C H A V E Z

SUPERMARKET IMPROVEMENT

5453 THORNTON AVENUE, NEWARK, CA 95121

TEAM

LAND OWNER:
JAI JALARAM LLC & PLAZA HOTEL INC.
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SAN MATEO, CA 94403
CONTACT:JAYESH KESHAV

BUSINESS OWNER:
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ARCHITECT:
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STRUCTURAL ENGINEER:
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408.550.8586

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PROJECT DESCRIPTION

1. 23,126 SF SUPERMARKET TENANT IMPROVEMENT INCLUDING: GROCERY, PRODUCE, DELI/MEAT, BAKERY, TAQUERIA,/SEATING AREA (705 SF), WAREHOUSE, PAYDAY CASH TRANSACTION AREA.
2. NEW ROOFTOP EQUIPMENT PER MECHANICAL DRAWINGS
3. MEZZANINE – INSTALL NEW EQUIPMENT, NEW LIGHTING, AND EXHAUST PER MECHANICAL DRAWINGS
4. EXTERIOR:
   A. INFILL ONE ENTRY DOOR WITH CMU/GLAZING TO MATCH EXISTING.
   B. REPLACE ONE DOOR + GLAZING WITH NEW AUTOMATIC SLIDING ENTRY DOORS
   C. INSTALL NEW LIGHTING PER SHEET A3.1
   D. RE-USE EXISTING 240 SF TRASH ENCLOSURE (NEW DRAINS, LIGHTS, EPOXY PAINT)
   E. SITE ACCESSIBLE PATH EXTENSION AND REPLACE 10 EXISTING PARKING SPACES WITH (4) NEW ACCESSIBLE PARKING SPACES
5. A SHOPPING CART SECURITY SYSTEM WILL BE PROVIDED – BY GATEKEEPER SYSTEMS. SEE ADDITIONAL I INFORMATION ON SHEET A0.1

DEFERRED PERMIT ITEMS

1. FIRE SPRINKLERS
2. FIRE SPRINKLER MONITORING SYSTEM
3. HOOD SUPPRESSION SYSTEM.

ASBESTOS / BAAQMD NOTES:

PRIOR TO DEMOLITION, TESTING SHALL BE PERFORMED FOR PRESENCE OF ASBESTOS BY EPA OR CA STATE CERTIFIED HEALTH INSPECTORS (CDPH) – SEE SHEETS A0.4 AND A0.5.
AN APPLICATION SHALL BE SUBMITTED TO, AND APPROVAL SHALL THEN BE OBTAINED FROM BAY AREA AIR QUALITY MANAGEMENT DISTRICT FOR THE HAZARDOUS OR OTHER REGULATED MATERIAL REMOVAL. AN ASB (ASBESTOS) APPLICATION NUMBER THROUGH BAY AREA AIR QUALITY DISTRICT PRIOR TO DEMOLITION PLAN APPROVAL AND PERMIT ISSUANCE.

BUILDING DATA

APPLICABLE CODES:
2022 CALIFORNIA BUILDING CODE (CBC)
2022 CALIFORNIA PLUMBING CODE (CPC)
2022 CALIFORNIA MECHANICAL CODE (CMC)
2022 CALIFORNIA ELECTRICAL CODE (CEC)
2022 CALIFORNIA FIRE CODE (CFC)
2022 CALIFORNIA ENERGY CODE AKA ENERGY EFFICIENCY STANDARDS (EES)

APN 92A-985-1.6-1
OCCUPANCY: M (W/ A2, MINOR ACCESSORY USE AT TAQUERIA)
CONSTRUCTION TYPE: III-B
ZONE: COMMUNITY COMMERCIAL
SEISMIC CATEGORY D
1 STORY BUILDING
FULLY SPRINKLERED
TRAVEL DISTANCE: 250'-0"

NOTE: EXISTING SPACE IS CURRENTLY VACANT. PRIOR OCCUPANCY WAS 'M' (BIG LOTS).

AREAS (UNCHANGED):
SITE: 5.281 ACRES
BUILDING: 65,376 SF
CHAVEZ MARKET TI. – 23,126 SF (GBA)
22,650 SF (BOMA – USABLE AREA)

ASSEMBLY (MINOR ACCESSORY USE): 860 SF
NOTE:
SEATING AREA (705 SF) + QUEUE AREA (160 SF) = 865 SF OF ASSEMBLY AREA. 860 SF < 2,312 SF (10% OF TENANT SPACE), AND IS A MINOR ACCESSORY TO THE OVERALL 'M' OCCUPANCY.

EXISTING TRASH ENCLOSURE: 240 SF

PLUMBING CALCULATIONS (CBC CHAPTER 29):

RETAIL– 483 OCCUPANTS (242 M, 242 W)
MEN 1WC + 1 LAV REQU'D
WOMEN 1WC + 1 LAV REQU'D

TAQUERIA– 47 OCCUPANTS (24M, 24F)
MEN 1WC + 1 LAV REQU'D
WOMEN 1WC + 1 LAV REQU'D

FIXTURE TOTALS SUMMARY:

MENS – 2 WCs REQU'D, 2 WCs, + 1 URINAL PROVIDED
2 LAVs REQU'D, 3 LAVs PROVIDED

WOMEN – 2 WCs REQU'D, 3 WCs PROVIDED
2 LAVs REQU'D, 2 LAVs PROVIDED

1 DRINKING FOUNTAIN REQU'D, 1 PROVIDED

PARKING CALCULATIONS:

CHAVEZ		
MARKET(COMMERCIAL USE)	22,650 SF / 250 =	91
HOME DEPOT (BLDG MAT. SALES+SVC.)	95,000 SF / 500 =	190
OUTDOOR DISPLAY AREA	15,000 SF / 1000 =	15
OTHER MALL TENANTS		
FISH + CHIPS (COMMERCIAL USE)	1,250 SF / 150 =	9
SALON (COMMERCIAL USE)	1,250 SF / 250 =	5
KUMON (PUBLIC/SEMI-PUBLIC)	1,250 SF / 250 =	5
JEWELERS (COMMERCIAL USE)	1,250 SF / 250 =	5
PLAZA CELL (COMMERCIAL USE)	1,250 SF / 250 =	5
TAQUERIA (COMMERCIAL USE)	2,500 SF / 150 =	17
LIQUOR (COMMERCIAL USE)	2,500 SF / 250 =	10

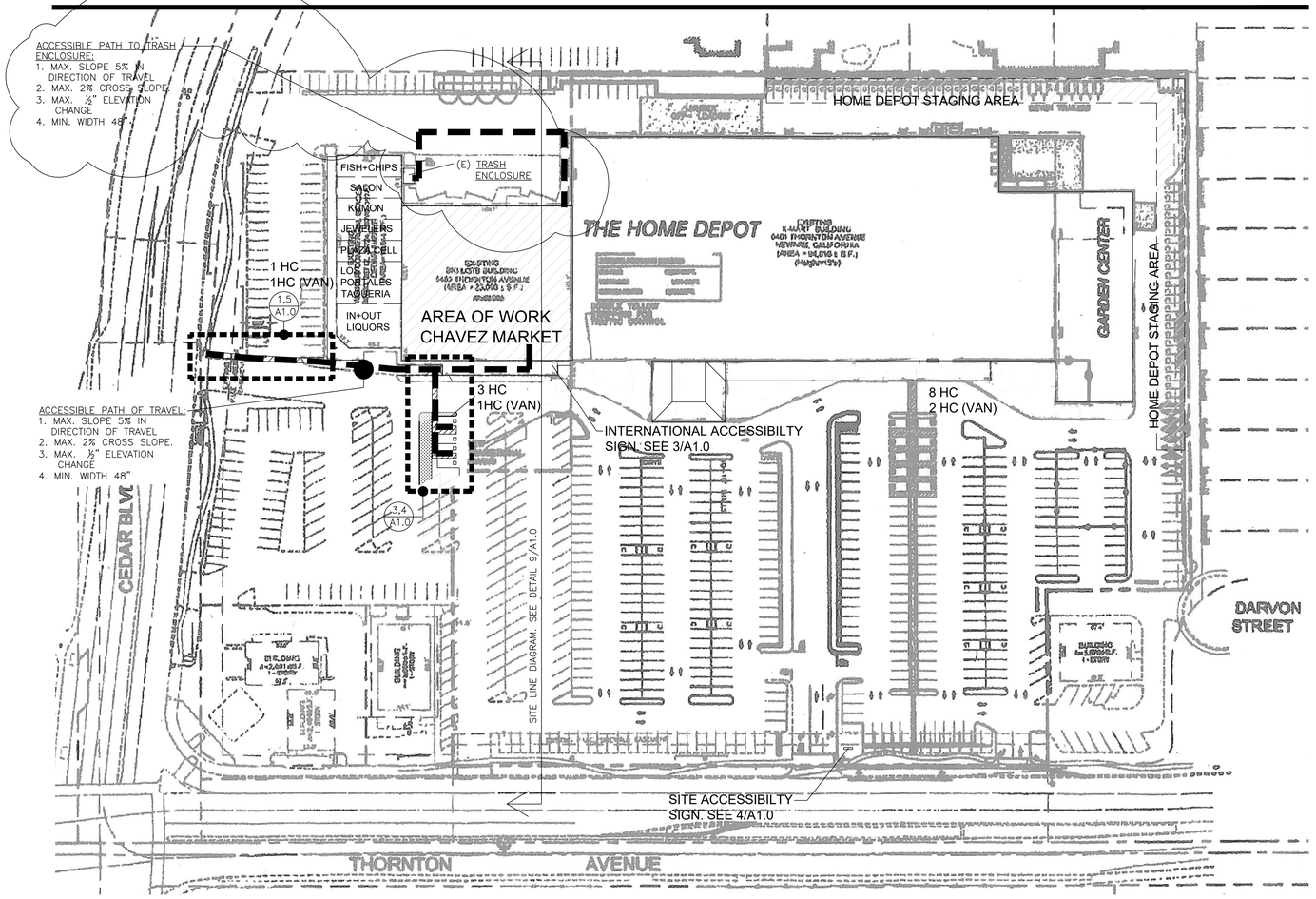
TOTAL REQUIRED PARKING: 352
TOTAL PROPOSED PARKING: 570
(NOTE TOTAL EXISTING PARKING (576) AND HAS BEEN REDUCED BY 6 IN ORDER TO INSTALL 4 NEW ACCESSIBLE SPACES)

ACCESSIBLE PARKING:

CONNECTED MALL
192 SPACES /
PER CBC 11B-208.2, 6 (1) VAN REQUIRED
6 (2 VAN) PROVIDED = OK

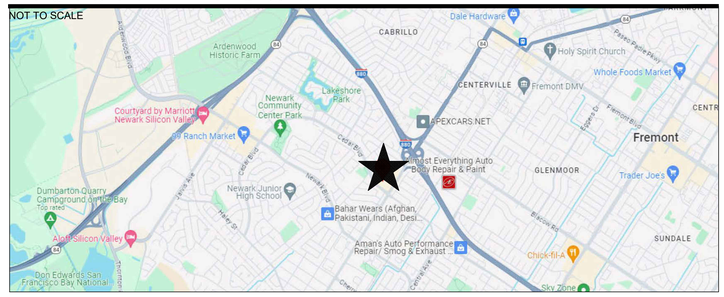
HOME DEPOT
(NO ACCESSIBLE PATH ACCESS TO REST OF MALL)
378 SPACES /
PER CBC 11B-208.2, 8 (2) VAN REQUIRED
10 (2 VAN) PROVIDED = OK

SITE PLAN (N.T.S.)



VICINITY PLAN

NOT TO SCALE



DRAWING INDEX

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Chavez Supermarket

SUPERMARKET T.I.

5453 THORNTON AVENUE
NEWARK, CA 95121

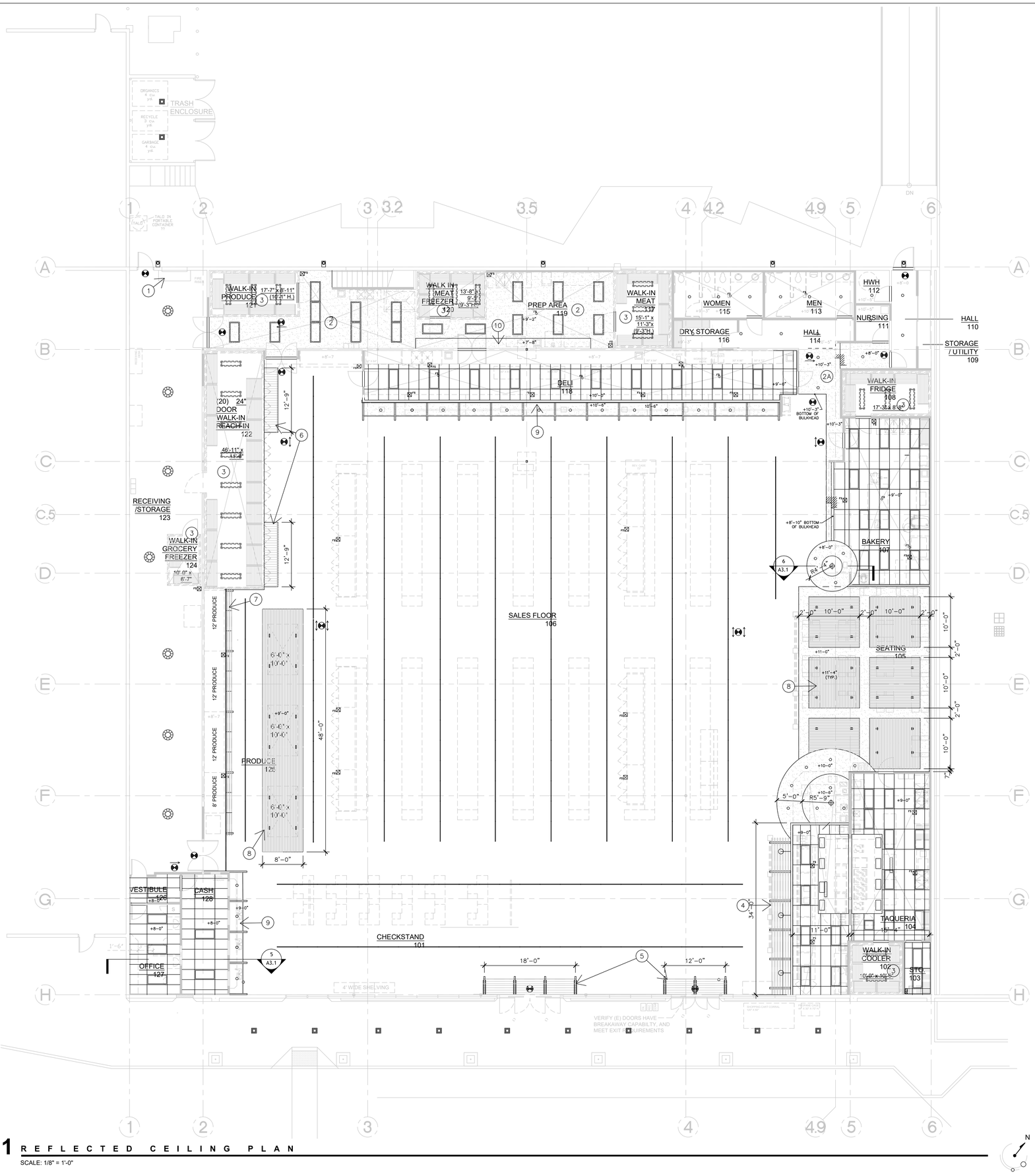
REV	DATE	DESCRIPTION
–	07.22.24	ISSUED FOR PERMIT
1	11.11.24	PLAN CHECK COMMENTS

COVER SHEET

DRAWN BY: RHA | SCALE: NOTED
CHECKED: RHA | PROJECT: 24-001

NTP: JAN., 2024

A0.0



GENERAL NOTES:

1. SEE SHEET A2.2 FOR MEZZANINE REFLECTED CEILING PLAN
2. SEE SHEET A0.1 FOR LEGEND AND NOTES

KEYED NOTES

1. NEW AIR CURTAIN AT ROLL–UP DOORS. SEE MECHAINICAL DRAWINGS
2. 5/8" MOISTURE RESISTANCE GYP. BD. AT UNDERSIDE OF MEZZANINE FRAMING. PAINT WHITE EPOXY.
2A. 5/8" GYP. BD. OVER 6" MTL STUDS AT 16" OC. (MAX SPAN 8'–6") PAINTED
3. LIGHTING AT WALK–IN COOLERS BY WALK–IN MFGR. SEE ELECTRICAL DRAWINGS.
4. AWNING 'A' – AT TAQUERIA. SEE DETAIL 2/A5.1
5. AWNING 'B' – ABOVE ENTRY DOORS SEE DETAIL 12/A5.1
6. AWNING 'C' – AT REACH IN COOLER. SEE DETAIL 13/A5.1
7. AWNING 'D' – AT PRODUCE AREA SEE DETAIL 19/A5.1
8. SUSPENDED CEILING: ARMSTRONG WOODWORKS SLAT (1 1/4" X 3 1/4"). PROVIDE FINISH SAMPLES FOR APPROVAL
9. DECORATIVE SOFFIT. SEE DETAIL 15/A5.1
10. GYP BD. DUCT SOFFIT (7'–8" AFF) COORDINATE WITH MECHANICAL DUCT INSTALLER

LIGHTING LEGEND

○	6" DIA RECESSED LED LIGHT – ELITE
•	PENDANT LIGHT – BESA LIGHTING, RUBY MATTE
▣	EXTERIOR WALL MOUNT LED LIGHT – AMER
▣	EXTERIOR CANOPY LED LIGHT – ELITE
———	8' L. SUSPENDED LINEAR LED LIGHT– ELITE
▭	2X4 RECESSED LED LIGHT – ELITE
▭	51.8" SURFACE MTD LED LIGHT – ELITE (COORD. WITH COOLER INSTALLER)
▬	8' LINEAR LED – ELITE
———	SUSPENDED TRACK LED LIGHT– ELITE (BLACK TRACK AND LIGHTS)
◎	SUSPENDED LED WAREOUSE LIGHT– WILLIAMS
○—	GOOSENECK – 10", WITH 25" ARM, HTM LIGHTING OR EQUAL
▮	INTEGRAL CEILING LIGHTING (FOR USE WITH ARMSTRONG WOODWORKS) = USAI MICRO

1 REFLECTED CEILING PLAN

SCALE: 1/8" = 1'-0"

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LICENSED ARCHITECT — I HEREBY CERTIFY THAT IN THE PRACTICE OF MY PROFESSION I AM LICENSED UNDER THE LAWS OF THE STATE OF CALIFORNIA — NO. C 23125 — REN. 10/31/25

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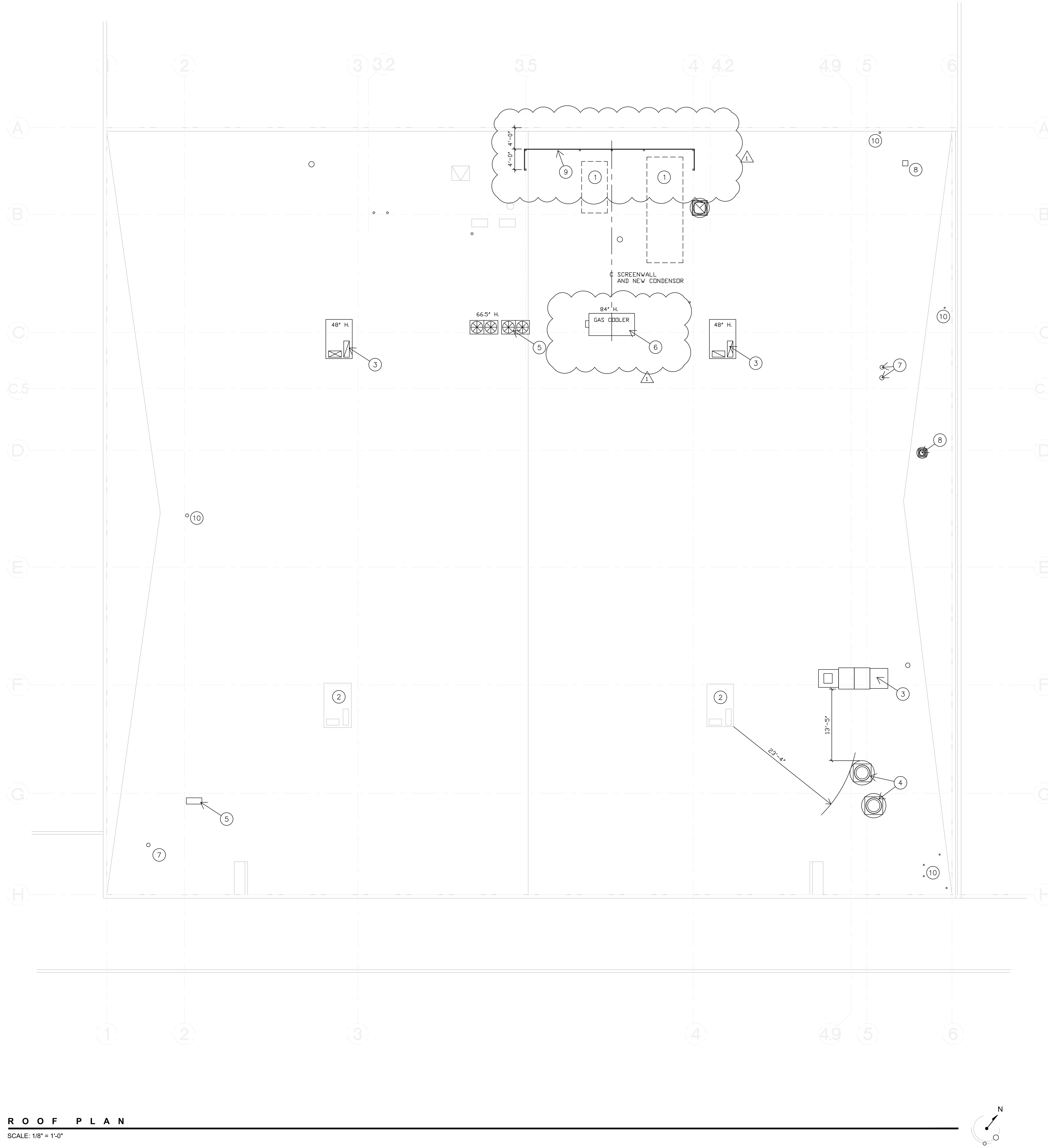
REFLECTED CLG. AND ROOF PLANS

DRAWN BY: RHA	SCALE: NOTED
CHECKED: RHA	PROJECT: 24-001
NTP: JAN., 2024	A2.3



1 ROOF PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. REPLACE ENTIRE BUILT UP ROOF WITH NEW – TO MATCH EXISTING.

KEYED NOTES

1. DEMOLISH MECH. UNIT
2. EXISTING MECH. UNIT TO REMAIN
3. NEW MECHANICAL UNIT. SEE MECHANICAL DRAWINGS
4. NEW KITCHEN EXHAST FAN. SEE MECHANICAL DRAWINGS
5. NEW HEATPUMP. SEE MECHANICAL DRAWINGS
6. NEW CONDENSER BY OTHERS. SEE STURCTURAL DRAWINGS.
7. FRESH AIR INTAKE. SEE MECHANICAL DRAWINGS.
8. EXHAUST. SEE MECHAINCAL DRAWINGS
9. NEW ROOF PARAPET EXTENSION. SEE 10/A5.2
10. VENT. SEE 10/A5.2

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ROOF PLAN

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CHECKED: RHA		PROJECT:	24-001

NTP:
JAN., 2024

A2.4

HVAC GENERAL NOTES

1. CONTRACTOR SHALL CAREFULLY REVIEW THESE PLANS AND SPECIFICATIONS PRIOR TO BID. CONTRACTOR SHALL ALSO REVIEW PLANS AND SPECIFICATIONS OF OTHER RELATED TRADES (INCLUDING ARCHITECTURAL, CIVIL, STRUCTURAL AND ELECTRICAL) PRIOR TO BID TO ENSURE AN ACCURATE UNDERSTANDING OF EXACT SCOPE OF WORK. ANY ITEMS REQUIRING CLARIFICATION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN SUFFICIENT TIME TO BE INCORPORATED INTO THE BID.
2. CONTRACTOR SHALL VERIFY ALL EQUIPMENT MODEL NUMBERS, CAPACITIES, SIZES, VOLTAGES, AND ALL OTHER SCHEDULED INFORMATION WITH ALL OTHER APPLICABLE TRADES AND WITH THE MANUFACTURER PRIOR TO INSTALLATION.
3. CONTRACTOR SHALL VERIFY ALL LOCATIONS, SIZES, P.O.C.'s, AND AVAILABILITY OF ALL EXISTING ITEMS (I.E.: OUTSIDE AIR, EXHAUST ETC.) PRIOR TO INSTALLATION OF ANY MATERIAL OR EQUIPMENT.
4. THESE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ARE NOT INTENDED TO INDICATE ALL NECESSARY OFFSETS OF DUCTWORK AND PIPING. THE CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT IN A MANNER AS TO CONFORM TO STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM, AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. ALL INSTALLATIONS SHALL BE CONSISTENT WITH NORMALLY ACCEPTABLE INDUSTRY STANDARDS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES OR CONFLICTS THAT WOULD AFFECT THE SYSTEM PERFORMANCE OR WHICH WOULD INCUR ADDITIONAL COSTS. THIS NOTIFICATION SHALL BE MADE PRIOR TO THE INSTALLATION OF THE ITEMS CONCERNED.
5. NEW AND/OR EXISTING EQUIPMENT INDICATED ON THIS DRAWING IS SHOWN IN APPROXIMATE POSITION(S). CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING EQUIPMENT LOCATIONS, P.O.C.'s AND STRUCTURAL MEMBERS PRIOR TO INSTALLATION. IN ALL CASES, ADEQUATE ACCESS (PER MANUFACTURER'S RECOMMENDATIONS AND CODE COMPLIANCE) FOR MAINTENANCE AND REPLACEMENT OF EQUIPMENT SHALL BE PROVIDED.
6. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES. NOTHING SHOWN IN THE PLANS OR STATED IN THE SPECIFICATIONS IS INTENDED TO INDICATE THAT THE INSTALLATION OF CONNECTIONS OF ANY ITEM OR DEVICE SHOULD BE DONE CONTRARY TO THE MANUFACTURER'S INSTRUCTIONS AND ALL APPLICABLE CODES AND REGULATIONS. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE INSTALLATION AND CONNECTIONS OF ALL ITEMS AND DEVICES CONFORM TO MANUFACTURER'S INSTRUCTIONS AND TO ALL APPLICABLE CODES AND REGULATIONS.
7. ALL HVAC EQUIPMENT, MATERIAL, AND ALL CONNECTION THERETO SHALL BE INSTALLED COMPLETE PER MANUFACTURER'S INSTRUCTIONS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL SYSTEM.
8. DUCT SIZES INDICATED ON DRAWINGS ARE INSIDE NET CLEARANCE DIMENSIONS.
9. CONTRACTOR MAY, AT HIS OPTION, WITH PRIOR APPROVAL FROM ENGINEER REVISE DUCTWORK SIZING AND ROUTING TO ALLOW FOR INSTALLATION IN THE AVAILABLE SPACE. DUCTWORK THAT IS RESIZED MUST MAINTAIN THE SAME CROSS-SECTIONAL AREA.
10. ALL NEW SUPPLY, RETURN, AND EXHAUST (AIR DISTRIBUTION) GRILLES, REGISTERS, AND DIFFUSERS SHALL MATCH (IF APPLICABLE) EXISTING, AND BE APPROVED BY ARCHITECT. THE MAXIMUM NOISE NC LEVEL SHALL BE 25.
11. ALL SUPPLY, RETURN, AND EXHAUST REGISTER CONNECTIONS TO DUCTWORK SHALL BE PROVIDED WITH ACCESSIBLE MANUAL VOLUME DAMPERS. ALTERNATIVELY, ACCESSIBLE MANUAL VOLUME DAMPERS MAY BE PROVIDED IN DUCT WORK FEEDER LINES SERVING INDIVIDUAL REGISTERS. PROVIDE ACCESS DOOR AND PANEL AS REQUIRED.
12. SUBSTITUTION OF HVAC EQUIPMENT WITH EFFICIENCIES LOWER THAT THOSE INDICATED ON THE PLANS IS NOT PERMITTED.
13. IF THE CONTRACTOR'S USE OF SUBSTITUTE MATERIALS, EQUIPMENT, OR METHODS OF INSTALLATION REQUIRES ANY CHANGES IN OTHER TRADES' WORK FROM THAT SHOWN ON THE DRAWINGS, THE EXTRA COST OF THE OTHER TRADES WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INITIATING THE SUBSTITUTION.
14. SUBMITTALS: APPROVAL OF SUBMITTALS DOES NOT RELEASE THE CONTRACTOR FROM OBLIGATIONS TO COMPLY WITH ALL REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS OR APPLICABLE CODE REGULATIONS.
15. WHERE NONMETALLIC PIPING PENETRATES AREA SEPARATION WALLS, THE PIPE SECTION PASSING THROUGH THE WALLS AND THE FIXTURE CONNECTIONS THERETO SHALL BE OF METAL ONLY.
16. NO RANGE HOODS, DRYER VENTS, COMBUSTION VENTS, OR HEATING DUCTS ARE PERMITTED IN AREA SEPARATION WALLS.
    A. CONTRACTOR TO VERIFY LOCATION OF FIRE AND FIRE/SMOKE BARRIER WALLS WITH ARCHITECT PRIOR TO FIRE AND/OR SMOKE DAMPER, DETECTOR AND ACTUATOR INSTALLATION.
    B. ALL CEILING FIRE DAMPERS TO BE ONE (1) HOUR U.L. AND C.S.F.M. APPROVED.
    C. ALL ONE HOUR WALL SHALL BE APPROVED WITH ONE HOUR FIRE DAMPERS BOTH U.L. AND C.S.F.M. APPROVED.
    D. ALL TWO HOUR WALLS SHALL BE APPROVED WITH TWO HOUR FIRE DAMPERS BOTH U.L. AND C.S.F.M. APPROVED.
    E. ALL SMOKE BARRIER WALLS SHALL BE PROVIDED WITH U.L. AND C.S.F.M. APPROVED SMOKE/FIRE DAMPERS (EQUAL TO WALL RATING), MOTOR, ACTUATOR, AND SMOKE DETECTOR.
    F. ALL PENETRATIONS OF ONE (1) HOUR CORRIDOR WALLS AND CEILINGS THAT WOULD REQUIRE THE INSTALLATION OF A FIRE DAMPER SHALL BE APPROVED WITH A U.L. AND C.S.F.M. APPROVED COMBINATION SMOKE/FIRE DAMPER, (EQUAL TO WALL RATING), MOTOR, ACTUATOR, AND SMOKE DETECTOR.
    G. PROVIDE ALL FIRE & SMOKE DAMPERS WITH ACCESS DOORS AS NECESSARY.
17. PROVIDE BALANCING DAMPERS ON ALL OUTSIDE AIR, EXHAUST AIR, SUPPLY AIR AND RETURN AIR SYSTEMS THROUGH OUT. DAMPERS ARE NOT INDICATED ON PLANS BUT ARE REQUIRED AT ALL BRANCH TAKE-OFFS.
18. PROVIDE TURNING VANES ON ALL 90 DEGREE SQUARE ELBOWS.
19. PROVIDE FLEXIBLE DUCT CONNECTIONS WITH MINIMUM 1" GAP ON THE SUPPLY AND RETURN DUCT CONNECTIONS ON ALL FANS.
20. ALL SUPPLY AND RETURN DUCTWORK FROM AC UNITS AND FANS SHALL BE LINED WITH 1" ACOUSTIC INSTALLATION TO MINIMUM 15 FEET FROM THE FAN UNLESS NOTED TO BE LONGER. PROVIDE PERFORATED LINING. DUCT SIZE SHALL BE INCREASED TO PROVIDE THE CLEAR INSIDE DIMENSIONS AS NOTED ON PLANS.
21. VERIFY MECHANICAL EQUIPMENT LOCATION & DUCT ROUTING WITH ENGINEERING PRIOR TO CONSTRUCTION.
22. FACTORY-MADE FLEXIBLE AIR DUCTS AND CONNECTORS SHALL BE NOT MORE THAN 5 FEET IN LENGTH AND SHALL NOT BE USED IN LIEU OF RIGID ELBOWS OR FITTINGS. FLEXIBLE AIR DUCTS SHALL BE PERMITTED TO BE USED AS AN ELBOW AT A TERMINAL DEVICE.

CALIFORNIA GREEN BUILDING STANDARDS CODE 2022

1. ALL HVAC DUCTS ARE REQUIRED TO BE SEALED WITH MASTIC AND SHALL BE TESTED. CONCEALED DUCT SHALL BE INSULATED WITH MIN R-8 DUCT INSULATION.
2. AT THE TIME OF ROUGH INSTALLATION OR DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL START-UP PF THE HEATING AND COOLING EQUIPMENT, ALL DUCTS AND OTHER RELATED AIR DISTRIBUTION COMPONENT EQUIPMENT SHALL BE COVERED WITH TAPE, PLASTIC, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST OR DEBRIS WHICH MAY COLLECT IN THE SYSTEM. CGBC 5.504.3
3. BASED ON THESE PLANS, THE MECHANICAL/BALANCING CONTRACTOR SHALL PROVIDE A TESTING AND ADJUSTING PLAN AND SHALL FOLLOW IT AS PER CALIFORNIA GREEN BUILDING STANDARDS CODE. SECTION 5.410.4.
4. IN MECHANICAL VENTILATED BUILDINGS, PROVIDE REGULARLY OCCUPIED AREAS OF THE BUILDING WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR PRIOR OCCUPANCY THAT PROVIDES AT LEAST A MERV 13. CGBC 5.504.5.3 ⚠1
5. BUILDINGS SHALL MEET OR EXCEED THE PROVISIONS OF CALIFORNIA BUILDING CODE, CCR, TITLE 24, PART 2, SECTIONS 1203 (VENTILATION) AND CHAPTER 14 (EXTERIOR WALLS). FOR ADDITIONAL MEASURES NOT APPLICABLE TO LOW-RISE RESIDENTIAL OCCUPANCIES, SEE SECTION 5.407.2 OF THIS CODE. CGBC 5.505.1
6. FOR MECHANICALLY OR NATURALLY VENTILATED SPACES IN BUILDINGS, MEET THE MINIMUM REQUIREMENTS OF SECTION 120.1 (REQUIREMENTS FOR VENTILATION) OF THE 2022 CALIFORNIA ENERGY CODE, OR THE APPLICABLE LOCAL CODE, WHICHEVER IS MORE STRINGENT, AND DIVISION 1, CHAPTER 4 OF CCR, TITLE 8. CGBC 5.506.1 ⚠1
7. FOR BUILDINGS OR ADDITIONS EQUIPPED WITH DEMAND CONTROL VENTILATION, CO2 SENSORS AND VENTILATION CONTROLS SHALL BE SPECIFIED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2022 CALIFORNIA ENERGY CODE, SECTION 120(C)(4). CGBC 5.506.2
8. TESTING AND ADJUSTING SYSTEMS SHALL BE REQUIRED FOR BUILDING LESS THAN 10,000 SQFT. CGBC 5.410.4.
9. DEVELOP A WRITTEN PLAN OF PROCEDURES FOR TESTING AND ADJUSTING SYSTEMS. SYSTEMS TO BE INCLUDED FOR TESTING AND ADJUSTING SHALL INCLUDE, AS APPLICABLE TO THE PROJECT, THE SYSTEMS LISTED IN SECTION 5.410.4.2.
10. PERFORM TESTING AND ADJUSTING PROCEDURES IN ACCORDANCE WITH APPLICABLE STANDARDS ON EACH SYSTEM AS DETERMINED BY THE ENFORCING AGENCY. 5.410.4.3. BEFORE A NEW SPACE-CONDITIONING SYSTEM SERVING A BUILDING IS OPERATED FOR NORMAL USE, BALANCE IN ACCORDANCE WITH THE PROCEDURES DEFINED BY NATIONAL STANDARDS LISTED IN SECTION 5.410.4.3.1. OR AS APPROVED BY THE ENFORCING AGENCY.
11. AFTER COMPLETION OF TESTING, ADJUSTING AND BALANCING, PROVIDE A FINAL REPORT OF TESTING SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR OPERATING THESE SERVICES.
12. PROVIDE THE BUILDING OWNER WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF WARRANTIES FOR EACH SYSTEM PRIOR TO FINAL INSPECTION. INCLUDE A COPY OF ALL INSPECTION VERIFICATIONS AND REPORTS REQUIRED BY THE ENFORCING AGENCY.
13. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, USE RETURN AIR FILTERS WITH A MERV OF 8, BASED ON ASHRAE 52.2-1999, OR AN AVERAGE EFFICIENCY OF 30% BASED ON ASHRAE 52.1-1992. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY. APPLIES TO ADDITIONS OR ALTERATIONS.
14. INSTALL HVAC AND REFRIGERATION EQUIPMENT THAT DOES NOT CONTAIN CFCs. CGBG 5.508.1.1.
15. INSTALL FIRE SUPPRESSION EQUIPMENT THAT DOES NOT CONTAIN HALONS. CGBC 5.508.1.2.
16. ADHESIVES, ADHESIVE BONDING PRIMERS, ADHESIVE PRIMERS, SEALANT, SEALANT PRIMERS AND CAULS SHALL COMPLY WITH LOCAL OR REGIONAL AIR POLLUTION CONTROL OR AIR QUALITY MANAGEMENT DISTRICT RULES WHERE APPLICABLE, OR SCAQMD RULE 1168 VOC LIMITS, AS SHOWN IN CALGREEN TABLES 5.504.4.2. SUCH PRODUCTS SHALL COMPLY WITH THE RULE 1168 PROHIBITION ON THE USE OF CERTAIN TOXIC COMPOUNDS (CHLOROFORM, ETHYLENE DICHLORIDE, METHYLENE CHLORIDE, PERCHLOROETHYLENE AND TRICHLOROETHYLENE), EXCEPT FOR AEROSOL PRODUCTS AS SPECIFIED BELOW. AEROSOL ADHESIVES, AND SMALLER UNIT SIZES OF ADHESIVES, AND SEALANT OR CAULKING COMPOUNDS)IN UNITS OF PRODUCT, LESS PACKAGING, WHICH DO NOT WEIGH MORE THAN ONE POUND AND DO NOT CONSIST OF MORE THAN 16 FUILD OUNCES) SHALL COMPLY WITH STATEWIDE VOC STANDARDS AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS, OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94507.

DUCT TESTING AND INSULATION

1. ALL DUCTWORK SHALL BE SEALED AND PRESSURE TESTED FOR LEAKS PER SMACNA REQUIREMENTS IN THE "HVAC AIR DUCT LEAKAGE TEST MANUAL" AND THE CALIFORNIA GREEN BUILDING 2022 STANDARDS.
2. INSULATE ALL DUCTWORK AND PIPES PER THE 2022 CALIFORNIA MECHANICAL CODE AND TITLE 24 REQUIREMENT. ALL DUCTWORK SHALL BE INSULATED WITH WOOL FIBER OR FIBERGLASS INSULATION WITH FSK VAPOR BARRIER. ALL PIPES (INCLUDING CONDENSATE PIPING) SHALL BE INSULATED WITH EARTHWOOL FIBERGLASS PIPE INSULATION WITH ASJ+SSL FACING. REFRIGERANT PIPING SHALL BE INSULATED WITH CLOSED CELL INSULATION. ALL DUCTS AND PIPES EXPOSED TO WEATHER (DUCTWORK IN CRAWL SPACES ARE CLASSIFIED AS DUCTWORK EXPOSED TO WEATHER), INCLUDING REFRIGERANT PIPING, SHALL BE PROVIDED WITH ALUMINUM OR SS JACKET INSTALLED PER MANUFACTURER'S PRINTED INSTALLATION MANUAL.
3. FOR PROJECTS WITH EXISTING DUCTS, PERFORM DUCT CLEANING PER THE "NATIONAL DUCT CLEANERS ASSOCIATION". CLEAN EXISTING DIFFUSERS, GRILLES AND REGISTERS WITHOUT DAMAGING PAIN OR COATING. IF THE DAMAGE IS EXISTING, INFORM ARCHITECT AND TAKE PHOTOS BEFORE PERFORMING CLEANING PROCEDURE.

SPECIAL HANGING REQUIREMENTS

1. FOR ALL ITEMS AND EQUIPMENT BEING SUPPORTED FROM ROOF DECK, SUBMIT COORDINATION DRAWINGS CLEARLY SHOWING DETAILS OF FIELD CONNECTIONS, ANCHORAGE, AND THE RELATIONSHIP TO THE WORK OF OTHERS.
2. MECHANICAL CONTRACTOR TO PROVIDE HANGER SUPPORTS AND SEISMIC BRACING AS NEEDED PER LATEST SMACNA SEISMIC RESTRAINT MANUAL. SUBMIT SHOP DRAWING AND HANGER DATA SHEET FOR APPROVAL.

MECHANICAL SPECIFICATIONS

1. GENERAL PROVISIONS – THE GENERAL CONDITIONS, SUPPLEMENTS AND AMENDMENTS SHALL GOVERN THIS DIVISION OF THE SPECIFICATIONS.
2. PROJECT REQUIREMENTS – PROVIDE ALL ITEMS, MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THE WORK OR OPERATIONS MENTIONED HEREIN, OR INDICATED ON THE DRAWINGS AND REASONABLY INFERRED THEREIN, AS REQUIRED TO MAKE A COMPLETE AND WORKING SYSTEM.
3. INTENT – WORK SHALL BE DONE IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS AND THEIR INTENT, COMPLETE WITH ALL NECESSARY COMPONENTS, INCLUDING THOSE NOT NORMALLY SHOWN OR CALLED FOR, AND SHALL BE READY FOR OPERATION BEFORE ACCEPTANCE.

   ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES. NOTHING SHOWN IN THE PLANS OR STATED IN THE SPECIFICATIONS IS INTENDED TO INDICATE THAT THE INSTALLATION OR CONNECTIONS OF ANY ITEM OR DEVICE SHOULD BE DONE CONTRARY TO MANUFACTURERS INSTRUCTIONS AND ALL APPLICABLE CODES AND REGULATIONS. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE INSTALLATION AND CONNECTIONS OF ALL ITEMS AND DEVICES CONFORMS TO MANUFACTURERS INSTRUCTIONS AND TO ALL APPLICABLE CODES AND REGULATIONS.

   ANY REFERENCE TO THE DESIGN AUTHORITY SHALL MEAN MR ENGINEERING, INC.

   THE WORK "PROVIDE" SHALL MEAN "SUPPLY AND INSTALL" UNLESS OTHERWISE INDICATED.
4. GOVERNING REGULATIONS – THE WORK UNDER MECHANICAL SCOPE OF WORK, SHALL CONFORM, BUT NOT LIMITED TO THE REQUIREMENTS OF THE FOLLOWING CODES, REGULATIONS AND STANDARDS:

   – 2022 EDITIONS OF THE CALIFORNIA BUILDING CODE, INCLUDING BUT NOT LIMITED TO THE MECHANICAL, PLUMBING, FIRE AND ENERGY CODES.
   – SMACNA PUBLICATIONS, INCLUDING BUT NOT LIMITED TO, HVAC DUCT CONSTRUCTION STANDARDS AND GUIDELINES FOR SEISMIC RESTRAINT OF MECHANICAL SYSTEMS.
   – AABC OR NEBB REGULATIONS GOVERNING TESTING AND BALANCING AND COMMISSIONING OF SYSTEMS.
   – OSHA REGULATIONS.
5. PERMITS – OBTAIN ALL REQUIRED PERMITS AND PAY ALL FEES THEREFORE AND COMPLY WITH ALL LOCAL AND STATE REGULATIONS, CODES AND BY-LAWS APPLICABLE TO THE WORK.
6. RESPONSIBILITY – VISIT THE SITE BEFORE SUBMITTING A BID AND EXAMINE ALL LOCAL AND EXISTING CONDITIONS ON WHICH THE WORK IS DEPENDENT.

   NO CONSIDERATION WILL BE GRANTED FOR ANY MISUNDERSTANDING OF WORK TO BE DONE RESULTING FROM FAILURE TO VISIT THE SITE.

   WHEN THE CONTRACT DOCUMENTS DO NOT CONTAIN SUFFICIENT INFORMATION FOR THE PROPER SELECTION OF EQUIPMENT FOR BIDDING, NOTIFY THE DESIGN AUTHORITY DURING THE BIDDING PERIOD. IF CLARIFICATION CANNOT BE OBTAINED, ALLOW FOR THE MOST EXPENSIVE ARRANGEMENT. FAILURE TO DO THIS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO SUPPLY THE INTENDED EQUIPMENT AND OR INSTALLATION.

   CHECK DRAWINGS OF ALL TRADES AND SITE SURVEY TO VERIFY SPACE AVAILABILITY FOR THE INSTALLATION. COORDINATE WORK WITH ALL TRADES AND MAKE CHANGES TO FACILITATE SATISFACTORY INSTALLATION. MAKE NO DEVIATIONS TO THE DESIGN INTENT INVOLVING EXTRA COST TO THE OWNER WITHOUT DESIGN AUTHORITY WRITTEN APPROVAL.
7. WORKMANSHIP – WORKMANSHIP SHALL BE IN ACCORDANCE WITH WELL ESTABLISHED PRACTICE AND STANDARDS ACCEPTED AND RECOGNIZED BY DESIGN AUTHORITY AND THE TRADE.

   EMPLOY ONLY TRADESMEN HOLDING VALID TRADE QUALIFICATION CERTIFICATES. TRADESMEN SHALL PERFORM ONLY WORK THAT THEIR CERTIFICATE PERMITS.
8. DRAWING AND MEASUREMENTS – DRAWINGS ARE GENERALLY DIAGRAMMATIC AND ARE INTENDED TO INDICATE THE SCOPE AND GENERAL ARRANGEMENT OF WORK. DO NOT SCALE DRAWINGS.

   TAKE FIELD MEASUREMENTS WHERE EQUIPMENT AND MATERIAL DIMENSIONS ARE DEPENDENT UPON BUILDING DIMENSIONS.
9. SUBMITTALS – SUBMIT THREE SETS OF ALL EQUIPMENT AND RELATED MATERIAL FOR APPROVAL PRIOR TO ORDERING. AFTER 10 DAYS FROM CONTRACT AWARD, SUBMIT DUCT SHOP DRAWINGS TO ARCHITECT FOR ENGINEERS REVIEW.
10. RECORD DRAWINGS – MAINTAIN ONE CONTRACT DRAWING, WHITE PRINT, ON SITE, SOLELY FOR THE PURPOSE OF RECORDING, IN RED, ANY CHANGES AND/OR DEVIATION FROM THE CONTRACT DRAWINGS AS IT OCCURS.

    AT THE COMPLETION OF THE PROJECT, CERTIFY THE ABOVE-MENTIONED DRAWINGS AS BEING ACCURATE AND COMPLETE BY LABELLING IN THE LOWER RIGHT HAND CORNER IN LETTERS OF AT LEAST ⅛ INCH HIGH AS FOLLOWS: "AS-BUILT DRAWINGS. DATED ----". DELIVER TO DESIGN AUTHORITY.
11. OPERATING AND MAINTENANCE MANUALS – PREPARE INSTRUCTION MANUALS WHICH INCLUDE EQUIPMENT MANUFACTURER'S OPERATING AND MAINTENANCE BULLETINS, AND A REPORT ON THE TESTING AND BALANCING. SUBMIT THREE (3) COPIES TO DESIGN AUTHORITY.
12. SERVICES – PROTECT ALL SERVICES AND MAKE GOOD ANY DAMAGE CAUSED BY THE WORK IN THIS CONTRACT.

    THE PLANS SHOW APPROXIMATE LOCATIONS OF DUCTWORK, PIPING AND EQUIPMENT BASED UPON EXISTING RECORD DRAWINGS. BE PREPARED TO ACCOMMODATE CHANGES IN LOCATION AS MAY BE FOUND ON SITE.
13. DUCTWORK CLEANING – ALL NEW DUCTWORK SHALL BE WIPED CLEAN OF ALL OIL AND OTHER SURFACE FILMS WITH SUITABLE SOLVENT PRIOR TO INSTALLATION.

    ALL SUPPLY AND RETURN DUCTWORK SHALL BE THOROUGHLY CLEANED BY A PROFESSIONAL DUCT CLEANING AGENCY PRIOR TO REUSE.
14. CLEAN UP – MAKE GOOD AND CLEAN ALL AREAS DISRUPTED BY THIS WORK.
15. BALANCING – AIR SYSTEMS – BALANCING SHALL BE DONE BY AN AABC OR NEBB CERTIFIED FIRM. ADJUST AIR HANDLING EQUIPMENT AND ASSOCIATED BALANCE DAMPERS ON SUPPLY, RETURN AND EXHAUST SYSTEMS TO WITHIN PLUS OR MINUS 10% OF THE SPECIFIED AIR QUANTITIES. MAINTAIN THE DESIGN PRESSURE RELATIONSHIPS.

    ADJUST DIFFUSERS, REGISTERS AND GRILLES TO OBTAIN OPTIMUM AIR DISTRIBUTION PATTERN.

    MEASURE OUTSIDE AIR QUANTITIES AND CONFIRM THAT THE SPECIFIED OUTSIDE AIR QUANTITIES PER TITLE-24 CALCULATIONS HAVE BEEN PROVIDED THROUGHOUT.

    PERMANENTLY MARK THE FINAL BALANCE POSITION ON ALL BALANCE DAMPERS AND ADJUSTABLE TURNING DEVICES.

    SUBMIT A REPORT TO THE DESIGN AUTHORITY INDICATING FINAL AIR QUANTITIES OBTAINED.
16. EQUIPMENT START UP AND COMMISSIONING

    CHECK AND ADJUST REFRIGERANT CHARGE AS REQUIRED FOR PROPER OPERATION.

    BALANCE AC UNITS TO PROVIDE SPECIFIED AIR FLOWS.

    PROVIDE ALL AC UNITS WITH NEW MERV 13 FILTERS. FILTER.

    TEST ALL EQUIPMENT. TO ASSURE THAT ALL FUNCTIONS AND PERFORMANCE ARE AS INDICATED ON THE MANUFACTURER'S RATING. ALL EQUIPMENT SHALL BE BALANCED AND TESTED TO PROVIDE THE OWNER WITH FUNCTIONING SYSTEMS. THE HVAC SYSTEMS SHALL HAVE A MINIMUM OF ONE YEAR WARRANTY ON ALL PARTS AND LABOR OR LONGER AS AGREED BETWEEN OWNER AND CONTRACTOR.

MECHANICAL LEGEND

SYMBOL	ABBREV	DESCRIPTION	ABBREV	DESCRIPTION
	POC	POINT OF CONNECTION	EQPT.	EQUIPMENT
	POD	POINT OF DISCONNECTION	KW	KILOWATT
		EXISTING EQUIPMENT OR PIPING TO REMAIN	LBS	POUNDS
		NEW EQUIPMENT OR PIPING	MAX	MAXIMUM
		REMOVE EXISTING EQUIPMENT OR PIPING	MECH	MECHANICAL
	FD	FLEX DUCT	MFR	MANUFACTURER
		SIDEWALL REGISTER	MIN	MINIMUM
		CEILING SUPPLY DIFFUSERS	MTD	MOUNTED
		CEILING RETURN DIFFUSERS	(N)	NEW
		CEILING EXHAUST DIFFUSERS	NOS	NUMBERS
		DUCT SECTION – SUPPLY AIR	OBD	OPPOSED BLADE DAMPER
		DUCT SECTION – RETURN AIR	OSA	OUTSIDE AIR
		DUCT SECTION – EXHAUST AIR	HP	HORSEPOWER
		SUPPLY AIR DUCT DOWN	HR	HOUR
		RETURN AIR DUCT DOWN	QTY	QUANTITY
		EXHAUST AIR DUCT DOWN	RA	RETURN AIR
		CARBON DIOXIDE (CO2) SENSOR/DETECTOR	RG	RETURN AIR GRILLE
		ROOM THERMOSTAT/TEMPERATURE SENSOR	RAD	RETURN AIR DUCT
		DOOR UNDERCUT	RR	RETURN AIR REGISTER
		DUCT SMOKE DETECTOR	SA	SUPPLY AIR
	VD	VOLUME DAMPER	SAD	SUPPLY AIR DUCT
	CD	CEILING DIFFUSER	SR	SUPPLY AIR REGISTER
	BTU	BRITISH THERMAL UNITS	SF	SQUARE FEET
	BTUH	BRITISH THERMAL UNITS PER HOUR	FSD	SMOKE/FIRE DAMPER
	CFM	CUBIC FEET PER MINUTE	SS	STAINLESS STEEL
	DWGS	DRAWINGS	TEMP	TEMPERATURE
	DG	DOOR GRILLE	TYP	TYPICAL
	SFD	COMBINATION SMOKE/FIRE DAMPER	TA	TRANSFER AIR
	VD	VOLUME DAMPER WITH CONCEALED REGULATOR	T/A	TO ABOVE
		THERMOSTAT	T/B	TO BELOW
	(E)	EXISTING	TR	TRANSFER REGISTER
	EA	EACH	V/PH/HZ	VOLTS/PHASE/HERTZ
	EAD	EXHAUST AIR DUCT	VCD	VARIABLE VOLUME CONTROL
	EAR	EXHAUST AIR REGISTER	VOL	VOLUME
	EF	EXHAUST FAN	VTR	VENT THRU ROOF
	HVAC	HEATING VENTILATION & AIR CONDITIONING	W/	WITH
	°F	DEGREES FAHRENHEIT	WC	WATER COLUMN
	F/A	FROM ABOVE	WPD	WATER PRESSURE DROP
	F/B	FROM BELOW	WT	WEIGHT
	FLR	FLOOR	MUA	MAKE UP AIR
	FT	FEET OR FOOT		
	GALV	GALVANIZED		
	GPM	GALLONS PER MINUTE		
	PSI	POUNDS PER SQUARE INCH		
	PSIG	POUNDS PER SQUARE INCH GAUGE		
-R-R-R-		REFRIGERANT LINE		

EQUIPMENT IDENTIFICATION SYMBOL

EQUIPMENT TYPE
EQUIPMENT IDENTIFIER

SCOPE OF WORK

1. RE-USE EXISTING ROOF TOP UNITS FOR HEATING/COOLING PURPOSE.
2. PROVIDE NEW HEATPUMP FOR HEATING/COOLING PURPOSE.
3. PROVIDE NEW HOOD, KITCHEN EXHAUST FAN, AND MAKE-UP AIR UNIT FOR VENTILATION PURPOSE.
4. PROVIDE NEW GRILLES AND DIFFUSERS WITH ASSOCIATED DUCTWORK FOR VENTILATION PURPOSE.

DRAWING INDEX

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REV	DATE	DESCRIPTION
⚠1	10.27.24	AHJ COMMENTS

MECHANICAL SPECIFICATIONS LEGEND AND GENERAL NOTES

DRAWN BY: JKS	SCALE: NONE
CHECKED: HC	PROJECT:A2404-AD669
NTP: OCT. 17, 2024	M0.1

FAN COIL UNIT SCHEDULE

MARK	MANUFACTURER & MODEL	SERVICE	SUPPLY AIR (CFM)	MIN O.A. (CFM)	E.S.P. (IN.)	TOTAL COOLING CAPACITY (MBH)	TOTAL HEATING CAPACITY (MBH)	ELECTRICAL DATA					UNIT DIMENSIONS	UNIT WEIGHT (LBS.)	SOUND LEVEL dB(A)	QTY.	REMARKS
								MCA	MOCP	VOLT	PH	HZ	HEIGHT x WIDTH x DEPTH				
FCU 1	CARRIER 40MBABQ18XB3 OR APPROVED EQUAL	AS SHOWN	500	120	0.8	18.0	19.0	3.0	–	208~230/	1	60	45" x 17-1/2" x 21"	106.7	36.4	1	1, 2, 3, 4, 5, 6
FCU 2	CARRIER MMD-UP0481HP-UL OR APPROVED EQUAL	AS SHOWN	1200	370	1.0	48.0	54.0	3.88	15.0	208~230/	1	60	11-3/4" x 55-1/5" x 29-5/8"	98.0	52.0	1	1, 2, 3, 5, 7
FCU 3	CARRIER MMD-UP0541HP-UL OR APPROVED EQUAL	AS SHOWN	1400	360	1.0	54.0	60.0	4.33	15.0	208~230/	1	60	11-3/4" x 55-1/8" x 29-1/2"	98.0	53.0	1	1, 2, 3, 5, 7
FCU 4	CARRIER MMD-UP0481HP-UL OR APPROVED EQUAL	AS SHOWN	1200	130	1.0	48.0	54.0	3.88	15.0	208~230/	1	60	11-3/4" x 55-1/5" x 29-5/8"	98.0	52.0	1	1, 2, 3, 5, 7
FCU 5	CARRIER MMD-UP0481HP-UL OR APPROVED EQUAL	AS SHOWN	1200	310	1.0	48.0	54.0	3.88	15.0	208~230/	1	60	11-3/4" x 55-1/5" x 29-5/8"	98.0	52.0	1	1, 2, 3, 5, 7
FCU 6	CARRIER MMD-UP0961HP-UL OR APPROVED EQUAL	AS SHOWN	2800	180	1.0	96.0	108.0	7.4	15.0	208~230/	1	60	17-5/8" x 55-1/8" x 35-3/8"	218.0	46.0	1	1, 2, 3, 5, 7

1. PROVIDE WITH PROGRAMMABLE T24 APPROVED TSATS. COORDINATE FINAL LOCATION W/ OWNER REPRESENTATIVE.
2. PROVIDE WITH MERV 13 PLEATED FILTERS
3. PROVIDE WITH SECONDARY CONDENSATE PAN AND CONDENSATE PUMP IF NECESSARY.
4. INDOOR UNIT POWERED BY OUTDOOR UNIT.
5. INSTALL PER MANUFACTURER'S RECOMMENDATION.
6. NEW MULTI-POSITION AIR HANDLING UNIT.
7. NEW CEILING CONCEALED FAN COIL UNIT.

OUTDOOR UNIT SCHEDULE

MARK	MANUFACTURER & MODEL	SERVICE	ELECTRICAL DATA			EER	SEER	HSPF	TOTAL COOLING CAPACITY (MBH)	TOTAL HEATING CAPACITY (MBH)	UNIT DIMENSIONS	TOTAL STD UNIT WT. (LBS.)	SOUND LEVEL dB(A)	REMARKS
			V. / PH. / HZ.	MOCP	MCA						HEIGHT x WIDTH x DEPTH			
HP 1	CARRIER 38MARBQ18AA3 OR APPROVED EQUAL	FCU 1	208~230/1/60	25.0	16.0	12.5	20.0	10.0	18.0	19.0	26.5" x 35.04" x 13.46"	100.97	59.0	1, 2, 3, 5, 7
HP 2	CARRIER MMY-AP3126FT9P-UL OR APPROVED EQUAL	FCU 2, FCU 3, FCU 4, FCU 5, FCU 6	208~230/3/60	70.0 + 60.0	66.2 + 52.1	10.5	IEER=21.5	COP=3.32	312.0	351.0	2 x [72.9" x 63.0" x 30.7"]	1676	67.5	1, 2, 4, 6, 7, 8

1. NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR AIR TEMPERATURE OF 80°F DB/ 67°F WB, OUTDOOR AIR TEMPERATURE OF 95°F (DB).
2. NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR AIR TEMPERATURE OF 70°F DB, OUTDOOR AIR TEMPERATURE OF 47°F DB/ 43°F WB.
3. INDOOR UNIT POWERED BY OUTDOOR UNIT.
4. COMBINED OUTDOOR UNIT MODEL: MMY-MAP1686FT9P-UL + MMY-MAP1446FT9P-UL.
5. SINGLE ZONE HEAT PUMP.
6. SHRMe VRF OUTDOOR UNIT.
7. PROVIDE WITH BRANCH JOINT AND FLOW SELECTOR AS PER MANUFACTURER'S RECOMMENDATION.
8. INSTALL AS PER MANUFACTURER'S RECOMMENDATION.

PACKAGED ROOFTOP AIR CONDITIONER UNIT SCHEDULE

MARK	MANUFACTURER & MODEL	SERVICE	NOMINAL TONNAGE	CFM	ESP (IN.)	MIN O.A. (CFM)	ELECTRICAL			SEER	EER	TOTAL COOLING CAPACITY (MBH)	HEATING CAPACITY		AFUE	SOUND LEVEL (DBA)	OPER. WT. (LBS.)	REMARKS
							V. / PH. / HZ.	MOCP	MCA				INPUT	OUTPUT (MBH)				
(E) RTU 1	DAIKIN DCH120XXX3VXXXAA OR APPROVED EQUAL	AS SHOWN	10.0	3500	1.00	1150	208~230/3/60	60.0/60.0	46.3/46.3	IEER=12.6	11.1	113.0	–	–	–	83	1285	1, 2, 8
(E) RTU 2	DAIKIN DCH120XXX3VXXXAA OR APPROVED EQUAL	AS SHOWN	10.0	3500	1.00	1150	208~230/3/60	60.0/60.0	46.3/46.3	IEER=12.6	11.1	113.0	–	–	–	83	1285	1, 2, 8
RTU 3	CARRIER 50HCQD07XXX5 OR APPROVED EQUAL	AS SHOWN	6.0	2700	1.00	780	208~230/3/60	50.0	36.0	IEER=15.6	12.0	70.0	5.80 kW	69.0	COP = 3.4	81	1005	3, 4, 5, 6, 7, 8, 9
RTU 4	CARRIER 50HCQD07XXX5 OR APPROVED EQUAL	AS SHOWN	6.0	2700	1.00	780	208~230/3/60	50.0	36.0	IEER=15.6	12.0	70.0	5.80 kW	69.0	COP = 3.4	81	1005	3, 4, 5, 6, 7, 8, 9

1. EXISTING PACKAGED ROOF TOP UNIT. CONTRACTOR TO CONFIRM EXACT LOCATION AND CONDITION ON-SITE.
2. PROVIDE WITH T24 APPROVED THERMOSTAT, SMOKE DETECTOR, AND MERV 13 PLEATED PANEL FILTERS IF NONE EXISTING.
3. PROVIDE WITH T24 APPROVED THERMOSTAT.
4. PROVIDE WITH MERV 13 PLEATED PANEL FILTERS.
5. PROVIDE WITH ROOF CURB AND VIBRATION ISOLATOR.
6. PROVIDE WITH PREMIUM EFFICIENCY MOTORS AND DISCONNECT SWITCH.
7. PROVIDE WITH ECONOMIZER AND POWER EXHAUST FAN.
8. PROVIDE WITH DUCT MOUNTED SMOKE DETECTOR.
9. INSTALL AS PER MANUFACTURER'S RECOMMENDATION.

FLOW SELECTOR SCHEDULE

MARK	MANUF. & MODEL	INDOOR FAN COIL UNIT	OUTDOOR UNIT	ELECTRICAL			UNIT DIMENSIONS	UNIT WT. (LBS.)	REMARKS
				V. / PH. / HZ.	MCA	MOP	WIDTH X HEIGHT X DEPTH		
FS 1	CARRIER RBM-Y0611F4PUL OR APPROVED EQUAL	FCU 2, FCU 3, FCU 4, FCU 5	HP 2	208~230/1/60	0.7	15.0	28.8" X 8.5" X 22.4"	84.0	1
FS 2	CARRIER RBM-Y0963FUL OR APPROVED EQUAL	FCU 6	HP 2	208~230/1/60	<1	15.0	15.8" X 7.88" X 7.88"	20.0	2

1. NEW MULTI-PORT FLOW SELECTOR. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
2. SINGLE PORT FLOW SELECTOR. INSTALL AS PER MANUFACTURER'S RECOMMENDATION.

EXHAUST FAN SCHEDULE

MARK	MANUF. & MODEL	LOCATION	SERVICE	CFM	ESP (IN.)	SONES	ELECTRICAL				QTY	OPER. WT. (LBS.)	REMARKS
							V. / PH. / HZ.	WATTS	MOCP	MCA			
EF 1	GREENHECK SP-A200 OR APPROVED EQUAL	CEILING	TOILET EXHAUST	190	0.35	2.5	115/1/60	53.0	15.0	0.6	2	24	1, 2, 4, 5
EF 2	GREENHECK SP-A200 OR APPROVED EQUAL	CEILING	STORAGE/UTILITY	180	0.37	2.5	115/1/60	53.0	15.0	0.6	1	24	1, 2, 5
EF 3	PANASONIC FV-1115VK2 OR APPROVED EQUAL	CEILING	STORAGE/MOP	60	0.25	0.4	120/1/60	7.2	–	–	1	15	1, 2, 3, 5
EF 4	GREENHECK CUBE-220 OR APPROVED EQUAL	ROOF	MECHANICAL/ FIRE ALARM ROOM	5800	0.5	18.1	208/3/60	BHP = 1.55	15.0	9.4	1	178	2
EF 5	GREENHECK CUBE-100 OR APPROVED EQUAL	ROOF	SINGLE RACK OVEN CANOPY EXHAUST	900	0.3	7.5	115/1/60	BHP = 0.15	15.0	7.2	1	74	2

1. PROVIDE WITH CEILING GRILLE VIBRATION ISOLATOR KIT, FAN TERMINATION CAP WITH BIRD SCREEN AND BACK DRAFT DAMPER.
2. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
3. PROVIDE WITH FV-VS15VK1 MULTI SPEED PLUG N' PLAY MODULE FROM PANASONIC.
4. PROVIDE FAN WITH INTEGRAL HUMIDITY SENSOR (30-80% ADJUSTABLE) AND MOTION SENSOR. SET INTIAL SETPOINT AT 60%.
5. PROVIDE WITH WALL SWITCH.

AIR DISTRIBUTION SCHEDULE

MARK	MANUFACTURER & MODEL OR EQUAL	SERVICE	TYPE	FINISH	MODULE SIZE	NECK SIZE	REMARKS
CD-1	TITUS TMS-AA OR APPROVED EQUAL	SUPPLY	CEILING	WHITE	24"x24"	AS SHOWN ON PLAN	1, 2
CD-2	TITUS 300R OR APPROVED EQUAL	SUPPLY	CEILING	WHITE	48"x24"	AS SHOWN ON PLAN	1, 2
CD-3	TITUS 300R OR APPROVED EQUAL	SUPPLY	SOFFIT	WHITE	18"x6"	AS SHOWN ON PLAN	1, 2
CD-4	TITUS TMR-AA OR APPROVED EQUAL	SUPPLY	DUCT	WHITE	10" ø	AS SHOWN ON PLAN	1, 2
CD-5	TITUS TMR-AA OR APPROVED EQUAL	SUPPLY	DUCT	WHITE	18" ø	AS SHOWN ON PLAN	1, 2
RR-1	TITUS 350RL OR APPROVED EQUAL	RETURN	CEILING	WHITE	24"x24"	AS SHOWN ON PLAN	1, 2
RR-2	TITUS 350RL OR APPROVED EQUAL	RETURN	DUCT	WHITE	48"x24"	AS SHOWN ON PLAN	1, 2
RR-3	TITUS 350RL OR APPROVED EQUAL	RETURN	SIDE WALL	WHITE	24"x14"	AS SHOWN ON PLAN	1, 2
RR-4	TITUS 350RL OR APPROVED EQUAL	RETURN	SIDE WALL	WHITE	42"x20"	AS SHOWN ON PLAN	1, 2
RR-5	TITUS 350RL OR APPROVED EQUAL	RETURN	DUCT	WHITE	42"x18"	AS SHOWN ON PLAN	1, 2
EG-1	TITUS 350RL OR APPROVED EQUAL	EXHAUST	CEILING	WHITE	42"x42"	AS SHOWN ON PLAN	1, 2

1. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
2. PROVIDE WITH VOLUME DAMPER.

DUCT MATERIAL SCHEDULE

(FOR LOW PRESSURE DUCTWORKS W/S.P. LESS THAN 2" W.G., LESS THAN 2000 FPM

RECTANGULAR

DIMENSION:	4"-18"	19"-30"	31"-54"	55"-84"
GAUGE:	26 ga.	24 ga.	22 ga.	20 ga.

ROUND

DIMENSION:	3"-14"	15"-23"	24"-37"	37"-50"
GAUGE:	26 ga.	24 ga.	22 ga.	20 ga.

DUCT CONSTRUCTION SHALL COMPLY WITH CMC 2022, SMACNA METAL AND FLEXIBLE DUCT CONSTRUCTION STANDARD AND UL 181, WHICHEVER IS THE MOST STRINGENT SHALL PREVAIL.

HEATING AND COOLING DUCT SYSTEM

AIRFLOW CFM	SUPPLY OR RETURN MAIN DUCT SIZE					TABLE A
200	8" RD	OR	6" X 8"			
300	9" RD	OR	8" X 8"			
400	10" RD	OR	10" X 8"			
500	11" RD	OR	14" X 8"	10" X 10"		
600	12" RD	OR	16" X 8"	12" X 10"		
700	13" RD	OR	18" X 8"	14" X 10"	12" X 12"	
800	14" RD	OR	22" X 8"	16" X 10"	14" X 12"	
1000	16" RD	OR	28" X 8"	20" X 10"	16" X 12"	
1200	17" RD	OR	32" X 8"	24" X 10"	20" X 12"	
1400	18" RD	OR		28" X 10"	24" X 12"	
1600	20" RD	OR		32" X 10"	28" X 12"	
1800	21" RD	OR			30" X 12"	
2000	22" RD	OR			34" X 12"	

AIRFLOW CFM	SUPPLY BRANCH DUCT SIZE	TABLE B
80	5" RD	
120	6" RD OR 3-1/2" X 10"	
160	7" RD	

AIR BALANCE (FAN)

MARK	S.A.(CFM)	R.A.(CFM)	O.A.(CFM)	E.A.(CFM)	DIFF.(CFM)
(E)RTU-1	3500	3500	1150		0
(E)RTU-2	3500	3500	1150		0
RTU-3	2700	2000	780		700
RTU-4	2700	2000	780		700
FCU-1	500	380	120		120
FCU-2	1200	830	370		370
FCU-3	1400	1040	360		360
FCU-4	1200	1070	130		130
FCU-5	1200	890	310		310
FCU-6	2800	2620	180		180
KEF-1				-3319	-3319
KEF-2				-3319	-3319
MUA-1			5974		5974
EF-1				-380	-380
EF-2				-180	-180
EF-3				-60	-60
EF-5				-900	-900
TOTAL	20700	-17830	5974	-8158	686

NOTES:
1. DATA USED FOR EXISTING AC ARE SUGGESTED AIRFLOW AND IS NOT PART OF SCOPE.

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NEWARK, CA 95121

REV	DATE	DESCRIPTION
1	10.27.24	AHJ COMMENTS

MECHANICAL SCHEDULES

DRAWN BY: JKS | SCALE: NONE
CHECKED: HC | PROJECT:A2404-AD669

NTP: OCT. 17, 2024

M0.2

MAKE–UP AIR UNIT SCHEDULE

MARK	MANUF. & MODEL	LOCATION	SERVICE	MIN. CFM	DESIGN CFM	ESP (IN.)	FAN (RPM)	SONES	EVAP FLOW RATE (Gal/Hr)	EVAP COOLER ENTERING DB TEMP	EVAP COOLER ENTERING WB TEMP	EVAP COOLER LEAVING DB TEMP	EVAP COOLER LEAVING WB TEMP	ELECTRICAL						WEIGHT (LBS.)	REMARKS
														V. / PH. / HZ.	HP	BHP	MCA	MOCP	FLA		
MUA 1	CAPTIVEAIRE A3–24D	ROOF	MAKE–UP AIR	3000	5974	0.750	1349	21.3	5.27	90°F	65°F	71°F	65°F	208/3/60	7.50	4.8680	26.4A	45A	21.1	1184	1, 2, 3

1. INTERLOCK TO OPERATE WHEN KITCHEN HOOD EXHAUST FAN IS ACTIVATED.
2. PROVIDE DISCONNECT SWITCH AND PREMIUM EFFICIENCY MOTOR.
3. INSTALL PER MANUFACTURER'S RECOMMENDATION.

KITCHEN EXHAUST FAN SCHEDULE

MARK	MANUF. & MODEL	LOCATION	SERVICE	CFM	ESP (IN.)	FAN (RPM)	SONES	ELECTRICAL				OPER. WT. (LBS.)	REMARKS
								V. / PH. / HZ.	HP	BHP	FLA		
KEF 1	CAPTIVEAIRE DU240HFA	ROOF	KITCHEN AREA	3319	2.00	976	19.1	208/3/60	5.00	2.4450	15.2	358	1, 2, 3, 4
KEF 2	CAPTIVEAIRE DU240HFA	ROOF	KITCHEN AREA	3319	2.00	976	19.1	208/3/60	5.00	2.4450	15.2	358	1, 2, 3, 4

1. INSTALL PER MANUFACTURER'S RECOMMENDATION.
2. FAN TO OPERATE ON A WALL MOUNT SWITCH.
3. PROVIDE WITH DISCONNECT SWITCH AND PREMIUM EFFICIENCY MOTOR.
4. FAN SHALL MEET NFPA 96 STANDARDS FOR GREASE DUCT. PROVIDE CURB AS PROVIDED BY MANUFACTURER.

EXHAUST HOOD SCHEDULE

MARK	MANUF. & MODEL	SERVICE	EXHAUST (CFM)	MAKE–UP AIR (CFM)	EXHAUST DUCT SIZE	EXHAUST S.P.	DIMENSIONS			OPER. WT. (LBS.)	REMARKS
							WIDTH	DEPTH	HEIGHT		
H 1	CAPTIVEAIRE 5424 ND–2–PSP–F	AS SHOWN	3319	2987	18"ø	–1.112"	189"	54"	24"	1178	1, 2
H 2	CAPTIVEAIRE 5424 ND–2–PSP–F	AS SHOWN	3319	2987	18"ø	–1.112"	189"	54"	24"	1122	1, 2

1. INSTALL PER MANUFACTURER'S RECOMMENDATION.
2. SEE CAPTIVE AIRE DRAWINGS M4.1 THROUGH M4.7.

AIR CURTAIN SCHEDULE

MARK	MANUF. & MODEL	LOCATION	SERVICE	WIDTH OF DOOR	DOOR HEIGHT	CFM	VELOCITY	ELECTRICAL		OPER. WT. (LBS.)	REMARKS
								V. / PH. / HZ.	HP		
A 1	MARS LPV260–1UA–OB OR APPROVED EQUAL	CEILING	AS SHOWN	60"	84"	1500	1800	115/1/60	1/6	53	1, 2
A 2	MARS LPV248–1UA–OB OR APPROVED EQUAL	CEILING	AS SHOWN	48"	84"	1200	1800	115/1/60	1/6	52	1, 2

1. PROVIDE WITH DOOR SWITCHES. AUTOMATIC ON/OFF OR AIR CURTAIN AS DOOR IS OPENED OR CLOSED.
2. INSTALL AS PER MANUFACTURER'S RECOMMENDATION.

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MECHANICAL SCHEDULES

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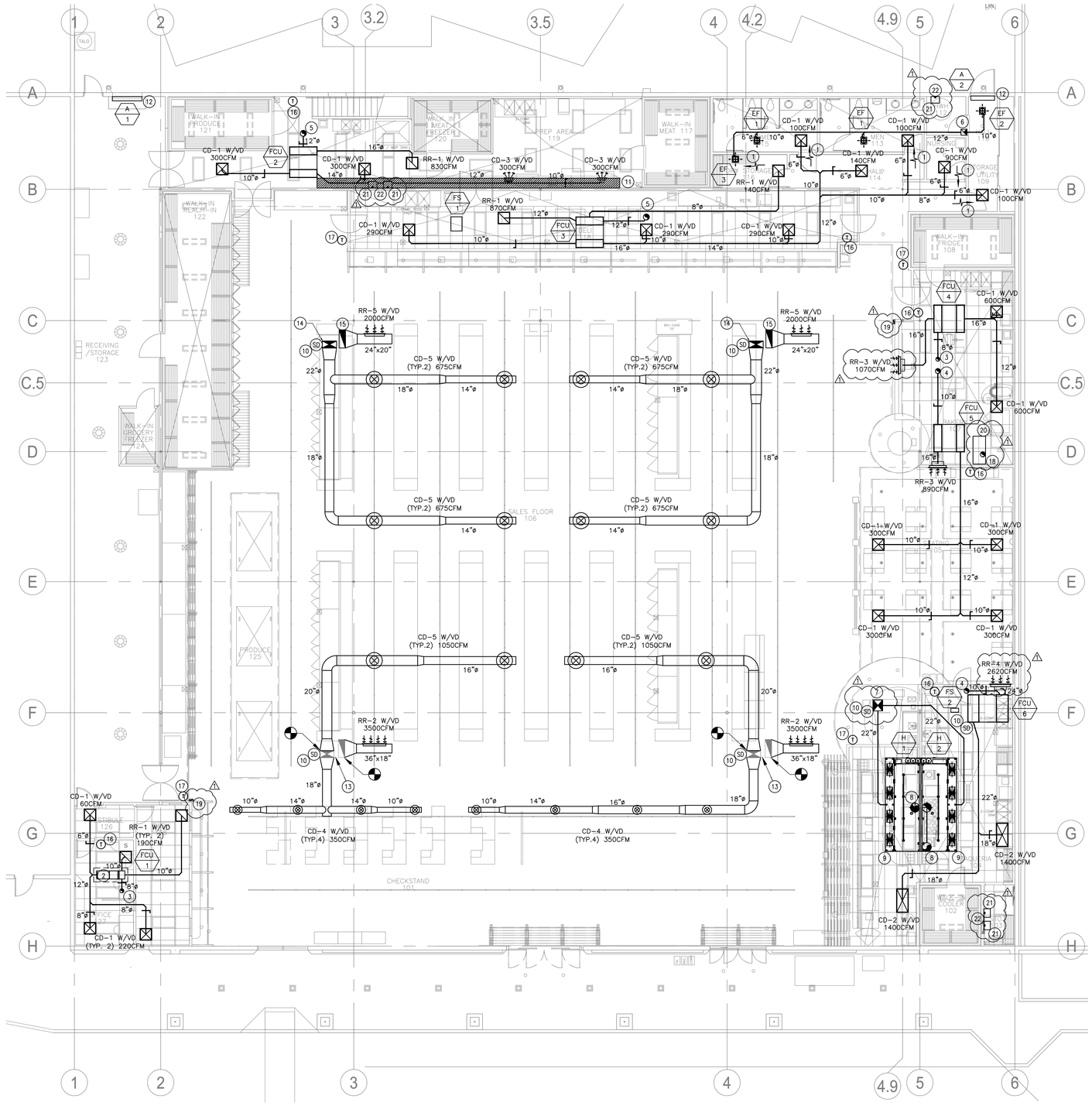
CHECKED: HC | PROJECT:A2404-AD669

NTP: OCT. 17, 2024

M0.3



GENERAL NOTES

A. CONTRACTOR SHALL VERIFY IN THE FIELD FOR EXACT LOCATION OF ALL DUCTING/PIPING AND UTILITIES PRIOR TO START OF WORK. IN THE EVENT OF ANY DISCREPANCIES OR POTENTIAL CONFLICTS, NOTIFY THE ARCHITECT AND ENGINEER IN WRITING PRIOR TO START OF WORK.

B. ALL DUCTING/PIPING LOCATIONS ARE DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE WITH ALL TRADES AND OWNER'S REPRESENTATIVE AND VERIFY EXACT ROUTING PRIOR TO START OF WORK.

C. FINAL THERMOSTAT/REMOTE SENSOR SHALL BE COORDINATED WITH THE ARCHITECT AND GENERAL CONTRACTOR FOR APPROVAL PRIOR TO INSTALLATION.

⚠ D. CONTRACTOR SHALL PERFORM AIR BALANCING AS PART OF TESTING AND COMMISSIONING ACTIVITIES OF ALL HVAC SYSTEM AND EQUIPMENT. DURING THE SAID ACTIVITY, ALL SUPPLY AND EXHAUST AIRFLOW RATES SHALL BE VERIFIED IN ACCORDANCE WITH 2022 CMC. AN AIR BALANCE REPORT MUST BE PROVIDED TO AUTHORITIES HAVING JURISDICTION PRIOR TO THE FINAL INSPECTION.

E. MECHANICAL HOOD SHOULD SHOULD COMPLY WITH CMC TABLE 508.5.1.2 AND FOR EXTRA-HEAVY-DUTY COOKING ONLY.

F. PROVIDE YOUNG REGULATOR BALANCING DAMPER AS NEEDED FOR THE DIFFUSER THAT IS NOT ACCESSIBLE FOR BALANCING.

G. CONTRACTOR TO PROVIDE ACCESS PANEL TO ALL MECHANICAL EQUIPMENTS FOR MAINTENANCE IF NOT READILY ACCESSIBLE. COORDINATE WITH ARCHITECT.

⚠ H. ALL DEEP-FAT FRYERS SHALL BE INSTALLED WITH AT LEAST A 16" SPACE BETWEEN THE FRYER AND SURFACE FLAMES FROM ADJACENT COOKING EQUIPMENT OR A MINIMUM 8" STEEL OR TEMPERED GLASS BAFFLE PLATE SHALL BE INSTALLED BETWEEN THE FRYER AND SURFACE FLAMES OF THE ADJACENT APPLIANCE.

I. ROOFTOP EQUIPMENT SHALL BE PERMANENTLY IDENTIFIED AS TO THE AREA OR SPACE SERVED BY THE EQUIPMENT.

KEY NOTES

1. ½" DOOR UNDERCUT. COORDINATE WITH ARCHITECT.
2. FAN COIL UNIT MOUNTED ON CEILING. INSTALL AS PER MANUFACTURER'S RECOMMENDATION.
3. 8" ø FRESH AIR INTAKE. PROVIDE 10 FEET CLEARANCE FROM ANY EXHAUST TERMINATION.
4. 10" ø FRESH AIR INTAKE. PROVIDE 10 FEET CLEARANCE FROM ANY EXHAUST TERMINATION.
5. 12" ø FRESH AIR INTAKE. PROVIDE 10 FEET CLEARANCE FROM ANY EXHAUST TERMINATION.
6. 12"x12" EXHAUST AIR RISER. PROVIDE WITH BACKDRAFT DAMPER, AND VENT CAP WITH INSECT SCREEN. PROVIDE 10 FEET CLEARANCE FROM ANY MECHANICAL INTAKE.
7. 22"x19" MAKE-UP AIR DUCT RISER. CONNECT TO MUA-1.
8. 18" ø KITCHEN EXHAUST DUCT RISER. CONNECT TO KEF-1/KEF-2.
9. HOOD SUPPLY AIR PLENUM BOX.
10. PROVIDE WITH DUCT MOUNTED SMOKE DETECTOR IF NONE EXISTING.
11. PROPOSED 20"x16" SOFFIT. COORDINATE WITH ARCHITECT.
12. NEW AIR CURTAIN. REFER TO SHEET M0.3 FOR UNIT SPECIFICATION.
13. EXISTING RTU1/RTU2 SUPPLY AND RETURN RISER TO REMAIN. CONTRACTOR TO VERIFY EXACT LOCATION AND CONDITION ON SITE.
14. 28-3/4"x14" SUPPLY RISER. CONNECT TO ROOFTOP UNIT.
15. 36-3/8"x12-5/8" RETURN RISER. CONNECT TO ROOFTOP UNIT.
16. FCU THERMOSTAT. COORDINATE WITH ARCHITECT. REFER TO DETAIL #5/M3.1 FOR MOUNTING.
17. RTU THERMOSTAT. PROVIDE IF NONE EXISTING. COORDINATE WITH ARCHITECT. REFER TO DETAIL #5/M3.1 FOR MOUNTING.
18. ELECTRICAL SINGLE RACK OVEN CANOPY EXHAUST THRU ROOF. INSTALL AS PER MANUFACTURER'S INSTRUCTION.

⚠ 19. NEW CO2 SENSOR TO BE PROVIDED. INSTALL AS PER CEnC 120.1(d)4.

20. SINGLE RACK OVEN TYPE-1 HOOD CANOPY OUTLINE.
21. NEW GAS-FIRED TANKLESS WATER HEATER. REFER TO PLUMBING PLANS FOR UNIT SPECIFICATIONS.
22. 3" ø CONCENTRIC VENT THRU ROOF. INSTALL AS PER MANUFACTURER'S RECOMMENDATION.

1 M2.1 MECHANICAL FLOOR PLAN
SCALE: 1/8" = 1'-0"

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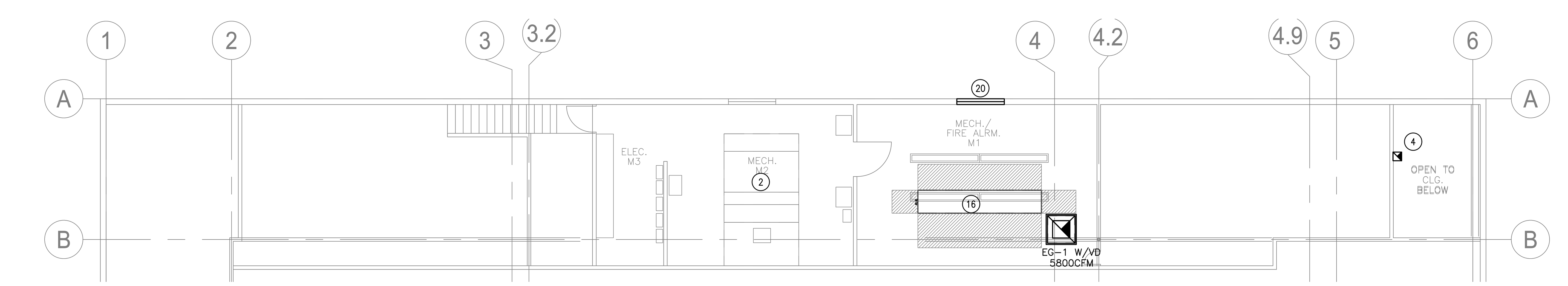
⚠	10.27.24	AHJ COMMENTS

MECHANICAL FLOOR PLAN

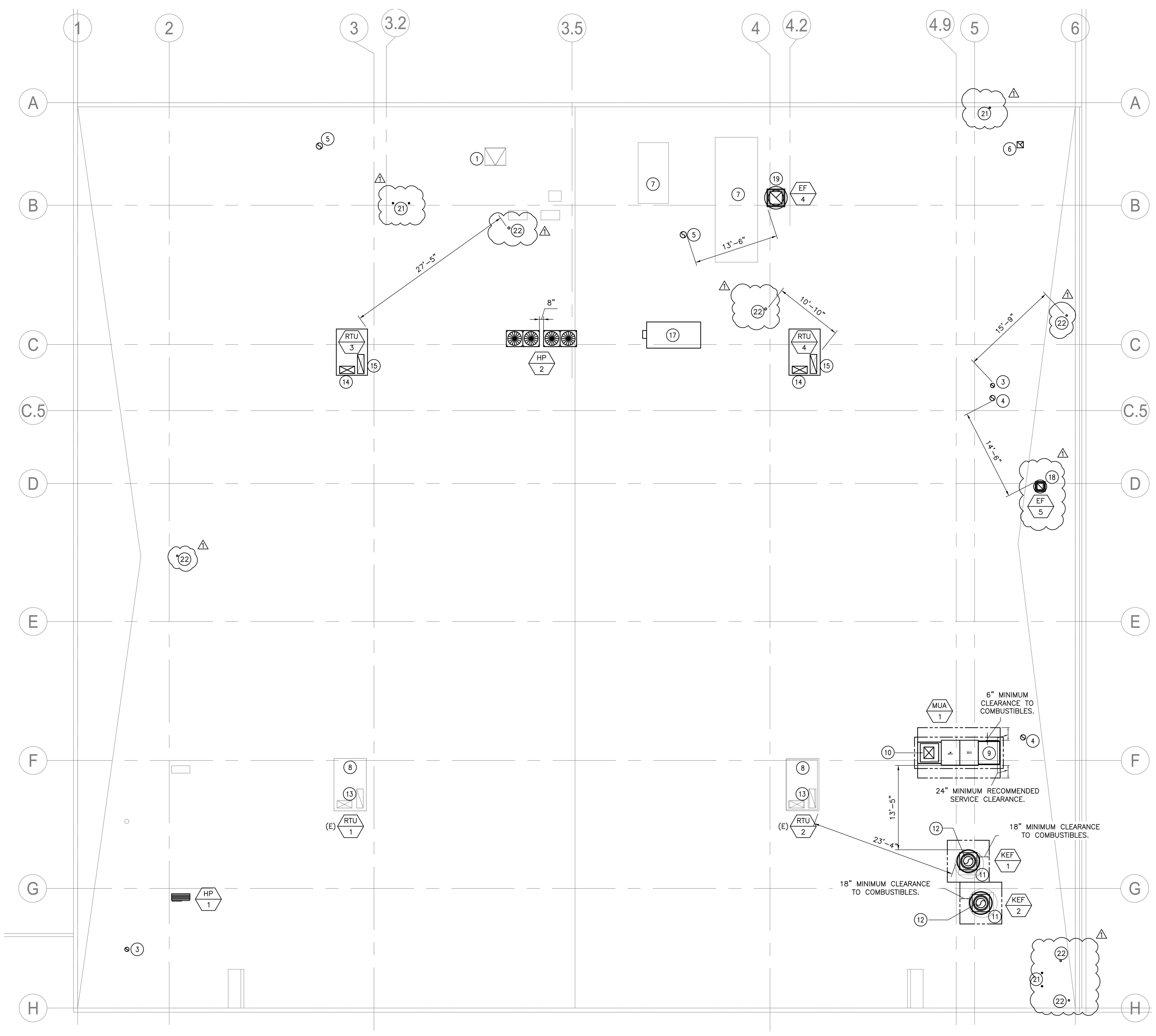
DRAWN BY: JKS	SCALE: NOTED
CHECKED: HC	PROJECT: A2404-AD669

NTP: OCT. 17, 2024

M2.1



1 M2.2 **MECHANICAL MEZZANINE FLOOR PLAN**
SCALE: 1/8" = 1'-0"



2 M2.2 **MECHANICAL ROOF PLAN**
SCALE: 1/8" = 1'-0"

GENERAL NOTES

A. CONTRACTOR SHALL VERIFY IN THE FIELD FOR EXACT LOCATION OF ALL DUCTING/PIPING AND UTILITIES PRIOR TO START OF WORK. IN THE EVENT OF ANY DISCREPANCIES OR POTENTIAL CONFLICTS, NOTIFY THE ARCHITECT AND ENGINEER IN WRITING PRIOR TO START OF WORK.

B. ALL DUCTING/PIPING LOCATIONS ARE DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE WITH ALL TRADES AND OWNER'S REPRESENTATIVE AND VERIFY EXACT ROUTING PRIOR TO START OF WORK.

C. FINAL THERMOSTAT/REMOTE SENSOR SHALL BE COORDINATED WITH THE ARCHITECT AND GENERAL CONTRACTOR FOR APPROVAL PRIOR TO INSTALLATION.

D. CONTRACTOR SHALL PERFORM AIR BALANCING AS PART OF TESTING AND COMMISSIONING ACTIVITIES OF ALL HVAC SYSTEM AND EQUIPMENT. DURING THE SAID ACTIVITY, ALL SUPPLY AND EXHAUST AIRFLOW RATES SHALL BE VERIFIED IN ACCORDANCE WITH 2022 CMC. AN AIR BALANCE REPORT MUST BE PROVIDED TO AUTHORITIES HAVING JURISDICTION PRIOR TO THE FINAL INSPECTION.

E. MECHANICAL HOOD SHOULD SHOULD COMPLY WITH CMC TABLE 508.5.1.2 AND FOR EXTRA-HEAVY-DUTY COOKING ONLY.

F. PROVIDE YOUNG REGULATOR BALANCING DAMPER AS NEEDED FOR THE DIFFUSER THAT IS NOT ACCESSIBLE FOR BALANCING.

G. CONTRACTOR TO PROVIDE ACCESS PANEL TO ALL MECHANICAL EQUIPMENTS FOR MAINTENANCE IF NOT READILY ACCESSIBLE. COORDINATE WITH ARCHITECT.

H. ALL DEEP-FAT FRYERS SHALL BE INSTALLED WITH A MINIMUM 8" STEEL OR TEMPERED GLASS BAFFLE PLATE SHALL BE INSTALLED BETWEEN THE FRYER AND SURFACE FLAMES OF THE ADJACENT APPLIANCE.

I. ROOFTOP EQUIPMENT SHALL BE PERMANENTLY IDENTIFIED AS TO THE AREA OR SPACE SERVED BY THE EQUIPMENT.

KEY NOTES

1. EXISTING ROOF HATCH ACCESS
2. EXISTING AHU TO BE DEMOLISHED.
3. 8" ø FRESH AIR INTAKE. PROVIDE 10 FEET CLEARANCE FROM ANY EXHAUST TERMINATION.
4. 10" ø FRESH AIR INTAKE. PROVIDE 10 FEET CLEARANCE FROM ANY EXHAUST TERMINATION.
5. 12" ø FRESH AIR INTAKE. PROVIDE 10 FEET CLEARANCE FROM ANY EXHAUST TERMINATION.
6. 12"x12" EXHAUST AIR RISER. PROVIDE WITH BACKDRAFT DAMPER, AND VENT CAP WITH INSECT SCREEN. PROVIDE 10 FEET CLEARANCE FROM ANY MECHANICAL INTAKE.
7. EXISTING ROOF TOP UNIT TO BE DEMOLISHED.
8. EXISTING PACKAGED ROOF TOP UNITS TO BE RE-USED. CONTRACTOR TO VERIFY EXACT LOCATION AND CONDITION ON-SITE.
9. NEW MAKE-UP AIR UNIT. PLEASE SEE SHEET M0.2 FOR UNIT SPECIFICATION. PROVIDE 10 FEET CLEARANCE FROM ANY EXHAUST TERMINATION.
10. 22"x19" MAKE-UP AIR DUCT RISER. CONNECT TO MUA-1.
11. NEW KITCHEN EXHAUST FAN. PLEASE SEE SHEET M0.2 FOR UNIT SPECIFICATION. PROVIDE 10 FEET CLEARANCE FROM ANY MECHANICAL INTAKE.
12. 18" ø KITCHEN EXHAUST DUCT RISER. CONNECT TO KEF-1/KEF-2.
13. EXISTING RTU1/RTU2 SUPPLY AND RETURN RISER TO REMAIN. CONTRACTOR TO VERIFY EXACT LOCATION AND CONDITION ON SITE.
14. 28-3/4"x14" SUPPLY RISER. CONNECT TO ROOFTOP UNIT.
15. 36-3/8"x12-5/8" RETURN RISER. CONNECT TO ROOFTOP UNIT.
16. RACK SYSTEM. NOT PART OF SCOPE.
17. ROOFTOP CONDENSER. NOT PART OF SCOPE.
18. NEW ROOFTOP EXHAUST FAN SERVING SINGLE RACK OVEN CANOPY EXHAUST. INSTALL AS PER MANUFACTURER'S INSTRUCTION.
19. 24"x24" EXHAUST AIR RISER CONNECTED TO EF-4. PROVIDE 10 FEET CLEARANCE FROM ANY MECHANICAL INTAKE.
20. LOUVERED OPENING. PROVIDE WITH A MINIMUM FREE AREA OF 12 SQUARE FEET. COORDINATE WITH ARCHITECT.
21. 3" ø CONCENTRIC VENT THRU ROOF. INSTALL AS PER MANUFACTURER'S RECOMMENDATION.
22. PLUMBING VENT. MAINTAIN A MINIMUM 10 FEET CLEARANCE FROM ANY MECHANICAL INTAKE. REFER TO PLUMBING PLANS FOR DETAILS.

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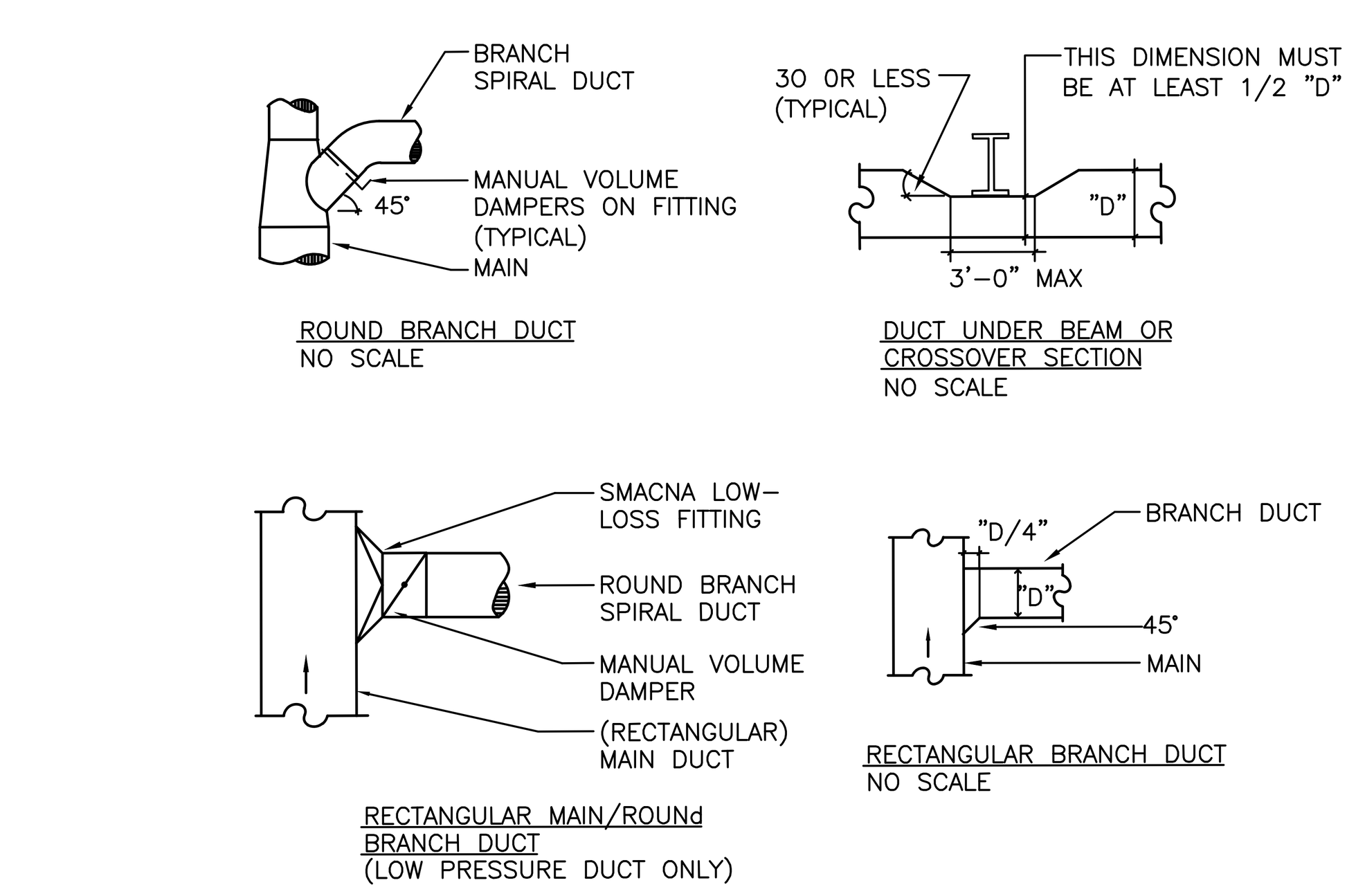
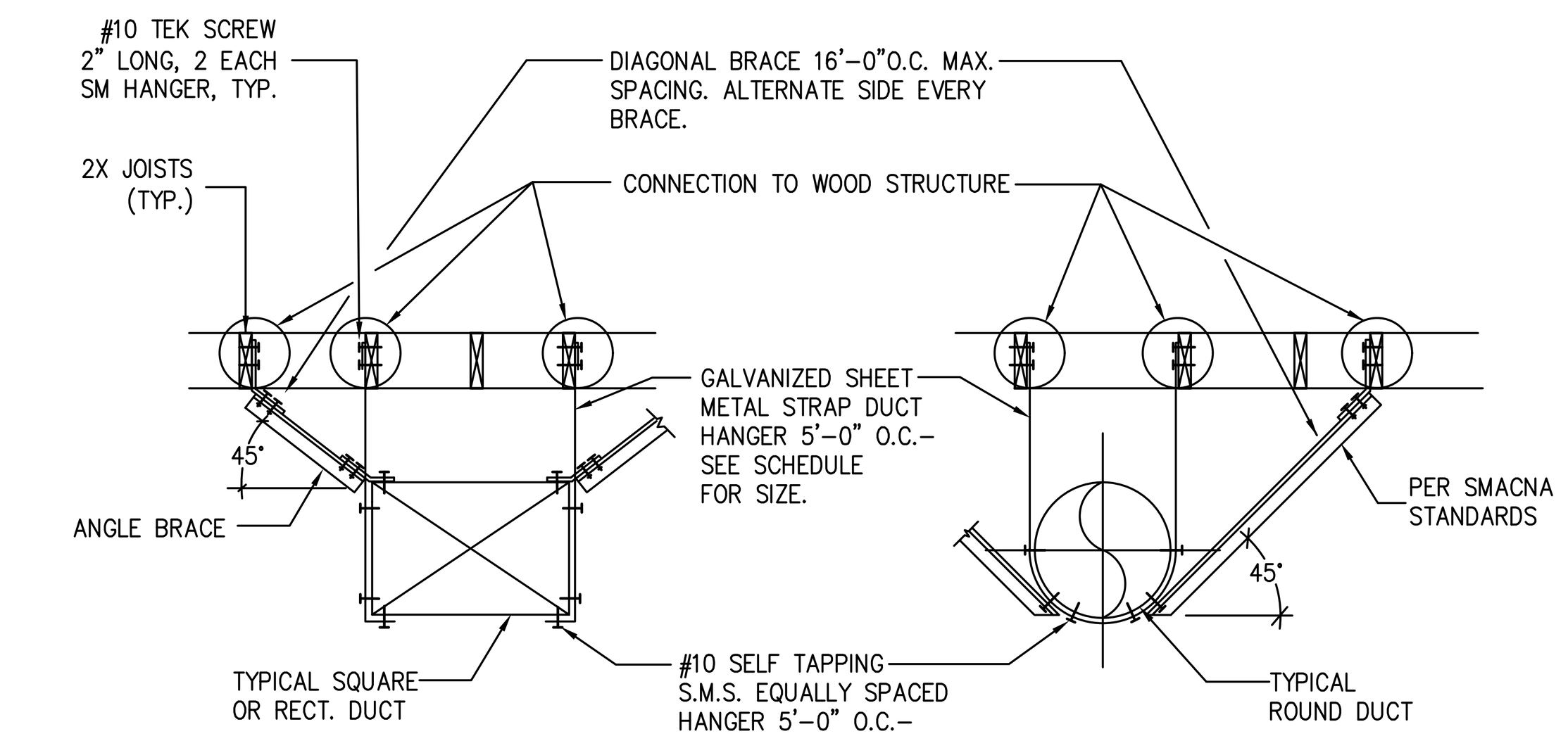
MECHANICAL MEZZANINE FLOOR & ROOF PLAN

DRAWN BY: JKS	SCALE: NOTED
CHECKED: HC	PROJECT:A2404-AD669
NTP: OCT. 17, 2024	M2.2



1 | SCALE NONE | DUCT INSTALLATION DETAIL

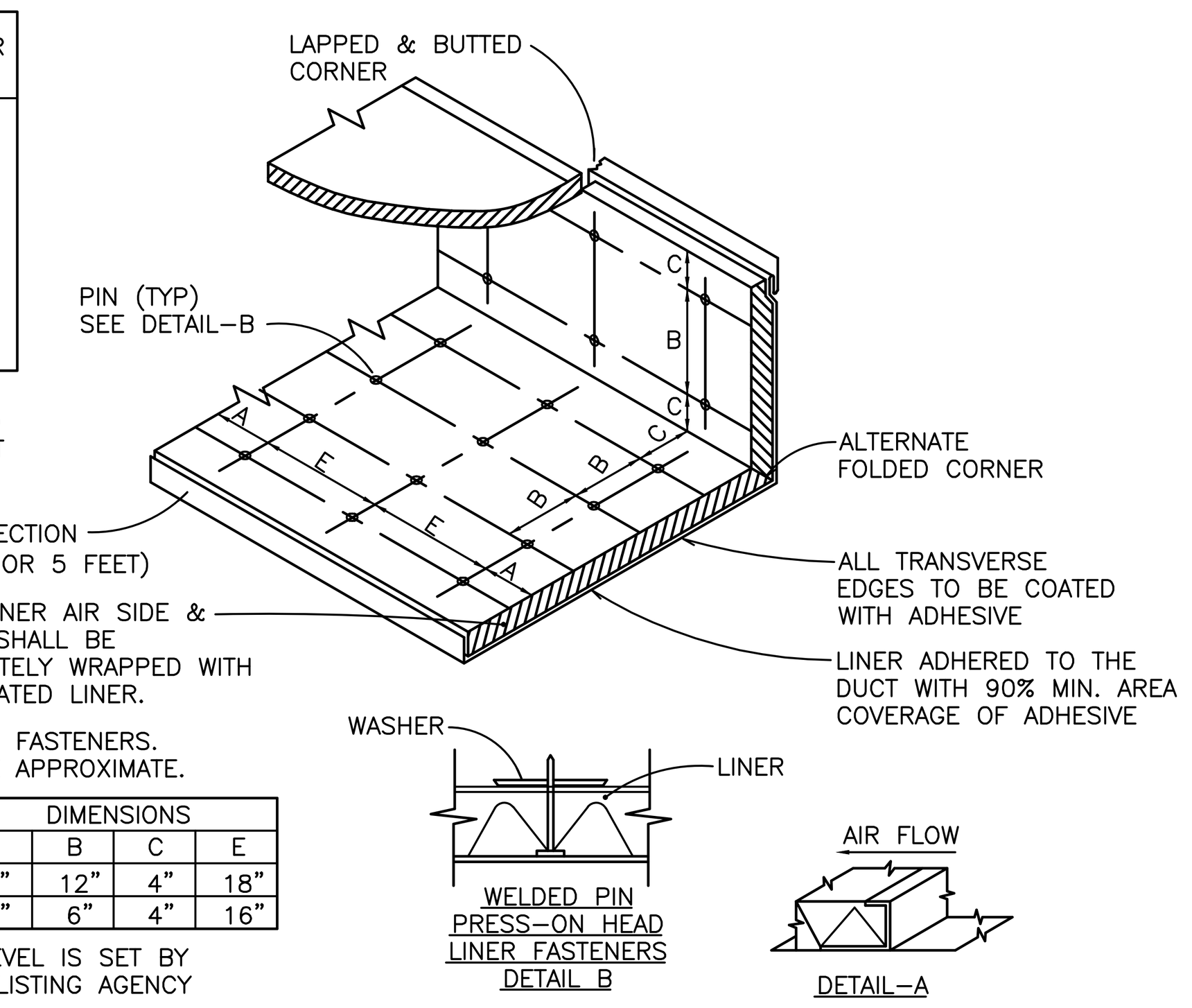


RETANGULAR DUCT			ROUND DUCT		
MAX. OF DUCT PERIMETER/IN.	STRAP	MAX. LOAD EACH HANGER/LBS.	DIAMETER /INCHES	STRAP	MAX. LOAD EACH HANGER/LBS.
P/2 =72	1"X 20 GA.	100	UP TO 20"	1"X 20 GA.	100
P/2 =96	1"X 18 GA.	150	21" TO 36"	1"X 18 GA.	150

2 | SCALE NONE | DUCT SUPPORT DETAIL

NO. PINS	LINER INTERIOR WIDTH
0	8" DN.
2	9"–16"
3	17"–28"
4	29"–40"
5	41"–52"
6	53"–64"
7	65"–76"
8	77"–88"
9	89"–100"

NOTE:
THE VELOCITY RATED SIDE OF LINER MUST FACE THE AIR FLOW

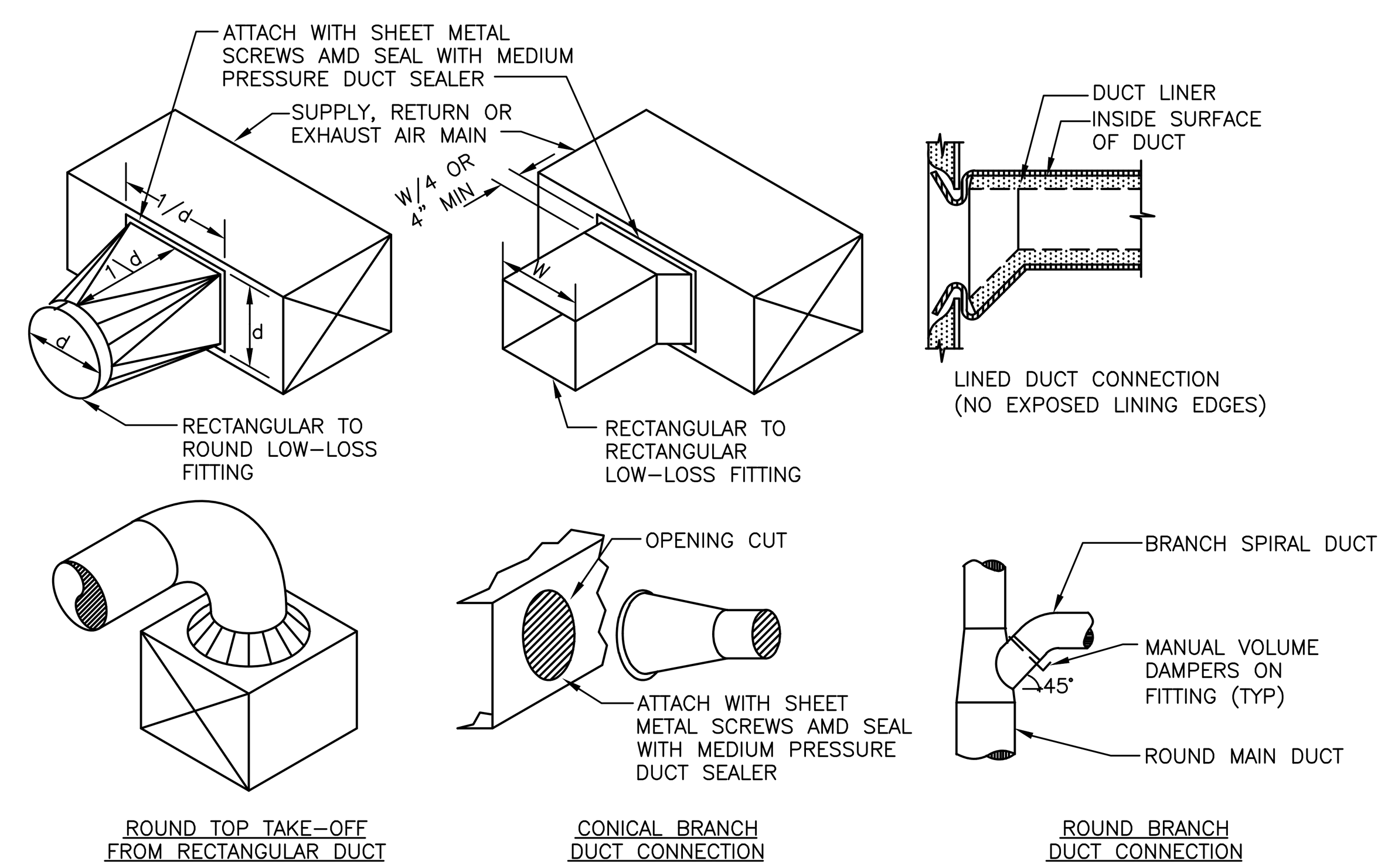


MAXIMUM SPACING FOR FASTENERS. ACTUAL INTERVALS ARE APPROXIMATE.

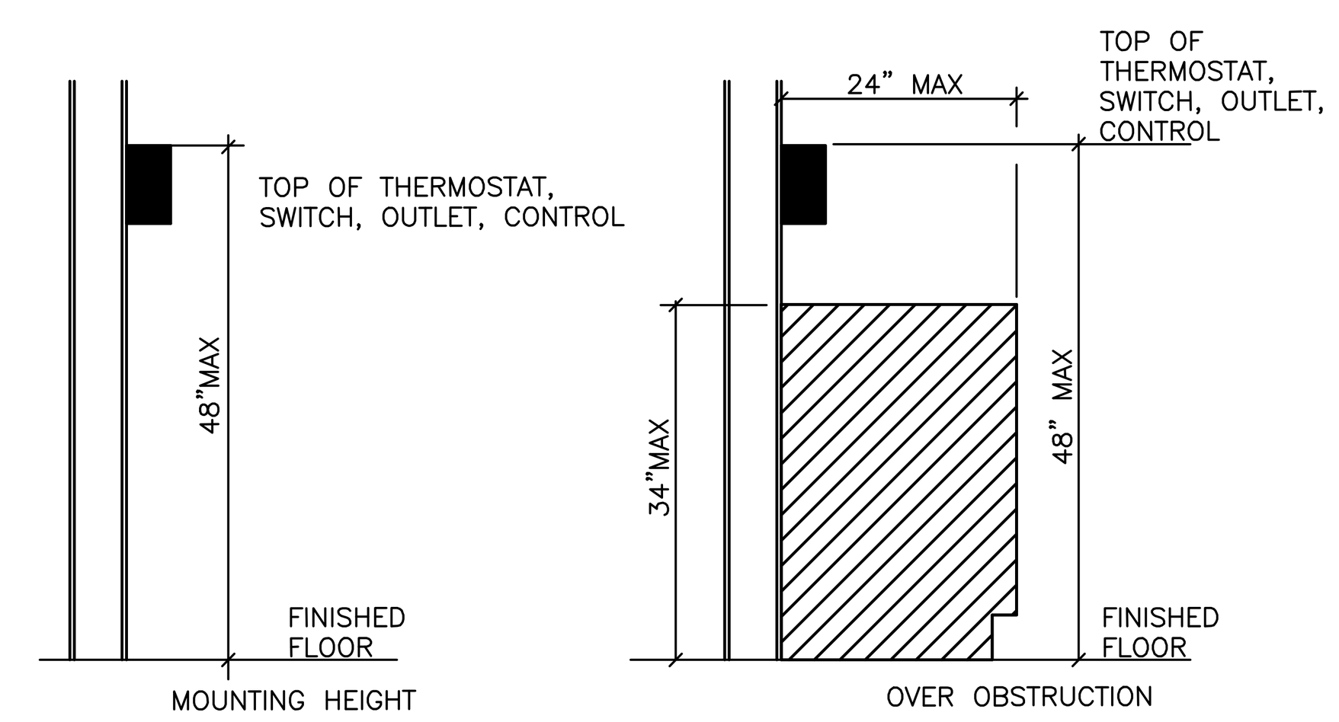
VELOCITY *	DIMENSIONS			
	A	B	C	E
0–2500 FPM	3"	12"	4"	18"
2501–6000 FPM	3"	6"	4"	16"

* UNLESS A LOWER LEVEL IS SET BY MANUFACTURER OR LISTING AGENCY

3 | SCALE NONE | DUCT LINING DETAIL

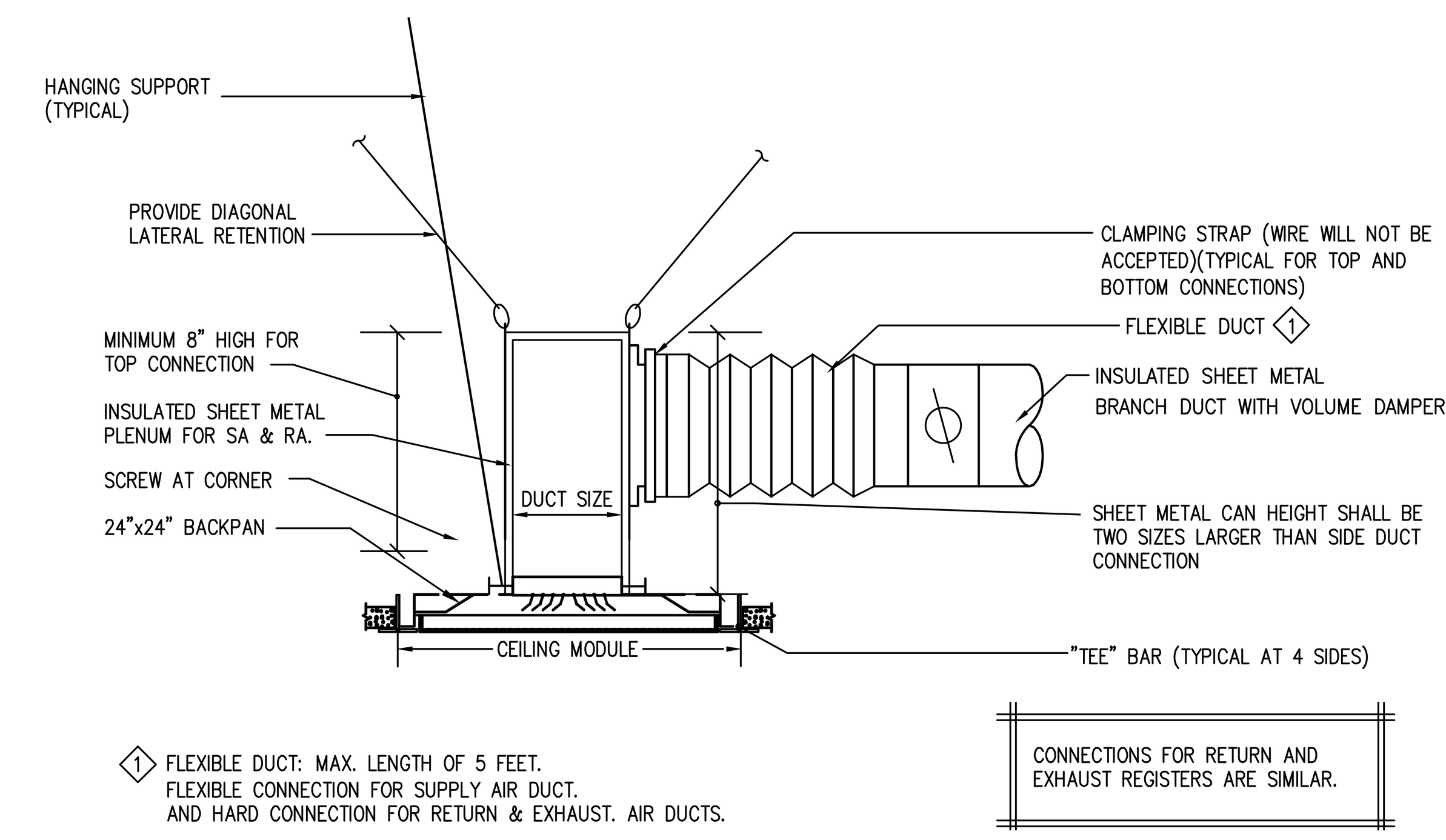


4 | SCALE NONE | BRANCH DUCTWORK CONNECTIONS



NOTE:
DETAIL APPLIES TO ALL SWITCHES AND SENSORS.

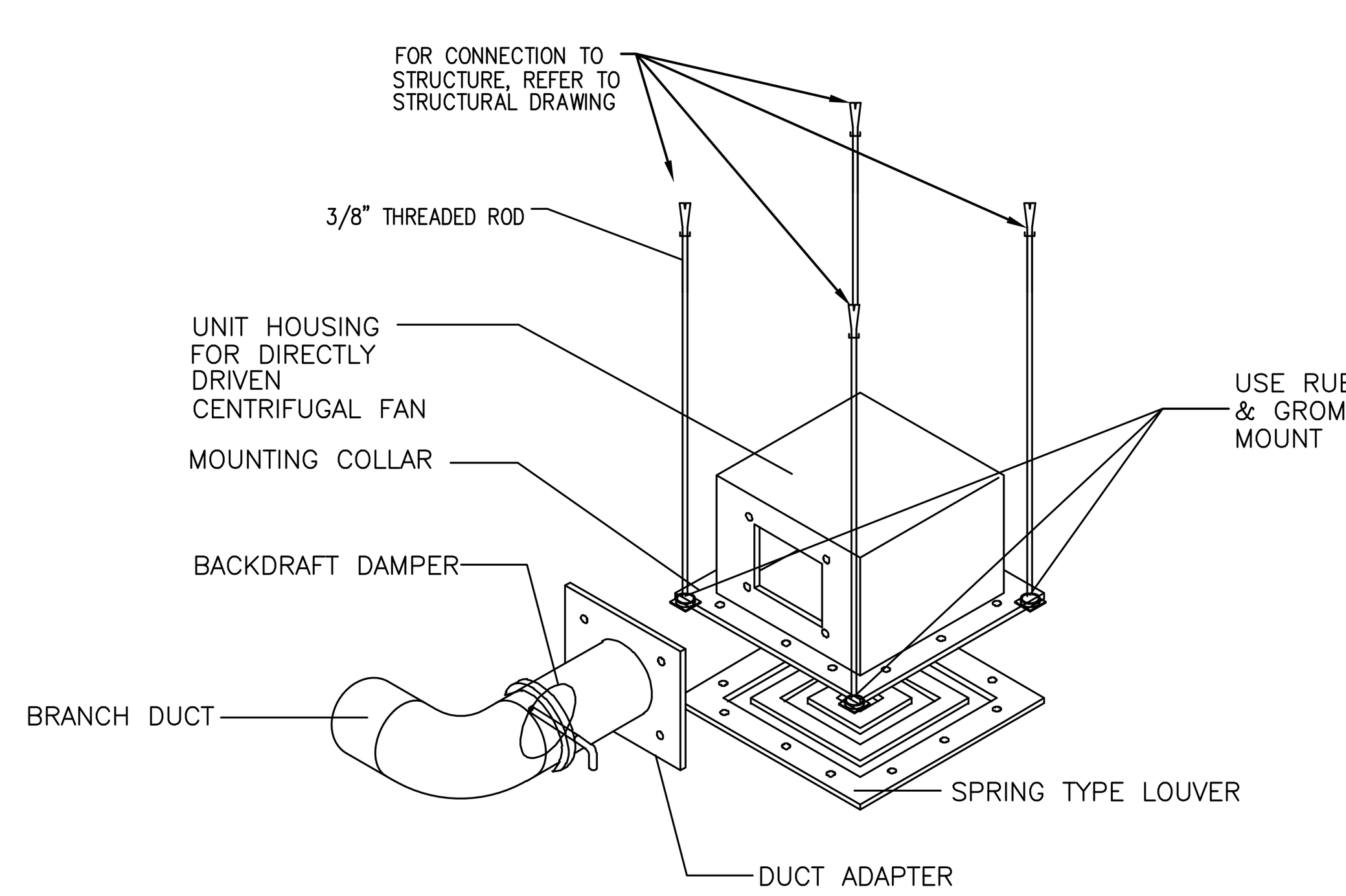
5 | SCALE NONE | THERMOSTAT MOUNTING DETAIL



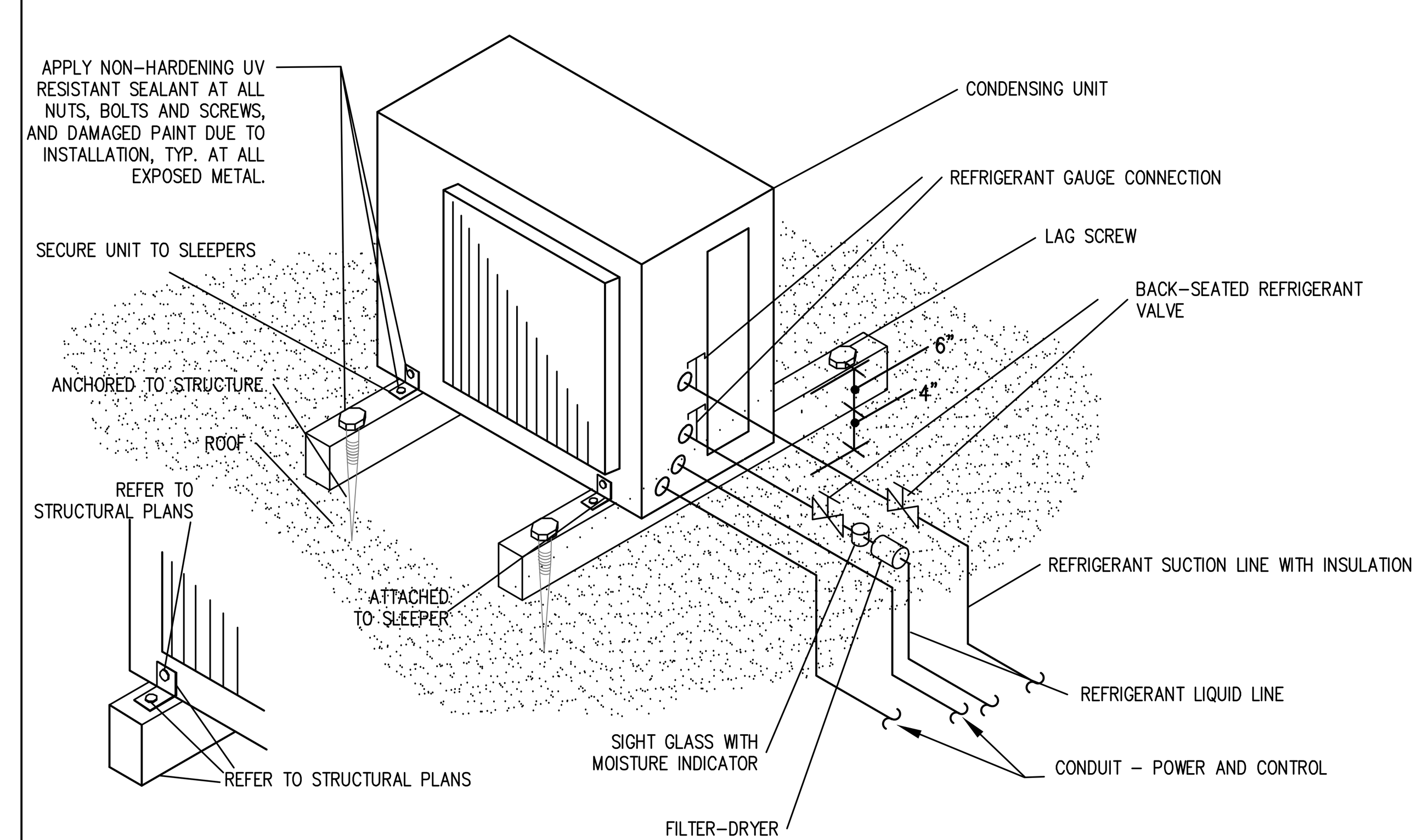
1 FLEXIBLE DUCT: MAX. LENGTH OF 5 FEET.
FLEXIBLE CONNECTION FOR SUPPLY AIR DUCT.
AND HARD CONNECTION FOR RETURN & EXHAUST. AIR DUCTS.

CONNECTIONS FOR RETURN AND EXHAUST REGISTERS ARE SIMILAR.

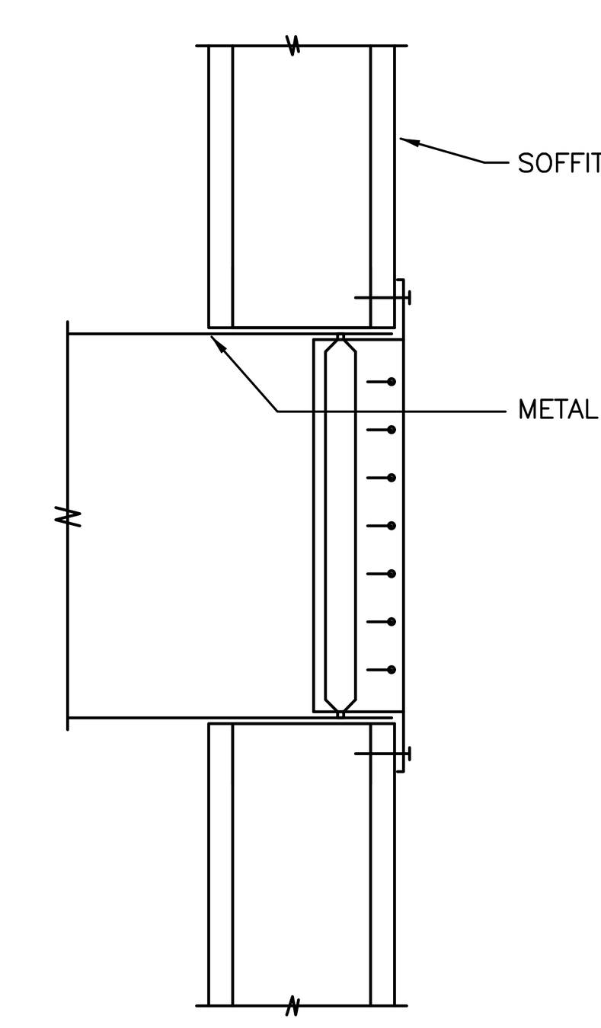
6 | SCALE NONE | CEILING DIFFUSER DETAIL



7 | SCALE NONE | EXHAUST FAN INSTALLATION DETAIL



8 | SCALE NONE | CONDENSING UNIT MOUNTING DETAIL ON ROOF



9 | SCALE NONE | SIDE WALL DIFFUSER DETAIL

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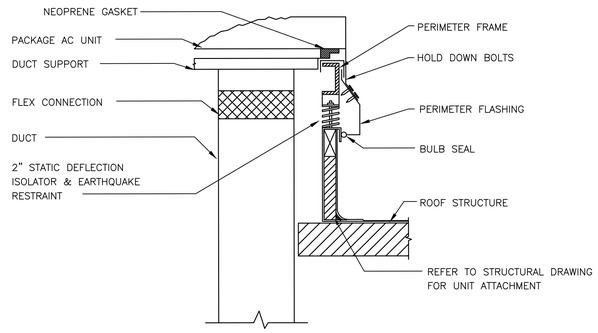
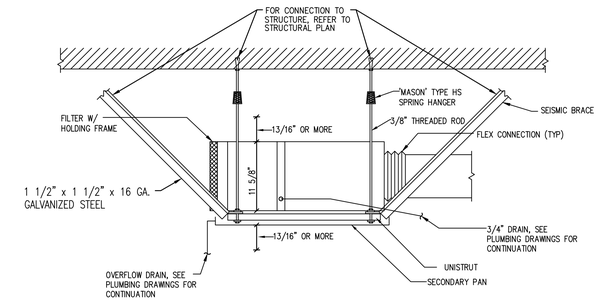
CHECKED: HC	PROJECT:A2404-AD669

NTP: OCT. 17, 2024

M3.1

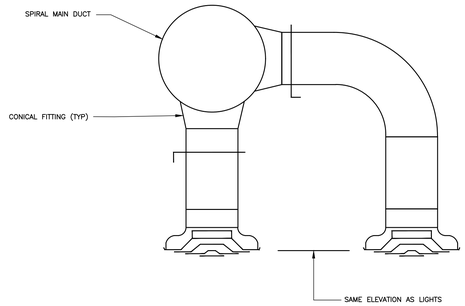


1 | SCALE: NONE | RTU UNIT CURB MOUNTING DETAIL



*NOTE: UNIT CLEARANCES FROM STRUCTURE:
1. ABOVE THE UNIT: 13/16" OR MORE
2. BELOW THE UNIT: 13/16" OR MORE
3. RIGHT: NO REQUIRED CLEARANCE.
4. LEFT: NO REQUIRED CLEARANCE.

2 | SCALE: NONE | FAN COIL UNIT INSTALLATION DETAIL



3 | SCALE: NONE | DUCT MOUNTED ROUND DIFFUSER DETAIL

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REGISTERED PROFESSIONAL ENGINEER
JEFF F. MALANDRA
No. M26141
Ren. 6/30/25
MECHANICAL
STATE OF CALIFORNIA

Chavez Supermarket

SUPERMARKET T.I.

5453 THORNTON AVENUE
NEWARK, CA 95121

REV	DATE	DESCRIPTION
1	10.27.24	AHJ COMMENTS

MECHANICAL DETAILS

DRAWN BY: JKS	SCALE: NONE
CHECKED: HC	PROJECT: A2404-AD669

NTP: OCT. 17, 2024

M3.2

FOR QUESTIONS, CALL THE
Central CA
REGION 91
PHONE: (415) 956 - 2200
EMAIL: reg91@captiveaire.com

PATENT NUMBERS

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

HOOD INFORMATION - JOB#6805013

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	MIN CFM	EXHAUST PLENUM RISER(S) WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP	TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG END TO END	ROW
1	H-1	5424 ND-2-PSP-F	CAPTIVEAIRE	14' 9"	600 DEG	I	HEAVY	225	3319	2655			4"	18"	3319	1878	-1.112"	2987	430 SS WHERE EXPOSED	ALONE	FRONT
2	H-2	5424 ND-2-PSP-F	CAPTIVEAIRE	14' 9"	600 DEG	I	HEAVY	225	3319	2655			4"	18"	3319	1878	-1.112"	2987	430 SS WHERE EXPOSED	ALONE	BACK

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	H-1	CAPTRATE SOLO FILTER	11	20"	16"	85% SEE FILTER SPEC	4	RECESSED ROUND	NO	LEFT	12"x54"x24"	TANK FS	4.0/4.0/4.0			YES	1178 LBS
2	H-2	CAPTRATE SOLO FILTER	11	20"	16"	85% SEE FILTER SPEC	4	RECESSED ROUND	NO	RIGHT	12"x54"x24"	TANK FS	4.0/4.0/4.0	DCV-2111	1 LIGHT 1 FAN	YES	1122 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	H-1	FIELD WRAPPER 16.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 80.00" HIGH X 189.00" LONG 430 SS VERTICAL.
		STRUCTURAL FRONT PANEL.
2	H-2	FIELD WRAPPER 16.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 80.00" HIGH X 189.00" LONG 430 SS VERTICAL.
		STRUCTURAL FRONT PANEL.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S) WIDTH	LENG	DIA	CFM	SP
1	H-1	Front	189"	18"	6"	MUA	12"	24"		746	0.244"
						MUA	12"	24"		746	0.244"
						MUA	12"	24"		746	0.244"
						MUA	12"	24"		746	0.244"
2	H-2	Front	189"	18"	6"	MUA	12"	24"		745	0.243"
						MUA	12"	24"		745	0.243"
						MUA	12"	24"		745	0.243"
						MUA	12"	24"		745	0.243"

CLEARANCE TO COMBUSTIBLES

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

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

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

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

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

HVAC DISTRIBUTION NOTE

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

VERIFY CEILING HEIGHT

___' - ___"

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

CUSTOMER APPROVAL TO MANUFACTURE:

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

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.

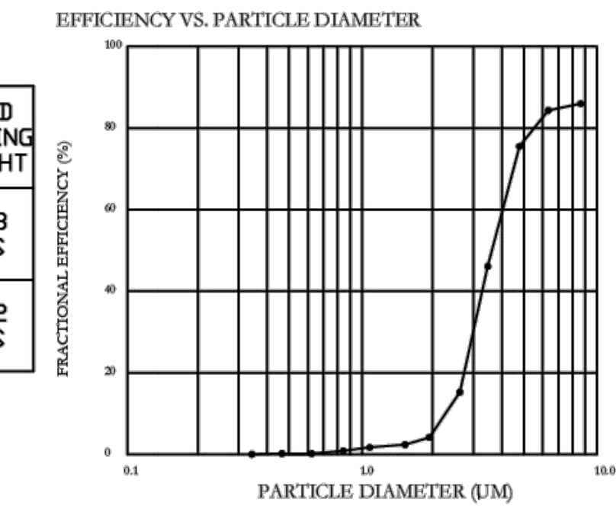
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

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

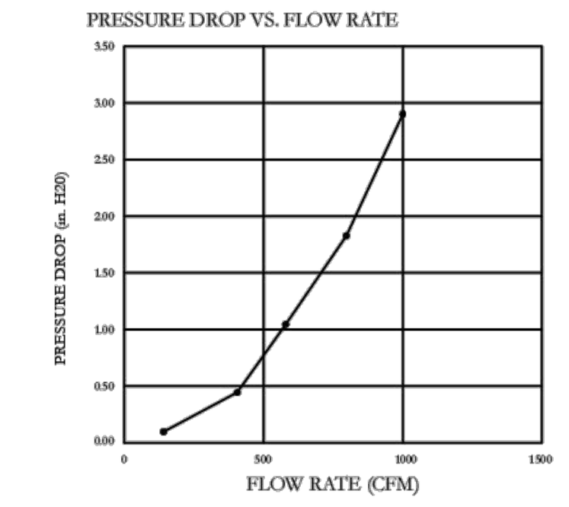
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

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

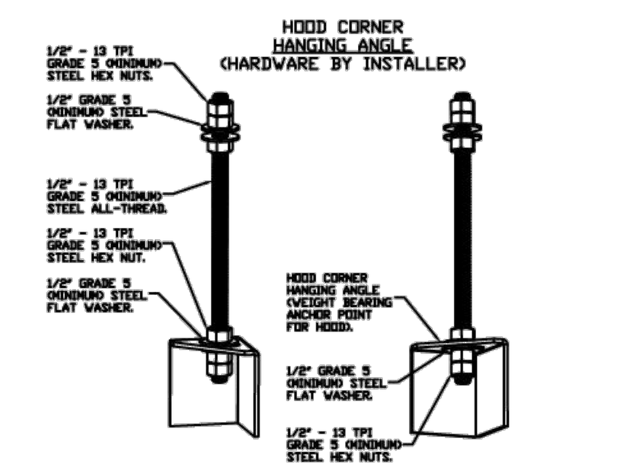


PRESSURE DROP VS. FLOW RATE



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

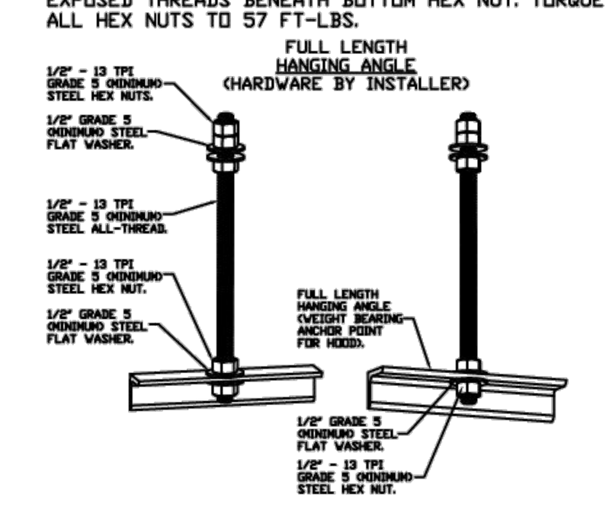
HOOD CORNER HANGING ANGLE (HARDWARE BY INSTALLER)



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.

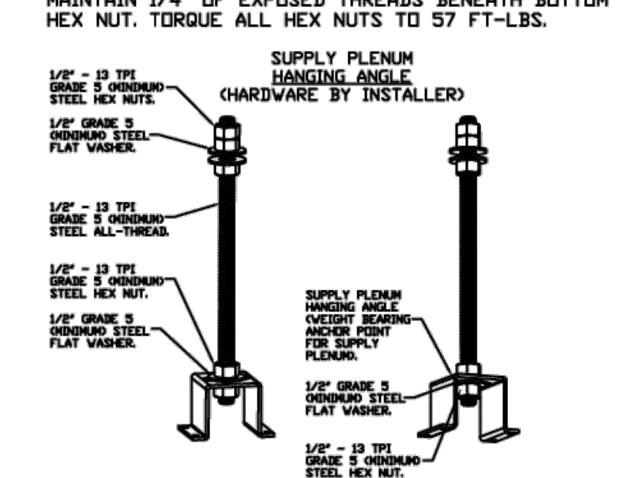
FULL LENGTH HANGING ANGLE (HARDWARE BY INSTALLER)



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 FULL LENGTH HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

SUPPLY PLENUM 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 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.

FOR QUESTIONS, CALL THE CAPTIVE-AIRE SYSTEMS CENTRAL CALIFORNIA OFFICE

Region 91

8 ADRIAN COURT
BURLINGAME, CA 94010
PHONE: (415) 956-2200
EMAIL: REG91@CAPTIVEAIRE.COM

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH
NFPA #96
UL 710 & ULC710 STANDARDS
E.T.L. LISTED 3054804-001

CAPTRATE & KLEEN-GARD FILTERS ARE BUILT IN COMPLIANCE WITH
NFPA #96
NSF STANDARD #2
UL STANDARD #1046
INT. MECH. CODE (IMC)

REVISIONS DESCRIPTION	DATE:
△	
△	
△	
△	

CAPTIVEAIRE www.captiveaire.com
Central CA
8 Adrian Court, Burlingame, CA, 94010 PHONE: (415) 956 - 2200 FAX: 9192275940 EMAIL: reg91@captiveaire.com

Chavez Supermarket - Newark, CA
5453 Thornton Avenue,
Newark, CA, 94560

DATE: 5/20/2024
DWG.#: 6805013
DRAWN BY: T.Thai
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 1

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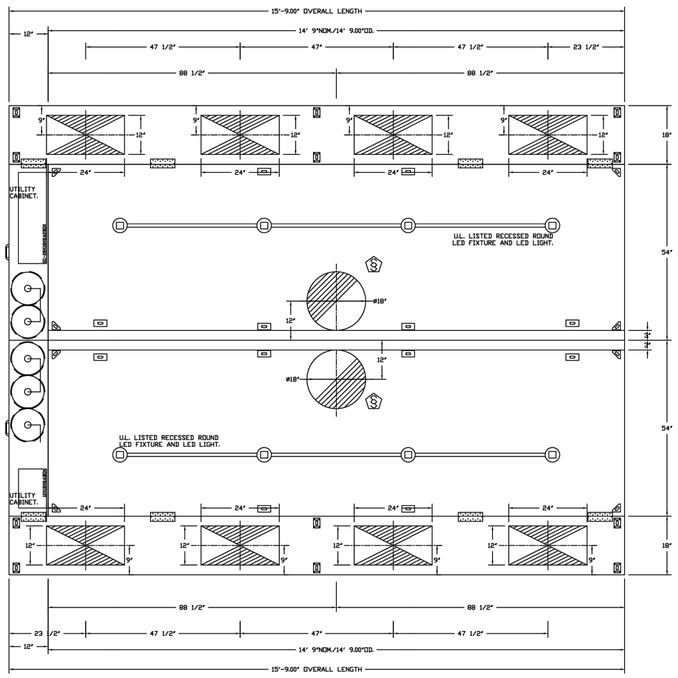
REV	DATE	DESCRIPTION
1	10.27.24	AHJ COMMENTS

MECHANICAL HOOD DETAILS

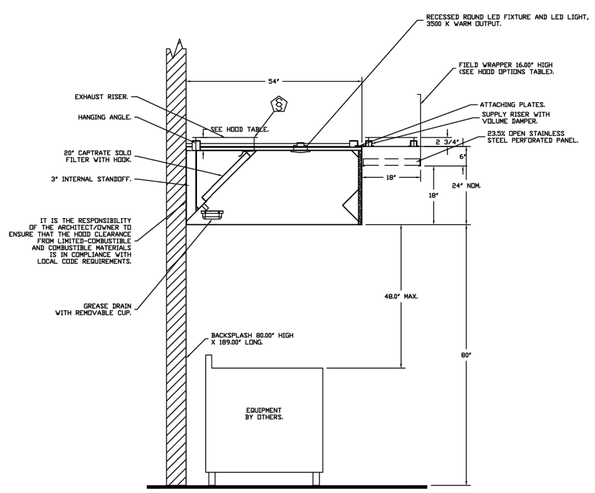
DRAWN BY: JKS | SCALE: NONE
CHECKED: HC | PROJECT:A2404-AD669
NTP: OCT. 17, 2024
M4.1

NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.

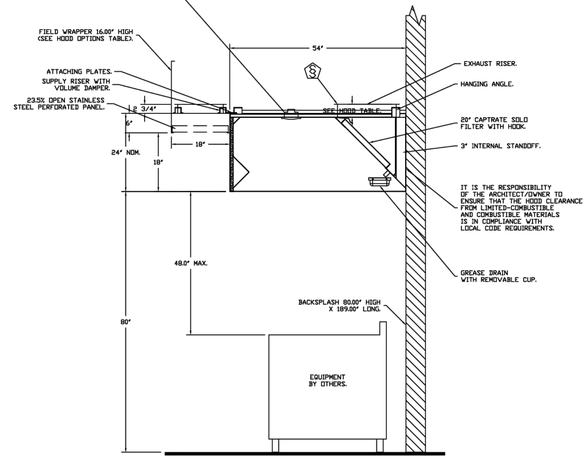
PLAN VIEW – HOOD #2 (H-2)
14' 9.00" LONG 5424ND-2-PSP-F



PLAN VIEW – HOOD #1 (H-1)
14' 9.00" LONG 5424ND-2-PSP-F
NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.



SECTION VIEW – MODEL 5424ND-2-PSP-F
HOOD – #1 (H-1)



SECTION VIEW – MODEL 5424ND-2-PSP-F
HOOD – #2 (H-2)

REVISIONS

	DESCRIPTION	DATE
1		
2		
3		
4		

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Chavez Supermarket – Newark, CA
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DATE: 5/20/2024

DWG.#: 6805013

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

MASTER DRAWING

SHEET NO. 2

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MECHANICAL HOOD DETAILS

DRAWN BY: JKS	SCALE: NONE
CHECKED: HC	PROJECT:A2404-AD669

NTP: OCT. 17, 2024

M4.2

EXHAUST FAN INFORMATION – JOB#6805013

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	1	DU240HFA	CAPTIVEAIRE	3319	2.000	976	ODP,PREMIUM	5.000	2.4450	3	208	15.2	754 FPM	358	19.1
2	KEF-2	1	DU240HFA	CAPTIVEAIRE	3319	2.000	976	ODP,PREMIUM	5.000	2.4450	3	208	15.2	754 FPM	358	19.1

MUA FAN INFORMATION – JOB#6805013

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	MCA	MOCP	EVAP FLOW RATE (Gal/Hr)	EVAP COOLER ENTERING DB TEMP	EVAP COOLER ENTERING WB TEMP	EVAP COOLER LEAVING DB TEMP	EVAP COOLER LEAVING WB TEMP	WEIGHT (LBS)	SONES
3	MAU-1	1	A3-24D	24MF-3-MOD	A3	3000	5974	0.750	1349	ODP,PREMIUM	7.500	4.8680	3	208	21.1	26.4A	45A	5.27	90.0°F	65.0°F	71.0°F	65.0°F	1184	21.3

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF-1	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL – DU/DR240HFA – INSTALLED AT PLANT – FOR GREASE DUCTS
		1	2 YEAR PARTS WARRANTY
2	KEF-2	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL – DU/DR240HFA – INSTALLED AT PLANT – FOR GREASE DUCTS
		1	2 YEAR PARTS WARRANTY
3	MAU-1	1	SIZE 3 UNTEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS
		1	EVAPORATIVE COOLER WIRING HARNESS
		1	SEPARATE 120V WIRING PACKAGE (REQUIRED AND USED ONLY FOR DCV OR PREWIRE WITH VFD) – THREE PHASE ONLY
		1	2 YEAR PARTS WARRANTY

FAN ACCESSORIES

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

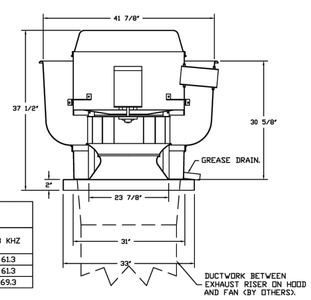
CURB ASSEMBLIES

NO	DN FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF-1	48 LBS	CURB	31.500"W X 31.500"L X 20.000"H VENTED HINGED.
2	# 2	KEF-2	48 LBS	CURB	31.500"W X 31.500"L X 20.000"H VENTED HINGED.
3	# 3	MAU-1	68 LBS	CURB	35.000"W X 35.000"L X 20.000"H.
	# 3			RAIL	4.000"W X 4.000"L X 36.000"H.
	# 3			RAIL	4.000"W X 4.000"L X 36.000"H.

FAN SOUND DATA

FAN UNIT NO	TAG	MOTOR	SOUND DATA			OCTAVE BAND SOUND DATA							
			LWA	SONES @ 5 FT	DBA @ 5 FT	DISTANCE (FT)	63 HZ	125 HZ	250 HZ	500 HZ	1 KHZ	2 KHZ	4 KHZ	8 KHZ
1	KEF-1	EXHAUST	82	19.0598940399802	70.5	5	77.9	87.7	87.8	77.3	72.8	70	65.6	61.3
2	KEF-2	EXHAUST	82	19.0598940399802	70.5	5	77.9	87.7	87.8	77.3	72.8	70	65.6	61.3
3	MAU-1	SUPPLY	83.6	21.296746087746	72.1	5	81.5	88.3	84.5	80.3	77.7	74.6	72.2	69.3

FANS #1 (KEF-1), #2 (KEF-2) – DU240HFA EXHAUST FAN



FEATURES:

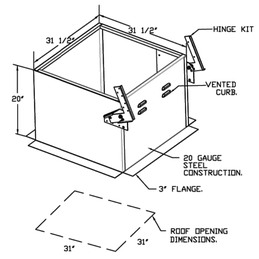
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT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

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

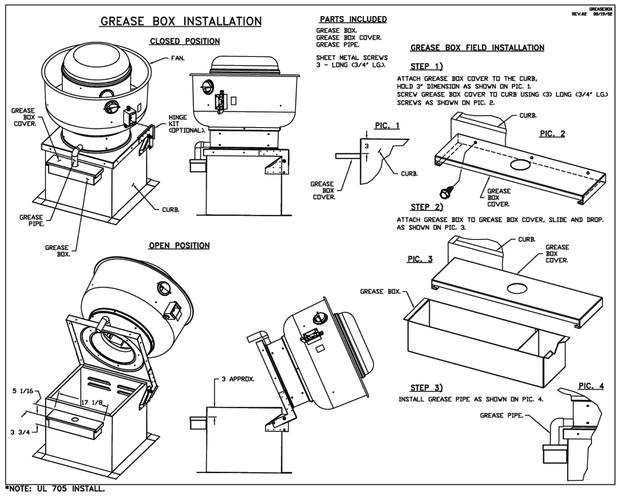
ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

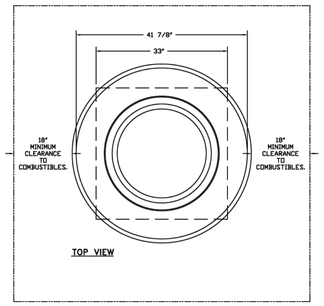
- GREASE BOX.
- FAN BASE CERAMIC SEAL – DU/DR240HFA – INSTALLED AT PLANT – FOR GREASE DUCTS.
- 2 YEAR PARTS WARRANTY.



GREASE BOX INSTALLATION



*NOTE: UL 705 INSTALL.



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CA
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SHEET NO. 3

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STATE OF CALIFORNIA

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REV	DATE	DESCRIPTION
1	10.27.24	AHJ COMMENTS

MECHANICAL HOOD DETAILS

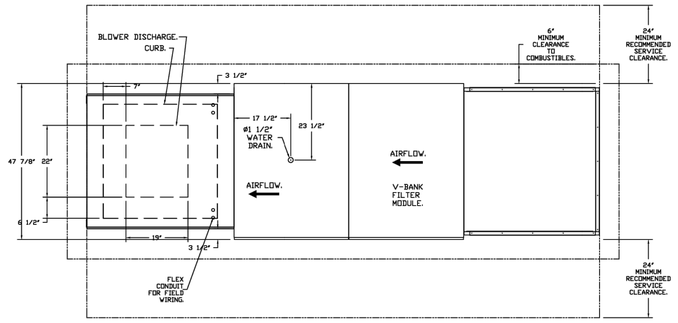
DRAWN BY: JKS	SCALE: NONE
CHECKED: HC	PROJECT:A2404-AD669

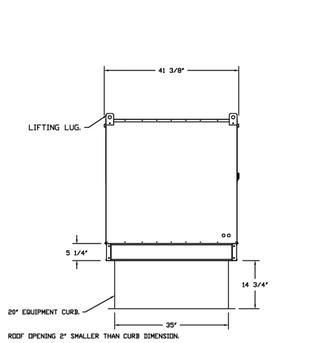
NTP: OCT. 17, 2024

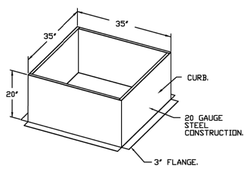
M4.3

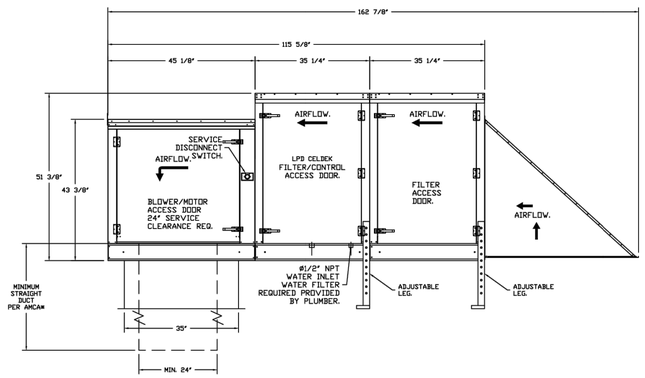
FAN #3 A3-24D - SUPPLY FAN (MAU-1)
1. UNTEMPERED SUPPLY UNIT WITH 24" MIXED FLOW DIRECT DRIVE FAN IN SIZE #3 HOUSING.
2. EVAP COOLER CLP3 CELDEK & V-BANK WITH 2" 7A-13 FILTERS-OUTDOOR.
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
4. DOWN DISCHARGE CONSTRUCTION FOR SIZE 3 UNTEMPERED DIRECT DRIVE AHUS.
5. 120V WIRING CONNECTION TO ENERGIZE EVAPORATIVE COOLERS FROM UNTEMPERED SUPPLY FANS.
6. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH.
7. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER/EVAP SECTIONS.
8. 2 YEAR PARTS WARRANTY.

#NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT.
SUGGESTED STRAIGHT DUCT SIZE IS 24" x 24".









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Chavez Supermarket - Newark, CA
5453 Thornton Avenue,
Newark, CA, 94560

DATE: 5/20/2024

DWG.#: 6805013

DRAWN BY: T.Thai

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

MASTER DRAWING

SHEET NO. 4

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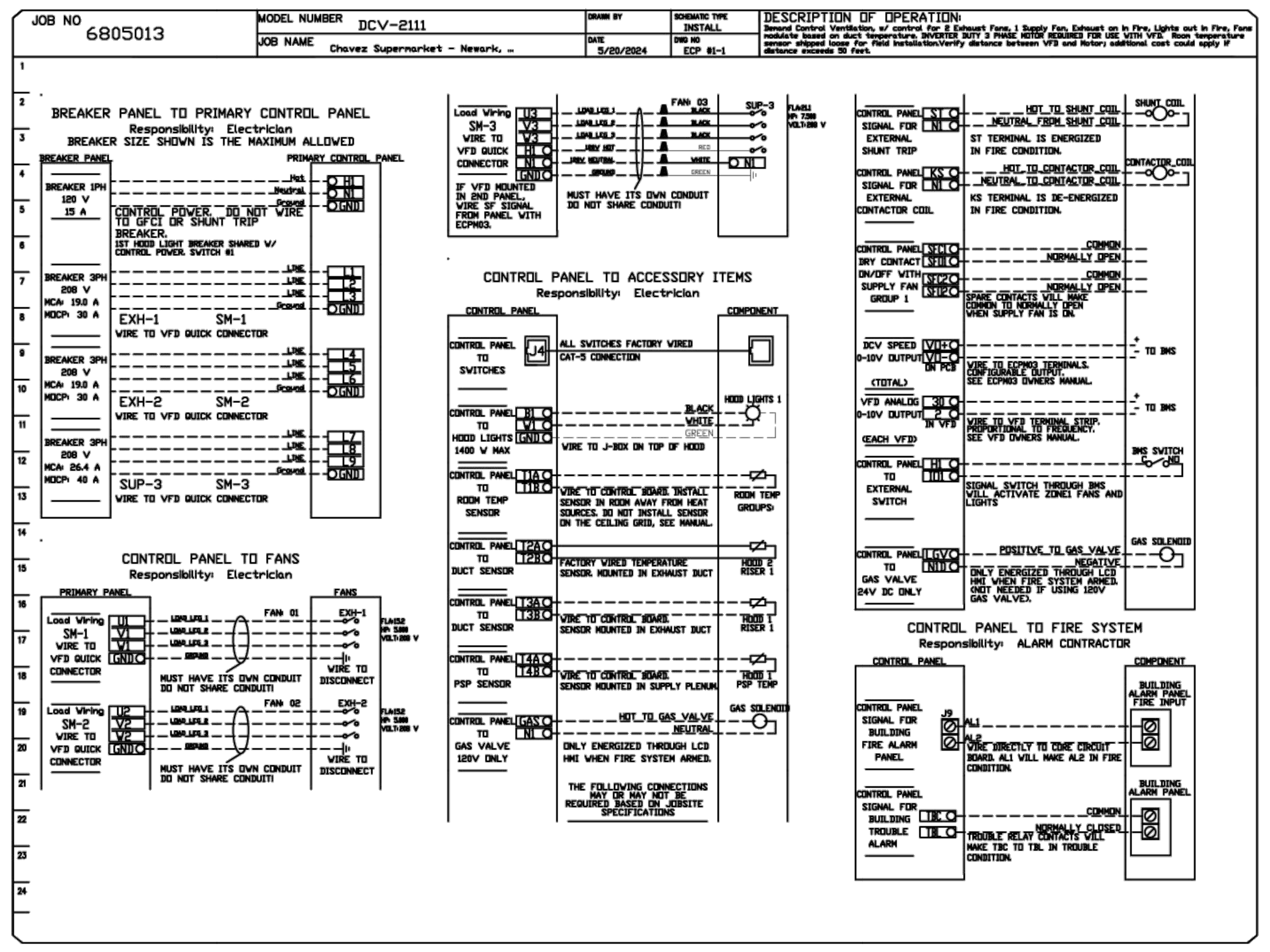
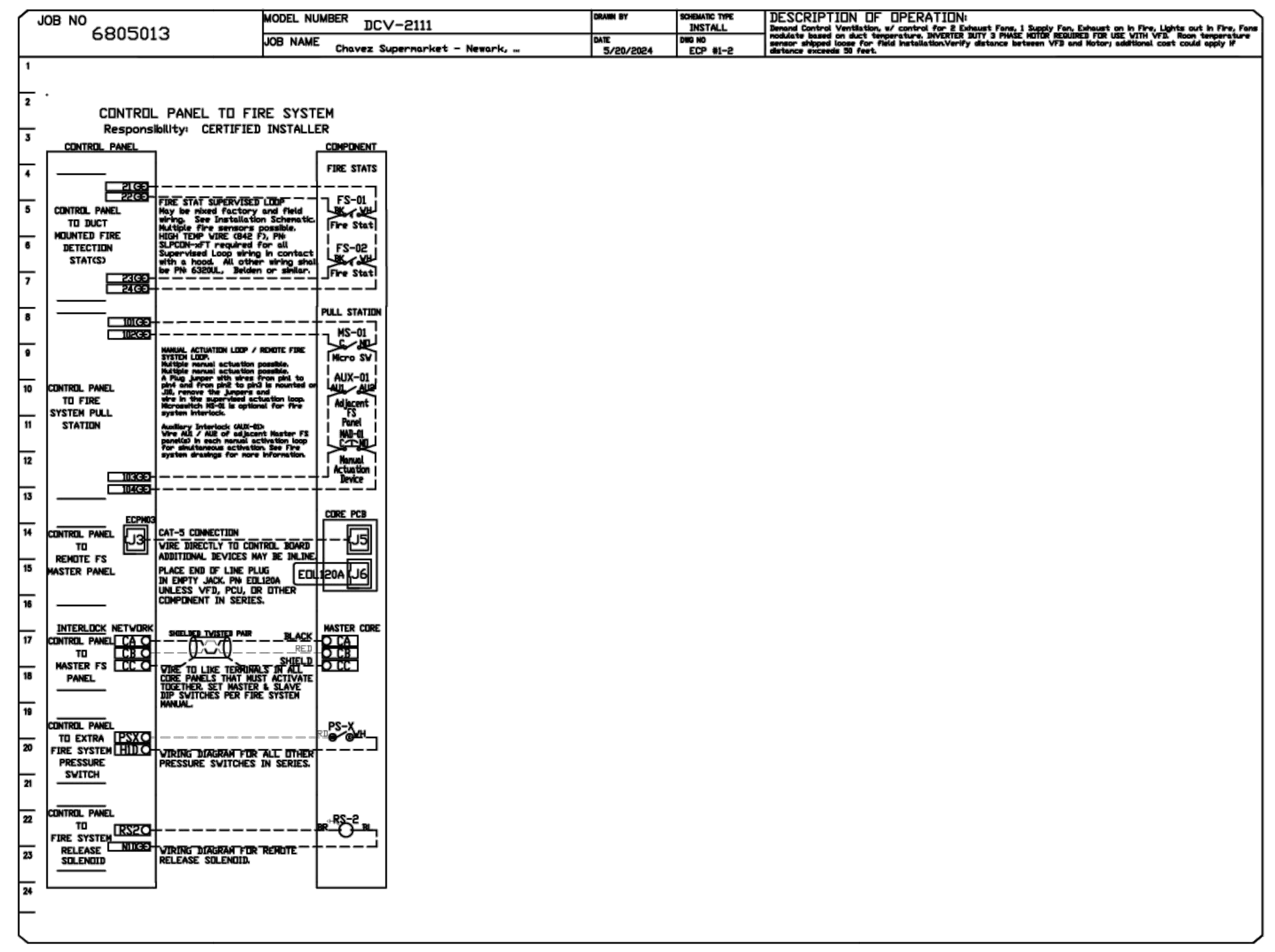
NTP: OCT. 17, 2024

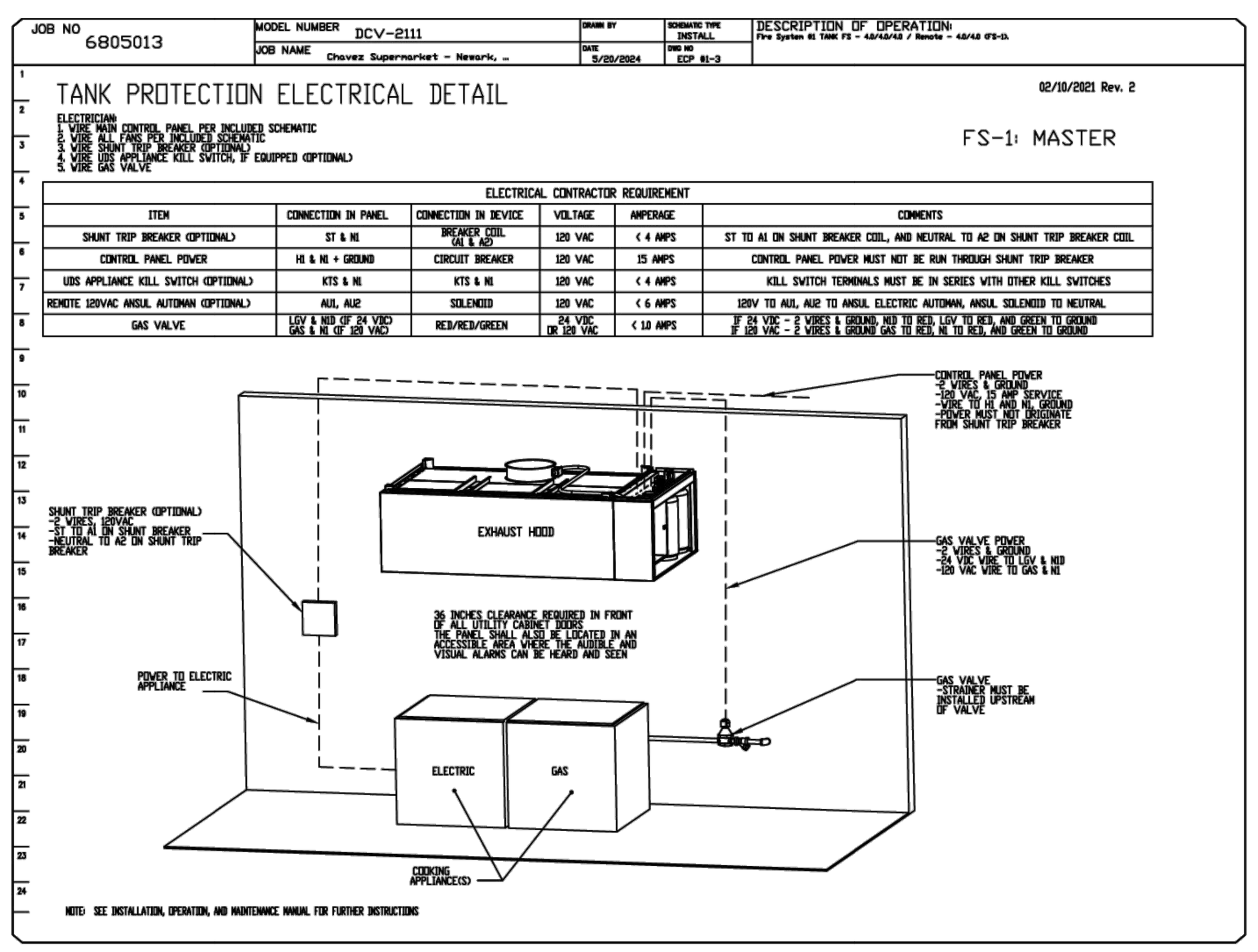
M4.4

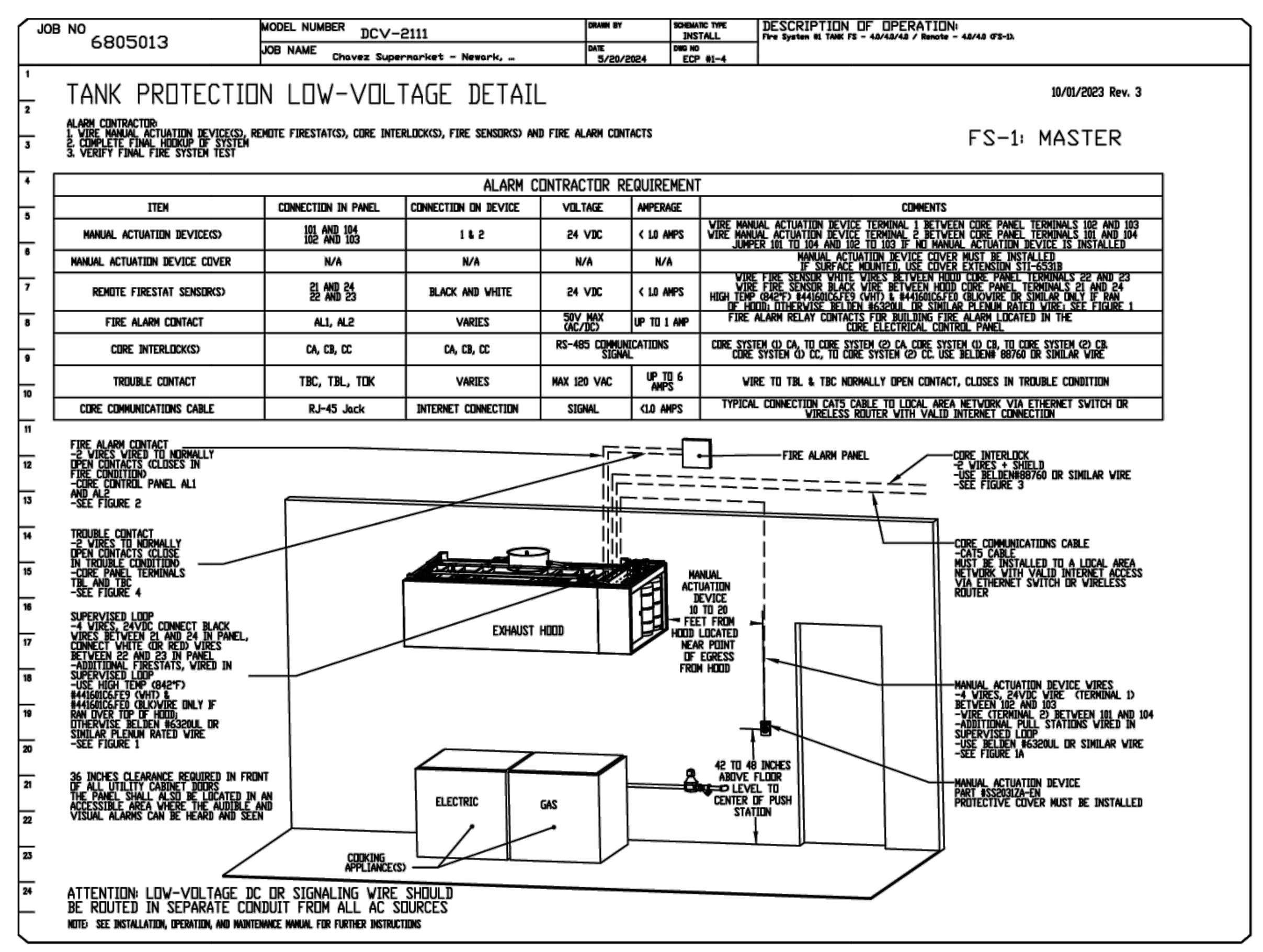
ELECTRICAL PACKAGE – JOB#6805013

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	Φ	HP	VOLT	FLA
1		DCV-2111	UTILITY CABINET RIGHT	UTILITY CABINET RIGHT	1 LIGHT	SMART CONTROLS DCV	KEF-1	EXHAUST	3	5.000	208	15.2
				HOOD # 2	1 FAN		KEF-2	EXHAUST	3	5.000	208	15.2
							MAU-1	SUPPLY	3	7.500	208	21.1









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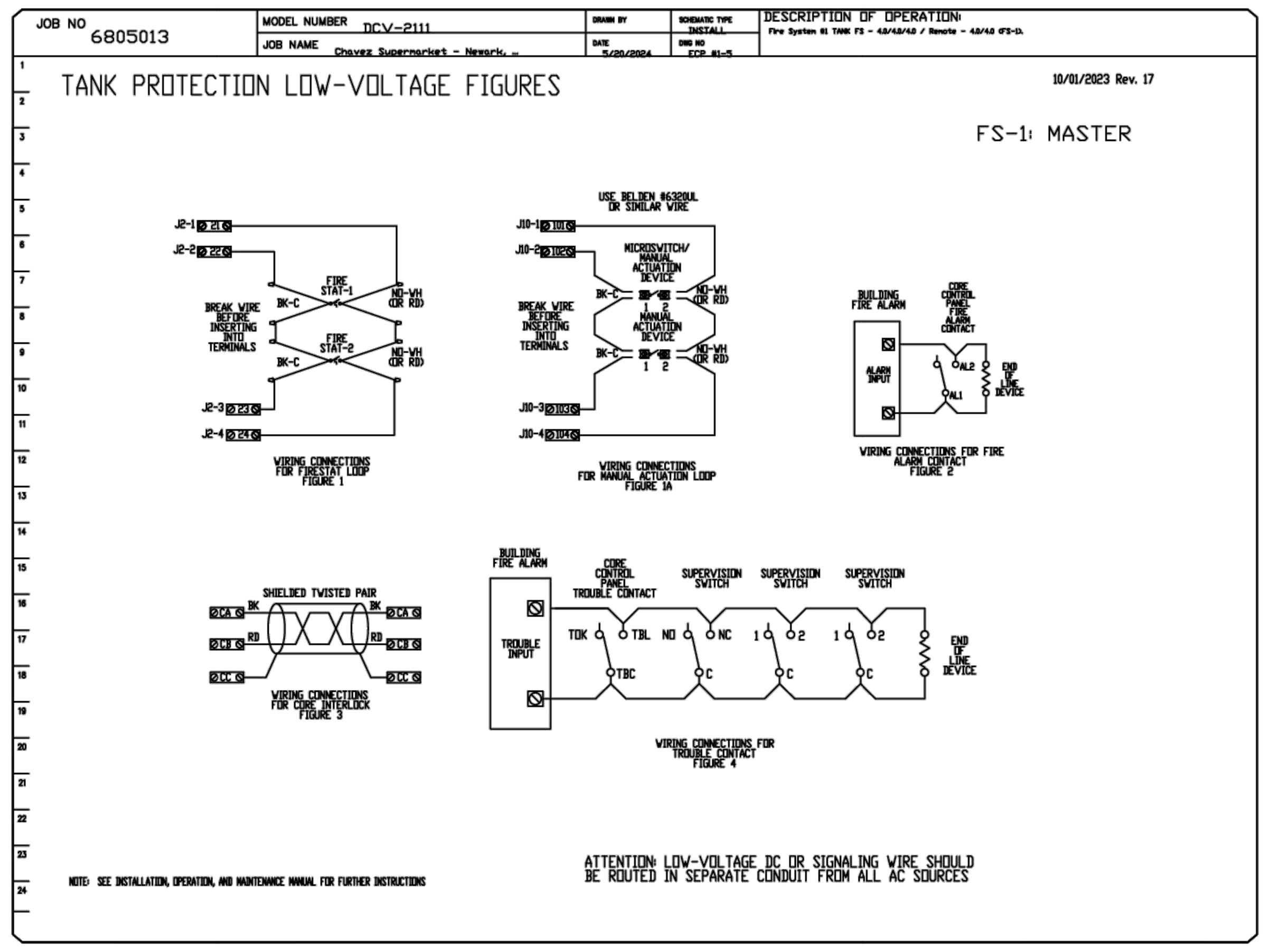
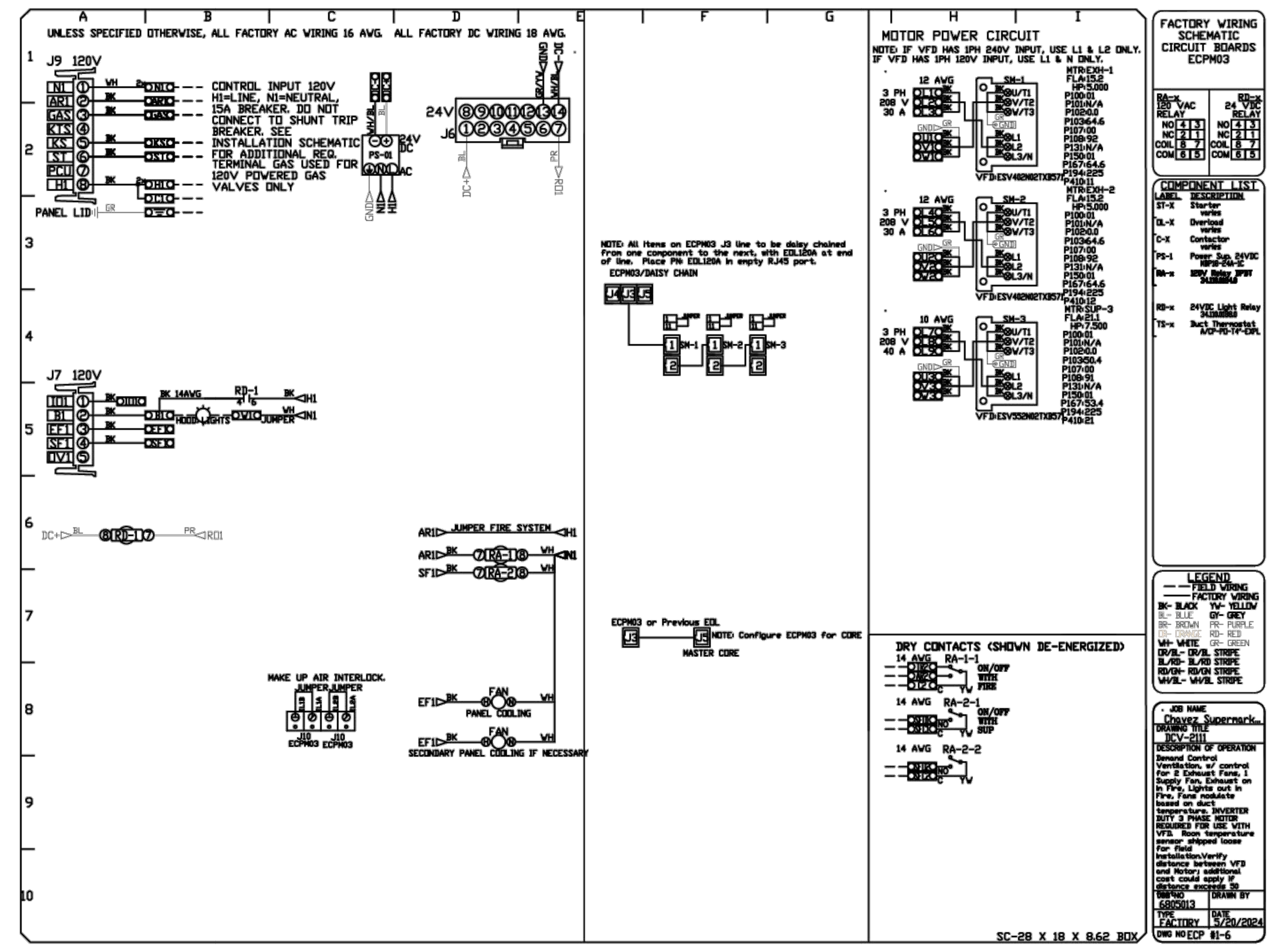
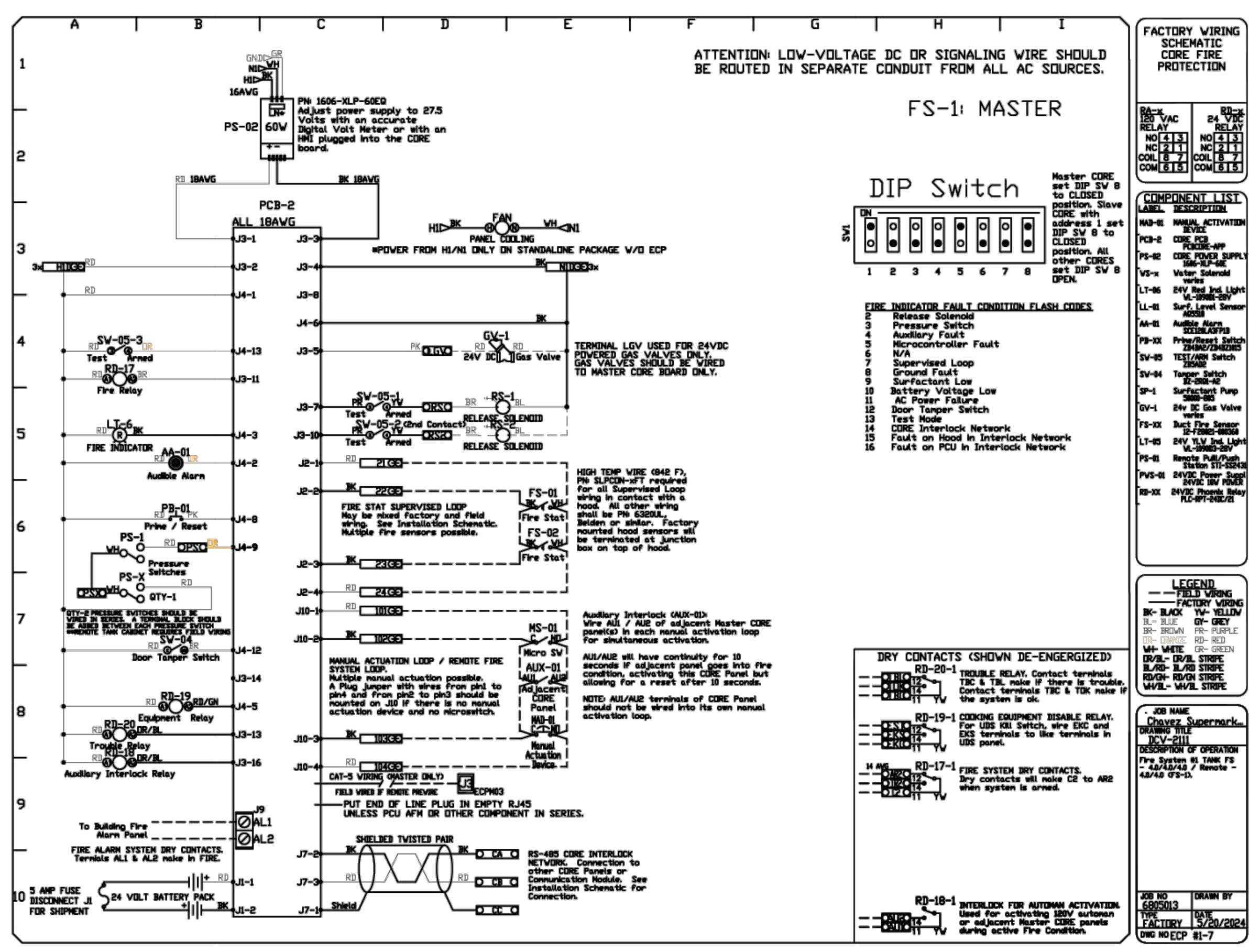
M4.5

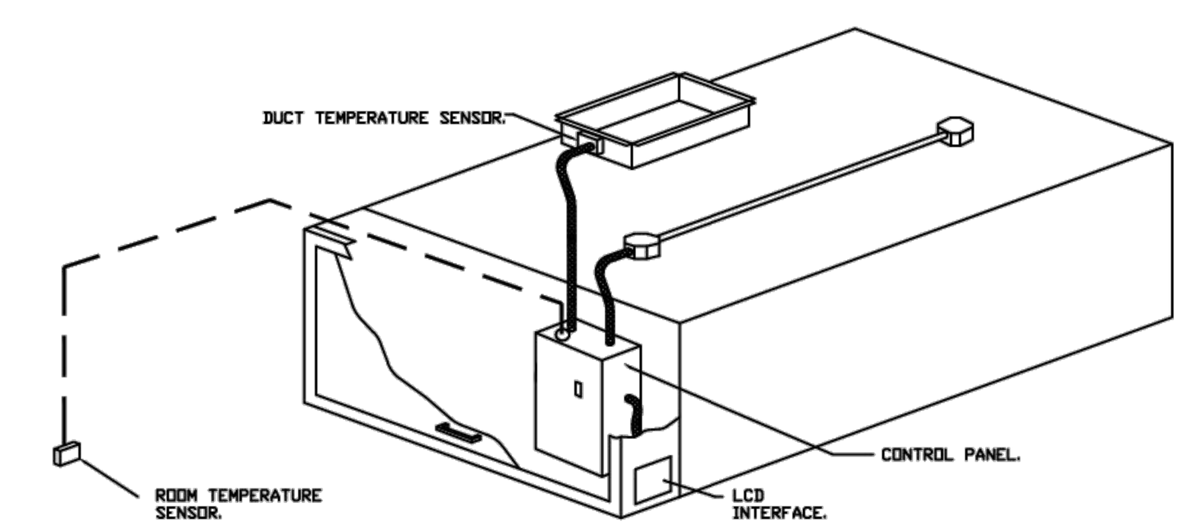






DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS:

- 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.

REVISIONS

DESCRIPTION	DATE

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M4.6

Additional information including installation manual available at www.captivealre.com.

FACTORY BUILT DOUBLE WALL GREASE DUCT MODEL DW-2R SPECIFICATION:

FURNISH DOUBLE WALL, FACTORY BUILT GREASE DUCT FOR USE WITH TYPE I KITCHEN HOODS, WHICH CONFORMS TO THE REQUIREMENTS OF NFPA-96. PRODUCTS SHALL BE ETL LISTED TO UL-1978 AND UL-2221 FOR VENTING AIR AND GREASE VAPORS FROM COMMERCIALCOOKING OPERATION. TESTING HAS BEEN EXTENDED TO RECONGNIZE ASTM E2336 AND AC101 DUE TO SIMILAR TESTING CRITERIA. MODELS DW-2R, 3R AND 3Z ARE USED FOR GREASE DUCT APPLICATIONS WHEN INSTALLED IN ACCORDANCE WITH THESE INSTRUCTIONS AND NFPA 96; STANDARD FOR VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS. DOUBLE WALL GREASE DUCTS ARE LISTED FOR A CONTINUOUS INTERNAL TEMPERATURE OF 500 DEGREES F AND INTERMITTENT TEMPERATURES OF 2000 DEGREES F.

THE DUCT SECTIONS SHALL BE CONSTRUCTED OF AN INNER DUCT WALL AND AN OUTER WALL WITH INSULATION IN BETWEEN. THE INNER DUCT WALL SHALL BE CONSTRUCTED OF .036 INCH THINK, 430 TYPE STAINLESS STEEL AND BE AVAILABLE IN DIAMETERS 8" THROUGH 24". THE OUTER WALL SHALL BE CONSTRUCTED OF STAINLESS STEEL AT A MINIMUM OF .024 INCH THICKNESS. THE DUCT, BASED ON MODEL NUMBER, SHALL INCLUDE LAYERS OF SUPER WOOL 607 PLUS INSULATION BETWEEN THE INNER AND OUTER WALL. GREASE DUCT JOINTS SHALL BE HELD TOGETHER BY MEANS OF FORMED V CLAMPS AND SEALED WITH 3M FIRE BARRIER 2000+. THE DUCT WALL ASSEMBLY SHALL BE TESTED AT 3/4" OR ZERO INCH CLEARANCE, ACCORDING TO CLASSIFICATIONS.

CLASSIFICATIONS AND CLEARANCES
UL 2221: STANDARD FOR FIRE RESISTIVE GREASE DUCT ENCLOSURE ASSEMBLIES. CHAPTER 7 OF THIS STANDARD REFERENCES A TEST LABELED INTERNAL FIRE TEST. SECTION 7.1.1 REFERENCES TWO INSTALLATION CONDITIONS, CONDITION A AND CONDITION B. CONDITION A REPRESENTS ALL INSTALLATION CONDITION EXCEPT FOR INSTALLATION WITHIN NON-VENTILATEDCOMBUSTIBLE ENCLOSURES. CONDITION B REPRESENTS INSTALLATION WITHIN A NON-VENTILATED COMBUSTIBLE ENCLOSURE.

MODEL DW-2R IS CLASSIFIED UNDER UL2221 AS AN ALTERNATE TO 2-HR FIRE RESISTIVE SHAFT ENCLOSURES WITH A REDUCED CLEARANCE TO COMBUSTIBLES (SIZES 8" TO 16" DIAMETER). MODEL 2R IS LISTED IN ACCORDANCE WITH THE REQUIREMENTS FOR DUCT ENCLOSURE CONDITION B.

MODEL DW-2R: 3/4" CLEARANCE TO COMBUSTIBLES FROM THE SURFACE OF THE DUCT OUTER SHELL; ZERO" INCH CLEARANCE FROM COMBUSTIBLES FROM THE TIP OF THE OUTER V BAND.

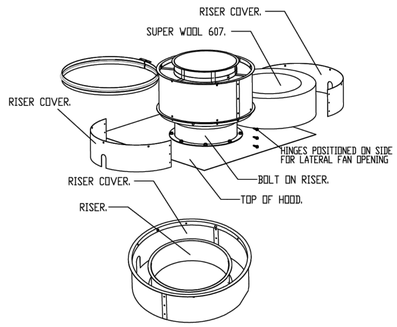
DOUBLE WALL GREASE DUCT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S "INSTALLATION, OPERATION AND MAINTENANCE MANUAL," ETL LISTING, STATE AND LOCAL CODES. FANS SHALL BE SUPPORTED INDEPENDENTLY FROM THE GREASE DUCT SECTIONS. PROTECT GREASE DUCT FROM TWISTING OR MOVEMENT CAUSED BY FAN TORQUE OR VIBRATION.

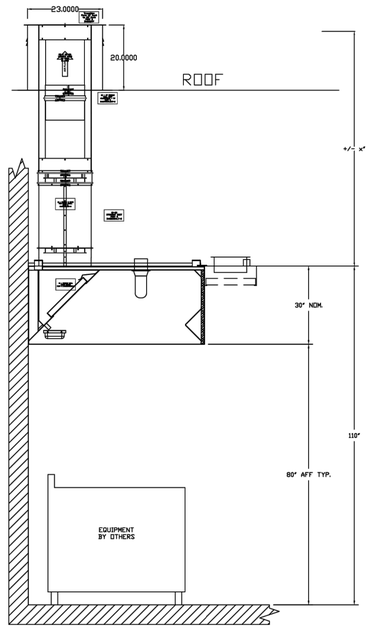
CERTIFICATIONS:
THE DW-2R SERIES HAS BEEN CERTIFIED BY ITS. THIS CERTIFICATION MARK INDICATES THAT THE PRODUCT HAS BEEN TESTED TO AND HAS MET THE MINIUM REQUIREMENTS OF A WIDELY RECOGNIZED (CONSENSUS) U.S. AND CANADIAN PRODUCTS SAFETY STANDARD, THAT THE MANUFACTURING SITE HAS BEEN AUDITED, AND THAT THE APPLICANT HAS AGRRED TO A PROGRAM OF PERIODIC FACTORY FOLLOW-UP INSPECTIONS TO VERIFY CONTINUED PERFORMANCE.

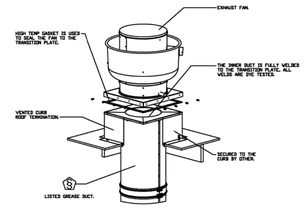
FOR QUESTIONS, CALL THE
Central CA
Thomas Thai
PHONE: (415) 956-2200
EMAIL: reg91@captivealre.com

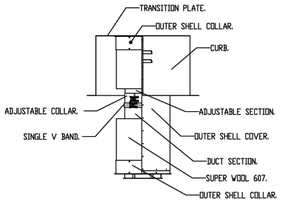
FOR REFERENCE ONLY
(ONCE DUCT RUN HAS BEEN DETERMINED, ACCURATE DUCT DESIGN WILL BE PRODUCED)

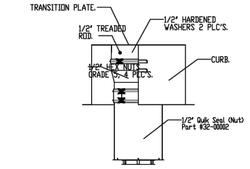
DOUBLE WALL DUCT RISER COVER



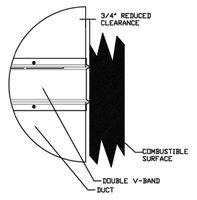








REDUCED CLEARANCE DETAIL



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