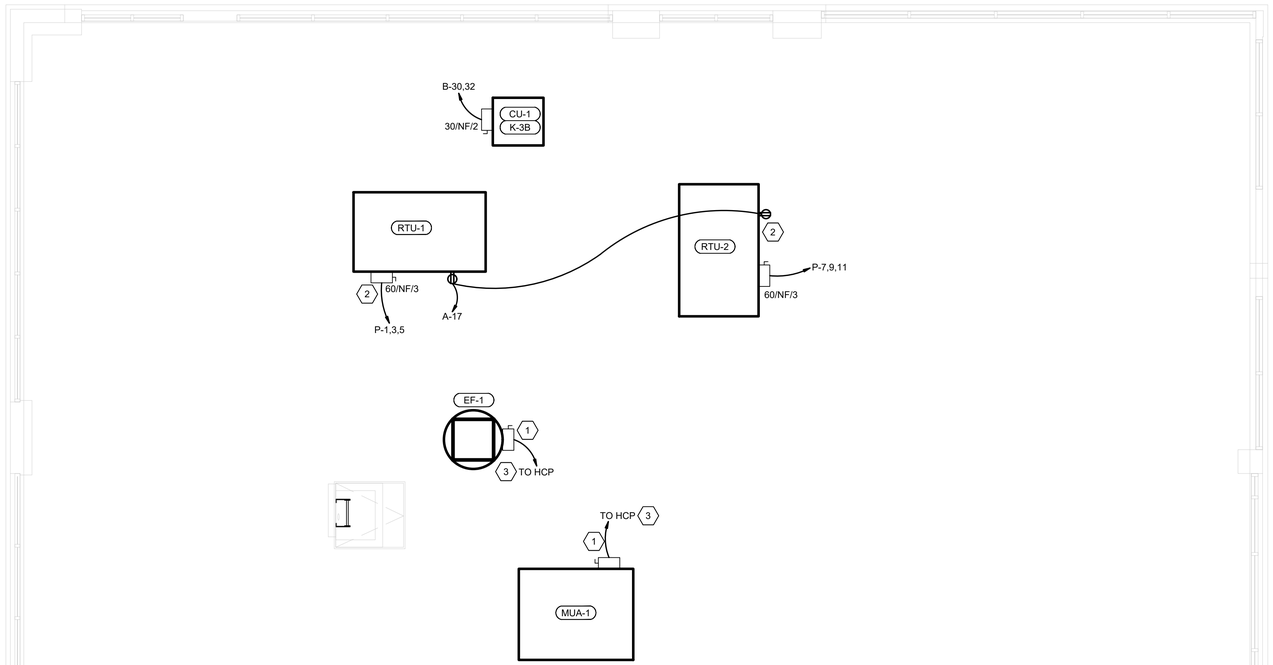

1 POWER ROOF PLAN
1/4" = 1'-0"

CODED NOTES

1. UNIT SHALL BE FURNISHED WITH AN INTEGRAL, NON-FUSED DISCONNECT SWITCH.
2. PROVIDE GFCI RECEPTACLE IN A WEATHERPROOF ENCLOSURE. CONNECT TO CIRCUIT INDICATED.
3. WIRE THROUGH HOOD CONTROL PANEL PER MANUFACTURER'S SHOP DRAWINGS.

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ELECTRICAL POWER PLAN

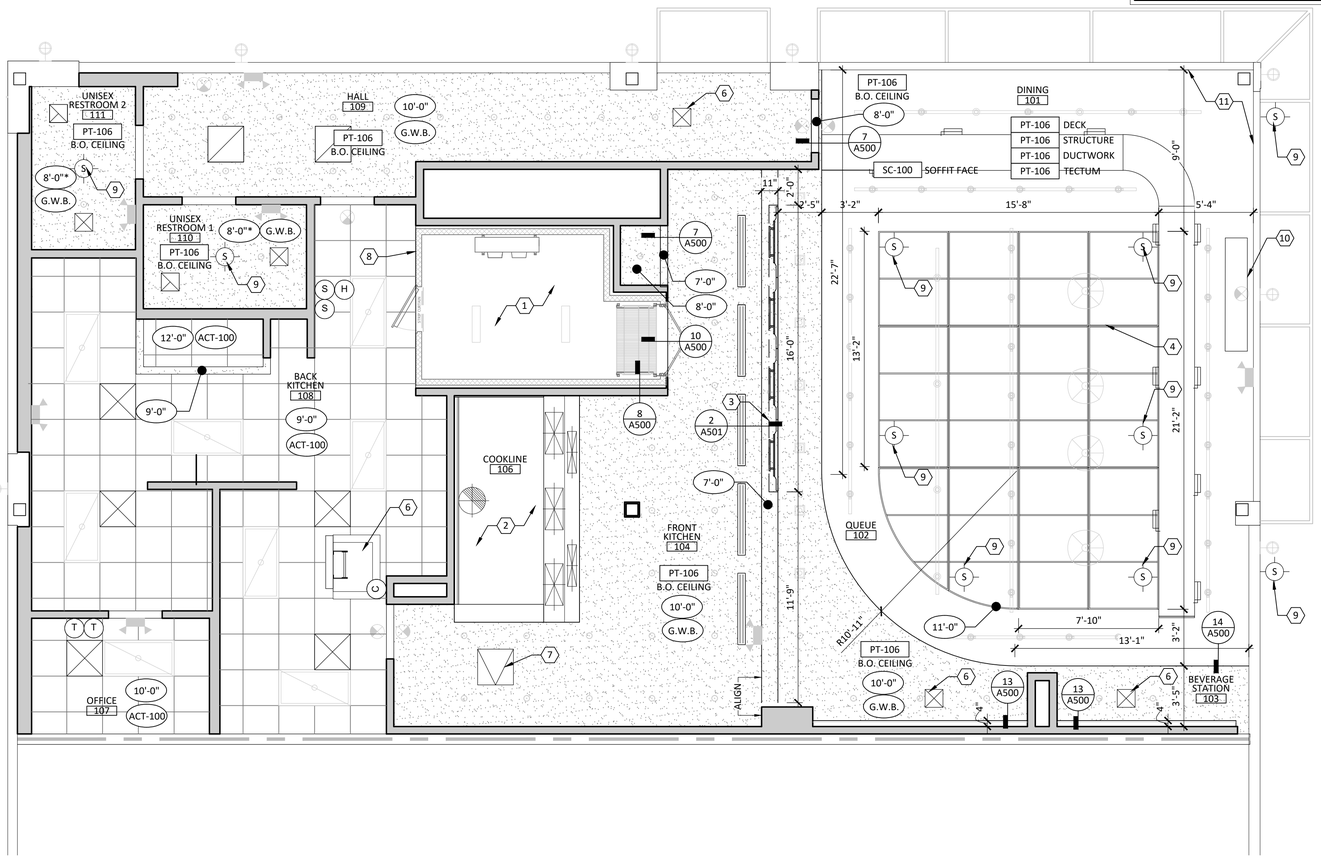
SHEET: E201

1/8/2025 10:33 AM

NOTE-
1. SEE MECHANICAL AND ELECTRICAL SHEETS FOR ALL FIXTURE SPECIFICATIONS, WIRING, AND POWER REQUIREMENTS.
2. "*" WITHIN THE CEILING ELEVATION TAG DENOTES INSTALLATION OF R-13 SOUND BATT ABOVE CEILING

REFLECTED CEILING PLAN LEGEND

	24"x 24" CEILING TILE
	GYPSUM BOARD CEILING REFER TO PLAN
	SOUND ATTENUATION PANEL TECTUM PANEL
	ACCESS PANEL CENDREX EDG-GYP FLUSH ACCESS DOOR W/ CONCEALED PUSH LATCH
	SUPPLY AIR DIFFUSER (SEE MECHANICAL SHEETS)
	RETURN AIR GRILLE (SEE MECHANICAL SHEETS)
S	SPEAKERS (BY VENDOR)
	CAMERA (BY VENDOR)
T	THERMOSTAT (SEE MECHANICAL SHEETS)
H	HUMIDITY SENSOR (SEE MECHANICAL SHEETS)
C	CO2 SENSOR (SEE MECHANICAL SHEETS)
S	REMOTE SENSOR (SEE MECHANICAL SHEETS)



CEILING PLAN GENERAL NOTES

A. WHERE CEILINGS ARE INDICATED TO BE GYP. BD., PROVIDE 1/2" GYPSUM BOARD ON METAL STUD FRAMING OR SUSPENDED CEILING SYSTEM. PROVIDE CEILING GYP. BD. CONTROL JOINTS PER MANUFACTURER'S RECOMMENDATIONS U.N.O.

B. VERTICALLY STACK LIGHT SWITCHES, THERMOSTATS, AND LIFE SAFETY DEVICES TO THE GREATEST EXTENT POSSIBLE.

C. CEILING HEIGHTS NOTED ARE FROM TOP OF FINISHED FLOOR (A.F.F.) TO UNDERSIDE OF FINISHED CEILING, U.N.O.

D. THE DIMENSIONS AND WORK NOTED ON THESE DRAWINGS ARE INDICATED FOR DESIGN INTENT. IF THE INSTALLATION OF ELECTRICAL, MECHANICAL, PLUMBING, OR FIRE PROTECTION WORK INTERFERES WITH THIS INTENT, THE ARCHITECT SHALL BE NOTIFIED PRIOR TO PROCEEDING WITH CONSTRUCTION.

E. SEE PARTITION TYPE DETAIL SHEET FOR TYPICAL DEVICE MOUNTING HEIGHT IN INFORMATION.

F. REFER TO ENGINEERING DRAWINGS FOR ALL CIRCUITING AND SWITCHING INFORMATION. ARCHITECTURAL DRAWINGS TO DICTATE QUANTITIES ONLY. IF DISCREPANCY OCCURS, NOTIFY ARCHITECT PRIOR TO PROCEEDING WITH CONSTRUCTION.

G. REFER TO FINISH SCHEDULE FOR FURTHER SPECIFICATION OF CEILING MATERIALS AND FINISHES.

H. G.C. TO VERIFY AND COORDINATE ALL CONDITIONS IN FIELD PRIOR TO START OF WORK, INCLUDING ELECTRICAL PANEL CAPACITY, LOCATIONS, AND CLEARANCES AT MECHANICAL DUCTS, ELECTRICAL ITEMS, SPRINKLERS, AND ASSOCIATED PIPING. ANY CONFLICTS ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER AT THE EARLIEST OPPORTUNITY.

I. REFER TO ELECTRICAL AND MECHANICAL DRAWINGS FOR LOCATION OF SUPPLY AND RETURN AIR DIFFUSERS, THERMOSTATS, EXIT SIGNS, AND LIFE SAFETY EQUIPMENT.

J. ACT AND GRID TO BE CENTERED IN ROOMS U.N.O.

K. SPRINKLER HEADS, LIGHT FIXTURES, DIFFUSERS, AND ETC. TO BE CENTERED WITHIN ACT, U.N.O. G.C. TO VERIFY SECURITY CAMERA LOCATIONS WITH OWNER'S VENDOR AND COORDINATE WITH ARCHITECT.

L. HVAC DIFFUSERS, EQUIPMENT ACCESS PANELS & HATCHES, SPRINKLER HEAD ESCUTCHEON PLATES, EMERGENCY LIGHT FIXTURES, SMOKE DETECTORS, SECURITY FEATURES, AUDIO DEVICES, ETC TO MATCH ADJACENT CEILING FINISH U.N.O. SUBMIT LOCATIONS, FINISHES & STYLES OF ALL CEILING FIXTURES TO ARCHITECT FOR APPROVAL PRIOR TO PURCHASING OR CONSTRUCTION.

M. ALL SPRINKLER HEADS LOCATED IN CLOSED CEILING IN VIEW OF PUBLICS AREAS SHALL BE RECESSED AND CONCEALED WITH AN ESCUTCHEON PLATE.

N. G.C. TO COORDINATE LOCATION OF ALL EQUIPMENT ACCESS PANELS & HATCHES WITH NECESSARY EQUIPMENT. CEILING OR PARTITION FEATURES, LIGHTING, AND OTHER EQUIPMENT. SUBMIT TO ARCHITECT FOR APPROVAL PRIOR TO COMMENCING WITH WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES OR CONFLICTS THAT INTERFERE WITH THE DESIGN INTENT PRIOR TO INSTALLATION OF EQUIPMENT OR SERVICES.

O. ALL ELECTRICAL CONDUIT, WIRING, PLUMBING LINES, AND OTHER SERVICES TO BE ROUTED THROUGH CLOSED CEILING, FRAMED WALLS, FAUX BEAMS, ETC. AS NECESSARY TO CONCEAL FROM VIEW.

P. G.C. TO COORDINATE THE CEILING FRAMING AROUND SUCH ITEMS AS THE HOOD AND WALK-IN COOLER BOX. THE HOOD SUPPLY PLENUM SHOULD HAVE A 1/4" REVEAL BELOW FINISHED CEILING HEIGHT.

Q. SECURITY CAMERA SCOPE AND LOCATION BY SECURITY TEAM.

R. SPEAKER SCOPE AND LOCATION BY AUDIO VENDER.

CEILING PLAN CODED NOTES (#)

1. G.C. TO COORDINATE INSTALLATION OF WALK-IN, CEILING LAYOUT AROUND BOX WITH FOOD SERVICE CONSULTANT.
2. LOCATION OF FOOD SERVICE PROVIDED EXHAUST/HOOD. COORDINATE CEILING WITH PARTITION FRAMERS. MAKE-UP AIR GRILL TO HAVE 1/4" MAX. REVEAL BENEATH FINISHED FACE OF DRYWALL CEILING. G.C. TO ENSURE ANCILLARY PANEL OPENS UNOBSTRUCTED.
3. PROVIDE BLOCKING IN CEILING FOR DIGITAL MENU BOARDS. REFER TO DETAIL 1/A501.
4. SUSPENDED WOOD SLAT PANEL SYSTEM BY MILLWORKER. SEE MILLWORK DRAWINGS. SUSPENDED FROM CEILING WITH UNI-STRUT. PAINT UNISTRUT PT-106.
5. CENTER DIFFUSER BETWEEN LIGHTS.
6. EXISTING ROOF HATCH LOCATION TO BE V.I.F.
7. LOCATION OF ACCESS PANEL. COORDINATE IN FIELD ACCESS REQUIREMENTS. ALIGN ACCESS PANELS WITH CENTERLINE OF LIGHTING FIXTURE, DIFFUSERS AND OTHER CEILING ELEMENTS WHERE POSSIBLE.
8. GC TO CLOSE GAP ABOVE WALK IN AND ACT TILE. GC TO CLOSE ANY GAP BETWEEN WALLS AND WALK IN COOLER.
9. PROVIDE POWER FOR SPEAKER.
10. AIR CURTAIN. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
11. GC TO VERIFY AFTER CEILING DEMO, THAT EXISTING EXTERIOR WALL ASSEMBLY HAS GYP BOARD FINISH. IF NOT, GYP. BOARD TO BE ADDED AND PREPPED FOR PAINT FINISH (TYP.)

1 A141 REFLECTED CEILING PLAN - FINISHES
1/4" = 1'-0"

3/14/2025 2:29 PM

CORE STATES GROUP
135 Water Street
Suite 201
Naperville, IL 60540
312.788.4545
core-states.com

ISSUED FOR CONSTRUCTION

CAVA

CAVA - BALA CYNWYD
4040 CITY AVENUE, SUITE 4
PHILADELPHIA, PA 19131
FOR
CAVA
14 Ridge Square NW #500, WASHINGTON, DC 20016

AOR PROJECT NUMBER:
CAV.39322

ISSUE	DATE
PERMIT SET	NOV 8, 2024
1 BID SET	DEC 16, 2024
2 IFC SET	MAR 14, 2025

REFLECTED CEILING PLAN FINISHES

SHEET:
A141

FOR QUESTIONS, CALL THE
Maryland Mechanical
REGION 76
PHONE: (800) 988 - 0881
EMAIL: reg76@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#7131143

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S) WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP	MUA CFM	AC CFM	HOOD CONSTRUCTION	HOOD CONFIG END TO END	ROW
1		6030 ND-2-ACPSP-F	CAPTIVEAIRE	11' 7"	600 DEG	I	HEAVY	200	2317			4"	16"	2317	1659	-0.765"	1432	710	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	FILTER(S) TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	LIGHT(S) QTY	TYPE	WIRE GUARD	UTILITY CABINET(S) LOCATION	SIZE	FIRE SYSTEM TYPE	FIRE SYSTEM SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
1		CAPTRATE SOLO FILTER	8	20"	16"	85% SEE FILTER SPEC	6	L55 SERIES E26	NO	LEFT	12"x60"x30"	TANK FS	4.0/4.0	DCV-1111	1 LIGHT 1 FAN	YES	1214 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1		FIELD WRAPPER 10.00" HIGH FRONT, LEFT.
		RIGHT END STANDOFF (FINISHED) 1" WIDE 60" LONG INSULATED.
		INSULATION FOR BACK OF HOOD.
		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"	22"	12"	MUA	10"	24"		476	0.126"
						MUA	10"	24"		476	0.126"
						MUA	10"	24"		476	0.126"
						AC	6"	28"		355	0.086"
						AC	6"	28"		355	0.086"

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 MANUFACTURES INSTALLATION GUIDE.
PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER MANUFACTURES 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 _____ _____

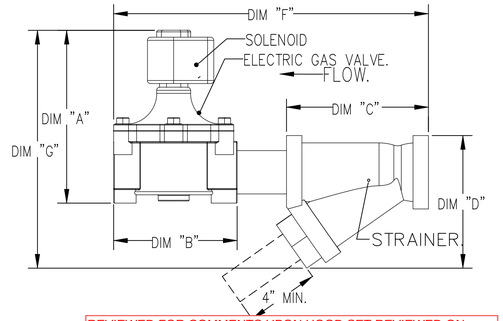
GAS VALVES AND STRAINERS

	TYPE	SIZE	VOLTAGE	GAS VALVE SIZING MIN. INLET PRESSURE	MAX. INLET PRESSURE	FLOW AT 1 IN.W.C. DROP NATURAL GAS	FLOW AT 1 IN.W.C. DROP PROPANE	GAS VALVE DIMENSIONS DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "F"	DIM "G"	INSTALLATION PIPE ORIENTATION	PART NUMBERS GAS VALVE PART NUMBER	STRAINER PART NUMBER	GAS VALVE/STRAINER KIT
GAS VALVE FOR FS#1 →	ELECTRICAL	2"	120 VAC	0 PSI (0 IN.W.C.)	5 PSI (138 IN.W.C.)	2,940,500 BTU/HR	1,908,048 BTU/HR	7-5/8"	6-3/8"	7-1/4"	7-13-16"	15-5/8"	13-15/16"	HORIZONTAL/VERTICAL	8214280	4417K68	(SC)EGVA2

ELECTRIC GAS VALVES ONLY-SOLENOID ORIENTATION
3/4"-2" 120VAC GAS VALVES CAN BE MOUNTED WITH THE SOLENOID IN ANY POSITION AT OR ABOVE HORIZONTAL.
2 1/2"-3" 120VAC GAS VALVES MUST BE MOUNTED WITH THE SOLENOID VERTICAL AND UPRIGHT.
24VDC GAS VALVES MUST BE MOUNTED WITH THE SOLENOID VERTICAL AND UPRIGHT.

ALL GAS VALVES/STRAINERS
PROPER CLEARANCE MUST BE PROVIDED IN ORDER TO SERVICE THE STRAINERS A MINIMUM OF 4" CLEARANCE DISTANCE MUST BE PROVIDED AT THE BASE OF THE STRAINER CUSTOMER MUST VERIFY BTU CONSUMPTION AS WELL AS PRESSURE RATING SPECIFIC GRAVITY OF NATURAL GAS = 0.64, SPECIFIC GRAVITY OF LP = 1.52.

CALCULATIONS
TO CALCULATE GAS FLOW FOR OTHER THAN 1 IN.W.C. PRESSURE DROP
NEW BTU/HR = (BTU/HR AT 1 IN.W.C. PRESSURE DROP) X NEW PRESSURE DROP$^{0.5}$
TO CALCULATE GAS FLOW FOR OTHER THAN 0.64 SPECIFIC GRAVITY
NEW BTU/HR = (BTU/HR AT 0.64) X (0.64 / NEW SPECIFIC GRAVITY)$^{0.5}$.



REVIEWED FOR COMMENTS UPON HOOD SET REVIEWED ON 01/07/25.
REDUCED MUA AIR FLOW TO 1432 CFM APPROVED
REMOVAL OF HINGE KIT FOR EXHAUST FAN CURB APPROVED
IF ANYTHING OTHER THEN THESE TWO ITEMS WERE CHANGED ON THIS SUBMITTAL - VENDOR TO ADVISE.

SPECIFICATION: CAPTRATE® GREASE-STOP® SO

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

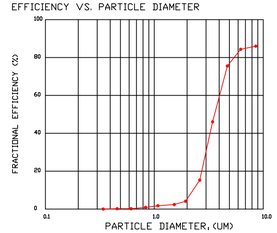
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

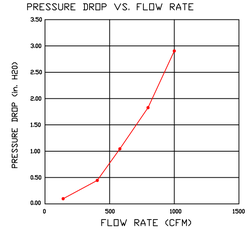
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

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

EFFICIENCY VS. PARTICLE DIAMETER



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.

BUILT IN ACCORDANCE WITH NFPA No. 96

National Engineering, Ltd
4635 Trueman Blvd, Suite 250
Hilliard, OH 43026
(614) 751-9610

NATIONAL ENGINEERING

☑ Approved ☐ Approved as Noted ☐ Revise and Resubmit ☐ Rejected

BY K L Morgan **DATE** 03/13/2025

SUBMITTAL# **SPEC**

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

REVISIONS

	DESCRIPTION	DATE:
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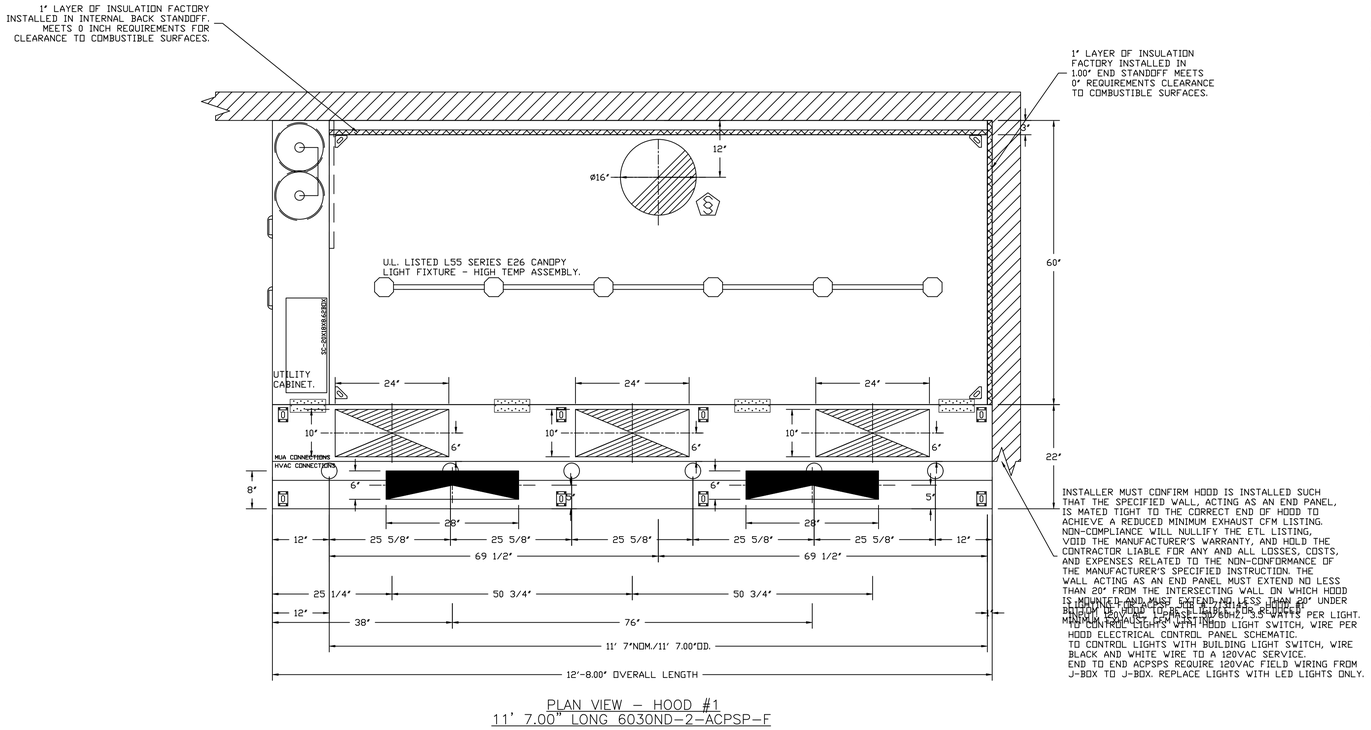
www.captiveaire.com
8120 Woodmont Avenue, Suite 720, Bethesda, MD, 20814 PHONE: (800) 988 - 0881 FAX: 9192275931 EMAIL: reg76@captiveaire.com
Maryland Mechanical

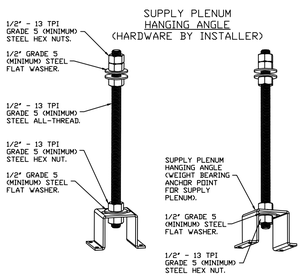
Cava - Bala Cynwyd PA
4040 City Avenue,Suite 4
Philadelphia, PA, 19131

DATE: 3/6/2025
DWG.#: 7131143
DRAWN BY: ABS-76
SCALE: NTS
MASTER DRAWING
SHEET NO. 1



PLAN VIEW – HOOD #1
11' 7.00" LONG 6030ND-2-ACPSP-F

ACPSP SHIPS LOOSE FOR FIELD INSTALLATION



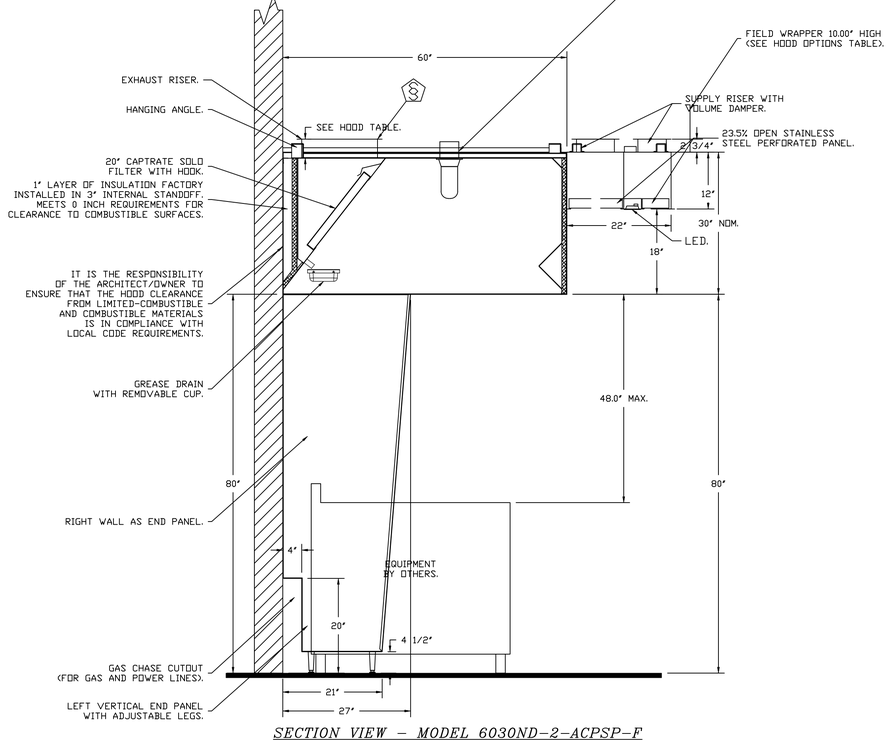
ASSEMBLY INSTRUCTIONS

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 ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR PSP HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

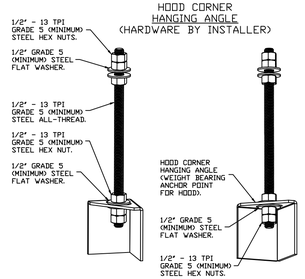
CLEARANCE TO COMBUSTIBLES

HOODS #	SURFACE	*CLEARANCE
1	TOP	18"
	FRONT	0"
	BACK	0"
	LEFT	0"
	RIGHT	0"

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



SECTION VIEW – MODEL 6030ND-2-ACPSP-F HOOD – #1



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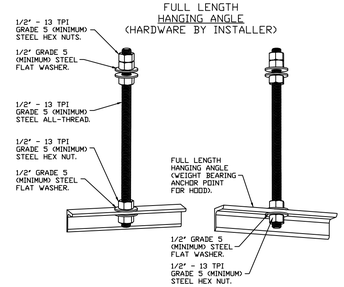

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REVISIONS

	DESCRIPTION	DATE:
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CAPTIVEAIRE
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Cava - Bala Cynwyd PA
4040 City Avenue,Suite 4
Philadelphia, PA, 19131

DATE: 3/6/2025

DWG.#: 7131143

DRAWN BY: ABS-76

SCALE: NTS

MASTER DRAWING

SHEET NO. 2

FIRE SYSTEM INFORMATION – JOB#7131143

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

GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		SC ELECTRICAL	2.000	CAPTIVEAIRE SYSTEMS

FIRE SYSTEM PARTS LIST KEY

FIRE SYSTEM NO	TAG	KEY NUMBER – PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
1		0 – 0 – TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
		0 – 0 – TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
		0 – 0 – 12-F28021-32144-DT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 360°F. (A0034310).	1	0
		0 – 0 – 32-00002 QUIK SEAL – 1/2" (UL).	1	0
		0 – 0 – 4429K153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW, BRASS.	2	0
		0 – 0 – 4429K422 1/2" X 1/4" BRASS REDUCING BUSHING.	1	0
		0 – 0 – 79525 1/2" 90 PRO-PRESS ELBOW WITH 1/2" NPT FEMALE CONNECTION, VIEGA.	1	0
		0 – 0 – 79580 1/2" X 1/2" PRO-PRESS TEE X 1/2" NPT FEMALE CONNECTION, VIEGA.	2	0
		0 – 0 – 87-120042-001 SECONDARY ACTUATOR VALVE (SVA) – SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION.	1	0
		0 – 0 – 87-120045-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5' BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION.	1	0
		0 – 0 – 87-300001-001 TANK – PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	2	0
		0 – 0 – 87-300030-001 PRIMARY ACTUATOR KIT (PAK) – ACTUATOR AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION.	1	0
		0 – 0 – 87-300033-001 DIN CONNECTOR, CANFIELD PART #5J560-201-EU0A, TANK FIRE SUPPRESSION, SUBMINATURE SOLENOID CONNECTION (CED VENDOR 30377).	1	0
		0 – 0 – 87-300152-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	8	0
		0 – 0 – 9055455PC PRO PRESS 1/2 PRESS X PRESS 90 ELBOW LD.	6	0
		0 – 0 – 9097200PC PRO PRESS PC611 1/2 PRESS TEE LD.	7	0
		0 – 0 – 98694A115 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	4	0
		0 – 0 – A0034332 JUNCTION BOX FOR MANUAL PULL STATION. 1.5" DEEP BACK BOX, RED COLOR.	1	0
		0 – 0 – A31484 1/4" NPT SCHRADER VALVE AND CAP, JB INDUSTRIES. 1/4" FLARE X 1/4" MPT HALF UNION. USED ON TANK SERVICE PORT.	1	0
		0 – 0 – BI145 3/8" BLACK IRON 90 ELL.	3	0
		0 – 0 – DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 – 0 – TANK STRAP TANK STRAP – USED FOR TANK FIRE SUPPRESSION.	6	0
		0 – 0 – TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 – 0 – WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	2	0
		16 – 16 – 79210 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	8	0
		16 – 16 – QL-F NOZZLE – TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE).	8	0
		26 – 26 – QSA-3/8 QUIK SEAL – 3/8" (UL).	8	0
		34 – 34 – A0034331 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT. RED COLOR.	1	0

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.

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

JOB #: 7131143.
JOB NAME: CAVA – BALA CYNWYD PA.

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: 16" DIA.
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

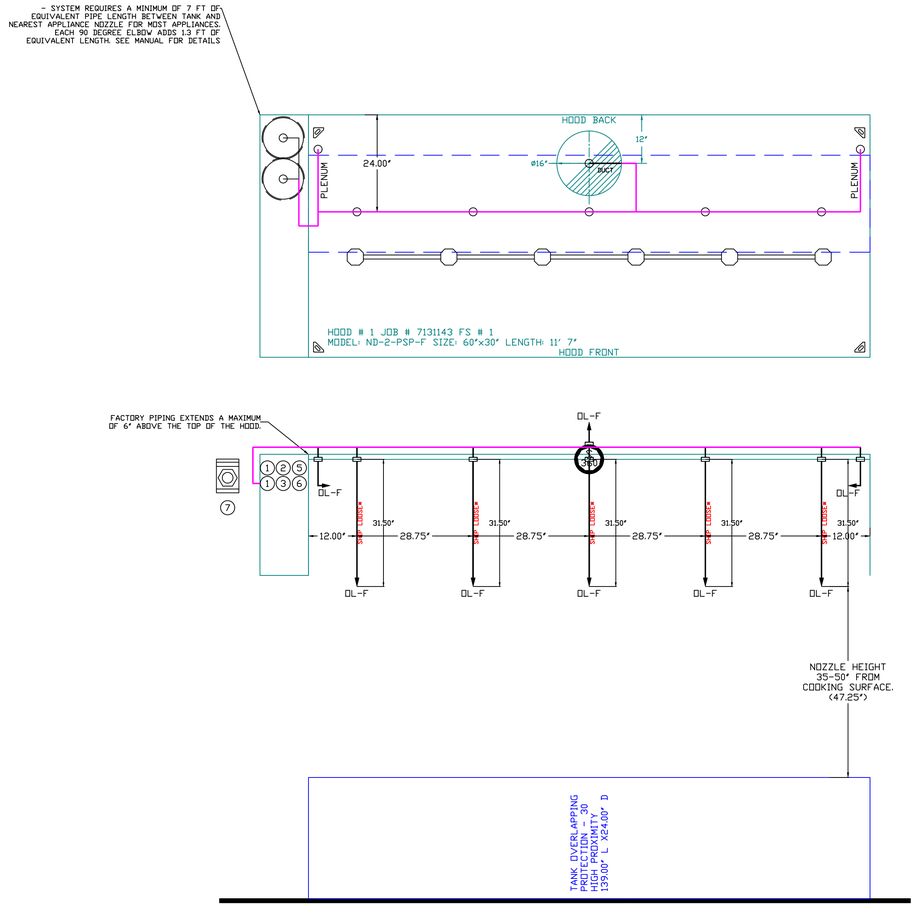
- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

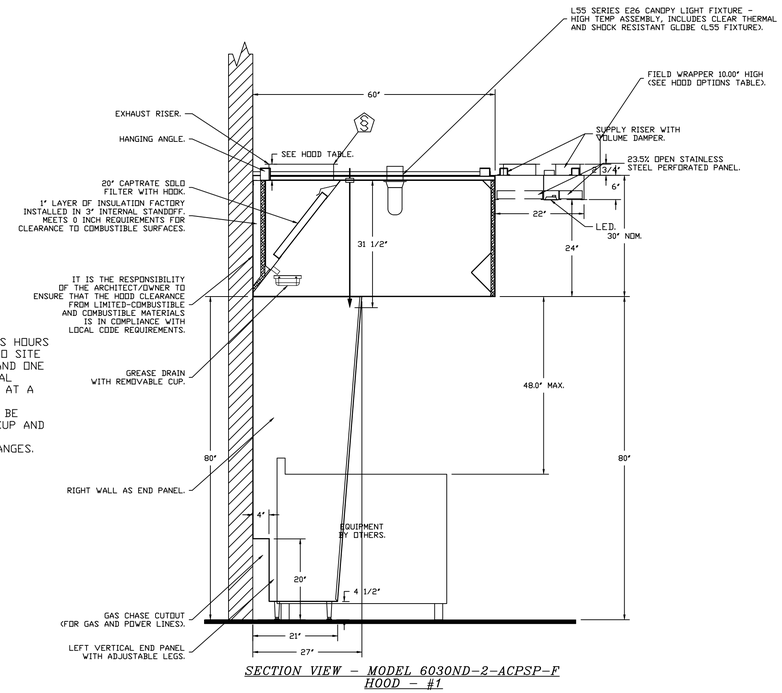
AGENT DISTRIBUTION PIPING LIMITATIONS	
PIPE SECTION	MAX PIPE LENGTH (FT)
MAX SUPPLY LINE TO FIRST OVERLAPPING NOZZLE	42
OVERLAPPING NOZZLE APPLIANCE BRANCH	10
DEDICATED NOZZLE APPLIANCE BRANCH	10

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.

INCLUDES: FIELD INSTALLATION AND HOOKUP DURING NORMAL BUSINESS HOURS BY CERTIFIED INSTALLERS ONLY IN THE LOCATION NOTED ABOVE, TWO SITE VISITS ONLY (ONE VISIT TO SET PULL STATION & SYSTEM HOOKUP AND ONE VISIT FOR ONE TEST; ADDITIONAL VISITS WILL RESULT IN ADDITIONAL CHARGES), ONE MECHANICAL OR ELECTRICAL GAS VALVE PER SYSTEM AT A MAXIMUM SIZE OF 2", PERMIT, AND SYSTEM TEST.
EXCLUDES: UNION LABOR & PREVAILING WAGE (LABOR & WAGES WILL BE ADDED IF APPLICABLE), GAS VALVE INSTALLATION, ELECTRICAL HOOKUP AND CONNECTIONS, HANGING OF FIRE CABINET, SHUNT TRIP, HANDHELD EXTINGUISHER(S), ON-SITE RE-PIPING DUE TO EQUIPMENT LAYOUT CHANGES.





SECTION VIEW – MODEL 6030ND-2-ACPSP-F HOOD – #1

REVISIONS

	DESCRIPTION	DATE:
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SHEET NO. 3

EXHAUST FAN INFORMATION – JOB#7131143

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	KEF	1	DU85HFA	CAPTIVEAIRE	2317	1.000	1551	TEAO-ECM	1.000	0.6650	1	115	11.6	733 FPM	87	16.7

DOAS/RTU FAN SCHEDULE – JOB#7131143

FAN INFORMATION										ELECTRICAL INFORMATION					COOLING INFORMATION										GAS HEAT INFORMATION					A2L MINIMUM ROOM VOLUME			NOTES
FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	BLOWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	WEIGHT (LBS)	ESP	HP	PHASE	VOLT	MCA	MOCP	OUTSIDE AIR		MIXED AIR		LEAVING AIR			CAPACITY		IEER	ISMRE	GAS TYPE	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	ROOM AREA (FT2)	AIRFLOW (CFM)	HEIGHT (FT)	
																DB	WB	DB	WB	DB	WB	DP	TOTAL	SENS.										
2	MAU	1	EARTU1-I.200-15-5T-MPU	ECON-AIR	15P-1	0	1432	1432	1200	0.500	1.50	3	208	26.8A	30A	85.6°F	77.1°F	85.6°F	77.1°F	67.4°F	65.1°F	64.0°F	64.0 MBH	27.6 MBH	17.9	6.1	NATURAL	121870	98715	58°F	7 IN. W.C. – 14 IN. W.C.	205.6	370	7.2	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. 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. 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
11. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE
12. 15 DEGREE LOW AMBIENT OPERATION
13. 1" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-4.3 INSULATION-MINIMUM 24GA EXTERIOR W/ 18GA BASE
14. DOWN DISCHARGE/NO RETURN
15. MINIMUM ROOM AREA ASSUMED 7.2' SUPPLY DIFFUSER HEIGHT AND IS CALCULATED PER UL60335-2-40 4TH ED. VALUES BASED ON FACTORY CHARGE. ACTUAL SITE CHARGE MAY DIFFER.

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF	1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
2	MAU	1	INLET PRESSURE GAUGE, 0-35"
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
		1	SHIP LOOSE GAS STRAINER 3/4"
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
		1	CONSTRUCTION MODE - MODIFIES START-UP SETTINGS TO ALLOW TEMPERING A BUILDING STILL UNDER CONSTRUCTION
		1	2" MERV 13 FILTERS FOR RTU1 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU1 (QTY. 4)
		1	TOTAL CFM MONITORING
		1	RTU1 DOWN DISCHARGE
		1	RTU FIXED 100% OA INTAKE CONTROL
		1	RTU1 CURB DUCT HANGER
		1	DISCHARGE FIRESTAT SET TO 240°F
		1	FREEZESTAT
		1	INTAKE FIRESTAT SET TO 135°F
		1	RTU1 NO RETURN - 100% OA - MPU
		1	RTU BLOWER DOOR SWITCH
		1	120V FIRE INPUT
		1	VAV PACKAGE W/ 0-10VDC INPUT CONTROL (571 VFD INCLUDED)
		1	VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
		1	5 TON MODULATING COOLING OPTION, 208/230V. R454B REFRIGERANT, VARIABLE SPEED COMPRESSOR, DL ECM CONDENSING FAN
		1	R454B LEAK DETECTOR OPTION FOR RTUS
		1	LOW AMBIENT COOLING OPERATION - DOWN TO 0F AMBIENT
		1	NO REHEAT
		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	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)
		1	EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET

FAN ACCESSORIES

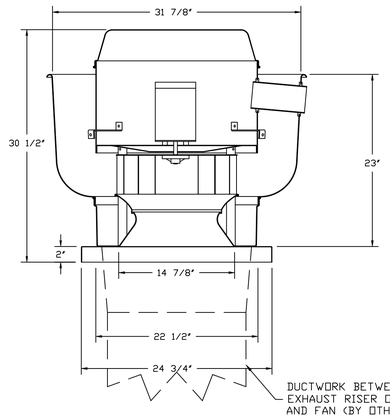
FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	KEF							

CURB ASSEMBLIES

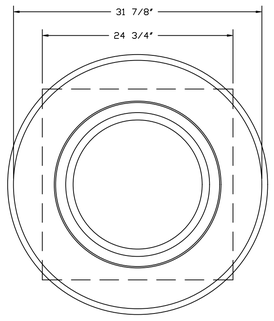
NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF	37 LBS	CURB	23.000"W X 23.000"L X 24.000"H VENTED.
2	# 2	MAU	103 LBS	CURB	41.000"W X 71.000"L X 20.000"H INSULATED.

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

FAN #1 DU85HFA - EXHAUST FAN (KEF)



DUCTWORK BETWEEN EXHAUST RISER ON HOOD AND FAN (BY OTHERS).



TOP VIEW

FEATURES:

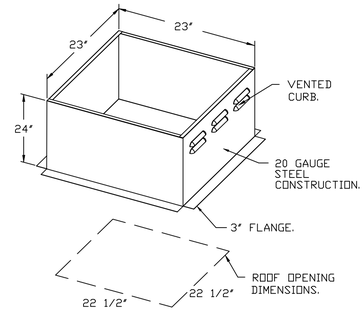
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).

- 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.

OPTIONS

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



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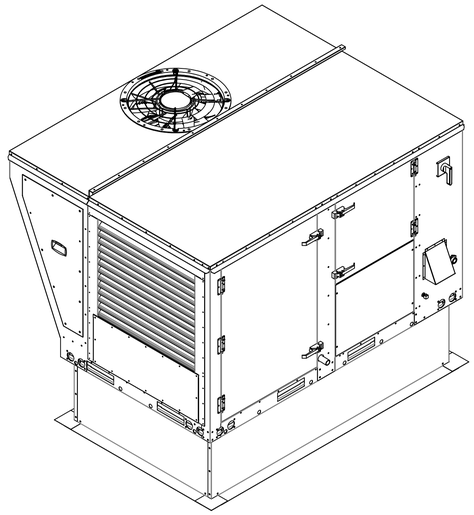
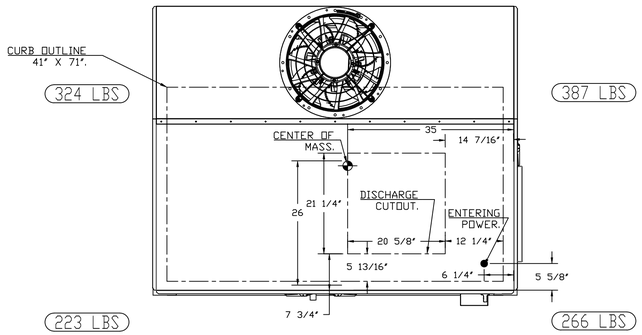
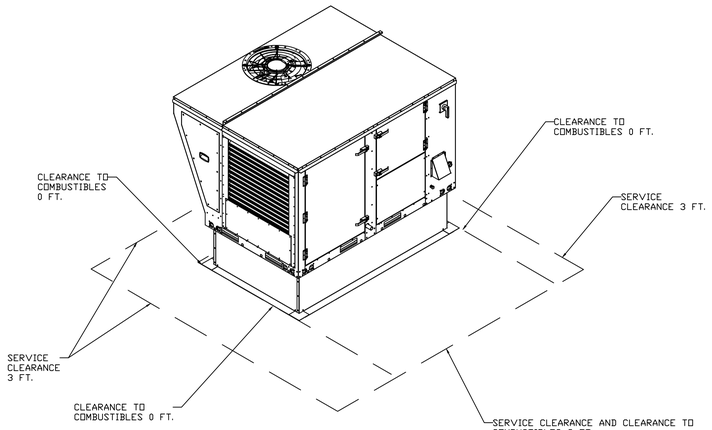
SHEET NO. 4

FAN #2 EARTU1-I.200-15-5T-MPU - HEATER (MAU)

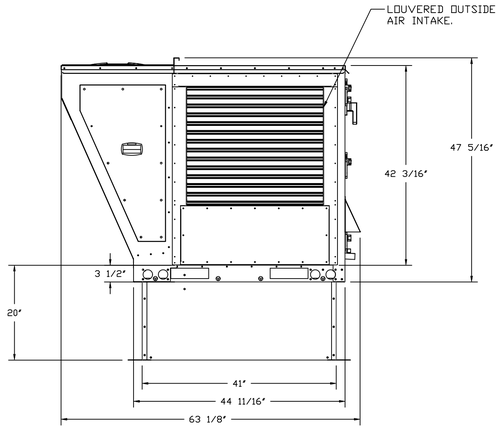
NOTES:
1. DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
2. ( ) DENOTES CORNER WEIGHT.
3. ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.
4. CONNECTION FROM BREAKER TO UNITS SAFETY DISCONNECT SWITCH TO BE COPPER WIRE ONLY.
5. EXTERIOR GAS CONNECTION PROVIDED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

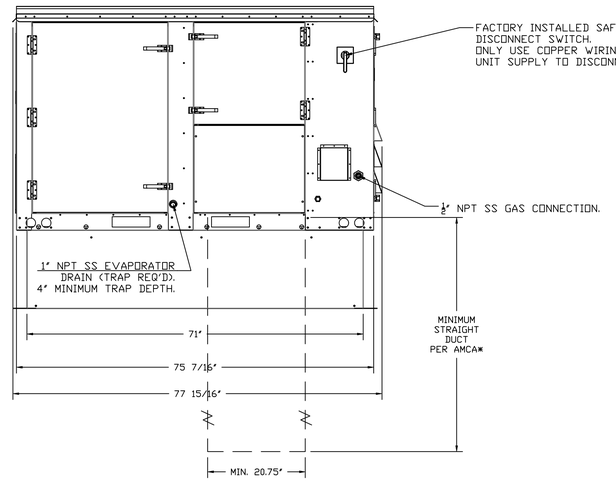






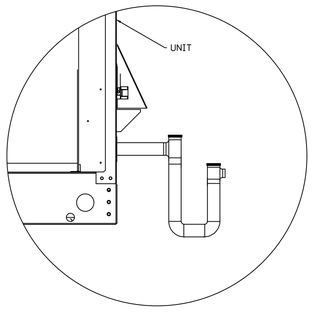
SIZE 1 - 1 CONDENSER

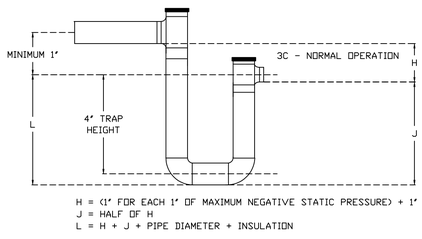




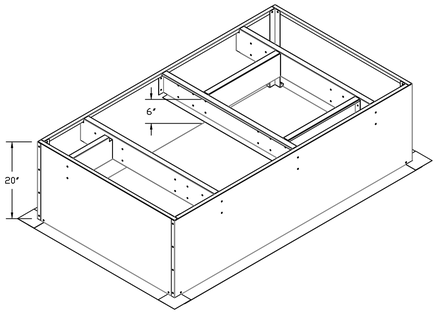
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE 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".

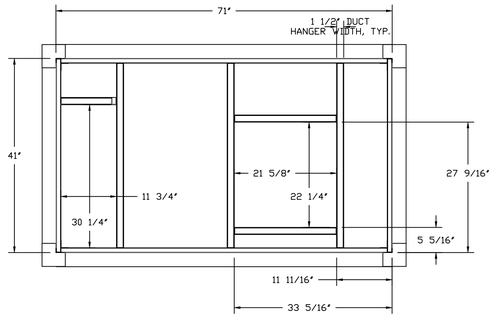
RTU CONDENSATE DRAIN TRAP DETAIL





H = (1" FOR EACH 1" OF MAXIMUM NEGATIVE STATIC PRESSURE) + 1"
J = HALF OF H
L = H + J + PIPE DIAMETER + INSULATION





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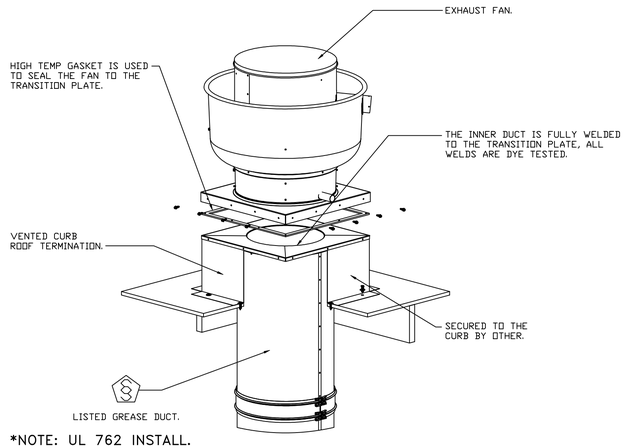
SHEET NO. 5

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 MANUFACTURES INSTALLATION GUIDE.
PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER MANUFACTURES 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.

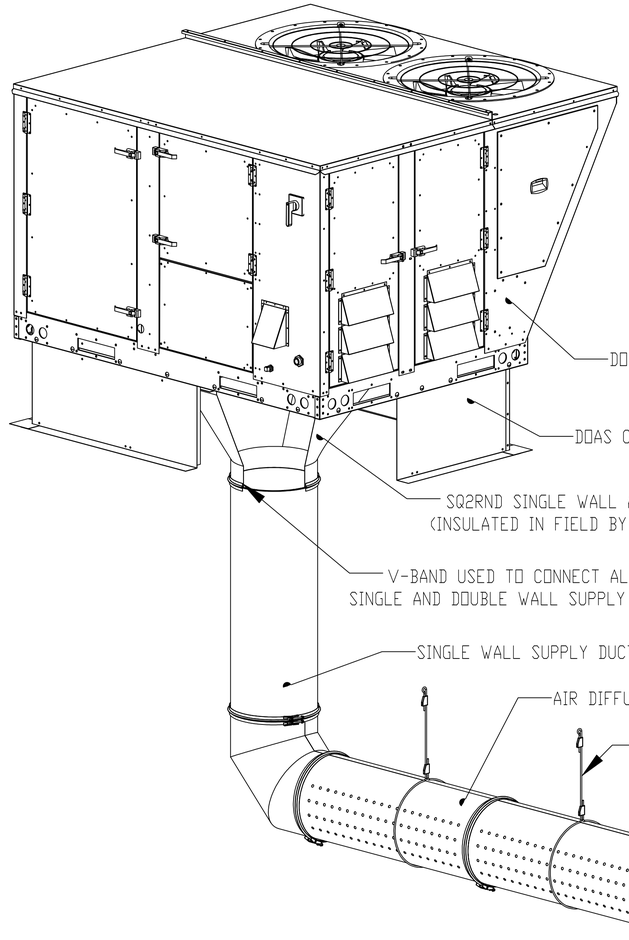


*NOTE: UL 762 INSTALL.

AIR DIFFUSION SUPPLY DUCT SPECIFICATIONS:
PROVIDE AIR DIFFUSION SUPPLY DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL DW-S0(HC), DW-S90(HC), & DW-S180(HC).
THREE DISTINCT HOLE PATTERN OPTIONS TO COVER A VARIETY OF CEILING HEIGHTS.
NO ADDITIONAL DIFFUSERS REQUIRED, AS THE DUCT ITSELF PROVIDES AIR DIFFUSION.
MADE OF HIGH QUALITY STAINLESS STEEL DESIGNED TO LAST 20+ YEARS.
HIGH INDUCTION SUPPLY DUCT IS CONSTRUCTED USING 24 GAUGE, 430 SS - 5" THRU 24".
HIGH INDUCTION SUPPLY DUCT IS CONSTRUCTED USING 20 GAUGE, 430 SS - 26" THRU 36".
QUICK ONSITE ASSEMBLY USING EPDM GASKETS & UNIVERSAL V-BANDS.
DOUBLE WALL SUPPLY DUCT AVAILABLE FOR INTERIOR AND EXTERIOR SPACES, EITHER CONDITIONED OR UNCONDITIONED.
DOUBLE WALL SUPPLY DUCT AVAILABLE IN DW-1S, DW-2S, & DW-3S TO MEET SPECIFIC REGIONAL "R" VALUE REQUIREMENTS.

Insulation R-Value Recommendations		
Supply Duct Type	Minimum R-value	Space Type
Single Wall - S & -HC	N/A	Conditioned Space Only
Double Wall - 1S	R-4	Unconditioned Interior Space Only
Double Wall - 2S	R-8	Unconditioned Space Climate Zones 1-4
Double Wall - 3S	R-12	Unconditioned Space Climate Zones 5-8

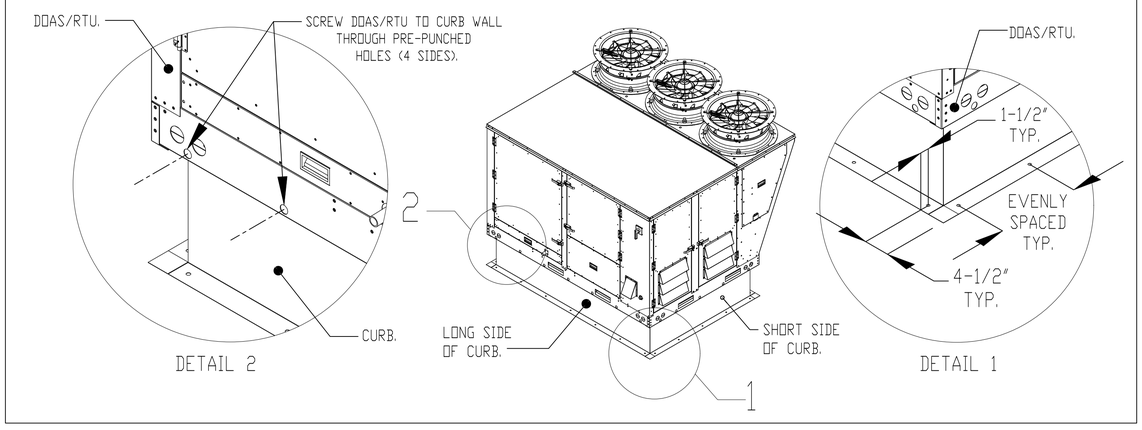
DOUBLE WALL SUPPLY DUCT IS INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.
AIR DIFFUSION SUPPLY DUCT COMPLIES WITH SMACNA (SHEET METAL AND AIR CONDITIONING CONTRACTORS) BEST PRACTICES.
POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTION TO DISCHARGE, SEE NFPA 13, TABLE 8.12.5.1.1.



TYPICAL DOAS/RTU ROOF MOUNTING INSTALLATION INSTRUCTIONS

1. SECURE THE CURB TO THE ROOF FRAMING MEMBERS BY DRILLING 1/4" PILOT HOLES IN THE CURB FLANGES AT LOCATIONS SHOWN IN THE DIAGRAM BELOW. USING 3/8" X 2" ZINC PLATED STEEL LAG BOLTS, AND ZINC PLATED WASHERS, SCREW THROUGH THE CURB FLANGES AND INTO THE ROOF FRAMING MEMBERS. A MINIMUM OF (5) LAG BOLTS ON EACH SHORT SIDE, AND (7) LAG BOLTS ON EACH LONG SIDE IS REQUIRED.

2. SECURE THE UNIT BASE TO THE SIDE WALLS OF THE CURB USING (24) 1/4"-14 X 2" SELF-DRILLING, STEEL ZINC PLATED SCREWS. PRE-PUNCHED HOLES HAVE BEEN PROVIDED FOR EACH SCREW LOCATION.



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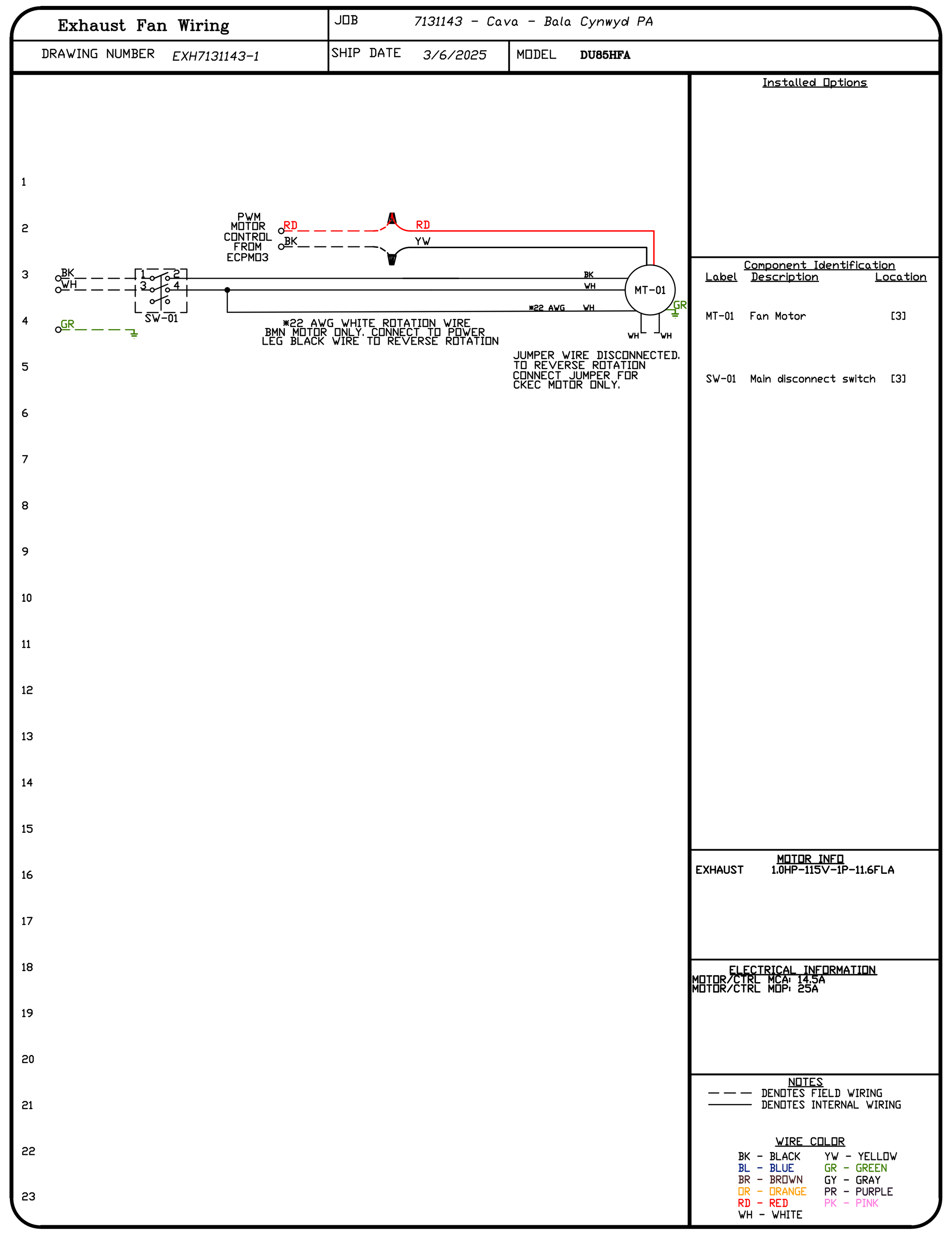

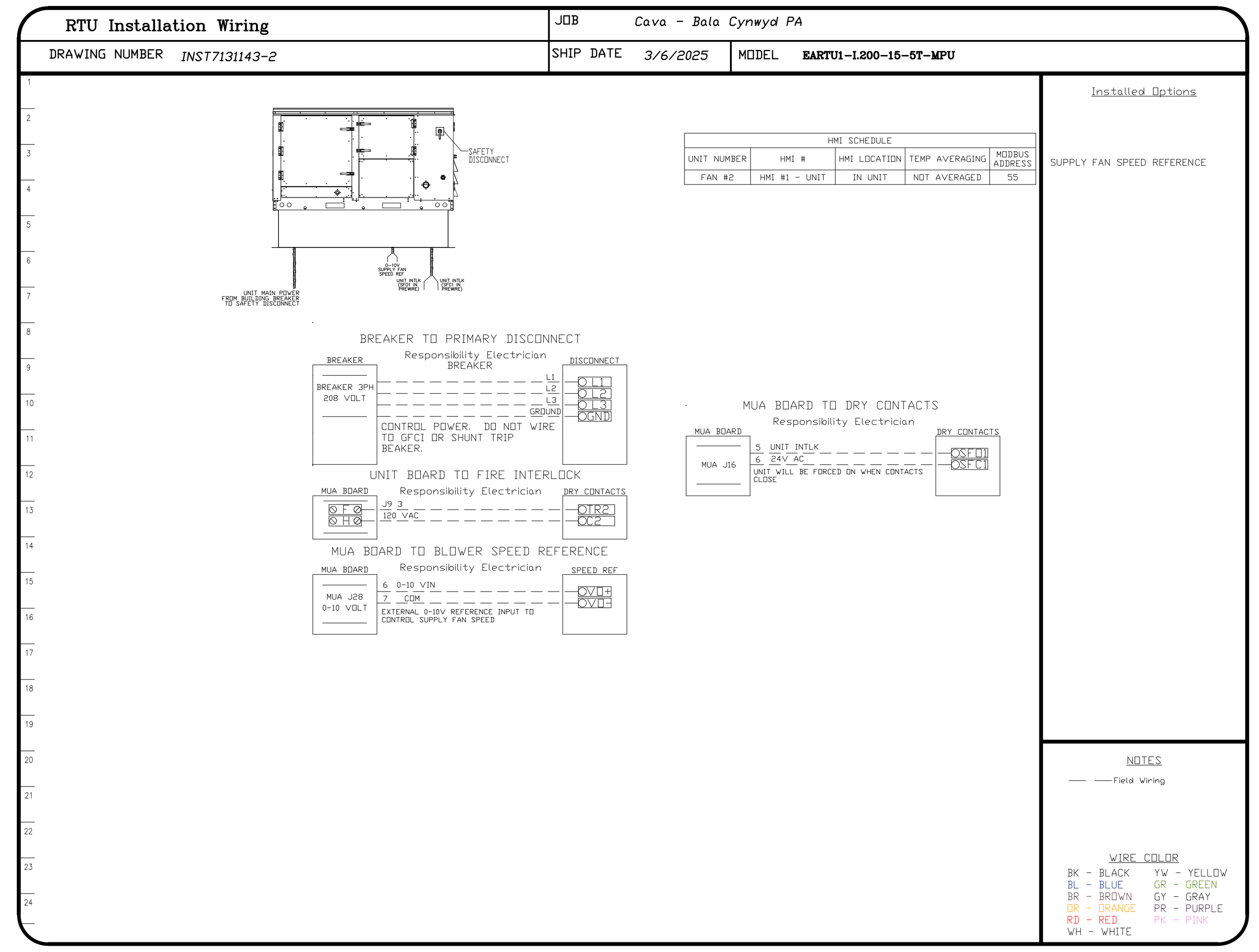

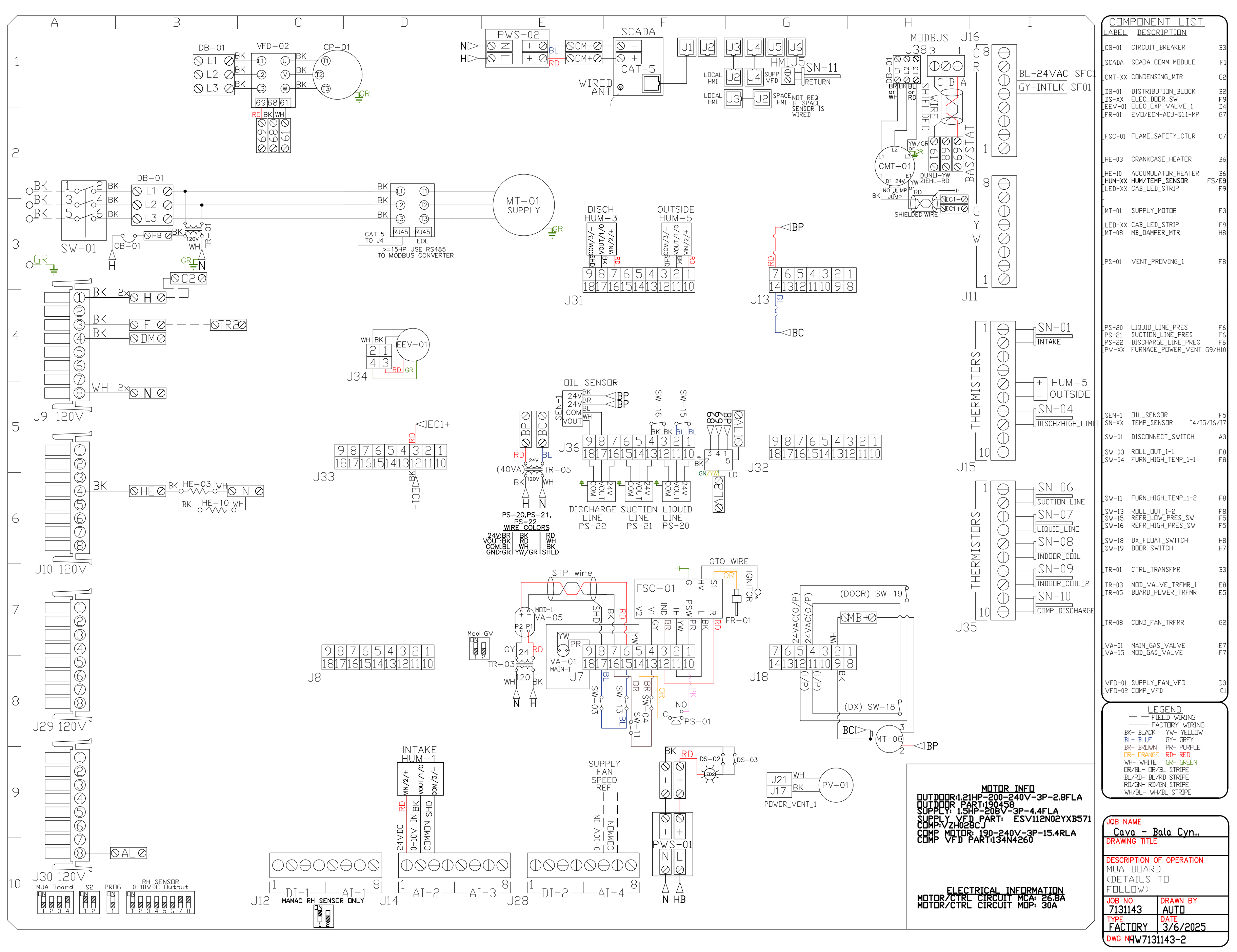

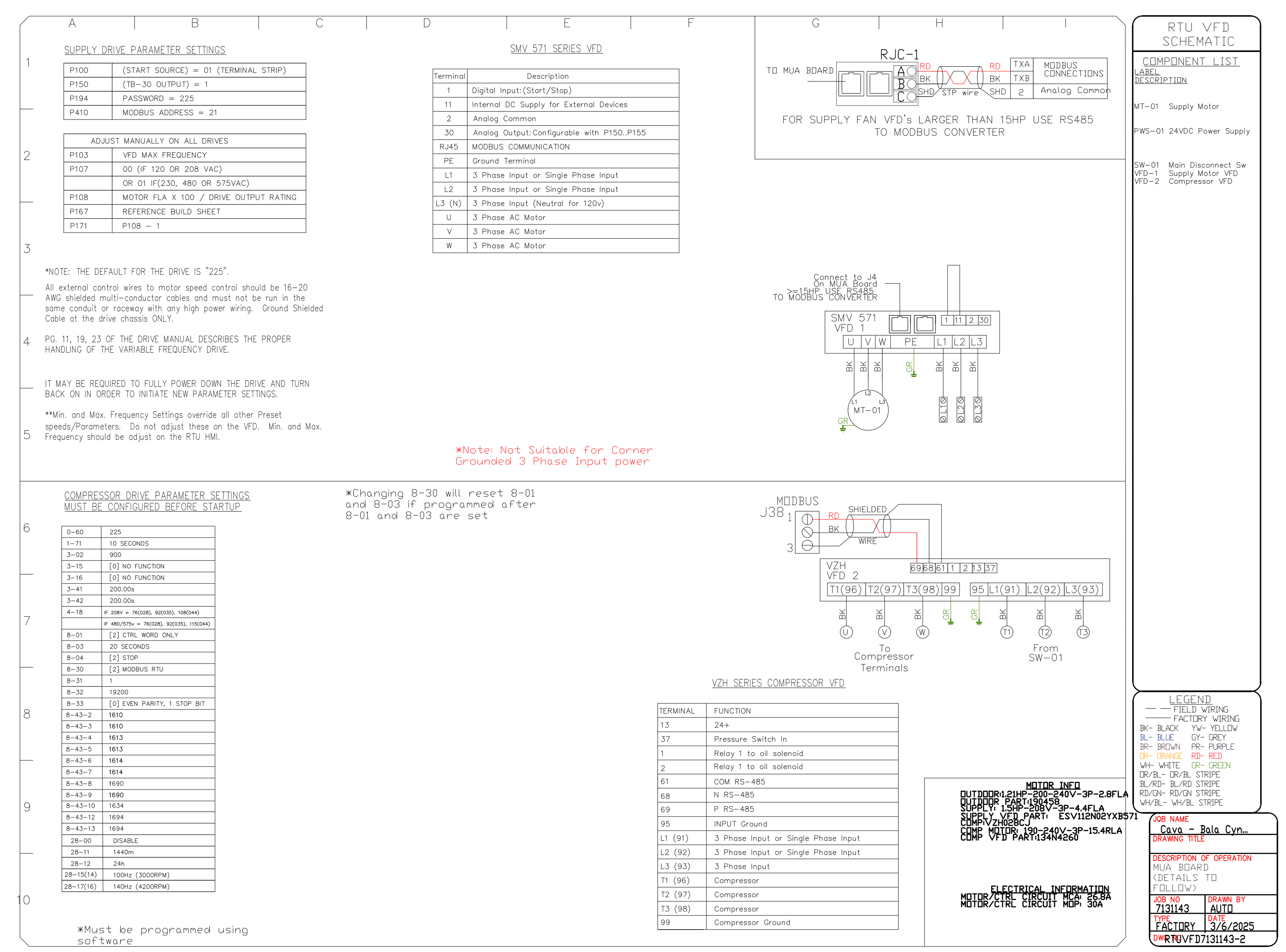

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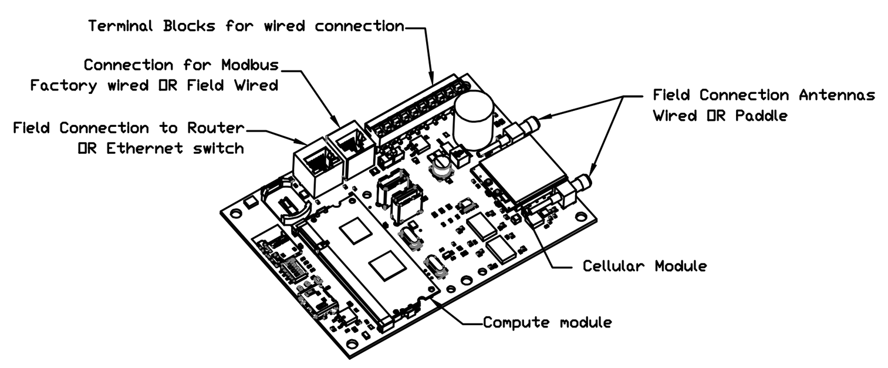
SHEET NO. 7

ELECTRICAL PACKAGE – JOB#7131143

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	ϕ	HP	VOLT	FLA
1		DCV-1111	UTILITY CABINET LEFT	UTILITY CABINET LEFT	1 LIGHT	SMART CONTROLS DCV	KEF	EXHAUST	1	1.000	115	11.6
				HOOD # 1	1 FAN		MAU	SUPPLY	3	1.500	208	4.4



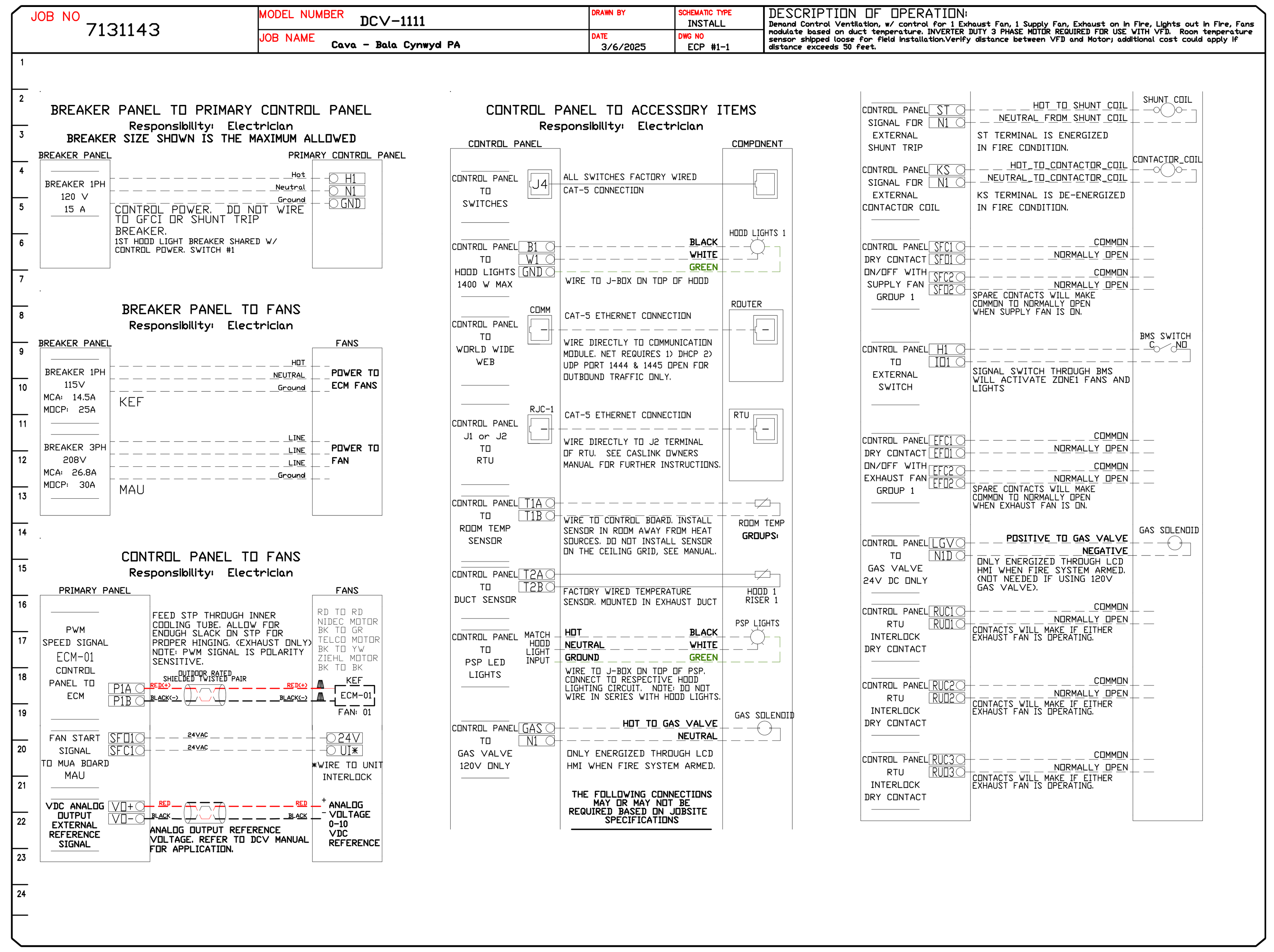
CASlink Monitor and Control

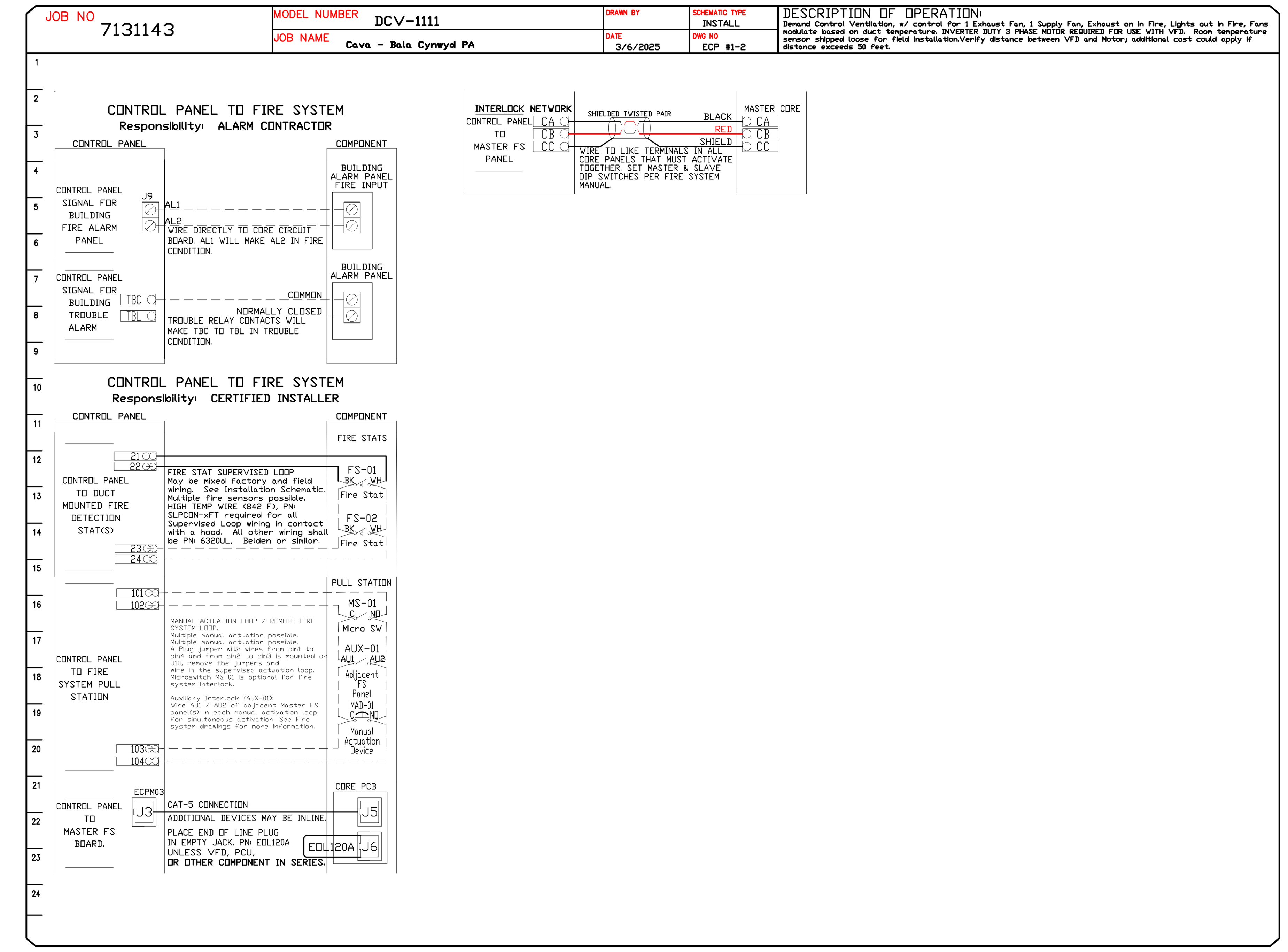
- *Hood control panel to support communications to cloud–based Building Management System.*
- *Hood Control Panel to allow cloud–based Building Management System to monitor real time parameters outlined as MONITOR in the points list.*
- *Hood Control Panel to allow cloud–based Building Management System 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
Room Temperature	MONITOR
Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR
Fan Amperage	MONITOR
Fan Power	MONITOR
VFD Faults	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
PCU Faults	MONITOR
PCU Filter Clog Percentages	MONITOR
Fire Condition	MONITOR
CORE Fire System	MONITOR
Building Pressures	MONITOR
Prep Time Button	MONITOR & CONTROL
Fans Button	MONITOR & CONTROL
Lights Button	MONITOR & CONTROL
Wash Button	MONITOR & CONTROL

SC Packages	Function
Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR
MUA DIscharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
PCU Faults	MONITOR
PCU Filter Clog Percentages	MONITOR
Fire Condition	MONITOR
CORE Fire System	MONITOR
Building Pressures	MONITOR
Fans Button(s)	MONITOR & CONTROL
Lights Button(s)	MONITOR & CONTROL
Wash Button	MONITOR & CONTROL





JOB NO 7131143 | MODEL NUMBER DCV-1111 | JOB NAME Cava - Bala Cynwyd PA | SCHEMATIC TYPE INSTALL | DATE 3/6/2025 | DWG NO ECP #1-3

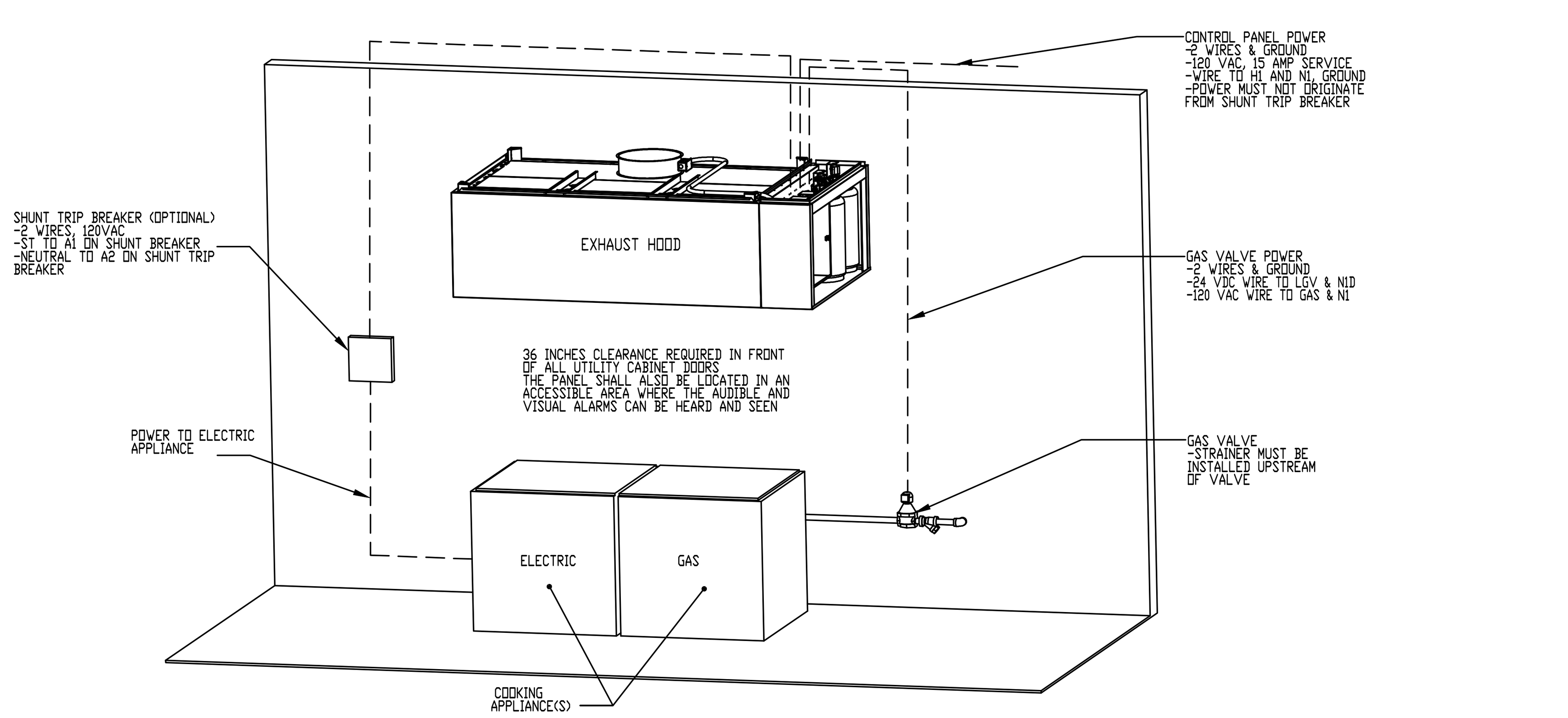
TANK PROTECTION ELECTRICAL DETAIL

02/10/2021 Rev. 2

FS-1: MASTER

ELECTRICIAN:
1. WIRE MAIN CONTROL PANEL PER INCLUDED SCHEMATIC
2. WIRE ALL FANS PER INCLUDED SCHEMATIC
3. WIRE SHUNT TRIP BREAKER (OPTIONAL)
4. WIRE UDS APPLIANCE KILL SWITCH, IF EQUIPPED (OPTIONAL)
5. WIRE GAS VALVE

ELECTRICAL CONTRACTOR REQUIREMENT					
ITEM	CONNECTION IN PANEL	CONNECTION IN DEVICE	VOLTAGE	AMPERAGE	COMMENTS
SHUNT TRIP BREAKER (OPTIONAL)	ST & N1	BREAKER COIL (A1 & A2)	120 VAC	< 4 AMPS	ST TO A1 ON SHUNT BREAKER COIL, AND NEUTRAL TO A2 ON SHUNT TRIP BREAKER COIL
CONTROL PANEL POWER	H1 & N1 + GROUND	CIRCUIT BREAKER	120 VAC	15 AMPS	CONTROL PANEL POWER MUST NOT BE RUN THROUGH SHUNT TRIP BREAKER
UDS APPLIANCE KILL SWITCH (OPTIONAL)	KTS & N1	KTS & N1	120 VAC	< 4 AMPS	KILL SWITCH TERMINALS MUST BE IN SERIES WITH OTHER KILL SWITCHES
REMOTE 120VAC ANSUL AUTOMAN (OPTIONAL)	AU1, AU2	SOLENOID	120 VAC	< 6 AMPS	120V TO AU1, AU2 TO ANSUL ELECTRIC AUTOMAN, ANSUL SOLENOID TO NEUTRAL
GAS VALVE	LGV & N1D (IF 24 VDC) GAS & N1 (IF 120 VAC)	RED/RED/GREEN	24 VDC OR 120 VAC	< 1.0 AMPS	IF 24 VDC - 2 WIRES & GROUND, N1D TO RED, LGV TO RED, AND GREEN TO GROUND IF 120 VAC - 2 WIRES & GROUND GAS TO RED, N1 TO RED, AND GREEN TO GROUND



NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

JOB NO 7131143 | MODEL NUMBER DCV-1111 | JOB NAME Cava - Bala Cynwyd PA | SCHEMATIC TYPE INSTALL | DATE 3/6/2025 | DWG NO ECP #1-4 | DESCRIPTION OF OPERATION: Fire System #1 TANK FS - 4.0/4.0.

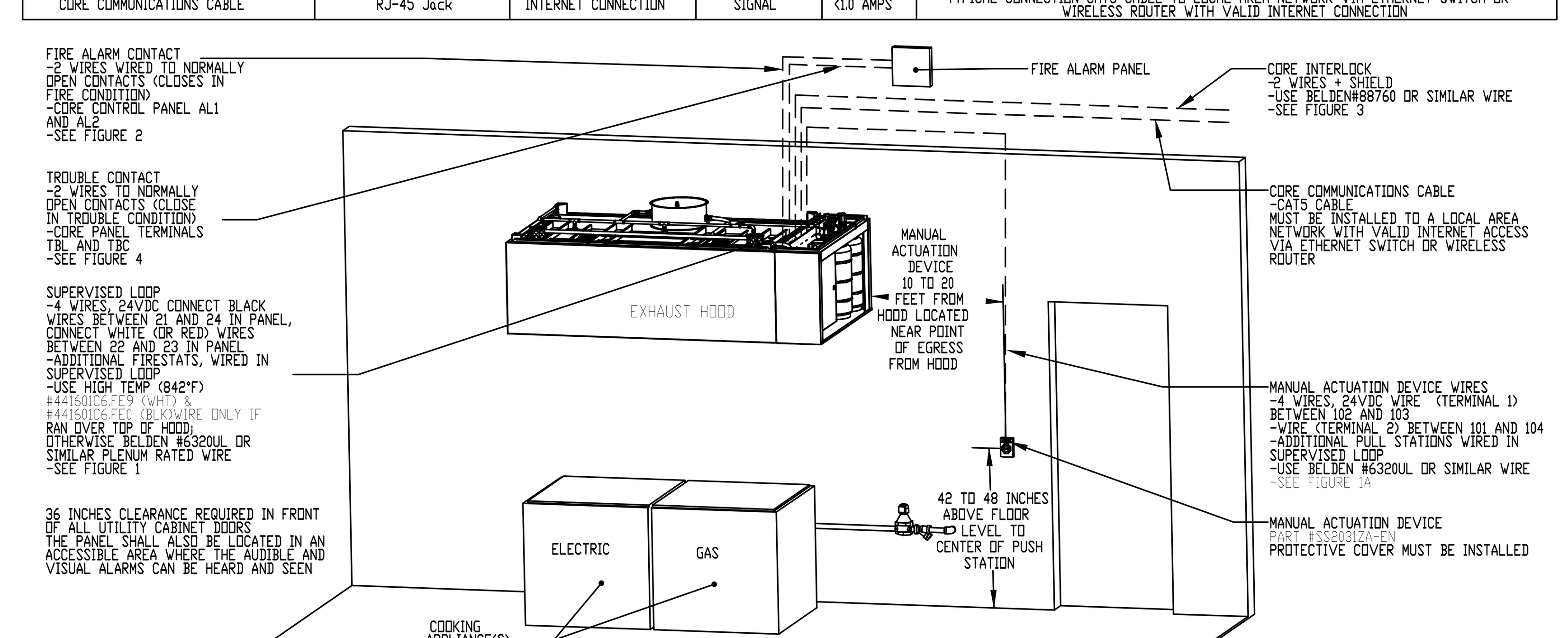
TANK PROTECTION LOW-VOLTAGE DETAIL

10/01/2023 Rev. 3

FS-1: MASTER

ALARM CONTRACTOR:
1. WIRE MANUAL ACTUATION DEVICE(S), REMOTE FIRESTAT(S), CORE INTERLOCK(S), FIRE SENSOR(S) AND FIRE ALARM CONTACTS
2. COMPLETE FINAL HOOKUP OF SYSTEM
3. VERIFY FINAL FIRE SYSTEM TEST

ALARM CONTRACTOR REQUIREMENT					
ITEM	CONNECTION IN PANEL	CONNECTION ON DEVICE	VOLTAGE	AMPERAGE	COMMENTS
MANUAL ACTUATION DEVICE(S)	101 AND 104 102 AND 103	1 & 2	24 VDC	< 1.0 AMPS	WIRE MANUAL ACTUATION DEVICE TERMINAL 1 BETWEEN CORE PANEL TERMINALS 102 AND 103 WIRE MANUAL ACTUATION DEVICE TERMINAL 2 BETWEEN CORE PANEL TERMINALS 101 AND 104 JUMPER 101 TO 104 AND 102 TO 103 IF NO MANUAL ACTUATION DEVICE IS INSTALLED
MANUAL ACTUATION DEVICE COVER	N/A	N/A	N/A	N/A	MANUAL ACTUATION DEVICE COVER MUST BE INSTALLED IF SURFACE MOUNTED, USE COVER EXTENSION STI-6531B
REMOTE FIRESTAT SENSOR(S)	21 AND 24 22 AND 23	BLACK AND WHITE	24 VDC	< 1.0 AMPS	WIRE FIRE SENSOR WHITE WIRES BETWEEN HOOD CORE PANEL TERMINALS 22 AND 23 WIRE FIRE SENSOR BLACK WIRE BETWEEN HOOD CORE PANEL TERMINALS 21 AND 24 HIGH TEMP (842°F) #441601C6.FE9 (WHT) & #441601C6.FE0 (BLK)WIRE OR SIMILAR ONLY IF RAN OF HOOD; OTHERWISE BELDEN #6320UL OR SIMILAR PLENUM RATED WIRE; SEE FIGURE 1
FIRE ALARM CONTACT	AL1, AL2	VARIES	50V MAX (AC/DC)	UP TO 1 AMP	FIRE ALARM RELAY CONTACTS FOR BUILDING FIRE ALARM LOCATED IN THE CORE ELECTRICAL CONTROL PANEL
CORE INTERLOCK(S)	CA, CB, CC	CA, CB, CC	RS-485 COMMUNICATIONS SIGNAL		CORE SYSTEM (1) CA, TO CORE SYSTEM (2) CA. CORE SYSTEM (1) CB, TO CORE SYSTEM (2) CB. CORE SYSTEM (1) CC, TO CORE SYSTEM (2) CC. USE BELDEN# 88760 OR SIMILAR WIRE
TROUBLE CONTACT	TBC, TBL, TOK	VARIES	MAX 120 VAC	UP TO 6 AMPS	WIRE TO TBL & TBC NORMALLY OPEN CONTACT, CLOSES IN TROUBLE CONDITION
CORE COMMUNICATIONS CABLE	RJ-45 Jack	INTERNET CONNECTION	SIGNAL	<1.0 AMPS	TYPICAL CONNECTION CAT5 CABLE TO LOCAL AREA NETWORK VIA ETHERNET SWITCH OR WIRELESS ROUTER WITH VALID INTERNET CONNECTION



ATTENTION: LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

REVISIONS

DESCRIPTION	DATE:
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Cava - Bala Cynwyd PA
4040 City Avenue,Suite 4
Philadelphia, PA, 19131

DATE: 3/6/2025

DWG.#: 7131143

DRAWN BY: ABS-76

SCALE: NTS

MASTER DRAWING

SHEET NO. 8

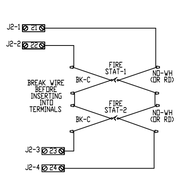
JOB NO	MODEL NUMBER	DRAWN BY	SCHEMATIC TYPE INSTALL
7131143	DCV-1111		
	JOB NAME Cava - Bala Cynwyd PA	DATE 3/6/2025	DWG NO ECP #1-5

DESCRIPTION OF OPERATION:
Fire System #1 TANK FS - 48/46

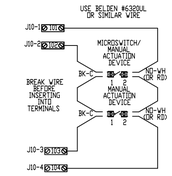
TANK PROTECTION LOW-VOLTAGE FIGURES

10/01/2023 Rev. 17

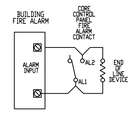
FS-1: MASTER



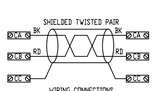
WIRING CONNECTIONS FOR FIRESTAT LOOP
FIGURE 1

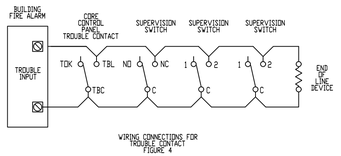


WIRING CONNECTIONS FOR MANUAL ACTUATION LOOP
FIGURE 1A



WIRING CONNECTIONS FOR FIRE ALARM CONTACT
FIGURE 2

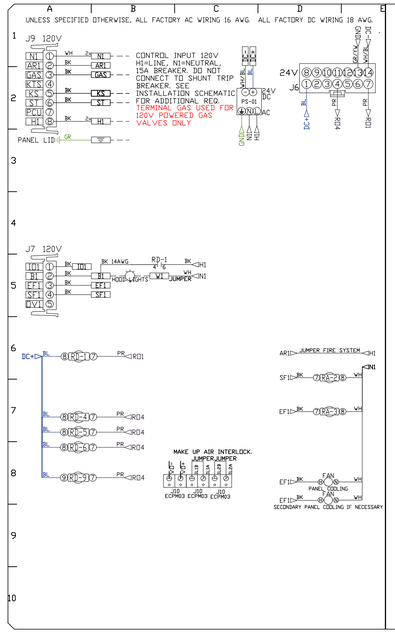




WIRING CONNECTIONS FOR TROUBLE CONTACT
FIGURE 4

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

ATTENTION: LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES



FACTORY WIRING SCHEMATIC CIRCUIT BOARDS ECPM03

RA-x 120 VAC RELAY		RD-x 24 VDC RELAY	
NO	4	1	NO
NC	2	1	NC
COIL	8	7	COIL
COM	6	5	COM

COMPONENT LIST

LABEL	DESCRIPTION
ST-X	Starter PN varies
CI-X	Contactor PN varies
PS-1	24V Pwr Sup. PN MDR-240-24
RA-x	120V Relay DPST PN 14135884
RD-x	24VDC Light Relay PN 14135861
TS-1	3wire Thermostat PN A19-P6-T4-24A
SCADA	SCADA Module PN:

LEGEND
FIELD WIRING
FACTORY WIRING
BK- BLACK YW- YELLOW
BL- BLUE GY- GREY
BR- BROWN PR- PURPLE
OR- ORANGE RD- RED
WH- WHITE
BK/BL- BK/BL STRIPE
BL/RD- BL/RD STRIPE
RD/GN- RD/GN STRIPE
WH/BL- WH/BL STRIPE

JOB NAME
Cava - Bala Cynw..
MODEL NO
DCV-1111
DESCRIPTION OF OPERATION
Normal Control Operation: Provides on/off control for 1 Exhaust Fan, 1 Supply Fan, Exhaust on if T>Y, Lights out in Prep Room, Variable based on duct temperature. INVERTER DUTY MOTOR IS REQUIRED FOR USE WITH VFD. Room temperature sensor is required for Make Up/Supply Fan. If distance between VFD and Motor is additional duct could apply. If distance exceeds 50 feet...
JOB NO 7131143
DRAWN BY JL
FACTORY 3/6/2025
DWG NO ECP #1-6

MOTOR POWER CIRCUITS. SEE INSTALLATION DIAGRAM FOR FIELD WIRING REQUIREMENTS.

FACTORY WIRING SCHEMATIC CIRCUIT BOARDS ECPM03

DCV Rev. 2.10.00
HMI Rev. 2.10.00

RA-x 120 VAC RELAY		RD-x 24 VDC RELAY	
NO	4	1	NO
NC	2	1	NC
COIL	8	7	COIL
COM	6	5	COM

COMPONENT LIST

LABEL	DESCRIPTION
ST-X	Starter PN varies
CI-X	Contactor PN varies
DR-X	VFD PN varies
LR-X	Line/Load Reactor PN varies

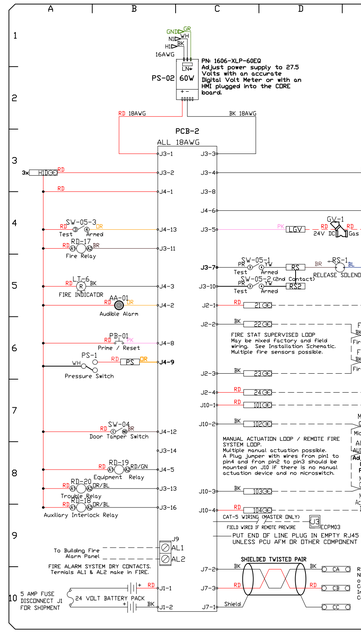
LEGEND
FIELD WIRING
FACTORY WIRING
BK- BLACK YW- YELLOW
BL- BLUE GY- GREY
BR- BROWN PR- PURPLE
OR- ORANGE RD- RED
WH- WHITE
BK/BL- BK/BL STRIPE
BL/RD- BL/RD STRIPE
RD/GN- RD/GN STRIPE
WH/BL- WH/BL STRIPE

JOB NAME
Cava - Bala Cynw..
MODEL NO
DCV-1111
DESCRIPTION OF OPERATION
Normal Control Operation: Provides on/off control for 1 Exhaust Fan, 1 Supply Fan, Exhaust on if T>Y, Lights out in Prep Room, Variable based on duct temperature. INVERTER DUTY MOTOR IS REQUIRED FOR USE WITH VFD. Room temperature sensor is required for Make Up/Supply Fan. If distance between VFD and Motor is additional duct could apply. If distance exceeds 50 feet...
JOB NO 7131143
DRAWN BY JL
FACTORY 3/6/2025
DWG NO ECP #1-7

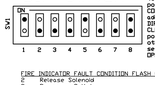
SC-20 x 18 x 8.62 BOX

ATTENTION: LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES.

FS-1: MASTER



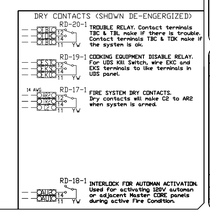
DIP Switch



Master CORE set DIP SW 8 to CLOSED position. Slave CORE with address 1 set DIP SW 8 to CLOSED position. All other CORES set DIP SW 8 OPEN

FIRE INDICATOR FAULT CONDITION FLASH CODES
2 Release Solenoid
3 Pressure Switch
4 Auxiliary Fault
5 Microcontroller Fault
6 N/A
7 Supervised Loop
8 Ground Fault
9 Surfactant Low
10 Battery Voltage Low
11 AC Power Failure
12 Door Tamper Switch
13 Test Mode
14 CORE Interlock Network
15 Fault on Hood in Interlock Network
16 Fault on PCU in Interlock Network

DRY CONTACTS (SHOWN DE-ENERGIZED)



FACTORY WIRING SCHEMATIC CORE FIRE PROTECTION

RA-x 120 VAC RELAY		RD-x 24 VDC RELAY	
NO	4	1	NO
NC	2	1	NC
COIL	8	7	COIL
COM	6	5	COM

COMPONENT LIST

LABEL	DESCRIPTION
MAD-02	MANUAL ACTIVATION DEVICE
PCB-2	CORE PCB PN PCBCRE-APP
PS-02	CORE POWER SUPPLY PN 366-5LP-60E
WS-x	Water Solenoid PN:
LT-06	24V Red Ind. Light PN W-109SD-28XV
LL-01	Surf. Level Sensor PN ADPS
AA-01	Audible Alarm PN 3322ALXAP18
PB-XX	Prime/Reset Switch PN 2988W/3982BR
Sw-05	TEST/ARM Switch PN 1994
Sw-04	Door Switch PN MC-2962-NO
SP-1	Surfactant Pump PN 7680-805
CV-1	24v DC Gas Valve PN:
FS-XX	Duct Fire Sensor PN 2F1980-1007AS
LT-05	24V YLW Ind. Light PN W-109SD-28YV
PS-01	Remote Fuel/Gas Pressure Switch PN 1950-0003-000
PwS-01	24VDC Power Supply PN 24VDC 3A POWER
RD-03	24VDC Powerg Relay PN PLC-RPT-24DC-21
PS	Pressure Switch PN EVC-PRESURE

LEGEND
FIELD WIRING
FACTORY WIRING
BK- BLACK YW- YELLOW
BL- BLUE GY- GREY
BR- BROWN PR- PURPLE
OR- ORANGE RD- RED
WH- WHITE GR- GREEN
BK/BL- BK/BL STRIPE
BL/RD- BL/RD STRIPE
RD/GN- RD/GN STRIPE
WH/BL- WH/BL STRIPE

JOB NAME
Cava - Bala Cynw..
MODEL NO
DCV-1111
DESCRIPTION OF OPERATION
Fire System #1 TANK FS - 48/46.
JOB NO 7131143
DRAWN BY JL
FACTORY 3/6/2025
DWG NO ECP #1-8

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REVISIONS

	DESCRIPTION	DATE:
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Cava - Bala Cynwyd PA
4040 City Avenue,Suite 4
Philadelphia, PA, 19131

DATE: 3/6/2025

DWG.#: 7131143

DRAWN BY: ABS-76

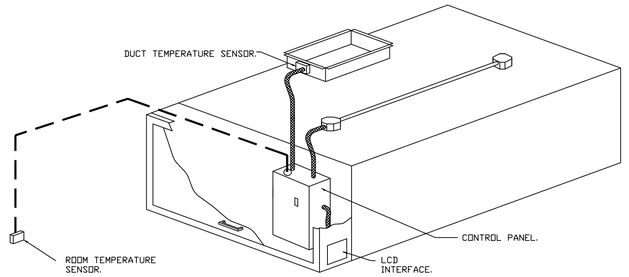
SCALE: NTS

MASTER DRAWING

SHEET NO. 9

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 PROBE(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:
  - A. ON/OFF PUSH BUTTON FAN & LIGHT SWITCH ACTIVATION.
  - B. INTEGRATED GAS VALVE RESET FOR ELECTRONIC GAS VALVES (NO RESET RELAY REQUIRED).
  - C. VFD FAULT DISPLAY WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  - D. DUCT TEMPERATURE SENSOR FAILURE DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  - E. MIS-WIRED DUCT TEMPERATURE SENSOR DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  - F. A SINGLE LOW VOLTAGE CAT-5 RJ45 WIRING CONNECTION.
  - G. 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 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.

REVISIONS

	DESCRIPTION	DATE:
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CAPTIVEAIRE
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Cava - Bala Cynwyd PA
4040 City Avenue,Suite 4
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DATE: 3/6/2025

DWG.#: 7131143

DRAWN BY: ABS-76

SCALE: NTS

MASTER DRAWING

SHEET NO. 10