

DIVISION 15 SPECIFICATIONS

PART I - GENERAL

- 1.01 SCOPE
- A. IT IS THE RESPONSIBILITY OF CONTRACTOR TO READ ALL SPECIFICATIONS AND CONSULT ALL DRAWINGS WHICH MAY AFFECT THE INSTALLATION AND COORDINATION OF WORK WITH OTHER TRADES. CONTRACTOR SHALL COORDINATE AND MAKE MINOR ADJUSTMENTS IN LOCATION OF EQUIPMENT AND MATERIALS AS NECESSARY FOR COORDINATION.
 - B. COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.
 - C. SYSTEM LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY STRUCTURAL CONDITIONS, COORDINATION WITH OTHER TRADES, COORDINATION WITH FINISHES AND OTHER CONDITIONS. STRUCTURAL SUPPORTS SHALL NOT BE CUT OR ALTERED TO ASSURE FIT OF HVAC SYSTEM. TEN FOOT CLEARANCE SHALL BE MAINTAINED BETWEEN OUTSIDE AIR INTAKES AND EXHAUST FANS AND PLUMBING VENT TERMINALS.
 - D. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER FINAL PAYMENT IS APPROVED. CONTRACTOR SHALL HONOR FACTORY WARRANTIES ON ALL EQUIPMENT PROVIDED AS PART OF THIS SYSTEM.
 - E. UPON COMPLETION OF PROJECT, ALL SYSTEM EQUIPMENT AND MATERIALS SHALL BE IN NEW, CLEAN CONDITION WITH ALL DAMAGE RESTORED TO CONDITION ACCEPTABLE TO THE OWNERS REPRESENTATIVE. ALL EQUIPMENT, COMPONENTS, DUCTWORK AND AIR DEVICES SHALL BE INSPECTED AND THOROUGHLY CLEANED, CLEARED OF DEBRIS, AND READY FOR USE. AT COMPLETION OF JOB, ALL MISCELLANEOUS TOOLS, SCAFFOLDING, SURPLUS MATERIALS, RUBBISH AND DEBRIS SHALL BE REMOVED BY CONTRACTOR.
 - F. CONTRACTOR SHALL PROVIDE TWO SETS OF 2" MERV 8 OR HIGHER THROW AWAY TYPE FILTERS. A CLEAN SET SHALL BE PROVIDED PRIOR TO TEST AND BALANCE AND AGAIN PRIOR TO OPENING.

PART II - PRODUCTS

- 2.01 HEATING AND COOLING EQUIPMENT
- A. FURNISH AND INSTALL R-410A ROOFTOP SINGLE PACKAGE COMBINATION ELECTRIC COOLING AND NATURAL GAS FIRED HEATING UNITS AS SHOWN ON DRAWINGS. EQUIPMENT SHALL BE ARI CERTIFIED AND A.G.A. AND U.L. LISTED.
 - B. ACCESSORIES SHALL INCLUDE LOW AND HIGH PRESSURE SAFETIES, CRANK CASE HEATER, OVERCURRENT AND OVERTEMPERATURE SAFETY, COMPRESSOR VIBRATION ISOLATORS, FILTER DRIERS, REFRIGERANT SERVICE VALVES, COIL HAIL GUARDS WHERE SCHEDULED, CONVENIENCE OUTLETS FACTORY INSTALLED ON SCHEDULED UNITS, UNIT MOUNTED NON-FUSED DISCONNECTS. LOW AMBIENT OPERATION DOWN TO 30 DEGREES F AND EVAPORATOR FREEZE STAT.
 - C. COMPRESSORS SHALL BE HERMETIC SCROLL TYPE WITH INTERNAL VIBRATION ISOLATORS. COMPRESSORS SHALL BE PROVIDED WITH A MINIMUM FIVE (5) YEAR FULL WARRANTY.
 - D. THE UNIT HEAT EXCHANGERS SHALL BE ALUMINIZED STEEL COATING. HEATING CONTROLS SHALL CONSIST OF REDUNDANT GAS VALVES, INTERMITTENT PILOT WITH ELECTRONIC SPARK OR HOT PLATE IGNITION SYSTEM, COMBUSTION/EXHAUST FAN PROTECTED BY CENTRIFUGAL SWITCHES, HEAT LIMIT SWITCHES, TIME-DELAY RELAY, FLAME, AND PILOT SENSORS. HEAT EXCHANGERS SHALL HAVE A TEN (10) YEAR WARRANTY. BURNERS SHALL BE IN-SHOT TYPE. THE DRAFT MOTOR SHALL BE MONITORED BY THE CONTROL SYSTEM.

2.02 DUCTWORK (C15735)

- A. ACCEPTABLE MANUFACTURERS OF INSULATION SHALL BE: JOHNS MANVILLE, OWENS CORNING OR KNAUF.
- B. ALL DUCTWORK SHALL BE SHEET METAL, UNLESS NOTED OTHERWISE (U.N.O.).
- C. DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS, U.N.O.
- D. CONSTRUCTION OF DUCTWORK SHALL MEET SMACNA 1" W.C. PRESSURE CLASS STANDARD AND RECOMMENDATIONS. SMACNA SHALL BE FOLLOWED WITH RESPECT TO GAGE THICKNESS, JOINTS, REINFORCING, CONSTRUCTION, INSTALLATION AND SUPPORT FOR PRESSURE CLASS STATED. ALL TRANSVERSE JOINTS IN RECTANGULAR AND ROUND DUCT INCLUDING DUCT CONNECTION TO AIR DEVICE COLLAR SHALL BE SEALED PER SMACNA SEAL CLASS C WITH U.L. DUCT MASTIC SEALANT APPROVED FOR INTENDED USE. DUCT TAPE IS NOT AN ACCEPTABLE SUBSTITUTE FOR MASTIC UNLESS EQUAL TO HARDCAST FOIL-GRIP 1402 BUTYL RUBBER ADHESIVE TAPE.
- E. DUCT SHALL BE SUPPORTED AT BASE OF DUCT DROPS. CURB DUCT RAILS ARE NOT INTENDED TO AND SHALL NOT SUPPORT THE WEIGHT OF THE DUCT.
- F. ALL DUCT WRAP SHALL BE MINIMUM 2" THICK, 3/4 PCF AND 6 R-VALUE INSTALLED WITH EITHER A VAPOR BARRIER WITH MAXIMUM PERMEANCE 0.05 OR A MINIMUM 2 MIL ALUMINUM REINFORCED FOIL/KRAFT FACING.
- G. ALL DUCT DROPS FROM THE ROOFTOP UNITS SHALL BE EXTERNALLY INSULATED.
- H. SUPPLY AND RETURN AIR DUCTWORK SERVING ALL AREAS SHALL BE EXTERNALLY INSULATED.
- I. ALL AIR CONVEYANCE COMPONENTS SUCH AS, BUT NOT LIMITED TO DUCT, DUCT PLENUMS, GRILLES/DIFFUSERS, BACK PANS, AND BOOTS SHALL BE INSULATED. INSULATION TYPE IS COVERED ELSEWHERE IN THIS SPECIFICATION.
- J. RESTROOM RECTANGULAR EXHAUST AIR DUCTWORK SHALL BE LINED WITH 1" THICK, 1-1/2 PCF INSULATION. RESTROOM ROUND EXHAUST DUCT SHALL BE EXTERNALLY INSULATED PER SECTION 2.02F.
- K. DUCT DROPS SHALL BE ISOLATED FROM UNIT VIBRATION WITH THE USE OF NFPA AND U.L. APPROVED FLEXIBLE CONNECTORS INSTALLED AT THE TOP OF BOTH SUPPLY AND RETURN DROPS.
- L. INSULATED FLEXIBLE DUCT MAY BE UTILIZED FOR RUNOUTS TO GRILLES AND DIFFUSERS ONLY IN THE HORIZONTAL POSITION AND IN MAXIMUM LENGTHS OF 4'-0", NO EXCEPTIONS.
- M. CONSTRUCTION OF FLEXIBLE DUCTWORK SHALL INCLUDE SPIRAL METAL HELIX BONDED TO A POLYESTER CORE, FIBERGLASS INSULATION WITH POLYETHYLENE OR MYLAR VAPOR BARRIER. ALL COMPONENTS SHALL HAVE APPROPRIATE U.L. APPROVAL AND SHALL BE EQUIVALENT TO THERMAFLEX MKE. FLEX DUCT SHALL HAVE A MINIMUM R-VALUE OF 6.
- N. FLEXIBLE DUCT SHALL BE INSTALLED PER THE "ADC FLEXIBLE DUCT PERFORMANCE AND INSTALLATION STANDARDS, 4TH ED" USING FOIL TAPE AND DRAWBAND ON THE INNER CORE AND TAPE OR DRAWBAND ON THE OUTER JACKET.
- O. DUCT TAPE SHALL BE EQUAL TO FASSON 181-B FX, 2-1/2" WIDE.
- P. SINGLE THICKNESS TURNING VANES SHALL BE INSTALLED AT ALL 90 DEGREE ELBOWS WHERE THE CENTERLINE RADIUS (R) IS LESS THAN THE WIDTH OF THE DUCT AND ANY ONE DIMENSION IS GREATER THAN 12".
- Q. EXTERNAL INSULATION ON BOTTOM OF DUCTS 24" OR WIDER SHALL BE SUPPORTED WITH STICK PINS ON 18" CENTERS. STICK PIN WASHERS SHALL BE COVERED WITH DUCT TAPE OR MASTIC.

2.03 CONTROLS

- A. SYSTEMS SHALL BE COMPLETE WITH CONNECTIONS TO CFA-500 TEMPERATURE CONTROL PANEL AS MANUFACTURED BY SUNCOAST ENVIRONMENTAL CONTROLS (S.E.C.) (PH: 877-544-6679). THE PANEL IS PROVIDED AND MOUNTED BY THE ELECTRICAL CONTRACTOR. CONTROL WIRING TERMINATIONS ARE BY THE MECHANICAL CONTRACTOR WHERE PERMITTED BY AHJ.
- B. THE SMOKE DETECTORS SHALL BE FACTORY INSTALLED AND WIRED BY THE ROOFTOP UNIT MANUFACTURER.
- C. A FACTORY INSTALLED SMOKE DETECTOR IN THE RETURN AIR SECTION OF EACH AIR CONDITIONING UNIT SHALL STOP THE INDOOR FAN AND CLOSE THE OUTSIDE AIR DAMPER IN THE EVENT OF EXCESSIVE TEMPERATURE OR SMOKE. SMOKE DETECTOR SHALL BE LOCATED PRIOR TO ANY EXHAUST FROM THE BUILDING OR MIXING WITH FRESH AIR MAKE-UP. UPON DETECTION, THE SYSTEM SHALL NOT RESTART UNTIL THE DEVICE IS MANUALLY RESET. DEVICES SHALL BE LOCATED WHERE THEY CAN BE EASILY ACCESSED AND WHERE CLEAR OF FILTERS.
- D. CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH SUNCOAST ENVIRONMENTAL CONTROLS FOR THE SMOKE DETECTOR TEST/RESET ANNUNCIATOR STATIONS. THE TEST/RESET STATIONS WILL BE PURCHASED BY THE ELECTRICAL CONTRACTOR AS A PART OF A NATIONAL ACCOUNT PACKAGE AND TURNED OVER TO THE MECHANICAL CONTRACTOR FOR INSTALLATION.
- E. THE REMOTE TEST/RESET ANNUNCIATORS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. INSTALLATION BY MECHANICAL SHALL INCLUDE MOUNTING OF THE ANNUNCIATORS AND ALL WIRING FROM EACH DEVICE TO THE RTU. ELECTRICAL WILL PROVIDE A JUNCTION BOX IN THE WALL WITH 1/2" CONDUIT STUBBED UP ABOVE THE CEILING FOR EACH REMOTE TEST STATION AS SHOWN ON THE ELECTRICAL PLANS. ANNUNCIATOR SHALL BE SUNCOAST CONTROLS REMOTE TEST/RESET STATION WITH POWER LED, TROUBLE LED, ALARM LED, 90DB HORN AND TEST/RESET BUTTON.
- F. THE RESTROOM FAN SHALL BE INTERLOCKED TO THE LIGHTS SERVING THE MEN AND WOMEN'S RESTROOMS. THE HOOD FANS SHALL BE CONTROLLED VIA THE SUNCOAST CFA-500 CONTROL PANEL. WIRING, RELAYS AND SWITCHES FOR CONTROL OF ALL FANS ARE BY ELECTRICAL CONTRACTOR.
- G. THERMOSTATS ARE PROVIDED AND INTEGRATED INTO THE TEMPERATURE CONTROL PANEL BY SUNCOAST ENVIRONMENTAL CONTROLS. SUNCOAST WILL PROVIDE A NETWORK THERMOSTAT US32-CFA THERMOSTAT PRE-WIRED IN THE TEMPERATURE CONTROL PANEL. REMOTE TEMPERATURE SENSOR(S) FOR EACH THERMOSTAT IS ALSO PROVIDED. MECHANICAL CONTRACTOR SHALL INSTALL ALL WIRING BETWEEN THE THERMOSTAT, THE REMOTE SENSOR(S) AND THE ROOFTOP UNIT.
- H. MECHANICAL CONTRACTOR SHALL INSTALL CONTROL WIRING IN 1/2" CONDUIT WHERE REQUIRED BY CODE. WHERE NOT REQUIRED TO BE IN CONDUIT, ALL WIRING SHALL BE RUN PARALLEL TO STRUCTURAL MEMBERS OR PERPENDICULAR WITH NO DIAGONAL ROUTING. ALL WIRING SHALL BE SECURED TO THE FRAMING TO PREVENT SAGGING IN RUNS. WIRING TO ROOFTOP UNITS SHALL BE ROUTED THROUGH THE FACTORY THRU-BASE FITTING IN THE UNIT BASE. NO SPLICING OF WIRING WILL BE ACCEPTED. ALL WIRING ABOVE THE ROOF SHALL BE INSTALLED IN EXTERIOR GRADE FLEXIBLE CONDUIT. ALL CONTROL WIRING AND CONTROL WIRING CONDUIT SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. WIRING SHALL BE INSTALLED IN ACCORDANCE WITH LATEST EDITION OF NEC. ALL LOW VOLTAGE CONTROL WIRING SHALL BE NO LESS THAN 18 AWG MIN. CONTROL WIRING CONDUCTORS SHALL BE SIZED TO ACCOUNT FOR LOAD AND LENGTH OF RUM TO ALLOW SUFFICIENT VOLTAGE AVAILABLE AT CONTROLLED DEVICE TO OPERATE THE SYSTEM RELIABLY.

2.04 PIPING

- A. ALL ABOVE GRADE NATURAL GAS PIPING SHALL BE SCHEDULE 40 STEEL MEETING ASTM A53 WITH SCREWED OR WELDED FITTINGS AND GASKET TYPE UNIONS AND FLANGES. FOR SCREWED PIPING, PIPING SHALL BE JOINED WITH BLACK 150 POUND MALLEABLE IRON SCREWED FITTINGS AS ALLOWED BY LOCAL AUTHORITY. CONTRACTOR SHALL VERIFY THE NEED FOR WELDED PIPING AS REQUIRED BY THE LOCAL GAS CODE AND/OR APPLICABLE LOCAL ORDINANCES AND AMENDMENTS.
- B. ALL BELOW GRADE NATURAL GAS PIPING SHALL BE MEDIUM DENSITY POLYETHYLENE (PE) MEETING ASTM D2513 AS MANUFACTURED BY GASTITE WITH JOINING SYSTEM AS MANUFACTURED BY CON-STAB. TRANSITIONS FROM ABOVE GRADE RIGID PIPING TO PE BELOW GRADE PIPING SHALL BE MADE WITH ANODE-LESS RISER ASSEMBLY AS MANUFACTURED BY CON-STAB.

- C. PROVIDE AND INSTALL A CUT-OFF VALVE, UNION AND FULL SIZE DIRT LEG AT CONNECTION TO EACH GAS-FIRED PIECE OF EQUIPMENT. INSTALL PIPING AT AND AROUND EQUIPMENT SO AS TO NO WAY OBSTRUCT EQUIPMENT ACCESS PANELS AND/OR ACCESS DOORS.
- D. ALL GAS PIPING ABOVE ROOF SHALL BE CLEANED FREE OF RUST AND PAINTED WITH COAT OF ZINC RUST PRIMER AND ONE COAT OF ALUMINUM BASE PAINT. METER AND GAS RISER SHALL BE PRIMED AND PAINTED TO MATCH BUILDING.
- E. NATURAL GAS PIPING SHALL BE LEAK TESTED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS AND MANUFACTURERS RECOMMENDATIONS.

PART III - EXECUTION

3.01 SCOPE

- A. FURNISH AND INSTALL SYSTEM IN ACCORDANCE WITH REFERENCED STANDARDS, APPLICABLE CODES, MANUFACTURER'S RECOMMENDATIONS AND AS INDICATED ON DRAWINGS.
 - B. CONTRACTOR SHALL INSTRUCT THE OWNER'S REPRESENTATIVE IN ALL MATTERS PERTAINING TO THE PROPER MAINTENANCE OF EQUIPMENT FURNISHED UNDER THIS CONTRACT THROUGH DEMONSTRATION AND EXPLANATION OF OPERATING & MAINTENANCE MANUALS.
 - C. CONTRACTOR SHALL PROVIDE A "SAMPLE MAINTENANCE PROPOSAL" TO THE OWNER'S REPRESENTATIVE IN ALL MATTERS PERTAINING TO THE PROPER MAINTENANCE OF EQUIPMENT FURNISHED UNDER THIS CONTRACT.
 - D. CONTRACTOR SHALL COMPLETE A/C EQUIPMENT STARTUP DOCUMENTATION PROVIDED BY OWNER AND/OR MANUFACTURER. THIS SHALL INCLUDE RE-TORQUE OF ALL FIELD AND FACTORY HIGH VOLTAGE CONNECTIONS.
- 3.02 LEED PROJECTS**
- A. CONTRACTOR SHALL COMPLETE RECEIPT INSPECTION CHECKLISTS PROVIDED IN THE COMMISSIONING PLAN WITHIN 5 DAYS OF RECEIVING EQUIPMENT ON SITE.
 - B. CONTRACTOR SHALL COMPLETE PRE-FUNCTIONAL CHECKLISTS PROVIDED IN THE COMMISSIONING PLAN. CHECKLISTS SHALL BE RETURNED AT LEAST 5 DAYS PRIOR TO SCHEDULING FUNCTIONAL PERFORMANCE TESTING.
 - C. CONTRACTOR SHALL PROVIDE A TECHNICIAN TO ASSIST THE THIRD PARTY COMMISSIONING AUTHORITY WITH FUNCTIONAL TESTING. FUNCTIONAL TESTING SHALL OCCUR AFTER ALL CONTROLS HAVE BEEN INSTALLED AND VERIFIED AND AFTER TEST AND BALANCE IS COMPLETE. THE FUNCTIONAL PERFORMANCE TEST PROCEDURES CAN BE FOUND IN THE COMMISSIONING PLAN.
 - D. IF THE TOTAL TIME REQUIRED TO CORRECT PROBLEMS DURING TESTING IS GREATER THAN FORTY-FIVE (45) MINUTES (UNLESS EXTENUATING CIRCUMSTANCES EXIST), THE TEST SHALL BE CONSIDERED FAILED AND MUST BE REPEATED IN ITS ENTIRETY.
 - E. RE-TESTING: DURING THE COURSE OF THE RETEST, IF AT ANY POINT A MAJOR DEFICIENCY IS DISCOVERED, THE TEST WILL BE STOPPED. REPEAT TESTS UNTIL ACCEPTABLE RESULTS ARE ACHIEVED. IF MORE THAN TWO FUNCTIONAL PERFORMANCE TESTS (ONE INITIAL TEST AND ONE RETEST) FOR ANY TYPE OF EQUIPMENT DUE TO ISSUES THAT THE CONTRACTOR HAD DIRECT OR INDIRECT CONTROL OVER ARE REQUIRED, THE COSTS FOR THE CXA TO WITNESS RETESTING OF SIMILAR TYPES OF EQUIPMENT UNTIL SATISFACTORY RESULTS ARE OBTAINED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 3.03 TEST & BALANCE**
- A. OWNER SHALL TEST AND BALANCE MECHANICAL SYSTEM IN ACCORDANCE WITH NEBB, NBC OR AABC STANDARDS TO ASSURE CONFORMANCE WITH DESIGN. G.C. WILL MAKE MECHANICAL CONTRACTOR AVAILABLE DURING TEST AND BALANCE TO ASSIST TESTING AGENCY AND TO MAKE CORRECTIONS IMMEDIATELY NECESSARY. CONTRACTOR SHALL CORRECT ITEMS ON WRITTEN TEST AND BALANCE REPORT.
 - B. ALL EQUIPMENT TO BE BALANCED MUST HAVE GONE THRU SUCCESSFUL START-UP PROCEDURE BY THE MECHANICAL CONTRACTOR (MC) PRIOR TO TAB VISIT.
 - C. THE FLOOR OF THE RESTAURANT SHALL BE CLEARED OF DEBRIS, STAGED CONSTRUCTION MATERIALS, EQUIPMENT, ETC. WHICH MAY, IN THE OPINION OF THE TAB TECHNICIAN, OBSTRUCT ACCESS TO AIR DISTRIBUTION COMPONENTS IN AND ABOVE THE CEILING.
 - D. EQUIPMENT ACCESS PANELS, DUCT AIR DEVICES SUCH AS BALANCING DAMPERS AND ACTUATORS SHALL BE ACCESSIBLE AND CLEAR OF PIPING, CONDUIT, FRAMING, SUPPORTS ETC...
 - E. PROVIDE AN 8 FT PORTABLE A-FRAME STYLE LADDER DEDICATED FOR THE TAB TECHNICIAN'S USE DURING THE ENTIRE TAB EFFORT DURATION.

KITCHEN HOOD SYSTEMS NOTES

1. CHICK-FIL-A MAINTAINS A NATIONAL ACCOUNT WITH HALTON CO. FOR THE HOODS. CHICK-FIL-A WILL PURCHASE AND PROVIDE THE HOODS FOR INSTALLATION BY THE MECHANICAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR RECEIVING THE HOODS. CONTACT HALTON CO. AT 270-237-5600 FOR MORE INFO.
2. THE FIRE SUPPRESSION SYSTEM SHALL CONSIST OF A COMPLETE WET CHEMICAL SYSTEM FURNISHED BY HALTON. THE HOOD SHALL BE FURNISHED PRE-PIPED BY HALTON.
3. THE FIRE SUPPRESSION SYSTEM EXTERNAL TO THE HOODS SHALL BE INSTALLED IN ACCORDANCE WITH HOOD MANUFACTURER'S SHOP DRAWINGS BY AN AUTHORIZED INSTALLER SELECTED AND HIRED BY HALTON. COST FOR INSTALLATION INCLUDED IN PRICE OF HOODS TO CFA.
4. HOOD EXHAUST DUCTWORK SHALL BE 16 GA. BLACK STEEL WITH CONTINUOUS LIQUID TIGHT WELD OF JOINTS & SEAMS.
5. TURNS IN GREASE EXHAUST DUCTWORK SHALL BE LONG RADIUS TYPE, WITH A CENTERLINE RADIUS R=3W/2, UNLESS OTHERWISE NOTED. NO MITERED FITTINGS ALLOWED.
6. ALL STAINLESS STEEL CLOSURE PANELS SHALL BE SUPPLIED BY HOOD MANUFACTURER AND INSTALLED BY THE MECHANICAL CONTRACTOR ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
7. SLOPE ALL GREASE EXHAUST DUCT BACK TO HOOD AT 1/4" PER FOOT OF RUN.
8. WRAP NEW GREASE DUCT WITH UNIFRAX FyreWRAP. INSULATION ON ACCESS DOORS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTALLATION RECOMMENDATIONS. UNIFRAX FyreWRAP PRODUCT USED SHALL MEET LOCAL CODE REQUIREMENTS.
9. SUPPORT ALL HOODS WITH THREADED ROD AT EACH FACTORY SUPPORT POINT. EACH SUPPORT POINT MUST SUPPORT THE HOOD WEIGHT EQUALLY. ATTACH TO STRUCTURE AS DETAILED ON STRUCTURAL DRAWINGS. ATTACH HOOD TO WALL AT 16" INTERVALS ALONG FULL LENGTH OF HOOD ON TOP AND BOTTOM. ATTACHMENT TO WALL REQUIRES FIELD DRILLING OF SUPPORT ANGLE AT BACK OF HOODS. EACH WALL ATTACHMENT POINT MUST OCCUR AT A WALL STUD. ATTACHMENT HARDWARE TO BE #12-24 HEX HEAD SHEET METAL SCREW EQUAL TO TEXTRON SDS EDT265, LENGTH AS REQUIRED TO FULLY PENETRATE THE STUD.

LEGEND

A-12-400	TYPE - NECK SIZE - CFM	[EF#1]	EXHAUST FAN #1 (TYP.)
	SPIN-IN FITTING WITH MANUAL BALANCING DAMPER, WITHOUT SCOOP	[AC#1]	AIR CONDITIONING UNIT #1 (TYP.)
	SPIN-IN HARD FLEXIBLE DIFFUSER		RETURN/EXHAUST (TYP.)
	REMOTE TEMPERATURE SENSOR		SUPPLY DIFFUSER, SQ FACE (TYP.)
	HUMIDITY SENSOR		PLAN NOTE REFERENCE
	SMOKE DETECTOR		MANUAL VOLUME DAMPER
12x18	DUCT SIZE (reverse for elevation views) 1ST NUMBER - HORIZONTAL DIMENSION 2ND NUMBER - VERTICAL DIMENSION		DIRECTION OF THROW ON DIFFUSER
			CLOSED AIR PATTERN DEFLECTOR
[SW]	AIR DOOR SWITCH	[GIH]	GAS INFRARED HEATER (TYP.)
EIH	ELECTRIC INFRARED HEATER	B/G	BELOW GRADE
			THERMOSTAT

ABBREVIATIONS

EC	ELECTRICAL CONTRACTOR
GC	GENERAL CONTRACTOR
MC	MECHANICAL CONTRACTOR
PC	PLUMBING CONTRACTOR
O.C.	ON CENTER
IRH	INFRARED HEATER
CF	CIRCULATING FAN
TF	TRANSFER FAN
EF	EXHAUST FAN

GENERAL NOTES

1. DUCT SIZES SERVING DIFFUSERS AND GRILLES ARE SAME SIZE AS DIFFUSER OR GRILLE NECK UNLESS NOTED OTHERWISE.
2. FLEXIBLE DUCT AND INSULATION NOT SHOWN FOR CLARITY.
3. FOR ALL ROOF EQUIPMENT, PROVIDE A PLASTIC ENGRAVED LABEL WITH 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. WITH A SELF ADHESIVE BACKING.
4. UNLESS NOTED OTHERWISE, MC TO ADJUST ALL DIFFUSER AIR PATTERN DEFLECTORS TO THROW HORIZONTALLY ALONG THE CEILING.
5. ALL EXHAUST DUCTWORK AND UNFINISHED METAL ON ROOF EXCEPT STAINLESS SHALL BE PREPARED WITH TWO COATS OF SHERWIN WILLIAMS PRO INDUSTRIAL DTM ACRYLIC COATING, SEMI-GLOSS, WHITE. DEGREASE AND PRIME BARE METAL SURFACE WITH ONE COAT OF SHERWIN WILLIAMS PRO INDUSTRIAL PRO-CRYLACRYLIC UNIVERSAL PRIMER, WHITE, PRIOR TO PAINTING.
6. MAINTAIN 18" CLEARANCE FROM GREASE EXHAUST DUCTWORK ABOVE ROOF TO ANY COMBUSTIBLE CONSTRUCTION INCLUDING PARAPET WALLS.

CANOPY GENERAL NOTES

1. COORDINATE WORK WITH CONDUIT, STRUCTURE, AND PIPING. FIELD VERIFY CONDITIONS PRIOR TO START OF WORK.
2. COORDINATE LOCATION AND RESPONSIBILITIES FOR UNDERGROUND PIPING AND ASSOCIATED TRENCHING WITH GENERAL CONTRACTOR PRIOR TO START OF WORK.
3. EXPOSED GAS PIPING SHALL BE COVERED WITH A RUST INHIBITING PAINT SUCH AS RUST-OLEUM 5200. PAINT COLOR SHALL MATCH STRUCTURE. ROOF MOUNTED GAS PIPING COLOR SHALL BE YELLOW.
4. CONTROL WIRING FOR HEATERS BY EC. COORDINATE REQUIRED WIRE GAUGE WITH EC. SEE CONTROLS PLAN AND ELECTRICAL DRAWINGS, (TYP.).



Chick-fil-A
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CHICK-FIL-A
NEW RESTAURANT

2381 W STATE ST
ALLIANCE, OH 44601

FSR#05811

BUILDING TYPE / SIZE: SSAM LSR BP

RELEASE: 24.02

PERMIT

REVISION SCHEDULE
NO. DATE DESCRIPTION

CONSULTANT PROJECT # 16-24-60004
DATE 10/04/2024

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SHEET
GENERAL NOTES, LEGENDS, SYMBOLS, AND ABBREVIATIONS.
SHEET NUMBER

M-001



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 Atlanta, Georgia
 30349-2998

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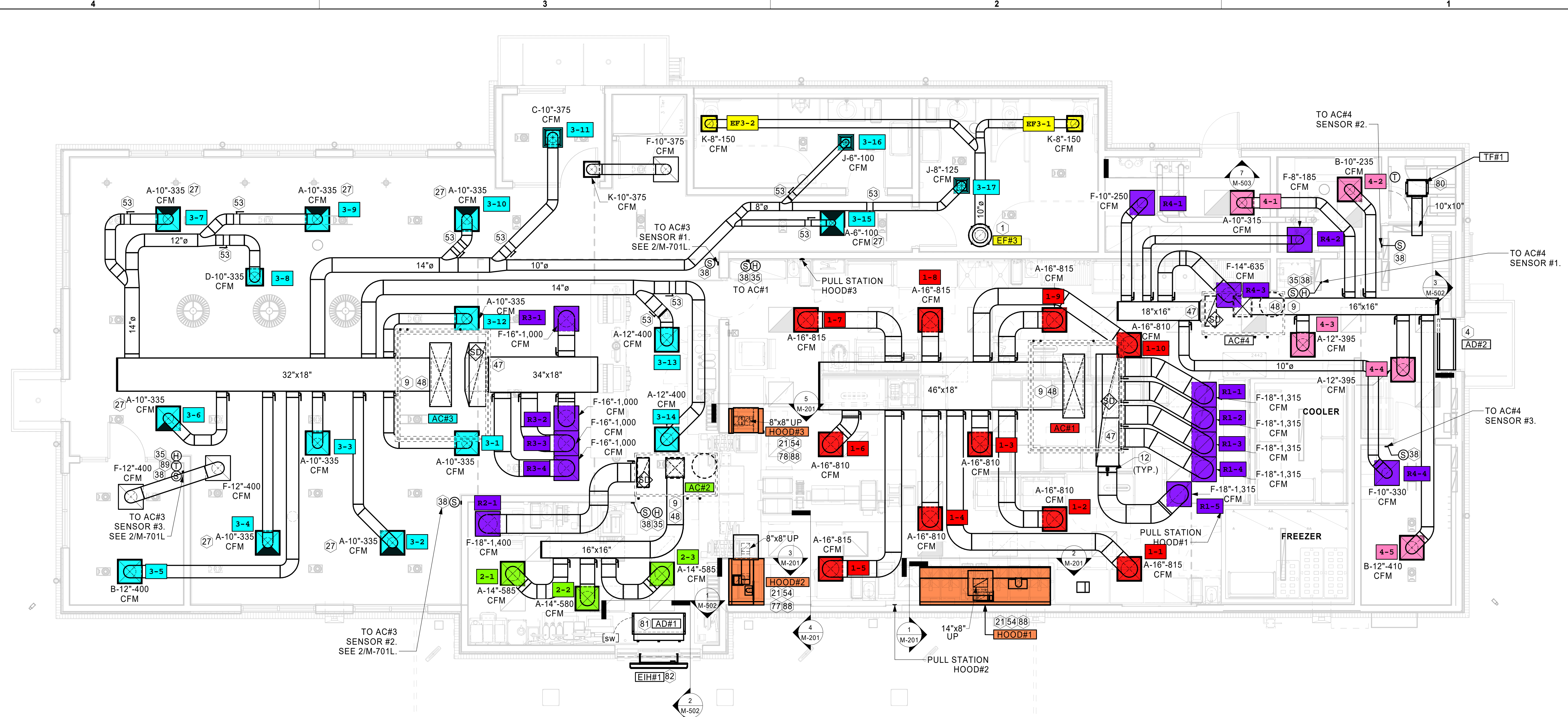
CHICK-FIL-A
NEW RESTAURANT
 2381 W STATE ST
 ALLIANCE, OH 44601

FSR#05811
 BUILDING TYPE / SIZE: SSAM LSR BP
 RELEASE: 24.02

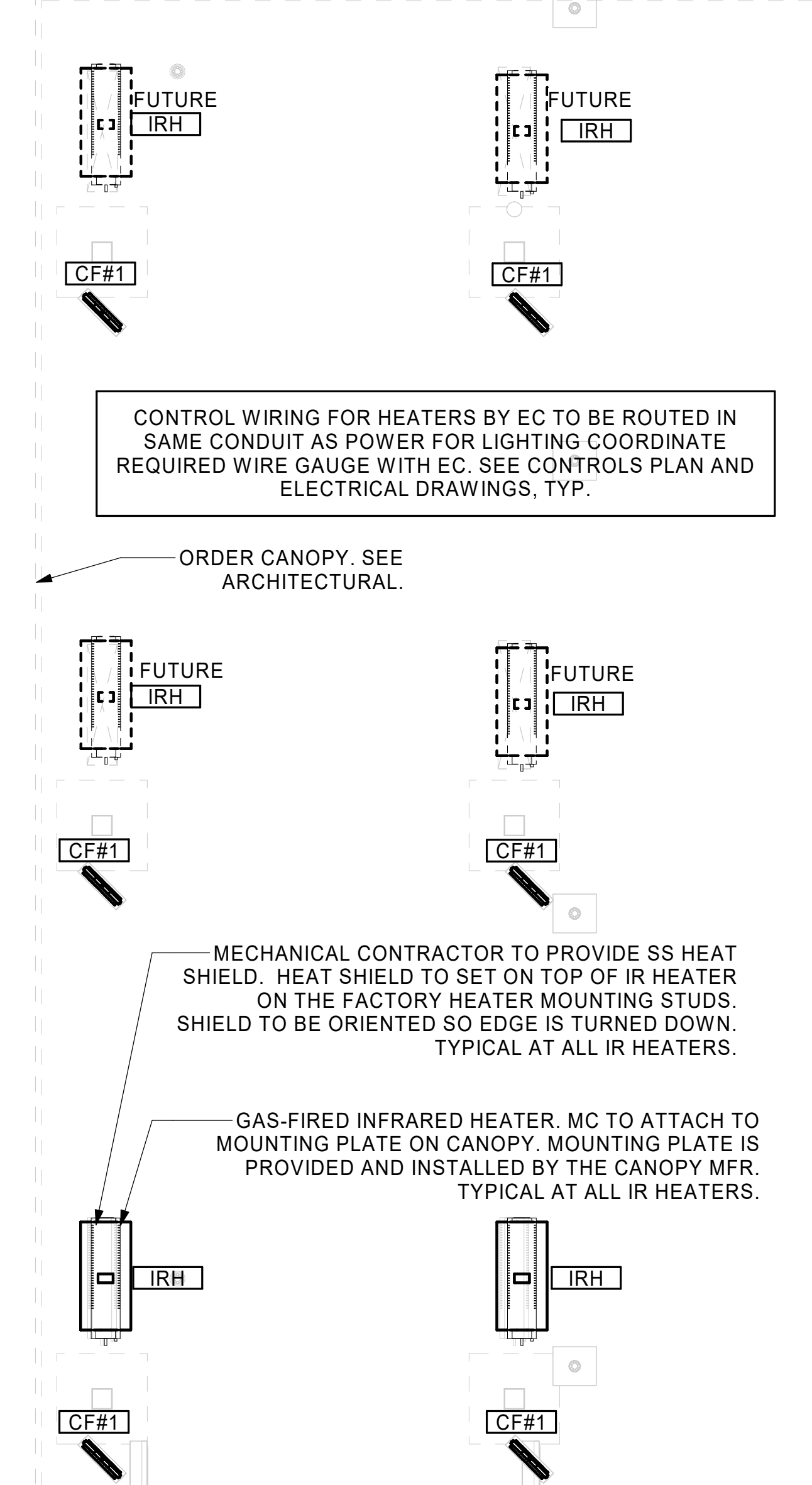
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EQUIPMENT AND DUCTWORK PLAN - LENNOX
 SHEET NUMBER

M-101L



1 EQUIPMENT AND DUCTWORK PLAN
 1/4" = 1'-0"



2 MECHANICAL FLOOR PLAN - ORDER CANOPY
 1/4" = 1'-0"

AIR BALANCE SCHEDULE

MARK	SUPPLY AIR	RETURN AIR	OUTSIDE AIR	EXHAUST AIR	BUILDING POSITIVE PRESSURE
AC#1	8,125 CFM	6,575 CFM	1,550 CFM	0 CFM	
AC#2	1,750 CFM	1,400 CFM	350 CFM	0 CFM	
AC#3	5,250 CFM	4,000 CFM	1,250 CFM	0 CFM	
AC#4	1,750 CFM	1,400 CFM	350 CFM	0 CFM	
EF#1	0 CFM	0 CFM	0 CFM	1,418 CFM	
EF#2	0 CFM	0 CFM	0 CFM	1,091 CFM	
EF#3	0 CFM	0 CFM	0 CFM	300 CFM	
	16,875 CFM	13,375 CFM	3,500 CFM	2,809 CFM	691 CFM

KEY NOTES

- 10" UP THRU ROOF.
- AIR CURTAIN MOUNTED OVER DOOR HEADER AT 7'-2" AFF TO BOTTOM OF UNIT. PROVIDE BLOCKING IN WALL BEHIND AIR CURTAIN. USE FACTORY PRE-PUNCHED MOUNTING HOLES ON BACK SIDE OF AIR CURTAIN ONLY. ATTACH AIR CURTAIN TO WALL USING 3/8" LAG BOLTS. LENGTH AS REQUIRED TO FULLY PENETRATE BLOCKING. LOCATE MAGNETIC CONTACT TYPE MICROSWITCH IN DOOR FRAME ON STRIKE SIDE.
- BRANCH TAKE-OFFS ARE NOT TO BE LOCATED CLOSER THAN 3'-0" FROM ANY OFFSET OR ELBOW INCLUDING THE SUPPLY AIR DROP FROM CURB.
- DAMPER HANDLES SHOULD BE INSTALLED SUCH THAT THE DAMPERS ROTATION AXIS IS PERPENDICULAR TO THE FLOOR WITH THE HANDLE FULLY ACCESSIBLE UNDERNEATH THE DUCT IT CONTROLS. (TYPICAL OF ALL DAMPERS AT THE SAME PLENUM.)
- HALTON KBD DAMPER AT HOOD COLLAR BY MECHANICAL CONTRACTOR. SEE HOOD ELEVATIONS ON M-201 FOR LOCATION.
- MECHANICAL CONTRACTOR TO CLOSE THE AIR PATTERN DEFLECTORS ON SHADED SIDE.
- MOUNT HUMIDITY SENSOR ON WALL ABOVE SPACE TEMP SENSOR AND ROUTE WIRING TO UNIT ON ROOF.
- MOUNT REMOTE SENSOR ON WALL AT 5'-0" AFF U.N.O. AND ROUTE WIRING BACK TO SUNCOAST TEMP CONTROL PANEL. FOR SENSOR SERVING AC#1, COORDINATE EXACT LOCATION WITH KITCHEN EQUIPMENT.
- TRANSITION IN VERTICAL DROP FROM FULL SIZE OF CURB OPENING TO SIZE SHOWN. SEE DETAIL S/M-501 FOR REQUIRED TRANSITION GEOMETRY. TRANSITION WITHIN CURB WHERE REQUIRED TO AVOID STRUCTURE. WHERE THE DUCT IS SHOWN OFFSET HORIZONTALLY, PROVIDE ELBOW WITHOUT TURNING VANES. FOR DROPS WITH NO HORIZONTAL OFFSET, EXTEND DROP BELOW STRUCTURE TO ACCOMMODATE START COLLARS. TERMINATE DROP A MINIMUM 0'-10" ABOVE CEILING (0'-4" ABOVE CEILING IF REQUIRED TO ACCOMMODATE TAKE-OFF AND DROP IS NOT LOCATED DIRECTLY ABOVE A LIGHT).
- TRANSITION IN VERTICAL DROP FROM FULL SIZE OF CURB OPENING TO SIZE SHOWN. TRANSITION WITHIN CURB WHERE REQUIRED TO AVOID STRUCTURE. WHERE THE DUCT IS SHOWN OFFSET HORIZONTALLY, PROVIDE ELBOW WITH TURNING VANES. FOR DROPS WITH NO HORIZONTAL OFFSET, EXTEND DROP BELOW STRUCTURE TO ACCOMMODATE START COLLARS. TERMINATE DROP A MINIMUM 0'-10" ABOVE CEILING (0'-4" ABOVE CEILING IF REQUIRED TO ACCOMMODATE TAKE-OFF AND DROP IS NOT LOCATED DIRECTLY ABOVE A LIGHT).
- RUSKIN MDRS25 MVD W/LOCKING QUADRANT HANDLE.
- SEE ELEVATIONS ON M-201 FOR CJ FAN DUCTING REQUIREMENT.
- INSTALL LEFT SIDE OF HOOD FLUSH WITH FINISHED EDGE OF PASS-THRU OPENING.
- INSTALL RIGHT SIDE OF HOOD WITH FINISHED EDGE OF PASS-THRU OPENING.
- CEILING MOUNTED RECIRCULATING FAN. DUCT AND DISCHARGE ABOVE CEILING.
- MOUNT AIR DOOR IN CEILING, CENTERED ON DRIVE-THRU/MFA DOOR OPENING. REFER TO WIRING DIAGRAM ON SHEET E-702 FOR MORE INFORMATION.
- ELECTRIC HEATER, MC TO MOUNT ON WALL PER MANUFACTURER'S RECOMMENDATIONS.
- PULL STATION FOR KITCHEN EXHAUST HOOD MOUNTED 42" TO 48" A.F.F. COORDINATE EXACT LOCATION WITH KITCHEN EQUIPMENT ELEVATIONS. JUNCTION BOX AND CONDUIT PROVIDED BY ELECTRICAL CONTRACTOR. PROVIDE PLASTIC ENGRAVED LABEL - RED WITH 1" HIGH WHITE LETTERING. LABELS SHALL BE AS FOLLOWS: HOOD #1 - "MAIN COOKLINE", HOOD #2 - "PASS THRU - RIGHT", HOOD #3 - "PASS THRU - LEFT".
- THERMOSTAT FOR VAV DIFFUSERS, PROVIDE WITH LOCKING COVER.

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 30-LSR-16-24-60004-M-101L-EQUIPMENT AND DUCTWORK PLAN - LENNOX



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NEW RESTAURANT

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ALLIANCE, OH 44601

FSR#05811

BUILDING TYPE / SIZE: SSAM LSR BP

RELEASE: 24.02

PRINTED FOR

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REVISION SCHEDULE

NO.	DATE	DESCRIPTION
1	01/24/25	REV 04

1 01/24/25 REV 04

CONSULTANT PROJECT # 16-24-60004

DATE 10/04/2024

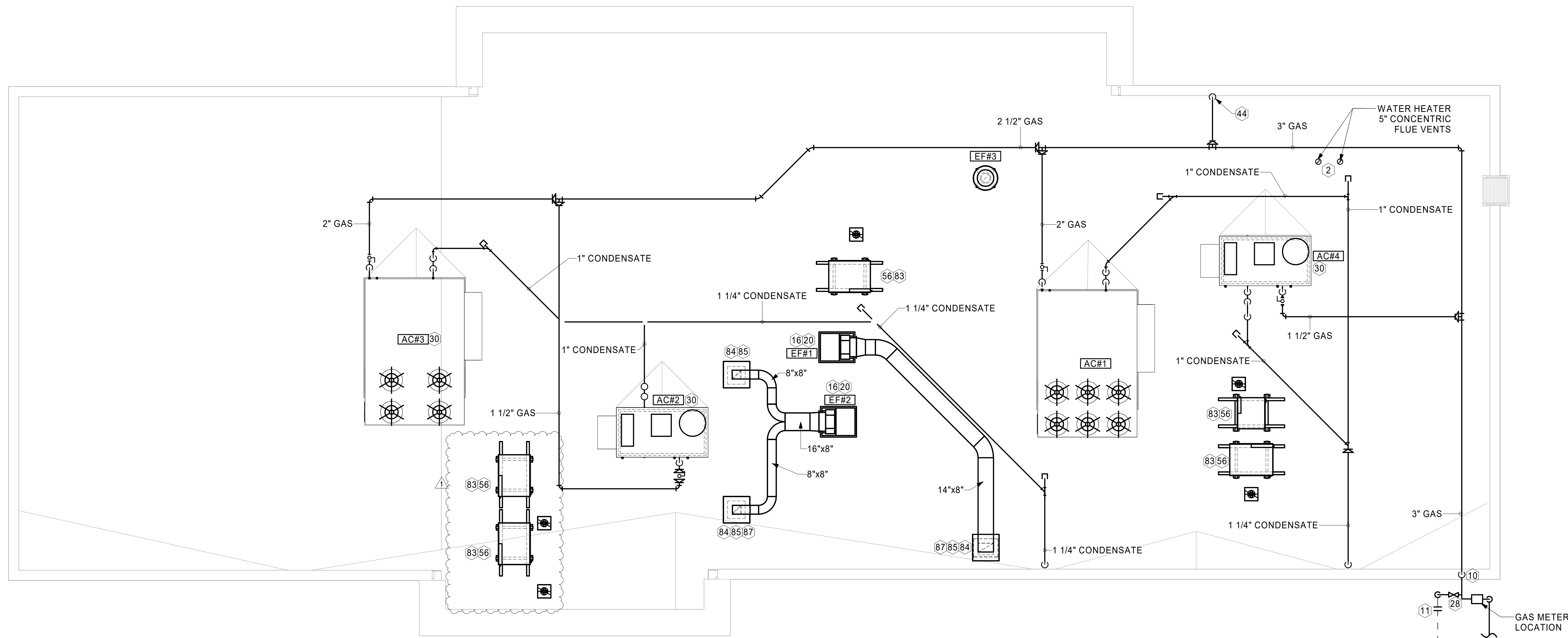
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SHEET EQUIPMENT ROOF PLAN - LENNOX

SHEET NUMBER

M-102L



1 EQUIPMENT ROOF PLAN - LENNOX

1/4" = 1'-0"

KEY NOTES

- 2 PROVIDE DUCT AS SHOWN. TERMINATE DUCT 24" ABOVE ROOF WITH ALUMINUM WEATHER CAP WITH INTEGRAL BIRD SCREEN. EXHAUST DUCT DISCHARGE SHALL BE LOCATED A MINIMUM OF 10 FT FROM ANY OUTSIDE AIR INTAKE.
- 10 TURN 3" GAS UP WITHIN WALL, THRU PARAPET AND ONTO ROOF.
- 11 ROUTE POLYETHYLENE GAS BELOW GRADE FROM THE METER. FOR TRANSITION FROM POLYETHYLENE PIPING BELOW GRADE TO STEEL AT THE METER, INSTALL ANODELESS RISER WITH INTEGRAL CONSTAB PE-TO-IPS TRANSITION FITTING BY CONTINENTAL INDUSTRIES OR EQUAL BY ELSTER.
- 16 FABRICATE DISCHARGE AIR NOZZLE. VERIFY EXHAUST TERMINATION IS A MINIMUM 10'-0" FROM PARAPETS AND OUTSIDE AIR INTAKES. REFER TO H-1.4 FOR DETAILS.
- 19 1-1/2" GAS BELOW GRADE TO ORDER CANOPY. SEE DETAIL 2 THIS SHEET.
- 20 GREASE EXHAUST DUCT LOCATED ON ROOF SHALL SLOPE 1/4" PER FOOT TOWARDS THE HOOD, THE FAN, OR A COMBINATION OF THE TWO SUCH THAT NO PORTION OF THE RADIUS ELBOW AT THE CURB IS BELOW THE CURB CAP AND SUCH THAT THE FAN BASE SETS DIRECTLY ON THE CURB RAILS. THE BOTTOM OF THE RADIUS ELBOW MAY BE EVEN OR FLUSH WITH THE CURB CAP, BUT NOT BELOW THE CAP. THE DUCT AT THE FAN MUST BE CENTERED ON THE FAN INLET.
- 28 PROVIDE FULL PORT BALL VALVE EQUAL TO APOLLO 50GB SERIES WITH WINGS HANDLE OPTION ABOVE GRADE AT THE METER. PROVIDE BRASS VALVE TAG WITH JACK CHAIN AT VALVE MARKED "SERVICE SHUTOFF FOR CANOPY HEATERS." LOCATE SHUTOFF VALVE TO BE EASILY ACCESSIBLE FROM GROUND LEVEL.
- 30 MECHANICAL CONTRACTOR TO SEE ARCHITECTURAL ROOF PLAN FOR NOTES REGARDING LEVELING FRAMES FOR RTUS. COORDINATE WITH GENERAL CONTRACTOR EXACT LOCATIONS AND SIZE NEEDED.
- 44 1-1/2" GAS DOWN THRU ROOF TO WATER HEATER. SEE DETAIL 3/P-502 FOR MORE INFORMATION ON CONSTRUCTION AND PENETRATION. WHEN CONTRACTOR OPTS TO PROVIDE ALTERNATIVE WATER-HEATER, INCREASE PIPE SIZE AS NEEDED PER CODE.
- 56 GC SHALL PROVIDE EQUIPMENT STANDS AS MANUFACTURED BY AVCOA OR EQUAL. STANDS SHALL BE INSTALLED PRIOR TO ROOF INSULATION SO THAT THE INSULATION IS CONTINUOUS UP TO THE PIPE POSTS. POSTS SHALL BE FLASHED IN ACCORDANCE WITH ROOFING MANUFACTURER'S INSTALLATION INSTRUCTIONS. COORDINATE BLOCKING BELOW THE ROOF DECK AS REQUIRED.
- 83 DO NOT DIRECT DISCHARGE OF CONDENSING UNITS INTO CONDENSER SECTION OF ROOFTOP UNITS, TYP.
- 84 ROOF CURB FOR DUCT PENETRATION. REFER TO MH-1.3 AND MH-1.4 FOR DETAILS.
- 85 TURN DOWN THRU ROOF. SEE M-101/LM-101T FOR CONTINUATION.
- 87 DUCT PENETRATIONS ON ROOF MUST BE AT LEAST 18" FROM ADJACENT PARAPETS.
- 95 GAS PIPING TO BE ROUTED ABOVE CANOPY, ON TOP OF STRUCTURAL MEMBERS, EXCEPT WHERE ROUTED DOWN THROUGH PENETRATIONS AS INDICATED.
- 96 GAS PIPING DOWN THROUGH DECK. WEATHERPROOF DECK PENETRATION PER DETAIL 6/M-503, TYPICAL.
- 97 SEE DETAIL 1/M-503 FOR PIPING AT IRH, TYPICAL.
- 98 GAS TRANSITION FITTING TO GAS PIPE STUB-OUT LOCATED IN GAS PIPE COVER AT CANOPY COLUMN. GAS PIPING INSIDE COLUMN AND STUB-OUTS BY CANOPY MFR. PROVIDE FULL PORT BALL VALVE EQUAL TO APOLLO 50GB SERIES WITH WING HANDLE OPTION ABOVE GRADE LOCATED IN GAS PIPE COVER, REFERENCE DETAIL 9/M-503. PROVIDE BRASS VALVE TAG WITH JACK CHAIN AT VALVE MARKED "SERVICE SHUTOFF FOR CANOPY". FOR TRANSITION TO POLYETHYLENE PIPING B/G TO STEEL ABOVE GRADE, INSTALL ANODELESS RISER WITH INTEGRAL CONSTAB PE-TO-IPS TRANSITION FITTING BY CONTINENTAL INDUSTRIES OR EQUAL BY ELSTER.
- 99 1-1/2" GAS B/G TO METER SEE 1/M-102L OR 1/M-102T.

3. GAS LOAD SCHEDULE

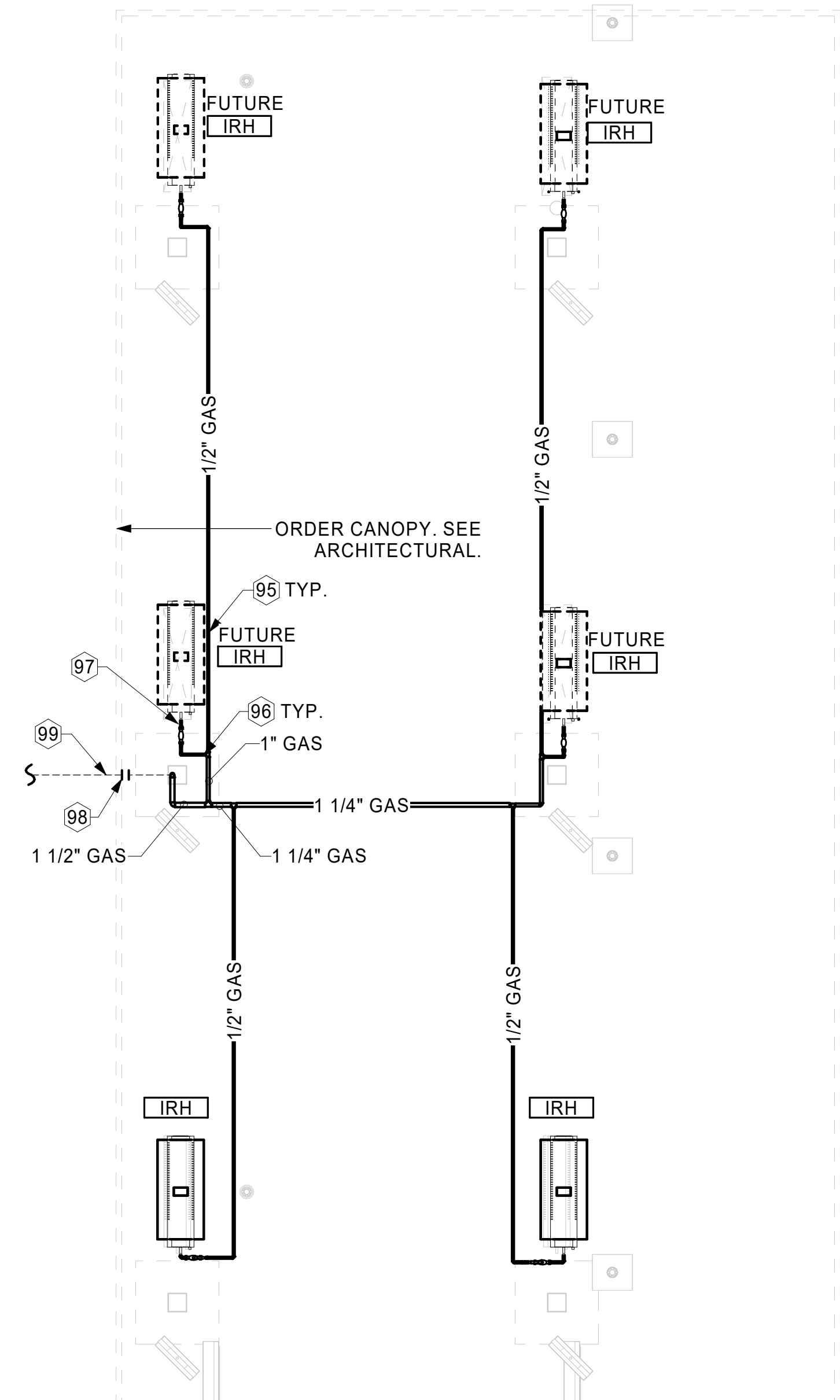
EQUIPMENT	GAS LOAD
AC#1	480,000 BTUS
AC#2	150,000 BTUS
AC#3	480,000 BTUS
AC#4	150,000 BTUS
IRH (2 @ 50,000 BTU EA.)	100,000 BTUS
IRH (FUTURE 4 @ 50,000 BTU EA.)	200,000 BTUS
WATER HEATER	398,000 BTUS
TOTAL BASIS OF DESIGN LOAD	1,758,000 BTUS
TOTAL FUTURE CONNECTED LOAD	1,958,000 BTUS

REMARKS:

1. EQUIVALENT TO 1,958.0 CFH
2. 7" W.C. DELIVERY PRESSURE
3. DEVELOPED LENGTH: 200 FT. (METER TO AC#2)
4. GAS PIPING SIZED FOR FUTURE LOAD

2 ORDER CANOPY GAS PIPING PLAN

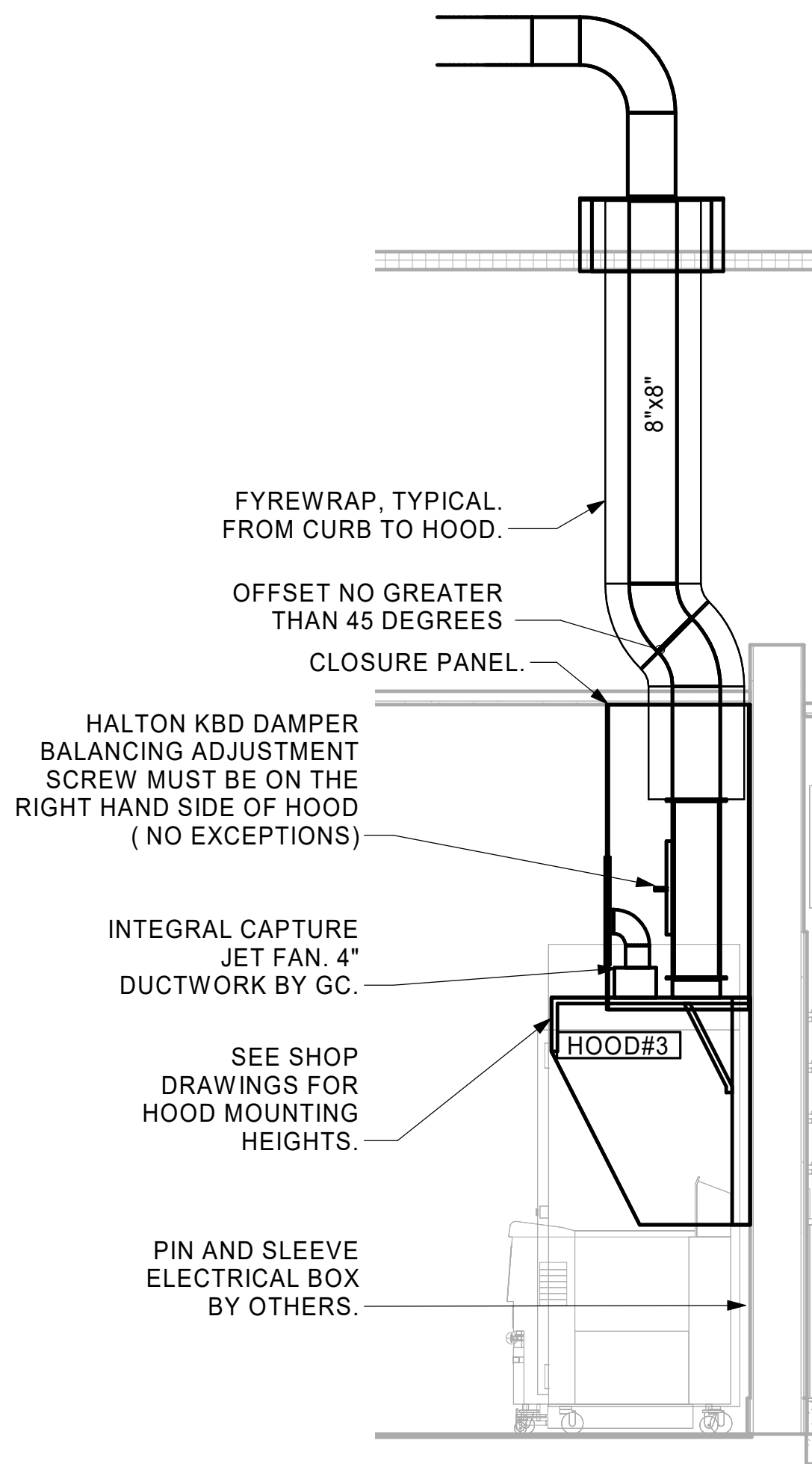
1/4" = 1'-0"



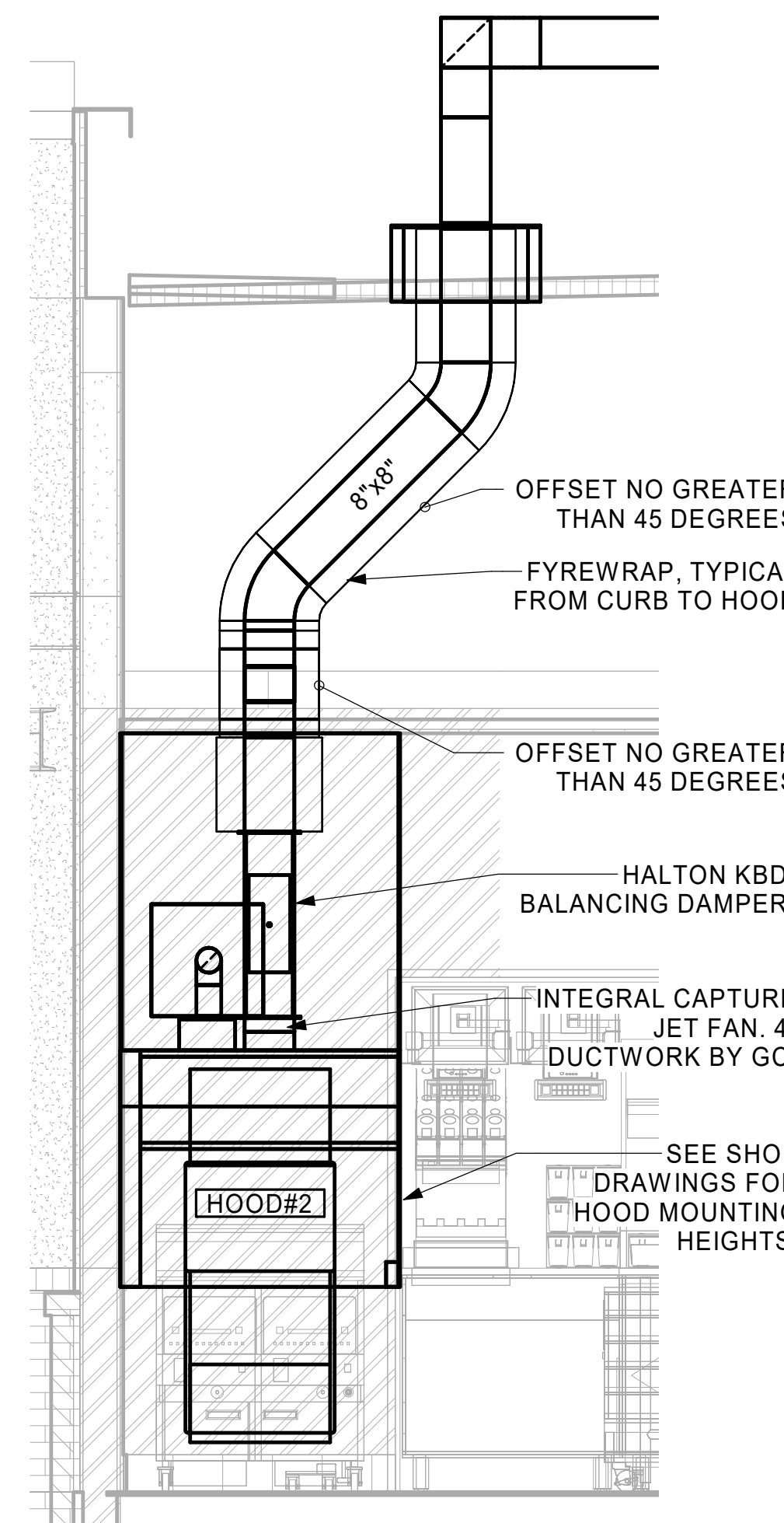
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 30-LSR-16-24-60004-MI-201-EXHAUST HOOD ELEVATIONS

GREASE EXHAUST DUCT CLEARANCE NOTE:
 CLEARANCES ABOVE CEILING ARE TIGHT. MECHANICAL CONTRACTOR TO FIELD VERIFY EXACT ROUTING AND CLEARANCES PRIOR TO FABRICATING GREASE EXHAUST DUCT.

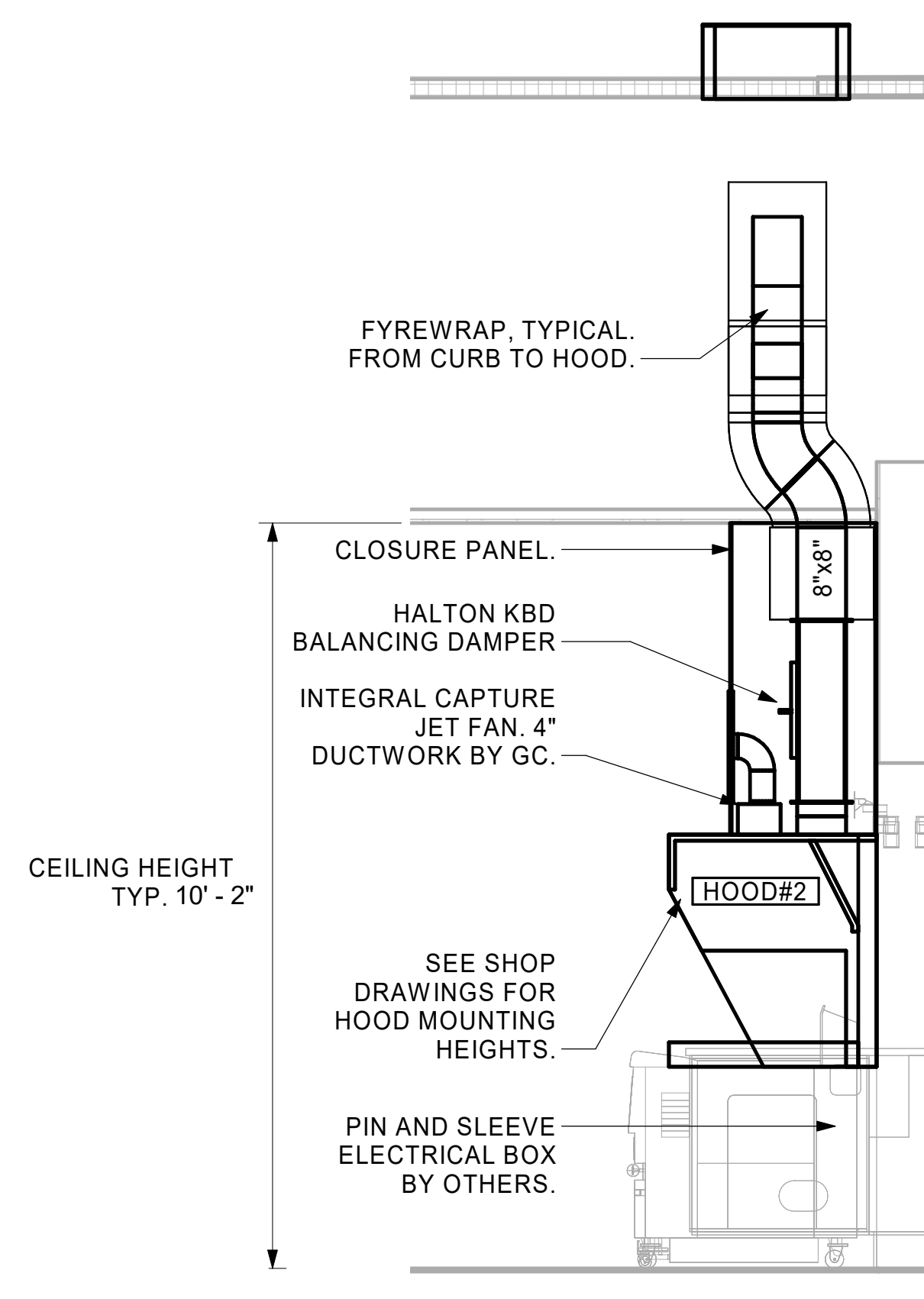
CLEANOUT DOOR NOTE:
 DUCT WRAP SHALL BE APPLIED TO THE CLEANOUT DOOR PER THE WRAP MFR'S INSTALLATION INSTRUCTIONS, NO EXCEPTIONS. ALSO, THE CLEANOUT DOOR MUST BE REMOVABLE WITHOUT TOOLS AND MUST BE CLEARLY AND PERMANENTLY LABELED.



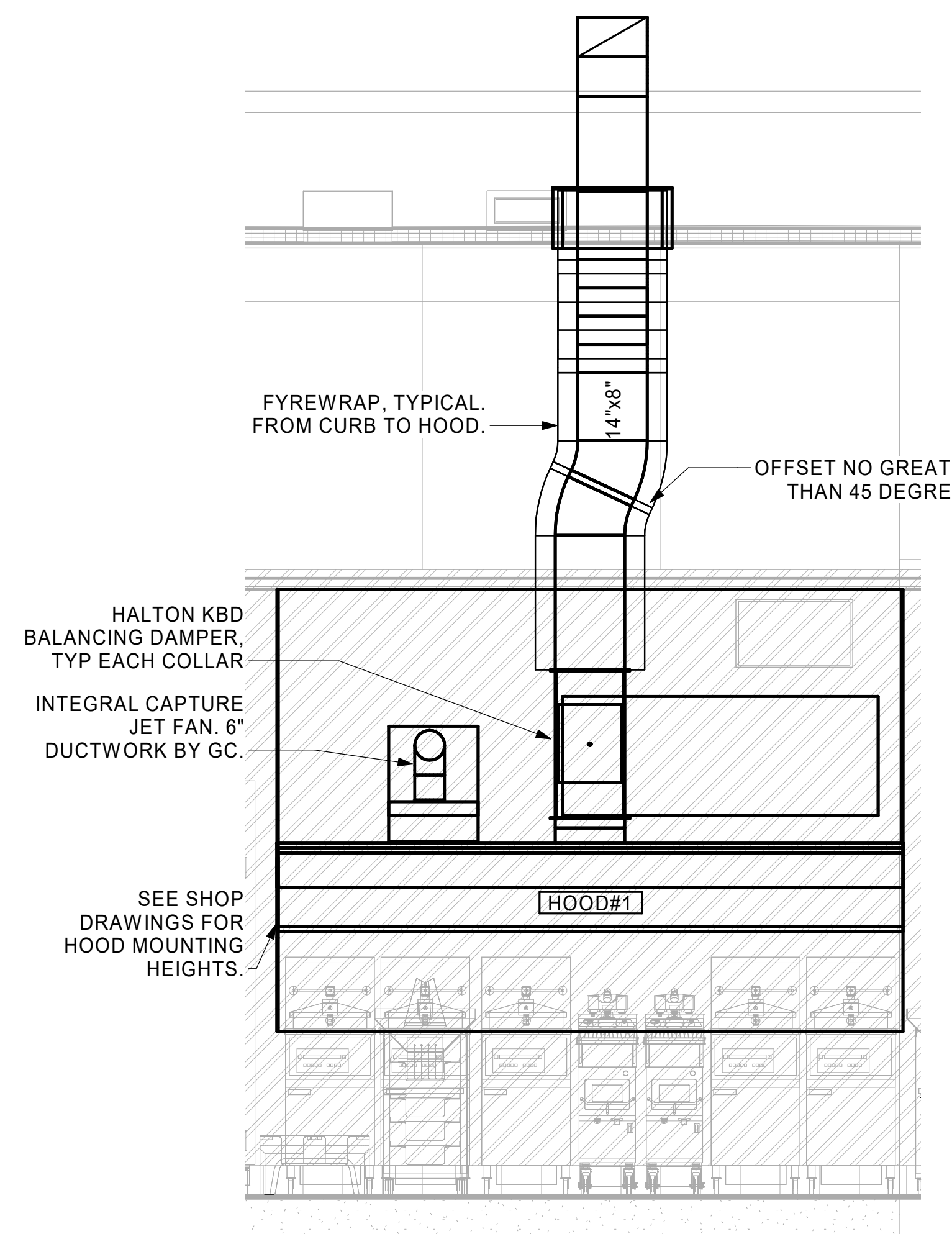
5 HOOD ELEVATION - HOOD#3
 NOT TO SCALE



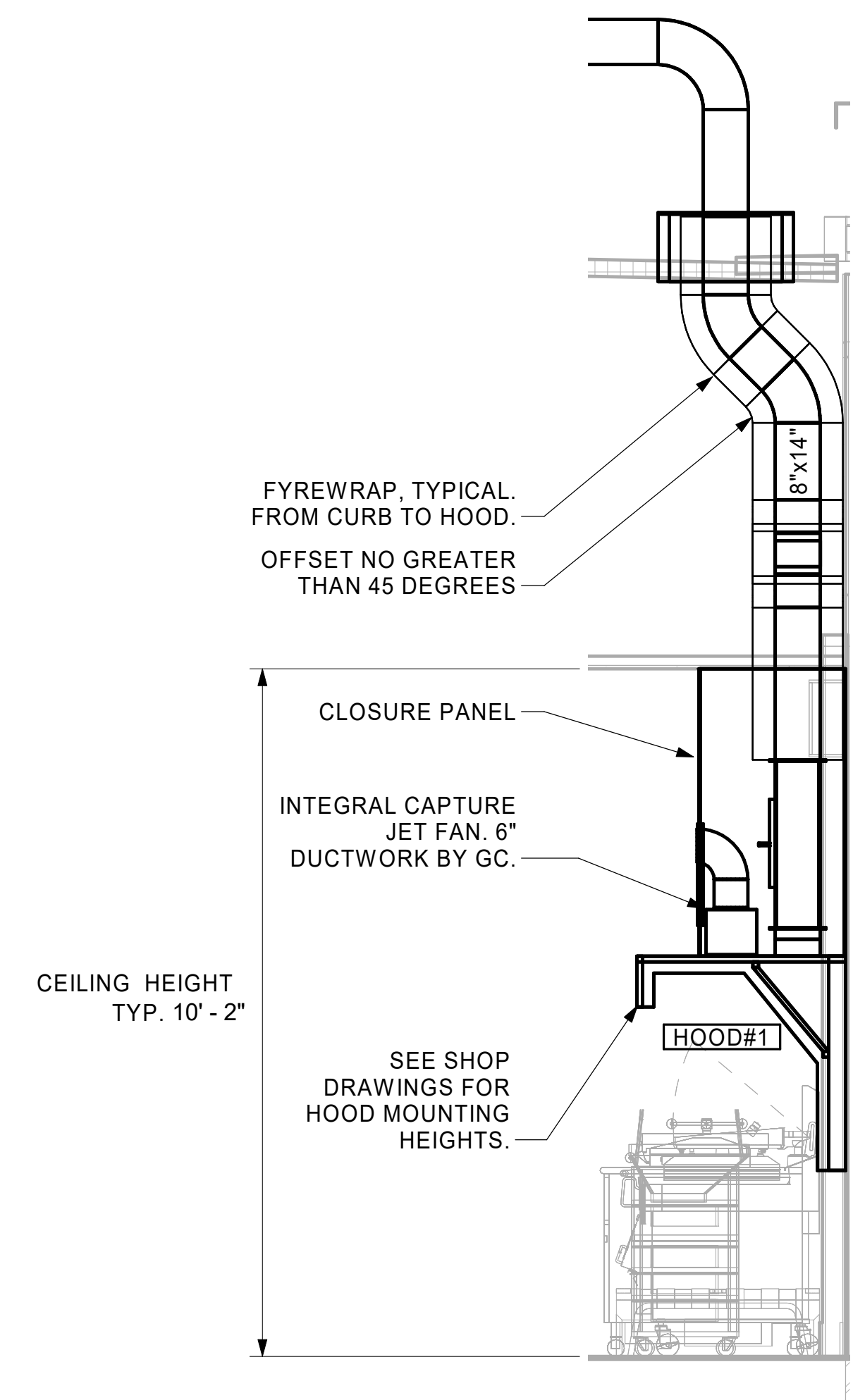
4 HOOD ELEVATION - HOOD#2 - FRONT
 NOT TO SCALE



3 HOOD ELEVATION - HOOD#2 - SIDE
 NOT TO SCALE



2 HOOD ELEVATION - HOOD#1 - FRONT
 NOT TO SCALE



1 HOOD ELEVATION - HOOD#1 - SIDE
 NOT TO SCALE



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NEW RESTAURANT
 2381 W STATE ST
 ALLIANCE, OH 44601

FSR#05811
 BUILDING TYPE / SIZE: SSAM LSR BP
 RELEASE: 24.02
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NO.	DATE	DESCRIPTION

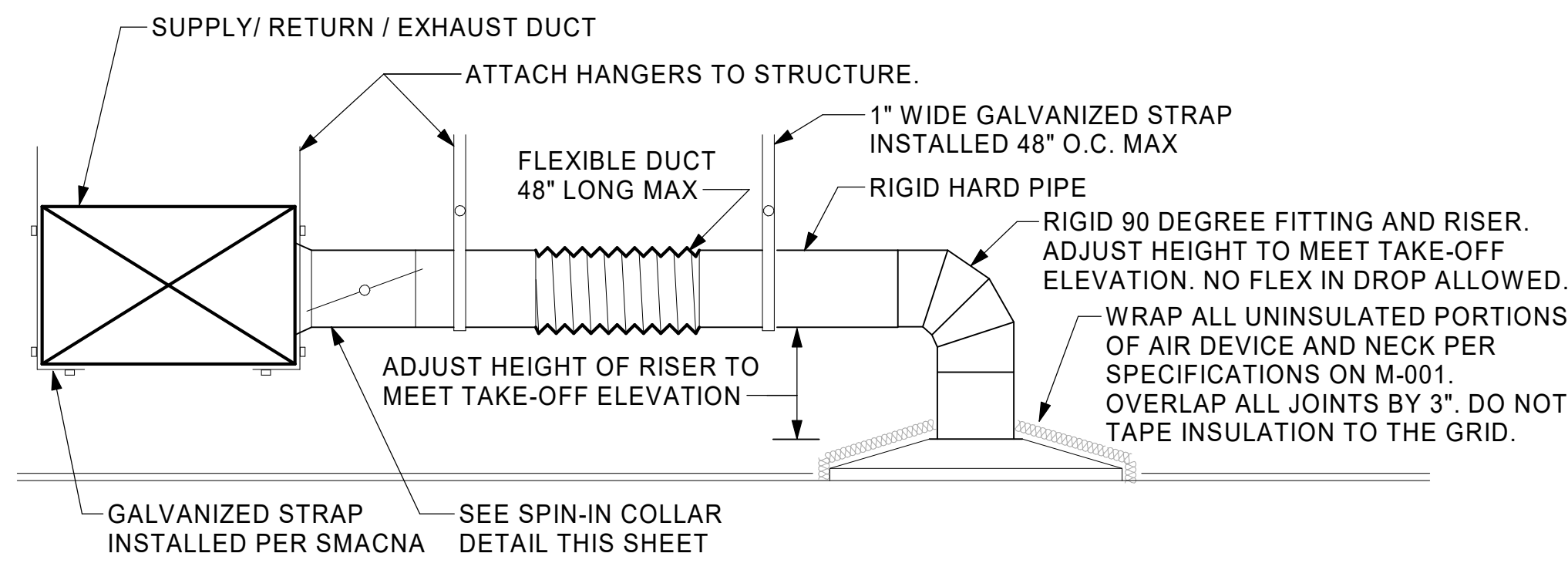
CONSULTANT PROJECT # 16-24-60004
 DATE 10/04/2024

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SHEET EXHAUST HOOD ELEVATIONS

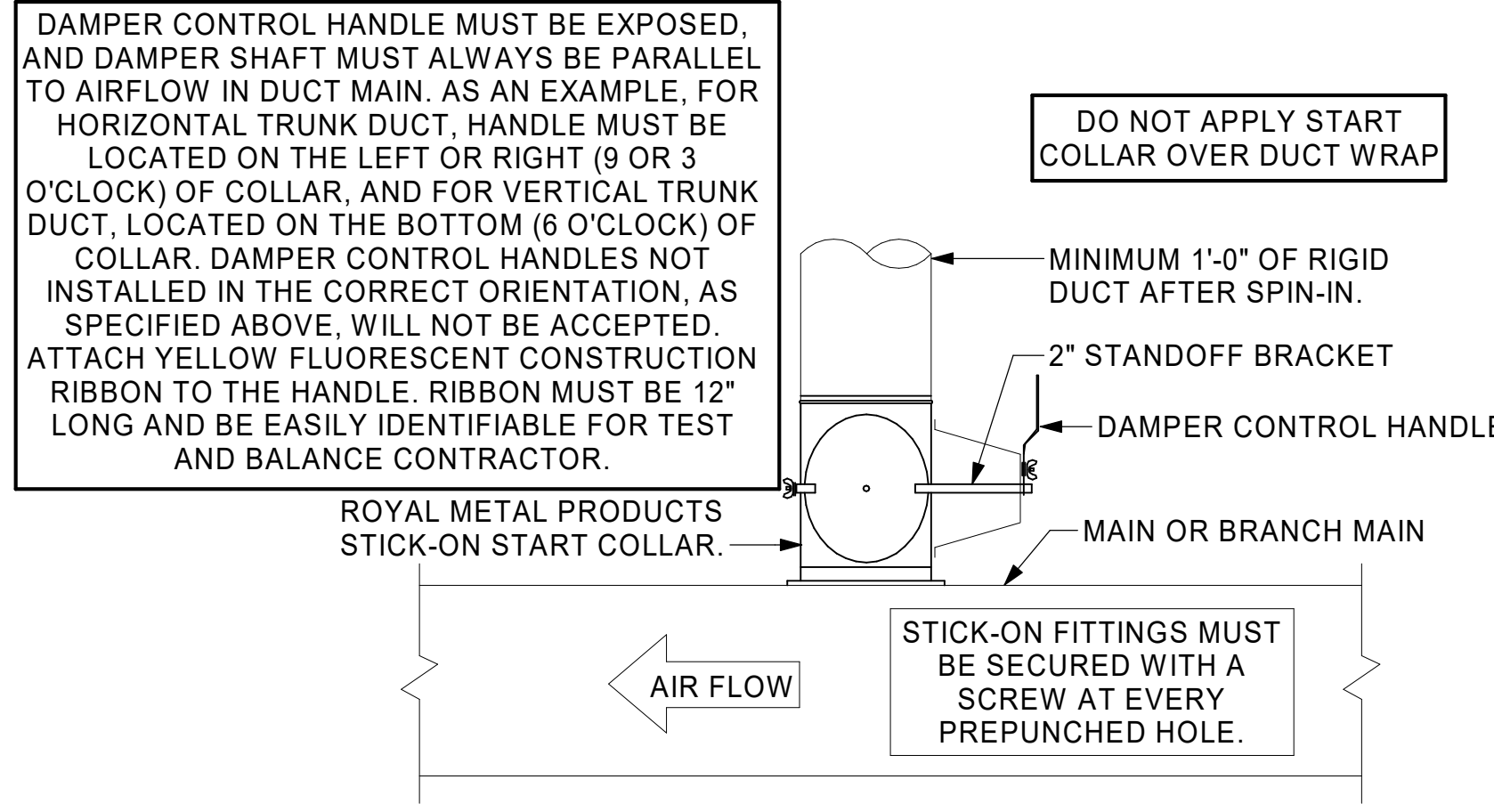
SHEET NUMBER

M-201



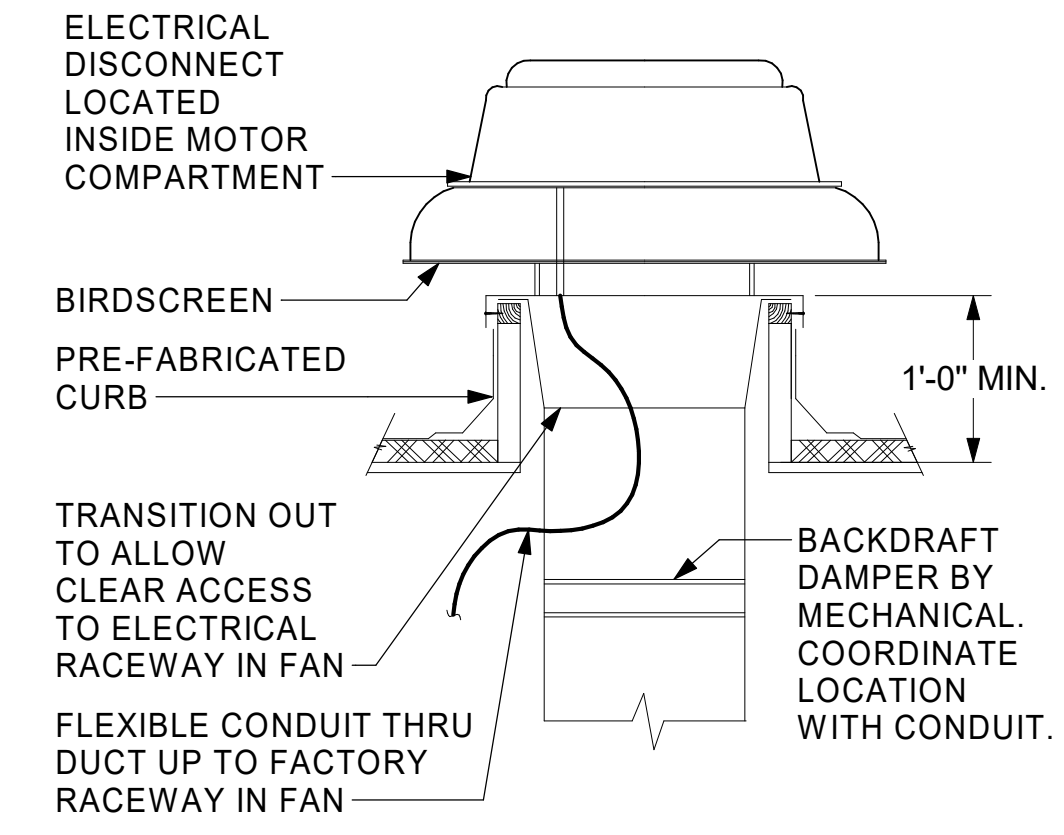
1 SAG/RAG/GRILLE TAKE-OFF - LARGE
NOT TO SCALE

CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARROW COMPANY FOR THE ROYAL METAL PRODUCTS START COLLARS FOR BOTH WITH AND WITHOUT A MANUAL BALANCING DAMPER. THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE ROYAL METAL PRODUCTS START COLLARS DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. ROYAL METAL PRODUCTS START COLLARS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.



2 START COLLAR - LARGE
NOT TO SCALE

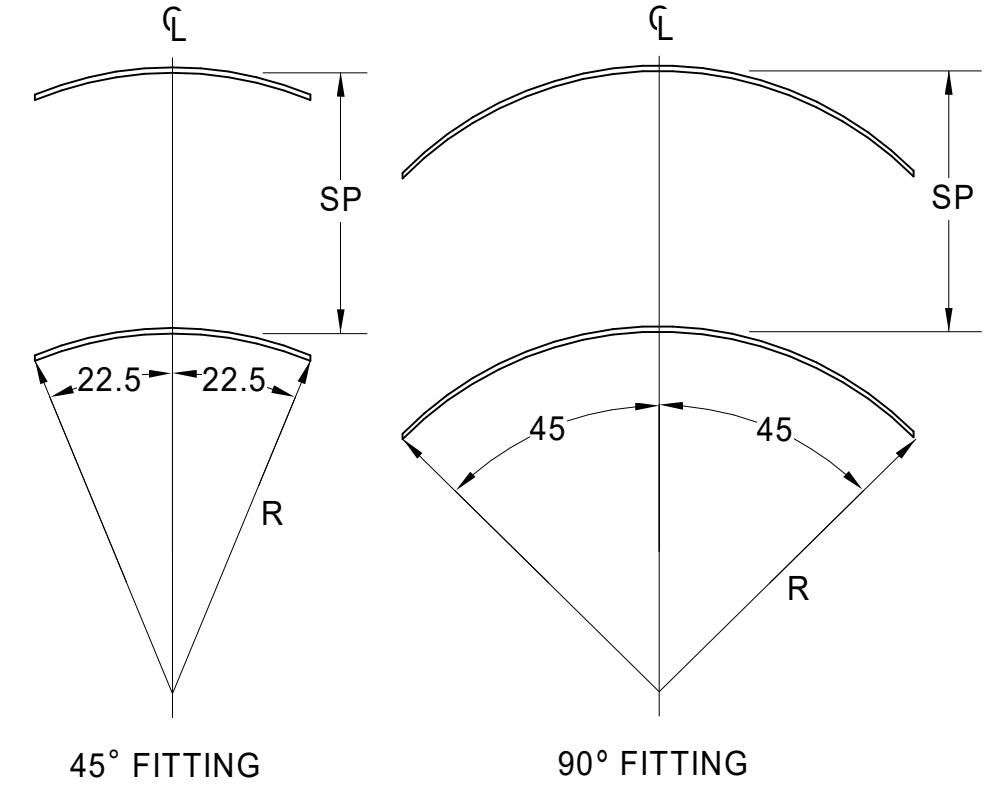
SECURE FAN TO CURB WITH SHEET METAL SCREWS (#10 x 1-1/2") 6" O.C. ALL AROUND



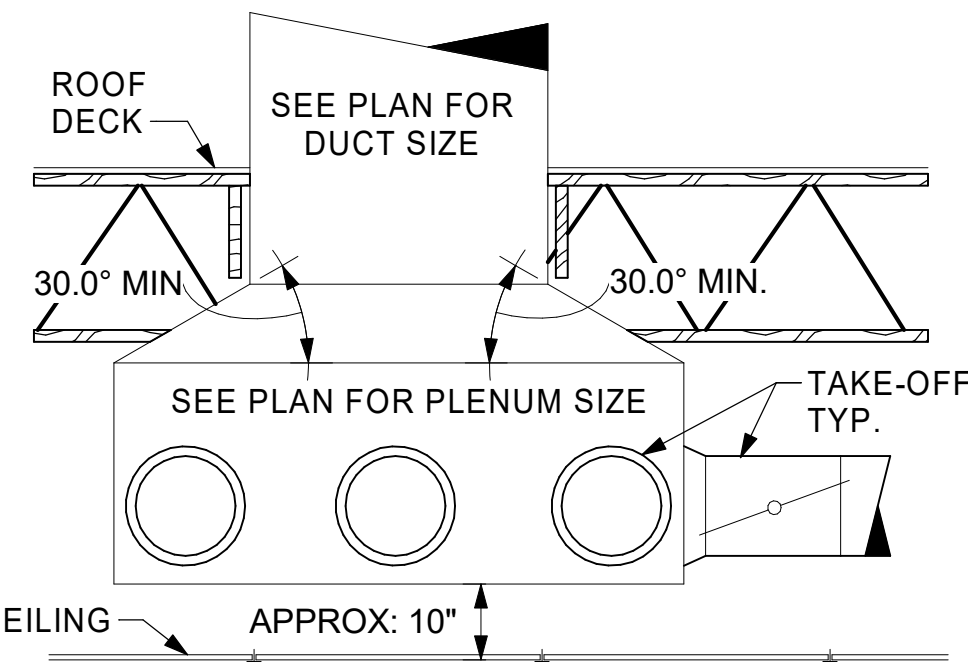
3 RESTROOM EXHAUST FAN
NOT TO SCALE

TURNING VANE SCHEDULE		
R	SP	GA
2"	1.5"	24

1. NO TRAILING EDGE.
2. SINGLE THICKNESS CONSTRUCTION.



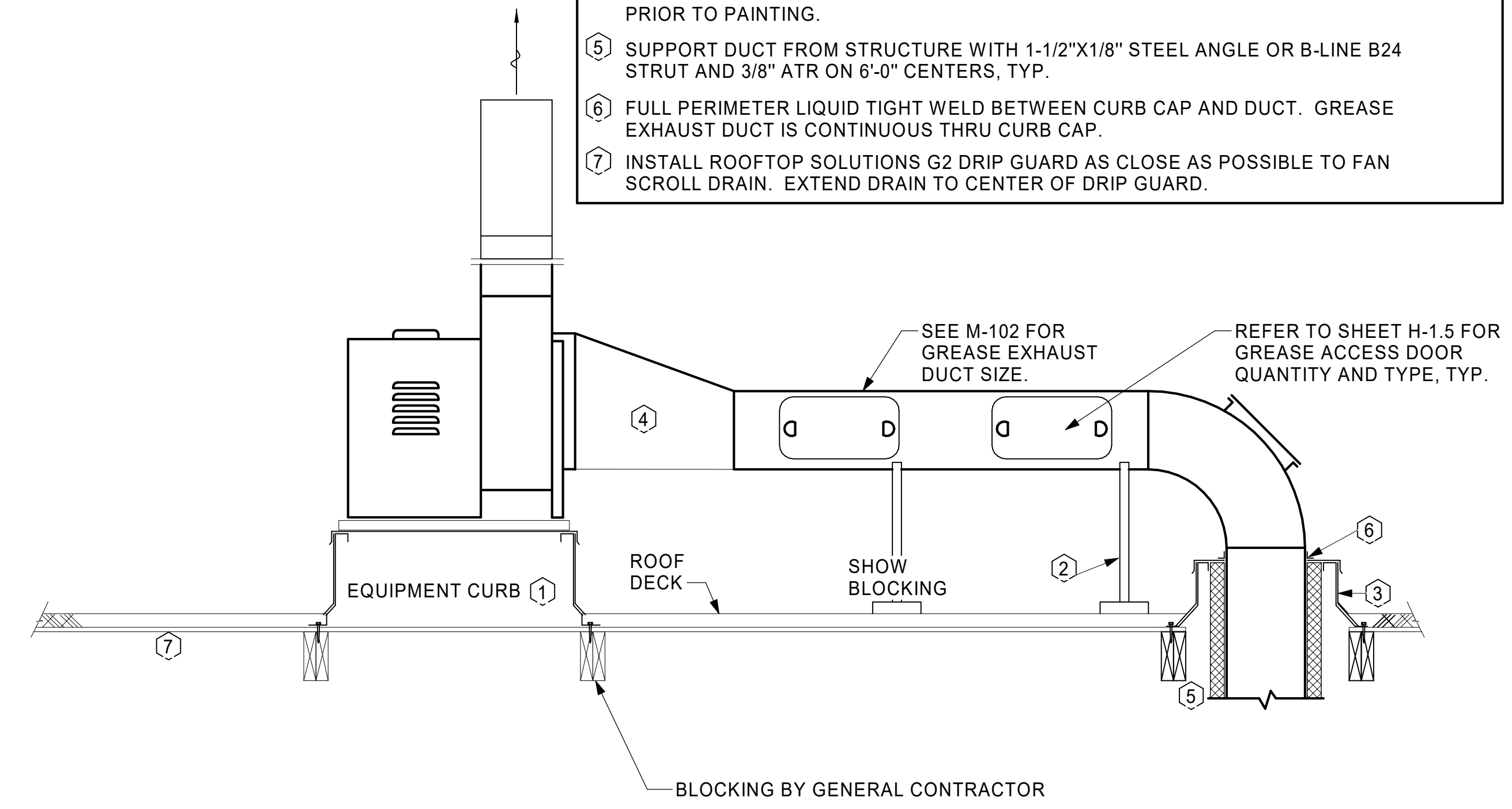
4 TURNING VANES
NOT TO SCALE



5 RETURN DROP GEOMETRY
NOT TO SCALE

KEYED NOTES:

- 22" EQUIPMENT CURB FURNISHED BY HALTON.
- DUCT SUPPORT SHALL BE PROVIDED EVERY 8' AND WITHIN 12" OF ANY FITTING OR WELD SEAM. SUPPORTS SHALL BE SECURELY ATTACHED TO THE STRUCTURE AND DESIGNED TO CARRY GRAVITY, WIND, AND SEISMIC LOADS PER CODE.
- 12" HIGH INSULATED CURB FURNISHED BY HALTON. MECHANICAL CONTRACTOR TO PROVIDE MINIMUM 18 GA STAINLESS STEEL CURB CAP AND FLASHING.
- ALL DUCTWORK AND UNFINISHED METAL ON ROOF EXCEPT STAINLESS SHALL BE PREPARED WITH TWO COATS OF SHERWIN WILLIAMS B66-200 SERIES DTM WHITE ACRYLIC SEMI-GLOSS INDUSTRIAL MAINTENANCE COATING. DEGREASE AND PRIME BARE METAL SURFACE WITH ONE COAT OF SHERWIN WILLIAMS DTM ACRYLIC PRIMER PRIOR TO PAINTING.
- SUPPORT DUCT FROM STRUCTURE WITH 1-1/2"x1/8" STEEL ANGLE OR B-LINE B24 STRUT AND 3/8" ATR ON 6'-0" CENTERS, TYP.
- FULL PERIMETER LIQUID TIGHT WELD BETWEEN CURB CAP AND DUCT. GREASE EXHAUST DUCT IS CONTINUOUS THRU CURB CAP.
- INSTALL ROOFTOP SOLUTIONS G2 DRIP GUARD AS CLOSE AS POSSIBLE TO FAN SCROLL DRAIN. EXTEND DRAIN TO CENTER OF DRIP GUARD.



6 KITCHEN HOOD EXHAUST FAN
NOT TO SCALE



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NEW RESTAURANT

2381 W STATE ST
ALLIANCE, OH 44601

FSR#05811

BUILDING TYPE / SIZE: SSAM LSR BP

RELEASE: 24.02

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CONSULTANT PROJECT # 16-24-60004

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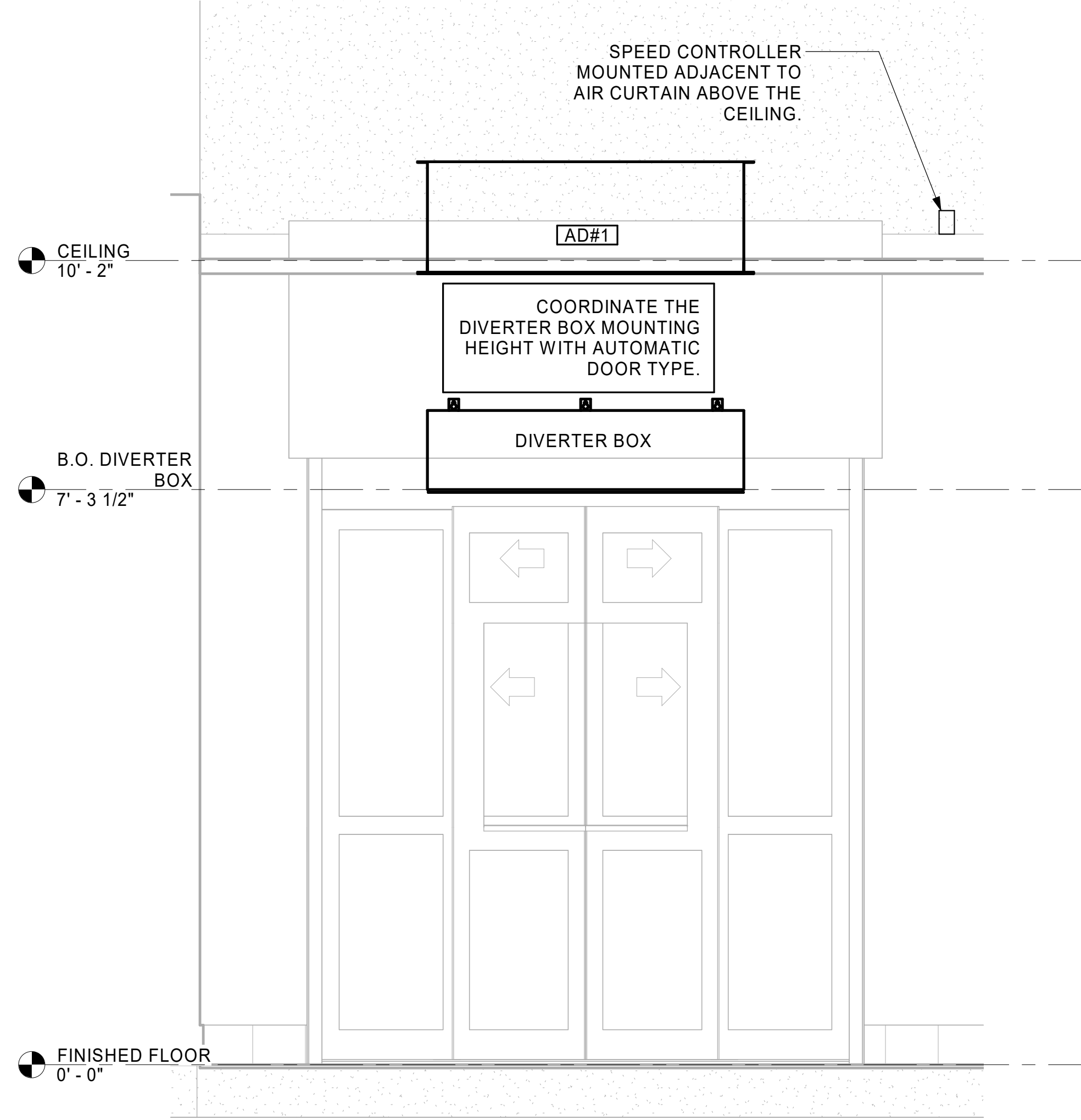
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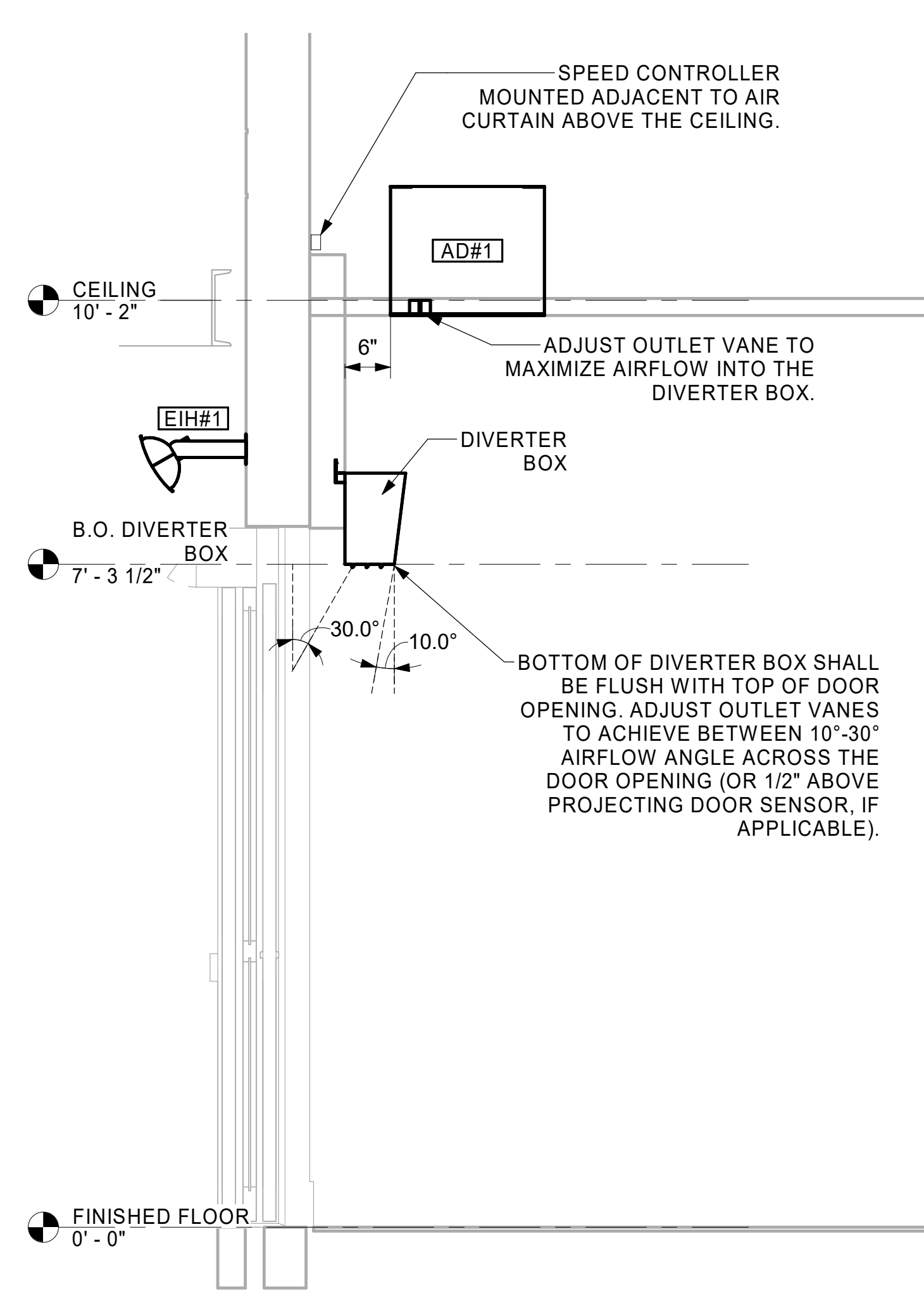
SHEET DETAILS

SHEET NUMBER

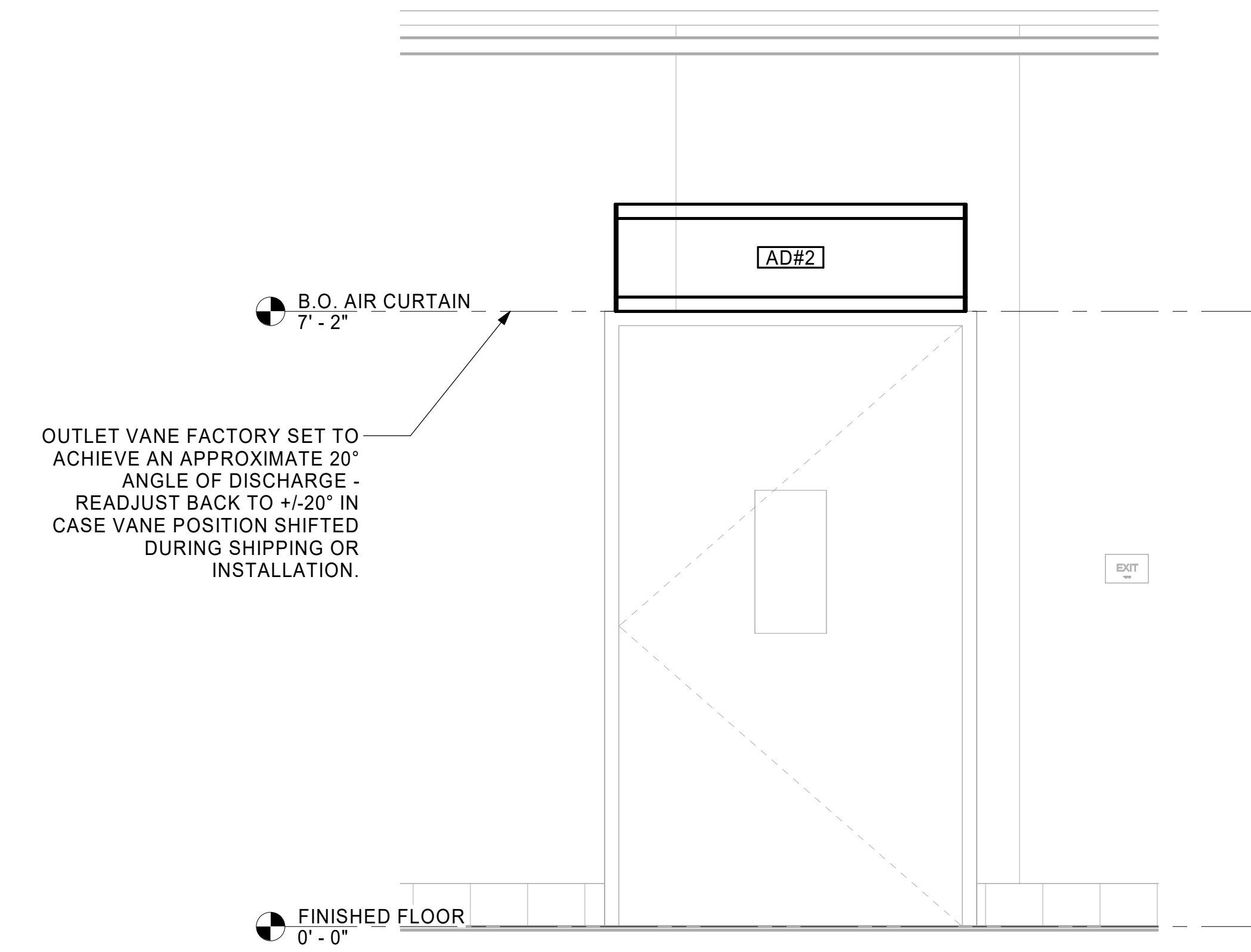
M-501



1 AD#1 FRONT VIEW
3/4" = 1'-0"



2 AD#1 SIDE VIEW
3/4" = 1'-0"



3 AD#2 FRONT VIEW
3/4" = 1'-0"



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SHEET

DETAILS

SHEET NUMBER

M-502

ROOFTOP UNIT SCHEDULE - LENNOX

MARK	TOTAL COOLING MBH	SENSIBLE COOLING MBH	HEATING INPUT MBH	HEATING OUTPUT MBH	SUPPLY CFM	OA CFM	HP	ESP (in-wg)	EER	IEER	VOLTAGE (V)	PHASE	MCA (A)	MOCP (A)	MODEL	MANUFACTURER	REMARKS
AC#1	285.6	193.90	480	389	8,125	1,550	7.5	0.8	10.3	14.5	208	3	135	150	LGT300S4M	LENNOX	1,3,4,5,6,7,8,9,10,11,12,13,14,15,16
AC#2	61.3	48.20	150	121	1,750	350	1.5	0.8	12.8	17.1	208	3	25	35	LGT060H4E	LENNOX	2,3,4,5,6,7,8,9,10,11,12,13,14,15
AC#3	211.9	135.20	480	389	5,250	1,250	5	0.8	12	15	208	3	72	80	LGT180H4M	LENNOX	2,3,4,5,6,7,8,9,10,11,12,13,14,15
AC#4	61.3	48.20	150	121	1,750	350	1.5	0.8	12.8	17.1	208	3	25	35	LGT060H4E	LENNOX	2,3,4,5,6,7,8,9,10,11,12,13,14,15

NOTES

- MECHANICAL CONTRACTOR TO VERIFY LENNOX SUBMITTAL WITH CONSTRUCTION DOCUMENTS. NATIONAL ACCOUNT - NO SUBSTITUTIONS PERMITTED - SEE DRAWING G-004.

REMARKS

- DIFFERENTIAL ENTHALPY ECONOMIZER WITH POWER EXHAUST.
- DIFFERENTIAL ENTHALPY ECONOMIZER WITH BAROMETRIC EXHAUST.
- 14" HIGH ROOF CURB.
- SEE DETAIL 2/M-701L FOR SETTING OF CONTROL PARAMETERS BY MC.
- FACTORY INSTALLED 115V GFI SERVICE OUTLET. SEPERATE 115V CIRCUIT PROVIDED BY ELECTRICAL CONTRACTOR.
- FACTORY INSTALLED RETURN AIR SMOKE DETECTOR.
- FACTORY INSTALLED NON-FUSED DISCONNECT.
- 2" MERV 8 THROW AWAY FILTERS.
- HINGED PANELS FOR ACCESS TO FILTER(S), FAN BLOWER & MOTOR, COMPRESSOR(S) ACCESS AND CONTROLS.
- FACTORY COIL HAIL GUARD, FIELD INSTALLED.
- FRESH AIR TEMPERING KIT.
- HOT GAS DEHUMIDIFICATION OPTION WITH WALL MOUNTED HUMIDITY SENSOR.
- FACTORY CONFIGURED PHASE LOSS PROTECTION.
- FACTORY INSTALLED CONDENSATE PAN DRAIN OVERFLOW SWITCH.
- FACTORY STAINLESS STEEL HEAT EXCHANGER.
- 100K SCCR RATING.

FAN SCHEDULE

MARK	FAN CFM	ESP (in-wg)	MOTOR RPM	HP	AREA SERVED	VOLTAGE (V)	PHASE	FLA (A)	MOCP (A)	MODEL	MANUFACTURER	REMARKS
CF#1	1,900	0.01	1,625	0.1	OUTDOOR CANOPY	120	1	1.1	20	U-18-TE-HD	TPI	20,21,22
EF#1	1,418	0.75	1,340	0.75	HOOD#1	120	1	0	25	KEFB-14-CFA	HALTON	1,2,3,4,5,6,7,8,9,10,11
EF#2	1,091	0.95	2,000	0.75	HOOD#2 & HOOD#3	120	1	0	25	KEFB-11-CFA	HALTON	1,2,3,4,5,6,7,8,9,10,11
EF#3	300	0.375	1,550	0.125	RESTROOMS	120	1	2.2	20	XRED-095-VG	ACCUREX	1,3,11,12,13,14,15,16
TF#1	450	0.3	1,144	0.127	TECH CLOSET	120	1	2.5	0	SP-A510-VG	GREENHECK	1,17,18,19

NOTES

- GREASE EXHAUST FAN RPM BASED ON 80 DEGREE F AIR AT 1000 FEET ABOVE SEA LEVEL.

REMARKS

- FANS SUPPLIED BY HALTON.
- U.L. 705 LISTED AND LABELED FOR RESTUARANT APPLICATIONS.
- FACTORY INSTALLED PREWIRED DISCONNECT SWITCH.
- 19" HIGH ROOF CURB.
- INSTALL ROOFTOP SOLUTIONS G2 DRIP GUARD. MECHANICAL CONTRACTOR TO CONTACT ROOFTOP SOLUTIONS AT 800-913-7034.
- FACTORY WEATHER HOUSING W/ HINGED ACCESS DOOR.
- FACTORY DRAIN CONNECTION.
- FACTORY BOLTED ACCESS DOOR ON SCROLL.
- FACTORY INSTALLED BELT DRIVE WITH ADJUSTABLE MOTOR SHEAVE, SPARE BELT, AND BELT TENSIONER.
- FACTORY INSTALLED OUTLET WITH QUICK RELEASE, HINGED ACCESS, AND GRAVITY BACKDRAFT DAMPER.
- INTEGRAL THERMAL OVERLOAD.
- BIRDSCREEN.
- BACKDRAFT DAMPER IN DUCT BY MECHANICAL CONTRACTOR AS SHOWN ON 3/M-501.
- STARTER BY ELECTRICAL CONTRACTOR. INTERLOCK WITH LIGHTS BY ELECTRICAL CONTRACTOR.
- 12" HIGH CURB.
- FACTORY INSTALLED AND WIRED SPEED CONTROLLER.
- PROVIDE NEMA 1 PREWIRED DISCONNECT.
- INTEGRAL POTENTIOMETER ON FAN MOTOR. SET TO FULL SPEED.
- PROVIDE THERMOSTAT / TEMPERATURE CONTROLLER. SET TO 76°F.
- INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE WITH ON/OFF SWITCH.
- FAN SUPPLIED BY TOM BARROW OR POWERS OF ARKANSAS FOR THE SOUTHWEST REGION.

HOOD SCHEDULE

MARK	EXHAUST CFM	SP @ TAB PORT (in-wg)	CAPTURE JET CFM & S.P.	TYPE	COLLAR SIZE	WIDTH	DEPTH	HEIGHT	MANUFACTURER	MODEL	REMARKS
HOOD#1	1,418	0.12	95 @ 0.30"	BACKSHELF	14"X8"	126"	37"	38"	HALTON	KVL-2-IC	1,2,3,4,5,7,8,9,17,21
HOOD#2	701	0.3	30 @ 0.29"	BACKSHELF	8"X8"	42"	34"	38"	HALTON	KVL-C-IC	1,2,3,6,7,8,9,13,15,17,18
HOOD#3	390	0.37	18 @ 0.30"	BACKSHELF	8"X8"	24"	33 1/2"	38"	HALTON	KVL-D-IC	1,2,3,4,6,7,8,9,13,17,21

NOTES

- DIMENSIONS OF HOODS INCLUDE BACK AND SIDE SPACERS (HEIGHT DOES NOT INCLUDE CLOSURE PANELS). NATIONAL ACCOUNTS - NO SUBSTITUTIONS PERMITTED - SEE DRAWING G-004.

REMARKS

- STAINLESS STEEL CONSTRUCTION.
- PROVIDE FULL HEIGHT SS CLOSURE PANEL WITH ACCESS PANEL IN FRONT LARGE ENOUGH TO REMOVE CAPTURE JET FAN, FIRE SUPPRESSION COMPONENTS, AND/OR TO ACCESS KBD EQUALIZER JACK SCREW.
- PRE-PIPED FIRE SUPPRESSION SYSTEM.
- FIRE SUPPRESSION CABINET AND COMPONENTS ABOVE HOOD.
- 3" ZERO CLEARANCE TO COMBUSTIBLE BACK SPACER.
- 3" ZERO CLEARANCE TO COMBUSTIBLE CUSTOM BACK SPACER TO ACCOMMODATE PIN AND SLEEVE ELECTRICAL BOX.
- EQUIPMENT I.D. LABELS LOCATED ON FRONT LEADING EDGE OF HOOD.
- FACTORY WALL MOUNTING ANGLE AT TOP OF HOOD.
- INTEGRAL CAPTURE JET FAN.
- NOT USED.
- NOT USED.
- NOT USED.
- PIN AND SLEEVE ELECTRICAL BOX (DOUBLE CONNECTION). SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- NOT USED.
- 3" ZERO CLEARANCE TO COMBUSTIBLE RIGHT SIDE SPACER.
- NOT USED.
- NOTCHED RIGHT END SIDE PANEL.
- 3"X3" HORIZONTAL AND VERTICAL TRIM ANGLE FOR RIGHT SIDE OF HOOD TO FINISH OFF GAP AT WALL.
- NOT USED.
- NOT USED.
- HALTON KBD EQUALIZER.
- NOT USED.
- NOT USED.

AIR DEVICE SCHEDULE

MARK	DESCRIPTION	LOCATION	NECK SIZE	FACE SIZE	FRAME TYPE	REMARKS
A	PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS.	DINING / KITCHEN	VARIES	24"x24"	LAY-IN	1, 7
B	PRICE MODEL VPD	OFFICE/PLAY	VARIES	24"x24"	LAY-IN	1, 7, 8
C	PRICE MODEL SMCD STEEL SUPPLY AIR DIFFUSER FIELD ADJUSTABLE AIR PATTERN CONTROLLERS.	ENTRY	14"x14"	16"x16"	BEVELLED	1, 3, 5, 6
D	PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS.	DINING	VARIES	16"x16"	SURFACE	1, 3, 5, 6
F	PRICE MODEL 80 EGGCRATE RETURN AIR GRILLE WITH REMOVABLE WHITE CORE, FACTORY FLAT BLACK BACKPAN AND ROUND NECK.	DINING / OFFICE / KITCHEN	VARIES	24"x24"	LAY-IN	1, 7
J	PRICE MODEL SMCD STEEL SUPPLY AIR DIFFUSER FIELD ADJUSTABLE AIR PATTERN CONTROLLERS.	RESTROOMS	14"x14"	16"x16"	BEVELLED	1, 2, 3, 5, 6
K	PRICE MODEL APDDR ALUMINUM PERFORATED FACE RETURN AIR GRILLE.	RESTROOMS / ENTRY	14"x14"	16"x16"	SURFACE	1, 4, 5, 6

NOTES

- NATIONAL ACCOUNT - NO SUBSTITUTIONS PERMITTED - SEE DRAWING G-004

REMARKS

- STANDARD OFF WHITE FINISH.
- PROVIDE MODEL VCS3 NECK DAMPER.
- SEE DRAWING M-101 FOR THROW.
- PROVIDE MODEL VCR7 NECK DAMPER ON GRILLES IN RESTROOMS SERVING EXHAUST FAN.
- PROVIDE BACKPAN. MC TO SEAL JOINTS WITH MASTIC AND INSULATE EXTERNALLY.
- FIELD INSULATE BACKPAN AS SHOWN ON DETAIL 3/M-501.
- FACTORY INSULATED R-8 BACKPAN.
- PROVIDE RELIEF COLLAR ACCESSORY FOR VAV DIFFUSER.

HEATER SCHEDULE

MARK	HEATING INPUT		FRAME LENGTH	FRAME WIDTH	FRAME DEPTH	MOUNTING TYPE	VOLTAGE (V)	PHASE	FLA (A)	MOCP (A)	MODEL	MANUFACTURER	REMARKS
	ELECTRIC (KW)	GAS (MBH)											
EIH#1	6.00	0.0	56"	8.5"	3.5"	WALL BRACKET	208	1	28.9	40	BH0420035	BROMIC	1, 2, 3, 4
IRH	0.00	50.0	48"	13.37"	9.5"	BRACKET	120	1	0.4	20	WB50	SPACE-RAY	1, 5, 6, 7

NOTES

- NATIONAL ACCOUNT NO SUBSTITUTIONS PERMITTED - SEE DRAWING G-004.
- CONFIRM HEATER QUANTITY WITH CANOPY SHOP DRAWINGS.

REMARKS

- STAINLESS STEEL LENS WITH BLACK EMISSIVE COATING.
- PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND.
- PROVIDE BLACK HEATER WITH HIGH TEMPERATURE COATING, AND MANUFACTURER MOUNTING BRACKETS.
- PROVIDE BROMIC WALL MOUNTED ELECTRIC HEATER MODEL: BH0420033 FOR 220-240V SITES.
- STEEL BURNER WITH CERAMIC BURNER TILES.
- PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. MOUNT TO CANOPY DECK, FACING FORWARD, 12" Laterally FROM THE LONG SIDE OF THE HEATER.
- STAINLESS STEEL HEAT SHIELDS.

AIR DOOR SCHEDULE

MARK	CFM	VELOCITY (FPM)	HEATING (KW)	MOTOR HP	MCA (A)	MOCP (A)	VOLTAGE (V)	PHASE	AREA SERVED	MODEL	MANUFACTURER	REMARKS
AD#1	1,543	2,338	10	0.75	31.4	40	208	3	DRIVE THRU	CHA-1-48E	POWERED AIRE	1,2,3,5
AD#2	3,867	4,218	0	0.75	3.6	20	208	1	REAR DOOR	RBT-1-48	POWERED AIRE	4

NOTES

- NATIONAL ACCOUNT - NO SUBSTITUTIONS PERMITTED - SEE DRAWING G-004

REMARKS

- FACTORY PROVIDED, WIRED, AND UNIT MOUNTED SPEED CONTROLLER ABOVE CEILING.
- FACTORY WIRED DISCONNECT.
- FACTORY PROVIDED, FIELD INSTALLED BY MC. REMOTE WALL SWITCHES FOR HEATING ON/OFF AND FAN ON/AUTO SWITCH. SEE DETAILS ON M502.
- FACTORY PROVIDED MAGNETIC DOOR CONTACT WITH FACTORY INSTALLED LOW VOLTAGE CONTROLS LOCATED IN AIR DOOR CABINET.
- PROVIDE WITH A DIVERTER BOX. PROVIDE WITH MOUNTING BRACKETS PER MANUFACTURER'S RECOMMENDATIONS.



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CHICK-FIL-A
NEW RESTAURANT

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ALLIANCE, OH 44601

FSR#05811

BUILDING TYPE / SIZE: SSAM LSR BP
 RELEASE: 24.02

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SHEET
HVAC EQUIPMENT SCHEDULES - LENNOX

SHEET NUMBER
M-601L

VENTILATION SCHEDULE

General			Ventilation													Exhaust					Served by	
Room #	Room Name	Area Az ft2	People			Area						Primary Zone Air Fraction Zp	Primary Outdoor Air Fraction Zp	Actual Outdoor Airflow CFM	Area		Toilet			Supply	Exhaust	
			Occupant Density People/1,000 ft2	Occupants Pz	Outdoor Airflow Rate CFM/Person Rp	Outdoor Airflow CFM Pz x Rp	Outdoor Airflow Rate CFM/ft2 Ra	Outdoor Airflow CFM Az x Ra	Breathing Zone Outdoor Airflow CFM Vbz	Zone Air Distribution Effectiveness Ez	Zone Outdoor Airflow CFM Voz				Primary Zone Airflow CFM Vpz	Required Exhaust Rate CFM/ft2	Total Required Exhaust CFM	Exhaust Control/Operation	Fixture Exhaust Rate CFM/Fixture			Required Fixture Exhaust CFM
1	Kitchen	1,080	20	22	7.5	165	0.12	130	295	0.8	369	8,125	0.05	1,550	1	756	-	-	-	2,509	AC#1	EF-1 / EF-2
Total Area 1,080			Total Vbz 295						Total Supply Airflow 8,125			1,550	Actual Outdoor Airflow									
			Diversity (D) 0.91			Maximum Zp 0.05																
			Uncorrected Outdoor Air Intake (Vou) 283			System Ventilation Efficiency (Ev) 1.00																
			Required Outdoor Air Intake (CFM) 282																			

VENTILATION SCHEDULE

General			Ventilation													Exhaust					Served by	
Room #	Room Name	Area Az ft2	People			Area						Primary Zone Air Fraction Zp	Primary Outdoor Air Fraction Zp	Actual Outdoor Airflow CFM	Area		Toilet			Supply	Exhaust	
			Occupant Density People/1,000 ft2	Occupants Pz	Outdoor Airflow Rate CFM/Person Rp	Outdoor Airflow CFM Pz x Rp	Outdoor Airflow Rate CFM/ft2 Ra	Outdoor Airflow CFM Az x Ra	Breathing Zone Outdoor Airflow CFM Vbz	Zone Air Distribution Effectiveness Ez	Zone Outdoor Airflow CFM Voz				Primary Zone Airflow CFM Vpz	Required Exhaust Rate CFM/ft2	Total Required Exhaust CFM	Exhaust Control/Operation	Fixture Exhaust Rate CFM/Fixture			Required Fixture Exhaust CFM
1	Drive-thru	243	15	4	7.5	30	0.18	44	74	0.8	93	1,750	0.05	350	-	-	-	-	-	-	AC#2	-
Total Area 243			Total Vbz 74						Total Supply Airflow 1,750			350	Actual Outdoor Airflow									
			Diversity (D) 1.00			Maximum Zp 0.05																
			Uncorrected Outdoor Air Intake (Vou) 74			System Ventilation Efficiency (Ev) 1.00																
			Required Outdoor Air Intake (CFM) 73																			

VENTILATION SCHEDULE

General			Ventilation													Exhaust					Served by	
Room #	Room Name	Area Az ft2	People			Area						Primary Zone Air Fraction Zp	Primary Outdoor Air Fraction Zp	Actual Outdoor Airflow CFM	Area		Toilet			Supply	Exhaust	
			Occupant Density People/1,000 ft2	Occupants Pz	Outdoor Airflow Rate CFM/Person Rp	Outdoor Airflow CFM Pz x Rp	Outdoor Airflow Rate CFM/ft2 Ra	Outdoor Airflow CFM Az x Ra	Breathing Zone Outdoor Airflow CFM Vbz	Zone Air Distribution Effectiveness Ez	Zone Outdoor Airflow CFM Voz				Primary Zone Airflow CFM Vpz	Required Exhaust Rate CFM/ft2	Total Required Exhaust CFM	Exhaust Control/Operation	Fixture Exhaust Rate CFM/Fixture			Required Fixture Exhaust CFM
1	Dining	1,214	70	85	7.5	637.5	0.18	219	856	0.8	1071	3,350	0.319	798	-	-	-	-	-	-	AC#3	-
2	Serving	190	15	3	7.5	23	0.18	34	57	0.8	71	800	0.09	190	-	-	-	-	-	-	AC#3	-
3	Men's RR	132	-	-	-	-	-	-	-	0.8	-	100	-	24	-	-	Continuous	50	100	150	AC#3	EF-3
4	Women's RR	182	-	-	-	-	-	-	-	0.8	-	125	-	30	-	-	Continuous	50	100	150	AC#3	EF-3
5	Corridor	103	-	-	-	-	0.06	6	6	0.8	8	100	0.08	24	-	-	-	-	-	-	AC#3	-
6	Play Area	218	-	-	-	-	0.3	65	65	0.8	82	400	0.20	95	-	-	-	-	-	-	AC#3	-
7	Entry Vestibule	65	-	-	-	-	0.06	4	4	0.8	5	375	0.01	89	-	-	-	-	-	-	AC#3	-
Total Area 2,104			Total Vbz 988						Total Supply Airflow 5,250			1,250	Actual Outdoor Airflow									
			Diversity (D) 0.93			Maximum Zp 0.319																
			Uncorrected Outdoor Air Intake (Vou) 966			System Ventilation Efficiency (Ev) 0.80																
			Required Outdoor Air Intake (CFM) 1,207																			

VENTILATION SCHEDULE

General			Ventilation													Exhaust					Served by	
Room #	Room Name	Area Az ft2	People			Area						Primary Zone Air Fraction Zp	Primary Outdoor Air Fraction Zp	Actual Outdoor Airflow CFM	Area		Toilet			Supply	Exhaust	
			Occupant Density People/1,000 ft2	Occupants Pz	Outdoor Airflow Rate CFM/Person Rp	Outdoor Airflow CFM Pz x Rp	Outdoor Airflow Rate CFM/ft2 Ra	Outdoor Airflow CFM Az x Ra	Breathing Zone Outdoor Airflow CFM Vbz	Zone Air Distribution Effectiveness Ez	Zone Outdoor Airflow CFM Voz				Primary Zone Airflow CFM Vpz	Required Exhaust Rate CFM/ft2	Total Required Exhaust CFM	Exhaust Control/Operation	Fixture Exhaust Rate CFM/Fixture			Required Fixture Exhaust CFM
1	Team Member Room	96	50	5	5	25	0.06	6	31	0.8	39	410	0.09	82	-	-	-	-	-	-	AC#4	-
2	Electrical Room	32	-	-	-	-	0.12	4	4	0.8	5	570	0.01	114	-	-	-	-	-	-	AC#4	-
3	Office	57	5	1	5	5	0.06	3	8	0.8	11	235	0.04	47	-	-	-	-	-	-	AC#4	-
4	Mecanical Room	41	-	-	-	-	0.12	5	5	0.8	7	315	0.02	63	-	-	-	-	-	-	AC#4	-
5	Dry Storage	132	-	-	-	-	0.12	16	16	0.8	20	220	0.09	44	-	-	-	-	-	-	AC#4	-
Total Area 358			Total Vbz 64						Total Supply Airflow 1,750			350	Actual Outdoor Airflow									
			Diversity (D) 1.00			Maximum Zp 0.09																
			Uncorrected Outdoor Air Intake (Vou) 64			System Ventilation Efficiency (Ev) 1.00																
			Required Outdoor Air Intake (CFM) 63																			



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SHEET
BP-VENTILATION SCHEDULES

SHEET NUMBER

M-602

PROVIDE A PROFESSIONALLY LAMINATED COPY OF THESE DETAILS TO BE INSTALLED INSIDE THE ROOFTOP UNIT CONTROL CABINET. USE A SETON CHART FRAME STYLE #68624, TELEPHONE NUMBER 800-243-6624, FOR MOUNTING THE DETAIL. ATTACH THE FRAME TO THE INTERIOR OF THE UNIT IN PLAIN AND EASY VIEW OF THE CONTROLS SECTION. CONTACT ENGINEER OF RECORD FOR A REPRODUCIBLE COPY OF THE DETAIL.

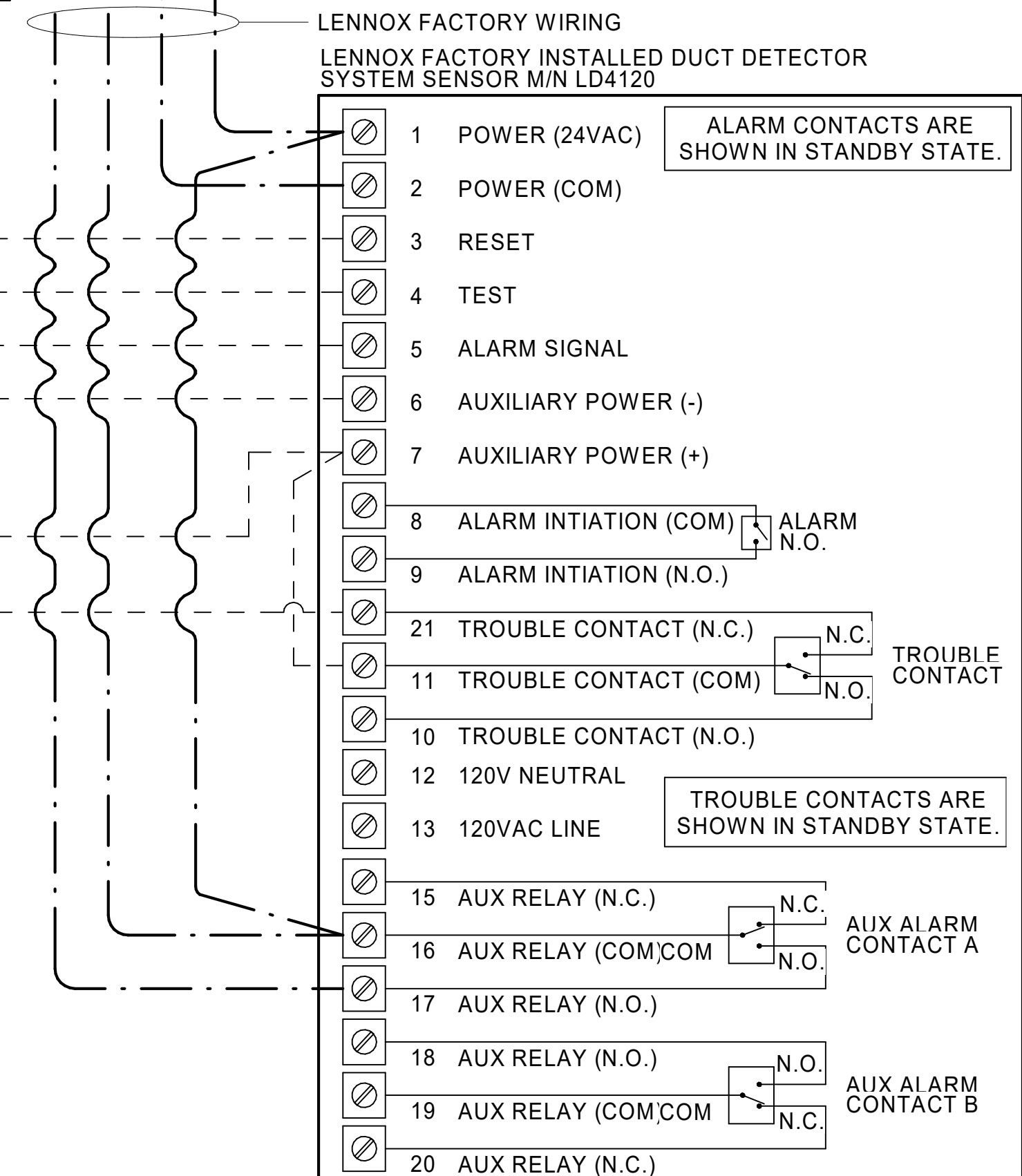
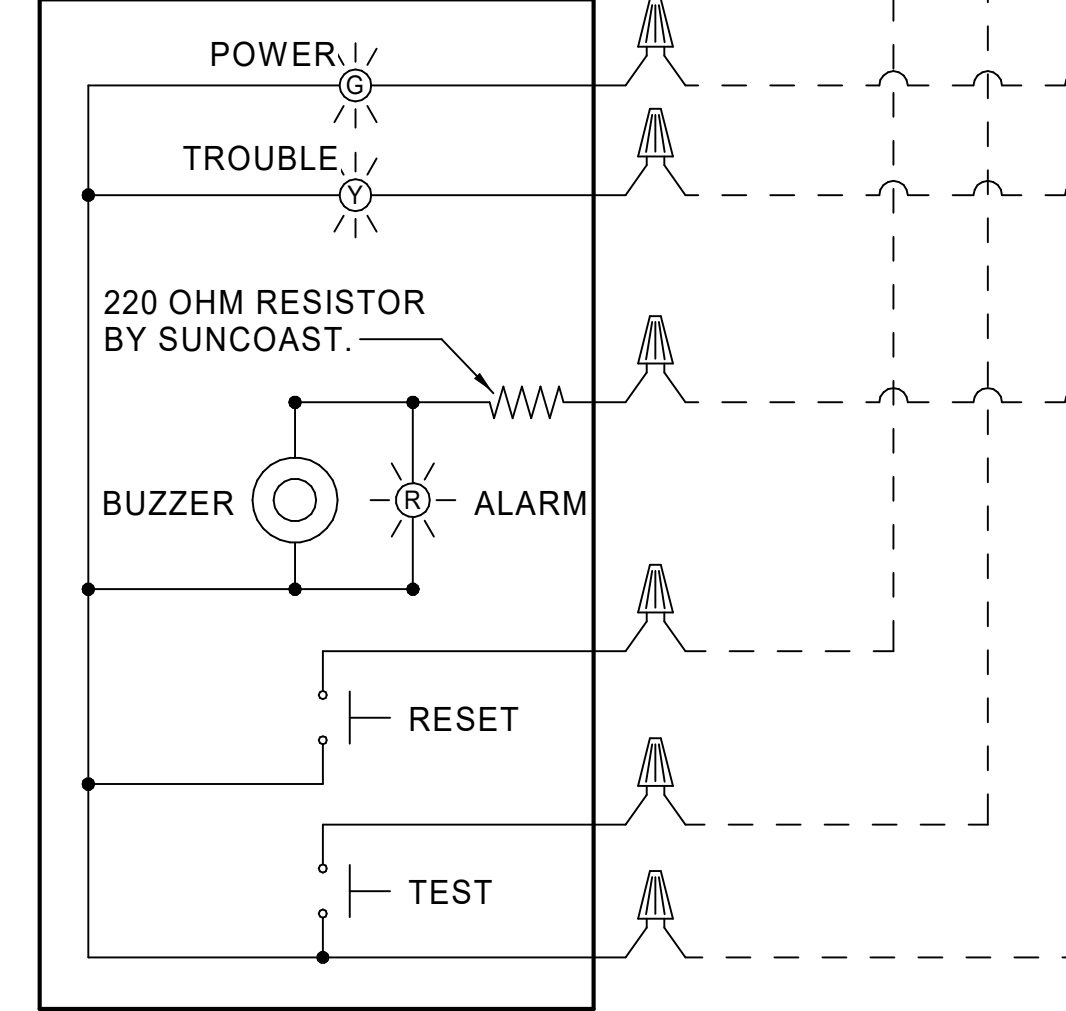
SUPPLY SIDE DETECTORS:
IF SUPPLY SIDE SMOKE DETECTORS ARE SHOWN ON DWG M-101, AND CALLED FOR ON RTU SCHEDULE, THE CONTRACTOR IS TO RELOCATE FACTORY INSTALLED SUPPLY SMOKE DETECTOR FROM BLOWER SECTION TO DUCTWORK. SEE NOTES ON DWG M-101.

FIELD INSTALLED WIRING:
WITHIN THE ROOFTOP UNIT, WIRING SHALL BE ROUTED BY WAY OF FACTORY WIRE WAYS ONLY. WIRING ROUTED OVER THE BLOWER HOUSING OR BY WAY OF OTHER ROUTES DETRIMENTAL TO THE WIRING LIFE WILL NOT BE ACCEPTED.

LEGEND
--- 18 AWG MIN WIRING BY MECH CONTRACTOR
--- FACTORY ANNUNCIATOR DETECTOR WIRING
--- FACTORY LENNOX WIRING

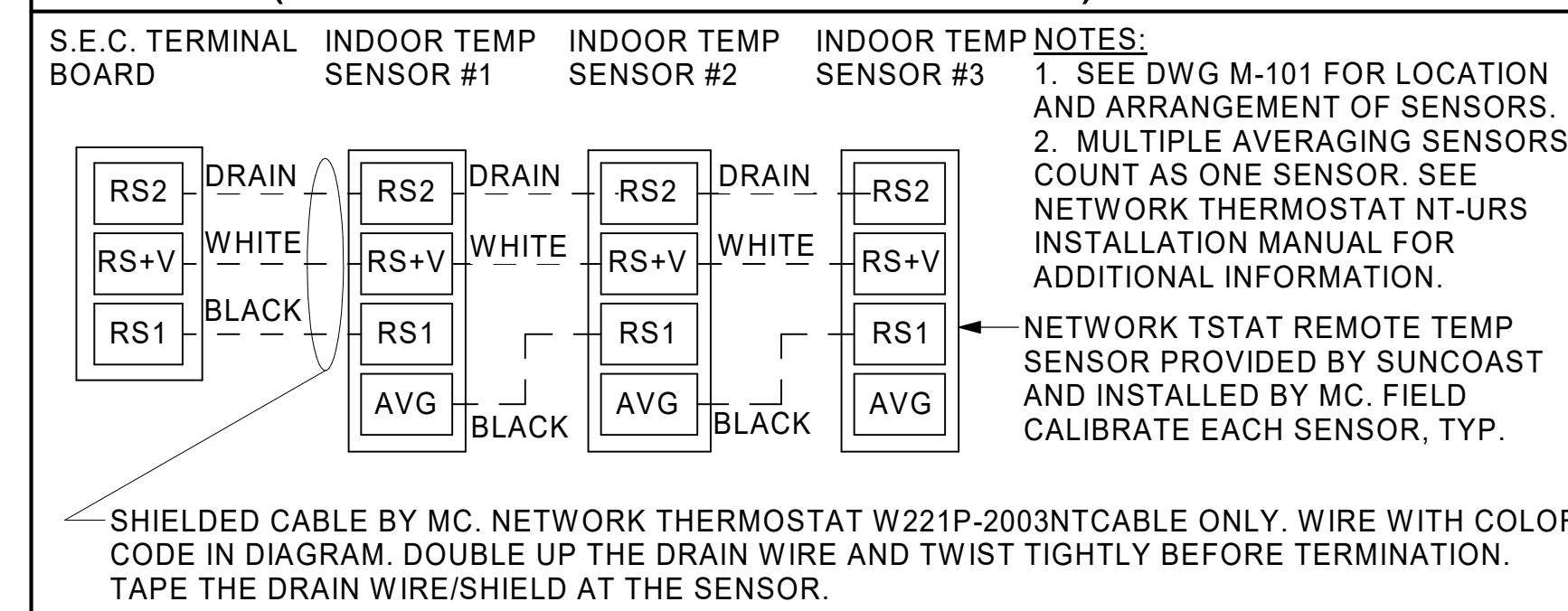
LABELING:
PROVIDE ENGRAVED LABEL WITH 1" HIGH WHITE LETTERS ON BLACK BACKGROUND IDENTIFYING UNIT SERVED.

SUNCOAST CONTROLS ANNUNCIATOR



1 SMOKE DETECTOR AND ANNUNCIATOR WIRING DIAGRAM - LENNOX
NOT TO SCALE

AVERAGING SENSORS (WHERE SHOWN ON PLANS)



- NOTES:**
- MECHANICAL CONTRACTOR SHALL MAKE PLASTIC LAMINATE OF THIS DETAIL AND INSTALL PERMANENTLY ON INSIDE DOOR OF ROOFTOP UNIT CONTROL COMPARTMENT.
 - SEE DETAILS THIS SHEET FOR SMOKE DETECTOR AND ANNUNCIATOR WIRING.
 - SET ALL THERMOSTATS FOR AUTO CHANGEOVER.
 - PROVIDE PLASTIC ENGRAVED LABEL AT ALL NEW SENSORS WITH 1/4" HIGH WHITE LETTERING ON BLACK BACKGROUND, I.E. "ACH2 HUMIDITY SENSOR" OR "ACH#2 TEMP SENSOR". PLACE LABELS ON WALL ADJACENT TO DEVICE, DO NOT APPLY DIRECTLY TO DEVICE.

- KEYED NOTES:**
- LOW VOLTAGE WIRING TO RTU TO BE ROUTED TO UNIT THRU FACTORY WIREWAY.
 - HUMIDITROL UNITS ONLY: WIRING TO HUMIDITY SENSOR TO BE MADE WITH TWO SEPARATE RUNS OF SHIELDED TWISTED PAIR. TERMINATE SHIELD WIRES AT TB-1, LEAVE OPEN AT SENSOR.
 - NETWORK TSTAT REMOTE TEMP SENSOR PROVIDED BY SUNCOAST AND INSTALLED BY MC. SENSOR IS INTENDED TO BE SURFACE MOUNTED AND DOES NOT REQUIRE A SINGLE GANG BOX OF CONDUIT. FIELD CALIBRATE EACH SENSOR.
 - CAT 5/5E CABLE BY M.C. NO SUBSTITUTIONS. REFER TO HVAC CONTROL WIRING DN 2023-035.

LEGEND

S.E.C. SUNCOAST ENVIRONMENTAL CONTROLS (SUPPLIER OF TEMP/FAN CONTROL PANEL) LOCATED IN KITCHEN

① KEY NOTE REFERENCE

MC MECHANICAL CONTRACTOR

(AC) SUNCOAST RELAY FACTORY INSTALLED AND WIRED IN CFA-500 PANEL, ENERGIZED BY PUTTING STORE SWITCH IN "STORE OCCUPIED" POSITION.

(AN) SUNCOAST RELAY FACTORY INSTALLED AND WIRED IN CFA-500 PANEL, DENERGIZED WHEN ANSUL FIRE SUPPRESSION SYSTEM IS ACTIVATED, AS NOTED.

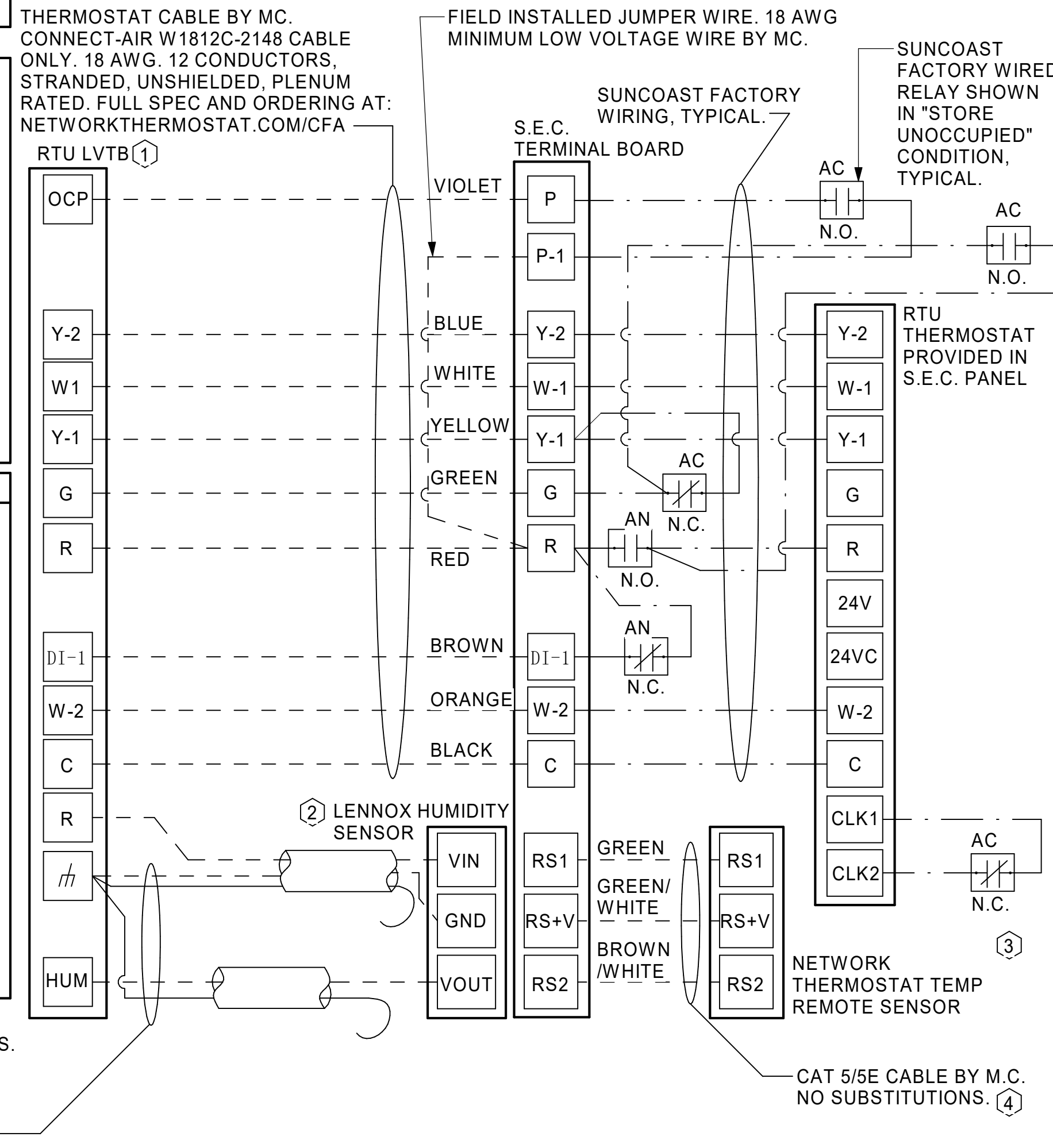
--- ALL LOW VOLTAGE CABLING BY MC. ONLY USE CABLE SPECIFIED. NO SUBSTITUTIONS.

--- LOW VOLTAGE WIRING BY S.E.C.

--- LINE VOLTAGE BY ELECTRICIAN OR S.E.C.

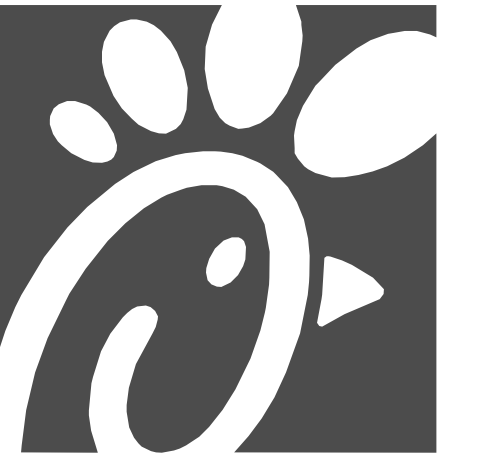
SHIELDED CABLE BY MC. 22AWG, 1-PAIR, TWISTED, SHIELDED, WITH DRAIN, PLENUM RATED. NO SUBSTITUTIONS. AFTER DRAIN WIRE TERMINATION, TAPE/INSULATE ALL EXPOSED DRAIN/SHIELD AT SENSOR. DO NOT CONNECT SHIELD/DRAIN WIRE. FULL SPEC AND ORDERING AT: NETWORKTHERMOSTAT.COM/CFA

2 ROOFTOP UNIT CONTROL WIRING - LENNOX
NOT TO SCALE



- LENNOX PRODIGY 2.0 OR CORE UNIT CONTROLLER SETTINGS:**
- FOR ALL RTU'S EXCEPT AC#1, ELIMINATE THE MORNING WARMUP/OSA DAMPER DELAY. THE MENU PATH IS: MAIN MENU > SETTINGS > RTU OPTIONS > EDIT PARAMETERS
FOR GAS HEAT UNITS (LGT):
• CHANGE PARAMETER #65 SETTING TO 1
FOR ELECTRIC HEAT UNITS (LCT):
• CHANGE PARAMETER #58 TO 1
 - ON UNIT AC#1:
• FOR GAS HEAT (LG) LEAVE AT 60-MINUTE DEFAULT
• FOR ELECTRIC HEAT (LC) CHANGE VALUE TO EQUAL 90-MINUTE
 - FOR HUMIDITROL UNITS THE MENU PATH IS: MAIN MENU > SETTINGS > RTU OPTIONS > DEHUMIDIFIER MODE > NO CONDITIONS
SELECT LOCAL SENSOR AND SAVE
• SET POINT: 60%
• DEHUMID DEADBAND: 2%
 - FOR ALL UNITS, SET BLOWER TO OPERATE AT ONE AIRFLOW FOR ALL MODES. MENU PATH IS:
• MAIN MENU > INSTALL > TEST AND BALANCE > BLOWER
• SET ALL HEATING AND COOLING CFM VALUES TO THE SAME VALUE AS SCHEDULED.
• ADJUST AIRFLOW BY MEANS OF ADJUSTABLE BLOWER MOTOR SHEAVE.

- LENNOX FRESH AIR HEATING SETUP WHEN SPECIFIED:**
- INSTALL FRESH AIR TEMPERING KIT WIRING HARNESS AS RECOMMENDED BY LENNOX.
 - LOCATE SUPPLY AIR TEMPERATURE SENSOR IN SUPPLY DUCT DOWNSTREAM OF FIRST ELBOW. SECURE WIRING TO DUCT OR STRUCTURE WITH RUBBER COATED CLAMPS. DO NOT RUN WIRING INSIDE DUCT WORK. PROTECT ALL WIRING PENETRATIONS WITH RUBBER GROMMETS.
 - FOR PRODIGY 2.0 OR CORE UNIT CONTROLLER WITHIN MAIN MENU GO TO SET-UP TO TEST AND BALANCE TO DAMPER. FOLLOW MENU PATH SET FRESH AIR HEATING ENABLE TO "YES" SET FAH SETPOINT TO 66F THIS WILL TEMPER SUPPLY AIR BELOW 66F WITH INTERMITTENT HEATING WHEN THERMOSTAT IS NOT ACTIVELY CALLING FOR HEAT.
 - CHANGE PRODIGY 2.0 OR CORE UNIT CONTROLLER PARAMETER #157. WITHIN MAIN MENU GO TO SETTINGS TO RTU OPTIONS TO EDIT PARAMETER VALUE TO 14 FOR A 14F FAH DEADBAND AND SAVE.
 - CHANGE PRODIGY 2.0 OR CORE UNIT CONTROLLER PARAMETER #158. WITHIN MAIN MENU GO TO SETTINGS TO RTU OPTIONS TO EDIT PARAMETER ADJUST VALUE TO 300 SECONDS FOR 5 MINUTE CYCLE TIME AND SAVE.



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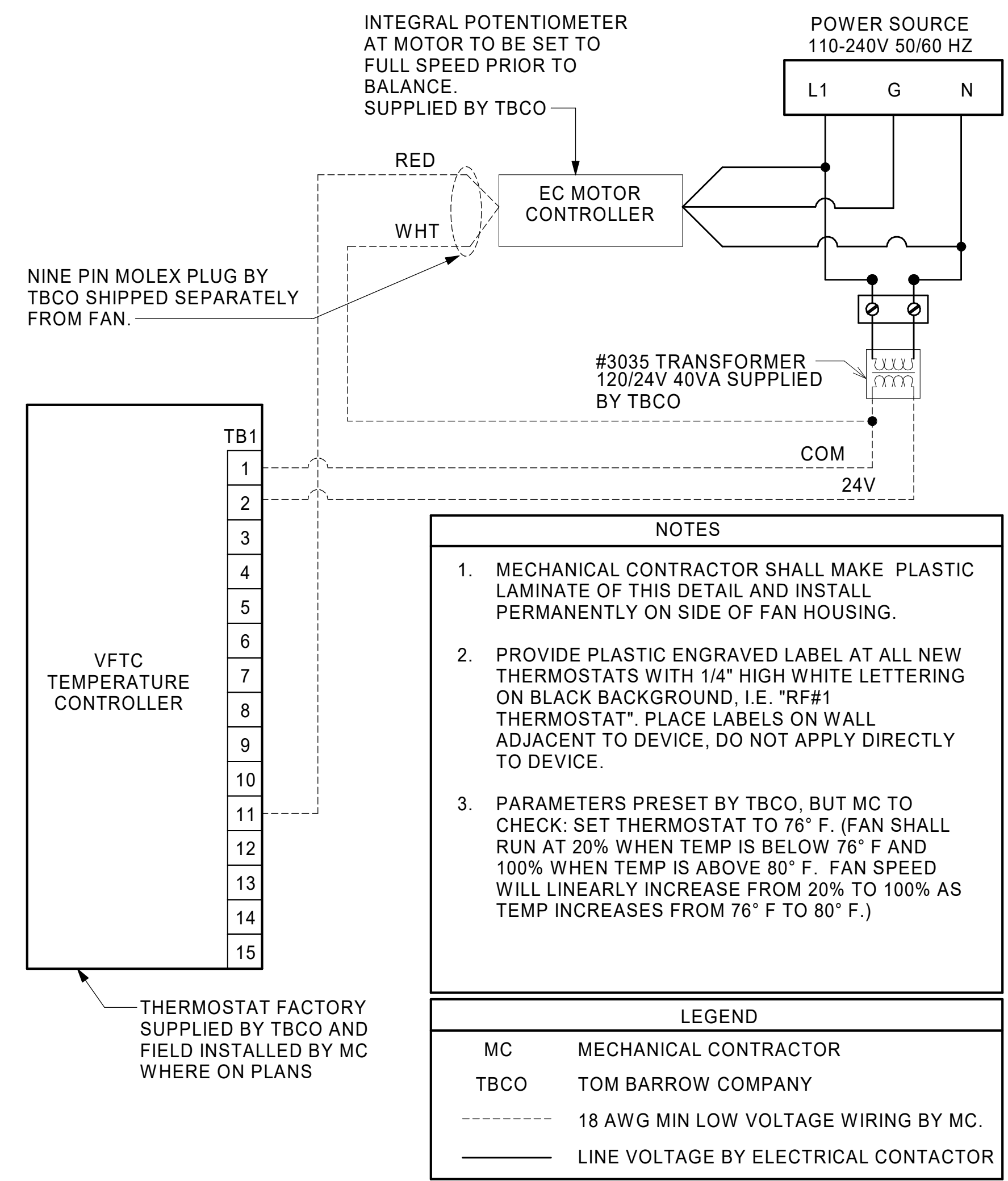
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SHEET CONTROL WIRING DIAGRAMS - LENNOX

SHEET NUMBER

M-701L



1 TECH CLOSET CONTROL DIAGRAM
 NOT TO SCALE



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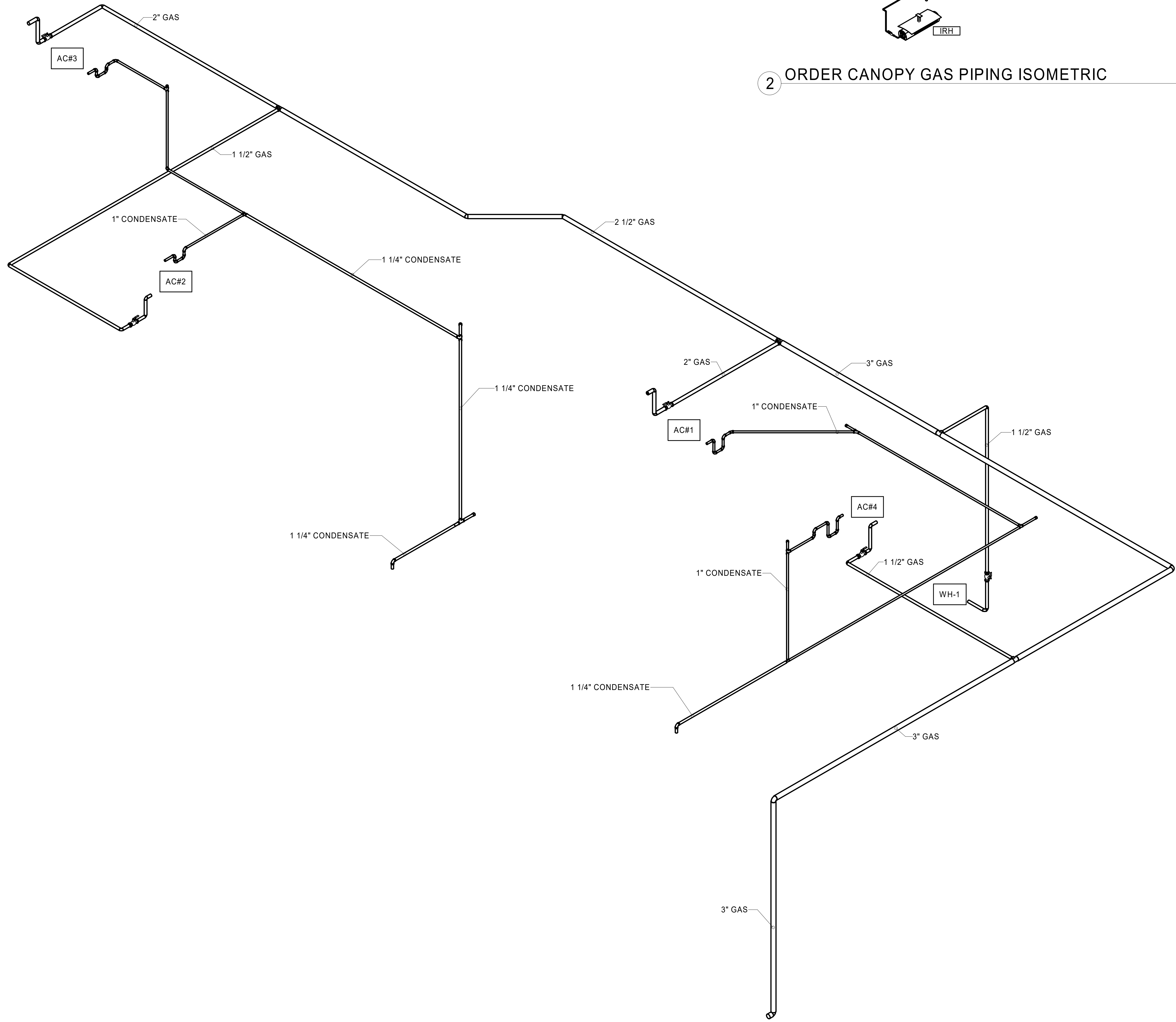
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SHEET
CONTROL WIRING
DIAGRAM

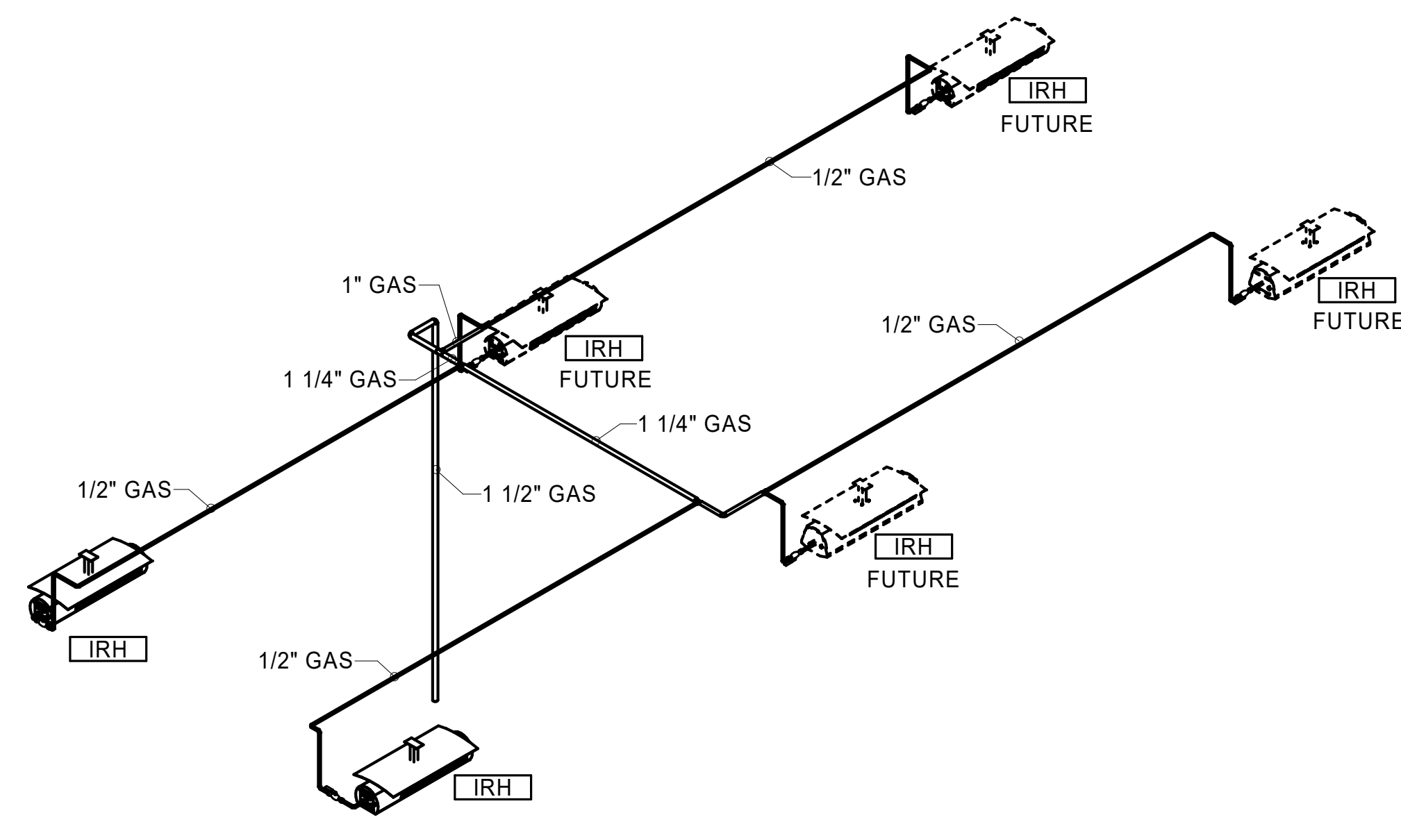
SHEET NUMBER
M-702

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 30-LSR-16-24-60004-M-901L-GAS AND CONDENSATE ISOMETRIC - LENNOX

1 GAS AND CONDENSATE ISOMETRIC - LENNOX



2 ORDER CANOPY GAS PIPING ISOMETRIC



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 Bentonville, Arkansas 72712
 www.hfa-ac.com



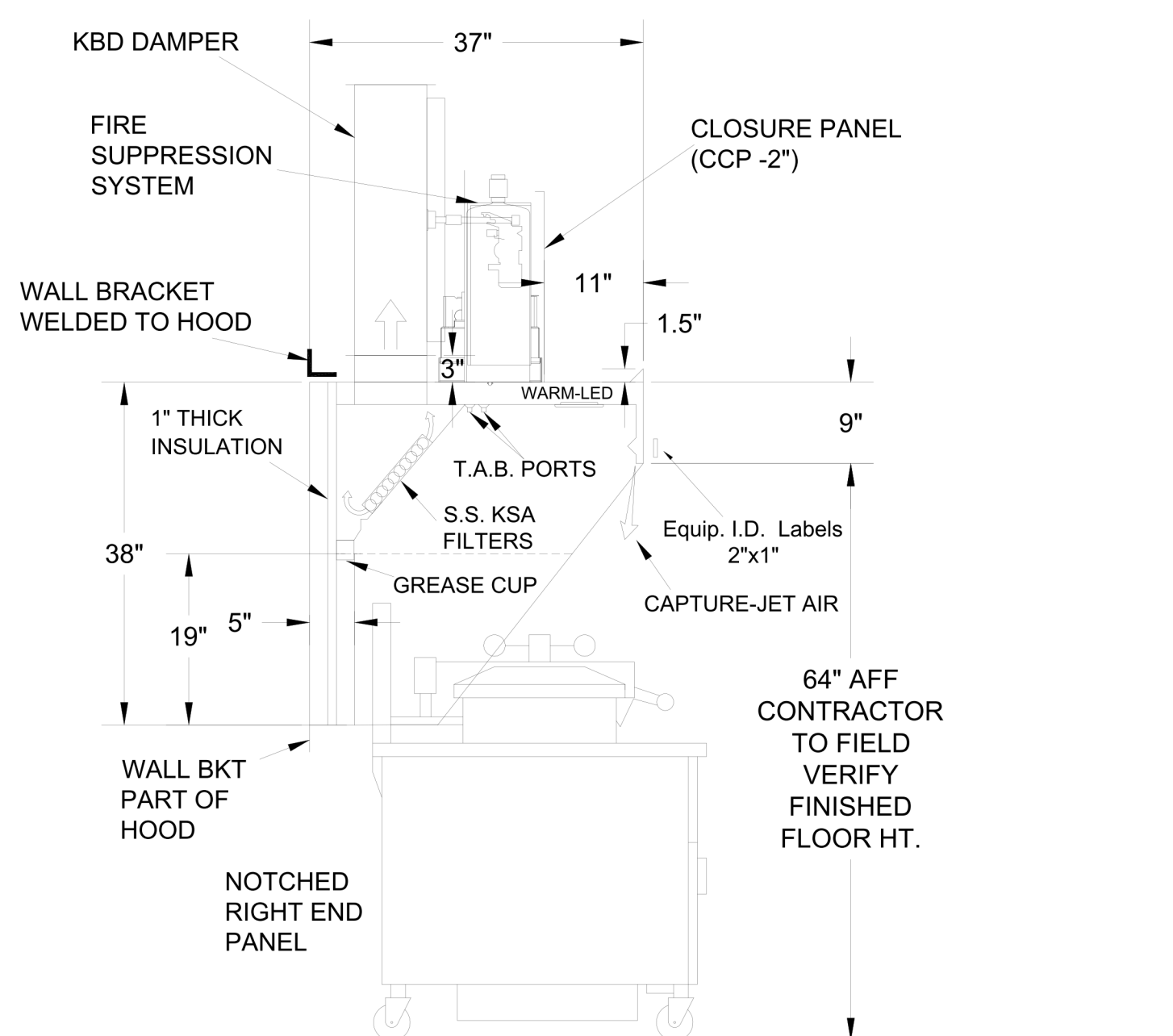
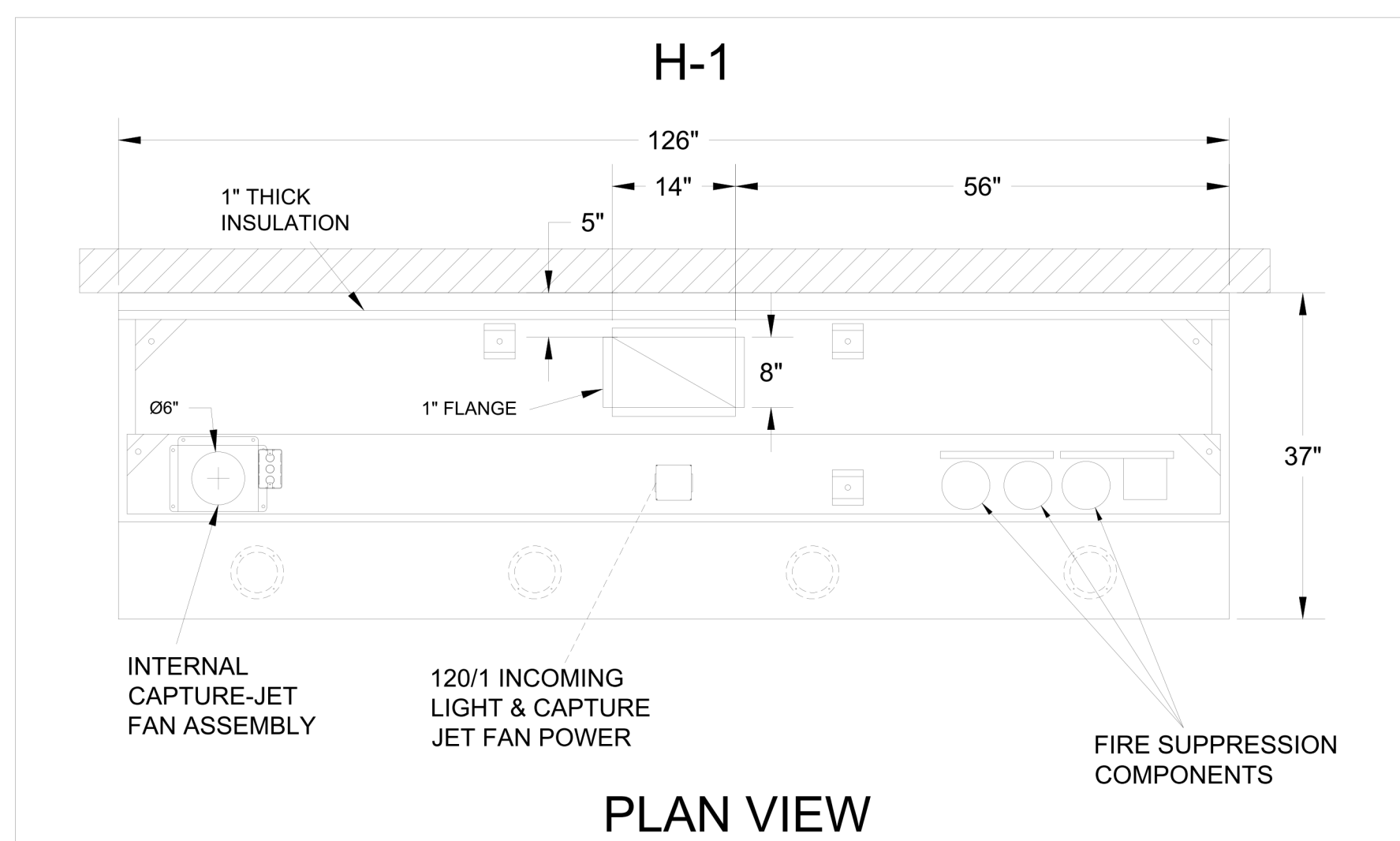
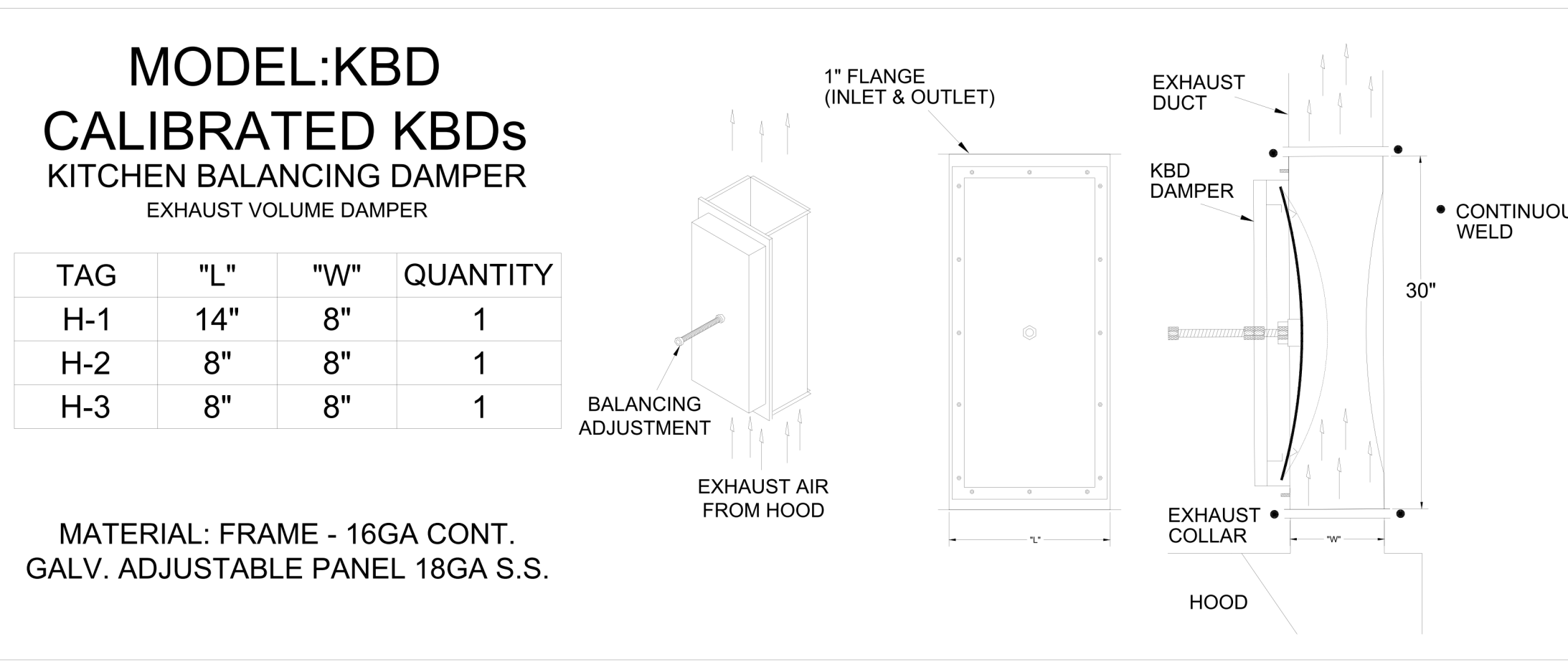
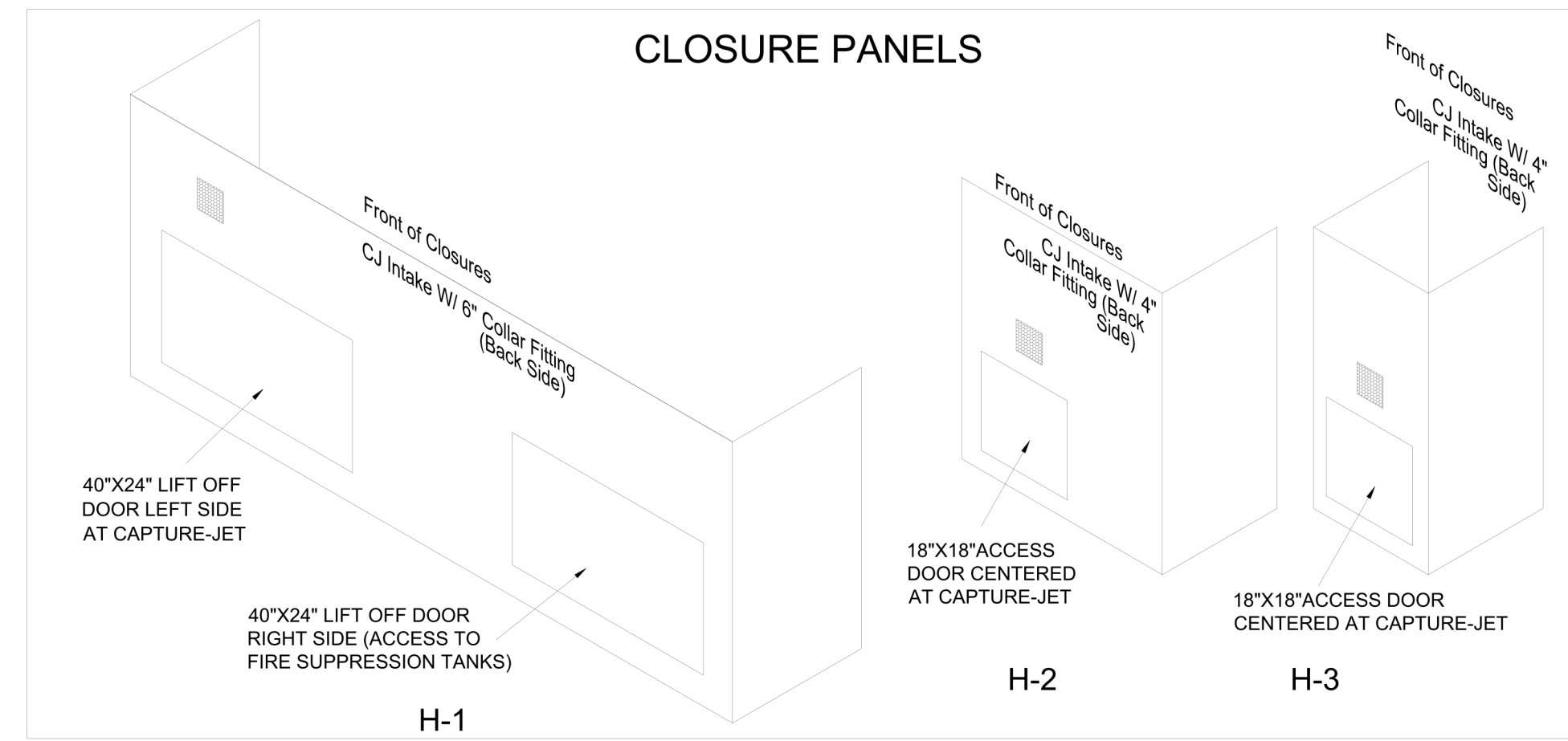
CHICK-FIL-A
NEW RESTAURANT
 2381 W STATE ST
 ALLIANCE, OH 44601

FSR#05811
 BUILDING TYPE / SIZE: SSAM LSR BP
 RELEASE: 24.02
 PRINTED FOR
PERMIT
 REVISION SCHEDULE
 NO. DATE DESCRIPTION

CONSULTANT PROJECT # 16-24-60004
 DATE 10/04/2024
 DRAWN BY BRM
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 SHEET
GAS AND CONDENSATE ISOMETRIC - LENNOX
 SHEET NUMBER

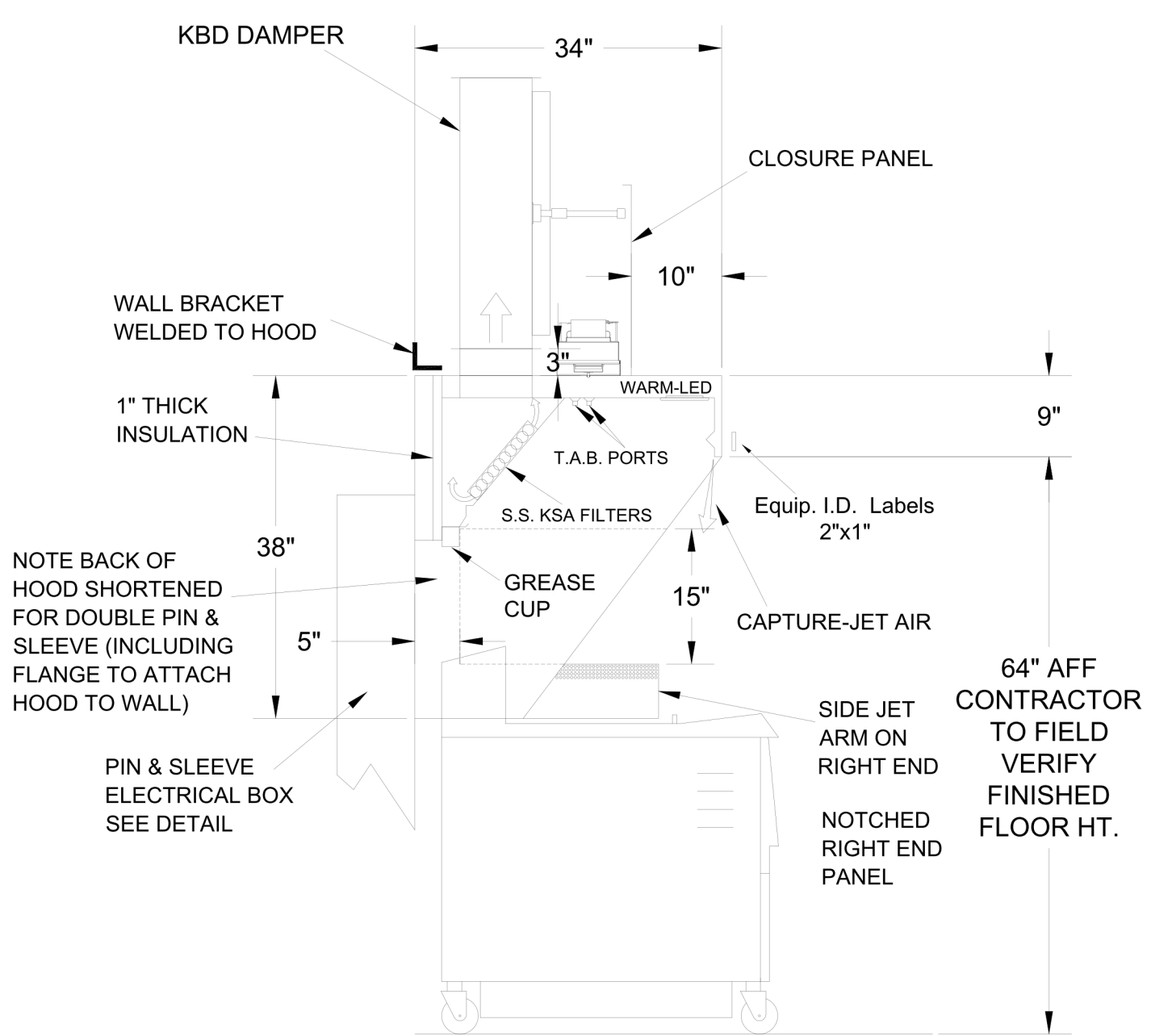
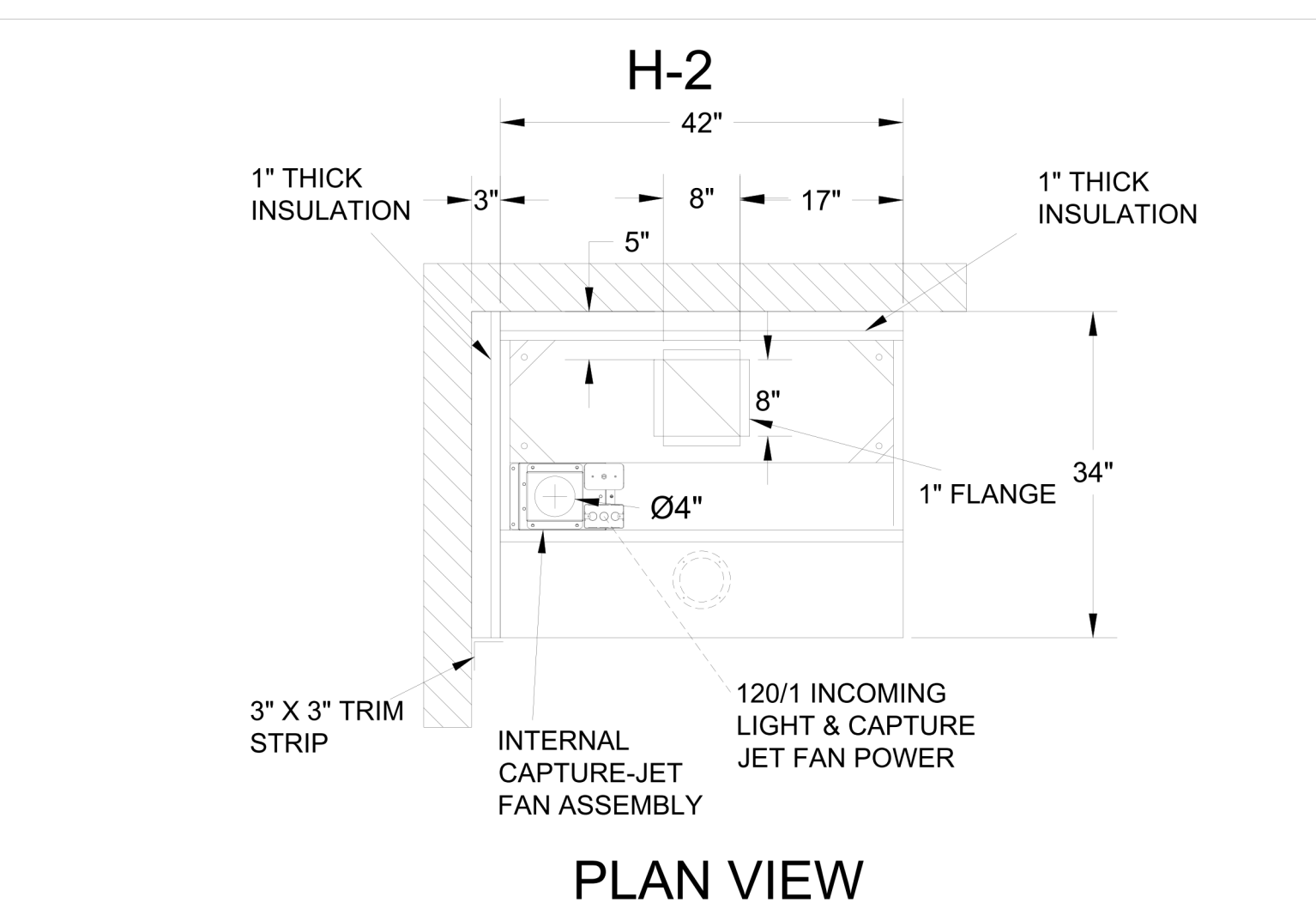
M-901L

HOOD MODEL	HOOD NUMBER	EXHAUST COLLAR			EXHAUST AIR INFORMATION			CAPTURE AIR INFORMATION		S.S. KSA FILTERS		LED LIGHTS	QTY	CEILING CLOSURES		KBD DAMPER	K FACTOR (CFM = K FACTOR * √DP)	MATERIAL	
		QTY	LENGTH	WIDTH	CFM	TAB	SP	CFM	SP	FULL	HALF			CLOSURE HEIGHT	CEILING HEIGHT				HOOD WEIGHT
KVL-2-IC	H-1	1	14"	8"	1418	0.12"	0.24"	95	0.30"	6	-	4	3	51"	122"	788 LBS	*	4106	ALL 18 GA 430 S.S.
KVL-C-IC	H-2	1	8"	8"	701	0.30"	0.39"	30	0.29"	2	-	1	2			245 LBS	*	1291	
KVL-D-IC	H-3	1	8"	8"	390	0.37"	0.42"	18	0.30"	1	-	1	3			150 LBS	*	646	



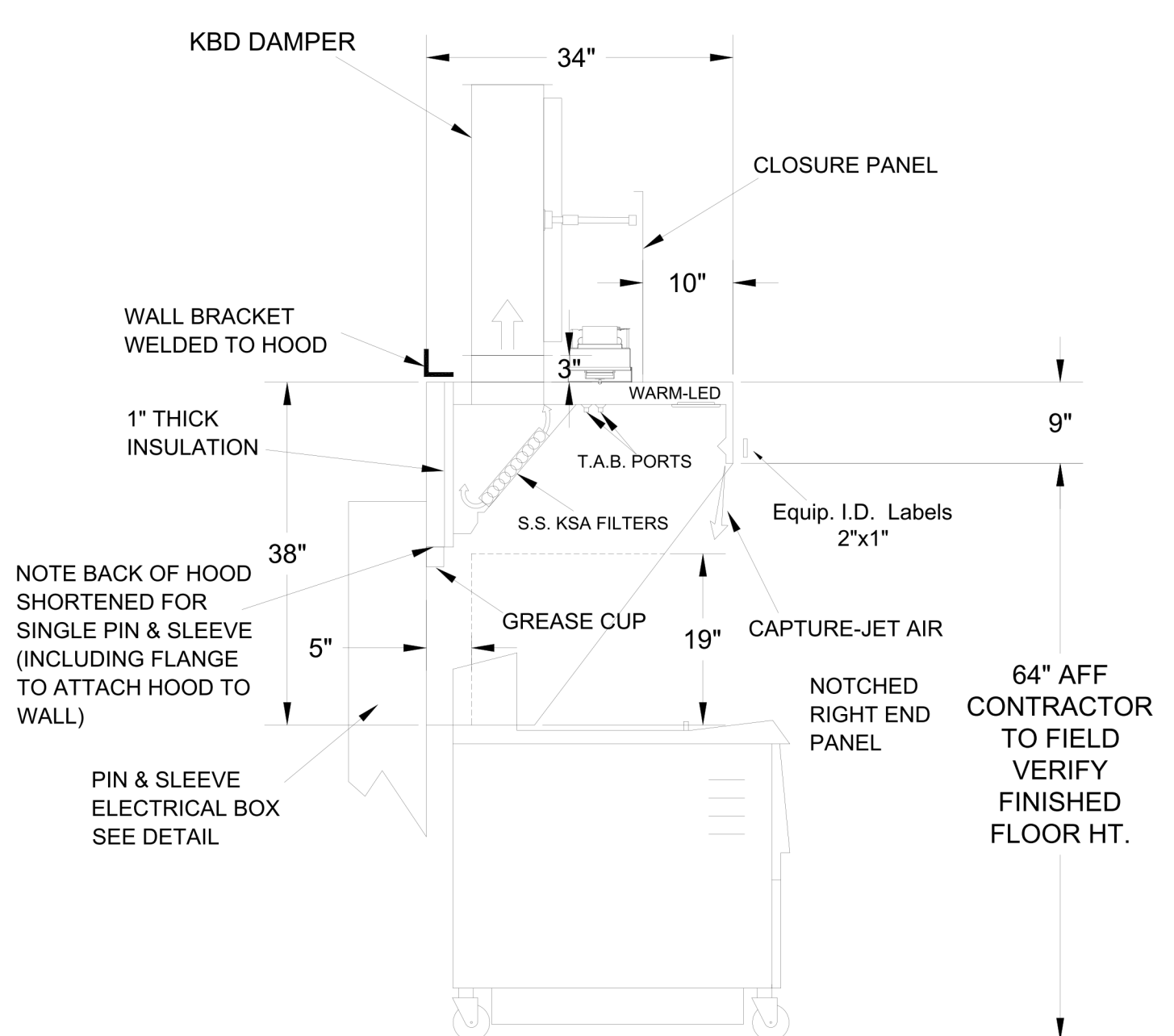
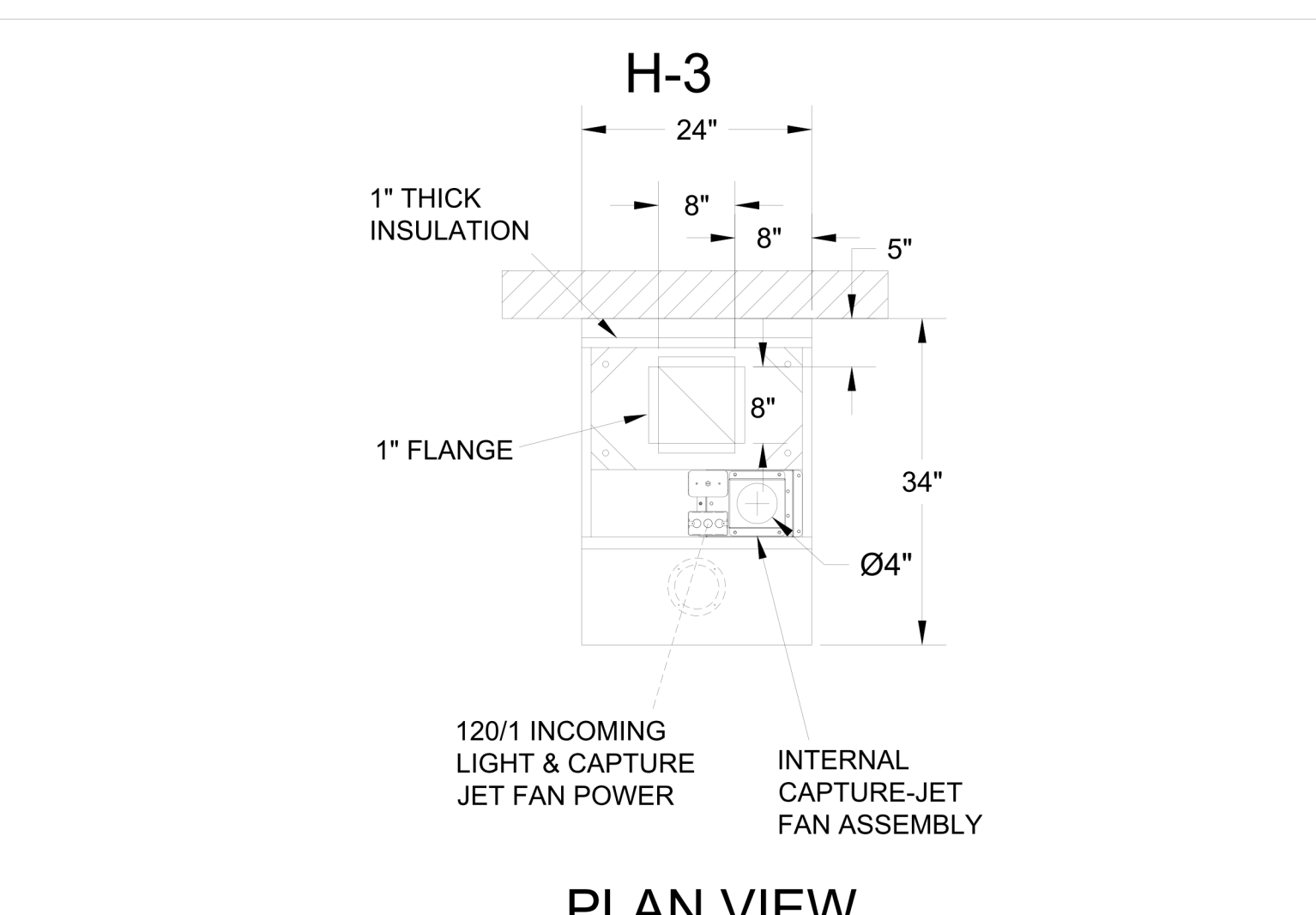
H-1 SECTION VIEW

- CEILING CLOSURE RECESSED 11" FROM FRONT TO CREATE SHELF
- FRONT CLOSURE PANEL WITH 40"x24" LIFT OUT DOOR RIGHT SIDE (ACCESS TO FIRE SUPPRESSION)
- 40"x24" LIFT DOOR LEFT SIDE AT CAPTURE-JET WITH FRONT CJ INTAKE
- 3" REAR STAND-OFF TO HAVE 1" THICK INSULATION
- NOTCHED RIGHT END PANEL
- GREASE CUP RIGHT END
- ANSUL WEIGHT = 284 LBS
- AMEREX WEIGHT = 257 LBS



H-2 SECTION VIEW

- CEILING CLOSURE RECESSED 10" FROM FRONT TO CREATE SHELF
- 18"x18" ACCESS DOOR CENTERED AT CAPTURE-JET WITH FRONT CJ INTAKE
- NOTCHED RIGHT END PANEL
- DOUBLE RECEPTACLE PIN & SLEEVE
- 3"x3" TRIM STRIP FOR STANDOFF ON LEFT END
- 3" SIDE & REAR STAND-OFF TO HAVE 1" THICK INSULATION
- GREASE CUP RIGHT END



H-3 SECTION VIEW

- CEILING CLOSURE RECESSED 10" FROM FRONT TO CREATE SHELF
- 18"x18" ACCESS DOOR CENTERED AT CAPTURE-JET WITH FRONT CJ INTAKE
- SIDE-JET PLENUM SUPPLIED BY HALTON. INSTALLED BY OTHERS (DETAIL "A", SHEET 2)
- NOTCHED RIGHT END PANEL
- CUSTOM 10" SINGLE RECEPTACLE PIN & SLEEVE
- 3" REAR STAND-OFF TO HAVE 1" THICK INSULATION
- GREASE CUP RIGHT END



THIS DRAWING MUST BE CHECKED, SIGNED AND RETURNED TO THE APPROPRIATE FACTORY. PLEASE VERIFY THE FOLLOWING:

1. ALL DIMENSIONAL INFORMATION, MOUNTING POSITIONS AND CLEARANCES.
2. THE LOCATION AND TYPE OF COOKING EQUIPMENT.

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APPROVED FOR FABRICATION: WITH NO CHANGES WITH CHANGES AS NOTED

APPROVED BY: _____ DATE: _____

WEBSITE: www.halton.com

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY BELOW:

HALTON CO. (USA)
101 INDUSTRIAL DRIVE
SCOTTSDALE, KY 42164
1-270-237-5600

HALTON CO. (CANADA)
1021 BREVIK PLACE
MISSISSAUGA, ON L4W 3R7
1-905-624-0301

PROJECT: CHICK-FIL-A SSAM REVERSE NAME

LOCATION: -- SKK DATE: 02.01.24

DRAWN BY: SKK

SCALE: NOT TO SCALE

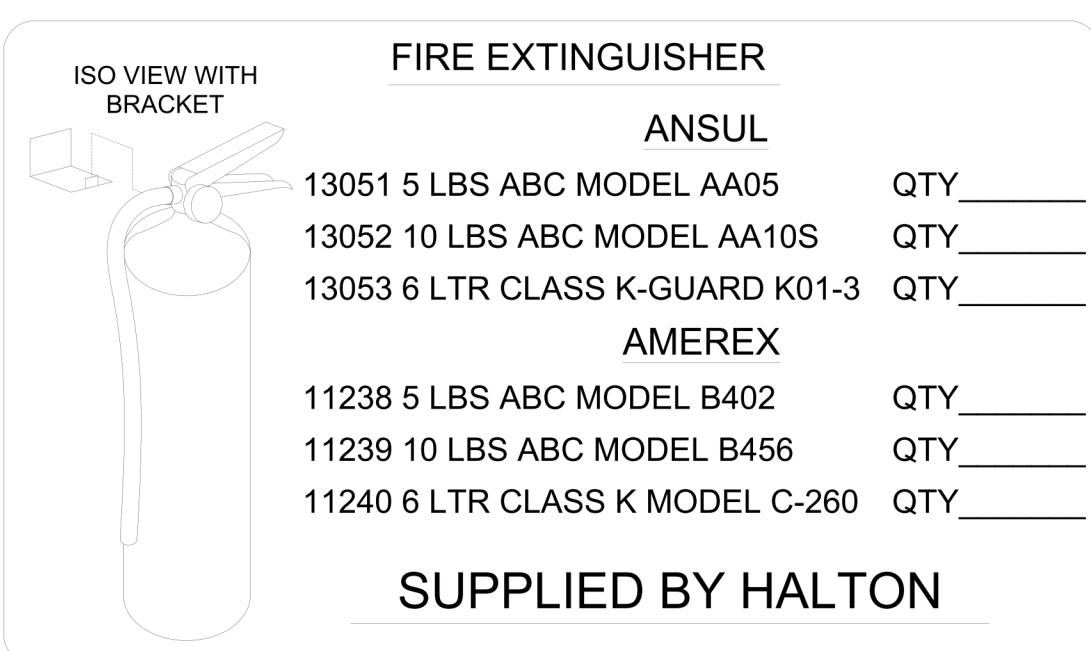
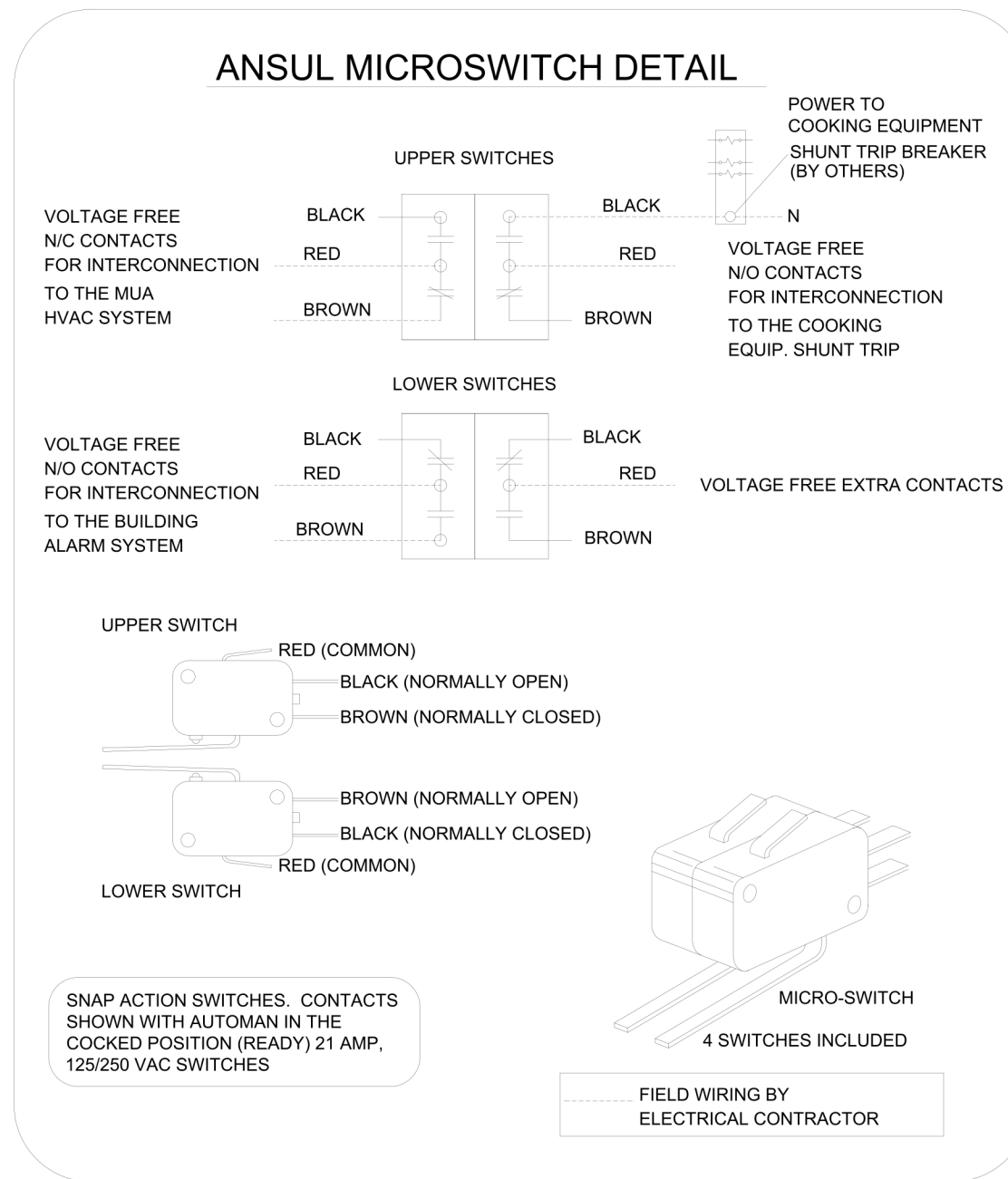
REVISION DESCRIPTION

REV.	DATE	BY	SKK
1	07.24.24	SKK	SKK
2	08.08.24	SKK	SKK
3			
4			
5			
6			
7			

PAPERSPACE LAYOUT
REVISED QTY OF ANSUL TANKS

DRAWING NO.: U24-089-01

SHEET NO.: H-1.1



NOTE:
FIRE SYSTEM TYPE TO BE DETERMINED AT TIME OF ORDER RELEASE.

ANSUL

FUSIBLE LINK RATINGS

ITEM	TEMP
OPEN FRYERS	450°
2 BURNER / FLAT TOP	450°
PRESSURE FRYERS	450°
GRILL	450°
EXHAUST COLLARS	450°

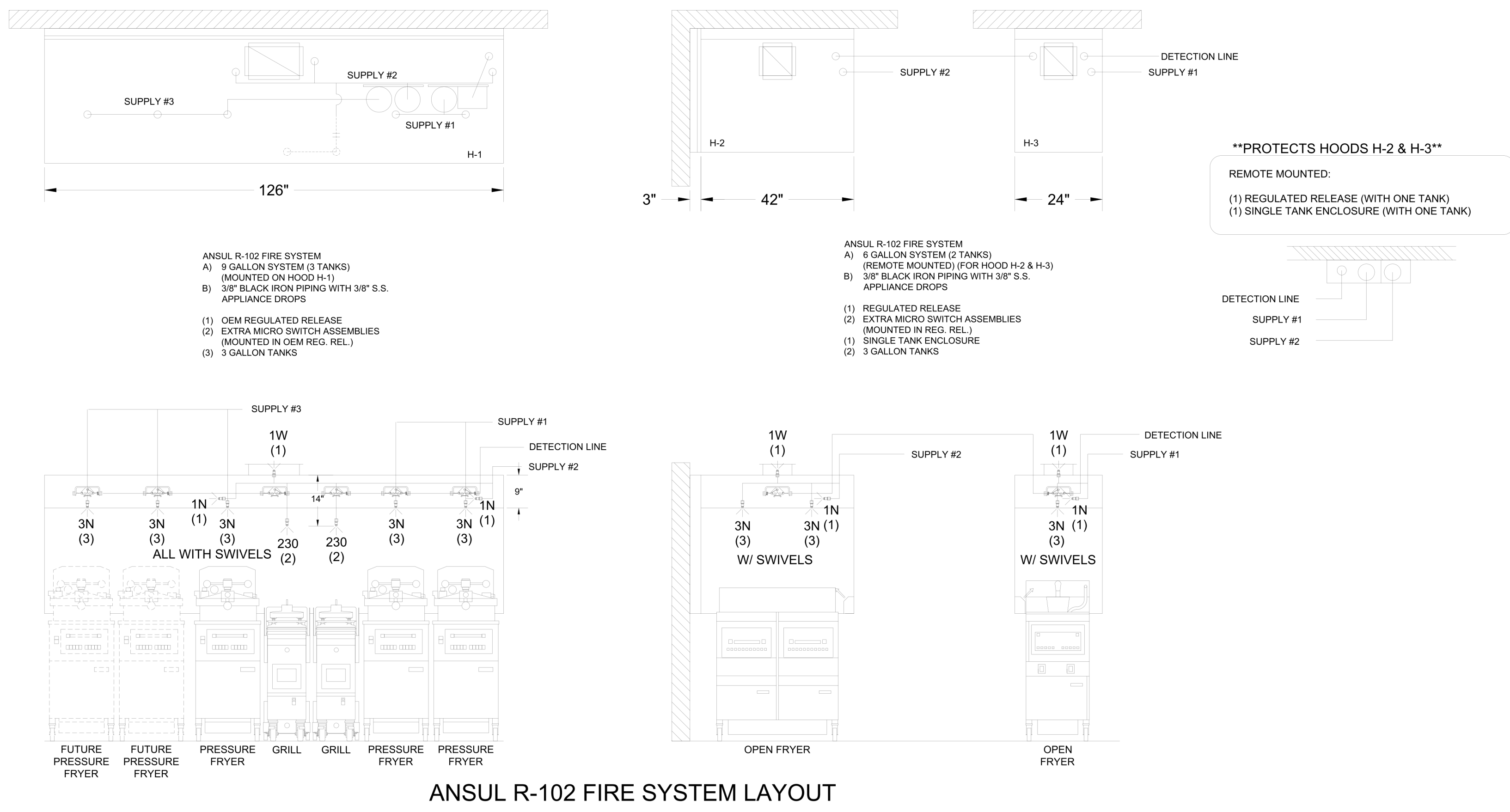
ANSUL R-102 FIRE SYSTEM NOTES
THREE TANK SYSTEM MOUNTED ON TOP OF (H-1)
MAXIMUM FLOW POINTS = 33

ANSUL R-102 FIRE SYSTEM NOTES
TWO TANK SYSTEM REMOTE MOUNTED
MAXIMUM FLOW POINTS = 22

ITEM	PART #	QTY	DESCRIPTION	FLOW PTS (TOTAL)
1W	10023	3	DUCT NOZZLES	3
1N	10022	4	PLENUM NOZZLES	4
230	10025	2	APPLIANCE NOZZLES	4
3N	10021	8	APPLIANCE NOZZLES	24
TOTAL FLOW POINTS				35
QTY		DESCRIPTION		
10035	8	DETECTORS W/ FUSIBLE LINKS		
10046	1	OEM REGULATED RELEASE W/ DOUBLE POLE MICRO SWITCH		
10033	1	REGULATED RELEASE W/ DOUBLE POLE MICRO SWITCH		
10333	5	3 GALLON TANKS		
10044	1	SINGLE TANK ENCLOSURE		
10040	2	REMOTE PULL STATION		
10065	4	DOUBLE TANK NITROGEN CARTRIDGE		
11128	5	3 GALLON ANSULEX CONTAINER		

ANSUL R-102 FIRE SYSTEM
UL LISTED PER STD LATEST STD 300

- FINAL INSTALLATION IS TO BE MADE IN ACCORDANCE WITH ALL APPLICABLE CODES
- ALL ELECTRICAL COMPONENTS FOR EQUIPMENT SHUT DOWN TO BE PROVIDED BY THE ELECTRICIAN. MICRO-SWITCH INSTALLED IN REGULATED RELEASE BY ANSUL INSTALLER
- REMOTE PULL STATION LOCATED PER MECHANICAL DRAWINGS



1/2" BLACK IRON SUPPLY LINE REQ'D FROM TANK TO FIRST BRANCH LINE FOR 475 TANKS ONLY!

AMEREX

FUSIBLE LINK RATINGS

ITEM	TEMP
OPEN FRYERS	450°
2 BURNER / FLAT TOP	450°
PRESSURE FRYERS	450°
GRILL	450°
EXHAUST COLLARS	450°

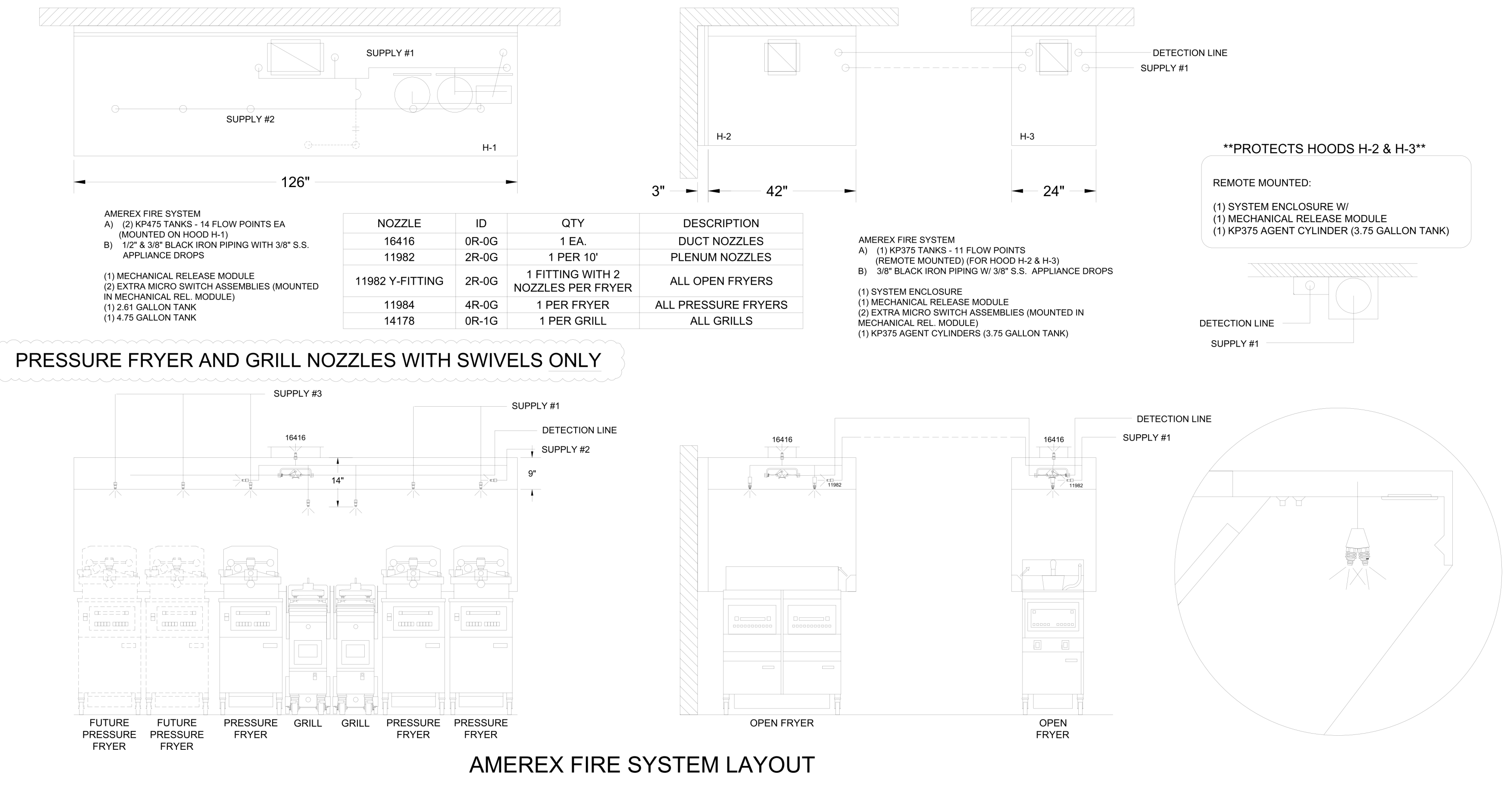
AMEREX FIRE SYSTEM NOTES
(1) KP250 & (2) KP475 TANK SYSTEM MOUNTED ON TOP OF (H-1)
MAXIMUM FLOW POINTS = 21

AMEREX FIRE SYSTEM NOTES
(1) KP375 TANK SYSTEM REMOTE MOUNTED
MAXIMUM FLOW POINTS = 11

ITEM	QTY	DESCRIPTION	FLOW PTS (TOTAL)	
16416	3	DUCT NOZZLES	3	
11982	4	PLENUM NOZZLES	4	
11982 Y-FITTING	3	APPLIANCE NOZZLES	6	
14178	2	APPLIANCE NOZZLES	4	
11984	5	APPLIANCE NOZZLES	3.5	
TOTAL FLOW POINTS				20.5
ITEM		DESCRIPTION		
12508-P001	8	DETECTORS BRACKET ASSEMBLY		
26948	1	KP250 AGENT CYLINDER		
13334	1	KP375 AGENT CYLINDER		
17379	1	KP475 AGENT CYLINDER		
18001	1	MECHANICAL RELEASE MODULE WITH ENCLOSURE WITH DOUBLE POLE MICRO SWITCH		
11977	1	MECHANICAL RELEASE MODULE WITHOUT ENCLOSURE WITH DOUBLE POLE MICRO SWITCH		
21481	2	REMOTE MANUAL PULL STATION		

AMEREX FIRE SYSTEM
UL LISTED PER STD LATEST STD 300

- FINAL INSTALLATION IS TO BE MADE IN ACCORDANCE WITH ALL APPLICABLE CODES
- ALL ELECTRICAL COMPONENTS FOR EQUIPMENT SHUT DOWN TO BE PROVIDED BY THE ELECTRICIAN. MICRO-SWITCH INSTALLED IN REGULATED RELEASE BY AMEREX INSTALLER
- REMOTE PULL STATION LOCATED PER MECHANICAL DRAWINGS



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APPROVED FOR FABRICATION: _____ WITH NO CHANGES _____ WITH CHANGES AS NOTED

APPROVED BY: _____ DATE: _____

WEBSITE: www.halton.com

HALTON CO. (USA)
101 INDUSTRIAL DRIVE
SCOTTSDALE, KY 42164
1-270-237-5600

BY: SKK DATE: 07.24.24
SKK SKK 08.08.24

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY BELOW:

HALTON CO. (CANADA)
1021 BREVIK PLACE
MISSISSAUGA, ON L4W 3R7
1-905-624-0301

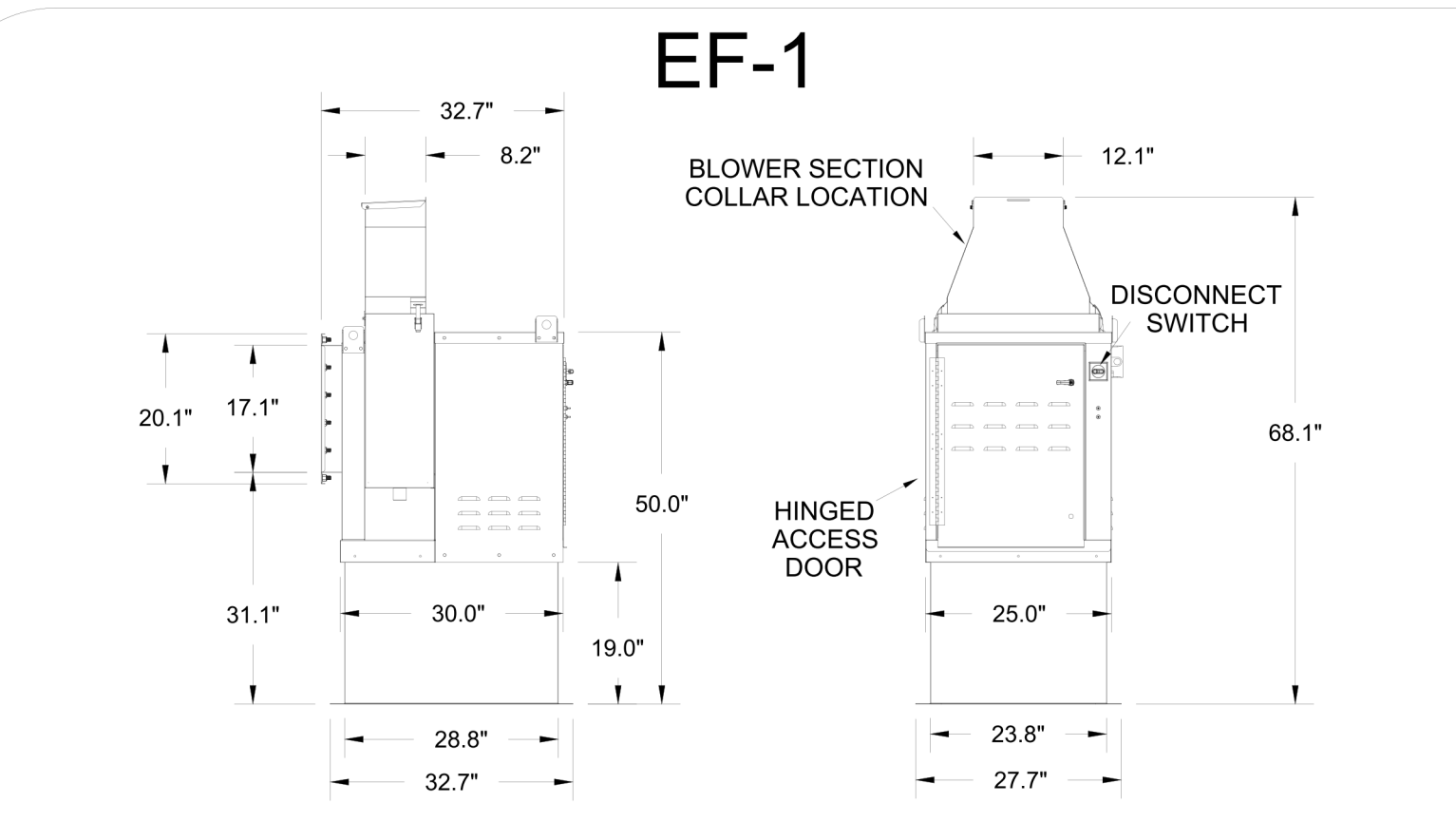
REVISION DESCRIPTION
REVISED FRYER NOZZLES, ANSUL & AMEREX
REVISED ANSUL TANK LAYOUT

PROJECT: CHICK-FIL-A SSAM REVERSE NAME

LOCATION: -- SKK DATE: 02.01.24
DRAWN BY: SKK
SCALE: NOT TO SCALE

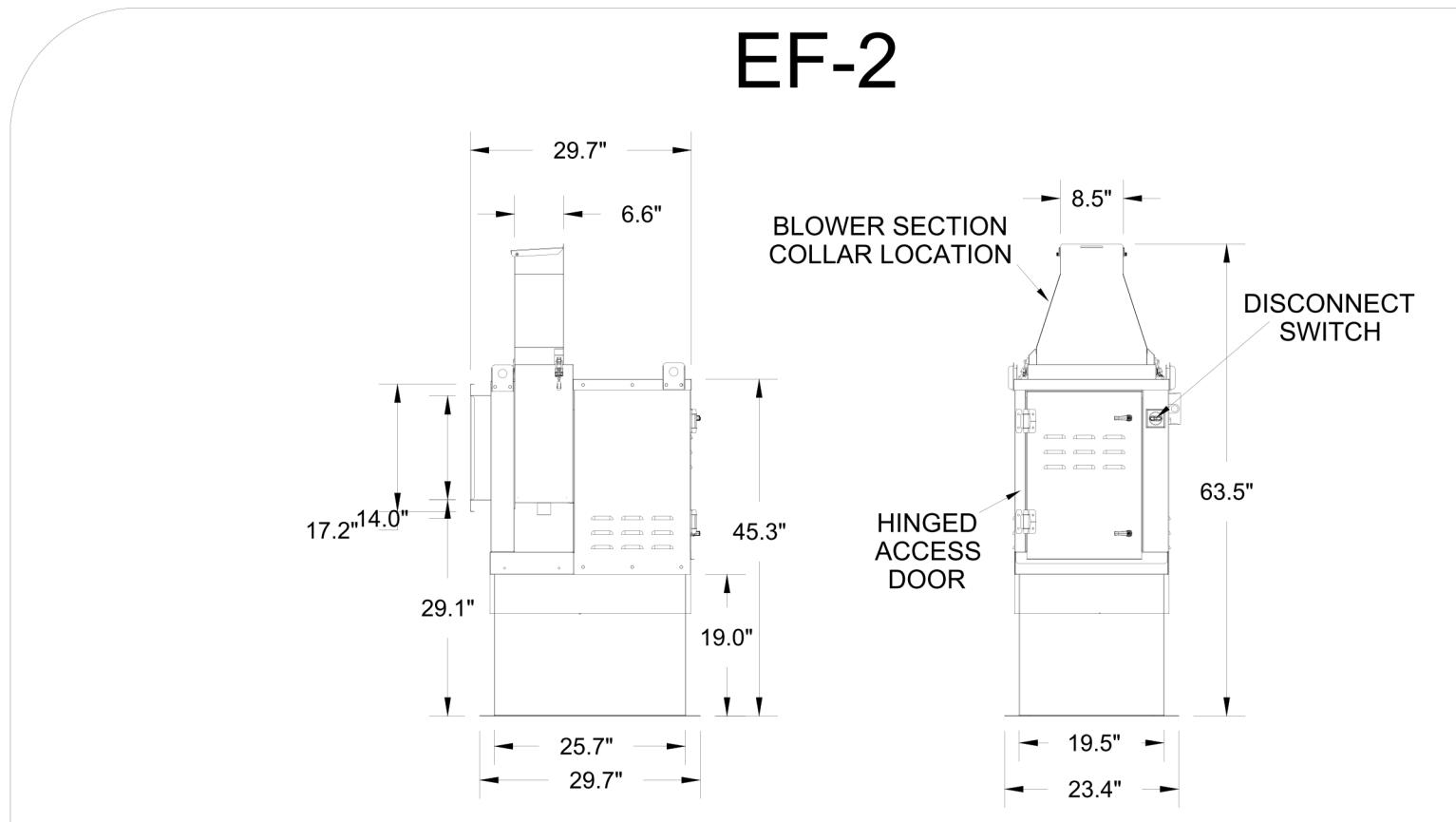
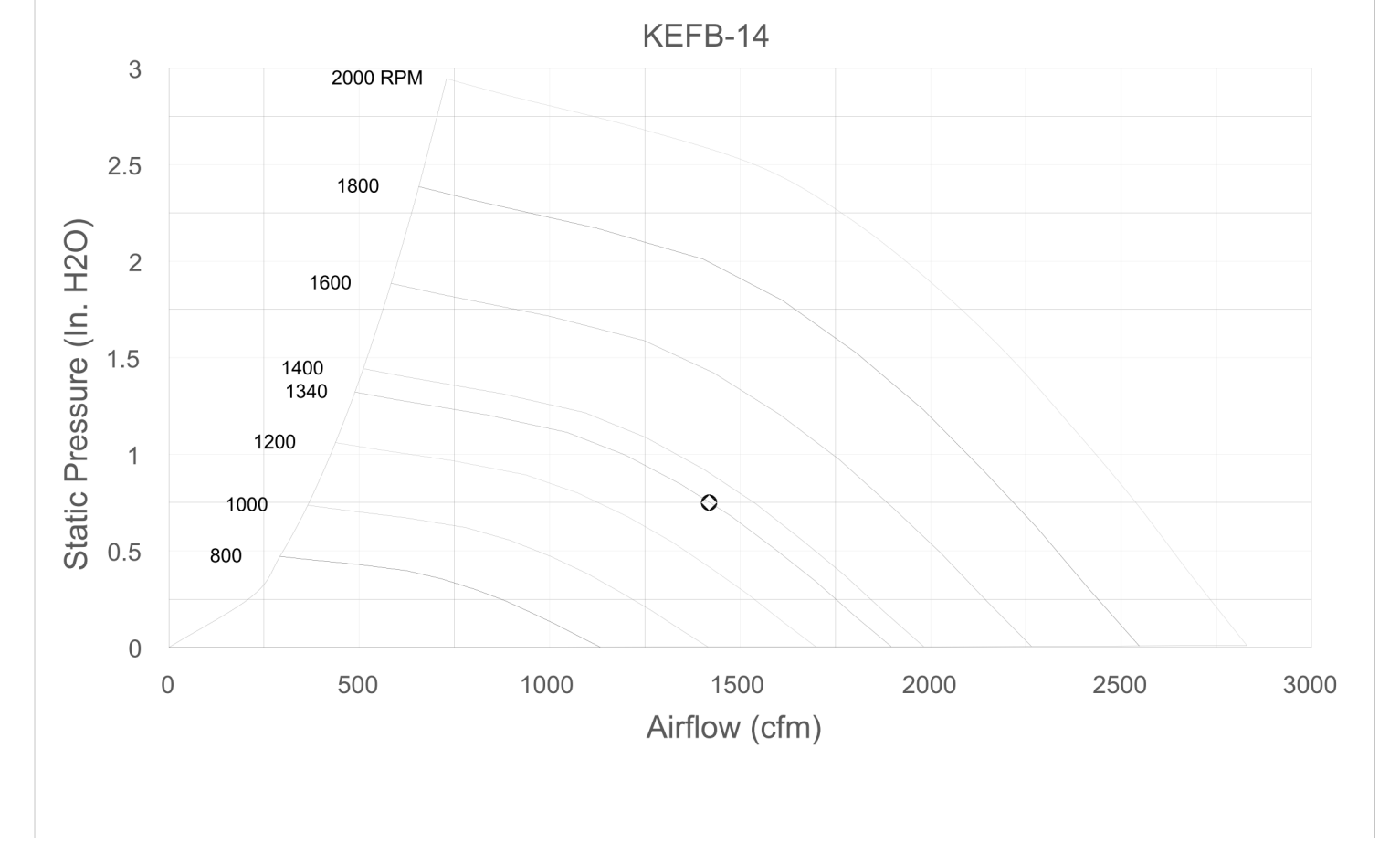
DRAWING NO.: U24-089-03
SHEET NO.: H-1.3

Halton



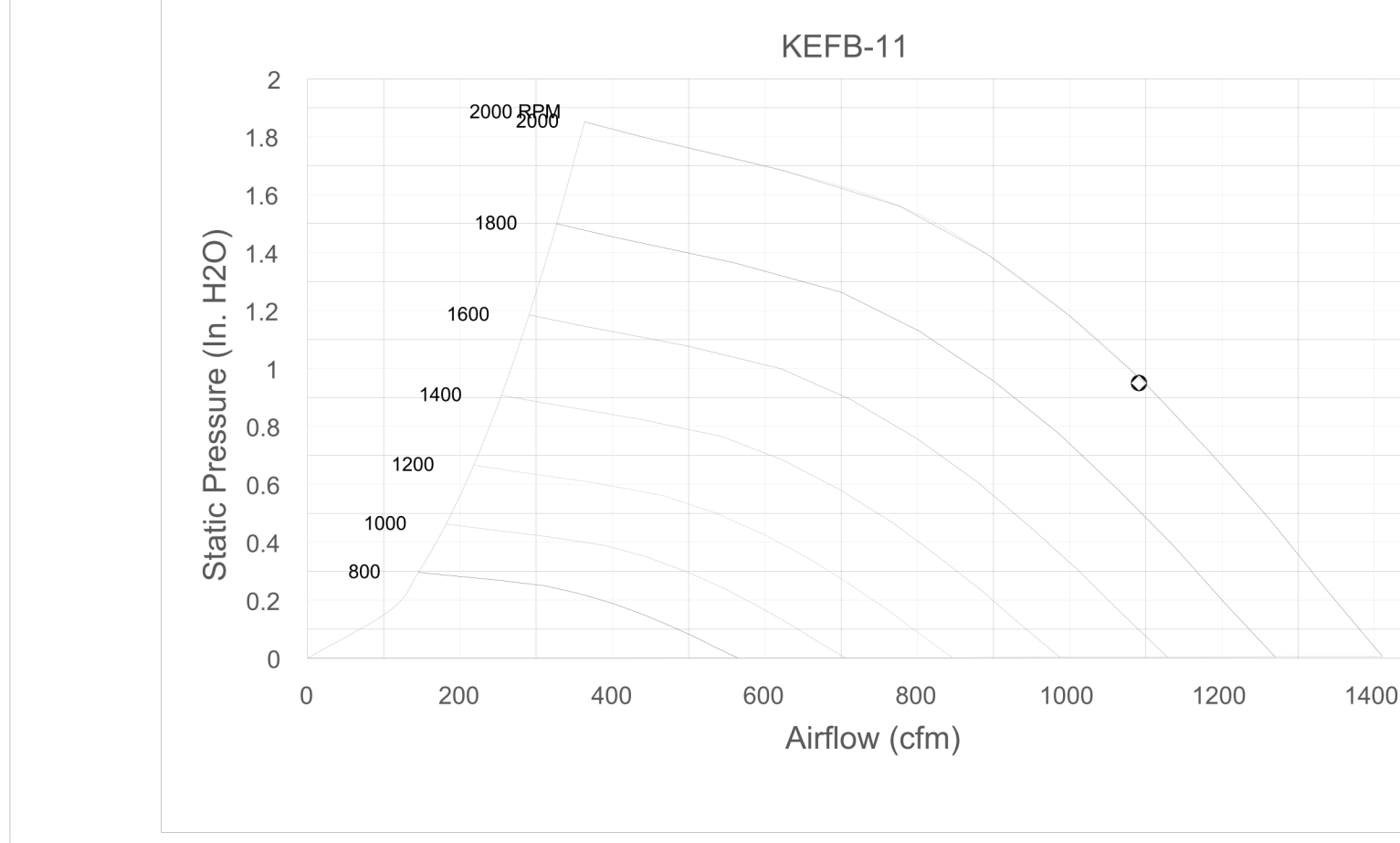
Halton KEFB Exhaust Fan

Job Name	Chick-Fil-A SSAM	Item No	EF-1	Qty	1	Volts/Ph/Amps	115/1/60
Location	EF-1	Model	KEFB-14	Fan RPM	1,340	Motor HP	0.5
Date	2/6/2024	Airflow, cfm	1,418	Fan BHP	0.32	TAB Port, in WC	2.2
Static Pressure, in WC	0.75						



Halton KEFB Exhaust Fan

Job Name	Chick-Fil-A SSAM	Item No	EF-2	Qty	1	Volts/Ph/Amps	115/1/60
Location	EF-2	Model	KEFB-11	Fan RPM	2,000	Motor HP	0.5
Date	2/6/2024	Airflow, cfm	1,091	Fan BHP	0.33	TAB Port, in WC	3.6
Static Pressure, in WC	0.95						



Model: XRED-095-VG
Direct Drive Centrifugal Roof Exhaust Fan

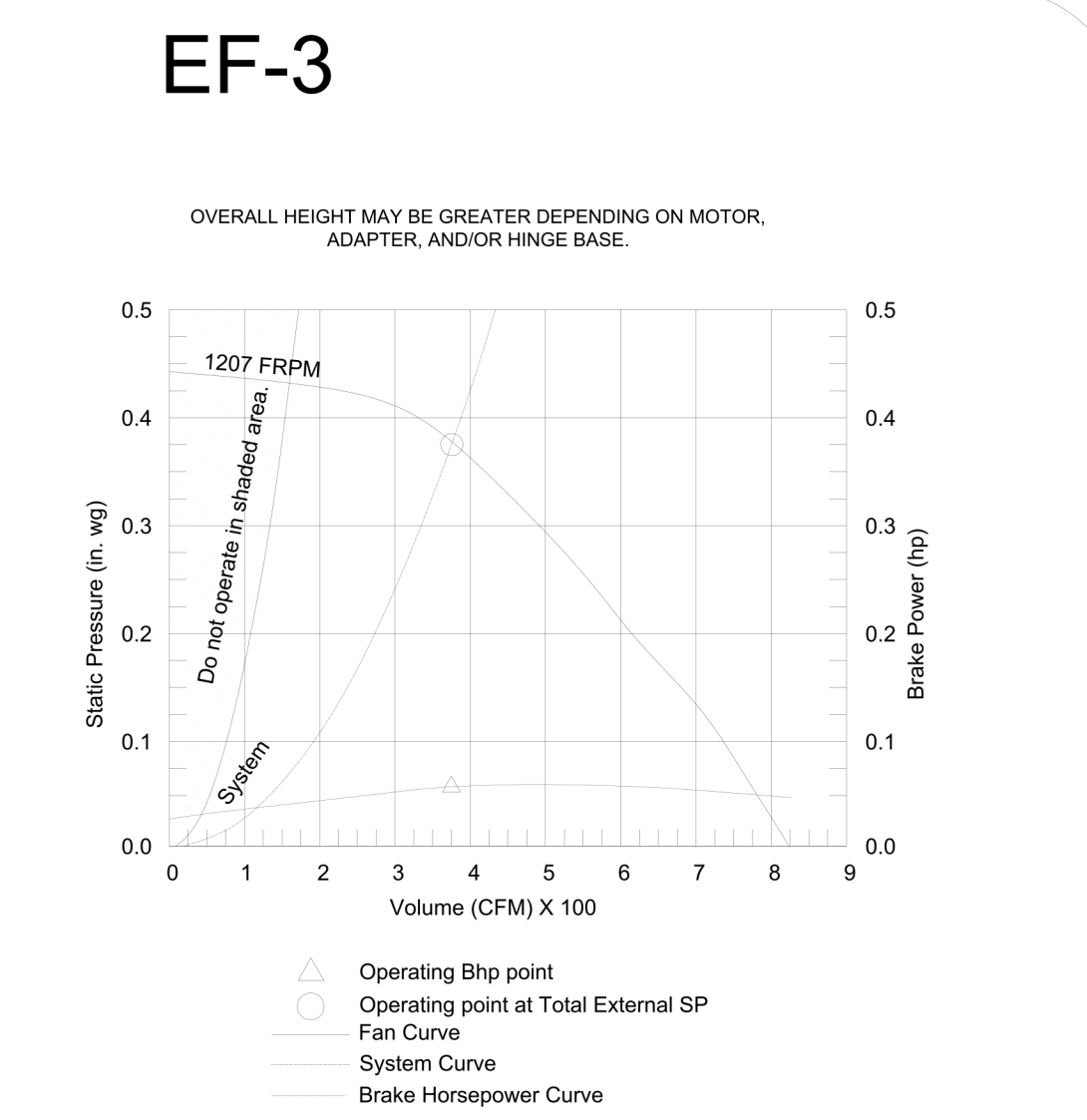
Dimensional	
Quantity	1
Weight w/o Acc's (lb)	28
Weight w/ Acc's (lb)	35
Weight w/ Acc's and Curb (lb)	49
Standard Curb Cap Size (in.)	17 x 17
Optional Damper (in.)	10 x 10
Roof Opening (in.)	13.5 x 13.5

Performance	
Requested Volume (CFM)	375
Actual Volume (CFM)	375
Total External SP (in. wg)	0.375
Fan RPM	1207
Operating Power (hp)	0.05
Elevation (ft)	23
Airstream Temp. (F)	70
Air Density (lb/ft ³)	0.075
Tip Speed (ft/min)	3,437
Static Eff. (%)	41

Motor	
Motor Mounted	Yes
Size (hp)	1/8 (or greater)
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP
Motor RPM	1550
Efficiency Rating	Standard
Windings	1

Misc Fan Data

Fan Eff. Index (FEI)	-
Outlet Velocity (ft/min)	323

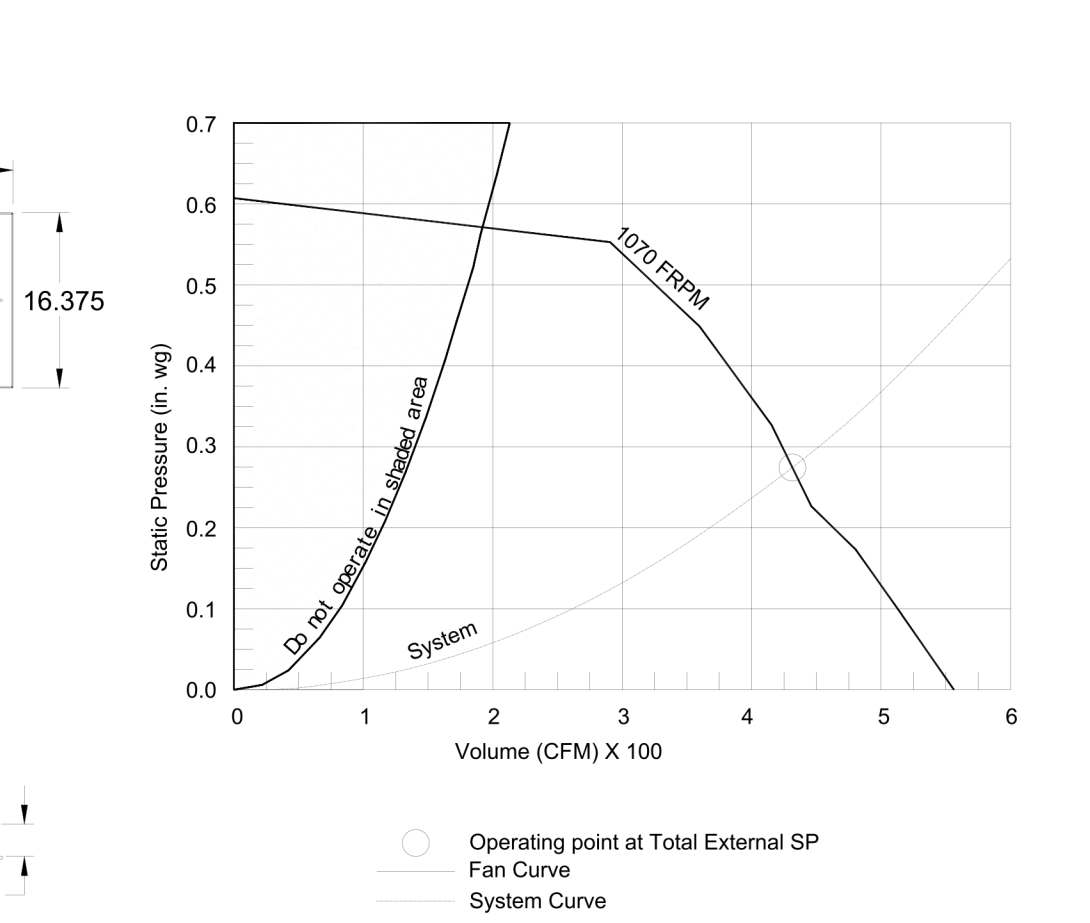


Model: SP-A510-VG

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	31
Weight w/ Acc's (lb)	40

Performance	
Requested Volume (CFM)	450
Actual Volume (CFM)	431
Total External SP (in. wg)	0.275
Fan RPM	1070
* FLA (A)	3.3
Elevation (ft)	23
Airstream Temp. (F)	70
Air Density (lb/ft ³)	0.075
Sones	4.5

Motor	
Motor Mounted	Yes
** Input Watts (W)	224
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP



GREASE ACCESS DOOR SCHEDULE

MODEL	"A"	"B"	"C"	"E"	"F"
KAP0715	7	15	FLAT	5.5	13.5
KAP1015	10	15	1/2"	7	12

ACCESS DOORS SHALL BE U.L. 1978 LISTED OR FIELD FABRICATED, REQUIRE NO TOOLS FOR REMOVAL AND MEET THE REQUIREMENTS OF THE CURRENT EDITION OF THE IMC. ACCESS DOOR SHALL BE SECURED WITH THUMB SCREWS. ACCESS DOORS SHALL BE SEALED WITH A MINIMUM 1500 DEGREE GASKET MATERIAL

INSTALL PER MANUFACTURER'S INSTRUCTIONS

Halton Kitchen Exhaust Fan Curb Insulated Duct Curb

Standard Construction Features:

- Roof Curb fits between the building roof and the fan mounted directly to the roof support structure
- Constructed of 18 ga aluminumized steel
- Straight Sided without a cant
- 2 in. mounting flange
- Height is 22 in.

Standard Construction Features:

- Duct Curb fits between the building roof and the fan mounted directly to the roof support structure
- Constructed of 18 ga aluminumized steel
- Straight Sided without a cant
- 2 in. mounting flange
- Height is 12 in.
- 18 ga. cap

Model: GPI
For Model: XRED-090-VG
Curb & Damper Tray

ACCESSORIES	
MATERIAL	GALVANIZED
SECURITY BARS	NO
LINER	NO
INSULATION (in.)	1
INSULATION R VALUE	R4.3

GENERAL	
TAG	EF-3
QTY	1
MODEL	GPI-17
SIZING METHOD	NOMINAL
UNDERSIZING (in.)	1.5
WEIGHT (lb)	14
SHIPPED ASSEMBLED	YES
UNION LABEL PREFERENCE	NO

DIMENSIONS	
NOMINAL CURB HEIGHT (in.)	12
NOMINAL CURB WIDTH (in.)	17
NOMINAL OUTSIDE LENGTH (in.)	17
NOMINAL INSIDE LENGTH (in.)	15.5
NOMINAL OUTSIDE WIDTH (in.)	15.5
NOMINAL INSIDE WIDTH (in.)	12
FLANGE WIDTH (in.)	19.5
FLANGE LENGTH (in.)	16
HINGE BASE WIDTH (in.)	16
HINGE BASE LENGTH (in.)	16

*MAY NOT BE APPLICABLE

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APPROVED FOR FABRICATION: WITH NO CHANGES WITH CHANGES AS NOTED

APPROVED BY: _____ DATE: _____

PROJECT: CHICK-FIL-A SSAM REVERSE NAME

LOCATION: -- SKK DATE: 02.01.24

DRAWN BY: SKK

SCALE: NOT TO SCALE

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY BELOW:

WEBSITE: www.halton.com

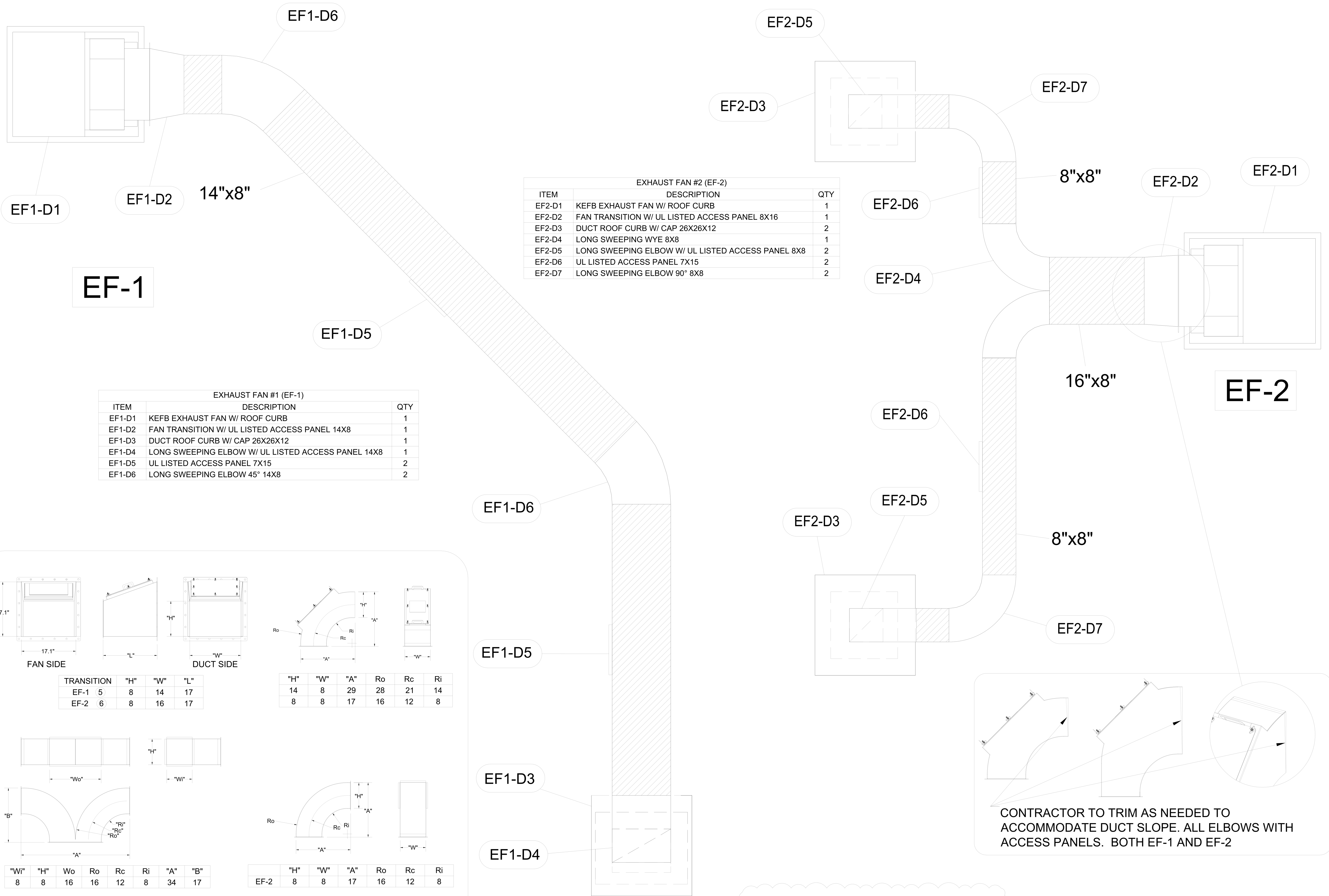
HALTON CO. (USA)
101 INDUSTRIAL DRIVE
SCOTTSDALE, KY 42164
1-270-237-5600

HALTON CO. (CANADA)
1021 BREVIK PLACE
MISSISSAUGA, ON L4W 3R7
1-905-624-0301

REV.	DESCRIPTION	DATE
1	PAPERSPACE LAYOUT	07.24.24
2	NO CHANGE	08.08.24
3	REVISED TO MATCH OTHER PROTOS	09.06.24
4		
5		
6		
7		

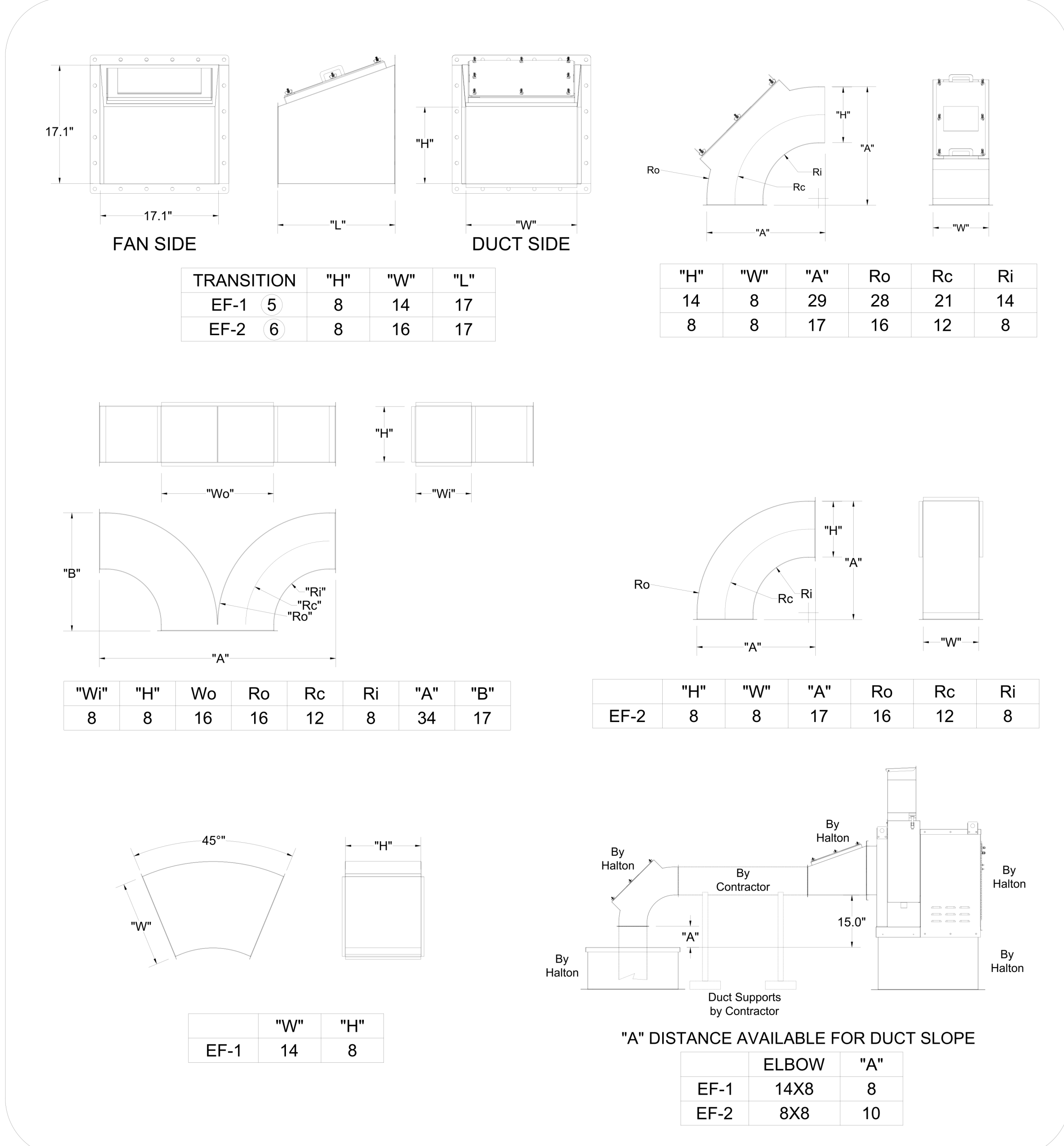
DRAWING NO.: U24-089-04

SHEET NO.: H-1.4



EXHAUST FAN #2 (EF-2)		
ITEM	DESCRIPTION	QTY
EF2-D1	KEFB EXHAUST FAN W/ ROOF CURB	1
EF2-D2	FAN TRANSITION W/ UL LISTED ACCESS PANEL 8X16	1
EF2-D3	DUCT ROOF CURB W/ CAP 26X26X12	2
EF2-D4	LONG SWEEPING WYE 8X8	1
EF2-D5	LONG SWEEPING ELBOW W/ UL LISTED ACCESS PANEL 8X8	2
EF2-D6	UL LISTED ACCESS PANEL 7X15	2
EF2-D7	LONG SWEEPING ELBOW 90° 8X8	2

EXHAUST FAN #1 (EF-1)		
ITEM	DESCRIPTION	QTY
EF1-D1	KEFB EXHAUST FAN W/ ROOF CURB	1
EF1-D2	FAN TRANSITION W/ UL LISTED ACCESS PANEL 14X8	1
EF1-D3	DUCT ROOF CURB W/ CAP 26X26X12	1
EF1-D4	LONG SWEEPING ELBOW W/ UL LISTED ACCESS PANEL 14X8	1
EF1-D5	UL LISTED ACCESS PANEL 7X15	2
EF1-D6	LONG SWEEPING ELBOW 45° 14X8	2



TRANSITION	"H"	"W"	"L"
EF-1	5	8	14
EF-2	6	8	16

"H"	"W"	"A"	Ro	Rc	Ri
14	8	29	28	21	14
8	8	17	16	12	8

"W"	"H"	Wo	Ro	Rc	Ri	"A"	"B"
8	8	16	16	12	8	34	17

"H"	"W"	"A"	Ro	Rc	Ri
8	8	17	16	12	8

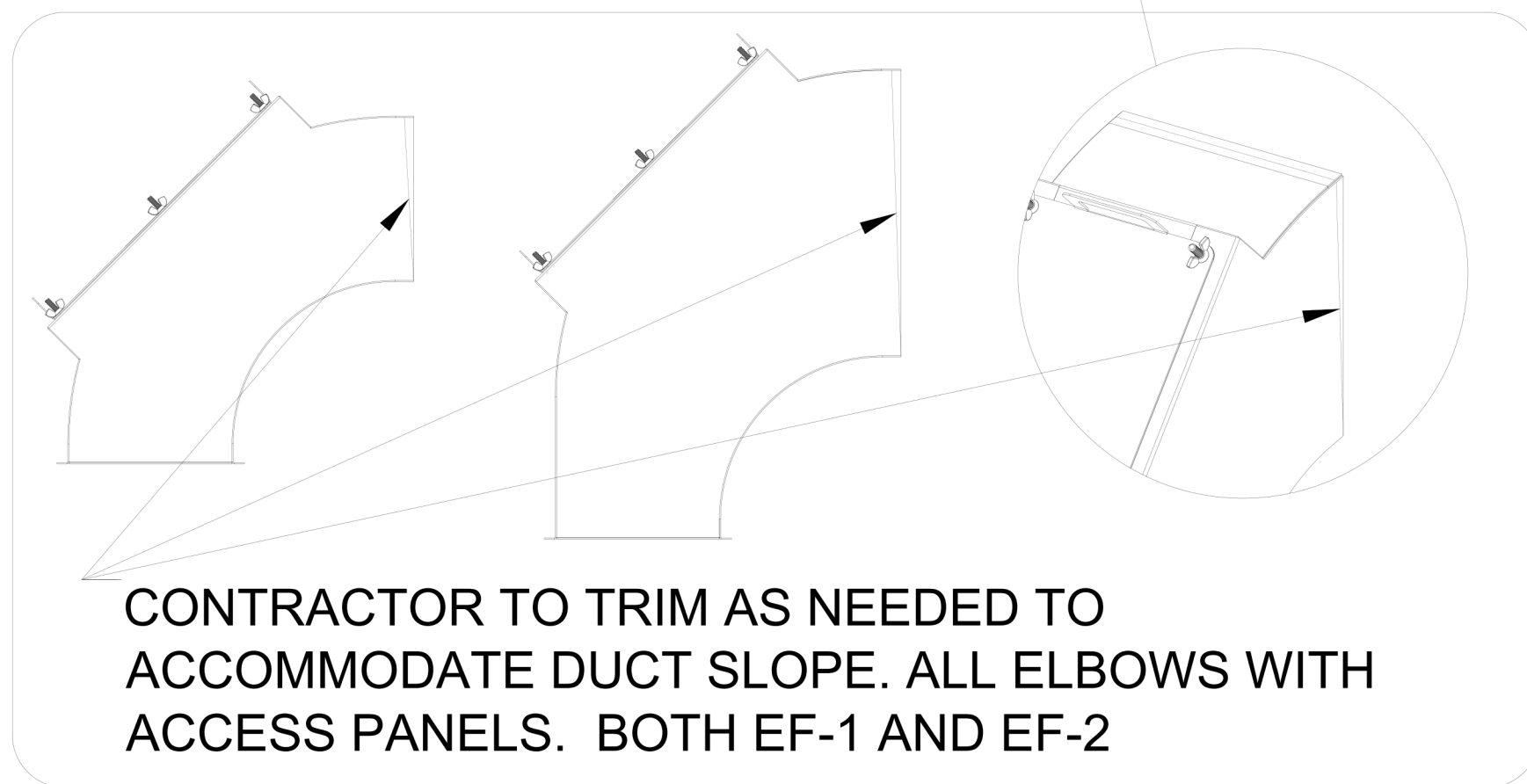
	"W"	"H"
EF-1	14	8

"A" DISTANCE AVAILABLE FOR DUCT SLOPE		
ELBOW	"A"	
EF-1	14X8	8
EF-2	8X8	10

ALL DUCTS AND FITTINGS DEPICTED BY HATCH AREAS ARE BY HVAC CONTRACTOR.

-CONTACT HALTON CUSTOMER SERVICE FOR HALTON PROVIDED ITEMS ONLY DUCT SECTIONS SPECIFIED BY NUMBERS AND SHOWN IN THE ABOVE CHART ARE PROVIDED BY HALTON

-ALL OTHER DUCTS AND FITTINGS BY HVAC CONTRACTOR. DUCT SECTIONS PROVIDED BY HVAC CONTRACTOR ARE SHOWN IN ORDER TO DEPICT TOTAL SYSTEM DESIGN. THE UL LISTED ACCESS PANELS PROVIDED BY HALTON MUST BE INSTALLED IN DUCT SECTIONS NOT PROVIDED BY HALTON BY HVAC CONTRACTOR.



CONTRACTOR TO TRIM AS NEEDED TO ACCOMMODATE DUCT SLOPE. ALL ELBOWS WITH ACCESS PANELS. BOTH EF-1 AND EF-2

SSAM-LSR

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REVISE AND RESUBMIT WITH NO CHANGES WITH CHANGES AS NOTED

APPROVED FOR FABRICATION: _____ DATE: _____

APPROVED BY: _____ DATE: _____

UL, NSF, ETL, UL, NSF, ETL

WEBSITE: www.halton.com

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY BELOW:

REV.	REVISION DESCRIPTION	DATE
1		
2		
3		
4		
5		
6		
7		

PROJECT: REVERSE NAME

LOCATION: PROTO SSAM-LS

DRAWN BY: SKK

SCALE: NOT TO SCALE

DATE: 09.06.24

DRAWING No.: U24-089-05

SHEET NO.: H-1.5

HALTON CO. (CANADA)
1021 BREVIK PLACE
MISSISSAUGA, ON L4W 3R7
1-905-624-0301

HALTON CO. (USA)
101 INDUSTRIAL DRIVE
SCOTTSDALE, KY 42164
1-270-237-5600

BY: SKK

DATE: 09.06.24

ADDED THIS SHEET