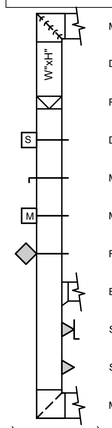
HVAC SYMBOLS & ABBREVIATIONS



MITERED CORNER WITH TURNING VANES

DUCTWORK INTERNAL FREE DIMENSIONS (WIDTH x HEIGHT)

RECTANGULAR TO ROUND TRANSITION

DUCT-MOUNTED SMOKE DETECTOR

MANUAL VOLUME DAMPER

MOTOR-OPERATED DAMPER

FIRE DAMPER

BRANCH TAKEOFF

SPIN-IN TAP WITH DAMPER

SPIN-IN TAP WITHOUT DAMPER

MITERED CORNER WITHOUT TURNING VANES

CONDENSER WATER RETURN

CONDENSER WATER SUPPLY

CONDENSATE DRAIN

SUPPLY DIFFUSER

RETURN GRILLE

EXHAUST GRILLE

THERMOSTAT

HUMIDISTAT

REMOTE SENSOR

CO2 SENSOR

AUDIO/VISUAL REMOTE SMOKE DETECTOR ANNUNCIATOR WITH REMOTE KEY OPERATED RESET

PLAN NOTE (SEE PLAN NOTES LISTED ON THE SAME SHEET FOR MEANING)

CONNECT TO EXISTING

DIFFUSER IDENTIFICATION
NECK SIZE
AIRFLOW

EQUIPMENT TAG. REFER TO THE SCHEDULES FOR MORE INFORMATION

HVAC ABBREVIATIONS

(D)	DEMOLISHED
(E)	EXISTING
(R)	RELOCATED
A.F.F.	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
A.O.R.	ARCHITECT OF RECORD
BC	BLOWER COIL
B.F.F.	BELOW FINISHED FLOOR
CD	CEILING DIFFUSER
CU	CONDENSING UNIT
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ER	EXHAUST REGISTER
E.O.R.	ENGINEER OF RECORD
GC	GENERAL CONTRACTOR
MFR	MANUFACTURER
OBD	OPPOSED BLADE DAMPER
PL	PLENUM
RG	RETURN GRILLE
RTU	ROOFTOP UNIT
SG	SUPPLY GRILLE
SPEC	SPECIFICATION OR SPECIFIED
SR	SUPPLY REGISTER
UNO	UNLESS NOTED OTHERWISE
WSHP	WATER SOURCE HEAT PUMP

CONSULTANT:

EVERJ ENGINEERING, INC.
1509 BUCK TRAIL LANE
WORTHINGTON, OH 43085
614-349-8054
www.everjengineering.com

SEAL

02/28/2025

PROJECT

CAVA

CAVA - YONKERS
3100 XAVIER DR.
YONKERS, NY 10701

	DATE	DESCRIPTION
1	07/09/2024	PERMIT/BID
2	08/02/2024	LL COMMENTS
	08/19/2024	LL COMMENTS
	08/23/2024	PERMIT/BID SET
3	09/27/2024	HEALTH DEPT COMM
4	12/02/2024	DINING SENSORS MOVED
5	01/03/2025	BLDG DEPT COMMENT
6	02/04/2025	PC COMMENTS
7	02/28/2025	CONSTRUCTION SET

MECHANICAL COVER SHEET

Date Modified:	08/02/2024
Date Created:	07/09/2024
Scale:	AS NOTED
Project No.:	230121
Drawn By:	KLM
Checked By:	JAE

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7/8/2024 4:09 PM

SECTION 23 00 00 - MECHANICAL GENERAL REQUIREMENTS

PART 1 - GENERAL
1. THE TERM "TENANT," "TENANT'S CONSTRUCTION MANAGER," "OWNER," OR "OWNER'S CONSTRUCTION MANAGER" SHALL REFER TO CAVA.
2. THE TERM "FURNISH" MEANS TO SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS. THE TERM "INSTALL" DESCRIBES THE OPERATIONS AT THE PROJECT SITE INCLUDING THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTING, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS. THE TERM "PROVIDE" MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE.
3. THE GENERAL CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR AS REQUIRED TO PROVIDE A COMPLETE WORKING SYSTEM AND AS DESCRIBED IN THESE DRAWINGS.
4. THE GENERAL CONTRACTOR SHALL REVIEW A COMPLETE SET OF THE CONSTRUCTION DOCUMENTS. EACH SUB-CONTRACTOR SHALL MAINTAIN A COMPLETE SET OF DRAWINGS ON SITE DURING THE CONSTRUCTION PROCESS.
5. COORDINATE WORK AS REQUIRED WITH THE LANDLORD. THE GENERAL CONTRACTOR SHALL UTILIZE LANDLORD-REQUIRED CONTRACTORS AT THE GENERAL CONTRACTOR'S EXPENSE.

PART 2 - PRODUCTS
1. PRODUCTS SHALL BE AS DESCRIBED IN THE DRAWINGS AND AS REQUIRED FOR A COMPLETE AND FUNCTIONING SYSTEM.

PART 3 - EXECUTION
1. UNLESS DIMENSIONS HAVE BEEN PROVIDED, THE DRAWINGS ARE DIAGRAMMATIC IN NATURE, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT AND REQUIRED EQUIPMENT. THEY SHALL NOT BE SCALED. COORDINATE WITH THE ARCHITECTURAL DRAWINGS, TENANT VENDORS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS AND CUTSHEETS AS REQUIRED.
2. COMPLETE ALL WORK IN COMPLIANCE WITH THE CODES LISTED ON THE ARCHITECTURAL SHEETS INCLUDING ALL LOCAL AMENDMENTS, ALL RELEVANT NFPA CODES AND STANDARDS AND SMACNA STANDARDS.
   A. VERIFY ALL CODE REQUIREMENTS AND LOCAL AMENDMENTS WITH THE AUTHORITY HAVING JURISDICTION PRIOR TO BID.
   B. WHEN THERE IS A DISCREPANCY BETWEEN THE ADOPTED CODES AND THESE DRAWINGS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
3. PROVIDE FIRESTOPPING AND SLEEVES AT ALL COMPONENTS PENETRATING RATED WALLS TO MAINTAIN THE FIRE RATING OF THE EXISTING SHELL SYSTEMS.
4. COORDINATE WITH THE LOCAL AUTHORITY HAVING JURISDICTION AS NECESSARY. PURCHASE PERMITS ASSOCIATED WITH THE WORK AND ARRANGE ALL INSPECTIONS AS REQUIRED.
5. COORDINATE WITH THE WORK OF OTHER TRADES, EQUIPMENT FURNISHED BY OTHERS, THE REQUIREMENTS OF THE OWNER AND OF THE EXISTING CONDITIONS AT THE PROJECT SITE.
6. MAINTAIN A CLEAN CONSTRUCTION SITE DURING CONSTRUCTION. CLEAN SCRAP MATERIAL AND REMOVE FROM SITE DAILY AND MAINTAIN WORKING AREA IN AN ORDERLY FASHION.
7. PROVIDE SUBMITTALS AS NOTED IN THESE SPECIFICATIONS AND AS REQUESTED BY THE TENANT'S CONSTRUCTION MANAGER.
   A. ALL SHOP DRAWINGS SHALL BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTING TO THE TENANT'S CONSTRUCTION MANAGER.
   B. SHOP DRAWINGS SHALL BE SUBMITTED TO ALLOW FOR FIVE BUSINESS DAYS OF REVIEW TIME WITHOUT IMPACT TO THE PROJECT SCHEDULE.
8. PROVIDE REQUESTS FOR INFORMATION TO THE TENANT'S CONSTRUCTION MANAGER.
   A. REQUESTS FOR INFORMATION SHALL PROVIDE A DETAILED DESCRIPTION OF THE SITE CONDITION OR DISCREPANCY AND THE CONTRACTORS PROPOSED REMEDY.
   B. REQUESTS FOR INFORMATION SHALL BE SUBMITTED TO ALLOW FOR FIVE BUSINESS DAYS OF REVIEW TIME.
9. UPON COMPLETION OF WORK, THE GENERAL CONTRACTOR SHALL PROVIDE THE TENANT'S CONSTRUCTION MANAGER WITH A BOUND RECORD OF ALL MECHANICAL EQUIPMENT UTILIZED IN THE JOB. THE GENERAL CONTRACTOR SHALL PROVIDE THE SAME INFORMATION IN AN ELECTRONIC FORMAT AS DIRECTED BY THE OWNER. THE BINDER SHALL CONTAIN:
   A. COVER SHEET INDICATING THE PROJECT NAME, ADDRESS AND TURNOVER DATE.
   B. COMPANY NAME AND CONTACT INFORMATION OF THE CONTRACTORS UTILIZED FOR THE MECHANICAL SCOPE OF WORK.
   C. CUTSHEETS, INSTALLATION MANUALS AND MAINTENANCE REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT.
10. UPON COMPLETION OF WORK, THE GENERAL CONTRACTOR SHALL PROVIDE THE TENANT'S CONSTRUCTION MANAGER A FULL SET OF DRAWINGS WITH ANY DEVIATIONS FROM THE DRAWINGS INDICATED IN RED INK.

(END OF SECTION 23 00 00)

SECTION 23 05 93 - TESTING, ADJUSTING AND BALANCING FOR HVAC

PART 1 - GENERAL
1. QUALITY ASSURANCE: ALL TESTING AND BALANCING WORK SHALL BE COMPLETED BY AN INDEPENDENT CONTRACTOR AT THE GENERAL CONTRACTOR'S EXPENSE, CERTIFIED BY NEBB OR TABB AS A T&B TECHNICIAN. BALANCE THE SYSTEM IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING STANDARDS.

PART 2 - PRODUCTS: N/A

PART 3 - EXECUTION
1. AIR SYSTEMS
   A. PROVIDE ALL LABOR AND MATERIALS REQUIRED TO BALANCE THE SYSTEM AS NOTED ON THE PLANS.
   B. FAN SYSTEMS SHALL BE ADJUSTED SUCH THAT THE LOWEST FAN SPEED IS UTILIZED TO DELIVER THE REQUIRED CFM TO THE AIR TERMINALS.
   C. ADJUST DAMPERS AS REQUIRED TO BALANCE THE SUPPLY, RETURN AND EXHAUST DEVICES TO 10% OF THE DESIGN RATES. ADJUST THE OUTSIDE AIR DAMPER AS REQUIRED TO OBTAIN THE MINIMUM OUTSIDE AIR REQUIREMENTS AS NOTED IN THE SCHEDULES.
   D. RECORD THE OPERATING VOLTAGE, AMPACITY, SUPPLY/RETURN SYSTEM STATIC PRESSURES, SUPPLY/MIXED AIR TEMPERATURES (BOTH HEATING AND COOLING) AND FINAL FAN RPM.
   E. VERIFY SYSTEM CONTROLS ARE FUNCTIONING AS INTENDED.
2. WATER SYSTEMS
   A. PROVIDE ALL LABOR AND MATERIALS REQUIRED TO BALANCE THE SYSTEM AS NOTED ON THE PLANS.
   B. ADJUST BALANCING VALVES AS REQUIRED TO ACHIEVE A WATER FLOW WITHIN 5% OF THE DESIGN VALUE.
   C. RECORD THE OPERATING FLOW RATE, WATER SUPPLY/RETURN TEMPERATURE CONDITIONS AND PRESSURE DROP ACROSS THE COIL.
   D. VERIFY SYSTEM CONTROLS ARE FUNCTIONING AS INTENDED.
3. REPORTING
   A. THE TEST AND BALANCE AGENT SHALL PREPARE A REPORT INCLUDING THE FINAL VALUES OF THE AIR AND WATER SYSTEM BALANCING, SYSTEM DIAGRAMS, AND SYSTEM NOTES.
   B. THE GENERAL CONTRACTOR SHALL REVIEW THE FINAL BALANCE REPORT PRIOR TO SENDING TO THE TENANT'S CONSTRUCTION MANAGER.
   C. PROVIDE T&B REPORT TO THE LANDLORD AND THE AUTHORITY HAVING JURISDICTION AS REQUIRED.

(END OF SECTION 23 05 93)

SECTION 23 07 13 - DUCT INSULATION

PART 1 - GENERAL
1. INSULATION SHALL BE PROVIDED ON THE FOLLOWING DUCT SERVICES:
   A. INDOOR, CONCEALED SUPPLY AND OUTDOOR AIR.
   B. INDOOR, CONCEALED RETURN.
   C. INDOOR, CONCEALED OVEN AND WAREWASH EXHAUST FROM AIR TERMINAL TO PENETRATION OF BUILDING EXTERIOR.
   D. INDOOR, CONCEALED GENERAL EXHAUST FROM AIR TERMINAL TO PENETRATION OF BUILDING EXTERIOR.
   E. OUTDOOR, SUPPLY AND RETURN.
2. QUALITY ASSURANCE
   A. INSULATION INSTALLED INDOORS SHALL HAVE A FLAME-SPREAD INDEX OF 25 OR LESS, AND SMOKE-DEVELOPED INDEX OF 50 OR LESS.
   B. INSULATION INSTALLED OUTDOORS SHALL HAVE A FLAME-SPREAD INDEX OF 75 OR LESS, AND SMOKE-DEVELOPED INDEX OF 150 OR LESS.

PART 2 - PRODUCTS
1. INTERIOR DUCTWORK SHALL HAVE FLEXIBLE FIBERGLASS DUCT WRAP LAMINATED TO FOIL REINFORCED KRAFT VAPOR BARRIER FACING WITH 2" STAPLING FLANGE AND AN INSTALLED THICKNESS OF 1-1/2" WITH AN R-VALUE OF 6.0.
2. EXTERIOR DUCTWORK SHALL BE INSULATED WITH 2" THICK RIGID INSULATION WITH A MINIMUM R-VALUE OF 12.0, PROTECTED WITH ROOFING MEMBRANE.

PART 3 - EXECUTION
1. PREPARATION: CLEAN AND DRY SURFACES. REMOVE MATERIALS THAT WILL ADVERSELY AFFECT INSULATION APPLICATION.
2. GENERAL INSTALLATION REQUIREMENTS:
   A. INSTALL INSULATION ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
   B. INSTALL INSULATION AND ACCESSORIES AND FINISHES WITH SMOOTH, STRAIGHT AND EVEN SURFACES; FREE OF VOIDS THROUGHOUT THE LENGTH OF DUCT AND FITTINGS.
   C. INSTALL ACCESSORIES COMPATIBLE WITH INSULATION MATERIALS AND SUITABLE FOR THE SERVICE. ACCESSORIES SHALL NOT CORRODE, SOFTEN OR OTHERWISE ATTACK INSULATION OR JACKET IN EITHER WET OR DRY STATE.
   D. INSTALL INSULATION WITH LONGITUDINAL SEAMS AT TOP OF HORIZONTAL RUNS. LONGITUDINAL SEAMS AND END JOINTS SHALL BE TIGHT. BOND SEAMS AND JOINTS WITH ADHESIVE RECOMMENDED BY INSULATION MANUFACTURER TO MAINTAIN VAPOR BARRIER INTEGRITY.
   E. APPLY ADHESIVES, MASTICS AND SEALANTS AT MANUFACTURER'S RECOMMENDED COVERAGE RATE.
   F. CUT INSULATION IN A MANNER TO AVOID COMPRESSING INSULATION MORE THAN 75 PERCENT ITS NOMINAL THICKNESS.
3. PENETRATIONS
   A. ROOF PENETRATIONS: INSTALL INSULATION CONTINUOUSLY THROUGH ROOF PENETRATIONS. FOR APPLICATIONS REQUIRING ONLY INDOOR INSULATION, TERMINATE INSULATION ABOVE ROOF SURFACE AND SEAL WITH JOINT SEALANT. FOR APPLICATIONS REQUIRING INDOOR AND OUTDOOR INSULATION, INSTALL INSULATION FOR OUTDOOR APPLICATIONS TIGHTLY JOINED TO INDOOR INSULATION ENDS. SEAL JOINT WITH JOINT SEALANT.
   B. WALL PENETRATIONS: INSTALL INSULATION CONTINUOUSLY THROUGH WALL PENETRATIONS. FOR APPLICATIONS REQUIRING ONLY INDOOR INSULATION, TERMINATE INSULATION OUTSIDE OF WALL SURFACE AND SEAL WITH JOINT SEALANT. FOR APPLICATIONS REQUIRING INDOOR AND OUTDOOR INSULATION, INSTALL INSULATION FOR OUTDOOR APPLICATIONS TIGHTLY JOINED TO INDOOR INSULATION ENDS. SEAL JOINT WITH JOINT SEALANT.
   C. INTERIOR WALLS: INSTALL INSULATION CONTINUOUSLY THROUGH WALLS AND PARTITIONS THAT ARE NOT FIRE RATED. TERMINATE INSULATION AT FIRE DAMPER SLEEVES FOR FIRE-RATED WALL AND PARTITION PENETRATIONS. EXTERNALLY INSULATE THE DAMPER SLEEVES TO MATCH ADJACENT INSULATION AND OVERLAP DUCT INSULATION AT LEAST 2 INCHES.

(END OF SECTION 23 07 13)

SECTION 23 31 13 - METAL DUCTS

PART 1 - GENERAL
1. SECTION INCLUDES
   A. RECTANGULAR DUCTS AND FITTINGS
   B. ROUND DUCTS AND FITTINGS
   C. DOUBLE-WALL DUCTWORK AND FITTINGS
   D. FLAT-OVAL DUCTS AND FITTINGS
   E. SHEET METAL MATERIALS
   F. SEALANTS AND GASKETS
   G. HANGERS AND SUPPORTS
2. PERFORMANCE REQUIREMENTS
   A. DUCT CONSTRUCTION, INCLUDING SHEET METAL THICKNESS, SEAM AND JOINT CONSTRUCTION, REINFORCEMENTS AND HANGERS/SUPPORTS SHALL COMPLY WITH THE LATEST VERSION OF SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE."
   B. DUCT HANGERS AND SUPPORTS SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS AND STRESSES WITHIN LIMITS UNDER CONDITIONS DESCRIBED IN SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE."
   C. SURFACES IN CONTACT WITH THE AIRSTREAM SHALL COMPLY WITH REQUIREMENTS IN ANSI/ASHRAE 62.1.
3. SECTION REQUIREMENTS
   A. SUBMITTALS: NONE REQUIRED.

PART 2 - PRODUCTS
1. RECTANGULAR DUCTS AND FITTINGS:
   A. COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" BASED ON INDICATED STATIC-PRESSURE CLASS UNLESS NOTED OTHERWISE.
   B. TRAVERSE JOINTS: SELECT JOINT TYPES AND FABRICATE ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," FIGURE 2-1 FOR STATIC-PRESSURE CLASS, APPLICABLE SEALING REQUIREMENTS, MATERIALS INVOLVED, DUCT SUPPORT INTERVALS AND OTHER PROVISIONS AS REQUIRED.
   C. LONGITUDINAL SEAMS: SELECT SEAM TYPES AND FABRICATE ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," FIGURE 2-2 FOR STATIC-PRESSURE CLASS, APPLICABLE SEALING REQUIREMENTS, MATERIALS INVOLVED, DUCT SUPPORT INTERVALS AND OTHER PROVISIONS AS REQUIRED.
   D. ELBOWS, TRANSITIONS, OFFSETS, BRANCH CONNECTIONS, AND OTHER DUCT CONSTRUCTION: SELECT TYPES AND FABRICATE ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," CHAPTER 4 FOR STATIC-PRESSURE CLASS, APPLICABLE SEALING REQUIREMENTS, MATERIALS INVOLVED, DUCT SUPPORT INTERVALS AND OTHER PROVISIONS AS REQUIRED.
2. ROUND DUCTS AND FITTINGS:
   A. SPIRAL LOCK SEAM, WITHOUT INSULATION.
   B. BASIS OF DESIGN: LINDAB SAFE SINGLE WALL DUCTS AND FITTINGS. ALTERNATES BY MCGILL AIRFLOW. ALL DUCTWORK SHALL BE PREPPED AND READY TO RECEIVE PAINT.
3. FLAT-OVAL DUCTS AND FITTINGS
   A. SPIRAL LOCK SEAM, WITHOUT INSULATION.
   B. BASIS OF DESIGN: LINDAB FOSR FLAT-OVAL SPIRAL DUCTS AND FITTINGS. ALTERNATES BY MCGILL AIRFLOW. ALL DUCTWORK SHALL BE PREPPED AND READY TO RECEIVE PAINT.
4. DOUBLE-WALL DUCTWORK AND FITTINGS
   A. SPIRAL LOCK SEAM, WITH 1" INSULATION THICKNESS.
   B. BASIS OF DESIGN: LINDAB SAFE DOUBLE WALL DUCTS AND FITTINGS. ALTERNATES BY MCGILL AIRFLOW.ALL DUCTWORK SHALL BE PREPPED AND READY TO RECEIVE PAINT.
4. MATERIALS: GALVANIZED SHEET STEEL, COMPLY WITH ASTM A 653/A 653M. G90 COATING DESIGNATION.
5. SEALANTS AND GASKETS:
   A. MAXIMUM FLAME-SPREAD INDEX: 25 (WHEN TESTED ACCORDING TO UL 723).
   B. MAXIMUM SMOKE-DEVELOPED INDEX: 50 (WHEN TESTED ACCORDING TO UL 723).
   C. TWO-PART TAPE SEALING SYSTEM: PROVIDE 3" TAPE CONSTRUCTED OF WOVEN COTTON FIBER IMPREGNATED WITH MINERAL GYPSUM AND MODIFIED ACRYLIC/SILICONE TO FORM A HARD, DURABLE AIRTIGHT SEAL. SEALANT SHALL BE A MODIFIED STYRENE ACRYLIC. COMPATIBLE WITH GALVANIZED SHEET STEEL. WATER, MOLD AND MILDEW RESISTANT. VOC CONTENT OF 250g/L OR LESS.
   D. WATER BASED JOINT AND SEAM SEALANT: BRUSH ON WITH MINIMUM OF 65% SOLIDS CONTENT. MINIMUM SHORE A HARDNESS OF 20. COMPATIBLE WITH GALVANIZED SHEET STEEL. WATER, MOLD AND MILDEW RESISTANT. VOC CONTENT OF 75g/L (LESS WATER).
6. HANGERS AND SUPPORT:
   A. RECTANGULAR DUCTWORK: HANGER RODS SHALL BE CADMIUM-PLATED STEEL RODS AND NUTS. STRAP AND ROD SIZE SHALL COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," TABLE 5-1. SECURE TO DUCT WITH SHEET METAL SCREWS COMPATIBLE WITH DUCT MATERIALS.
   B. ROUND DUCTWORK: SUPPORT WITH AIRCRAFT CABLE COMPLYING WITH ASTM A 603. CONNECT ENDS WITH CADMIUM-PLATED STEEL ASSEMBLIES WITH BRACKETS, SWIVEL AND BOLTS DESIGNED FOR DUCT HANGER SERVICE.
   C. EXTERIOR DUCTWORK SHALL BE PROVIDED WITH DUCT SUPPORTS, SPACED PER THE MANUFACTURER'S RECOMMENDATIONS.

PART 3 - EXECUTION
1. INSTALLATION
   A. DRAWING PLANS, SCHEMATICS AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF DUCTWORK ROUTING. COORDINATE INSTALLATION WITH WORK OF ALL OTHER TRADES AND EXISTING CONDITIONS. ACCOMMODATE DUCT HANGER, RODS, INSULATION AND OTHER REQUIREMENTS AS REQUIRED.
   B. DUCT DIMENSIONS ON PLANS INDICATE DIMENSIONS OF THE INTERNAL FREE AREA.
   C. INSTALL DUCTS ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" IN MAXIMUM PRACTICAL LENGTHS WITH FEWEST POSSIBLE JOINTS.
   D. UNLESS NOTED OTHERWISE, INSTALL DUCTS PARALLEL AND PERPENDICULAR TO BUILDING LINES.
   E. INSTALL DUCTS WITH CLEARANCES AS REQUIRED TO ACCOMMODATE THE INSTALLATION OF INSULATION.
   F. INSTALLATION OF EXPOSED DUCTWORK: PROTECT DUCTWORK FROM DAMAGE. REPAIR/REPLACE ALL DAMAGED SECTIONS AND FINISHED WORK. TRIM SEALANTS FLUSH WITH METAL. CREATE A SMOOTH AND UNIFORM EXPOSED BEAD. DO NOT USE TWO-PART TAPING SYSTEM. MAINTAIN CONSISTENCY, SYMMETRY AND UNIFORMITY IN THE INSTALLATION.
2. ALL DUCT COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC OR SHEET METAL UNTIL THE FINAL START-UP OF THE HEATING COOLING AND VENTILATION EQUIPMENT.
3. DUCT SEALING: CONSTRUCT DUCTS WITH 2 INCH POSITIVE AND NEGATIVE DUCT PRESSURE CLASSIFICATIONS. CONSTRUCT TO SMACNA SEAL CLASS A.
4. HANGER AND SUPPORT INSTALLATION: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," CHAPTER 5. HANGERS EXPOSED TO VIEW SHALL BE AIRCRAFT IN ACCORDANCE WITH THE MECHANICAL DETAILS.
5. CONNECTIONS: MAKE CONNECTIONS TO EQUIPMENT WITH FLEXIBLE CONNECTORS COMPLYING WITH SECTION 23 33 00 "AIR DUCT ACCESSORIES." COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" FOR BRANCH, OUTLET AND INLET, AND TERMINAL UNIT CONNECTIONS.
6. CLEANING: CLEAN ALL EXISTING DUCTWORK TO REMAIN PRIOR TO TESTING, ADJUSTING AND BALANCING. REMOVE ALL SURFACE CONTAMINANTS AND DEPOSITS ON AIR OUTLETS AND INLETS PRIOR TO PUNCH.
7. PROVIDE AIR BALANCE IN ACCORDANCE WITH SECTION 23 05 93 "TESTING, ADJUSTING, AND BALANCING FOR HVAC."
8. DUCT ELBOWS
   A. RECTANGULAR: PROVIDE MITERED ELBOWS WITH HOLLOW-FORMED, DOUBLE-THICKNESS TURNING VANES OR RADIUSED ELBOWS WITH INSIDE RADIUS NO SMALLER THAN 1/2 OF THE DUCT WIDTH.
   B. ROUND DUCT ELBOWS: PROVIDE RADIUSED ELBOWS WITH AN INSIDE RADIUS NO SMALLER THAN 1/2 OF THE DUCT WIDTH.
9. BRANCH CONFIGURATION
   A. RECTANGULAR: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," FIGURE 4-6. RECTANGULAR MAIN TO RECTANGULAR BRANCH SHALL BE A 45-DEGREE ENTRY. RECTANGULAR MAIN TO ROUND BRANCH SHALL BE A SPIN-IN FITTING.
   B. ROUND: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," FIGURE 3-5 AND FIGURE 3-6. PROVIDE 90 DEGREE TAP.

(END OF SECTION 23 31 13)

SECTION 23 33 00 - AIR DUCT ACCESSORIES

PART 1 - GENERAL
1. SECTION INCLUDES
   A. BACKDRAFT AND PRESSURE RELIEF DAMPERS
   B. MANUAL VOLUME DAMPERS
   C. CONTROL DAMPERS
   D. FIRE DAMPERS
   E. TURNING VANES
   F. FLEXIBLE CONNECTORS
   G. DUCT ACCESSORY HARDWARE
2. SECTION REQUIREMENTS
   A. SUBMITTALS: NONE REQUIRED.

PART 2 - PRODUCTS
1. COMPLY WITH NFPA 90A AND WITH NFPA 90B.
2. COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE" FOR ACCEPTABLE MATERIALS, THICKNESS AND DUCT CONSTRUCTION METHODS UNLESS NOTED OTHERWISE. SHEET METAL MATERIALS SHALL BE FREE FROM PITTING, SEAM MARKS, ROLLER MARKS, STAINS, DISCOLORATIONS AND OTHER IMPERFECTIONS.
3. GALVANIZED SHEET STEEL: COMPLY WITH ASTM A 653/A 653M. G90 COATING DESIGNATION.
4. BACKDRAFT AND PRESSURE RELIEF DAMPERS: GRAVITY BALANCED. AS SPECIFIED ON THE PLANS.
5. MANUAL VOLUME DAMPERS: STANDARD LEAKAGE RATING WITH LINKAGE OUTSIDE OF AIRFRAME. SUITABLE FOR HORIZONTAL OR VERTICAL APPLICATIONS
   A. FRAME: HAT SHAPED WITH MITERED AND WELDED CORNERS. FLANGELESS FRAMES FOR INSTALLING IN DUCTS.
   B. BLADES: RECTANGULAR DAMPERS SHALL BE MULTIPLE BLADES WITH OPPOSED-BLADE DESIGN. ROUND DAMPERS SHALL BE SINGLE BLADE.
   C. BLADE AXLES: GALVANIZED STEEL.
   D. BEARINGS: MOLDED SYNTHETIC.
   E. TIE BARS AND BRACKETS: GALVANIZED STEEL.
   F. JACKSHAFT: 1/2" DIAMETER CONSTRUCTED OF GALVANIZED STEEL WITHIN PIPE-BEARING ASSEMBLY WITH SUPPORTS. LENGTH AND NUMBER OF MOUNTINGS AS REQUIRED.
   G. HARDWARE: ZINC-PLATED, DIE CAST CORE WITH DIAL HANDLE AND A LOCKING NUT.
6. CONTROL DAMPERS
   A. FRAME: HAT SHAPED WITH MITERED AND WELDED CORNERS. FLANGELESS FRAMES FOR INSTALLING IN DUCTS.
   B. BLADES: RECTANGULAR DAMPERS SHALL BE MULTIPLE BLADES WITH OPPOSED-BLADE DESIGN. ROUND DAMPERS SHALL BE SINGLE BLADE. BLADE EDGING SHALL BE REPLACEABLE RUBBER SEALS.
   C. BLADE AXLES: 1/2" DIAMETER. BLADE LINKAGE HARDWARE OF ZINC-PLATED STEEL AND BRASS; ENDS SEALED AGAINST BLADE BEARING.
   D. BEARINGS: MOLDED SYNTHETIC.
7. FIRE DAMPERS
   A. TYPE: DYNAMIC; RATED AND LABELED ACCORDING TO UL 555.
   B. CLOSING RATINGS IN DUCTS UP TO 4" STATIC PRESSURE CLASS AND MAXIMUM 2,000 FPM VELOCITY.
   C. FIRE RATING: 1-1/2 HOURS, OR AS NOTED IN THE SCHEDULES.
   D. FRAME: CURTAIN TYPE WITH BLADES INSIDE AIRSTREAM. CONSTRUCTED OF GALVANIZED STEEL.
   E. MOUNTING SLEEVE: FACTORY FURNISHED.
   F. MOUNTING ORIENTATION: AS NOTED ON PLANS.
   G. BLADES: INTERLOCKING, CONSTRUCTED OF GALVANIZED STEEL.
   H. HEAT-RESPONSIVE DEVICE: 165 DEGREE F RATED FUSIBLE LINK OR AS NOTED IN THE SCHEDULES.
8. TURNING VANES: CURVED BLADES OF GALVANIZED SHEET STEEL. PROVIDED WITH SUPPORT BARS PERPENDICULAR TO BLADE SET SUITABLE FOR DUCT MOUNTING. COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE." SINGLE WALL CONSTRUCTION.
9. FLEXIBLE CONNECTORS: CONSTRUCTED OF FLAME-RETARDANT OR NONCOMBUSTIBLE FABRIC. FABRIC SHALL BE A GLASS FABRIC, DOUBLE COATED WITH NEOPRENE. COMPLY WITH UL 181 CLASS 1. FACTORY-FABRICATED WITH A FABRIC STRIP 3-1/2 INCHES WIDE ATTACHED TO TWO STRIPS OF 2-3/4 INCH THICK GALVANIZED SHEET STEEL.

PART 3 - EXECUTION
1. INSTALLATION
   A. INSTALL DUCT ACCESSORIES ACCORDING TO APPLICABLE DETAILS IN SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE."
   B. INSTALL VOLUME DAMPERS AT POINTS NOTED ON PLANS AND AS REQUIRED FOR SYSTEM BALANCING. WHERE DAMPERS ARE INSTALLED IN DUCTS WITH DUCT LINER, INSTALL DAMPERS WITH HAT CHANNELS OF SAME DEPTH AS LINER AND TERMINATE LINER WITH NOSING AT HAT CHANNEL.
   C. WHERE DAMPERS ARE INSTALLED IN WRAPPED DUCT, PROVIDE INSULATION STAND-OFF'S AS REQUIRED.
   D. SET DAMPERS TO FULLY OPEN POSITION BEFORE TESTING, ADJUSTING AND BALANCING.
   E. INSTALL TEST HOLES AT FAN INLETS AND OUTLETS AND WHERE REQUIRED FOR TESTING AND BALANCING PURPOSES.
   F. INSTALL FIRE DAMPERS ACCORDING TO UL LISTING.
   G. INSTALL FLEXIBLE CONNECTORS TO CONNECT DUCTS TO EQUIPMENT.
2. TESTS AND INSPECTIONS
   A. OPERATE DAMPERS TO VERIFY FULL RANGE OF MOVEMENT.
   B. OPERATE FIRE DAMPERS TO VERIFY FULL RANGE OF MOVEMENT AND VERIFY THAT PROPER HEAT-RESPONSE DEVICE IS INSTALLED.
   C. INSPECT TURNING VANES FOR PROPER AND SECURE INSTALLATION.

(END OF SECTION 23 33 00)

CONSULTANT:

EVERJ ENGINEERING, INC.
1509 BUCK TRAIL LANE
WORTHINGTON, OH 43085
614-349-8054
www.everjengineering.com

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02/28/2025

PROJECT

CAVA

CAVA - YONKERS
3100 XAVIER DR.
YONKERS, NY 10701

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MECHANICAL SPECIFICATIONS

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SECTION 23 33 46 - FLEXIBLE DUCTS

PART 1 - GENERAL
1. SECTION REQUIREMENTS
   A. SUBMITTALS: NONE REQUIRED.

PART 2 - PRODUCTS
1. COMPLY WITH NFPA 90A AND NFPA 90B.
2. COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" FOR ACCEPTABLE MATERIALS, MATERIAL THICKNESS AND DUCT CONSTRUCTION METHODS UNLESS NOTED OTHERWISE.
3. COMPLY WITH ASTM E 96/E 96M.
4. INSULATED, FLEXIBLE DUCT UL 181, CLASS 1. FACTORY FABRICATED AND INSULATED. PROVIDED WITH INTERIOR LINER, FIBROUS-GLASS INSULATION AND VAPOR-BARRIER FILM.
   A. PRESSURE RATING: 10" W.G. POSITIVE.
   B. MAXIMUM VELOCITY: 4,000 FPM
   C. INSULATION R-VALUE: R6.0
5. FLEXIBLE DUCT CONNECTORS SHALL BE NYLON STRAPS IN SIZES 3 THROUGH 18 INCHES TO SUIT DUCT SIZE.

PART 3 - EXECUTION
1. INSTALLATION
   A. INSTALL FLEXIBLE DUCTS ACCORDING TO APPLICABLE DETAILS IN SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE."
   B. INSTALL IN INDOOR APPLICATIONS ONLY. FLEXIBLE DUCTWORK IS ONLY PERMITTED TO CONNECT TO SUPPLY-AIR GRILLES, REGISTERS AND DIFFUSERS. MAXIMUM LENGTH SHALL BE 60 INCHES.
   C. CONNECT FLEXIBLE DUCTS TO METAL DUCTS WITH DRAW BANDS AND TAPE.
   D. INSTALL DUCTS FULLY EXTENDED.
   E. DO NOT BEND DUCTS ACROSS SHARP CORNERS.
   F. BENDS OF FLEXIBLE DUCTING SHALL NOT EXCEED A MINIMUM OF ONE DUCT DIAMETER.
   G. AVOID CONTACT WITH METAL FIXTURES, WATER LINES, PIPES, ADJACENT DUCTWORK OR CONDUIT.
   H. INSTALL FLEXIBLE DUCTS IN A DIRECT LINE, WITHOUT SAGS, TWISTS OR TURNS.
   I. SUSPEND FLEXIBLE DUCTS WITH BANDS 1-1/2 INCHES WIDE AND SPACED A MAXIMUM OF 48 INCHES APART. PROVIDE ADDITIONAL SUPPORT AT BENDS. DUCTS MAY REST ON CEILING JOISTS OR TRUSS SUPPORTS. SPACING BETWEEN THESE ELEMENTS SHALL NOT EXCEED 48 INCHES.

(END OF SECTION 23 33 46)

SECTION 23 34 33 - AIR CURTAINS

PART 1 - GENERAL
1. SECTION REQUIREMENTS
   A. SUBMITTALS: PROVIDE SHOP DRAWINGS INDICATING THE HEATING WATTAGE, ELECTRICAL CHARACTERISTICS, AIRFLOW CHARACTERISTICS, DIMENSIONS, WEIGHTS AND ACCESSORIES.
   B. WARRANTY: PROVIDE MANUFACTURER'S WARRANTY EFFECTIVE FOR FIVE YEARS FOR UNHEATED UNITS, AND TWO YEARS FOR HEATED UNITS. THE GENERAL CONTRACTOR SHALL PROVIDE A 12 MONTH WARRANTY ON ALL WORKMANSHIP.

PART 2 - PRODUCTS
1. MANUFACTURERS: AS NOTED IN THE MECHANICAL SCHEDULES.
2. CHARACTERISTICS. PROVIDED WITH:
   A. CABINET: ALUMINIZED STEEL CABINET WITH STAINLESS STEEL RIVETED CONSTRUCTION AND WHITE POWDER COATED FINISH.
   B. MOUNTING: PROVIDE WALL OR SUSPENDED MOUNTING AS REQUIRED.
   C. SERVICE ACCESS: REMOVABLE SCREEN AND REMOVABLE BOTTOM ACCESS PANEL.
   D. MOTORS: DIRECT DRIVE, RESILIENT MOUNTED, RATED FOR CONTINUOUS DUTY WITH INTERNAL THERMAL-OVERLOAD PROTECTION AND PERMANENTLY LUBRICATED SEALED BALL BEARINGS.
   E. FANS: BALANCED, FORWARD CURVED CROSS FLOW MADE OF ALUMINUM.
   F. DISCHARGE NOZZLES: PROVIDE UNIFORM VELOCITY ACROSS WIDTH OF AIR CURTAIN.
   G. INLET: PROVIDED WITH PERFORATED PATTERN SCREEN.
   H. HEATING ELEMENTS (WHEN NOTED ON PLANS): UL-APPROVED, FACTORY-MOUNTED, FACTORY WIRED, THERMALLY PROTECTED, IN GALVANIZED STEEL FRAME. HELICAL COIL DESIGN WITH THERMAL CUTOUT.
   I. PROVIDE ALL ACCESSORIES AS NOTED IN THE SCHEDULES.
3. CONTROLS:
   A. MANUAL SWITCH: FACTORY INSTALLED "FAN-OFF-FAN & HEAT" AND "HIGH-LOW" SWITCHES.
   B. CONTROL PACKAGE: AIR CURTAIN SHALL TURN ON WHEN DOOR IS OPENED AND SHUT OFF WHEN DOOR IS CLOSED.
   C. OUTDOOR AIR TEMPERATURE SENSOR (WHEN PROVIDED WITH A HEATING ELEMENT AND INDICATED ON PLANS).

PART 3 - EXECUTION
1. INSTALLATION
   A. INSTALL AIR CURTAIN WHERE INDICATED ON DRAWINGS IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE CLEARANCE TO PERMIT SERVICING AND MAINTENANCE.
   B. INSTALL LEVEL, PLUMB AND AS CLOSE AS PRACTICAL TO TOP OF OPENING AND FACE OF WALL.
   C. INSTALL ALL ACCESSORIES.
2. CONNECTIONS
   A. CONNECT ELECTRICAL WIRING IN ACCORDANCE WITH THE ELECTRICAL SPECIFICATIONS.
   B. GROUND EQUIPMENT IN ACCORDANCE WITH THE ELECTRICAL SPECIFICATIONS.
3. FIELD QUALITY AND CONTROL
   A. TEST AND OPERATE AIR CURTAIN TO VERIFY PERFORMANCE AS INDICATED.
4. ADJUSTING
   A. ADJUST MOTOR AND FAN SPEED TO PERFORM AS INDICATED.
   B. ADJUST NOZZLES TO DEFLECT AIR OUTWARD UNLESS NOTED OTHERWISE.

(END OF SECTION 23 34 33)

SECTION 23 37 13 - GRILLES, REGISTERS & DIFFUSERS

PART 1 - GENERAL
1. SECTION REQUIREMENTS
   A. SUBMITTALS: NONE REQUIRED.

PART 2 - PRODUCTS
1. GRILLES: MANUFACTURER, MODEL, MATERIAL, FINISH, MOUNTING AND ACCESSORIES SHALL BE AS NOTED IN THE MECHANICAL SCHEDULES. NO SUBSTITUTIONS SHALL BE PERMITTED.
2. REGISTERS: MANUFACTURER, MODEL, MATERIAL, FINISH, MOUNTING AND ACCESSORIES SHALL BE AS NOTED IN THE MECHANICAL SCHEDULES. NO SUBSTITUTIONS SHALL BE PERMITTED.
3. DIFFUSERS: MANUFACTURER, MODEL, MATERIAL, FINISH, MOUNTING AND ACCESSORIES SHALL BE AS NOTED IN THE MECHANICAL SCHEDULES. NO SUBSTITUTIONS SHALL BE PERMITTED. UNLESS OTHERWISE NOTED, ALL CEILING DIFFUSERS SHALL BE FOUR-WAY.

PART 3 - EXECUTION
1. INSTALLATION
   A. INSTALL GRILLES, REGISTERS & DIFFUSERS LEVEL AND PLUMB.
   B. INSTALL GRILLES, REGISTERS & DIFFUSERS AS INDICATED. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION.
   C. INSTALL GRILLES, REGISTERS & DIFFUSERS WITH AIRTIGHT CONNECTIONS TO DUCTS AND TO ALLOW SERVICE AND MAINTENANCE OF DAMPERS, EXTRACTORS AND OTHER ACCESSORIES.
   D. ALL AIR DEVICE COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC OR SHEET METAL UNTIL THE FINAL START-UP OF THE HEATING COOLING AND VENTILATION EQUIPMENT
   E. WHEN INDICATED ON THE PLANS, PAINT THE GRILLES, REGISTERS & DIFFUSERS PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH AN ENAMEL PAINT, COLOR AS INDICATED.
   F. AFTER INSTALLATION, ADJUST REGISTERS & DIFFUSERS TO AIR PATTERNS (IF NOTED) OR AS DIRECTED BY THE TENANT'S CONSTRUCTION MANAGER PRIOR TO STARTING AIR BALANCING.

(END OF SECTION 23 37 13)

SECTION 23 74 16 - PACKAGED ROOFTOP AIR-CONDITIONING UNITS

PART 1 - GENERAL
1. SECTION REQUIREMENTS
   A. UNITS FURNISHED BY OWNER; INSTALLED BY GENERAL CONTRACTOR.

PART 2 - PRODUCTS
1. DESCRIPTION
   A. UNITS FURNISHED BY OWNER; INSTALLED BY GENERAL CONTRACTOR.

PART 3 - EXECUTION
1. INSTALLATION
   A. ROOF CURB: INSTALL ON ROOF STRUCTURE, LEVEL, SECURE, PER STRUCTURAL DETAILS AND PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
   B. UNIT SUPPORT: INSTALL UNIT LEVEL ON STRUCTURAL CURBS PER STRUCTURAL DETAILS AND PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
   C. PROVIDE LABELING FOR ALL HVAC EQUIPMENT USING ENGRAVED PHENOLIC PLATES OR AS REQUIRED BY THE LANDLORD.
2. CONNECTIONS
   A. COMPLY WITH DUCT INSTALLATION REQUIREMENTS SPECIFIED IN OTHER HVAC SECTIONS. DRAWINGS INDICATE GENERAL ARRANGEMENTS OF DUCTS.
   B. INSTALL DUCTS TO TERMINATION TO TOP OF ROOF CURB. REMOVE ROOF DECKING ONLY AS REQUIRED FOR PASSAGE OF DUCTS. DO NOT CUT OUT DECKING UNDER ENTIRE ROOF CURB. CONNECT SUPPLY AND RETURN DUCTS TO RTUS WITH FLEXIBLE DUCT CONNECTORS.
   C. INSTALL CONDENSATE DRAIN WITH TRAP AND INDIRECT CONNECTION AS NOTED ON THE PLANS.
   D. WHERE INSTALLING PIPING ADJACENT TO RTUS, ALLOW SPACE FOR SERVICE AND MAINTENANCE.
   E. CONNECT GAS PIPING TO BURNER, FULL SIZE OF GAS TRAIN INLET. CONNECT WITH UNION, SHUTOFF VALVE AND DIRT LEG WITH SUFFICIENT CLEARANCE FOR BURNER REMOVAL AND SERVICE
   F. CONNECT ELECTRICAL WIRING IN ACCORDANCE WITH THE ELECTRICAL SPECIFICATIONS.
   G. GROUND EQUIPMENT IN ACCORDANCE WITH THE ELECTRICAL SPECIFICATIONS.
3. FIELD QUALITY CONTROL
   A. AFTER INSTALLING RTUS, TEST UNITS FOR COMPLIANCE WITH REQUIREMENTS.
   B. INSPECT AND REMOVE SHIPPING BOLTS, BLOCKS, TIE-DOWN STRAPS AND ANY OTHER SHIPPING RELATED MATERIALS INSIDE OR OUTSIDE OF THE UNIT PRIOR TO OPERATION.
   C. CONFIRM PROPER MOTOR ROTATION AND UNIT OPERATIONS.
   D. TEST AND ADJUST CONTROLS AND SAFETIES. REPLACE DAMAGED AND MALFUNCTIONING CONTROLS AND EQUIPMENT.
   E. OPERATIONAL TEST: AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, START UNITS TO CONFIRM PROPER MOTOR ROTATION AND UNIT OPERATION.
   F. CLEAN FILTER HOUSINGS AND CHANGE FILTERS PRIOR TO AIR BALANCE AND IMMEDIATELY PRIOR TO TURNOVER.

(END OF SECTION 23 74 16)

SECTION 23 74 30 - ROOF-MOUNTED MAKEUP AIR UNIT

PART 1 - GENERAL
1. SECTION REQUIREMENTS
   A. UNITS FURNISHED BY OWNER; INSTALLED BY GENERAL CONTRACTOR.

PART 2 - PRODUCTS
1. DESCRIPTION
   A. UNITS FURNISHED BY OWNER; INSTALLED BY GENERAL CONTRACTOR.

PART 3 - EXECUTION
1. INSTALLATION
   A. ROOF MOUNTING: INSTALL ON ROOF STRUCTURE, LEVEL, SECURE, PER STRUCTURAL DETAILS AND PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
   B. UNIT SUPPORT: INSTALL UNIT LEVEL ON STRUCTURAL CURBS, MOUNTING RAIN AND STANDS PER STRUCTURAL DETAILS AND PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. CONNECTIONS
   A. COMPLY WITH DUCT INSTALLATION REQUIREMENTS SPECIFIED IN OTHER HVAC SECTIONS. DRAWINGS INDICATE GENERAL ARRANGEMENTS OF DUCTS.
   B. INSTALL DUCTS TO TERMINATION TO TOP OF ROOF CURB. REMOVE ROOF DECKING ONLY AS REQUIRED FOR PASSAGE OF DUCTS. DO NOT CUT OUT DECKING UNDER ENTIRE ROOF CURB. CONNECT SUPPLY DUCT TO UNIT WITH FLEXIBLE DUCT CONNECTORS.
   C. WHERE INSTALLING PIPING ADJACENT TO UNIT, ALLOW SPACE FOR SERVICE AND MAINTENANCE.
   D. CONNECT GAS PIPING TO BURNER, FULL SIZE OF GAS TRAIN INLET. CONNECT WITH UNION, SHUTOFF VALVE AND DIRT LEG WITH SUFFICIENT CLEARANCE FOR BURNER REMOVAL AND SERVICE.
   E. CONNECT ELECTRICAL WIRING IN ACCORDANCE WITH THE ELECTRICAL SPECIFICATIONS.
   F. GROUND EQUIPMENT IN ACCORDANCE WITH THE ELECTRICAL SPECIFICATIONS.
3. FIELD QUALITY CONTROL
   A. AFTER INSTALLING UNIT, TEST UNITS FOR COMPLIANCE WITH REQUIREMENTS.
   B. INSPECT OR AND REMOVE SHIPPING BOLTS, BLOCKS AND TIE-DOWN STRAPS.
   C. CONFIRM PROPER MOTOR ROTATION AND UNIT OPERATIONS.
   D. TEST AND ADJUST CONTROLS AND SAFETIES. REPLACE DAMAGED AND MALFUNCTIONING CONTROLS AND EQUIPMENT.
   E. OPERATIONAL TEST: AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, START UNITS TO CONFIRM PROPER MOTOR ROTATION AND UNIT OPERATION.
   F. CLEAN FILTER HOUSINGS AND CHANGE FILTERS PRIOR TO AIR BALANCE AND IMMEDIATELY PRIOR TO TURNOVER.

(END OF SECTION 23 74 30)

CONSULTANT:

EVERJ ENGINEERING, INC.
1509 BUCK TRAIL LANE
WORTHINGTON, OH 43085
614-349-8054
www.everjengineering.com

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STATE OF NEW YORK
JOSHUA A. EVERETT
106537
LICENSED PROFESSIONAL ENGINEER

02/28/2025

PROJECT

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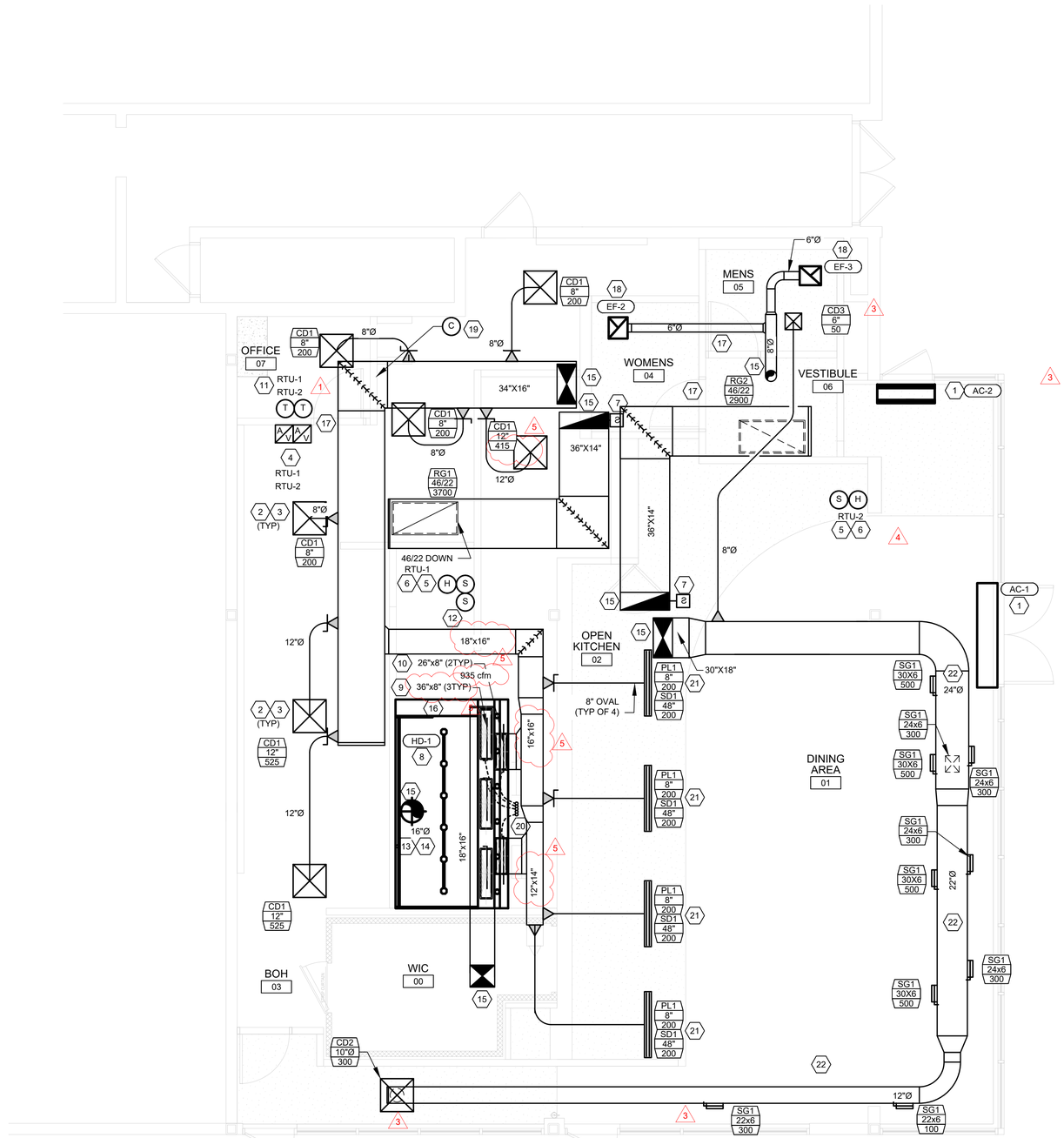
7/8/2024 4:32 PM



1 MECHANICAL 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 AUDIO/VISUAL 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. COORDINATION 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. NOT USED.
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.
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, ANSUL 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.

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WORTHINGTON, OH 43085
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106537
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SHEET NOTES

A. SEE SHEETS A0.2 & A0.3 FOR GENERAL NOTES.

B. DO NOT SCALE THE DRAWINGS.

C. GC TO PATCH, FIRE CAULK, AND MAINTAIN FIRE RATING FOR DEMISING WALLS.

D. ALL OWNER SUPPLIED ITEMS ARE TO BE INSTALLED BY GC, U.O.N.

E. REFER TO SHEET A4.1 FOR FURNITURE/ EQUIPMENT CALL-OUTS AND ALL ADA CLEARANCES. PROVIDE MINIMUM CLEARANCES AS REQUIRED.

F. GC TO PROVIDE PROPER PROTECTION OF ALL EXISTING TO REMAIN ITEMS DURING ALL PHASES OF CONSTRUCTION.

G. GC TO REPAIR ALL DAMAGED EXISTING TO REMAIN ITEMS AS REQUIRED TO MATCH EXISTING.

H. GC TO FLASH PATCH, REPAIR AND LEVEL THE EXISTING CONCRETE SLAB AS REQUIRED TO RECEIVE THE SCHEDULED FINISH AND MAINTAIN A LEVEL DATUM LINE.

I. VERIFY IN FIELD DIMS AND ALL (E) CONDITIONS PRIOR TO START CONSTRUCTION.

J. GC TO PROVIDE THE FOLLOWING DIMENSIONS BEFORE CONSTRUCTION. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES:

DIM A: DIM C:
DIM B: DIM D:

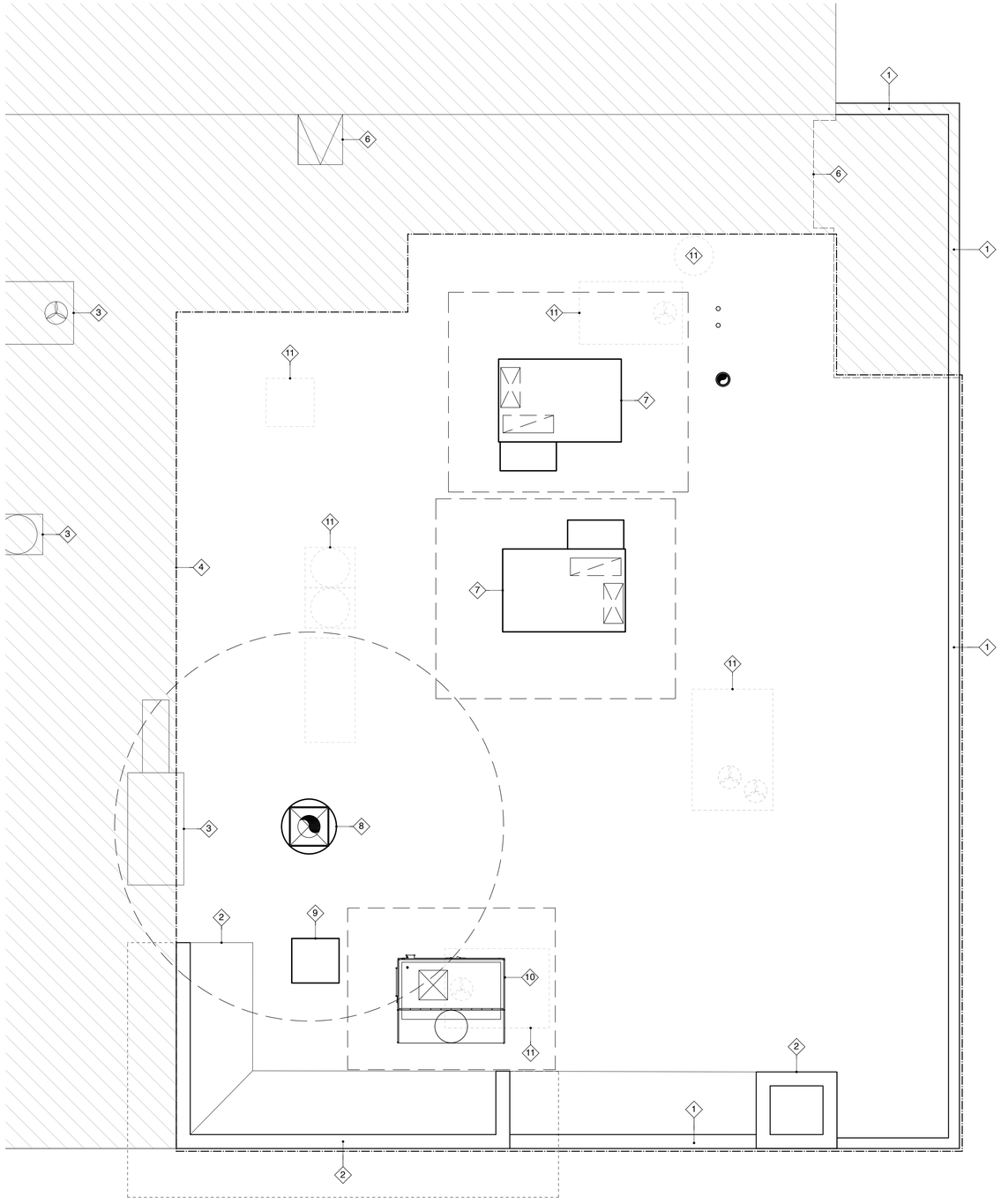
KEYNOTES

1. (N) PARAPET PROPOSED BY CAVA
2. (E) TOWER STRUCTURE
3. (E) ROOFTOP EQUIPMENT
4. LEASE LINE
5. LINE OF EXISTING WALL BELOW
6. (E) ROOF HATCH
7. (N) RTU BY CAVA
8. (N) CURB-MOUNTED EXHAUST FAN BY CAVA
9. (N) CONDENSING UNIT BY CAVA
10. (N) CURB-MOUNTED MAU BY CAVA
11. DEMO EXIST. ROOFTOP EQUIPMENT

LEGEND

℄ CENTER LINE

1 REFER TO KEY NOTES



valerio

5858 Wilshire Blvd #200 T:323.954.8996
Los Angeles, CA 90036

381 Park Ave South #823 T:212.252.8996
New York, NY 10016

www.valerioinc.com info@valerioinc.com

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REGISTERED ARCHITECT NICOLO VALERIO LIC. NO. 030317-1 STATE OF NEW YORK

PROJECT

CAVA

CAVA - YONKERS

3100 XAVIER DR
YONKERS, NY 10701 UNITED STATES

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3	09/27/24	HEALTH COMMENTS
4	11/06/24	REVISED BID SET
5	01/03/25	2ND BUILDING SUBMITTAL
6	02/04/25	PC COMMENTS
7	02/28/25	CONSTRUCTION SET

Roof Plan

Date Modified:
Date Created: 01-17-24
Scale: 1/4" = 1'-0"
Project No.: 3464-23-209
Drawn By: MV
CAD File: 3464- 250228_Construction Set_NG.vwx

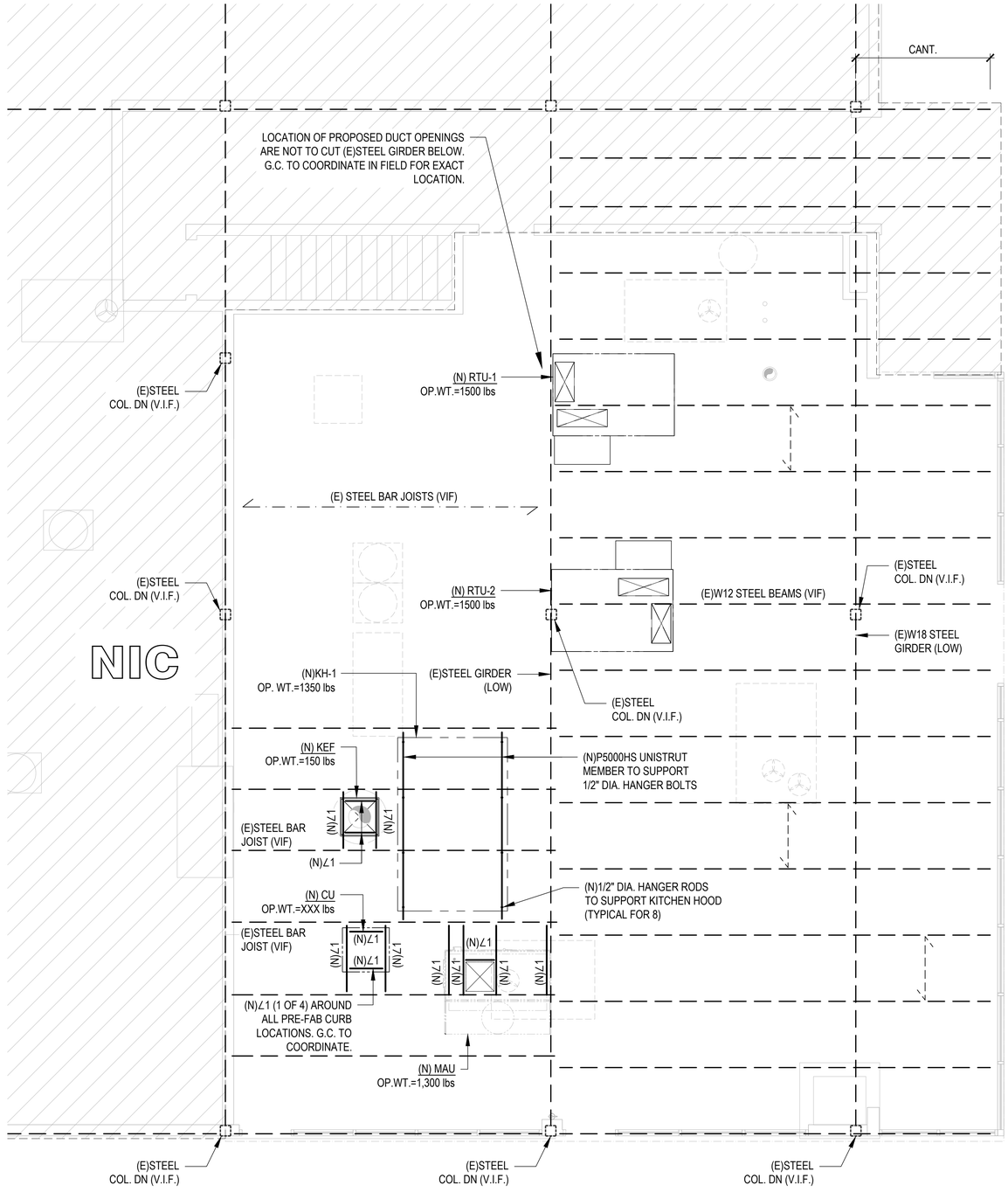
A4.3

SHEET LEGEND

— — —	DENOTES EXISTING STRUCTURAL STEEL FRAMING ELEMENT.
⟋ - - - ⟍	DENOTES EXISTING TECTUM ROOF DECK.
∠ — · — ⟍	DENOTES EXISTING STEEL BAR JOIST ROOF FRAMING.
(V.I.F.)	DENOTES VERIFY IN FIELD.
NIC	DENOTES NOT IN CONTRACT.
(N)∠1	DENOTES NEW ∠4X4X3/8 HEADER.

SHEET NOTES

1. ALL EXISTING STEEL BAR JOISTS AND STEEL WIDE FLANGE JOISTS ARE NOT TO BE CUT TO INSTALL NEW MECHANICAL DUCT OPENINGS. VERIFY EXACT STEEL BAR JOIST LOCATIONS IN FIELD PRIOR TO INSTALLATION.
2. ALL EXISTING JOISTS BRIDGING AND WALL BRACING MEMBERS TO BE RE-INSTALLED AS REQUIRED TO INSTALL NEW DUCT OPENINGS.
3. ALL NEW MOUNTED MECHANICAL UNITS TO BE SUPPORTED ON PRE-FABRICATED ROOF TOP CURBS. SEE MECHANICAL DRAWINGS FOR SUPPORT DETAILS.



1 PARTIAL ROOF FRAMING PLAN

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

valerio

5858 Wilshire Blvd #200 T:323.954.8996
Los Angeles, CA 90036

381 Park Ave South #823 T:212.252.8996
New York, NY 10016

www.valerioinc.com info@valerioinc.com

SEAL

PROJECT

CAVA

CAVA - YONKERS

3100 XAVIER DR
YONKERS, NY 10701, UNITED STATES

△	DATE	DESCRIPTION
	08/02/24	ISSUED FOR ARCHITECTURAL REVIEW
	08/23/24	ISSUED FOR BID/PERMIT

CONSULTANT:

THE EIPEL ENGINEERING GROUP, D.P.C.

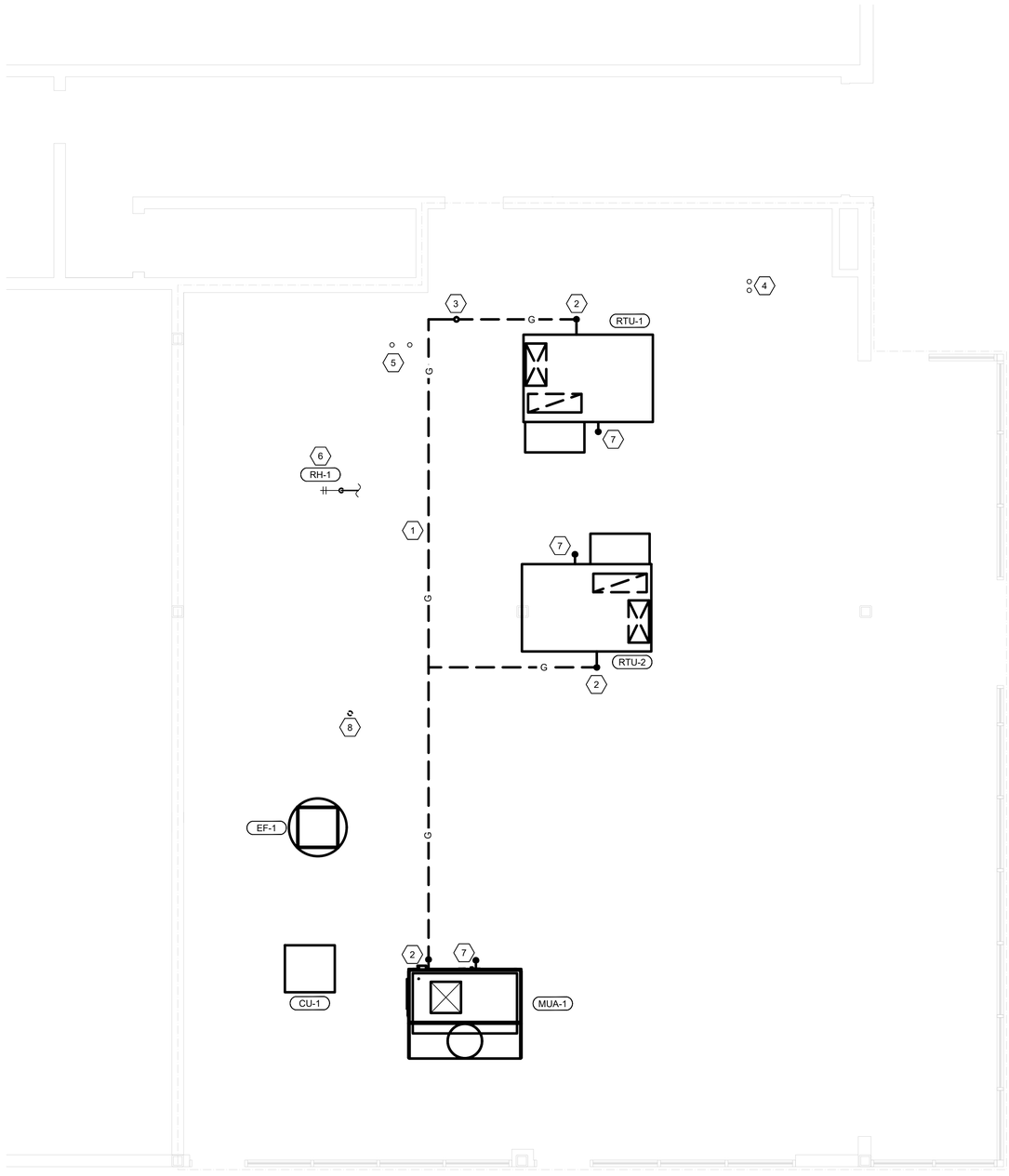
307 SEVENTH AVENUE, SUITE 1805
NEW YORK, NY 10001
TEL: (212) 695-5120
FAX: (212) 695-5158

Partial Roof Framing Plan

Date Modified:	
Date Created:	07-22-24
Scale:	AS INDICATED
Project No.:	3464-23-209
Drawn By:	GS / AN
CAD File:	-

S-102

TEEG Project No.: 1576-016-24



1 **PLUMBING SUPPLY 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 DOESNT BLOCK ACCESS TO ANY ACCESS PANELS TO THE EQUIPMENT. TYPICAL OF ROOF TOP UNITS AND MAKEUP AIR UNIT.
8. SANITARY VENT THROUGH ROOF.

CONSULTANT:

EVERJ ENGINEERING, INC.
1509 BUCK TRAIL LANE
WORTHINGTON, OH 43085
614-349-8054
www.everjengineering.com

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JOSHUA A. EVERETT
106537
LICENSED PROFESSIONAL ENGINEER

02/28/2025

PROJECT

CAVA

CAVA - YONKERS
3100 XAVIER DR.
YONKERS, NY 10701

	DATE	DESCRIPTION
	07/09/2024	PERMIT/BID
1	08/02/2024	LL COMMENTS
2	08/19/2024	LL COMMENTS
	08/23/2024	PERMIT/BID SET
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4	12/02/2024	DINING SENSORS MOVED
5	01/03/2025	BLDG DEPT COMMENT
6	02/04/2025	PC COMMENTS
7	02/28/2025	CONSTRUCTION SET

PLUMBING SUPPLY ROOF PLAN

Date Modified:	08/02/2024
Date Created:	07/09/2024
Scale:	AS NOTED
Project No.:	230121
Drawn By:	BRW
Checked By:	JAE

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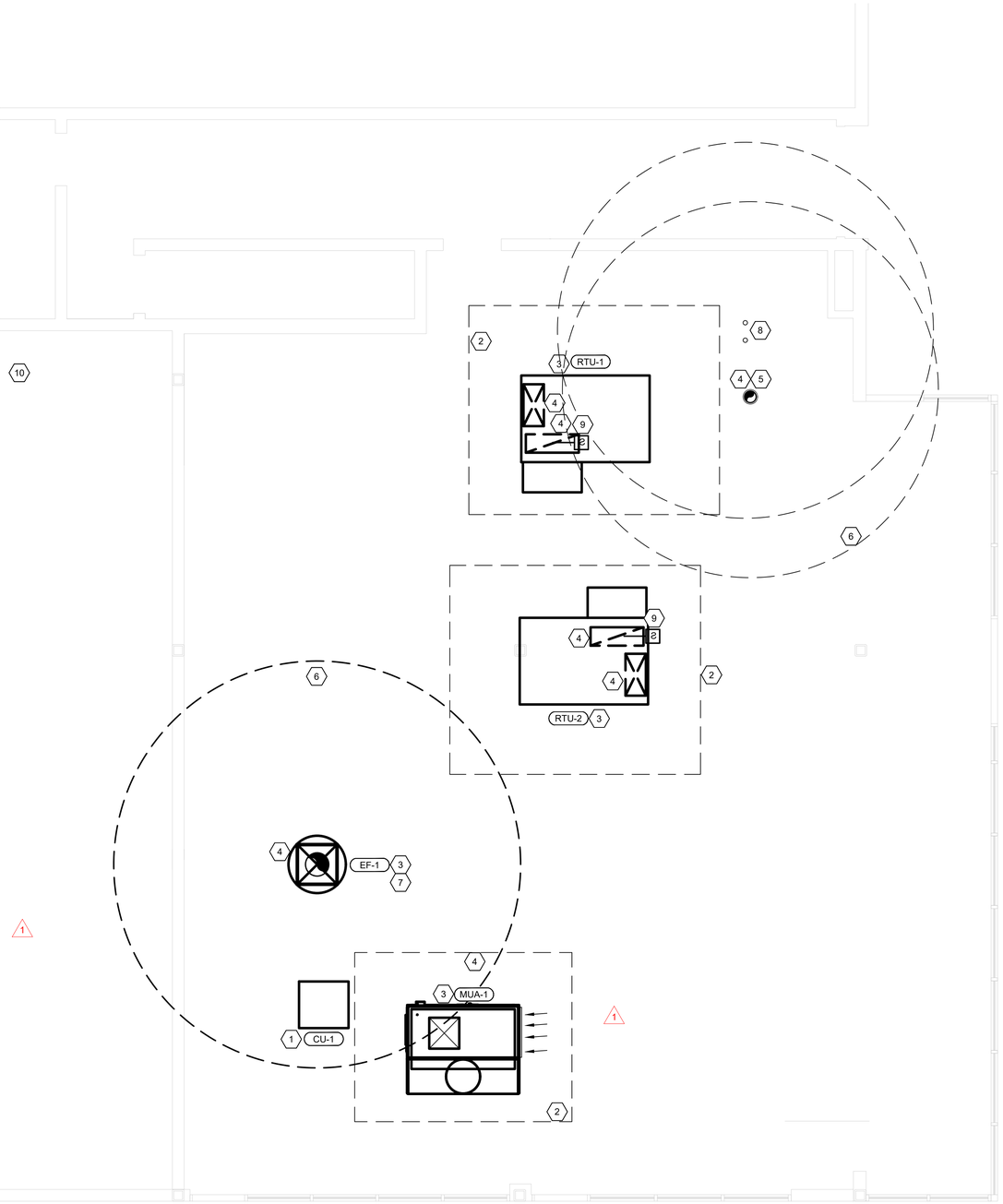

1 MECHANICAL ROOF PLAN
1/4" = 1'-0"

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. 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 IN THE RETURN AIR OF THE UNIT. FURNISHED WITH UNIT. UPON DETECTION OF SMOKE THE SUPPLY AIR FAN SHALL DE-ENERGIZE.
10. ADJACENT TENANT'S EQUIPMENT ON ROOF. NOT IN CONTRACT. POSITION NOTED FOR 10'-0" CLEARANCE FROM EF-1 SHOWN FOR CLARIFICATION.

1

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LICENSED PROFESSIONAL ENGINEER

02/28/2025

PROJECT

CAVA

CAVA - YONKERS
3100 XAVIER DR.
YONKERS, NY 10701

	DATE	DESCRIPTION
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MECHANICAL ROOF PLAN

Date Modified:	08/02/2024
Date Created:	07/09/2024
Scale:	AS NOTED
Project No.:	230121
Drawn By:	KLM
Checked By:	JAE

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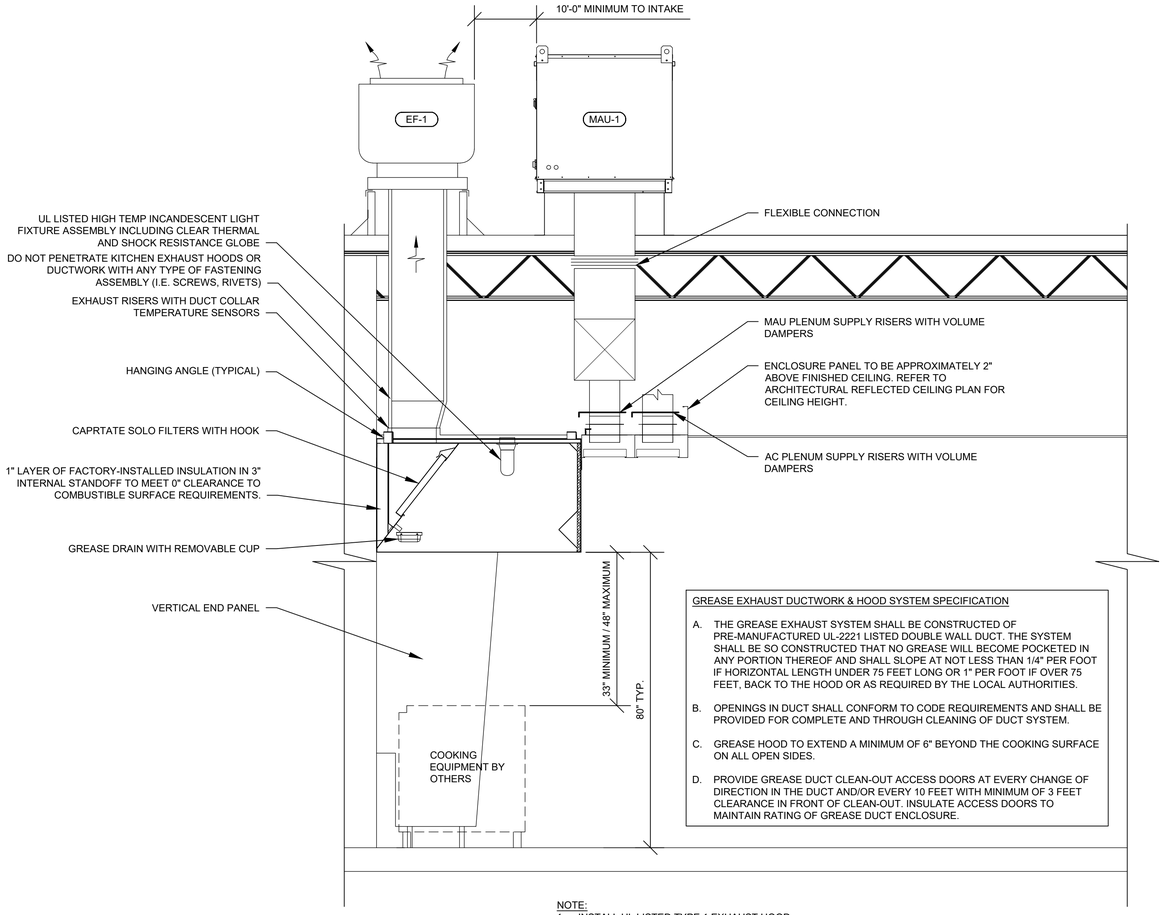


GREASE EXHAUST DUCTWORK & HOOD SYSTEM SPECIFICATION

A. THE GREASE EXHAUST SYSTEM SHALL BE CONSTRUCTED OF PRE-MANUFACTURED 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.

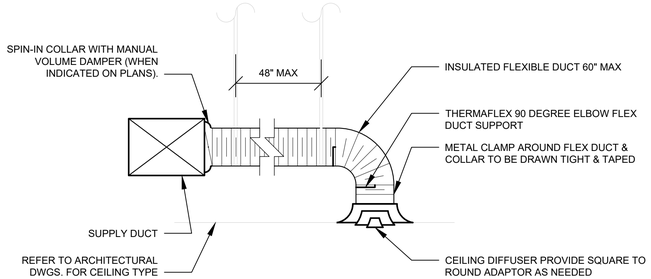
B. OPENINGS IN DUCT SHALL CONFORM TO CODE REQUIREMENTS AND SHALL BE PROVIDED FOR COMPLETE AND THROUGH CLEANING OF DUCT SYSTEM.

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.

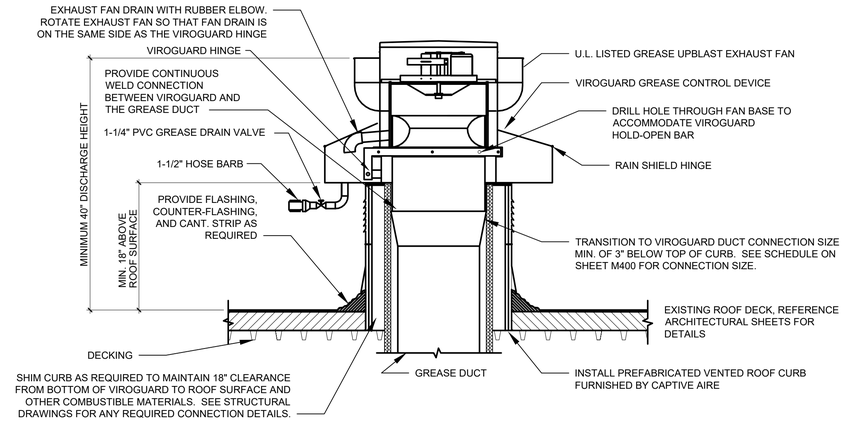
NOTE:
1. INSTALL UL LISTED TYPE 1 EXHAUST HOOD.
2. THE GREASE HOOD SHALL MEET THE REQUIREMENTS OF THE MECHANICAL CODE, NSF AND NFPA FOR A TYPE I HOOD.
3. FIRE DEPARTMENT APPROVAL SHALL BE REQUIRED ON FIRE PROTECTION SYSTEM FOR GREASE HOODS AND DUCTS AS REQUIRED BY THE MECHANICAL CODE AND AS REQUIRED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

5 KITCHEN HOOD SCHEMATICS
N.T.S.



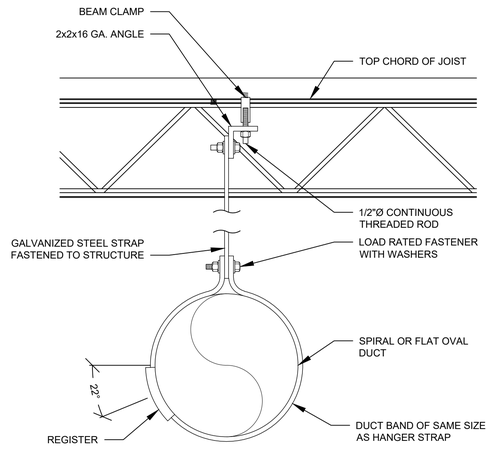
NOTE:
1. METHOD OF INSTALLATION FOR AIRTIGHT SEAL IS TYPICAL FOR ALL FLEX CONNECTIONS TO AIR DISTRIBUTION DEVICES.

6 DIFFUSER CONNECTION
N.T.S.

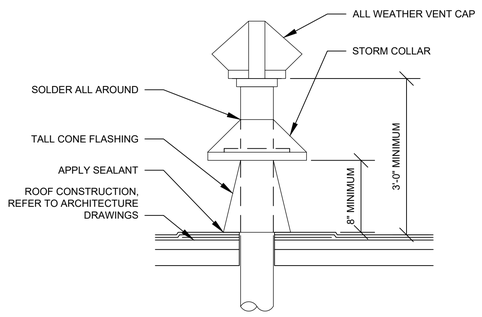


NOTES:
1. INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 96 REQUIREMENTS.
2. CUT AND PATCH EXISTING ROOFING AS REQUIRED FOR NEW CURB INSTALLATION.
3. CURB SHALL BE TAPERED TYPE AND MATCH THE PITCH OF THE ROOF.
4. CONTRACTOR TO PROVIDE TREATED WOOD BLOCKINGS AND SHIM FLAT ROOF CURB TILL LEVEL FOR ALL EXHAUST 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.



1 SPIRAL DUCT SUPPORT DETAIL
N.T.S.



3 DUCT THROUGH ROOF
N.T.S.

2 NOT USED
N.T.S.

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CONSULTANT:

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1509 BUCK TRAIL LANE
WORTHINGTON, OH 43085
614-349-8054
www.everjengineering.com

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02/28/2025

PROJECT

CAVA

CAVA - YONKERS
3100 XAVIER DR.
YONKERS, NY 10701

	DATE	DESCRIPTION
	07/09/2024	PERMIT/BID
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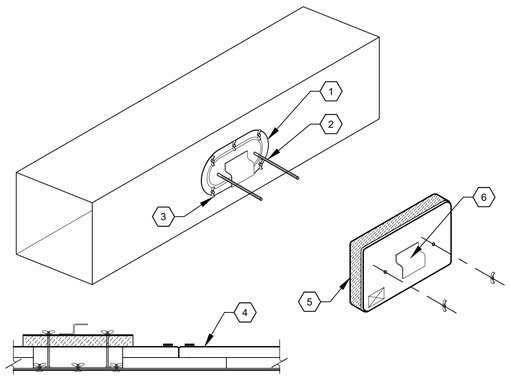
MECHANICAL DETAILS

Date Modified:	08/02/2024
Date Created:	07/09/2024
Scale:	AS NOTED
Project No.:	230121
Drawn By:	KLM
Checked By:	JAE

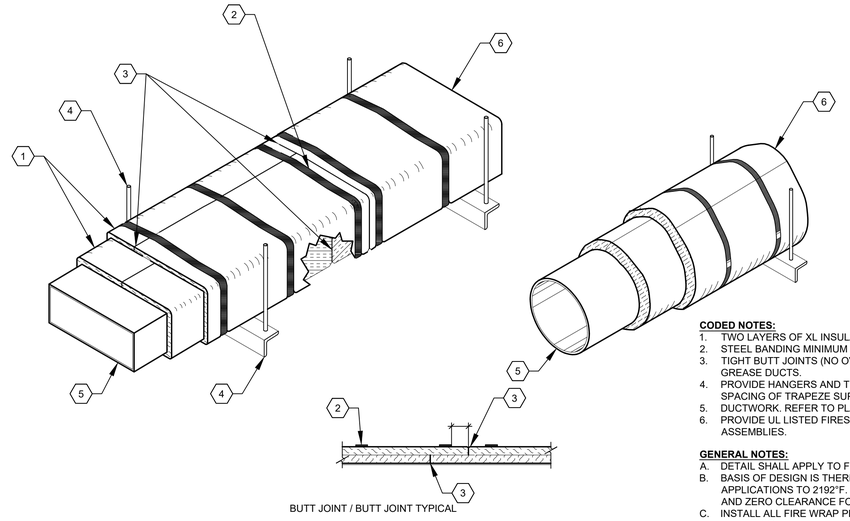
M300



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.

VENTILATION SCHEDULE
PER TABLE 6.2.2.1 OF ASHRAE 62.1 - 2016

CATEGORY	AREA	OCCUPANT DENSITY (PPL / 1000 SF)	OCCUPANT LOAD (PEOPLE)	AIR RATE		EFFECTIVENESS	VENTILATION REQUIRED (CFM)	VENTILATION PROVIDED (CFM)
				CFM / PERSON	CFM / SF			
RTU-1								
DINING	781.8	70	55	7.50	0.18	0.8	689.0	1080
CORRIDOR	253.0	0	0	0.00	0.06	0.8	19.0	20
						TOTAL:	707.9	1100
RTU-2								
KITCHEN	1,002.0	20	20	7.50	0.06	0.8	263.0	265
OFFICE	50.4	5	1	5.00	0.06	0.8	10.0	35
						TOTAL:	263.0	300

EXHAUST CALCULATIONS
PER TABLE 403.7 OF THE 2020 NY MECHANICAL CODE

SPACE NUMBER	SPACE NAME	SPACE CLASSIFICATION	NUMBER OF FIXTURES	SQ FOOTAGE	EXHAUST PER FIXTURE (CFM)	EXHAUST PER SQUARE FOOT (CFM)	AIR FLOW REQUIRED (CFM)	PROVIDED AIRFLOW (CFM)
04 & 05	RESTROOM	RESTROOM	2.00	--	-50.0	0	-100	-150
03 & 02	KITCHEN	KITCHEN	--	1,109.00	0.0	-0.700000	-776	-2115
						TOTAL:	-876	-2265

COMMISSIONING REQUIREMENTS

THE GENERAL CONTRACTOR SHALL PROVIDE COMMISSIONING OF THE FOLLOWING EQUIPMENT IN ACCORDANCE WITH SECTION 408 OF THE 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE (2018 IECC):

- 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

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.

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

1 SEQUENCE OF OPERATIONS
N.T.S.

CONSULTANT:

EVERJ ENGINEERING, INC.
1509 BUCK TRAIL LANE
WORTHINGTON, OH 43085
614-349-8054
www.everjengineering.com

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106537
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02/28/2025

PROJECT

CAVA

CAVA - YONKERS
3100 XAVIER DR.
YONKERS, NY 10701

	DATE	DESCRIPTION
	07/09/2024	PERMIT/BID
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MECHANICAL DETAILS

Date Modified:	08/02/2024
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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"	CAPTIVEAIRE DU85HFA	OWNER	GC	ENVIROMATIC	GC TO INSTALL ON EF-1. ENVIROMATIC VIROGUARD HOOD EXHAUST FAN ROOFTOP CONTAINMENT SYSTEM.

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	1,854	0	1,854	0	1,854
RTU-1	4,000	3,700	300	0	300
RTU-2	4,000	2,900	1,100	0	1,100
NET PRESSURE (CFM)					787

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

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	
CD2	PLAQUE FACE DIFFUSER	24"x24"	STEEL	TO MATCH CEILING	GYP CEILING	GC	GC	TITUS	OMNI	PROVIDE WITH OBD
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	UNFINISHED	FIXTURE	GC	GC	TITUS	FBPI-20	FURNISH WITH FACE-OPERATED INLET DAMPER
SD1	LINEAR SLOT DIFFUSER	WIDTH = 2"	TAPE & SPACKLE	TO MATCH CEILING	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 CEILING	DUCT MOUNT	GC	GC	TITUS	S300FS	PROVIDE WITH 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 SHORT DIMENSION	REFER TO NECK SIZE	STEEL	TO MATCH WALL	SURFACE	GC	GC	TITUS	350FS	

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	150.0	11.6	25	120/1/60	OWNER	GC	CAPTIVE AIRE	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	45.0	208/3/60	GC	GC	BERNER	AI08-E-2084E	FURNISHED WITH MAGNETIC DOOR SWITCH INTERLOCKED WITH DOOR. DISCONNECT SWITCH.
AC-2	SECONDARY DINING ROOM DOOR	42.00	2,317	1,728	1,134	5.6	25	17.2	208/3/60	GC	GC	BERNER	AI08-E-1042E	FURNISHED WITH MAGNETIC DOOR SWITCH INTERLOCKED WITH DOOR. DISCONNECT SWITCH.

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		COOLING CAPACITY (TONS)	TOTAL COOLING CAPACITY		MOTOR POWER (HP)	V/P/H	CONDENSING UNIT					MANUFACTURER	MODEL	
							DB (DEG. F)	WB (DEG. F)		TOTAL (MBH)	SENSIBLE (MBH)			MCA (A)	MOCP (A)						
MAU-1	GAS FIRED MAKEUP AIR UNIT WITH AIR CONDITIONING	1,854	0.75	13.0	173.185	140.280	97.0	74.0	5	64.0	30.2	2.0	208/3/60	28.4	30	1,300	OWNER	GC	ECON-AIR	EARTU1-I.200-15-5T-MPU	FURNISHED WITH DISCONNECT, ROOF CURB, HOT GAS REHEAT, FIRESTAT, FREEZESTAT AND UNIT MOUNTED VFD, LOUVERED INTAKE AND WASHABLE MERV 8 AND MERV 13 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											
						NO.	DIAMETER (IN.)					AIRFLOW (CFM)	DUCT COLLARS			AIRFLOW	DUCT COLLARS							MANUFACTURER	MODEL	
													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	0.66	1	16	139.00	57.00	142.00	22.00	1,854	3	36	8	935	2	26	8	6	1,350	OWNER	GC	CAPTIVE AIRE	6030 ND-2-ACPSP-F	FURNISHED WITH FIELD WRAPPER, LEFT END STANDOFF, RIGHT VERTICAL END PANEL, 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	10.0	11.4 (17.2)	4,000	3700	300	0.80	118.2	78.4	74.8	64.8	97.0	250	205	65.8	2	1	23.2	1,500	60	52	208/3/60	OWNER	GC	CARRIER	48GCFN12	FURNISHED WITH HOT GAS REHEAT WITH REMOTE HUMIDISTAT, COMPARATIVE ENTHALPY ECONOMIZER WITH FAULT DETECTION AND DIAGNOSTICS, SMOKE DETECTOR IN RETURN AIR STREAM, BAROMETRIC RELIEF, HINGED PANELS, MERV 8 FILTERS, HAIL GUARD, DISCONNECT, UNPOWERED CONVENIENCE RECEPTACLE, MULTI-SPEED FAN, AND 24" TALL ROOF CURB
RTU-2	DINING ROOM ROOFTOP UNIT	10.0	11.4 (17.2)	4,000	2900	1,100	0.80	122.2	85.6	78.1	66.4	97.0	250	205	55.0	2	1	23.2	1,500	60	52	208/3/60	OWNER	GC	CARRIER	48GCFN12	FURNISHED WITH HOT GAS REHEAT WITH REMOTE HUMIDISTAT, COMPARATIVE ENTHALPY ECONOMIZER WITH FAULT DETECTION AND DIAGNOSTICS, SMOKE DETECTOR IN RETURN AIR STREAM, BAROMETRIC RELIEF, HINGED PANELS, MERV 8 FILTERS, HAIL GUARD, DISCONNECT, UNPOWERED CONVENIENCE RECEPTACLE, MULTI-SPEED FAN, AND 24" TALL ROOF CURB

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PROJECT

CAVA

CAVA - YONKERS
3100 XAVIER DR.
YONKERS, NY 10701

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MECHANICAL SCHEDULES

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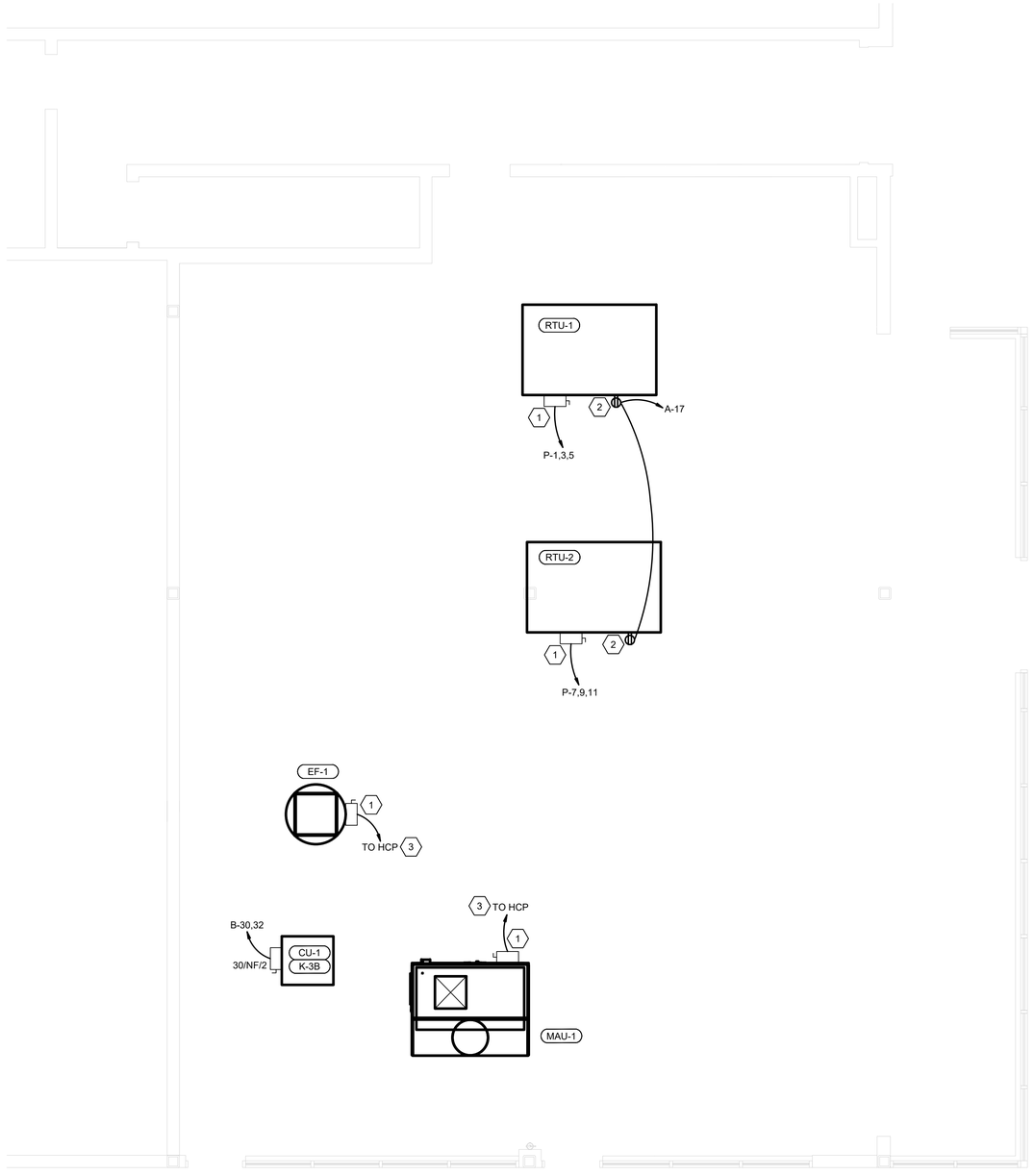
2/28/2025 1:57 PM



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

CODED NOTES

1. UNIT SHALL BE FURNISHED WITH AN INTEGRAL, NON-FUSED DISCONNECT SWITCH.
2. UNIT SHALL BE FURNISHED WITH AN INTEGRAL, NON-POWERED 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 ROOF PLAN

Date Modified:	08/02/2024
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Drawn By:	JWH
Checked By:	JAE

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MATERIAL SCHEDULE

CATEGORY	APPLICATION	ALLOWABLE MATERIAL
CONDUCTORS	#10 AWG AND SMALLER	SOLID CU, TYPE THHN/THWN OR XHHW
	#8 AWG AND LARGER	STRANDED CU, TYPE THHN/THWN OR XHHW
	FIELD-MADE CORD (EXPOSED INDOOR LOCATIONS)	TYPE SO OR SJO SERVICE CORD WITH CU CONDUCTORS
CONDUITS	OUTDOOR, UNDERGROUND	SCHEDULE 80 PVC OR INTERMEDIATE METALLIC CONDUIT
	OUTDOOR, EXPOSED OR CONCEALED	INTERMEDIATE METAL CONDUIT
	OUTDOOR OR INDOOR, DAMP LOCATIONS, CONNECTION TO VIBRATING EQUIPMENT	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
	INDOOR, EXPOSED	ELECTRICAL METALLIC TUBING U.N.O.
	INDOOR, WITHIN 1-1/2" OF ROOF DECK	INTERMEDIATE METAL CONDUIT
	INDOOR, CONCEALED	ELECTRICAL METALLIC TUBING, FLEXIBLE METAL CONDUIT OR METAL CLAD CABLE
	INDOOR DRY LOCATIONS, CONNECTION TO VIBRATING EQUIPMENT	FLEXIBLE METAL CONDUIT
	LOW VOLTAGE, INDOOR, ABOVE GRADE	ELECTRICAL METALLIC TUBING
	LOW VOLTAGE, BELOW GRADE	RIGID NONMETALLIC CONDUIT (SCHEDULE 40 PVC)
WIRING DEVICES	IN KITCHEN (NON-TILE SURFACES), OFFICE OR NON-PUBLIC SPACE	GRAY DECORA DEVICE WITH STAINLESS STEEL COVER PLACE
	IN KITCHEN (TILE SURFACES)	WHITE DECORA DEVICE WITH WHITE COVER PLATE
	IG OR IG/GFCI RECEPTACLES	GRAY DECORA DEVICE WITH STAINLESS STEEL COVER PLATE
	ON DRYWALL IN DINING ROOM	DEVICE AND COVER PLATE TO MATCH WALL COVER. COORDINATE WITH CONSTRUCTION MANAGER AS REQUIRED.
	IN RESTROOMS	WHITE TAMPER RESISTANT DECORA DEVICE WITH WHITE COVER PLATE
	IN MILLWORK	WHITE TAMPER RESISTANT DECORA DEVICE WITH TWO USB PORTS WITH STAINLESS STEEL COVER PLATE

LIGHTING FIXTURE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	MODEL	LAMP(S)	MOUNTING	VOLTS	WATTS	DIMMING TYPE	FURNISHED BY	INSTALLED BY	REMARKS
R1	1 LAMP ADJUSTABLE RECESSED DOWNLIGHT	CONTECH LIGHTING	RDA4L12712D2FX1BLK-P	2700K LED 85 CRI	RECESSED	120	10	0-10V	OWNER	GC	37' BEAM
R4	1 LAMP ADJUSTABLE RECESSED DOWNLIGHT	CONTECH LIGHTING	K4SA3-27K-MVD-F	2700K LED	RECESSED	120	20	0-10V	OWNER	GC	
P1	PENDANT	RBW LIGHTING	MP-S-27-10_TRIAC_UNV	2700K LED	PENDANT	120	9	TRIAC	OWNER	GC	
P6	DECORATIVE PENDANT	CONTECH LIGHTING	CTL9051FCF27CD-P	2700K LED	PENDANT	120	9	PHASE	OWNER	GC	
A1	2X4 LAY-IN FIXTURE	NORA LIGHTING	NPDBL-E24/334-W	3000K LED	LAY-IN	120	45	0-10V	OWNER	GC	
TL	LED TAPE LIGHT	WAC LIGHTING	INVISILED PRO 2 LED-TX2427-1-WT	2700K LED	SURFACE	24	4W/FT	PHASE	OWNER	GC	FURNISH WITH 100W REMOTE POWER SUPPLY, JOINER CABLES, CONNECTORS, CHANNELS AND CLIPS AS NECESSARY FOR A COMPLETE INSTALLATION.
T1	TRACK SYSTEM, HEAD AND LAMP	CONTECH LIGHTING	TRACK HEAD: CTL-603-P WHITE FINISH LAMPS & LT SERIES TRACK	TRACK LAMP: LED PAR20 6.5	TRACK	120	6.5	ELV	OWNER	GC	8 FT TRACK(S) IN WHITE FNISH W/ ALL POWER AND CONNECTION COMPONENTS INCLUDING: LT-9-P, LA-10P, LA-2-P, SUSPENSION COMPONENTS BY ELECTRICAL CONTRACTOR.
EMF	EXIT SIGN (FOH)	CONTECH LIGHTING	REXA-MF-G-EM-P	INTEGRAL LED	UNIVERSAL	120	3	N/A	OWNER	GC	GREEN LETTERS, UL 924 COMPLIANT WITH 90-MINUTE BATTERY BACKUP.
EMB	EXIT SIGN (BOH)	NORA LIGHTING	NX-603-LED/G	INTEGRAL LED	UNIVERSAL	120	2	N/A	OWNER	GC	GREEN LETTERS ON WHITE HOUSING, UL 924 COMPLIANT WITH 90-MINUTE BATTERY BACKUP.
EM2	EXTERIOR EGRESS FIXTURE	DUAL LITE	PGB-HTR	INTEGRAL LED	WALL	120	2	N/A	OWNER	GC	UL 924 COMPLIANT WITH 90-MINUTE BATTERY BACKUP.
EME	EMERGENCY LIGHT	CONTECH LIGHTING	EL2HALEDEM-P	INTEGRAL LED	REFER TO PLANS	120	4	N/A	OWNER	GC	UL 924 COMPLIANT WITH 90-MINUTE BATTERY BACKUP.

VOLTS: 208Y/120V
PHASES: 3
WIRES: 4
MOUNTING: RECESSED
ENCLOSURE: EXISTING

PANEL: P
MAINS: MCB
MAINS RATING: 200A
MCB RATING: 200A

CKT	CIRCUIT DESCRIPTION	BREAKER SIZE	TYPE NOTES	LOAD TYPE	CKT AMPS	KVA	PHASE	KVA	CKT AMPS	LOAD TYPE	TYPE NOTES	BREAKER SIZE	CIRCUIT DESCRIPTION	CKT
1	RTU-1 (3-#4, #10G. IN 1"C)	60/3	H	C	52.00	6.244	A	3.410	28.40	E	H	30/3	MAU-1 (3-#10, #10G. IN 3/4"C)	2
3						6.244	B	3.410		E				4
5						6.244	C	3.410		E				6
7	RTU-2 (3-#4, #10G. IN 1"C)			C		6.244	A	0.000	0.00			20/1	SPARE	8
9				C		6.244	B	0.000	0.00			20/1	SPARE	10
11				C		6.244	C	0.000	0.00			20/1	SPARE	12
13	AC-1 (3-#4, #10G. IN 1"C)	60/3	H	D	46.60	5.596	A	0.000	0.00			20/1	SPARE	14
15				D		5.596	B	0.000	0.00			20/1	SPARE	16
17				D		5.596	C	0.000	0.00			20/1	SPARE	18
19	SPARE	20/1			0.00	0.000	A	0.000	0.00			20/1	SPARE	20
21	SPARE	20/1			0.00	0.000	B	0.000	0.00			20/1	SPARE	22
23	SPARE	20/1			0.00	0.000	C	0.000	0.00			20/1	SPARE	24
25	SPARE	20/1			0.00	0.000	A	0.000	0.00			20/1	SPARE	26
27	SPARE	20/1			0.00	0.000	B	0.000	0.00			20/1	SPARE	28
29	SPARE	20/1			0.00	0.000	C	0.000	0.00			20/1	SPARE	30
31	SPARE	20/1			0.00	0.000	A	0.000	0.00			20/1	SPARE	32
33	SPARE	20/1			0.00	0.000	B	0.000	0.00			20/1	SPARE	34
35	SPARE	20/1			0.00	0.000	C	0.000	0.00			20/1	SPARE	36
37	SPARE	20/1			0.00	0.000	A	0.000	0.00			20/1	SPARE	38
39	SPARE	20/1			0.00	0.000	B	0.000	0.00			20/1	SPARE	40
41	SPARE	20/1			0.00	0.000	C	0.000	0.00			20/1	SPARE	42

CONNECTED LOADS

PHASE	KVA	AMPS
A:	21.495	178.99
B:	21.495	178.99
C:	21.495	178.99
TOTAL:	64.486	179.00

BREAKER OPTIONS
G - GFCI DEVICE
H - HACR DEVICE
L - LOCK ON HANDLE DEVICE

PANEL A LOAD SUMMARY

LOAD TYPE	DESCRIPTION	CONNECTED LOAD (KVA)	N.E.C. DEMAND FACTOR	ESTIMATED DEMAND (KVA)
A	INTERIOR LIGHTING	2.492	1.25	3.115
B	EXTERIOR LIGHTING	1.200	1.25	1.500
C	COMFORT COOLING	0.000	1.00	0.000
D	COMFORT HEATING	6.485	1.00	6.485
E	MISC. MOTOR	8.751	1.00	8.751
F	KITCHEN EQUIPMENT	42.307	0.65	27.500
G	RECEPTACLES	7.680	1.0< 10 KW + 0.5 REMAINING KW	7.680
H	WATER HEATER	0.400	1.00	0.400
I	TRACK LIGHTING	0.260	220.43(B) Exception 1	0.480
J	SHOW WINDOW LIGHTING	0.000	0.2kVA PER FOOT	0.000
	TOTAL (KVA):	69.574	TOTAL (KVA):	55.910
			TOTAL (AMP):	155.20

PANEL P LOAD SUMMARY

LOAD TYPE	DESCRIPTION	CONNECTED LOAD (KVA)	N.E.C. DEMAND FACTOR	ESTIMATED DEMAND (KVA)
A	INTERIOR LIGHTING	0.000	1.25	0.000
B	EXTERIOR LIGHTING	0.000	1.25	0.000
C	COMFORT COOLING	37.466	1.00	37.466
D	COMFORT HEATING	16.788	1.00	16.788
E	MISC. MOTOR	10.231	1.00	10.231
F	KITCHEN EQUIPMENT	0.000	0.65	0.000
G	RECEPTACLES	0.000	1.0< 10 KW + 0.5 REMAINING KW	0.000
H	WATER HEATER	0.000	1.00	0.000
I	TRACK LIGHTING	0.000	220.43(B) Exception 1	0.000
J	SHOW WINDOW LIGHTING	0.000	0.2kVA PER FOOT	0.000
	TOTAL (KVA):	64.486	TOTAL (KVA):	64.486
			TOTAL (AMP):	179.00

ELECTRICAL SERVICE SUMMARY

LOAD TYPE	DESCRIPTION	CONNECTED LOAD (KVA)	N.E.C. DEMAND FACTOR	ESTIMATED DEMAND (KVA)
A	INTERIOR LIGHTING	2.492	1.25	3.115
B	EXTERIOR LIGHTING	1.200	1.25	1.500
C	COMFORT COOLING	37.466	1.00	37.466
D	COMFORT HEATING	23.273	1.00	23.273
E	MISC. MOTOR	18.982	1.00	18.982
F	KITCHEN EQUIPMENT	42.307	0.65	27.500
G	RECEPTACLES	7.680	1.0< 10 KW + 0.5 REMAINING KW	7.680
H	WATER HEATER	0.400	1.00	0.400
I	TRACK LIGHTING	0.260	220.43(B) Exception 1	0.480
J	SHOW WINDOW LIGHTING	0.000	0.2kVA PER FOOT	0.000
	TOTAL (KVA):	134.061	TOTAL (KVA):	120.396
			TOTAL (AMP):	334.20

VOLTS: 208Y/120V
PHASES: 3
WIRES: 4
MOUNTING: RECESSED
ENCLOSURE: NEMA 1

PANEL: A
MAINS: MCB
MAINS RATING: 225A
MCB RATING: 200A

CKT	CIRCUIT DESCRIPTION	BREAKER SIZE	TYPE NOTES	LOAD TYPE	CKT AMPS	KVA	PHASE	KVA	CKT AMPS	LOAD TYPE	TYPE NOTES	BREAKER SIZE	CIRCUIT DESCRIPTION	CKT
1	RECEPTACLE - OFFICE	20/1		G	3.00	0.360	A	0.501	4.18	A		20/1	DINING LIGHTING	2
3	RECEPTACLE - OFFICE	20/1		G	3.00	0.360	B	0.260	2.17	I		20/1	DINING TRACK LIGHTING	4
5	RECEPTACLE - OFFICE	20/1		G	3.00	0.360	C	1.070	8.92	A		20/1	KITCHEN LIGHTING	6
7	SPARE	20/1			0.00	0.000	A	1.200	10.00	B		20/1	EXTERIOR SIGNAGE	8
9	DWH-1, DWH-2	20/1	G	H	3.33	0.400	B	0.500	4.17	A		20/1	LIGHTING CONTROL SYSTEM	10
11	CONVENIENCE RECEPT.	20/1		G	3.00	0.360	C	0.221	1.84	A		20/1	RESTROOM, EF-2, EF-3	12
13	SPARE	20/1			0.00	0.000	A	0.500	4.17	F		20/1	K-3 - WALK-IN POWER	14
15	K-22 - CARBONATOR	20/1	G	F	6.67	0.800	B	1.740	14.50	E	H	25/1	EF-1	16
17	HVAC RECEPTACLE	20/1		G	3.00	0.360	C	2.288	22.00	F	G	30/2	K-53 - FUTURE EQUIPMENT (2-#10, #10G. IN 3/4"C)	18
19	K-34 - RICE COOKER (2-#10, #10G. IN 3/4"C)	20/2	G	F	18.00	1.872	A	2.288						20
21				F		1.872	B	0.720	6.00	G		20/1	STOREFRONT RECEPT.	22
23	K-34 - RICE COOKER (2-#10, #10G. IN 3/4"C)	20/2	G	F	18.00	1.872	C	0.360	3.00	G		20/1	RECEPTACLE - PREP	24
25				F		1.872	A	0.360	3.00	G		20/1	RECEPTACLE - PREP	26
27	MENUBOARDS	20/1		G	10.00	1.200	B	1.800	15.00	F	G	20/1	K-14 - WAREWASHER	28
29	K-3A - EVAPORATOR	20/1		F	1.80	0.216	C	1.416	11.80	F	L	15/1	K-25 - ICE MAKER	30
31	AC-2 (3-#10, #10G. IN 1"C)	25/3	H	D	18.00	2.162	A	0.180	1.50	G	G	20/1	CO2 ALARM	32
33				D		2.162	B	0.156	1.30	F	G	20/1	K-21 - B.I.B.	34
35				D		2.162	C	0.900	7.50	G		20/1	STOREFRONT RECEPT.	36
37	SPARE	20/1			0.00	0.000	A	0.360	3.00	G		20/1	RECEPTACLE - PREP	38
39	SPARE	20/1			0.00	0.000	B	0.000	0.00			20/1	SPARE	40
41	SPARE	20/1			0.00	0.000	C	0.000	0.00			20/1	SPARE	42
	PANEL B FEED THRU (SEE RISER)				95.39	11.972	A							
						11.197	B							
						11.197	C							

CONNECTED LOADS

PHASE	KVA	AMPS
A:	23.626	196.74
B:	23.166	192.91
C:	22.781	189.70
TOTAL:	69.574	193.13

BREAKER OPTIONS
G - GFCI DEVICE
H - HACR DEVICE
L - LOCK ON HANDLE DEVICE

VOLTS: 208Y/120V
PHASES: 3
WIRES: 4
MOUNTING: RECESSED
ENCLOSURE: NEMA 1

PANEL: B
MAINS: MLO
MAINS RATING: 225A
MCB RATING: N/A

CKT	CIRCUIT DESCRIPTION	BREAKER SIZE	TYPE NOTES	LOAD TYPE	CKT AMPS	KVA	PHASE	KVA	CKT AMPS	LOAD TYPE	TYPE NOTES	BREAKER SIZE	CIRCUIT DESCRIPTION	CKT
1	K-84A - HOT WELL	20/1	G	F	5.00	0.600	A	0.295	2.46	F	G	20/1	K-42 - PREP REFRIGERATOR	2
3	SPARE	20/1			0.00	0.000	B	0.360	3.00	F	G	20/1	K-60 - TABLE POWER	4
5	K-90 - GAS GRIDDLE	20/1	G	F	1.67	0.200	C	0.000	0.00			20/1	SPARE	6
7	K-84C - COLD WELL	20/1	G	F	6.50	0.780	A	0.360	3.00	G	G	20/1	RECEPTACLE - CONVENIENCE	8
9	SPARE	20/1			0.00	0.000	B	0.420	3.50	F	G	20/1	K-59 - SANDWICH PREP	10
11	SPARE	20/1			0.00	0.000	C	0.000	0.00			20/1	SPARE	12
13	K-84D - COLD WELL	20/1	G	F	5.50	0.660	A	0.180	1.50	F	G	20/1	K-52 - KDS SYSTEM	14
15	K-43 - ELECTRIC OVEN (2-#4, #8G. IN 1"C)	70/2	H/L	F	50.00	5.200	B	1.800	15.00	F	G	20/1	K-41 - PITA PRESS	16
17				F		5.200	C	0.000	0.00			20/1	SPARE	18
19	SPARE	20/1			0.00	0.000	A	1.020	8.50	F	G	20/1	K-71 - BEVERAGE DISPENSER	20
21	K-28 - U.C. FRIDGE	20/1	G	F	2.50	0.300	B	0.000	0.00			20/1	SPARE	22
23	K-28 - U.C. FRIDGE	20/1	G	F	2.50	0.300	C	0.360	3.00	G	G	20/1	CONVENIENCE RECEPTACLE	24
25	K-41 - PITA PRESS	20/1	G	F	15.00	1.800	A	0.600	5.00	F	G	20/1	K-66 - ICE DISPENSER	26
27	SPARE	20/1			0.00	0.000	B	1.440	12.00	F	G	20/1	K-35 - SELF-SERVE MERCH.	28
29	FUTURE KDS	20/1	G	G	4.50	0.540	C	1.560	15.00	E	H	20/2	K-3B - CU-1 (2-#10, #10G. IN 3/4"C)	30
31	K-84B - HOT WELL	20/1	G	F	15.00	1.800	A	1.560		E				32
33	PRINTER	20/1	G	G	1.50	0.180	B	0.000	0.00			20/1	SPARE	34
35	K-57 - POS SYSTEM	20/1	G	G	3.00	0.360	C	0.300	2.50	F	G	20/1	K-72 - U.C. FRIDGE	36
37	K-71 - BEVERAGE DISPENSER	20/1	G	F	8.50	1.020	A	1.297		E				38
39	HOOD LIGHTING	20/1		A	1.67	0.200	B	1.297	10.80	E		20/3	BOOSTER PUMP P-1 (3-#10, #10G. IN 1"C)	40
41	K-27 - WARMING CABINET	20/1	G	F	9.00	1.080	C	1.297		E				42

CONNECTED LOADS

PHASE	KVA	AMPS
A:	11.972	99.69
B:	11.197	93.24
C:	11.197	93.24
TOTAL:	34.366	95.39

BREAKER OPTIONS
G - GFCI DEVICE
H - HACR DEVICE
L - LOCK ON HANDLE DEVICE

CONSULTANT:

EVERJ ENGINEERING, INC.
1509 BUCK TRAIL LANE
WORTHINGTON, OH 43085
614-349-8054
www.everjengineering.com

SEAL

STATE OF NEW YORK
JOSHUA A. EVERETT
106537
LICENSED PROFESSIONAL ENGINEER

02/28/2025

PROJECT

CAVA

CAVA - YONKERS
3100 XAVIER DR.
YONKERS, NY 10701

	DATE	DESCRIPTION
	07/09/2024	PERMIT/BID
1	08/02/2024	LL COMMENTS
2	08/19/2024	LL COMMENTS
	08/23/2024	PERMIT/BID SET
3	09/27/2024	HEALTH DEPT COMM
4	12/02/2024	DINING SENSORS MOVED
5	01/03/2025	BLDG DEPT COMMENT
6	02/04/2025	PC COMMENTS
7	02/28/2025	CONSTRUCTION SET

ELECTRICAL SCHEDULES

Date Modified:	08/02/2024
Date Created:	07/09/2024
Scale:	AS NOTED
Project No.:	230121
Drawn By:	JWH
Checked By:	JAE

E300

2/28/2025 2:00 PM

FOR QUESTIONS, CALL THE
Maryland Mechanical
REGION 76
PHONE: (800) 988 - 0881
EMAIL: reg76@econair.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#7234366

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"	1854	936	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	RIGHT	12"x60"x30"	TANK FS	4.0/4.0	DCV-1111	1 LIGHT 1 FAN	YES	1162 LBS

HOOD OPTIONS

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

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	RISER(S) TYPE	WIDTH	LENG	DIA	CFM	SP
1		Front	152"	22"	6"	MUA	8"	36"		618	0.171"
						MUA	8"	36"		618	0.171"
						MUA	8"	36"		618	0.171"
						AC	8"	26"		468	0.115"
						AC	8"	26"		468	0.115"

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.

(8) GREASE DUCT & CHIMNEY SPECIFICATIONS:
PROVIDE GREASE DUCT EQUAL TO ECON-AIR MODEL "EDW"
ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "EDW"
IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING
CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "EDW"
DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER
THE MANUFACTURES INSTALLATION GUIDE.
PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER.
PER MANUFACTURES LISTING MODEL "EDW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE
SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12".
DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE
ACCUMULATION IN HORIZONTAL RUNS.

IF THE DUCT OR CHIMNEY IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE
UL-2221 OR UL-103 HT LISTED DOUBLE WALL GREASE DUCT OR DOUBLE WALL CHIMNEY
EQUAL TO ECON-AIR MODEL "EDW- 2R, 2R TYPE HT, 3R, OR 3Z" ROUND 20 GAUGE 430
STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

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

HVAC DISTRIBUTION NOTE

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

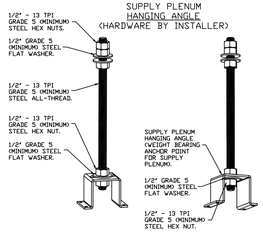
VERIFY CEILING HEIGHT

___' - ___"

HEIGHT REQUIRED TO VERIFY THAT HOOD FITS SPACE AND TO SIZE THE ENCLOSURE PANELS

CUSTOMER APPROVAL TO MANUFACTURE:

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



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.

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.

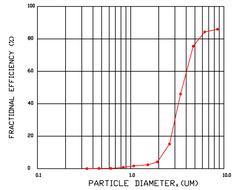
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

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

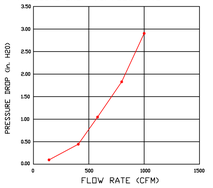
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

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

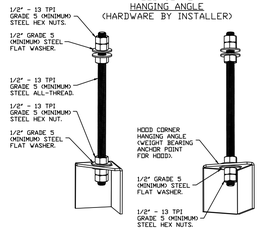


PRESSURE DROP VS. FLOW RATE



CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
NFPA #96.
NSF STANDARD #2.
UL STANDARD #1046.
INT. MECH. CODE (IMC).
ULC-S649.

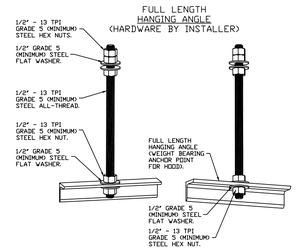
HOOD CORNER
HANGING ANGLE
(HARDWARE BY INSTALLER)



ASSEMBLY INSTRUCTIONS

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

FULL LENGTH
HANGING ANGLE
(HARDWARE BY INSTALLER)



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REVISIONS

	DESCRIPTION	DATE:
△		
△		
△		
△		

econ·air
www.econair.com
Maryland Mechanical
8120 Woodmont Avenue, Suite 720, Bethesda, MD, 20814 PHONE: (800) 988 - 0881 FAX: 9192275931 EMAIL: reg76@econair.com

Cava - Yonkers, NY_R2
3100 Xavier Drive,
Yonkers, NY, 10704

DATE: 12/18/2024
DWG.#: 7234366
DRAWN BY: JPH - 76
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 1

valerio

5858 Wilshire Blvd #200 T:323.954.8996
Los Angeles, CA 90036

381 Park Ave South #823 T:212.252.8996
New York, NY 10016

www.valerioinc.com info@valerioinc.com

SEAL

REGISTERED ARCHITECT NICOLO VALERIO LIC. NO. 030317-1 STATE OF NEW YORK

PROJECT

CAVA

CAVA - YONKERS

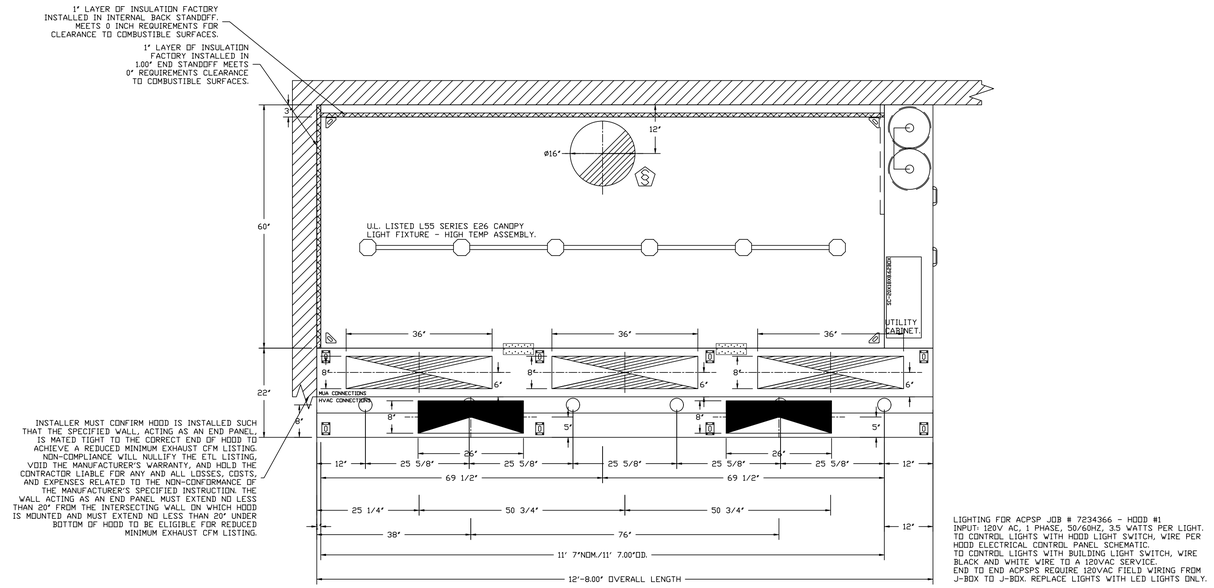
3100 XAVIER DR
YONKERS, NY 10701 UNITED STATES

	DATE	DESCRIPTION
△	07/09/24	LL PERMIT SET
1	08/02/24	LL COMMENTS
2	08/19/24	LL COMMENTS
△	08/23/24	PERMIT / BID SET
3	09/27/24	HEALTH COMMENTS
4	11/06/24	REVISED BID SET
5	01/03/25	2ND BUILDING SUBMITTAL
6	02/04/25	PC COMMENTS
7	02/28/25	CONSTRUCTION SET

Kitchen Hood Drawings

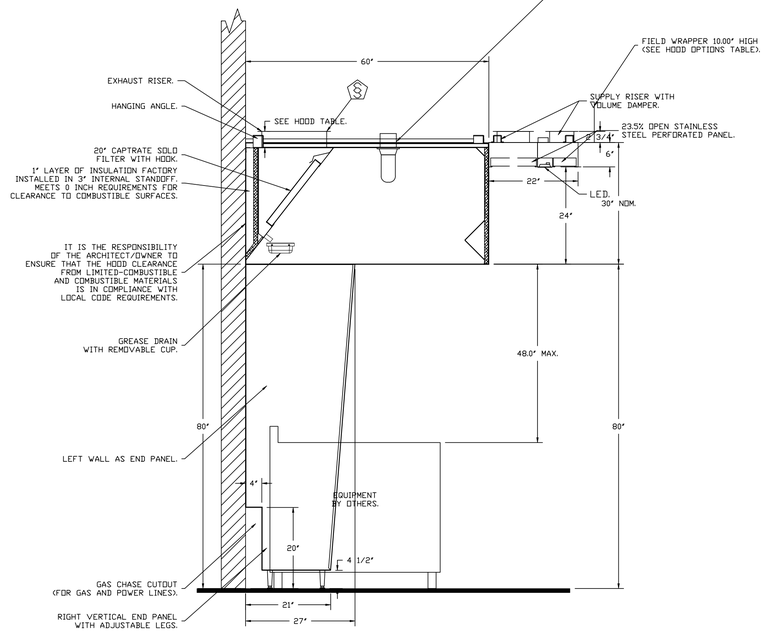
Date Modified:
Date Created: 01-17-24
Scale: N.T.S.
Project No.: 3464-23-209
Drawn By: MV
CAD File: 3464- 250228_Construction Set_NG.vwx

A9.1
5



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

ACPSP SHIPS LOOSE FOR FIELD INSTALLATION



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

REVISIONS

	DESCRIPTION	DATE:
1		
2		
3		
4		

econ·air
Maryland Mechanical
www.econair.com
8120 Woodmont Avenue, Suite 720, Bethesda, MD, 20814 PHONE: (800) 988 - 0881 FAX: 9192275931 EMAIL: reg796@econair.com

Cava - Yonkers, NY_R2
3100 Xavier Drive,
Yonkers, NY, 10704

DATE: 12/18/2024

DWG.#: 7234366

DRAWN BY: JPH - 76

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

MASTER DRAWING

SHEET NO. 2

valerio
5858 Wilshire Blvd #200 T:323.954.8996
Los Angeles, CA 90036
381 Park Ave South #823 T:212.252.8996
New York, NY 10016
www.valerioinc.com info@valerioinc.com

SEAL

REGISTERED ARCHITECT NICCOLO VALERIO LIC. NO. 030317-1 STATE OF NEW YORK

PROJECT

CAVA

CAVA - YONKERS

3100 XAVIER DR
YONKERS, NY 10701 UNITED STATES

	DATE	DESCRIPTION
	07/09/24	LL PERMIT SET
1	08/02/24	LL COMMENTS
2	08/19/24	LL COMMENTS
	08/23/24	PERMIT / BID SET
3	09/27/24	HEALTH COMMENTS
4	11/06/24	REVISED BID SET
5	01/03/25	2ND BUILDING SUBMITTAL
6	02/04/25	PC COMMENTS
7	02/28/25	CONSTRUCTION SET

Kitchen Hood Drawings

Date Modified:
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Project No.: 3464-23-209
Drawn By: MV
CAD File: 3464- 250228_Construction Set_NG.vwx

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FIRE SYSTEM INFORMATION – JOB#7234366

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 RIGHT	RIGHT, HOOD 1

GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		SC ELECTRICAL	2.000	ECON-AIR

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 MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
		0 – 0 – TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE 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 – OL-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.

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

JOB #: 7234366.
JOB NAME: CAVA – YONKERS, NY_R2.

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.

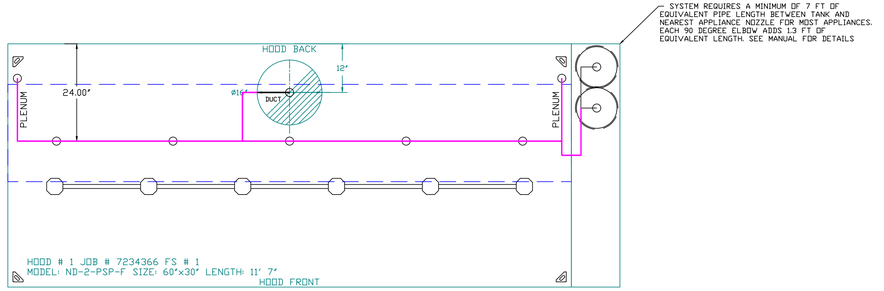
- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

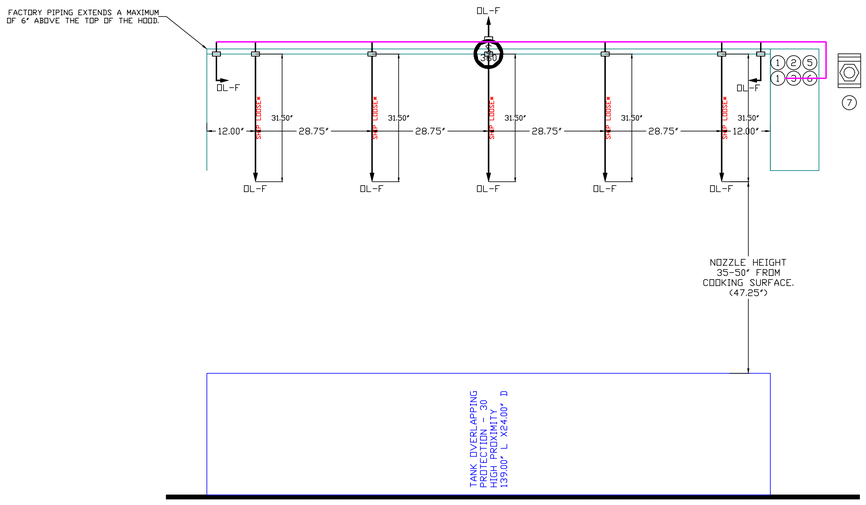
AGENT DISTRIBUTION PIPING LIMITATIONS	
PIPE SECTION	MAX PIPE LENGTH (FT)
MAX SUPPLY LINE TO FIRST OVERLAPPING NOZZLE	42
OVERLAPPING NOZZLE APPLIANCE BRANCH	10
DEDICATED NOZZLE APPLIANCE BRANCH	10

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.





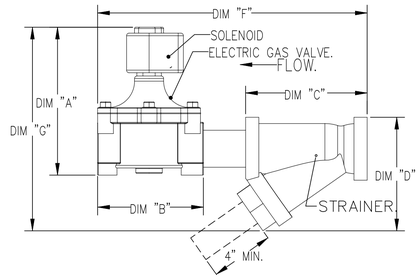
GAS VALVES AND STRAINERS

	GAS VALVE SIZING						GAS VALVE DIMENSIONS						INSTALLATION	PART NUMBERS		
	TYPE	SIZE	VOLTAGE	MIN. INLET PRESSURE	MAX. INLET PRESSURE	FLOW AT 1 IN.W.C. DROP NATURAL GAS	FLOW AT 1 IN.W.C. DROP PROPANE	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "F"	DIM "G"	PIPE ORIENTATION	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)$^{0.5}$.



REVISIONS

	DESCRIPTION	DATE:
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econ·air
www.econair.com
Maryland Mechanical
8120 Woodmont Avenue, Suite 720, Bethesda, MD, 20814 PHONE: (800) 988 - 0981 FAX: 9192275931 EMAIL: reg766@econair.com

Cava – Yonkers, NY_R2
3100 Xavier Drive,
Yonkers, NY, 10704

DATE: 12/18/2024

DWG.#: 7234366

DRAWN BY: JPH – 76

SCALE: 3/4" = 1'–0"

MASTER DRAWING

SHEET NO. 3

valerio
5858 Wilshire Blvd #200 T:323.954.8996
Los Angeles, CA 90036
381 Park Ave South #823 T:212.252.8996
New York, NY 10016
www.valerioinc.com info@valerioinc.com

SEAL

REGISTERED ARCHITECT NICCOLO VALERIO LIC. NO. 030317-1 STATE OF NEW YORK

PROJECT

CAVA

CAVA - YONKERS

3100 XAVIER DR
YONKERS, NY 10701 UNITED STATES

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EXHAUST FAN INFORMATION – JOB#7234366

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	DUBSHFA	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#7234366

FAN INFORMATION										ELECTRICAL INFORMATION					COOLING INFORMATION											GAS HEAT INFORMATION					A2L MINIMUM ROOM VOLUME			
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)	NOTES
																DB	WB	DB	WB	DB	WB	DP	TOTAL	SENS.									
2	MAU	1	EARTU1-1200-15-ST-MPU	ECON-AIR	15P-1	0	1854	1854	1210	0.750	2.00	3	208	28.4A	30A	85.5°F	76.1°F	85.5°F	76.1°F	69.9°F	66.9°F	65.6°F	64.0 MBH	30.2 MBH	17.9	6.1	NATURAL	173185	140280	65°F	7 IN. W.C. – 14 IN. W.C.	235	423	7.2	1,2,3,4,5,6,7,8,9,10,11,12,13,14

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. 1" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-4.3 INSULATION-MINIMUM 24GA EXTERIOR W/ 18GA BASE
13. DOWN DISCHARGE/NO RETURN
14. 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 ECPMD3 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	TOTAL CFM MONITORING
		1	INTAKE FIRESTAT SET TO 135°F
		1	FREEZESTAT
		1	DISCHARGE FIRESTAT SET TO 240°F
		1	SHIP LOOSE GAS STRAINER 3/4"
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
		1	2" MERV 13 FILTERS FOR RTU1 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU1 (QTY. 4)
		1	RTU1 DOWN DISCHARGE
		1	RTU1 CURB DUCT HANGER
		1	120V FIRE INPUT
		1	RTU BLOWER DOOR SWITCH
		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 TON MODULATING COOLING OPTION, 208/230V. R454B REFRIGERANT, VARIABLE SPEED COMPRESSOR, DL ECM CONDENSING FAN
		1	R454B LEAK DETECTOR OPTION FOR RTUS
		1	RTU1 NO RETURN - 100% OA - MPU
		1	RTU FIXED 100% OA INTAKE CONTROL
		1	SIZE 1 MOISTURE ELIMINATOR FOR SIZE 1, 5 TON RTU. NO REHEAT
		1	UNIT MOUNTED VFD CONFIGURED FOR DCV
		1	LOAD REACTOR MOUNTED IN FAN
		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

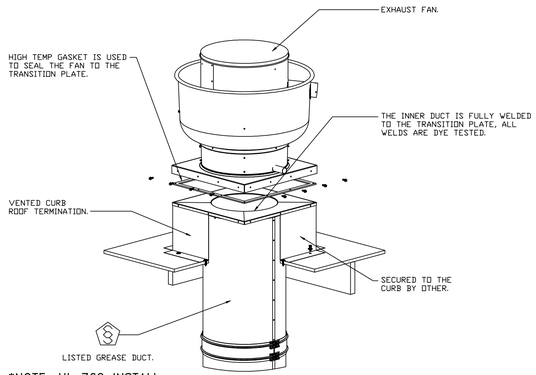
FAN ACCESSORIES

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	41 LBS	CURB	23.000"W X 23.000"L X 24.000"H VENTED HINGED.
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



*NOTE: UL 762 INSTALL.

(5) GREASE DUCT & CHIMNEY SPECIFICATIONS:
PROVIDE GREASE DUCT EQUAL TO ECON-AIR MODEL "EDW"
ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "EDW"
IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING
CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "EDW"
DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER
THE MANUFACTURES INSTALLATION GUIDE.
PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER.
PER MANUFACTURES LISTING MODEL "EDW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE
SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12".
DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE
ACCUMULATION IN HORIZONTAL RUNS.

IF THE DUCT OR CHIMNEY IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE
UL-2221 OR UL-103 HT LISTED DOUBLE WALL GREASE DUCT OR DOUBLE WALL CHIMNEY
EQUAL TO ECON-AIR MODEL "EDW- 2R, 2R TYPE HT, 3R, OR 3Z" ROUND 20 GAUGE 430
STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

CUSTOMER APPROVAL TO MANUFACTURE:

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

REVISIONS

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econ·air
www.econair.com
Maryland Mechanical
8120 Woodmont Avenue, Suite 720, Bethesda, MD, 20814 PHONE: (800) 988 - 0981 FAX: 9192275931 EMAIL: reg76@econair.com

Cava - Yonkers, NY_R2
3100 Xavier Drive,
Yonkers, NY, 10704

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valerio
5858 Wilshire Blvd #200 T:323.954.8996
Los Angeles, CA 90036
381 Park Ave South #823 T:212.252.8996
New York, NY 10016
www.valerioinc.com info@valerioinc.com

SEAL

REGISTERED ARCHITECT NICOLO VALERIO LIC. NO. 030317-1 STATE OF NEW YORK

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CAVA

CAVA - YONKERS

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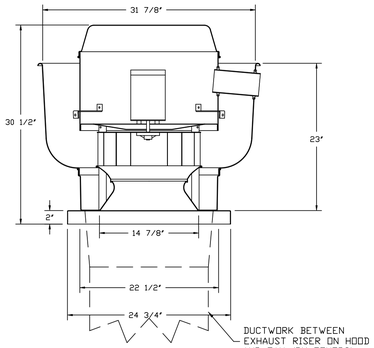
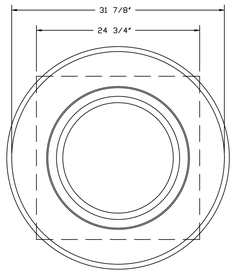
FAN #1 DUB5HFA - EXHAUST FAN (KEF)





TOP VIEW

FEATURES:

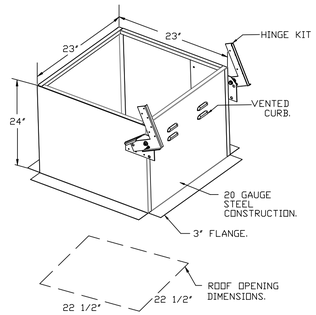
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).

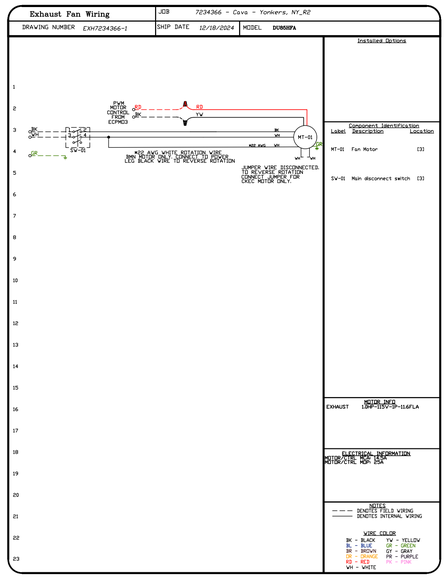
- NEMA 3R SAFETY DISCONNECT SWITCH.

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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Cava - Yonkers, NY_R2
3100 Xavier Drive,
Yonkers, NY, 10704

DATE: 12/18/2024

DWG.#: 7234366

DRAWN BY: JPH - 76

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

MASTER DRAWING

SHEET NO. 5

REVISIONS

	DESCRIPTION	DATE:
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SEAL

PROJECT

CAVA

CAVA - YONKERS

3100 XAVIER DR
YONKERS, NY 10701 UNITED STATES

△	DATE	DESCRIPTION
	07/09/24	LL PERMIT SET
1	08/02/24	LL COMMENTS
2	08/19/24	LL COMMENTS
	08/23/24	PERMIT / BID SET
3	09/27/24	HEALTH COMMENTS
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6	02/04/25	PC COMMENTS
7	02/28/25	CONSTRUCTION SET

Kitchen Hood Drawings

Date Modified:
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Project No.: 3464-23-209
Drawn By: MV
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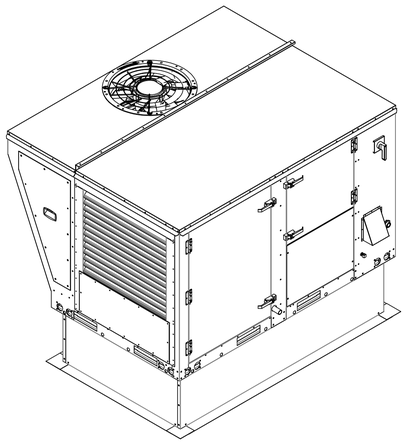
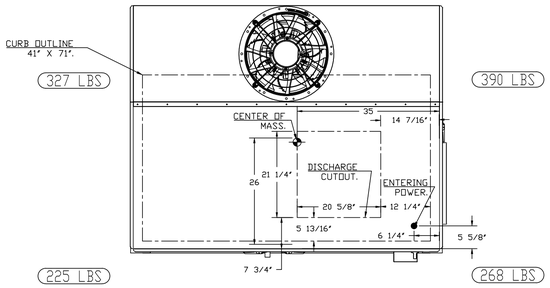
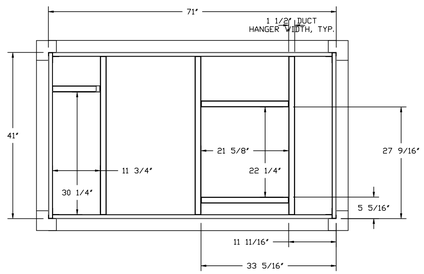
FAN #2 EARTU1-I.200-15-5T-MPU - HEATER (MAU)

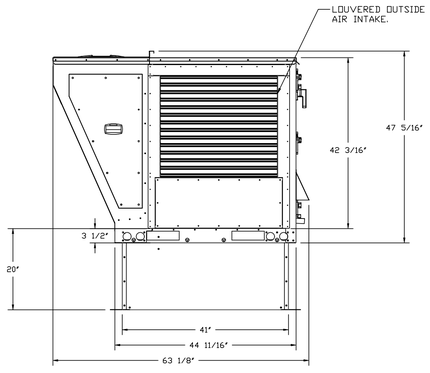
NOTES:
1. DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
2. ( ) DENOTES CORNER WEIGHT.
3. ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.
4. CONNECTION FROM BREAKER TO UNITS SAFETY DISCONNECT SWITCH TO BE COPPER WIRE ONLY.
5. EXTERIOR GAS CONNECTION PROVIDED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

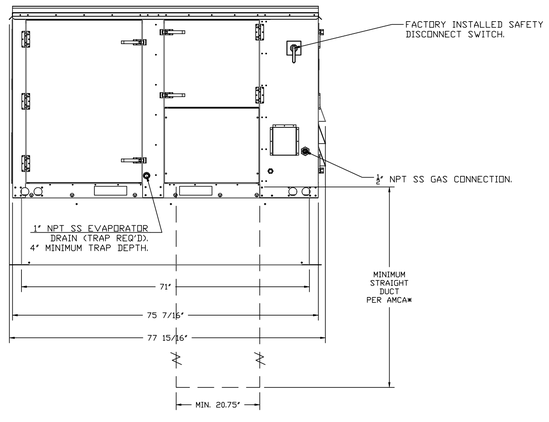
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE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

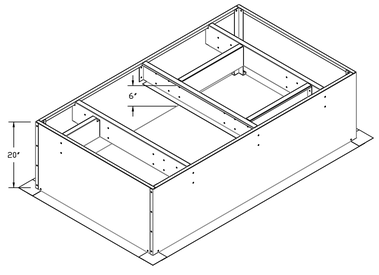












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DWG.#: 7234366

DRAWN BY: JPH - 76

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

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valerio
5858 Wilshire Blvd #200 T:323.954.8996
Los Angeles, CA 90036
381 Park Ave South #823 T:212.252.8996
New York, NY 10016
www.valerioinc.com info@valerioinc.com

SEAL

REGISTERED ARCHITECT NICCOLO VALERIO LIC. NO. 030317-1 STATE OF NEW YORK

PROJECT

CAVA

CAVA - YONKERS

3100 XAVIER DR
YONKERS, NY 10701 UNITED STATES

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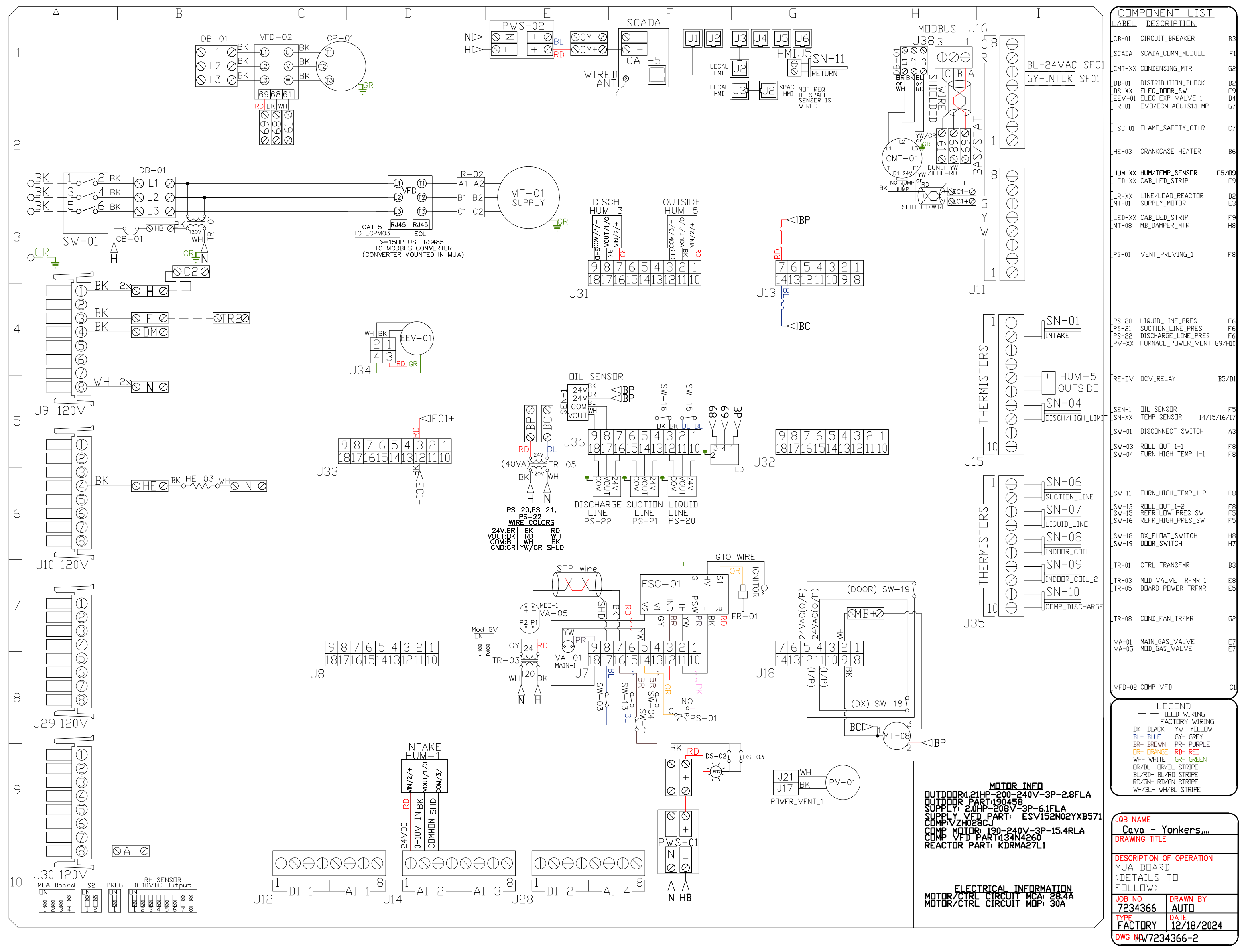

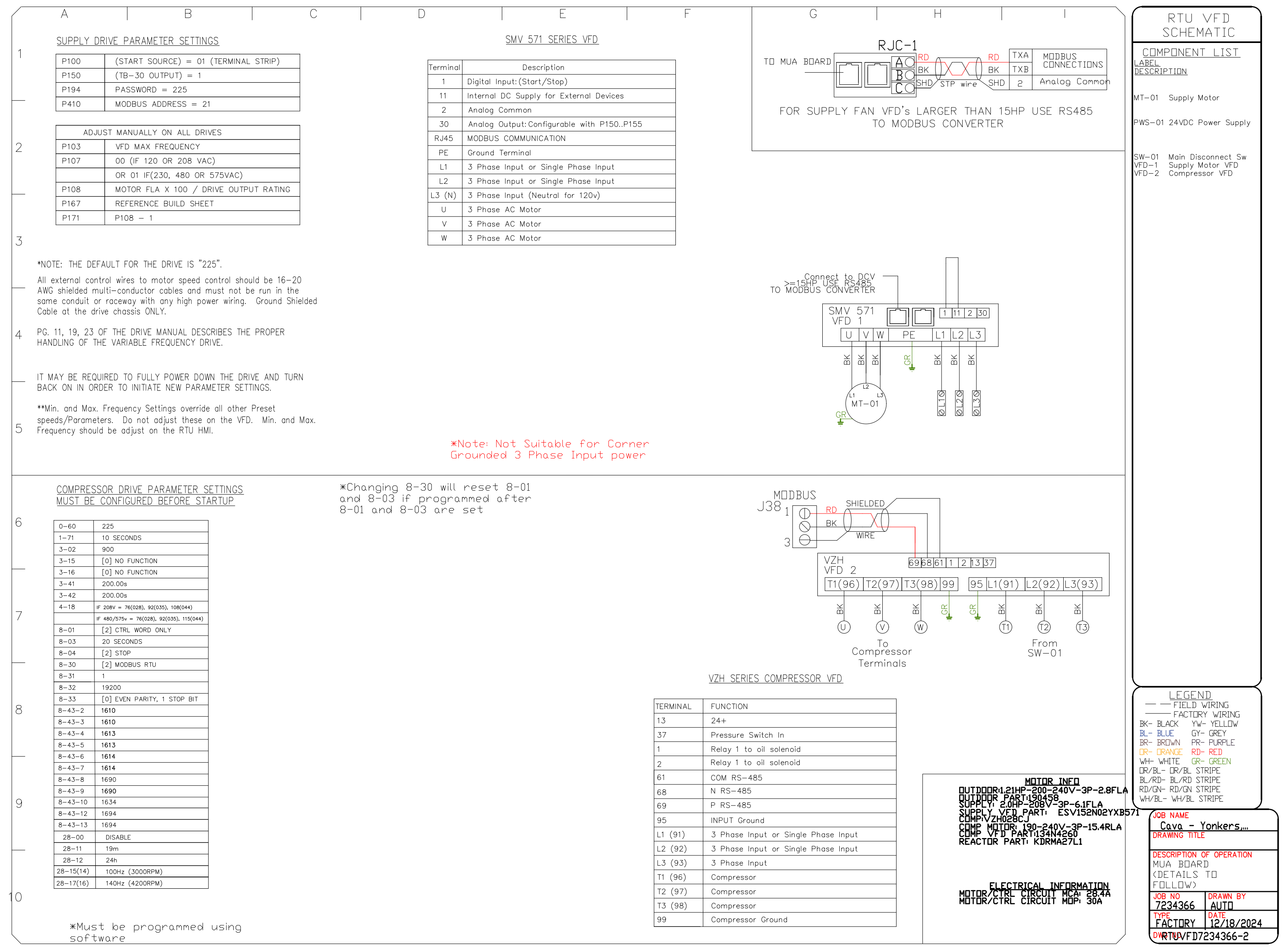

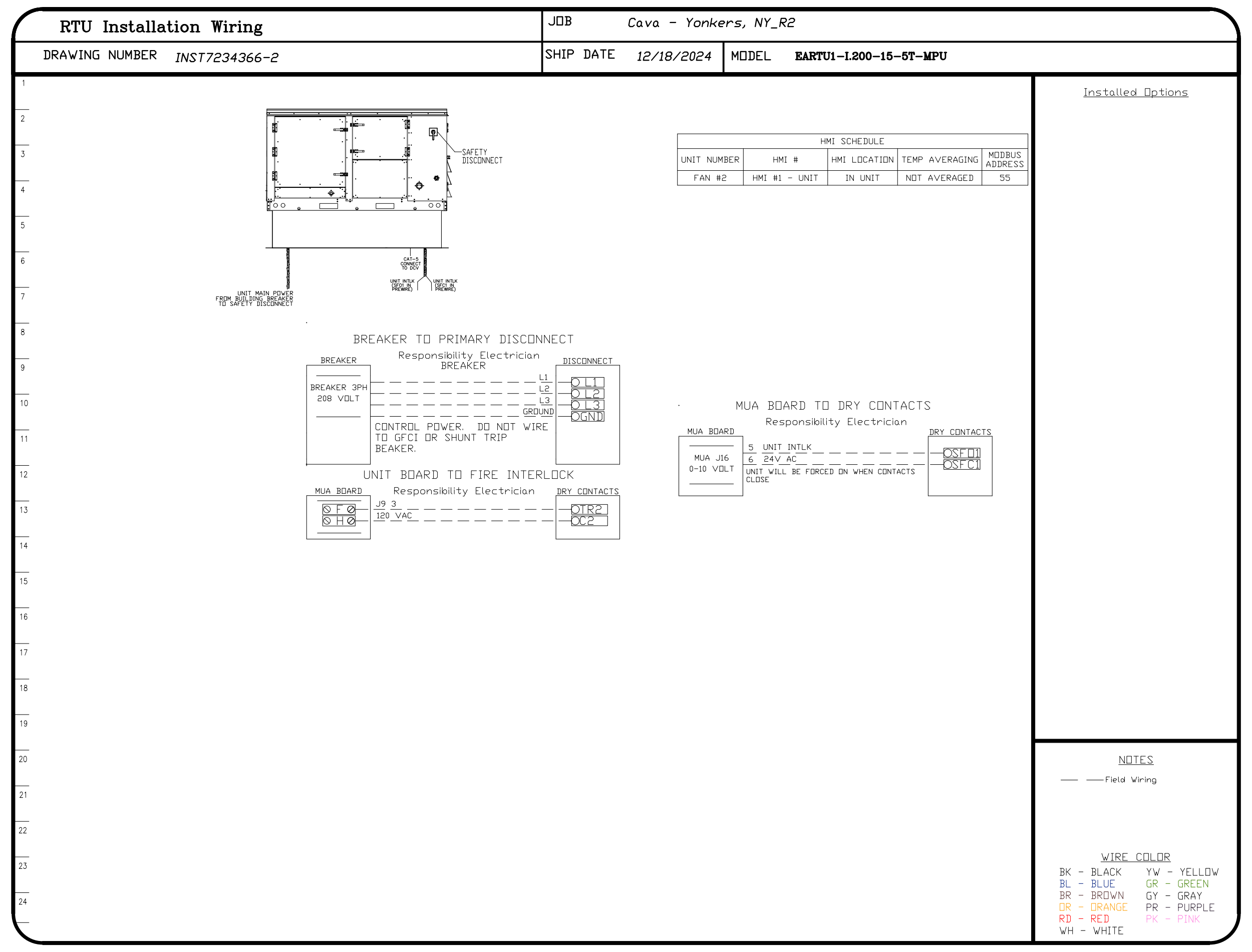

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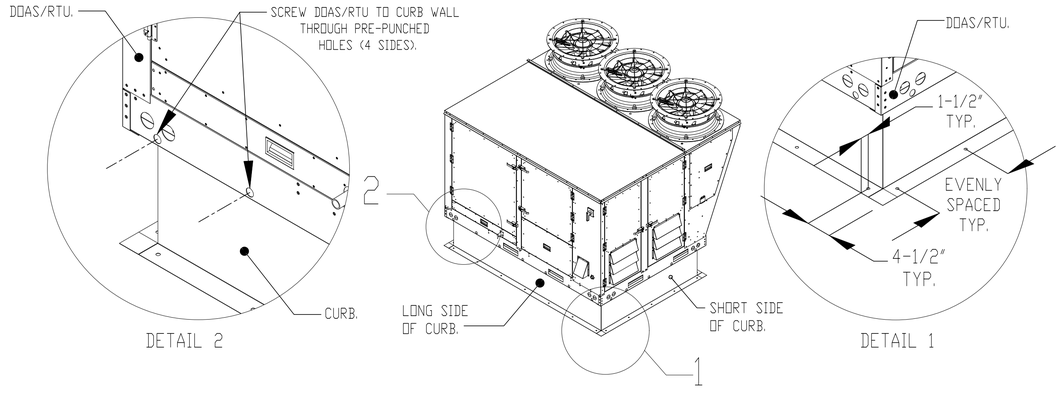
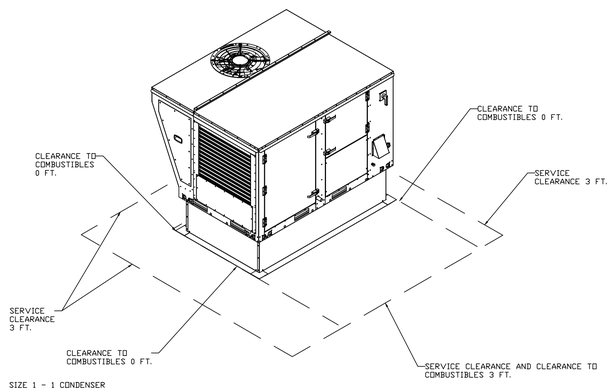
TYPICAL DOAS/RTU ROOF MOUNTING INSTALLATION INSTRUCTIONS

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.

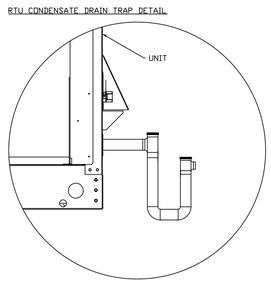
2. SECURE THE UNIT BASE TO THE SIDE WALLS OF THE CURB USING (24) 1/4"-14 X 2" SELF-DRILLING, STEEL ZINC PLATED SCREWS. PRE-PUNCHED HOLES HAVE BEEN PROVIDED FOR EACH SCREW LOCATION.

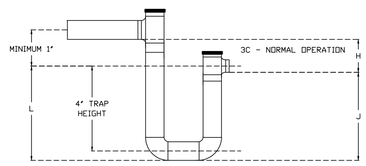




SIZE 1 - 1 CONDENSER

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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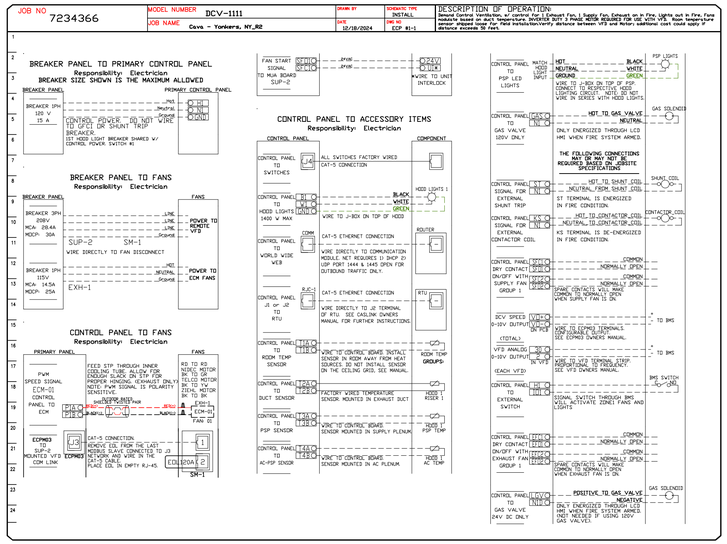
ELECTRICAL PACKAGE – JOB#7234366

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	Φ	HP	VOLT	FLA
1		DCV-1111	UTILITY CABINET RIGHT	UTILITY CABINET RIGHT	1 LIGHT	SMART CONTROLS DCV	KEF	EXHAUST	1	1.000	115	11.6
				HOOD # 1	1 FAN		MAU	SUPPLY	3	2.000	208	6.1

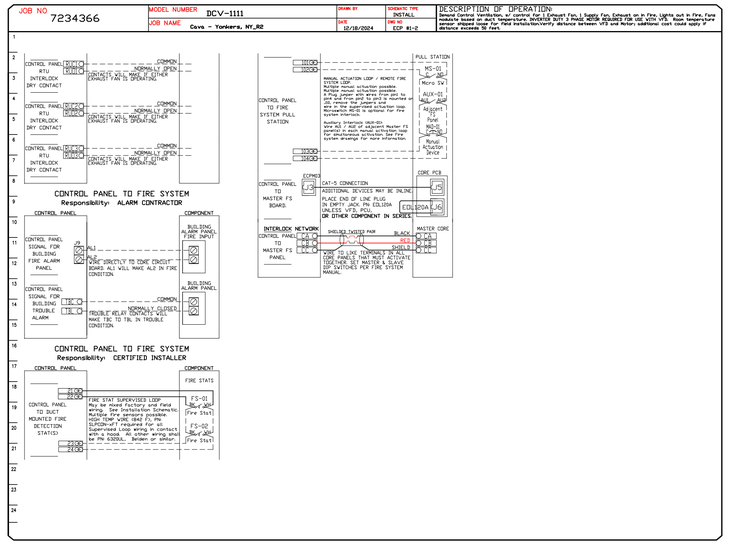
JOB NO 7234366 | MODEL NUMBER DCV-1111 | JOB NAME Cava – Yonkers, NY_R2 | DRAWN BY | DATE 12/18/2024 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-1

DESCRIPTION OF OPERATION:
Demand Control Ventilation, w/ control for 1 Exhaust Fan, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Fans outside based on duct temperature, INVERTER SUPPLY MODEL MUST BE PURCHASED FOR USE WITH VFD. Room temperature sensors, Field installation/evenly distance between VFD and Motor; additional cost could apply if distance exceeds 50 feet.



JOB NO 7234366 | MODEL NUMBER DCV-1111 | JOB NAME Cava – Yonkers, NY_R2 | DRAWN BY | DATE 12/18/2024 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-2

DESCRIPTION OF OPERATION:
Demand Control Ventilation, w/ control for 1 Exhaust Fan, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Fans outside based on duct temperature, INVERTER SUPPLY MODEL MUST BE PURCHASED FOR USE WITH VFD. Room temperature sensors, Field installation/evenly distance between VFD and Motor; additional cost could apply if distance exceeds 50 feet.



JOB NO 7234366 | MODEL NUMBER DCV-1111 | JOB NAME Cava – Yonkers, NY_R2 | DRAWN BY | DATE 12/18/2024 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-3

DESCRIPTION OF OPERATION:
Fire System W/ TANK FS – 45/45.

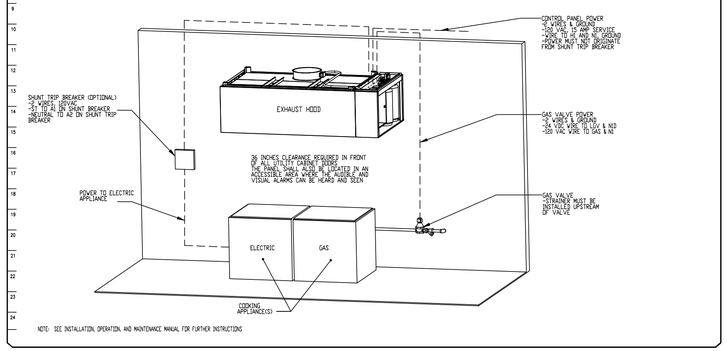
TANK PROTECTION ELECTRICAL DETAIL

02/10/2021 Rev. 2

FS-1: MASTER

ELECTRICIAN
1. WIRE MAIN CONTROL PANEL PER INCLUDED SCHEMATIC
2. WIRE PC1, FANS PER INCLUDED SCHEMATIC
3. WIRE SHUNT TRIP BREAKER (OPTIONAL)
4. WIRE GAS 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 & NI	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	HI & NI + GROUND	CIRCUIT BREAKER	120 VAC	15 AMPS	CONTROL PANEL POWER MUST NOT BE RUN THROUGH SHUNT TRIP BREAKER
LOS APPLIANCE KILL SWITCH (OPTIONAL)	KTS & NI	KTS & NI	120 VAC	< 4 AMPS	KILL SWITCH TERMINALS MUST BE IN SERIES WITH OTHER KILL SWITCHES
REMOTE 120VAC ANSUL AUTOMAN (OPTIONAL)	AUL, AUR	SOLENOID	120 VAC	< 6 AMPS	120V TO AUL, AUR TO ANSUL ELECTRIC AUTOMAN, ANSUL SOLENOID TO NEUTRAL
GAS VALVE	LGV & NGI (IF 24 VDC) GAS & NI (IF 120 VAC)	RED/RED/GREEN	24 VDC OR 120 VAC	< 1.0 AMPS	IF 24 VDC – 2 WIRES & GROUND (NO 3D SEE 12-2 TO SEE 3WG GREEN TO GROUND IF 120 VAC – 2 WIRES & GROUND GAS 1S RED, NI TO RED, AND GREEN TO GROUND



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

JOB NO 7234366 | MODEL NUMBER DCV-1111 | JOB NAME Cava – Yonkers, NY_R2 | DRAWN BY | DATE 12/18/2024 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-4

DESCRIPTION OF OPERATION:
Fire System W/ TANK FS – 45/45.

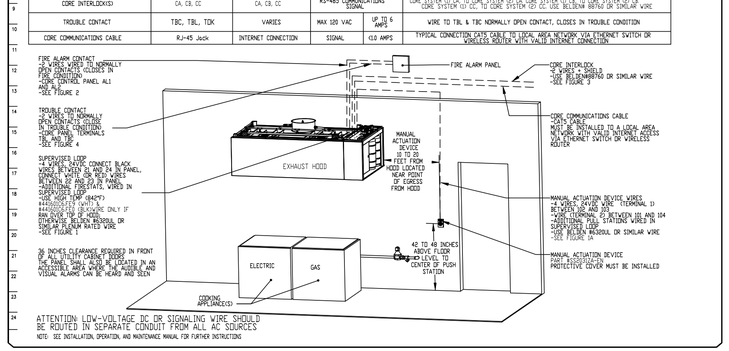
TANK PROTECTION LOW-VOLTAGE DETAIL

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. CONNECT FINAL DEVICE TO 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 ETI-402018
REMOTE FIRESTAT SENSOR(S)	D1 AND D4 D2 AND D3	BLACK AND WHITE	24 VDC	< 1.0 AMPS	WIRE FIRE SENSOR UNITS WIRED BETWEEN HEDD CORE PANEL TERMINALS D1 AND D4 AND D2 AND D3 HIGH TEMP WIRE 1848 FT, PN 1848-22-1000-FT-RED. USE SUPERVISED LOOP WIRING IN CONDUIT WITH A HOOD. ALL OTHER WIRING SHOULD BE FPL ELSOLL, Belden or similar.
FIRE ALARM CONTACT	ALI, ALC	VARIES	30V 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 1ST CC, TO CORE SYSTEM 1ST CC USE BELDEN# 8870U OR SIMILAR WIRE
TROUBLE CONTACT	TBC, TBI, TCK	VARIES	MAX 120 VAC	UP TO 6 AMPS	WIRE TO TBI, & TBC NORMALLY OPEN CONTACT, CLOSES IN TROUBLE CONDITION
CORE COMMUNICATIONS CABLE	RJ-45 Jack	INTERNET CONNECTION	SIGNAL	<1.0 AMPS	TYPICAL CONNECTION CATS 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

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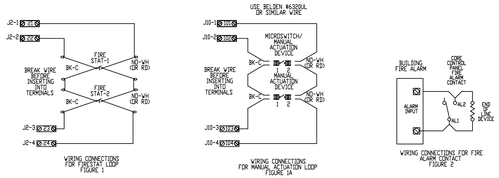
JOB NO 7234366 | MODEL NUMBER DCV-1111 | JOB NAME Cava - Yonkers, NY R2 | DRAWN BY | DATE 12/18/2024 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-5

DESCRIPTION OF OPERATION:
Fire System #1 TANK FS - 40/48.

TANK PROTECTION LOW-VOLTAGE FIGURES

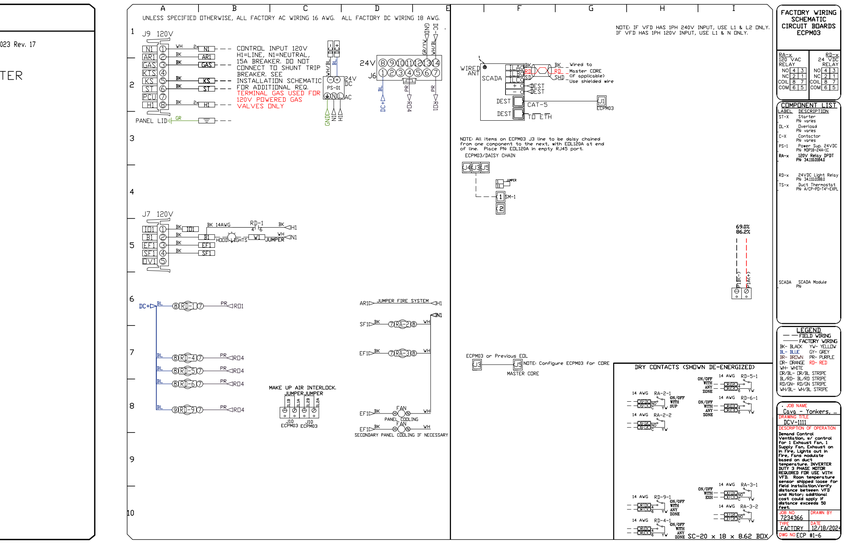
10/01/2023 Rev. 17

FS-1: MASTER



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 ECPMO3

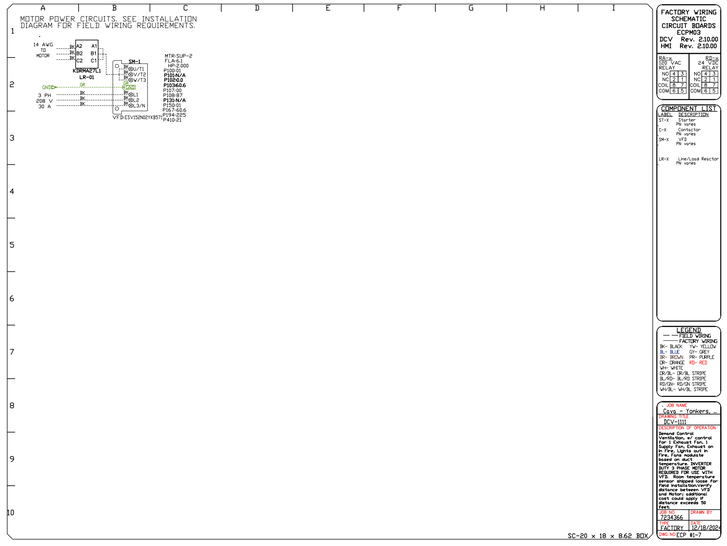
RA-1 24 VAC RELAY
NC 1 1 NO
NC 2 2 NC
COM 3 3 COM
NO 4 4 COM

RA-2 24 VDC RELAY
NC 1 1 NO
NC 2 2 NC
COM 3 3 COM
NO 4 4 COM

COMPONENT LIST
LABEL DESCRIPTION
MA-1 Manual Activation PN 90-02
PCB-2 Main PCB PN ECPCB-MP
PS-1R/2R CORE POWER SUPPLY PN ESD-ECPSU
VS-1 Vacuum Solenoid PN 90-01
LT-1R 24V Red Ind. Light PN 16MM-24RED
LL-1R Sump Level Sensor PN 46050
AA-1R Audible Alarm PN 16MM-24APSQ
PB-1R Press/Reset Switch PN 16MM-2TMD2RS
SV-1R 24VDC Solenoid Valve PN 120VAC
SV-2R Tamper Switch PN 16MM-2TMD2
SF-1 Switched Fuse PN 1080-SMI
EV-1 24VDC 3/4 Gas Valve PN 4-20
TS-1R Duct Fire Sensor PN 16MM-2TMD2RS
LT-1R 24V TLM Ind. Light PN W-16MOD-RD-24
PS-1R Pressure Switch PN 120VAC-5PSI-DPDT
PVS-1R 24VDC Power Supply PN EPSU 3A #5069
ED-1R 24VDC Process Relay PN RUP-P24DUT
PS Pressure Switch PN 120/MEDIUM

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

Cava - Yonkers, NY R2
ECPMO3
DCV-1111
DESCRIPTION OF OPERATION:
Demand Control Ventilation control for 3 exhaust fan, 1 supply fan system with VFD. Up to 6 make up air units. Includes fire, fume activate and low temperature. INVERTER DUTY MOTORS ARE REQUIRED FOR USE WITH VFD. Room temperature sensors must be used. Hard wall/ceiling distance between VFD and temperature sensor should not exceed 50 feet.
JOB NO 7234366 DRAWN BY
FACTORY 12/18/2024
DWG NO ECP #1-6



FACTORY WIRING SCHEMATIC CIRCUIT BOARDS ECPMO3
DCV Rev. 2.10.00
HMI Rev. 2.10.00

RA-1 24 VAC RELAY
NC 1 1 NO
NC 2 2 NC
COM 3 3 COM
NO 4 4 COM

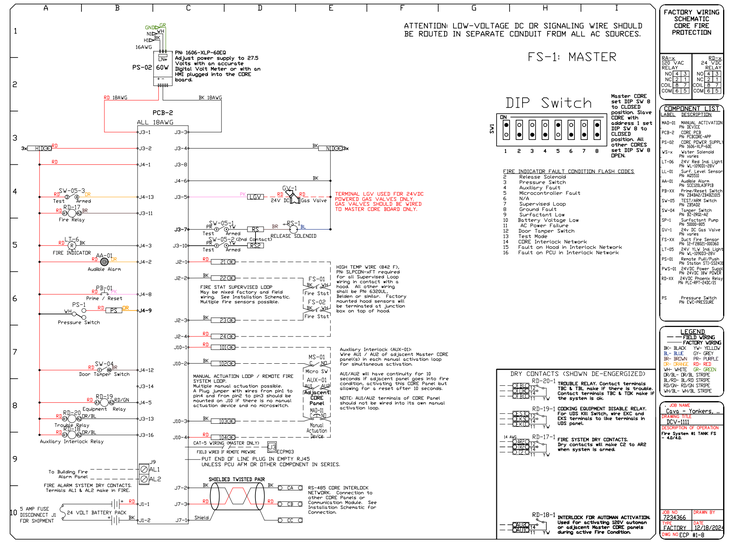
RA-2 24 VDC RELAY
NC 1 1 NO
NC 2 2 NC
COM 3 3 COM
NO 4 4 COM

COMPONENT LIST
LABEL DESCRIPTION
ET-1 Starter PN varies
C-1 Contactor PN varies
DM-1 VFD PN varies
LR-1 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
GN- GREEN WH- WHITE
BK/BL- BK/BL STRIPE
BL/RD- BL/RD STRIPE
RD/GN- RD/GN STRIPE
WH/BL- WH/BL STRIPE

Cava - Yonkers, NY R2
ECPMO3
DCV-1111
DESCRIPTION OF OPERATION:
Demand Control Ventilation control for 3 exhaust fan, 1 supply fan system with VFD. Up to 6 make up air units. Includes fire, fume activate and low temperature. INVERTER DUTY MOTORS ARE REQUIRED FOR USE WITH VFD. Room temperature sensors must be used. Hard wall/ceiling distance between VFD and temperature sensor should not exceed 50 feet.
JOB NO 7234366 DRAWN BY
FACTORY 12/18/2024
DWG NO ECP #1-7

SC-20 x 18 x 8.62 BOX



FACTORY WIRING SCHEMATIC CORE FIRE PROTECTION

RA-1 24 VAC RELAY
NC 1 1 NO
NC 2 2 NC
COM 3 3 COM
NO 4 4 COM

RA-2 24 VDC RELAY
NC 1 1 NO
NC 2 2 NC
COM 3 3 COM
NO 4 4 COM

COMPONENT LIST
LABEL DESCRIPTION
MA-01 MANUAL ACTIVATION PN 90-02
PCB-2 Main PCB PN ECPCB-MP
PS-02 CORE POWER SUPPLY PN ESD-ECPSU
VS-1 Vacuum Solenoid PN 90-01
LT-1R 24V Red Ind. Light PN 16MM-24RED
LL-01 Sump Level Sensor PN 46050
AA-01 Audible Alarm PN 16MM-24APSQ
PB-1R Press/Reset Switch PN 16MM-2TMD2RS
SV-05 24VDC Solenoid Valve PN 120VAC
SV-04 Tamper Switch PN 16MM-2TMD2
SF-1 Switched Fuse PN 1080-SMI
EV-1 24VDC 3/4 Gas Valve PN 4-20
TS-1R Duct Fire Sensor PN 16MM-2TMD2RS
LT-1R 24V TLM Ind. Light PN W-16MOD-RD-24
PS-01 Pressure Switch PN 120VAC-5PSI-DPDT
PVS-01 24VDC Power Supply PN EPSU 3A #5069
ED-01 24VDC Process Relay PN RUP-P24DUT
PS Pressure Switch PN 120/MEDIUM

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

Cava - Yonkers, NY R2
ECPMO3
DCV-1111
DESCRIPTION OF OPERATION:
Fire System #1 TANK FS - 40/48.
JOB NO 7234366 DRAWN BY
FACTORY 12/18/2024
DWG NO ECP #1-8

econ·air
www.econair.com
Maryland Mechanical
8120 Woodmont Avenue, Suite 720, Bethesda, MD, 20814 PHONE: (800) 988 - 0881 FAX: 8192275931 EMAIL: reg76@econair.com

REVISIONS

	DESCRIPTION	DATE:
1		
2		
3		
4		

Cava - Yonkers, NY_R2
3100 Xavier Drive,
Yonkers, NY, 10704

DATE: 12/18/2024

DWG.#: 7234366

DRAWN BY: JPH - 76

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

MASTER DRAWING

SHEET NO. 10

valerio
5858 Wilshire Blvd #200 T:323.954.8996
Los Angeles, CA 90036
381 Park Ave South #823 T:212.252.8996
New York, NY 10016
www.valerioinc.com info@valerioinc.com

SEAL

REGISTERED ARCHITECT NICCOLO VALERIO LIC. NO. 030317-1 STATE OF NEW YORK

PROJECT

CAVA

CAVA - YONKERS

3100 XAVIER DR
YONKERS, NY 10701 UNITED STATES

	DATE	DESCRIPTION
	07/09/24	LL PERMIT SET
1	08/02/24	LL COMMENTS
2	08/19/24	LL COMMENTS
	08/23/24	PERMIT / BID SET
3	09/27/24	HEALTH COMMENTS
4	11/06/24	REVISED BID SET
5	01/03/25	2ND BUILDING SUBMITTAL
6	02/04/25	PC COMMENTS
7	02/28/25	CONSTRUCTION SET

Kitchen Hood Drawings

Date Modified:
Date Created: 01-17-24
Scale: N.T.S.
Project No.: 3464-23-209
Drawn By: MV
CAD File: 3464- 250228_Construction Set_NG.vwx

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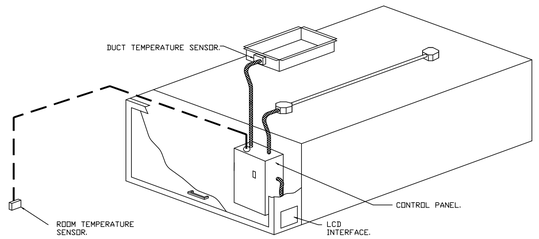
DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS:

- 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 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.

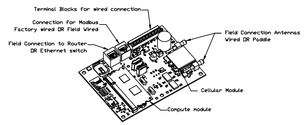


TYPICAL HOOD CONTROL PANEL INSTALLATION

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.



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

IC 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

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:
1		
2		
3		
4		

econ·air
www.econair.com
Maryland Mechanical
8120 Woodmont Avenue, Suite 720, Bethesda, MD, 20814 PHONE: (800) 988 - 0881 FAX: 9192275931 EMAIL: reg76@econair.com

Cava - Yonkers, NY_R2
3100 Xavier Drive,
Yonkers, NY, 10704

DATE: 12/18/2024

DWG.#: 7234366

DRAWN BY: JPH - 76

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

MASTER DRAWING

SHEET NO. 11

valerio
5858 Wilshire Blvd #200 T:323.954.8996
Los Angeles, CA 90036
381 Park Ave South #823 T:212.252.8996
New York, NY 10016
www.valerioinc.com info@valerioinc.com

SEAL

REGISTERED ARCHITECT NICCOLO VALERIO LIC. NO. 030317-1 STATE OF NEW YORK

PROJECT

CAVA

CAVA - YONKERS

3100 XAVIER DR
YONKERS, NY 10701 UNITED STATES

△	DATE	DESCRIPTION
	07/09/24	LL PERMIT SET
1	08/02/24	LL COMMENTS
2	08/19/24	LL COMMENTS
	08/23/24	PERMIT / BID SET
3	09/27/24	HEALTH COMMENTS
4	11/06/24	REVISED BID SET
5	01/03/25	2ND BUILDING SUBMITTAL
6	02/04/25	PC COMMENTS
7	02/28/25	CONSTRUCTION SET

Kitchen Hood Drawings

Date Modified:
Date Created: 01-17-24
Scale: N.T.S.
Project No.: 3464-23-209
Drawn By: MV
CAD File: 3464- 250228_Construction Set_NG.vwx

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