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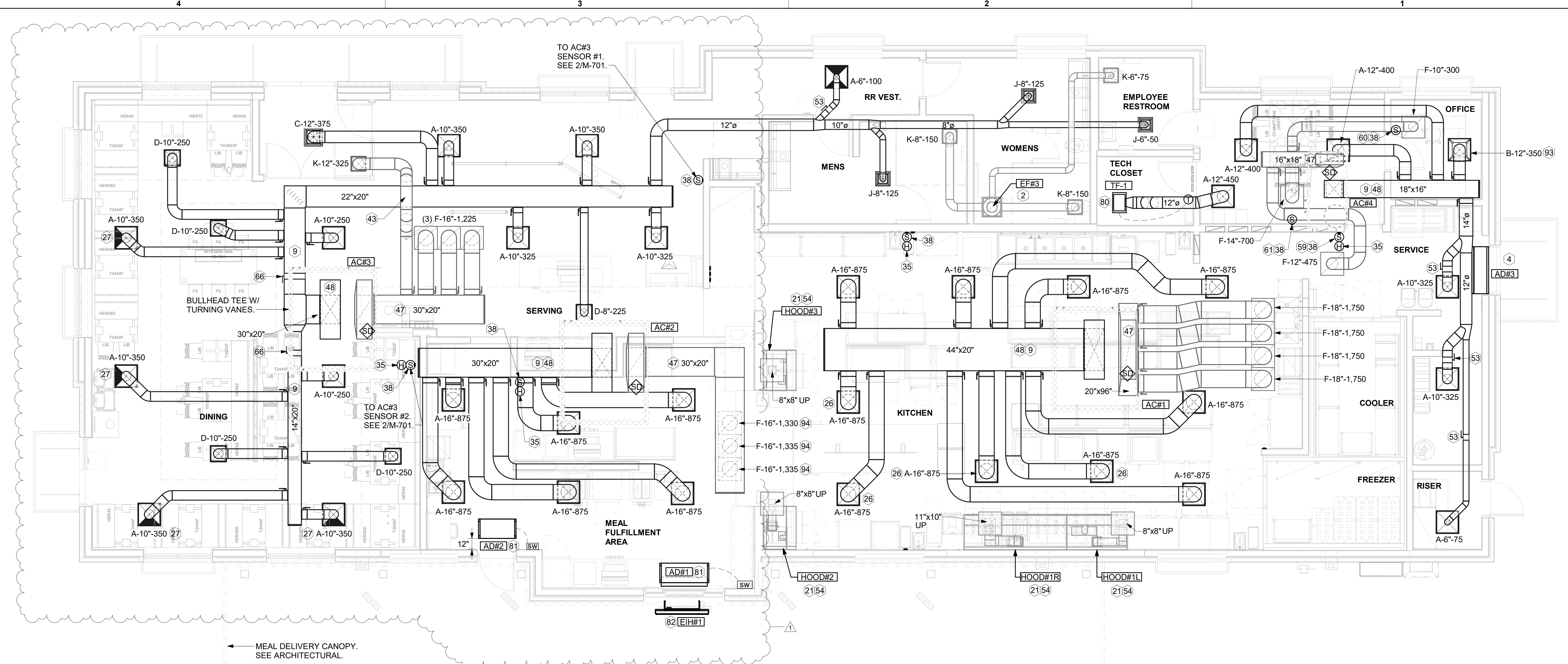


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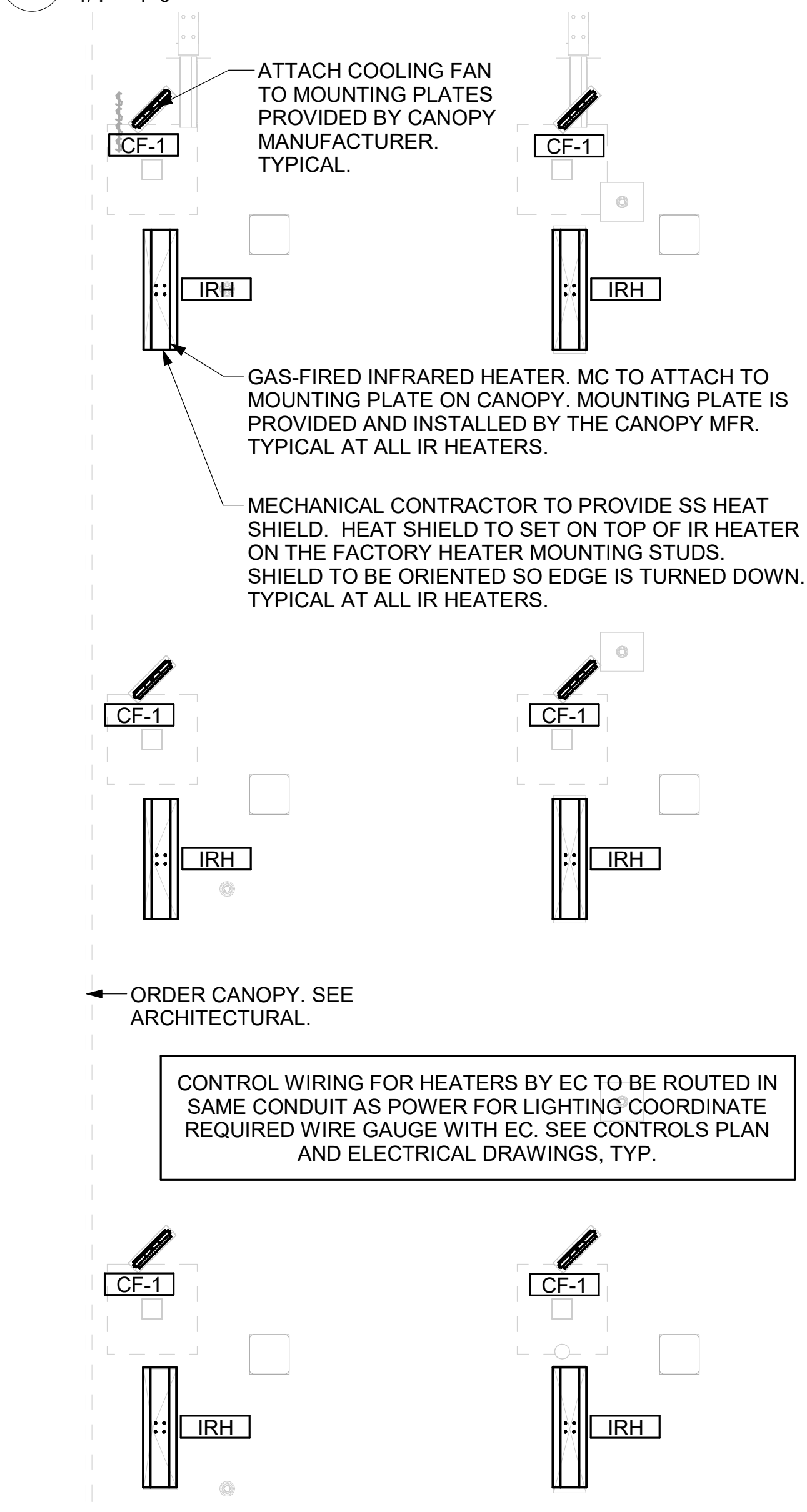
**FSR#05525**  
 BUILDING TYPE / SIZE: P14 LSR BN  
 RELEASE: 23.05  
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 CONSTRUCTION  
 REVISION SCHEDULE  
 NO. DATE DESCRIPTION  
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CONSULTANT PROJECT # 23135.EH.S  
 DATE 08/14/2023  
 DRAWN BY BLM  
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 SHEET  
 EQUIPMENT AND DUCTWORK PLAN  
 SHEET NUMBER

**M-101**



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



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

**AIR BALANCE SCHEDULE LENNOX**

Mark	SUPPLY AIR	RETURN AIR	OUTSIDE AIR	EXHAUST AIR	BUILDING POSITIVE PRESSURE
AC#1	8,750	7,000	1,750	0	
AC#2	5,250	4,000	1,250	0	
AC#3	5,250	4,000	1,250	0	
AC#4	1,875	1,475	400	0	
EF#1	0	0	0	1,913	
EF#2	0	0	0	1,402	
EF#3	0	0	0	375	
	21,125	16,475	4,650	3,690	960

**H.E.S. SYSTEM**  
 MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL SUNCOAST H.E.S. SYSTEM FOR ALL HOODS. SEE HOOD FAN/EQUIPMENT INTERLOCK WIRING DIAGRAM ON M-702 FOR MORE INFORMATION.

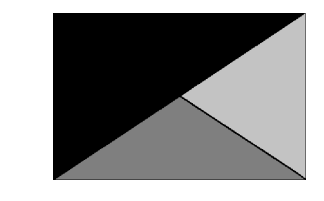
**KEY NOTES**

- 2 10X10 UP THRU ROOF.
- 4 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.
- 9 BRANCH TAKE-OFFS ARE NOT TO BE LOCATED CLOSER THAN 3'-0" FROM ANY OFFSET OR ELBOW INCLUDING THE SUPPLY AIR DROP FROM CURB.
- 21 HALTON KBD DAMPER AT HOOD COLLAR BY MECHANICAL CONTRACTOR. SEE HOOD ELEVATIONS ON M-201 FOR LOCATION.
- 26 MECHANICAL CONTRACTOR TO ADJUST PATTERN DEFLECTORS TO THROW STRAIGHT DOWN.
- 27 MECHANICAL CONTRACTOR TO CLOSE THE AIR PATTERN DEFLECTORS ON SHADED SIDE.
- 35 MOUNT HUMIDITY SENSOR ON WALL ABOVE SPACE TEMP SENSOR AND ROUTE WIRING TO UNIT ON ROOF.
- 38 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.
- 43 ROUTE DUCT WITHIN STRUCTURE.
- 47 TRANSITION IN VERTICAL DROP FROM FULL SIZE OF CURB OPENING TO SIZE SHOWN. SEE DETAIL 6/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).
- 48 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).
- 53 RUSKIN MDRS25 MVD W/LOCKING QUADRANT HANDLE.
- 54 SEE ELEVATIONS ON M-201 FOR CJ FAN DUCTING REQUIREMENT.
- 59 TO AC#4, SENSOR #1. SEE 2/M-701.
- 60 TO AC#4, SENSOR #2. SEE 2/M-701.
- 61 TO AC#4, SENSOR #3. SEE 2/M-701.
- 66 PROVIDE RUSKIN CD35 MANUAL BALANCING DAMPER WITH 6" MAXIMUM BLADE WIDTH. OPPOSED BLADE ACTION. LOCKING QUADRANT HANDLE WITH 2" STANDOFF AND 16 GA GALVANIZED BLADE AND FRAME CONSTRUCTION.
- 80 CEILING MOUNTED RECIRCULATING FAN. ROUTE 12" DUCT FROM FAN TO DISCHARGE AT TYPE 'A' DIFFUSER SHOWN.
- 81 MOUNT AIR DOOR IN CEILING, CENTERED ON DRIVE-THRU/MFA DOOR OPENING. REFER TO WIRING DIAGRAM ON SHEET M-702 FOR MORE INFORMATION.
- 82 ELECTRIC HEATER. MC TO MOUNT ON WALL PER MANUFACTURER'S RECOMMENDATIONS.
- 93 MAXIMUM HEATING AND COOLING AIRFLOWS INDICATED. SET MINIMUM AIRFLOW TO 25 CFM.
- 94 TAKE OFF WITH DAMPER AT THE BOTTOM OF DUCTWORK, TYP.

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11/27/23

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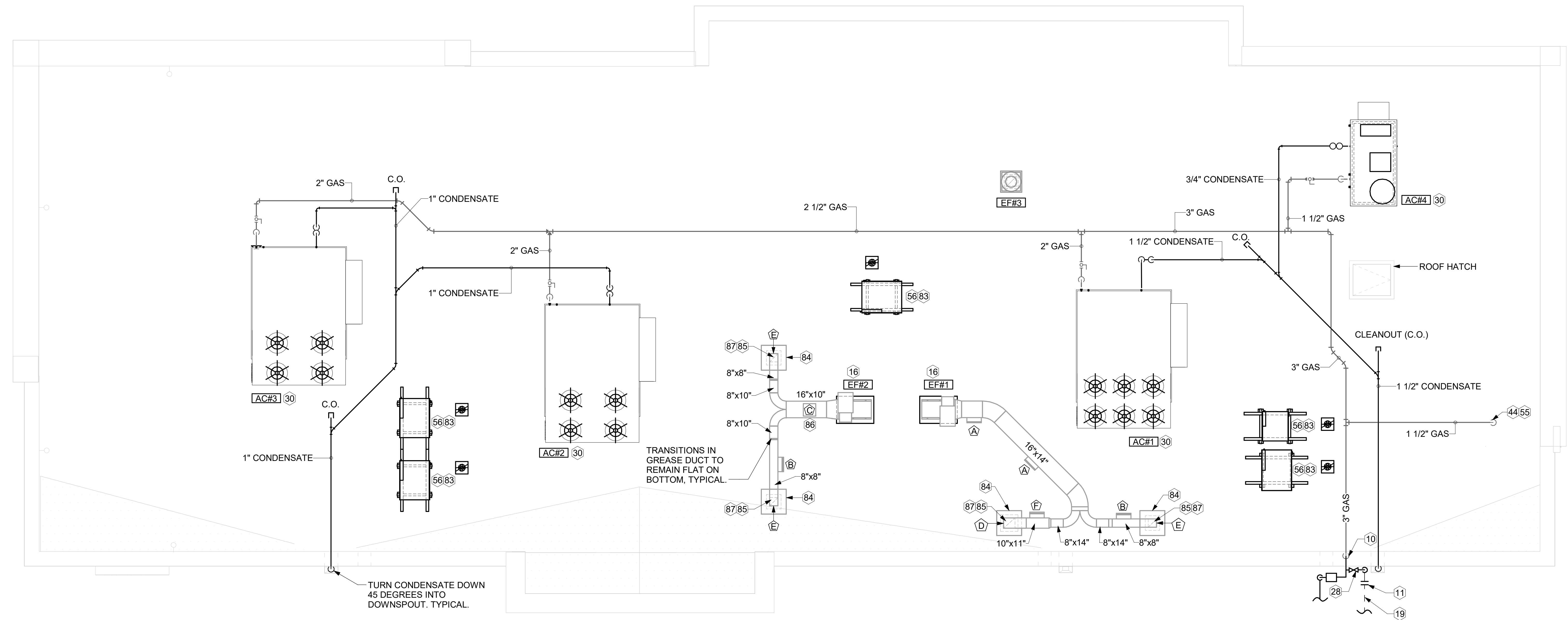
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 SHEET EQUIPMENT ROOF PLAN

SHEET NUMBER  
**M-102**



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

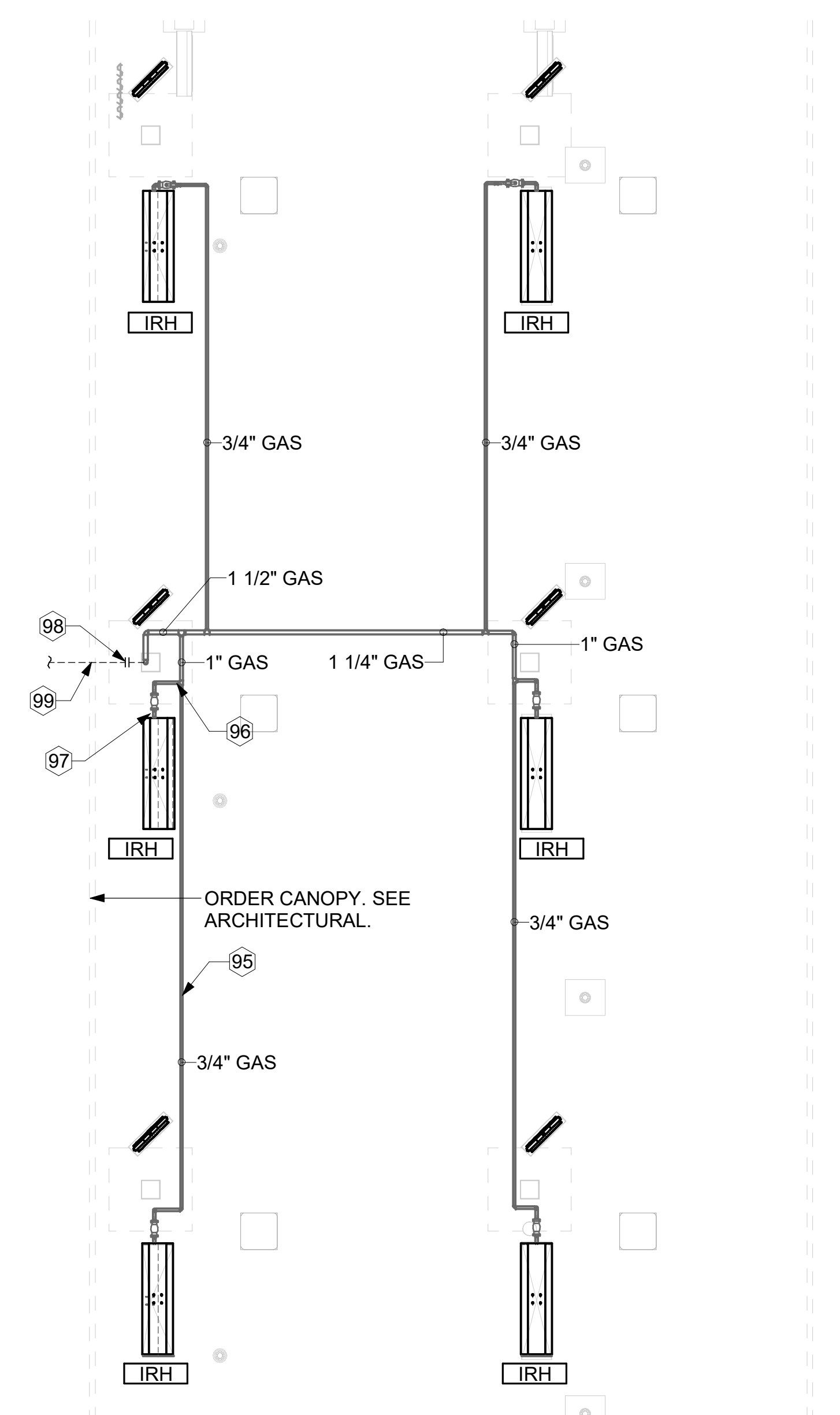
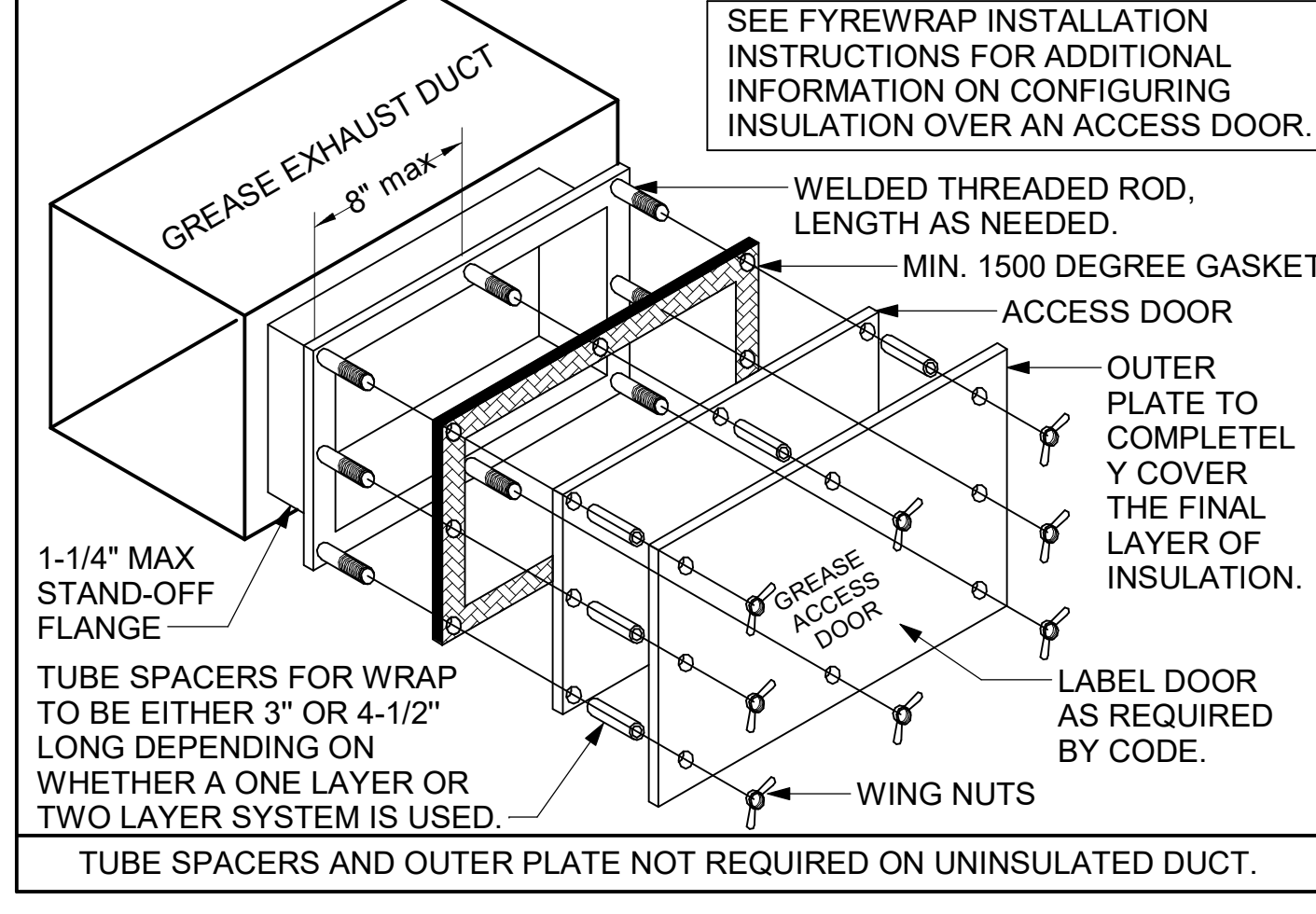
**KEY NOTES**

- 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. SEE DETAIL 1M-501.
- 19 1-1/2" GAS BELOW GRADE TO ORDER CANOPY, SEE DETAIL 2 THIS SHEET.
- 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."
- 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 2M-502 FOR MORE INFORMATION ON CONSTRUCTION AND PENETRATION.
- 55 SEE ARCHITECTURAL DETAILS FOR ROOFTOP PIPE PENETRATIONS.
- 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 DISCHARGE OF CONDENSING UNITS INTO CONDENSER SECTION OF ROOFTOP UNITS, TYP.
- 84 ROOF CURB FOR DUCT PENETRATION. SEE DETAIL 1/M-501.
- 85 TURN DOWN THRU ROOF. SEE M-101 FOR CONTINUATION.
- 86 ACCESS DOOR ON TOP OF DUCT.
- 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-502, TYPICAL.
- 97 SEE DETAIL 1/M-502 FOR PIPING AT IRH, TYPICAL.
- 98 GAS TRANSITION FITTING TO GAS PIPE STUB-OUT. GAS PIPING INSIDE COLUMN AND STUB-OUTS BY CANOPY MFR. JOIN UNDERGROUND POLYETHYLENE GAS PIPING TO TRANSITION FITTING WITH ELSTER PERMASERT COUPLING. CANOPY MFR'S EXPOSED STEEL PIPING BELOW GRADE SHALL BE PROTECTED WITH TWO COATS ASPHALT TUM BASE PAINT AND POLY SLEEVE.
- 99 1-1/2" GAS B/G TO METER SEE 1/M-102.

3. GAS LOAD SCHEDULE		
EQUIPMENT	GAS LOAD	
AC#1	260,000 BTUS	
AC#2	360,000 BTUS	
AC#3	360,000 BTUS	
AC#4	108,000 BTUS	
GIH (6 @ 50,000 BTU EA.)	300,000 BTUS	
WATER HEATER	398,000 BTUS	
<b>TOTAL CONNECTED LOAD</b>	<b>1,786,000 BTUS</b>	
REMARKS:	1) EQUIVALENT TO 1,786.0 CFH 2) 7" W.C. DELIVERY PRESSURE 3) DEVELOPED LENGTH: 175 FT (METER TO AC#3) 4) SIZING BASED ON IFGC TABLE 402.4(2).	

GREASE ACCESS DOOR SCHEDULE			
MARK	OPENING SIZE	DOOR SIZE	REMARKS
A	11.5H X 14W	13.5H X 16W	1
B	5.5H X 14W	7.5H X 16W	1
C	12H X 12W	14H X 14W	1
D	8H X 14W	10H X 16W	1
E	6H X 14W	8H X 16W	1
F	8.5H X 14W	10.5H X 16W	1

1. 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 ASSEMBLY SHALL BE WELDED IN PLACE TO THE GREASE EXHAUST DUCT AND THE ACCESS DOOR SHALL BE SECURED WITH THUMB SCREWS. ACCESS DOORS SHALL BE SEALED WITH A MINIMUM 1500 DEGREE GASKET MATERIAL EQUIVALENT TO THAT MANUFACTURED BY BRENTON INDUSTRIES, INC (800) 382-2491.



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

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**ROOFTOP UNIT SCHEDULE**

MARK	TOTAL COOLING MBH	SENSIBLE COOLING MBH	HEATING INPUT MBH	HEATING OUTPUT MBH	SUPPLY	OA	HP	# OF FANS	ESP	EER	IEER/SEER	VOLTAGE	PHASE	MCA	MOCP	MODEL	MFR	REMARKS
AC#1	287.5	212.8	260	211	8,750 CFM	1,750 CFM	7.5 hp	1	0.8 in-wg	10.3	14.5	208 V	3	137 A	150 A	LGT300S4M	LENNOX	1,3,4,5,6,7,8,9,10,11,12,13,14,15,16
AC#2	177.4	128.6	360	292	5,250 CFM	1,250 CFM	5 hp	1	0.8 in-wg	12	15	208 V	3	79 A	90 A	LGT180H4M	LENNOX	1,3,4,5,6,7,8,9,10,11,12,13,14,15,16
AC#3	177.4	128.6	360	292	5,250 CFM	1,250 CFM	5 hp	1	0.8 in-wg	12	15	208 V	3	79 A	90 A	LGT180H4M	LENNOX	1,3,4,5,6,7,8,9,10,11,12,13,14,15,16
AC#4	61.3	48.2	108	87	1,875 CFM	400 CFM	1 hp	1	0.8 in-wg	12.7	17.1	208 V	3	28 A	40 A	LGT060H4E	LENNOX	2,3,4,5,6,7,8,9,10,11,12,13,14,15,16

NOTES

- MECHANICAL CONTRACTOR TO VERIFY TRANE SUBMITTAL WITH CONSTRUCTION DOCUMENTS. NATIONAL ACCOUNTS - 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-702 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 INSTALLED COIL HAIL GUARD.
- FRESH AIR TEMPERING KIT.
- HOT GAS DEHUMIDIFICATION OPTION WITH WALL MOUNTED HUMIDITY SENSOR.
- FACTORY PROVIDED, FIELD INSTALLED BELT TENSIONER.
- FACTORY CONFIGURED PHASE LOSS PROTECTION.
- FACTORY INSTALLED CONDENSATE PAN DRAIN OVERFLOW SWITCH.
- 100K SCCR RATING.

**HOOD SCHEDULE**

MARK	EXHAUST CFM	SP @ TAB PORT	CAPTURE JET CFM & S.P.	TYPE	COLLAR SIZE	WIDTH	DEPTH	HEIGHT	MANUFACTURER	MODEL	REMARKS
HOOD#1L	709 CFM	0.13 in-wg	47 @ 0.30"	BACKSHELF	8"X8"	63"	37"	38"	HALTON	KVL-2 IC	1
HOOD#1R	1,204 CFM	0.13 in-wg	80 @ 0.30"	BACKSHELF	14"X8"	107"	37"	38"	HALTON	KVL-2 IC	1
HOOD#2	701 CFM	0.3 in-wg	30 @ 0.29"	BACKSHELF	8"X8"	45"	34"	38"	HALTON	KVL-C IC	1
HOOD#3	701 CFM	0.3 in-wg	30 @ 0.29"	BACKSHELF	8"X8"	42"	34"	38"	HALTON	KVL-C IC	1

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

- REFER TO HOOD SHOP DRAWINGS FOR HOOD CONSTRUCTION AND OPTIONS. HOOD SHOP DRAWINGS ARE INCLUDED FOR REFERENCE ON SHEETS MH-1.1 AND MH-1.2.

**ELECTRIC HEATER SCHEDULE**

MARK	HEATING INPUT	FRAME LENGTH	FRAME WIDTH	FRAME DEPTH	MOUNTING TYPE	VOLTAGE	PHASE	FLA	MOCP	MODEL	PART NUMBER	MANUFACTURER
EIH#1	6 kW	56"	8.5"	3.5"	WALL BRACKET	208 V	1	29 A	40 A	6000W	BH0420035	BROMIC

NOTES

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

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.

**FAN SCHEDULE**

MARK	FAN CFM	ESP	MOTOR RPM	HP	AREA SERVED	VOLTAGE	PHASE	FLA	MOCP	MODEL	MANUFACTURER	REMARKS
CF-1	1,900	0.01 in-wg	1,625	0.1 hp	OUTDOOR CANOPY	120 V	1	1.1 A	20 A	U-18-TE-HD	TPI	20,21
EF#1	1,913	0.75 in-wg	1,331	0.75 hp	HOOD#1	120 V	1	13.8 A	25 A	150 CPS	LOREN COOK	1,2,3,4,5,6,7,8,9,10,11
EF#2	1,402	0.95 in-wg	1,199	0.75 hp	HOOD#2 & HOOD#3	120 V	1	13.8 A	25 A	150 CPS	LOREN COOK	1,2,3,4,5,6,7,8,9,10,11
EF#3	375	0.375 in-wg	1,550	0.125 hp	RESTROOMS	120 V	1	9.5 A	20 A	ACED-90C15DH	LOREN COOK	3,11,12,13,14,15,16
TF-1	450	0.3 in-wg	1,144	0.33 hp	TECH CLOSET	120 V	1	4.4 A	20 A	GCVF-700	LOREN COOK	17, 18, 19

NOTES

- GREASE EXHAUST FAN RPM BASED ON 80 DEGREE F AIR AT 1000 FEET ABOVE SEA LEVEL.
- GREASE EXHAUST FANS TO BE U.L. 762 LISTED.
- NATIONAL ACCOUNT - NO SUBSTITUTIONS PERMITTED.

REMARKS

- UPBLAST ARRANGEMENT 10, CCW ROTATION. SEE PLANS TO CONFIRM CONFIGURATION.
- FACTORY ALUMINUM FAN WHEEL.
- FACTORY INSTALLED PREWIRED NON-FUSED DISCONNECT.
- FACTORY STEEL INLET FLANGE AND INLET COMPANION FLANGE.
- 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 AND SPARE BELT.
- FACTORY STEEL OUTLET COMPANION FLANGE.
- INTEGRAL THERMAL OVERLOAD WITH AUTOMATIC RESET.
- BIRDSCREEN.
- BACKDRAFT DAMPER IN DUCT BY MECHANICAL CONTRACTOR AS SHOWN ON 5/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 RECOMMENDATION.
- PROVIDE WITH ON/OFF SWITCH.

**AIR DOOR SCHEDULE**

MARK	CFM	VELOCITY (FPM)	HEATING (KW)	MOTOR HP	MCA	MOCP	VOLT	PH	AREA SERVED	MODEL	MANUFACTURER	REMARKS
AD#1	1,543	2,338	10 KW	0.75 hp	31.4 A	40 A	208	3	DRIVE THRU	CHA-1-48E	POWERED AIRE	1,2,3,5
AD#2	1,197	2,443	10 KW	0.75 hp	31.4 A	40 A	208	3	SERVING	CHA-1-36E	POWERED AIRE	1,2,3,4
AD#3	3,867	4,218	0 KW	0.75 hp	8 A	20 A	120	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 DETAIL, AIR CURTAIN WIRING DIAGRAM.
- 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.

**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	VARITHERM PLAQUE DIFFUSER	OFFICE	12"	24"x24"	LAY-IN	1,7,8
C	PRICE MODEL SMCD STEEL SUPPLY AIR DIFFUSER FIELD ADJUSTABLE AIR PATTERN CONTROLLERS.	ENTRY	14"x14"	19"x19"	BEVELLED	1,3,5,6
D	PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS.	DINING/ KITCHEN	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	10"x10"	15"x15"	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-6 BACKPAN.
- PROVIDE RELIEF COLLAR ACCESSORY FOR VAV DIFFUSER.

**GAS FIRED INFRARED HEATER SCHEDULE**

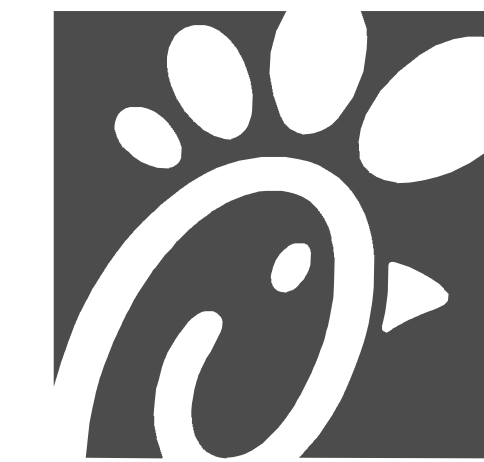
MARK	INPUT (MBH)	FRAME LENGTH	FRAME WIDTH	FRAME DEPTH	MOUNTING TYPE	MODEL	MANUFACTURER
IRH	50	48"	13 1/2"	9 3/4"	BRACKET	WB50-N7-CM	SPACE RAY

NOTES

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

REMARKS

- STEEL BURNER WITH CERAMIC BURNER TILES.
- 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. MOUNT TO CANOPY DECK, FACING FORWARD, 12" LATERALLY FROM THE LONG SIDE OF THE HEATER.
- STAINLESS STEEL HEAT SHIELDS PROVIDED BY TOM BARROW COMPANY.



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**NEWBURGH FSU**  
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 NEWBURGH, IN 47630

**FSR#05525**  
 BUILDING TYPE / SIZE: P14 LSR BN  
 RELEASE: 23.05  
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**REVISION SCHEDULE**  
 NO. DATE DESCRIPTION  
 1 11/13/2023 Designates

CONSULTANT PROJECT # 23135.EH.S  
 DATE 08/14/2023  
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**SHEET**  
 HVAC EQUIPMENT SCHEDULES  
 SHEET NUMBER

**M-601**

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**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 ROOF-TOP SINGLE PACK 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 RUN 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 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 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.
- 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 FYREWREAP. INSULATION ON ACCESS DOORS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTALLATION RECOMMENDATIONS. UNIFRAX FYREWREAP 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 18" 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 UNDER TO TEXTRON SDS EDT265, LENGTH AS REQUIRED TO FULLY PENETRATE THE STUD.
10. MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL SUNCOAST H.E.S. SYSTEM FOR ALL HOODS. SEE HOOD FAN/EQUIPMENT INTERLOCK WIRING DIAGRAM ON M-702 FOR MORE INFORMATION.

**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 $\phi$ FLEXIBLE $\phi$ 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		GAS INFRARED HEATER (TYP.)
	AIR DOOR SWITCH		BELOW GRADE
	ELECTRIC INFRARED HEATER		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.

**VENTILATION CALCULATIONS**

ZONE	PEOPLE OUTDOOR AIR RATE (Rp)	ZONE POPULATION (Pz)	AREA OUTDOOR AIR RATE (Ra)	ZONE FLOOR AREA (Az)	OUTDOOR AIRFLOW RATE REQ'D (Vbz)
CORRIDOR (ENTRYWAYS)	--	--	0.06	179	11
SALES (SERVING AREA)	7.5	11	0.12	709	168
SALES (DINING AREA)	7.5	8	0.12	504	120
DINING (CAFETERIA, FAST FOOD)	7.5	90	0.18	895	836
OFFICE	5	1	0.06	68	9
STORAGE	--	--	0.12	239	29
TEAM MEMBER (RECEPTION)	5	5	0.06	175	35
KITCHEN	7.5	26	0.12	1316	353

ZONE 1 - KITCHEN = 353 CFM.  
353 CFM (Vbz) / 0.8 = 441 CFM (Voz)  
AC#1 PROVIDES 1,750 CFM OUTSIDE AIR TO ZONE 1.

ZONE 2 - SALES (SERVING AREA) = 168 CFM.  
168 CFM (Vbz) / 0.8 = 211 CFM (Voz)  
AC#2 PROVIDES 1,250 CFM OUTSIDE AIR TO ZONE 2.

ZONE 3 - DINING + CORRIDORS + SALES (DINING AREA) = 967 CFM.  
967 CFM (Vbz) / 0.8 = 1,209 CFM (Voz)  
AC#3 PROVIDES 1,250 CFM OUTSIDE AIR TO ZONE 3.

ZONE 4 - TEAM MEMBER (RECEPTION) + STORAGE + OFFICE = 73 CFM.  
73 CFM (Vbz) / 0.8 = 93 CFM (Voz)  
AC#4 PROVIDES 400 CFM OUTSIDE AIR TO ZONE 4.

KITCHEN IS 1,316 SQUARE FEET. AT 0.70 CFM EXHAUST REQUIRED PER SQ. FT. KITCHEN IS REQUIRED TO EXHAUST 921 CFM. KITCHEN EXHAUSTS 3,315 CFM.

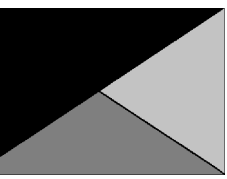
CALCULATIONS ARE BASED ON TABLE 403.3.3.1, 2018 INTERNATIONAL MECHANICAL CODE.  
(FOR OA RATE: Vbz = RpPz + RaAz || FOR ZONE OA RATE: Voz = Vbz/0.8)

**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.).



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11/27/23

**CHICK-FIL-A**  
**NEWBURGH FSU**

8091 PARK PLACE DRIVE  
NEWBURGH, IN 47630

**FSR#05525**

BUILDING TYPE / SIZE: P14 LSR BN  
RELEASE: 23.05  
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**REVISION SCHEDULE**

NO.	DATE	DESCRIPTION

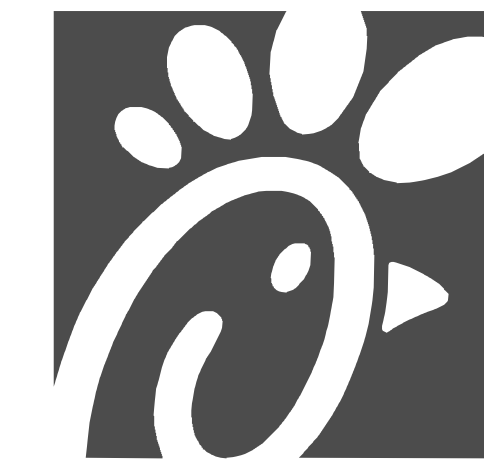
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DATE 08/14/2023  
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GENERAL NOTES, LEGENDS, SYMBOLS, AND ABBREVIATIONS

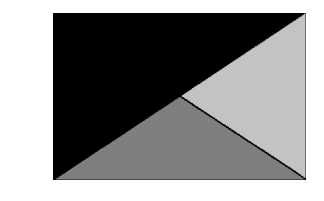
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**M-001**

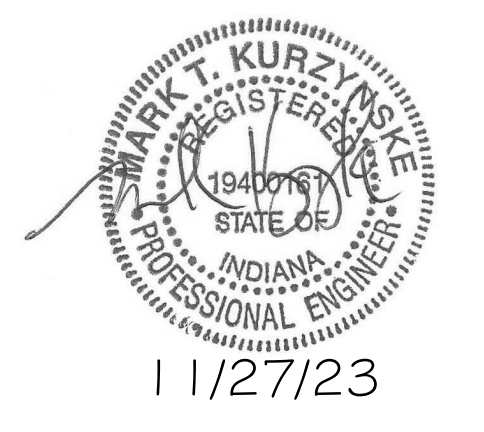


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11/27/23

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**FSR#05525**

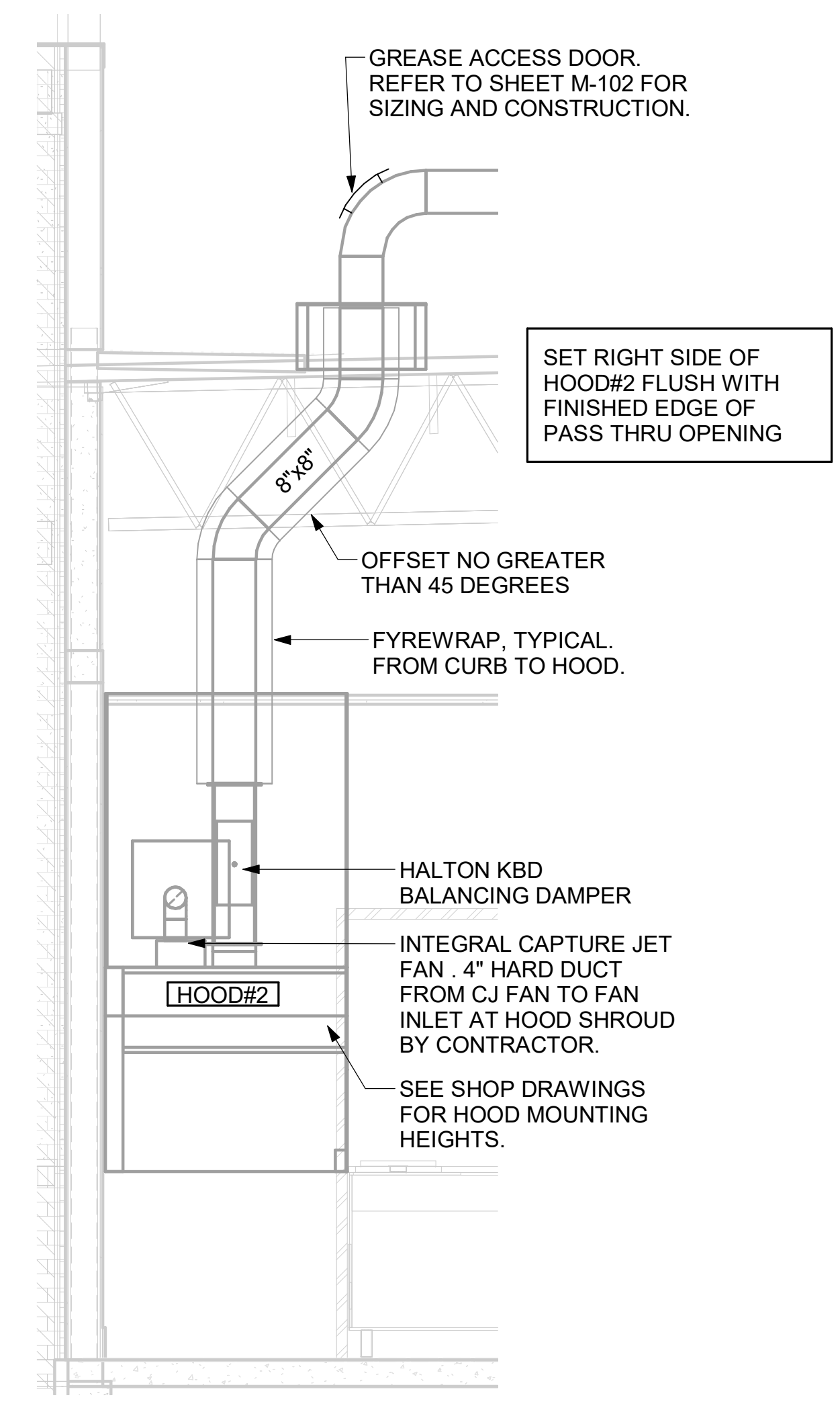
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RELEASE: 23.05  
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NO.	DATE	DESCRIPTION

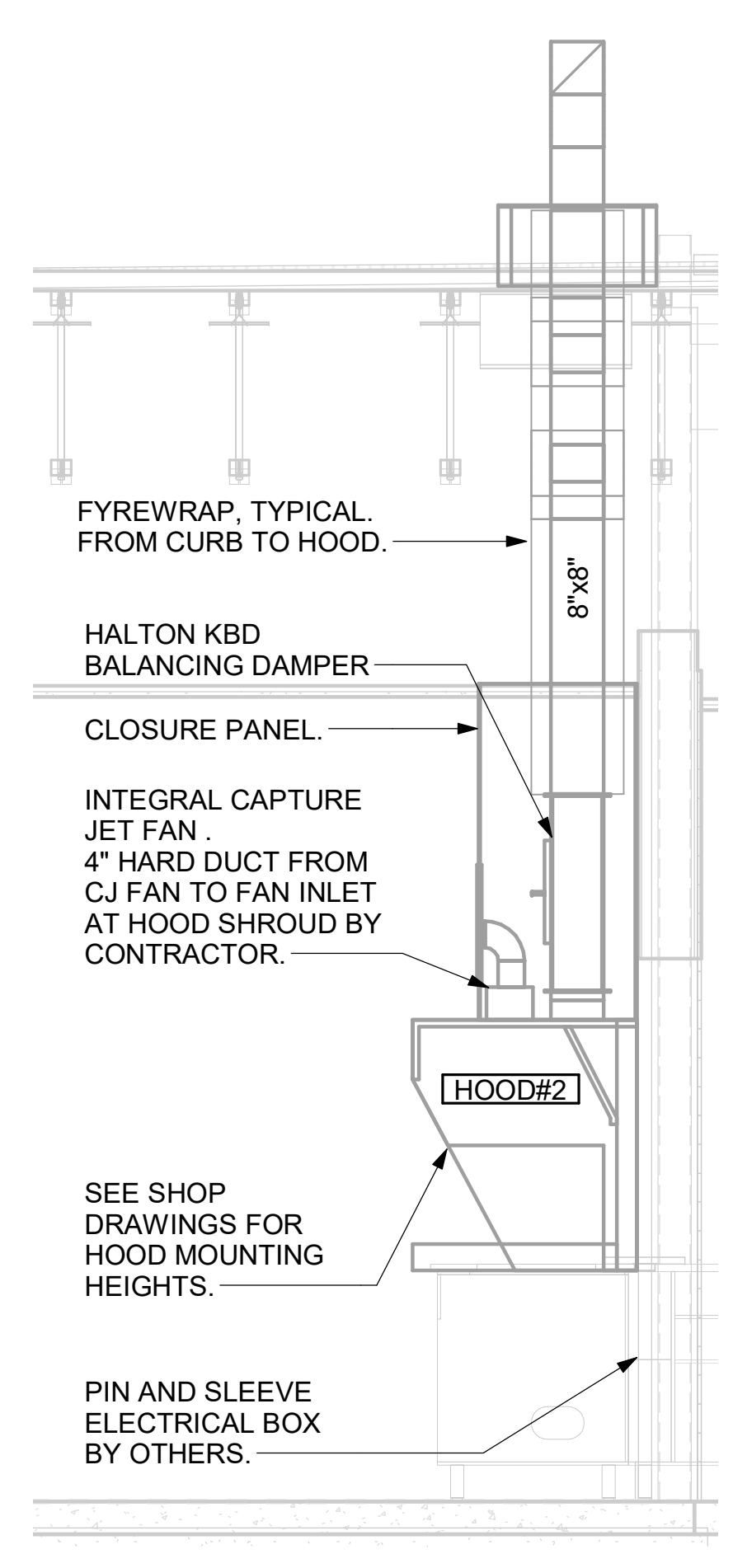
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SHEET  
EXHAUST HOOD ELEVATIONS

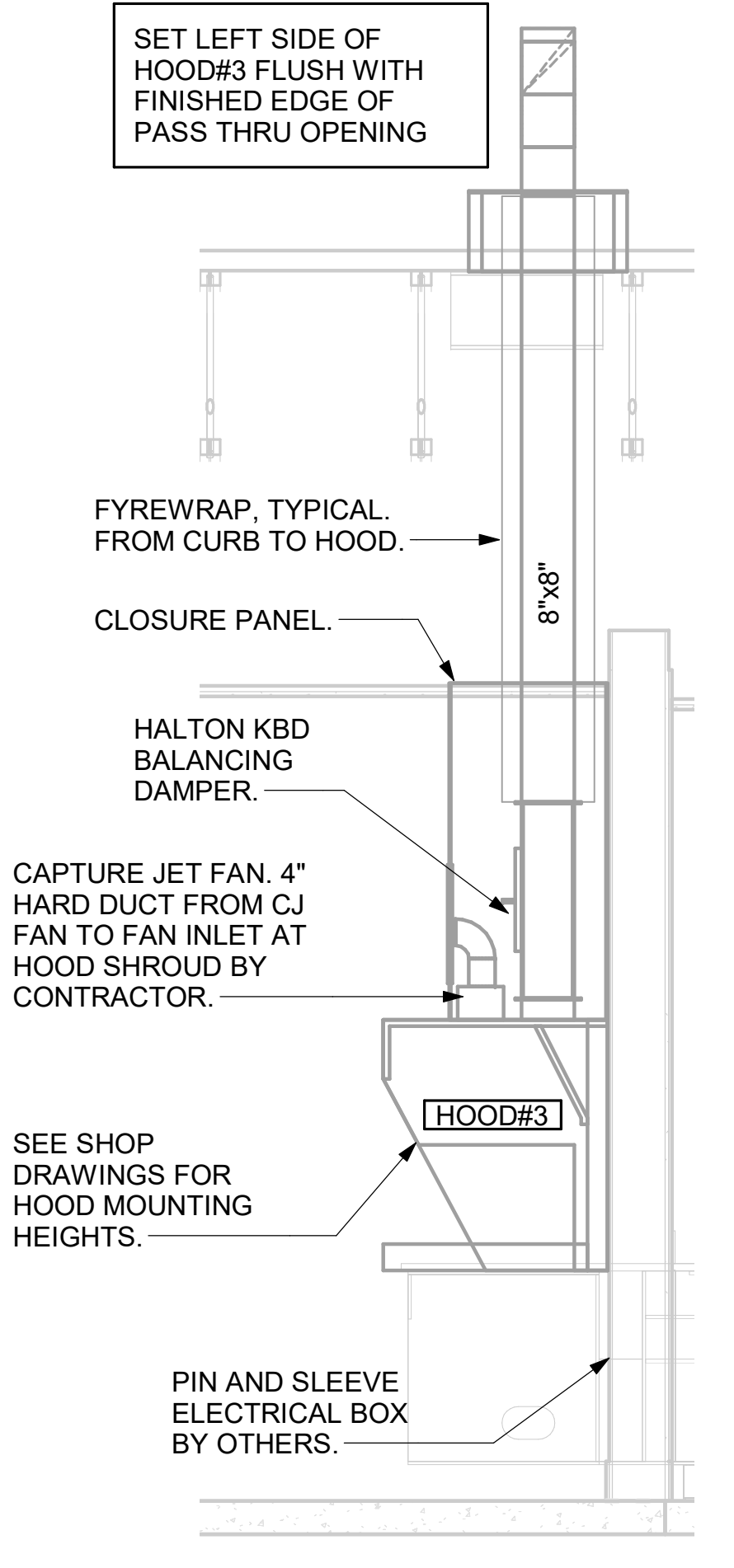
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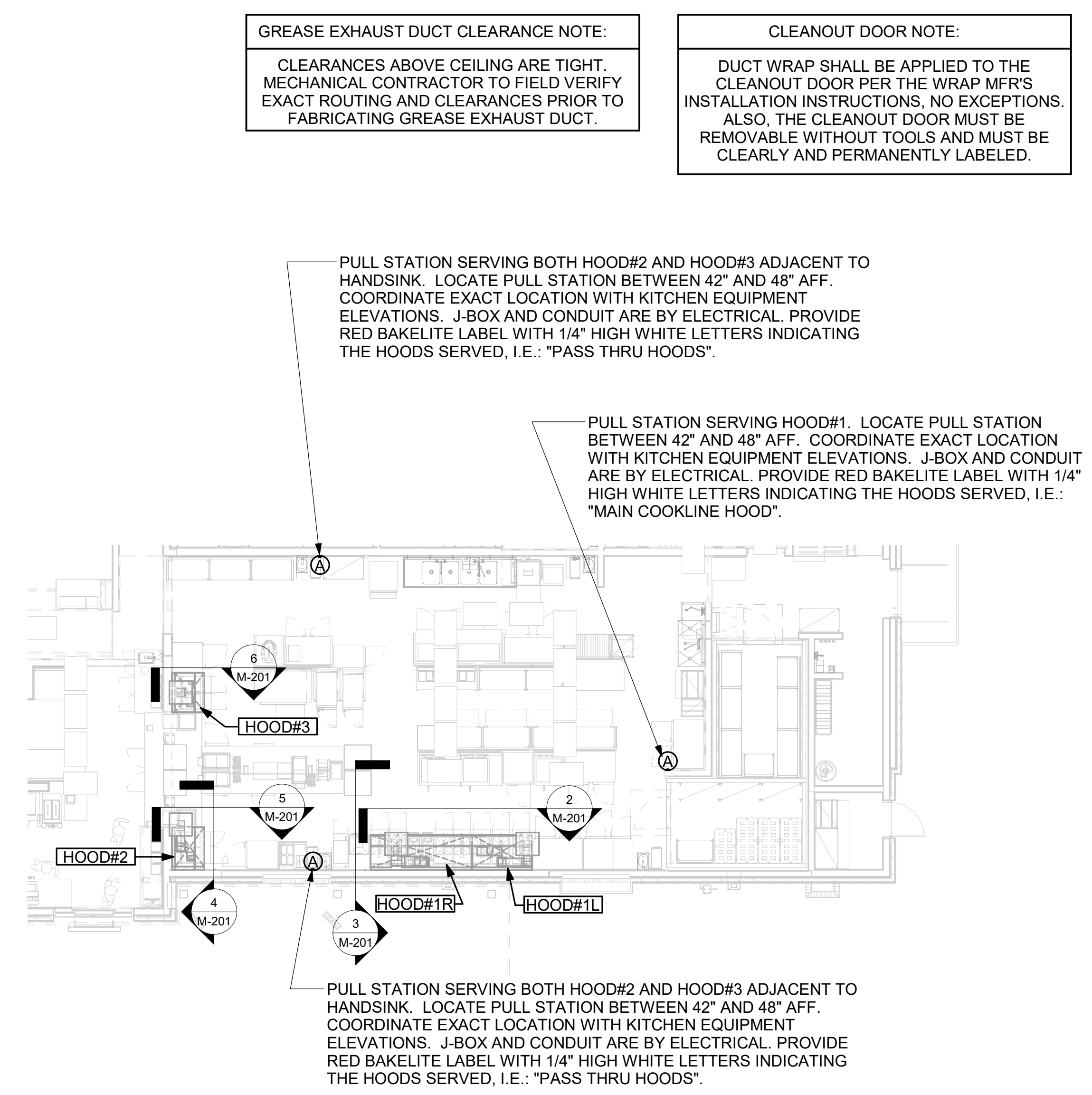
4 HOOD ELEVATION - HOOD#2 - FRONT  
NOT TO SCALE



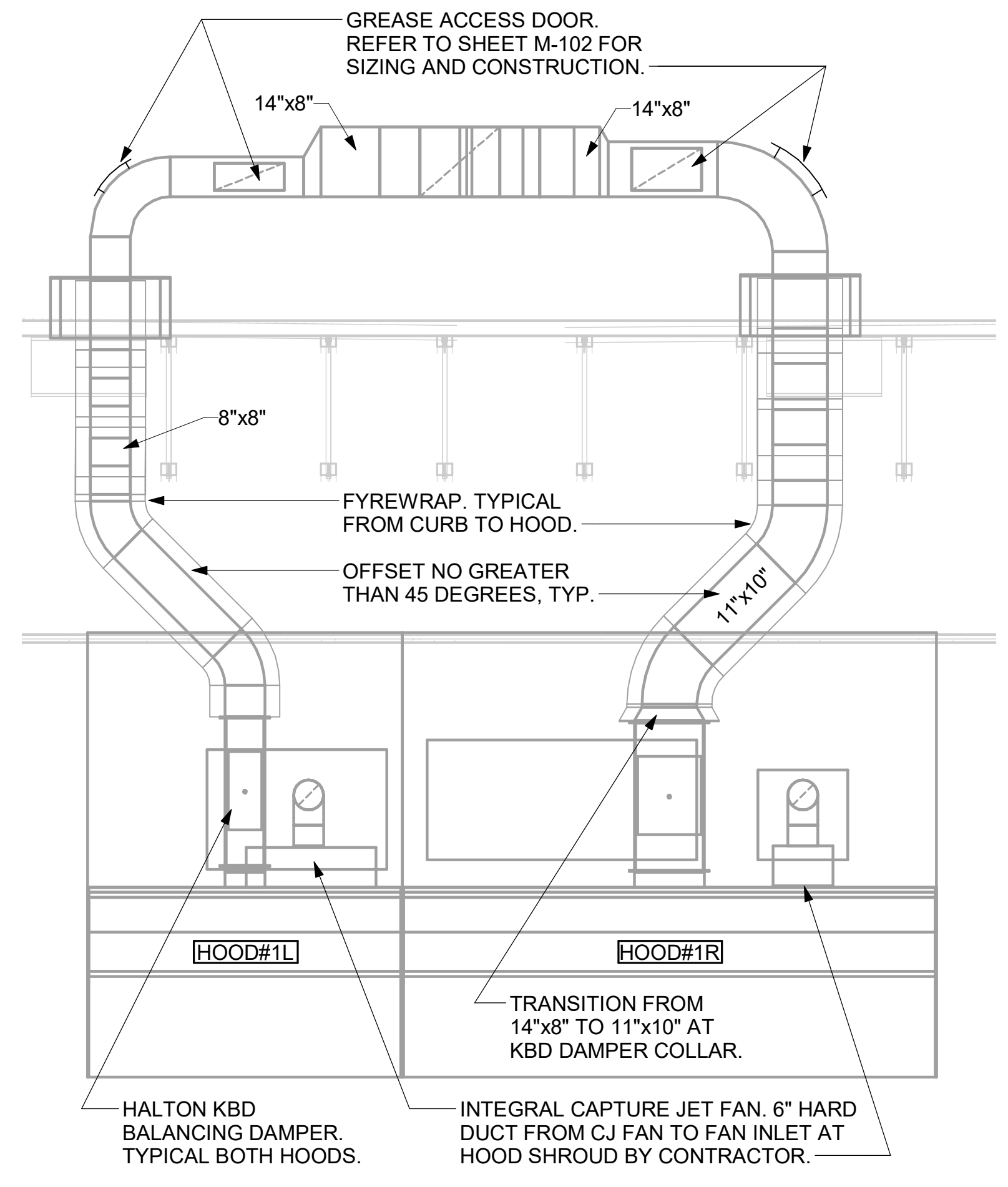
5 HOOD ELEVATION - HOOD#2 - SIDE  
NOT TO SCALE



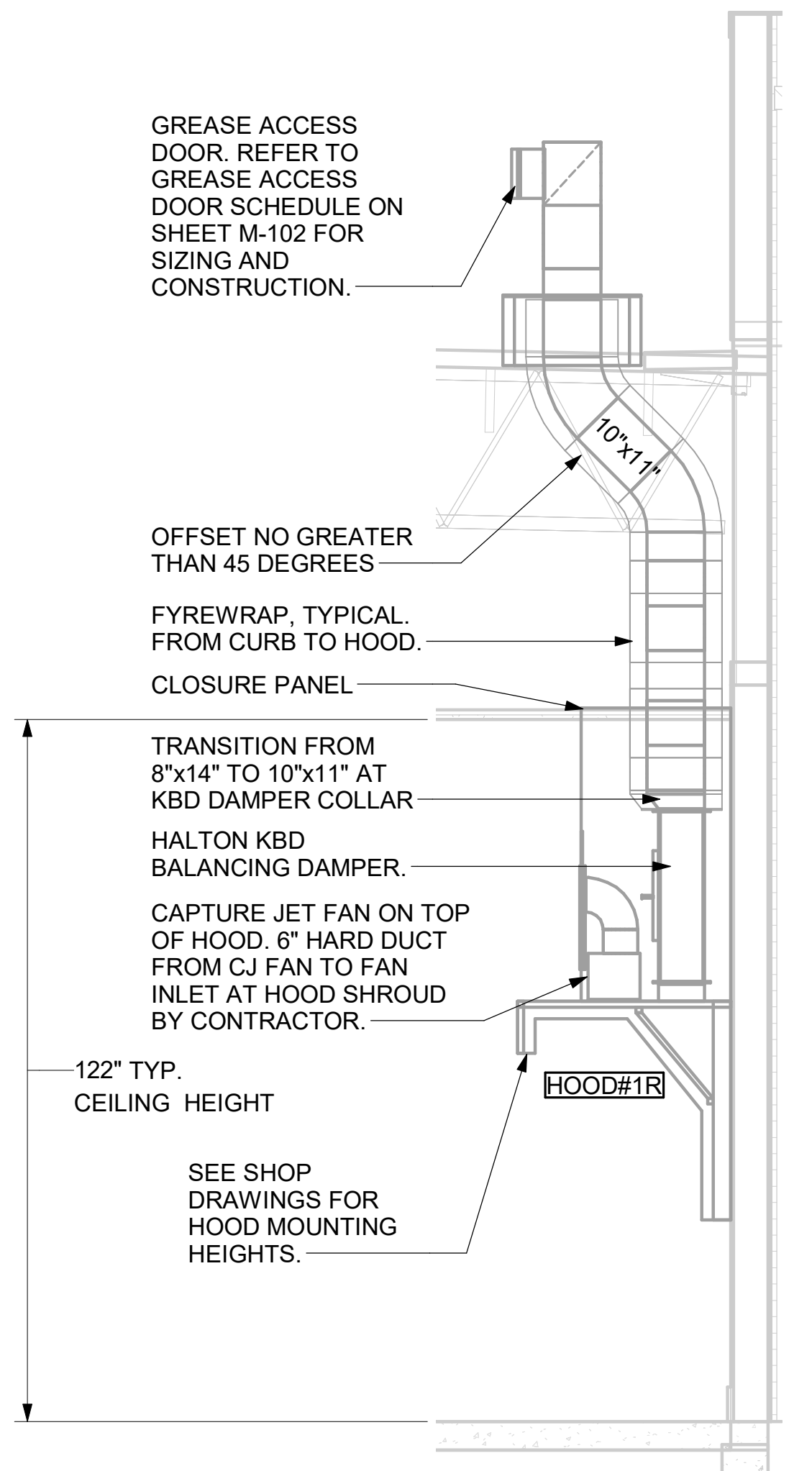
6 HOOD ELEVATION - HOOD#3  
NOT TO SCALE



1 HOOD LAYOUT  
NOT TO SCALE



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

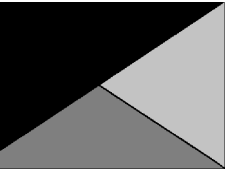


3 HOOD ELEVATION - HOOD#1 - SIDE  
NOT TO SCALE

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11/27/2023 3:17:48 PM  
30-LSR-05525-M-201-EXHAUST HOOD ELEVATIONS



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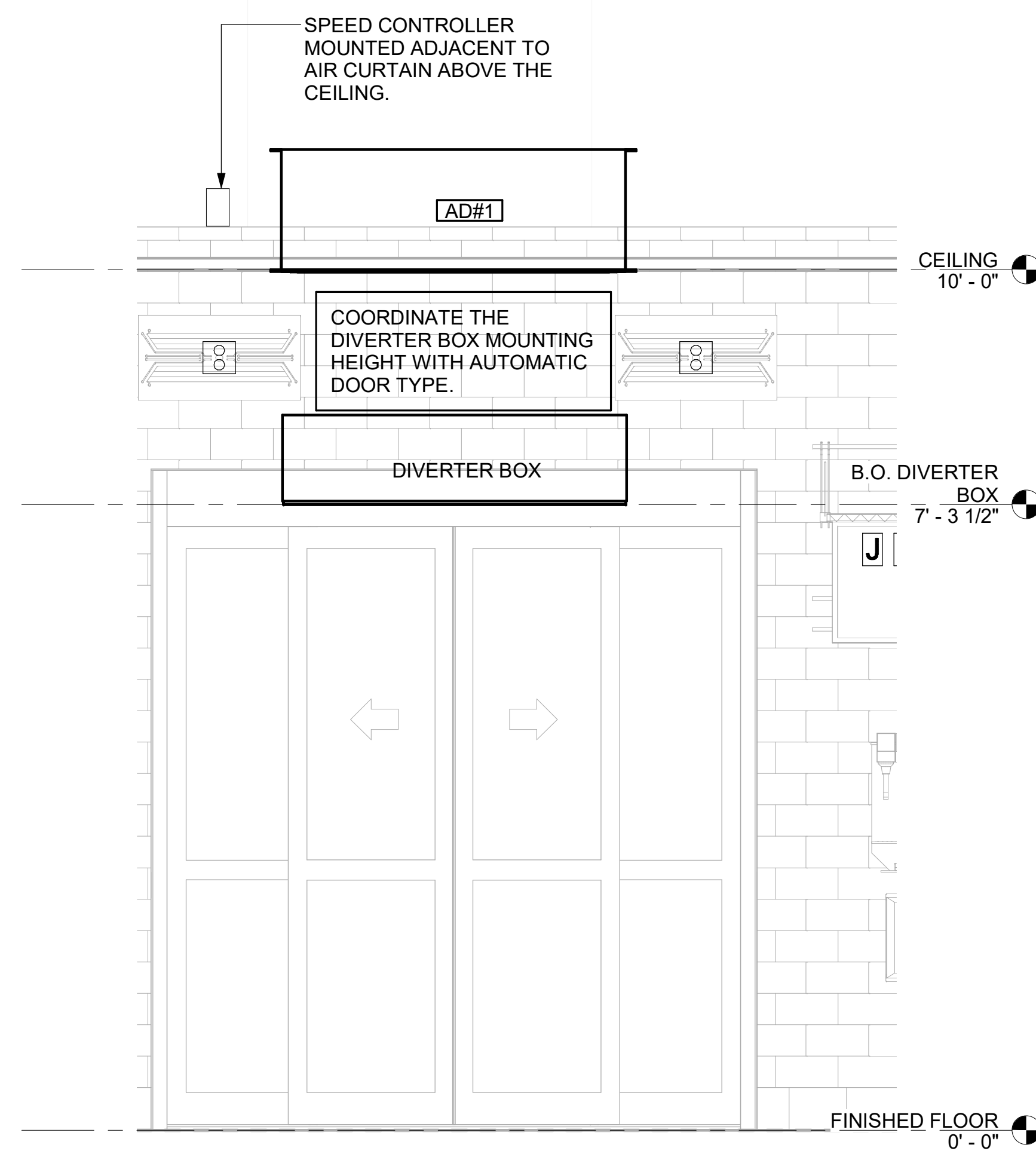
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 RELEASE: 23.05  
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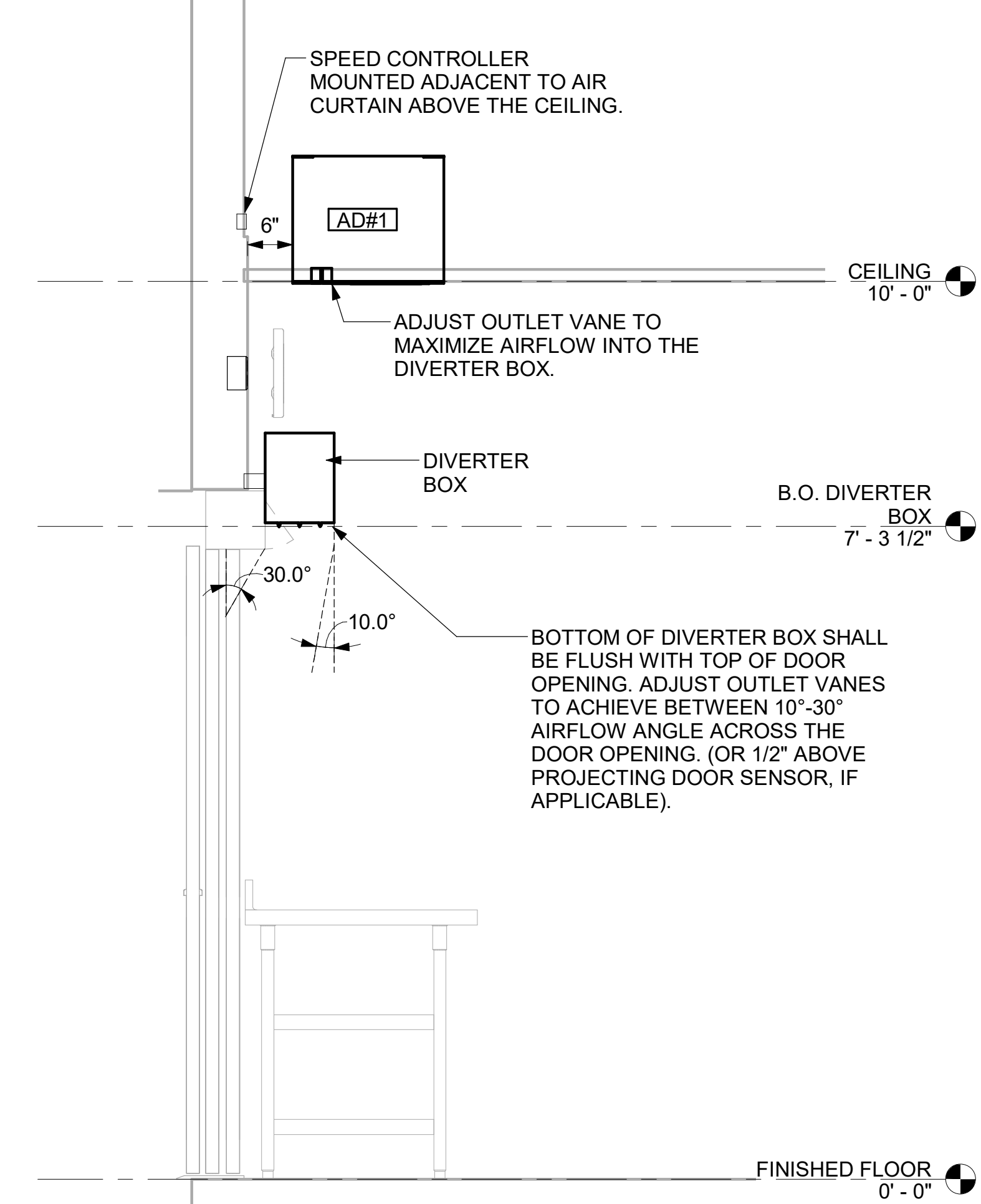
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 SHEET SECTIONS

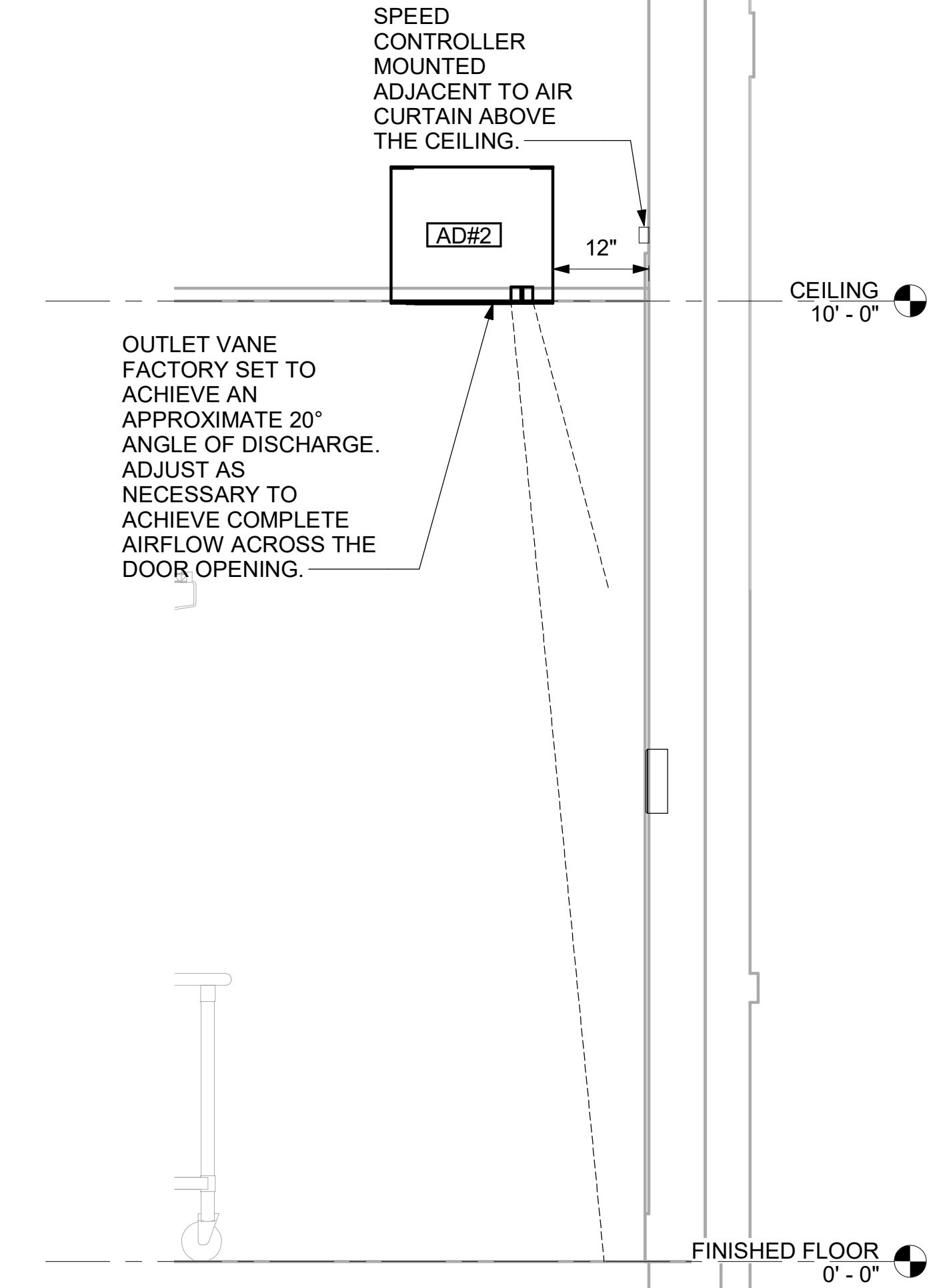
SHEET NUMBER  
**M-301**



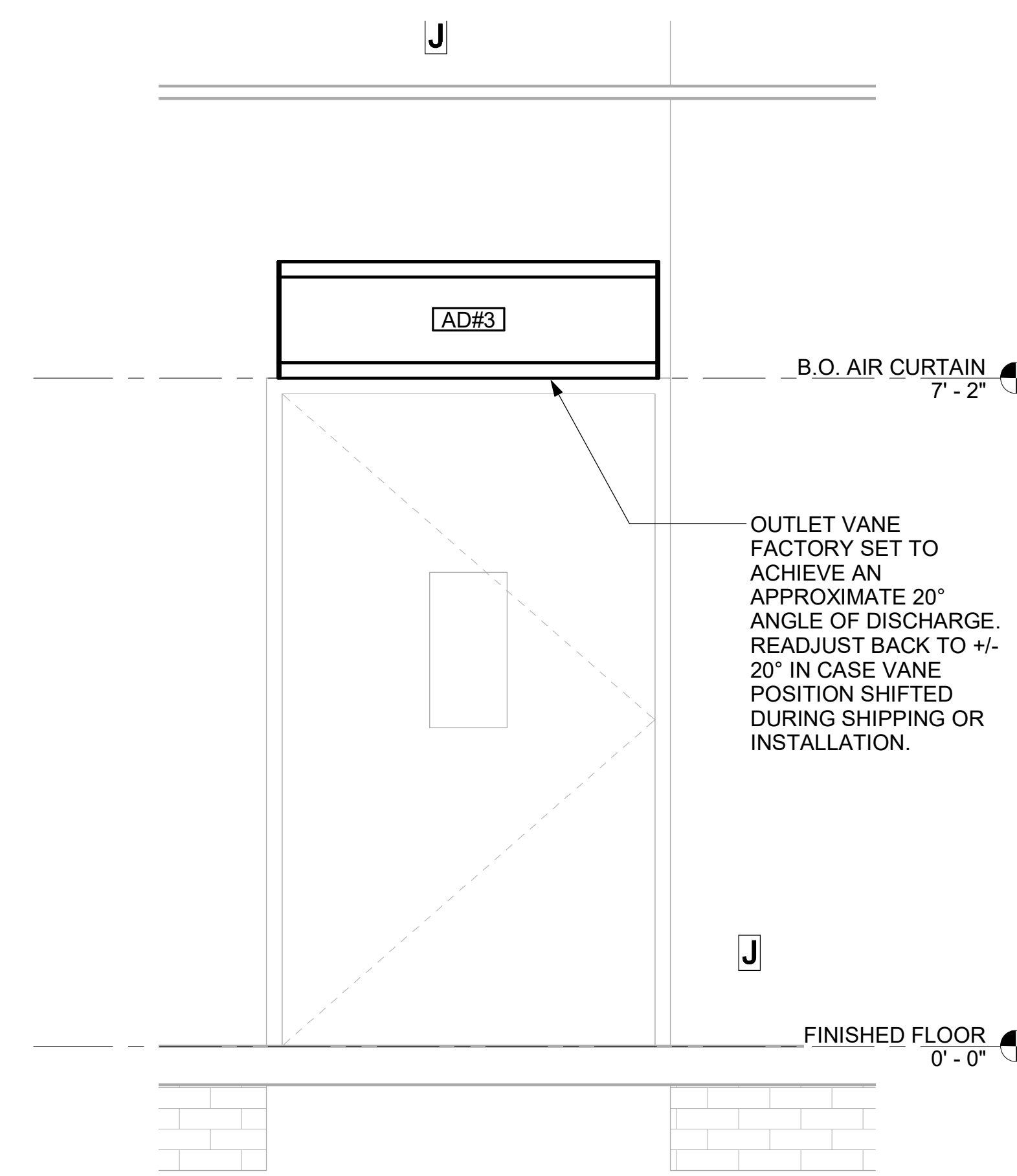
2 AD#1 FRONT VIEW  
 3/4" = 1'-0"



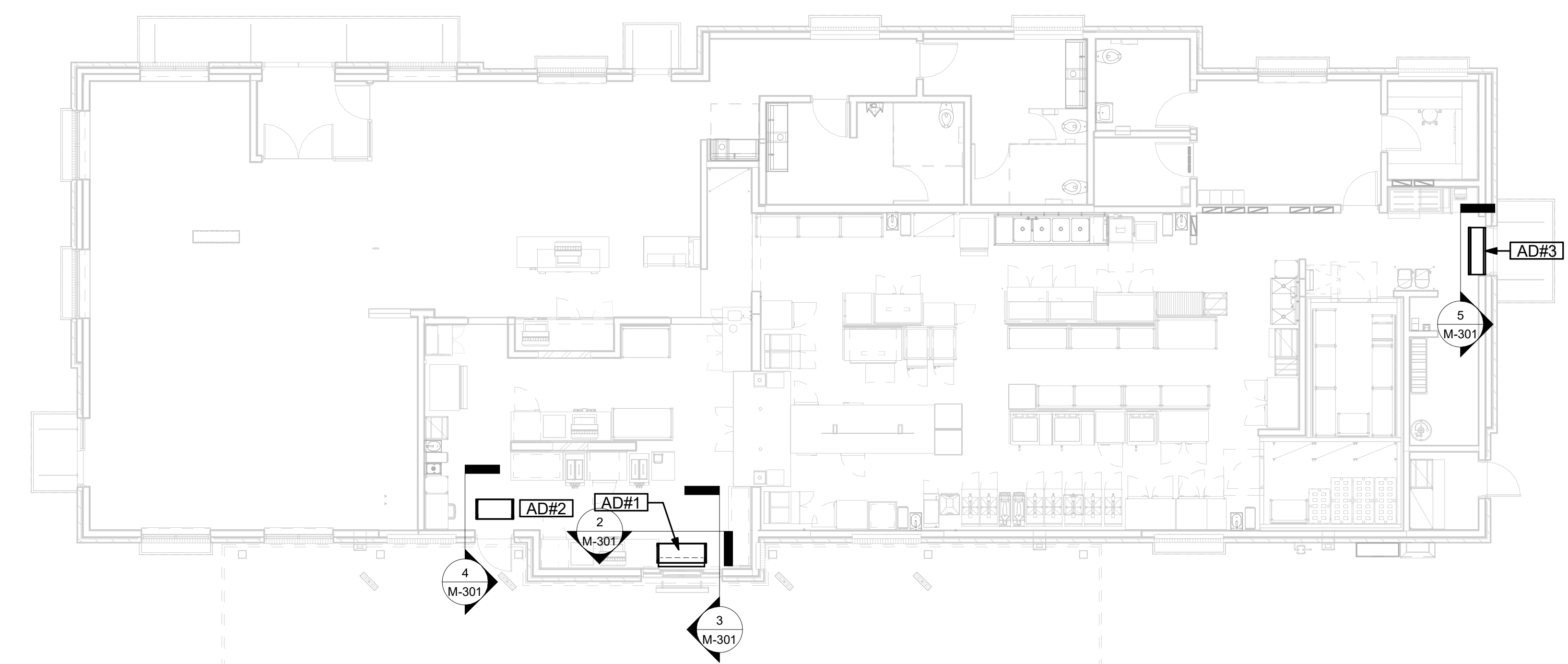
3 AD#1 SIDE VIEW  
 3/4" = 1'-0"



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



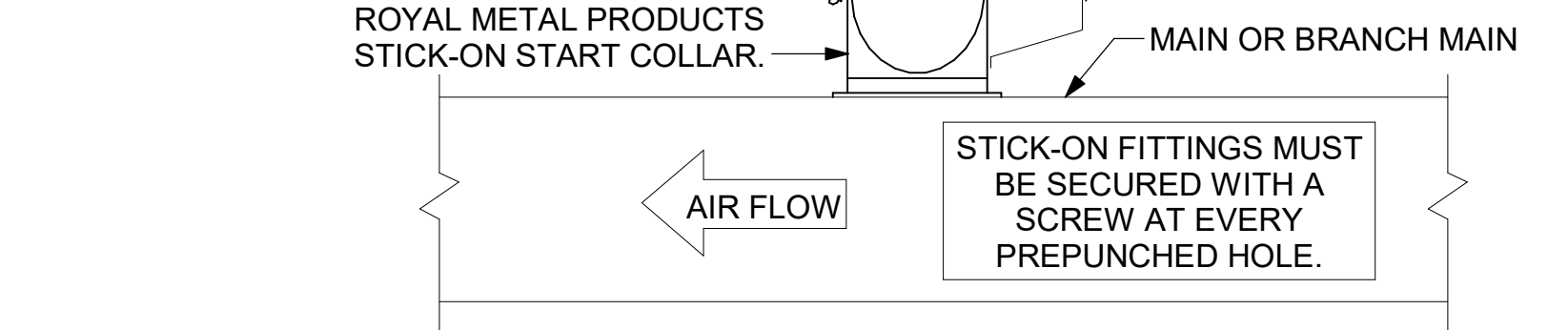
5 AD#3 FRONT VIEW  
 3/4" = 1'-0"



1 AIR DOOR SECTIONS  
 1/8" = 1'-0"

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.

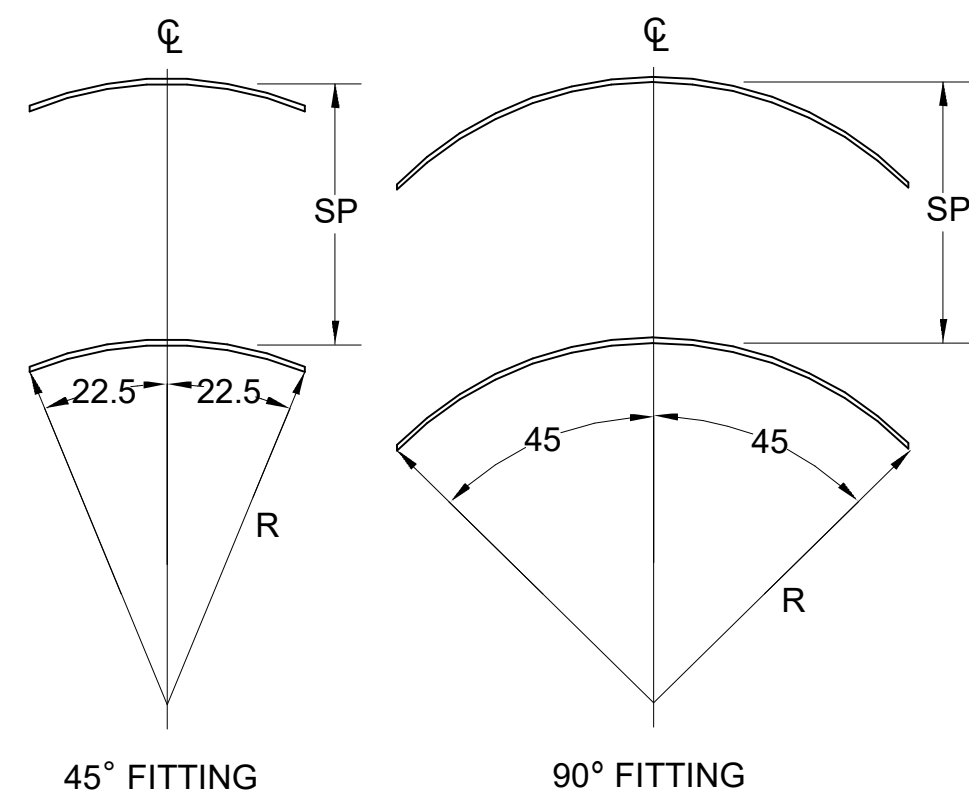
DAMPER CONTROL HANDLE MUST BE EXPOSED, AND DAMPER SHAFT MUST ALWAYS BE PARALLEL TO AIRFLOW IN DUCT MAIN. AS AN EXAMPLE, FOR HORIZONTAL TRUNK DUCT, HANDLE MUST BE LOCATED ON THE LEFT OR RIGHT (9 OR 3 O'CLOCK) OF COLLAR, AND FOR VERTICAL TRUNK DUCT, LOCATED ON THE BOTTOM (6 O'CLOCK) OF COLLAR. DAMPER CONTROL HANDLES NOT INSTALLED IN THE CORRECT ORIENTATION, AS SPECIFIED ABOVE, WILL NOT BE ACCEPTED. ATTACH YELLOW FLUORESCENT CONSTRUCTION RIBBON TO THE HANDLE. RIBBON MUST BE 12" LONG AND BE EASILY IDENTIFIABLE FOR TEST AND BALANCE CONTRACTOR.



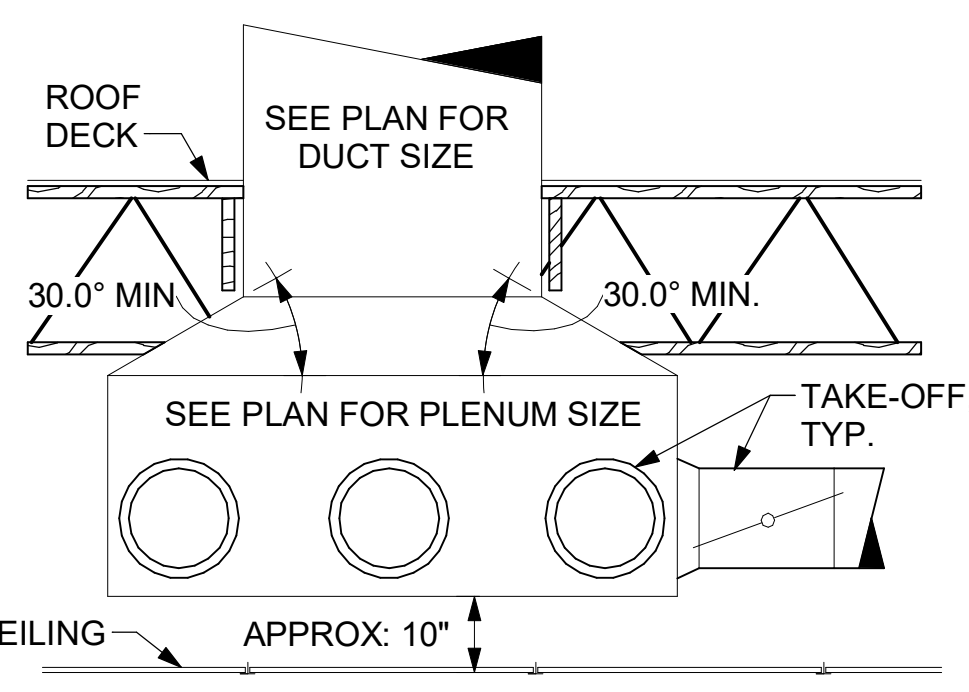
**2 START COLLAR**  
NOT TO SCALE

R	SP	GA
2"	1.5"	24

- NO TRAILING EDGE.
- SINGLE THICKNESS CONSTRUCTION.

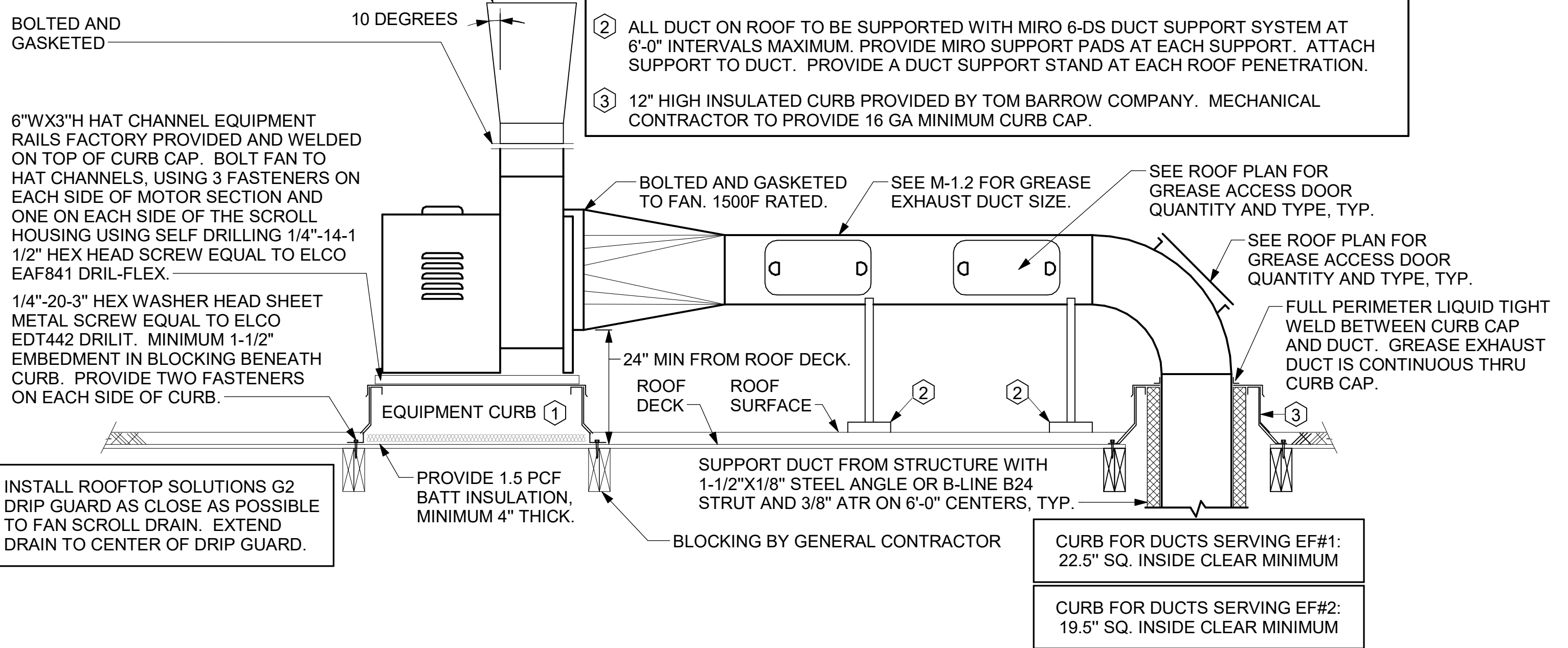


**4 TURNING VANES**  
NOT TO SCALE

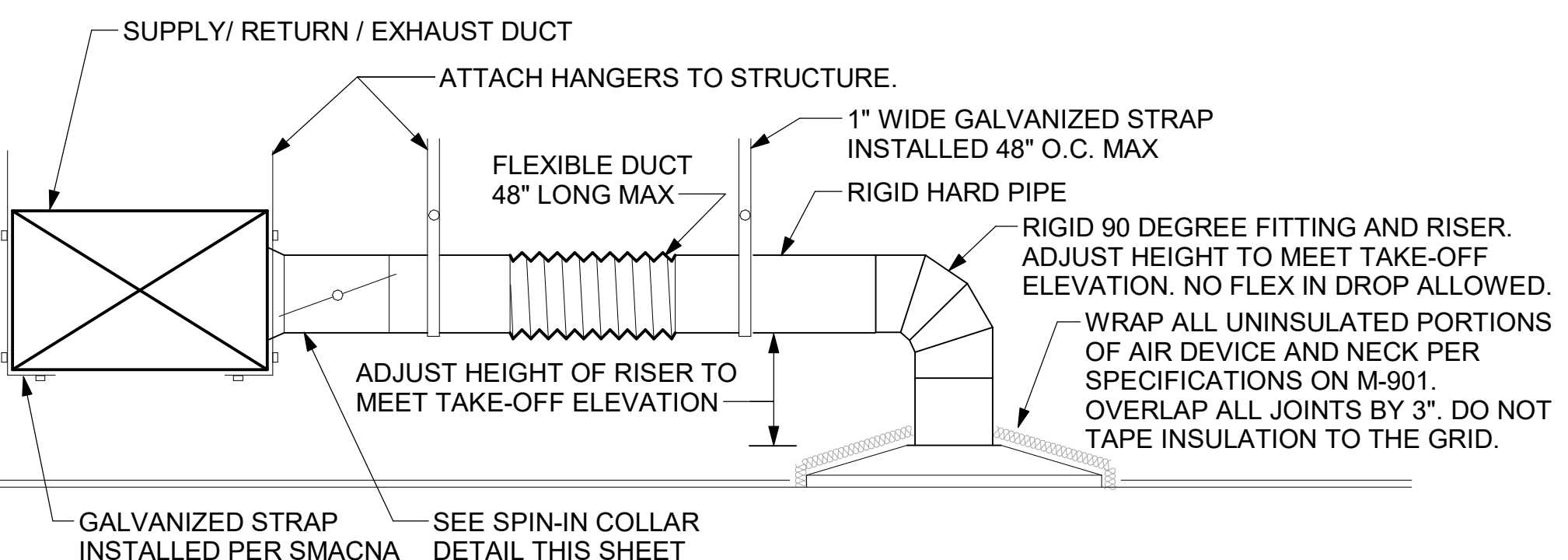


**6 RETURN DROP GEOMETRY**  
NOT TO SCALE

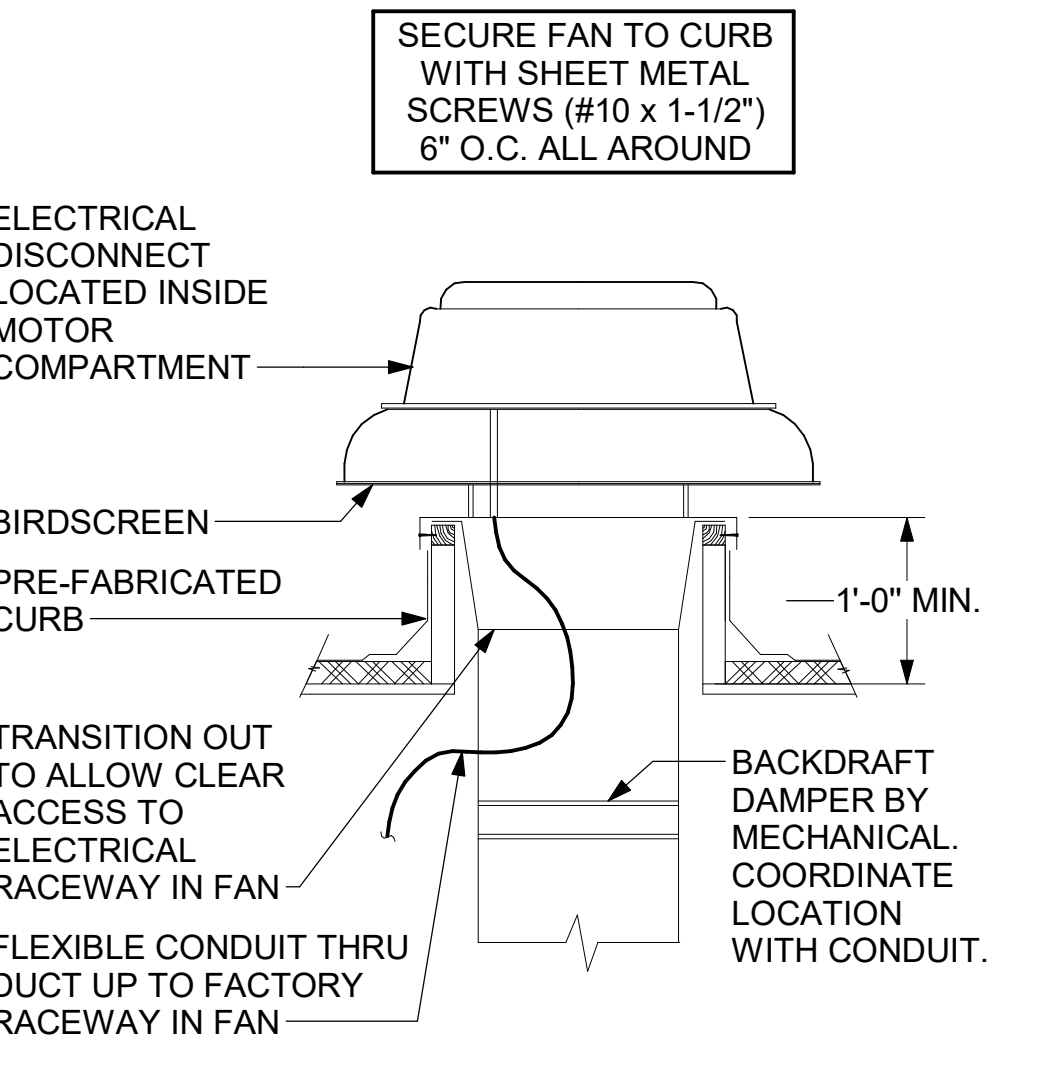
FABRICATE 18 GA STAINLESS NOZZLE. NOZZLE INLET FULL SIZE OF FAN DISCHARGE. MINIMUM NOZZLE HEIGHT 1'-0". EXTEND NOZZLE AS NEEDED TO TERMINATE 0'-2" ABOVE TOP OF ALL CONDENSING UNITS, RTUS, AND PARAPETS WITHIN 10'-0".



**1 KITCHEN HOOD EXHAUST FANS**  
NOT TO SCALE



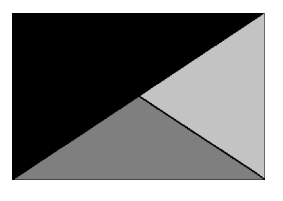
**3 SAG/RAG/GRILLE TAKE-OFF**  
NOT TO SCALE



**5 RESTROOM EXHAUST FAN**  
NOT TO SCALE



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**CHICK-FIL-A**  
**NEWBURGH FSU**  
8091 PARK PLACE DRIVE  
NEWBURGH, IN 47630

**FSR#05525**

BUILDING TYPE / SIZE: P14 LSR BN  
RELEASE: 23.05  
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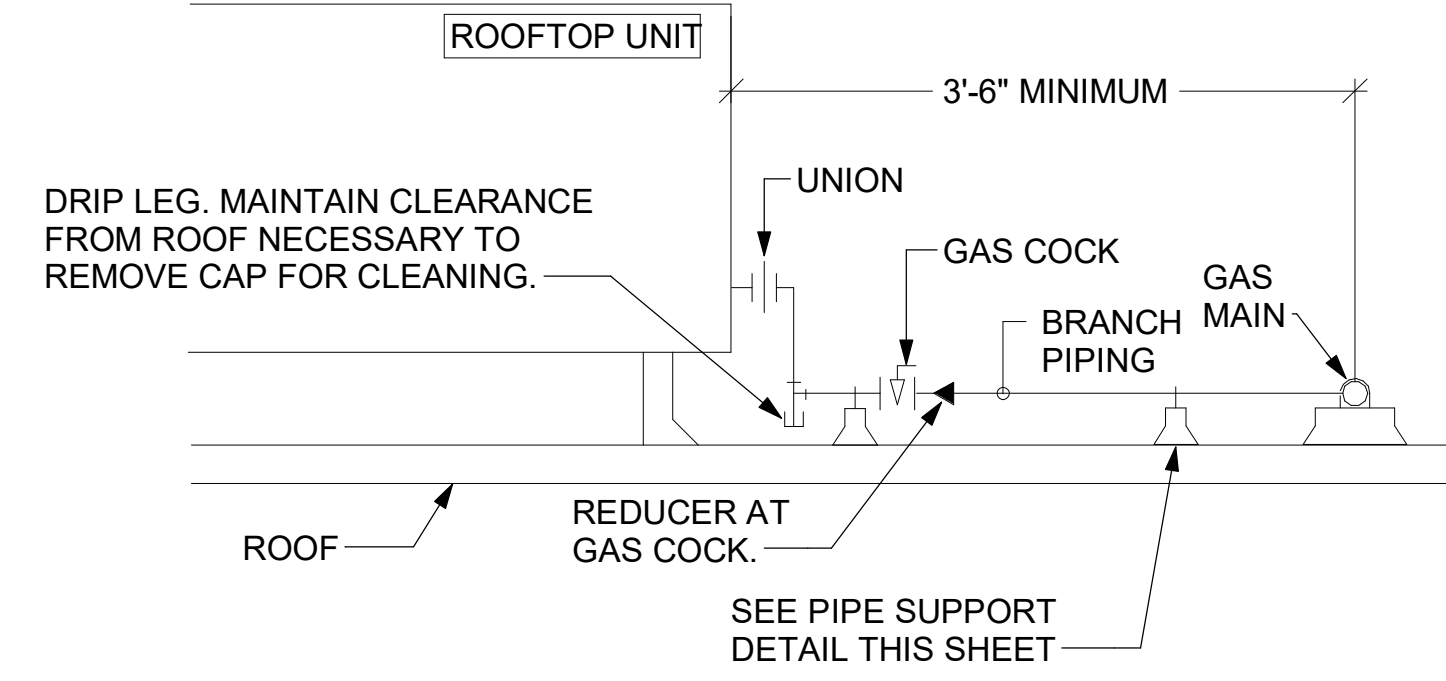
NO.	DATE	DESCRIPTION

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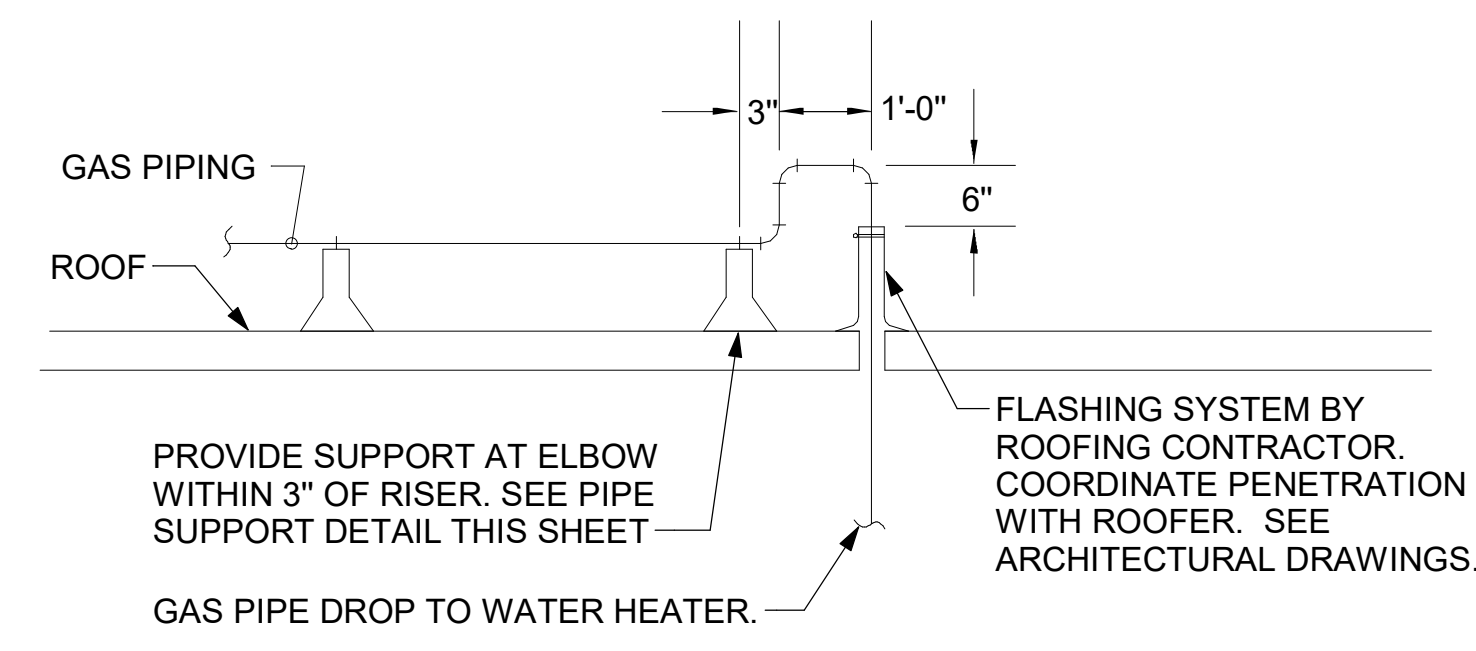
SHEET NUMBER  
**M-501**

- NOTES:**
1. INSTALL GAS PIPING SUCH THAT HVAC EQUIPMENT ACCESS PANELS AND/OR DOORS ARE IN NO WAY OBSTRUCTED BY PIPING, VALVES, OR SUPPORTS.
  2. TO AVOID CONFLICT WITH AC UNIT ACCESS DOORS, INSTALL GAS PIPING NO CLOSER THAN 3'-6" FROM AC UNIT. (EXCEPT FOR BRANCH LINE CONNECTED TO AC UNIT.)
  3. ROUTE BRANCH TAKE-OFF DIRECTLY FROM MAIN TO ROOFTOP UNIT AS SHOWN ON PLAN AND DETAILS WITHOUT LATERAL OFFSETS WHICH MAY OBSTRUCT UNIT ACCESS DOORS.

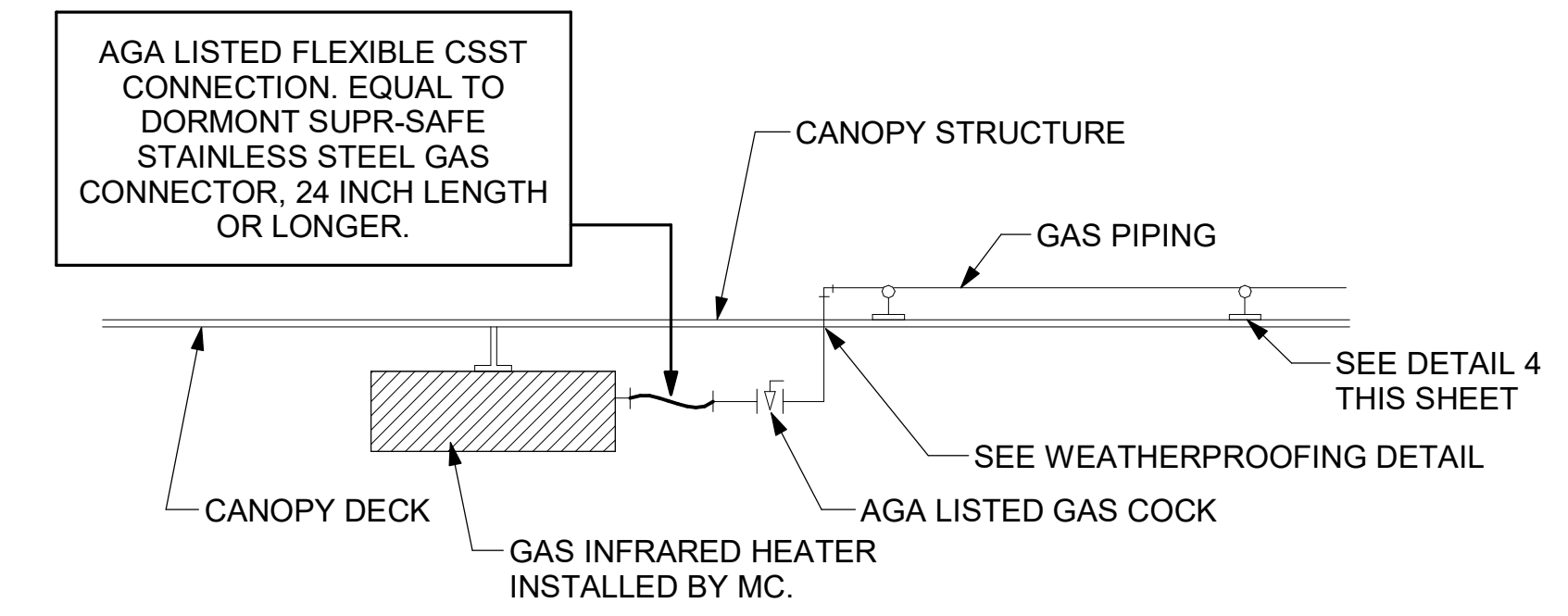


**3 GAS PIPING AT RTU**  
NOT TO SCALE

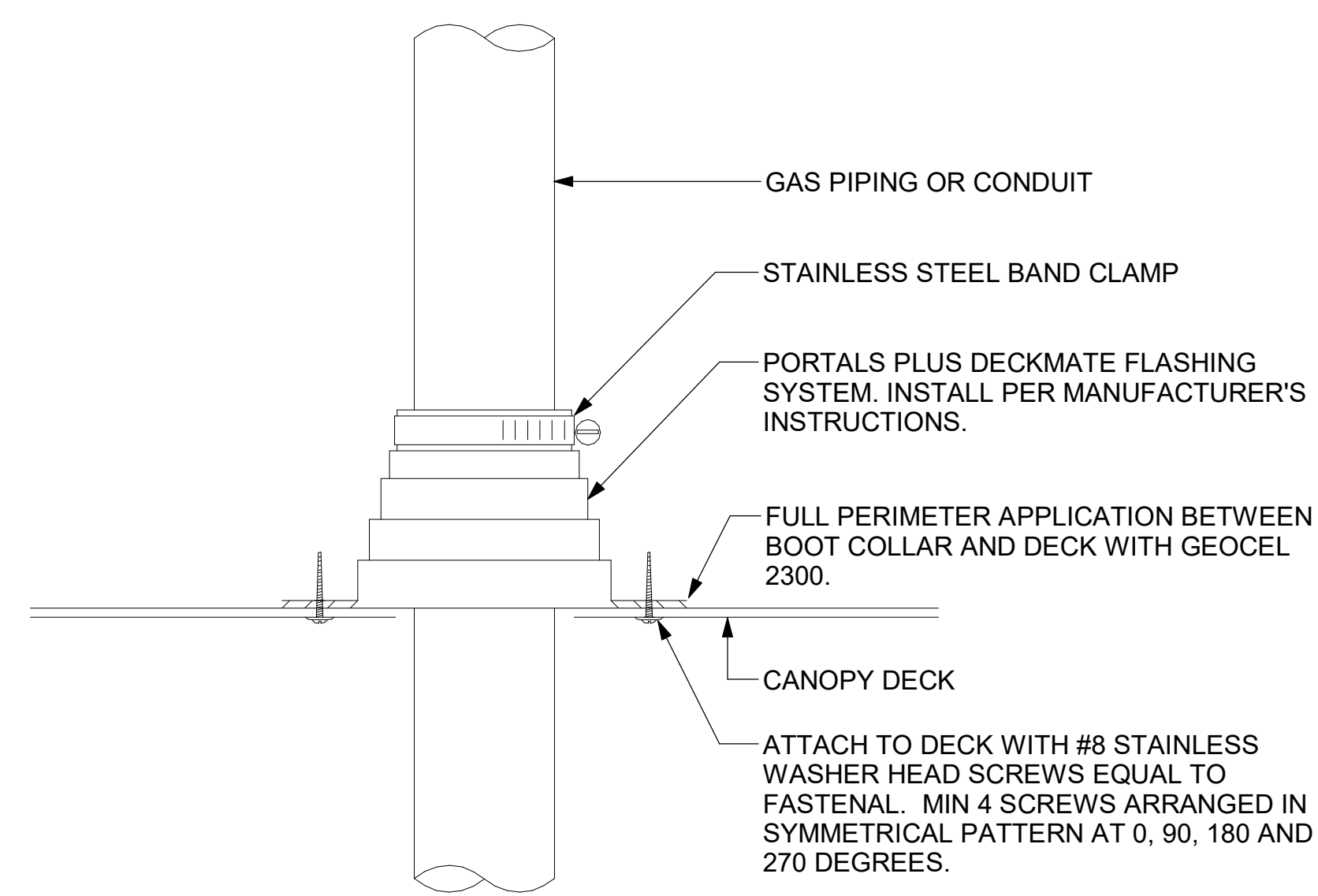
OFFSET PIPING A MINIMUM OF 6" ABOVE TOP EDGE OF FLASHING.



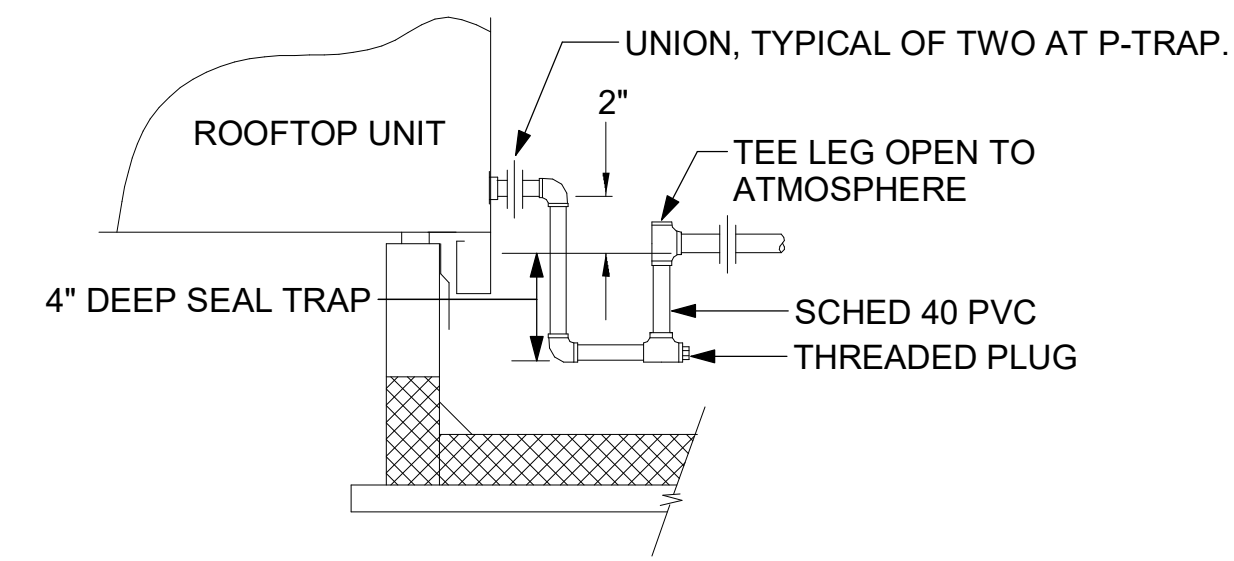
**2 GAS PIPE DROP TO WATER HEATER**  
NOT TO SCALE



**1 GAS CONNECTION AT APPLIANCE**  
NOT TO SCALE

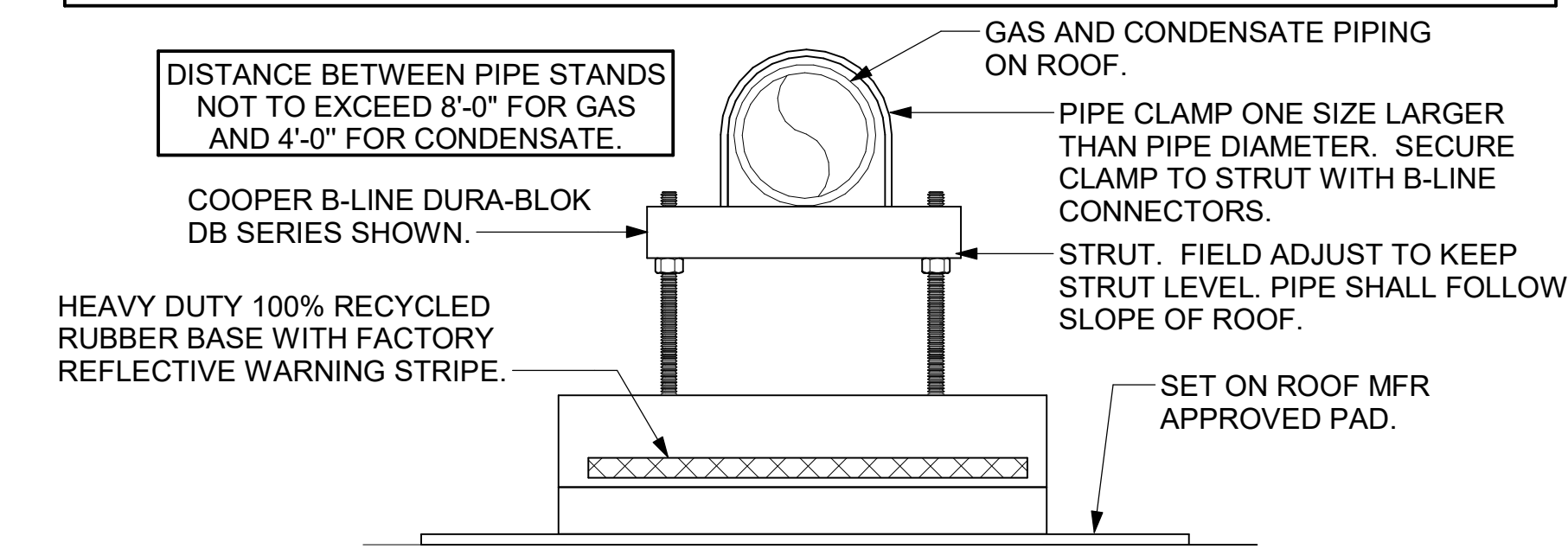


**6 WEATHERPROOFING AT CANOPY PENETRATION**  
NOT TO SCALE

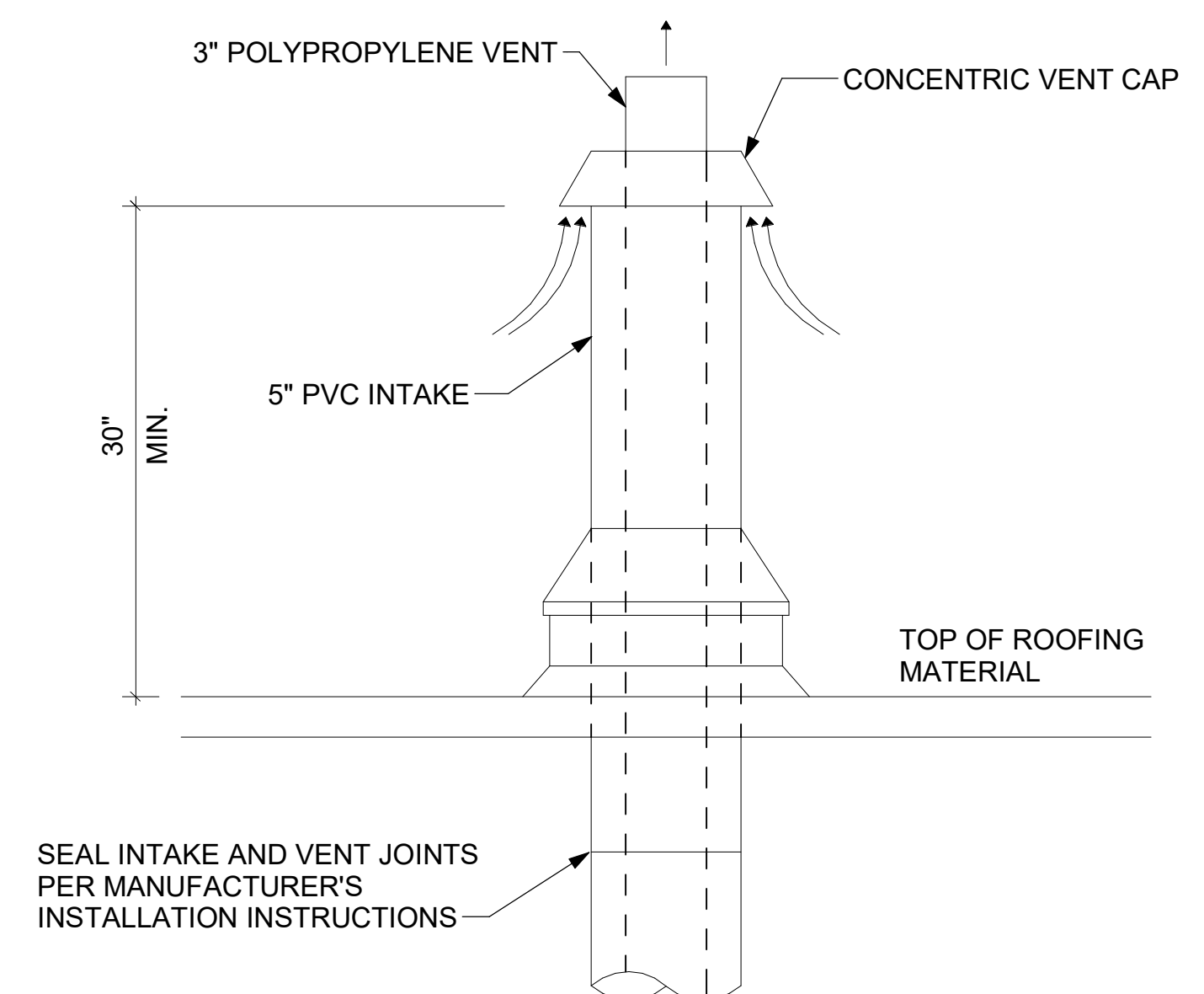


**5 CONDENSATE DRAIN PIPING**  
NOT TO SCALE

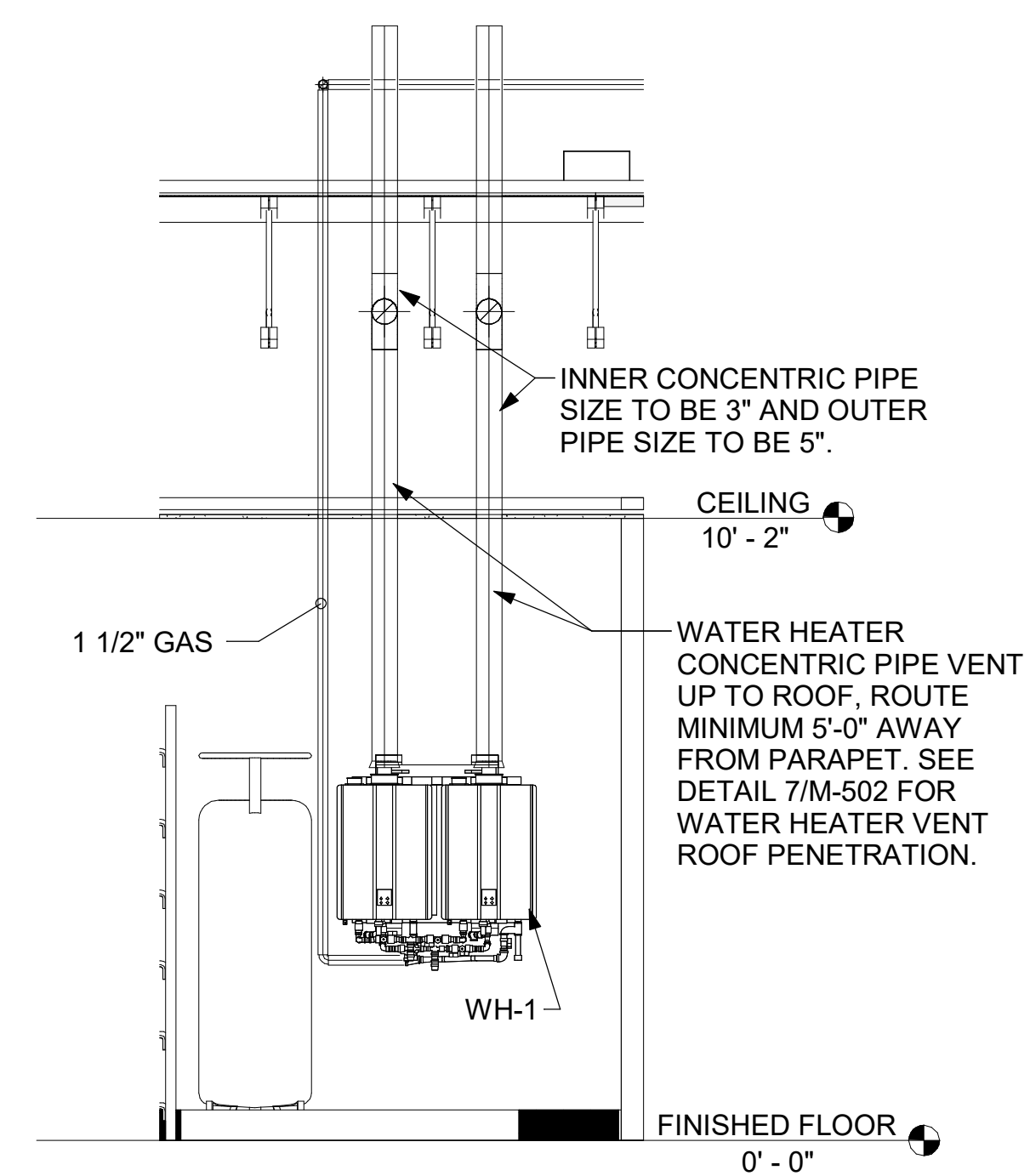
- NOTES:**
1. NON ADJUSTABLE MODEL DB610 PIPE STAND TO BE USED FOR NON-ELEVATED PIPING INSTALLED FLAT ON ROOF DECK.
  2. PROVIDE MODEL DBE 10-8 OR DBE 10-12 OR DBE 10-16 AS NEEDED FOR ELEVATING CONDENSATE PIPING TO MAINTAIN PROPER SLOPE AND FOR GAS PIPING CROSSING OVER CONDENSATE PIPING.
  3. ENSURE GAS AND CONDENSATE PIPING DO NOT OBSTRUCT ROOFTOP EQUIPMENT ACCESS OPENINGS. RE-PIPING OF SYSTEMS DUE TO CONFLICTS WITH EQUIPMENT ACCESS OPENINGS SHALL BE DONE AT PLUMBING CONTRACTOR'S EXPENSE.



**4 PIPING SUPPORT ON ROOF**  
NOT TO SCALE



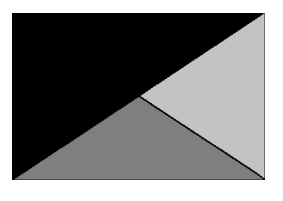
**7 WATER HEATER VENT ROOF PENETRATION**  
NOT TO SCALE



**8 WATER HEATER GAS PIPING AND VENTING**  
NOT TO SCALE



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**CHICK-FIL-A**  
**NEWBURGH FSU**  
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**FSR#05525**  
 BUILDING TYPE / SIZE: P14 LSR BN  
 RELEASE: 23.05

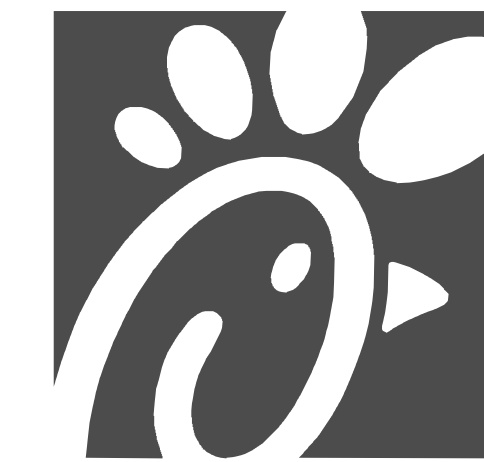
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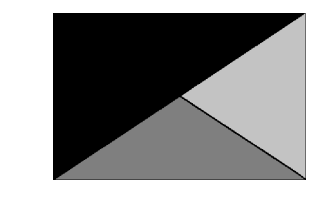
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 SHEET DETAILS

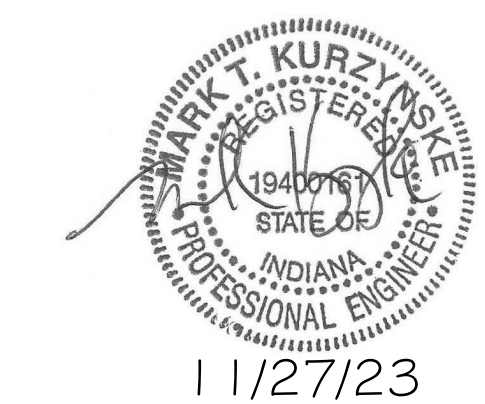
SHEET NUMBER  
**M-502**



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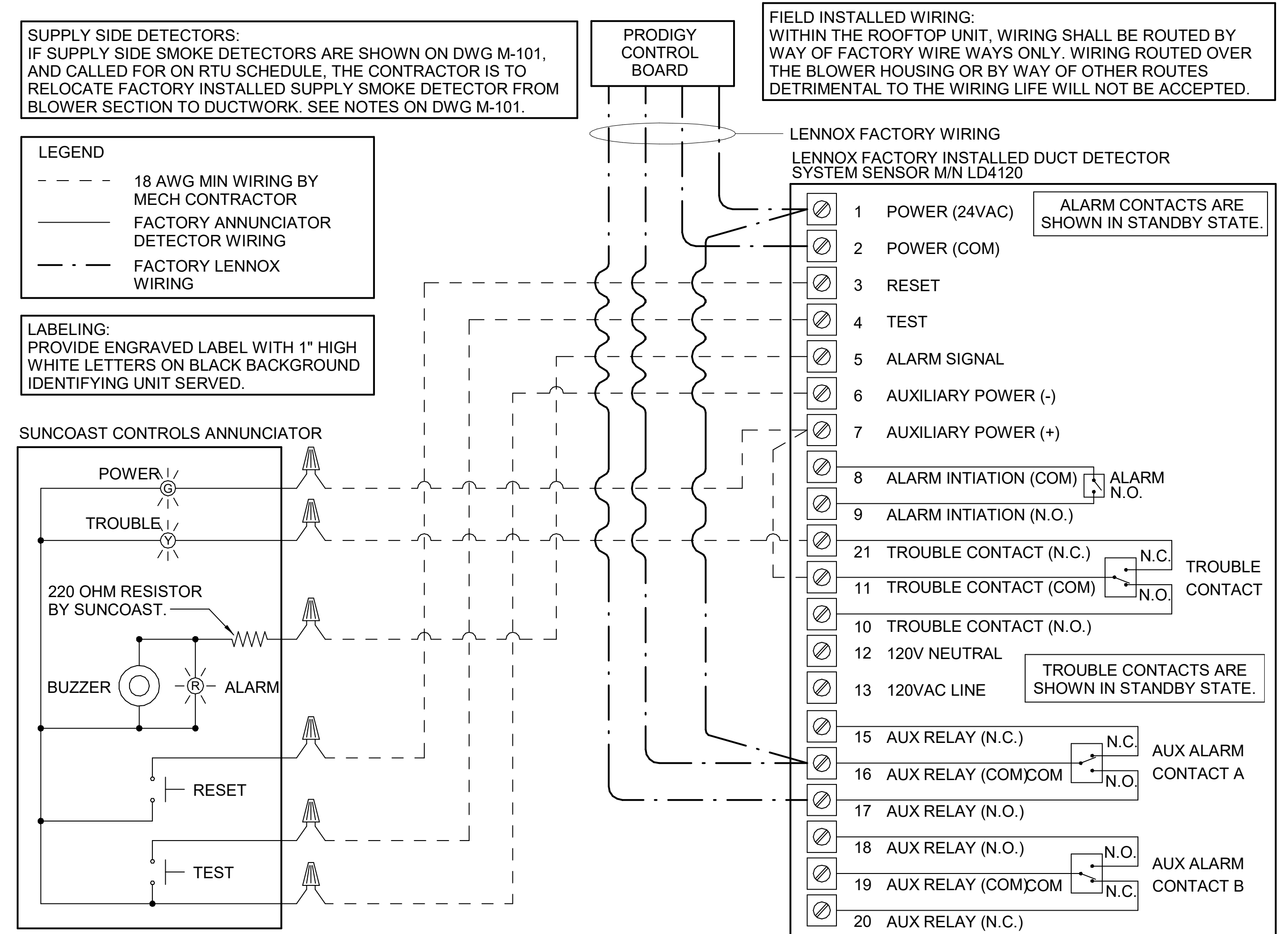
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**FSR#05525**  
 BUILDING TYPE / SIZE: P14 LSR BN  
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 1 11/13/2023 Designates

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 SHEET CONTROL WIRING DIAGRAMS  
 SHEET NUMBER

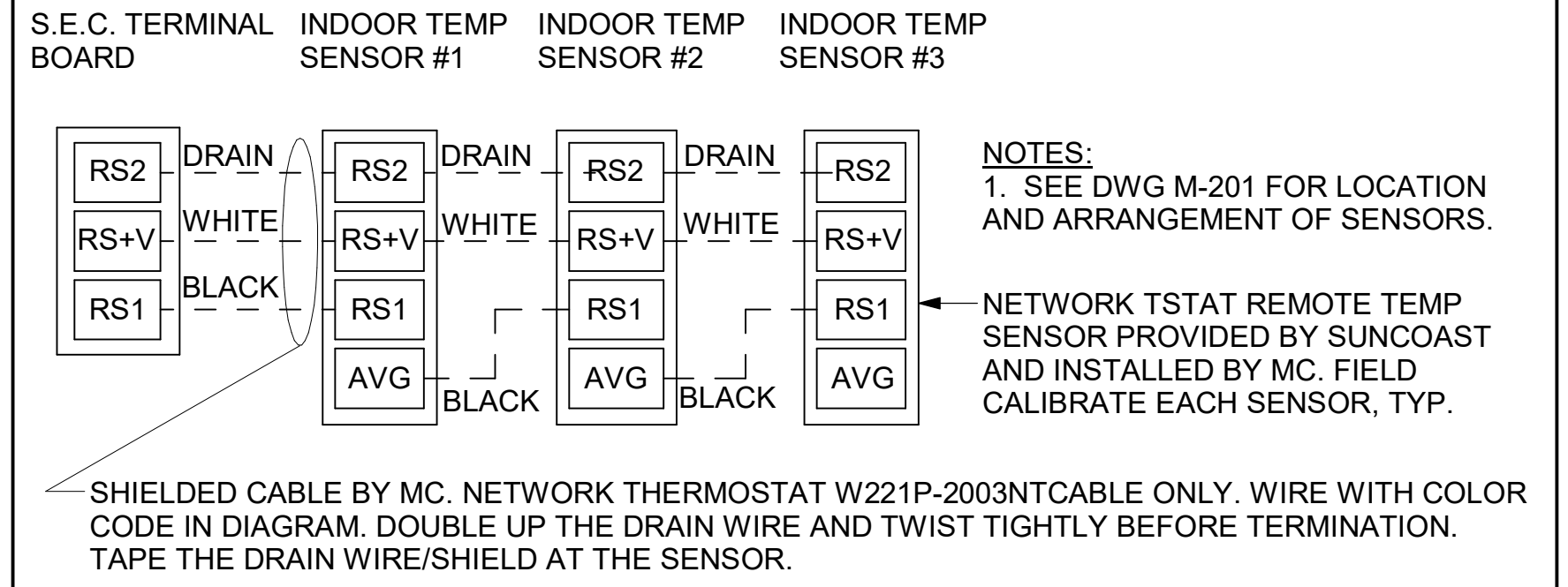
**M-701**

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 800-243-8624. 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.



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

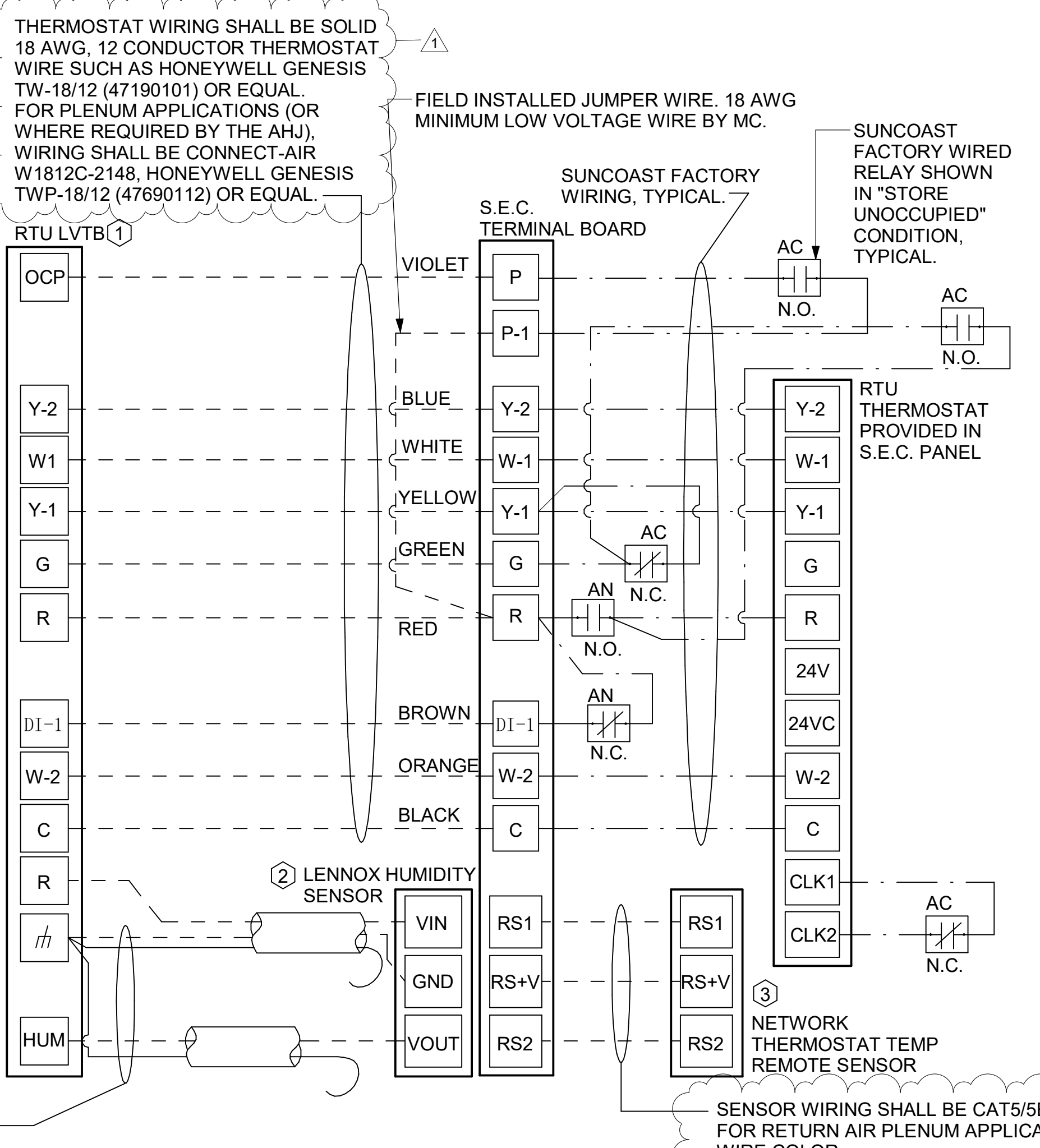
**AC#3 AVERAGING SENSORS (WHERE SHOWN ON PLANS)**



- 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. "AC#2 HUMIDITY SENSOR" OR "AC#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.

- 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. NETWORK THERMOSTAT W221P-2003NT CABLE ONLY. 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.

- 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.

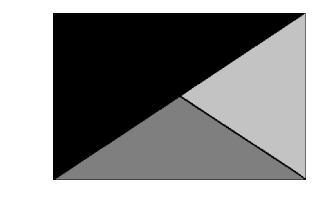
SENSOR WIRING SHALL BE CAT5/E CABLE. PLENUM RATED CABLE IS ONLY REQUIRED FOR RETURN AIR PLENUM APPLICATIONS (OR WHERE REQUIRED BY THE AHJ).  
 WIRE COLOR:  
 • RS+V - GREEN WITH WHITE STRIPE  
 • RS2 - BROWN WITH WHITE STRIPE  
 • RS1 - GREEN

**2 ROOFTOP UNIT CONTROL WIRING - LENNOX**  
 NOT TO SCALE

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Telephone: (615) 255-5203



11/27/23

**CHICK-FIL-A**  
**NEWBURGH FSU**  
8091 PARK PLACE DRIVE  
NEWBURGH, IN 47630

**FSR#05525**

BUILDING TYPE / SIZE: P14 LSR BN  
RELEASE: 23.05  
PRINTED FOR: CONSTRUCTION

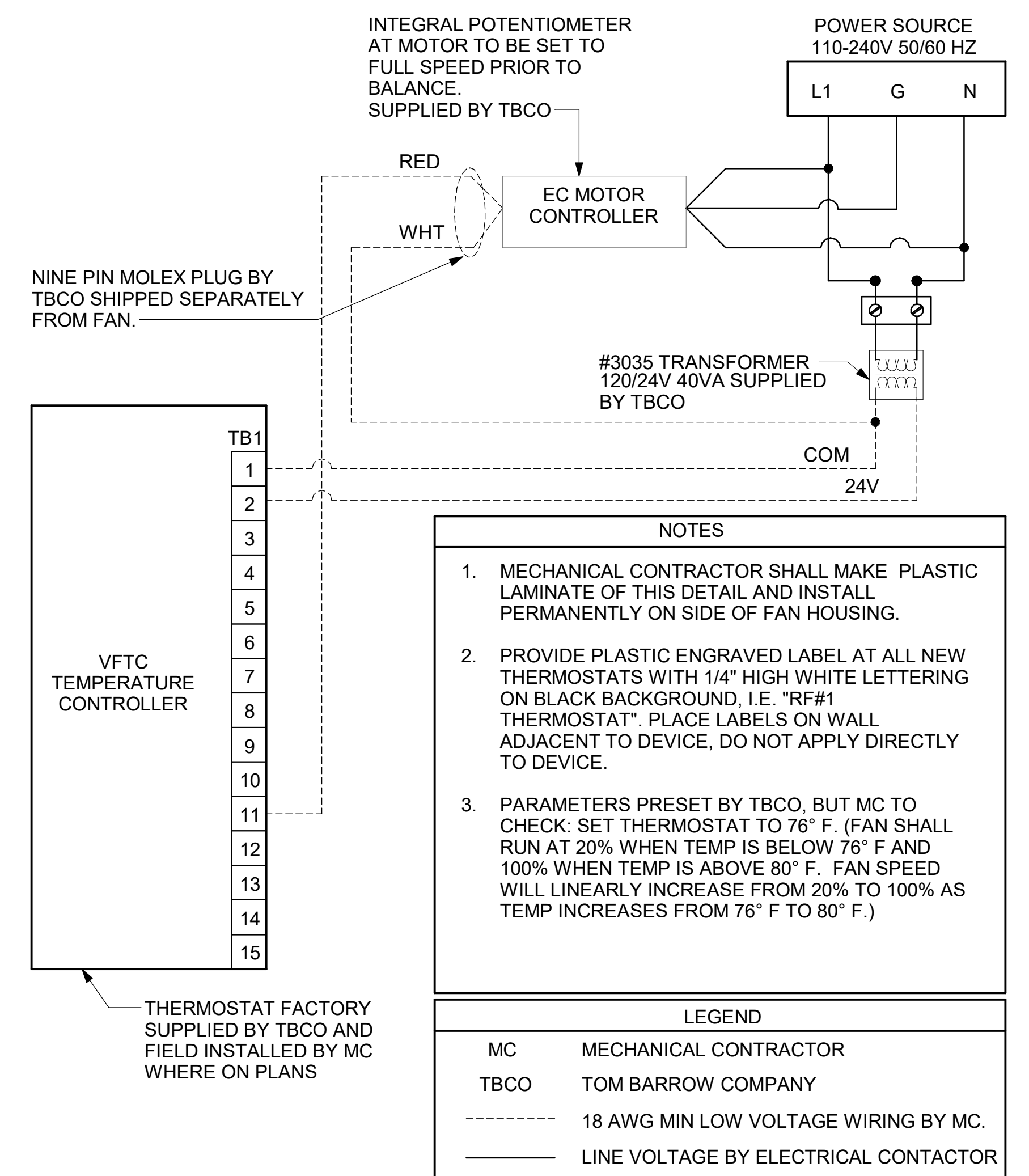
NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 23135.EH.S  
DATE 08/14/2023  
DRAWN BY BLM

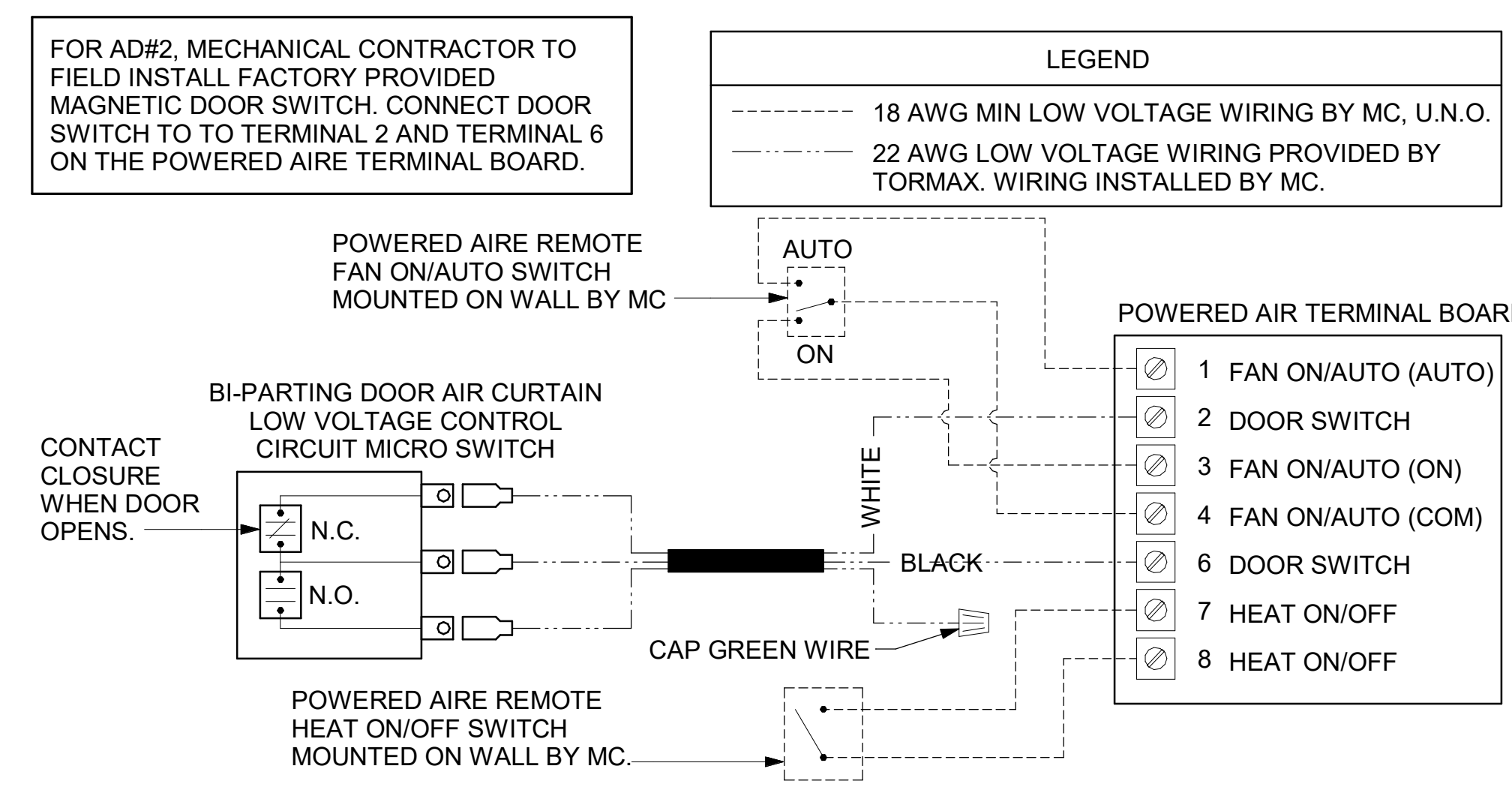
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SHEET CONTROL WIRING DIAGRAMS

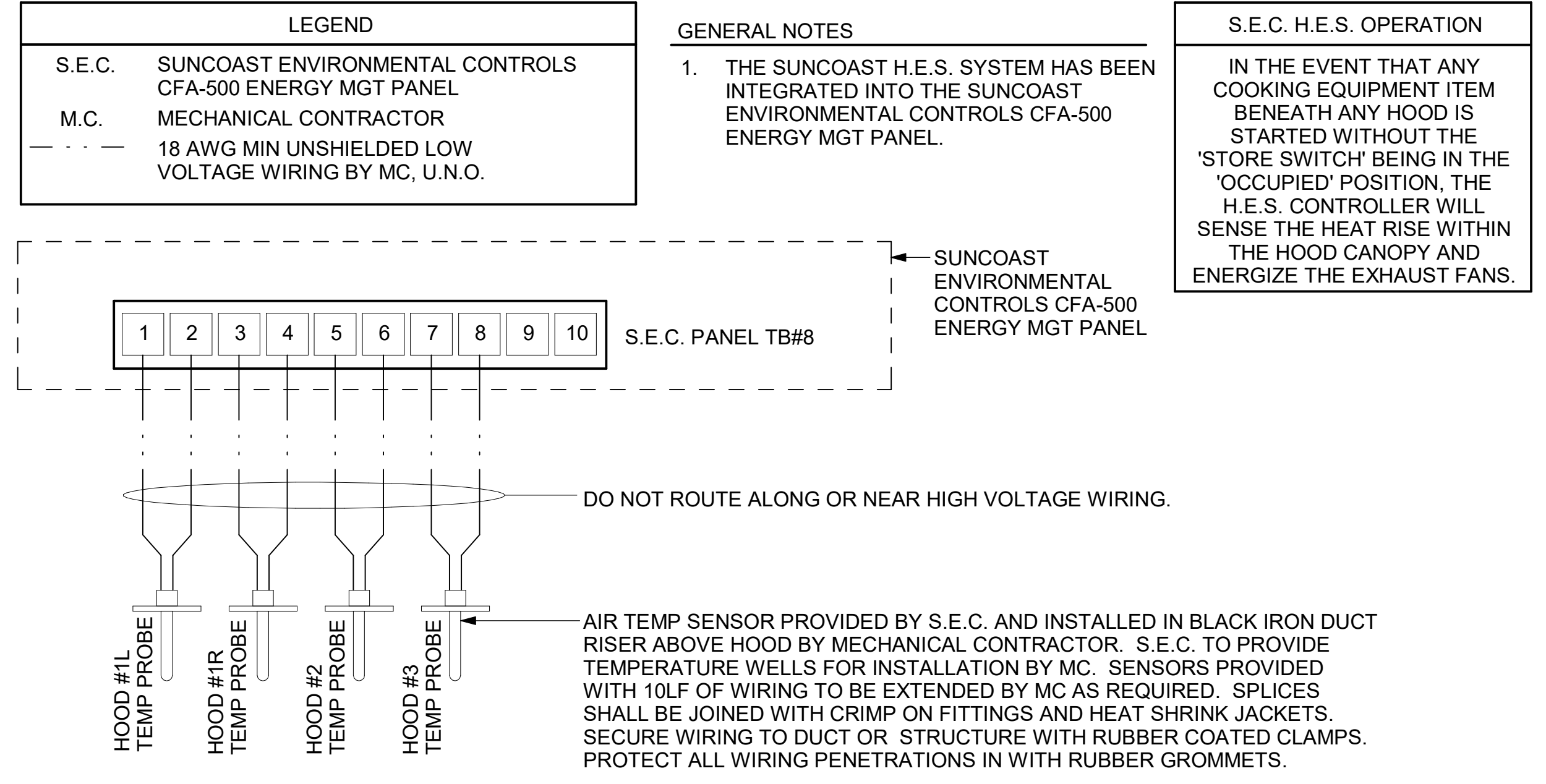
SHEET NUMBER **M-702**



**1 TECH CLOSET CONTROL DIAGRAM**  
NOT TO SCALE



**2 AIR CURTAIN WIRING DIAGRAM**  
NOT TO SCALE

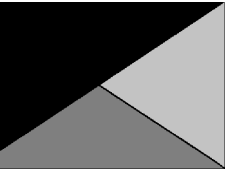


**3 HOOD FAN/EQUIPMENT INTERLOCK - 3 Hood (4 Collars) - CFA500 Integrated**  
1/4" = 1'-0"

Autodesk Docs://IN\_05525\_Newburgh FSU\_2023.5\_FSR05525\_Newburgh FSU\_MEC.rvt  
11/27/2023 3:17:56 PM  
30-LSR-05525-M-702-CONTROL WIRING DIAGRAMS



**Chick-fil-A**  
 5200 Buffington Road  
 Atlanta, Georgia  
 30349-2998



**Kurzynske & Associates**  
 2705 Lebanon Pike - Suite One  
 Nashville, Tennessee 37214  
 Telephone: (615) 255-5203



**CHICK-FIL-A**  
**NEWBURGH FSU**  
 8091 PARK PLACE DRIVE  
 NEWBURGH, IN 47630

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PRINTED FOR CONSTRUCTION

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION

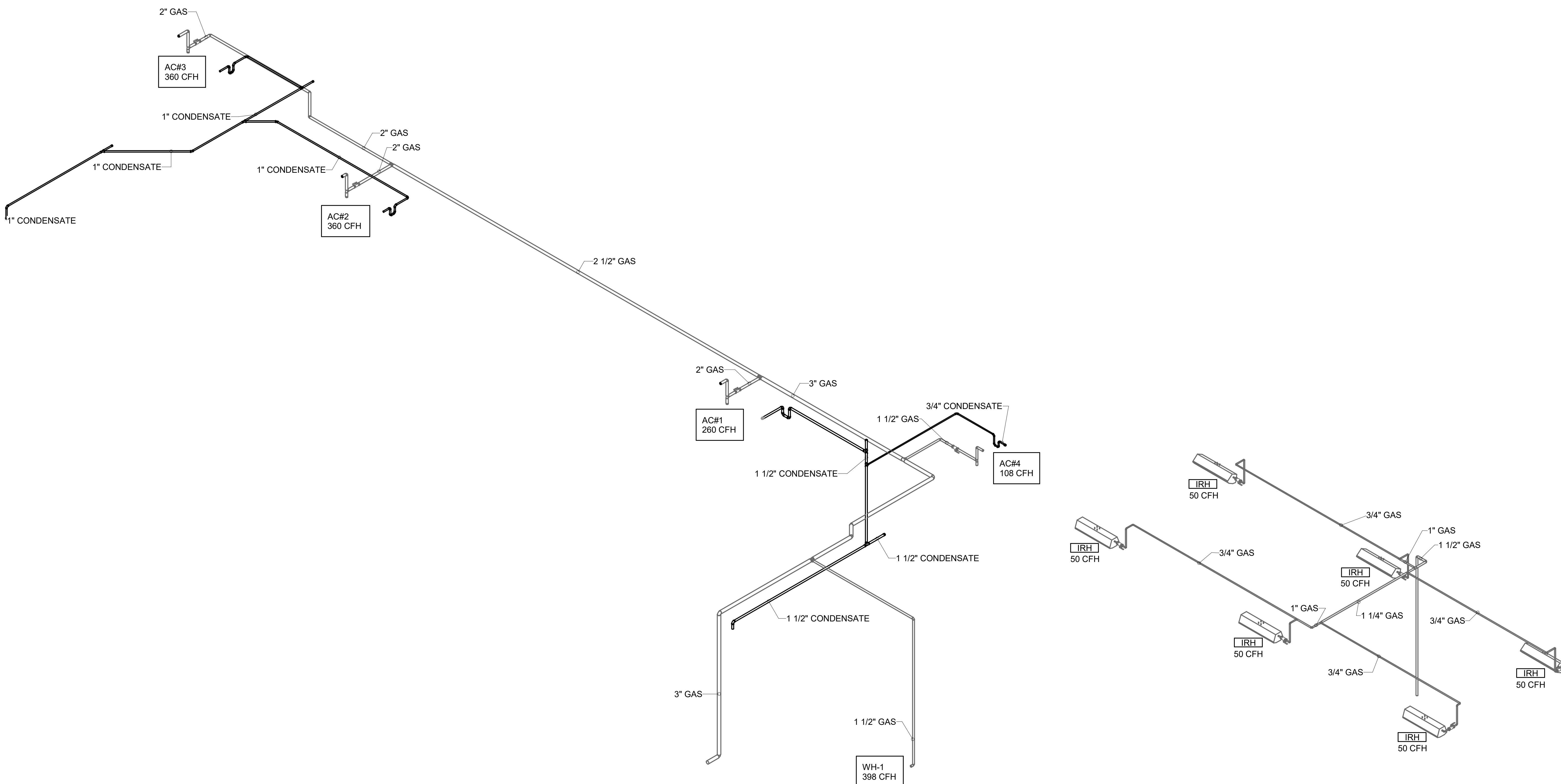
CONSULTANT PROJECT # 23135.EH.S  
 DATE 08/14/2023  
 DRAWN BY BLM

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SHEET GAS AND CONDENSATE ISOMETRIC

SHEET NUMBER

**M-901**

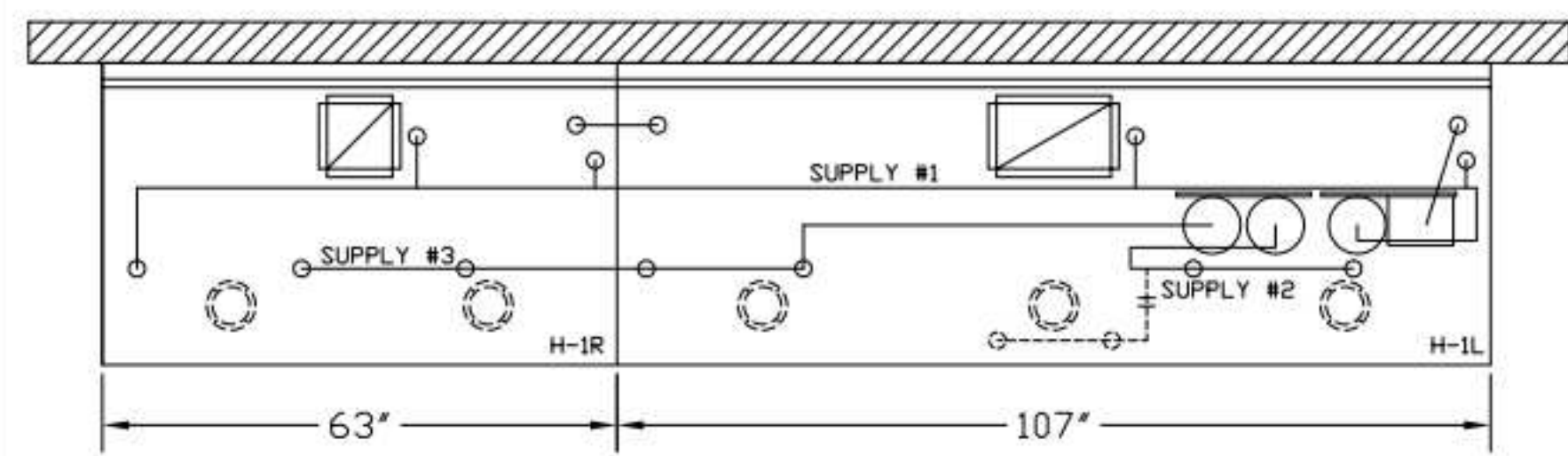


**1 GAS AND CONDENSATE ISOMETRIC**

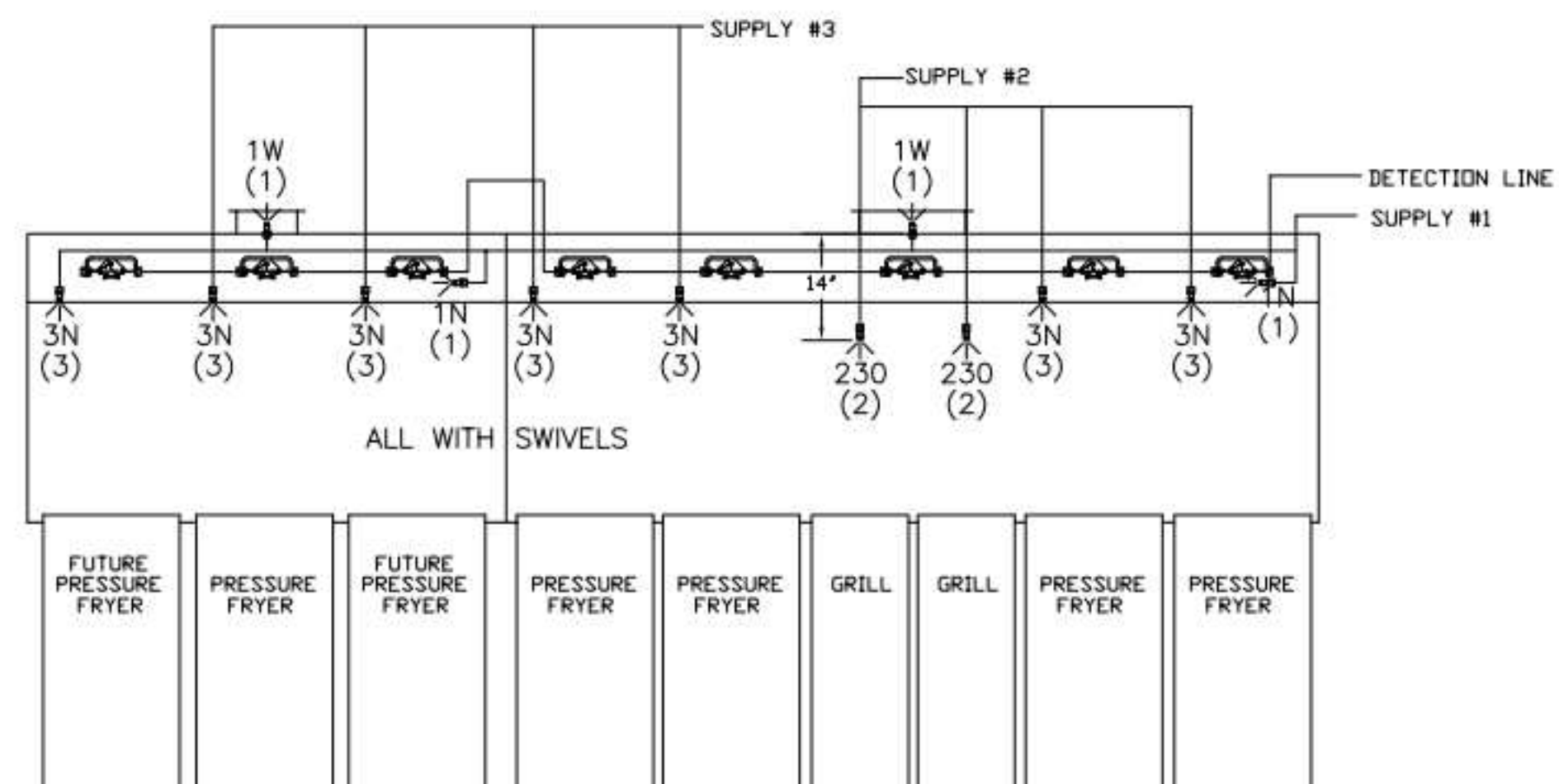
**2 ORDER CANOPY PIPING ISOMETRIC**

**NOTE:**

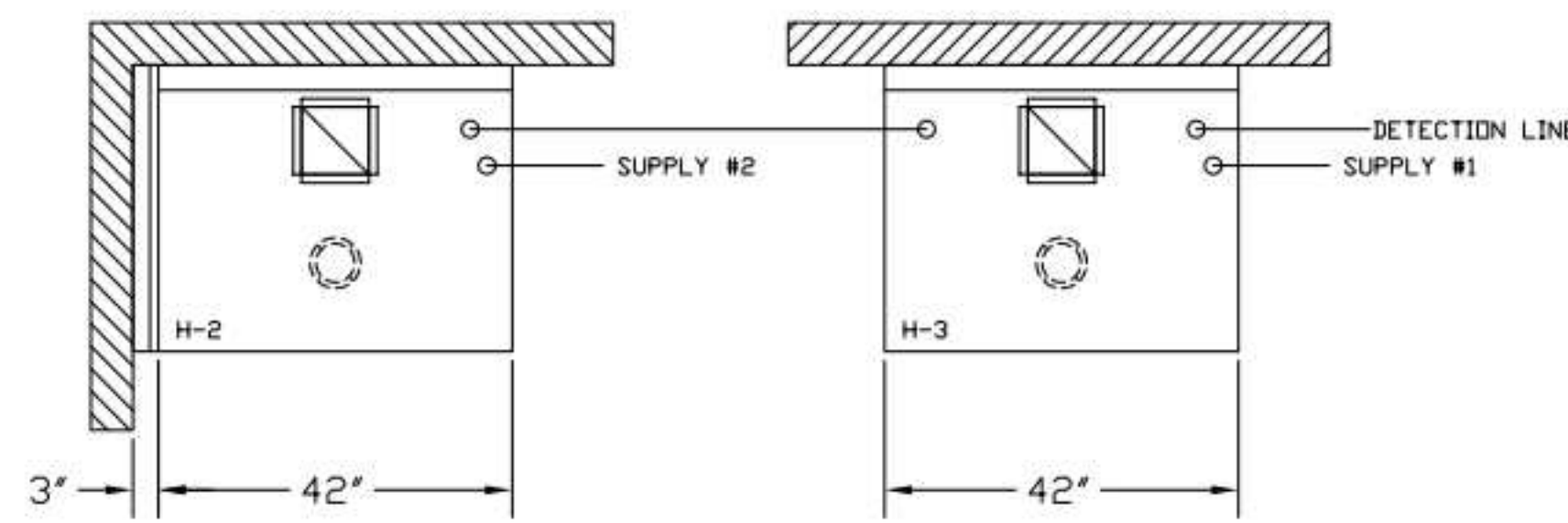
FIRE SYSTEM TYPE TO BE DETERMINED AT TIME OF ORDER RELEASE.



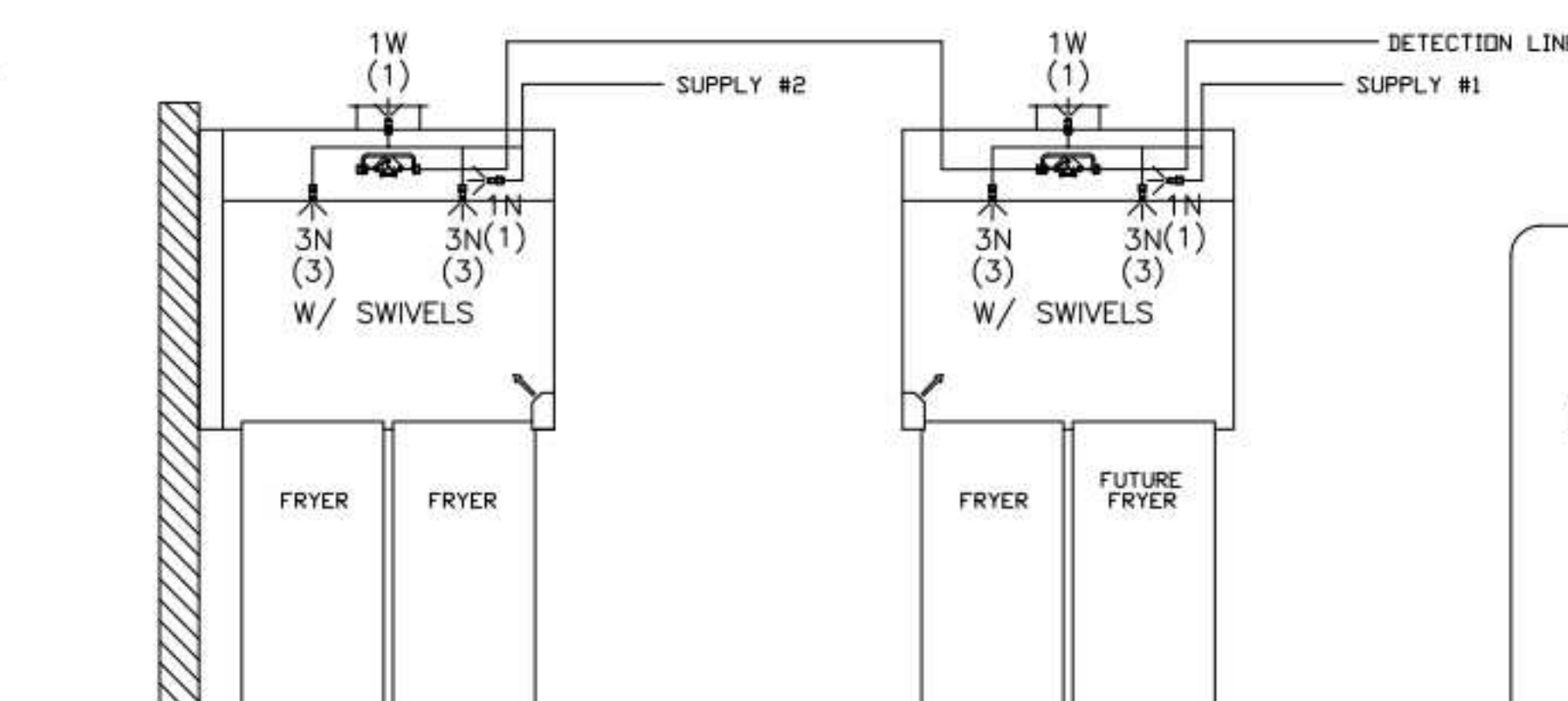
- ANSUL R-102 FIRE SYSTEM**
- (1) DEM REGULATED RELEASE
  - (2) EXTRA MICRO SWITCH ASSEMBLIES (MOUNTED IN DEM REG. REL.)
  - (3) 3 GALLON TANKS
- A) 9 GALLON SYSTEM (3 TANKS) (MOUNTED ON HOOD H-1L & H-1R)
  - B) 3/8" BLACK IRON PIPING W/ 3/8" S.S. APPLIANCE DROPS



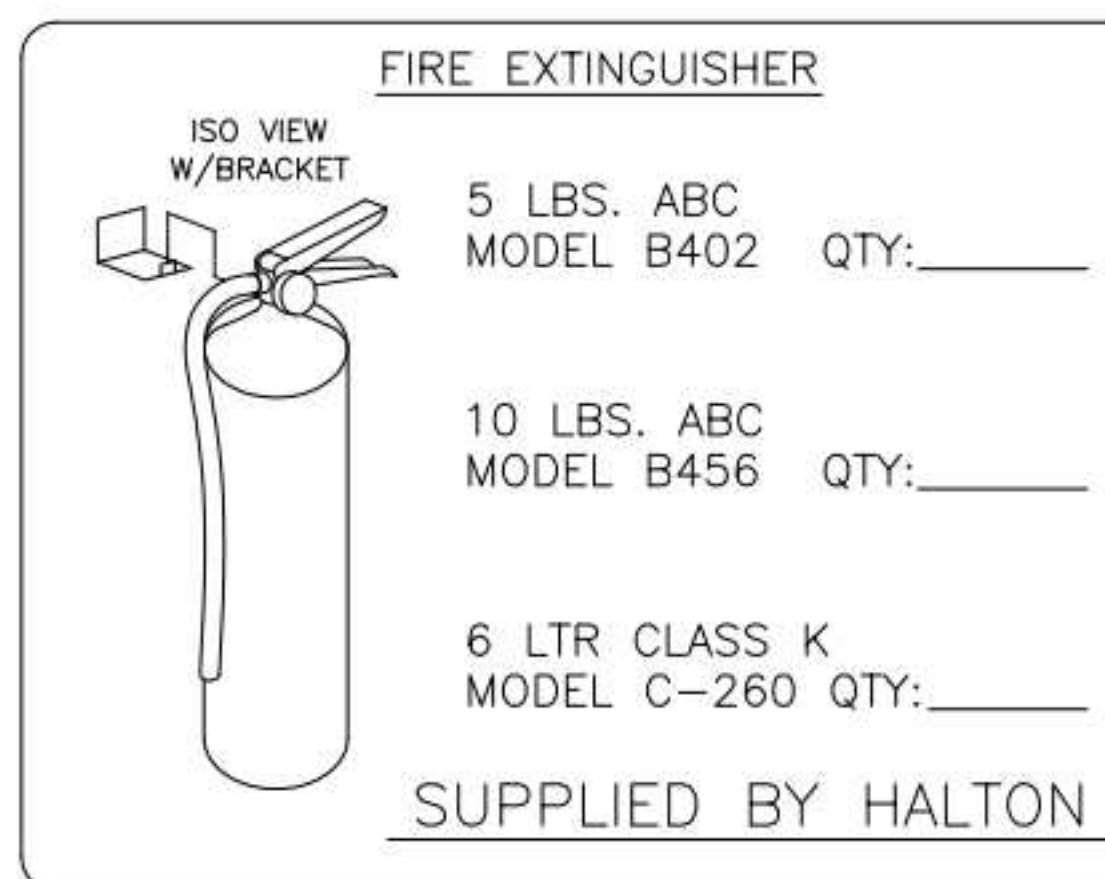
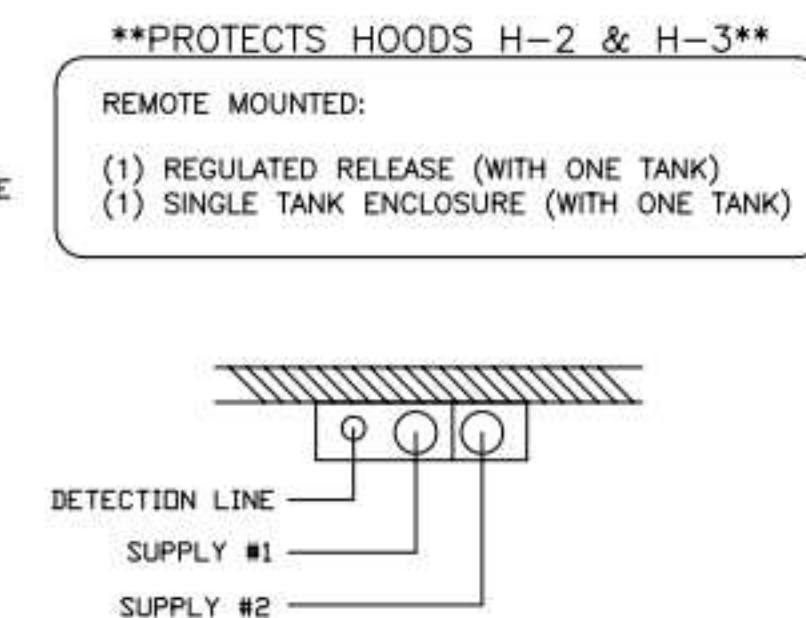
ANSUL R-102 FIRE SYSTEM LAYOUT



- ANSUL R-102 FIRE SYSTEM**
- (1) ELEC REGULATED RELEASE
  - (2) EXTRA MICRO SWITCH ASSEMBLIES (MOUNTED IN REG. REL.)
  - (3) SINGLE TANK ENCLOSURE
  - (4) 3 GALLON TANK
- A) 6 GALLON SYSTEM (2 TANKS) (REMOTE MOUNTED)
  - B) 3/8" BLACK IRON PIPING W/ 3/8" S.S. APPLIANCE DROPS



ANSUL R-102 FIRE SYSTEM LAYOUT



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-1R)  
MAXIMUM FLOW POINTS = 33

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

ITEM #	QTY	DESCRIPTION	FLOW PTS (TOTAL)
1W	4	DUCT NOZZLES	4
1N	4	PLENUM NOZZLES	4
230	2	APPLIANCE NOZZLES	4
3N	11	APPLIANCE NOZZLES	33

TOTAL FLOW POINTS - 45

ITEM #	QTY	DESCRIPTION
#200	8	SERIES DETECTORS W/ FUSIBLE LINKS
#201	2	TERMINAL DETECTOR W/ FUSIBLE LINKS
#202	1	ELEC DEM REGULATED RELEASE W/ DOUBLE POLE MICRO SWITCH
#202	1	ELEC REGULATED RELEASE W/ DOUBLE POLE MICRO SWITCH
#203	5	3 GALLON TANKS
#204	1	SINGLE TANK ENCLOSURE
#205	2	REMOTE PULL STATION

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

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) KP375 & (2) KP475 TANK SYSTEM MOUNTED ON TOP OF (H-1L)  
MAXIMUM FLOW POINTS = 39

AMEREX FIRE SYSTEM NOTES  
KP475 TANK SYSTEM REMOTE MOUNTED  
(1) TANK  
MAXIMUM FLOW POINTS = 14

ITEM #	QTY	DESCRIPTION	FLOW PTS (TOTAL)
16416	4	DUCT NOZZLES	4
11982	4	PLENUM NOZZLES	4
14178	8	APPLIANCE NOZZLES	8
14178	2	APPLIANCE NOZZLES	4
13729	14	APPLIANCE NOZZLES	28

TOTAL FLOW POINTS - 48

ITEM #	QTY	DESCRIPTION
12508-P001	10	DETECTOR BRACKET ASSEMBLY
13334	1	KP375 AGENT CYLINDER
17379	3	KP475 AGENT CYLINDER
18001	1	MECHANICAL RELEASE MODULE W/ DOUBLE POLE MICRO SWITCH
25851	1	SYSTEM ENCLOSURE W/ DOUBLE POLE MICRO SWITCH
16290	1	WALL MOUNTING BRACKET
21481	3	REMOTE MANUAL PULL STATION

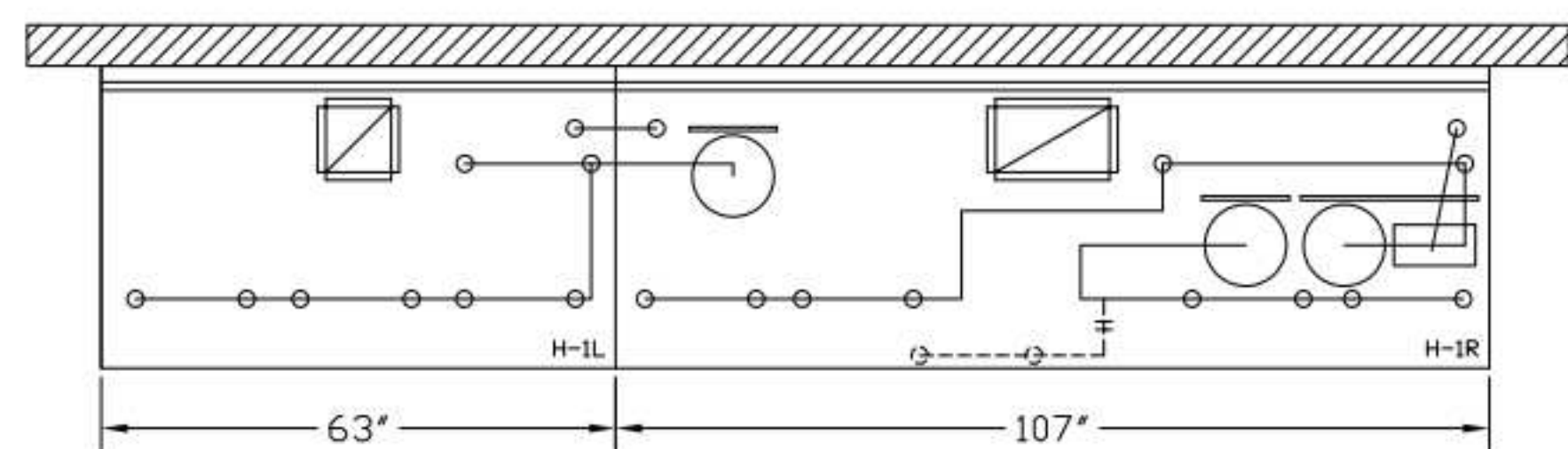
AMEREX FIRE SYSTEM  
TESTED & LISTED BY UNDERWRITERS LABORATORIES, INC. TO UL STANDARD 300.

- 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

ANSUL

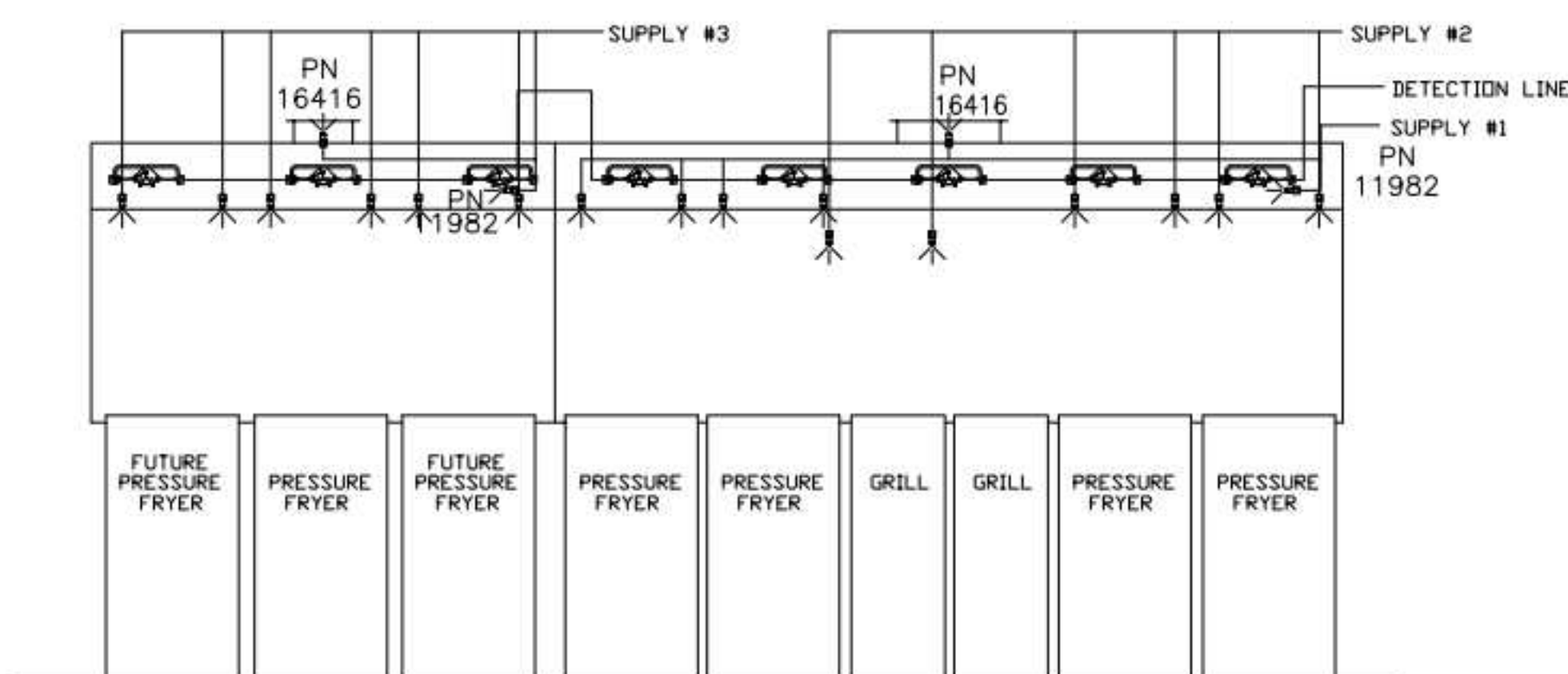
AMEREX

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

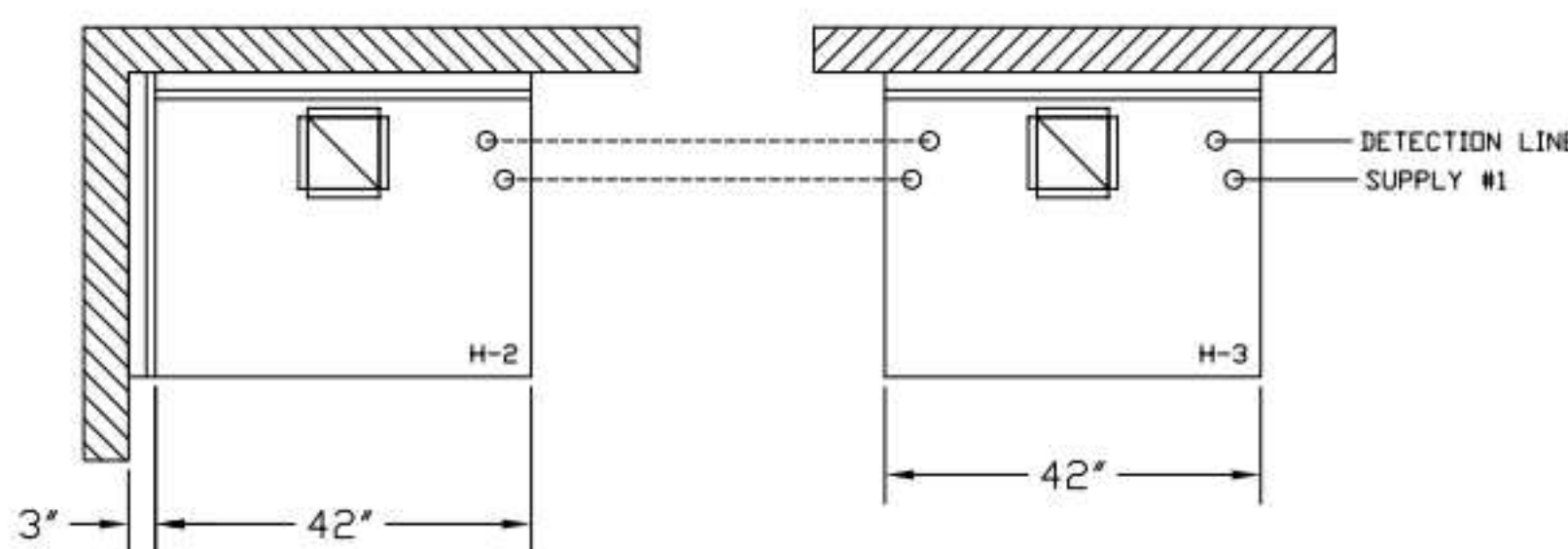


- AMEREX FIRE SYSTEM**
- (1) MECHANICAL RELEASE MODULE
  - (2) EXTRA MICRO SWITCH ASSEMBLIES (MOUNTED IN MECHANICAL REL. MODULE)
  - (3) 3.75 GALLON TANK
  - (4) 4.75 GALLON TANKS
- A) (1) KP375 TANK - 11 FLOW POINTS
  - (2) KP475 TANKS - 14 FLOW POINTS (MOUNTED ON HOOD H-1L & H-1R)
  - B) 1/2" & 3/8" BLACK IRON PIPING W/ 3/8" S.S. APPLIANCE DROPS

ALL APPLIANCE NOZZLES FOR PRESSURE FRYERS ARE PN 13729 NOZZLES W/ SWIVELS. ALL GRILL NOZZLES ARE 14178 NOZZLES W/ SWIVELS.

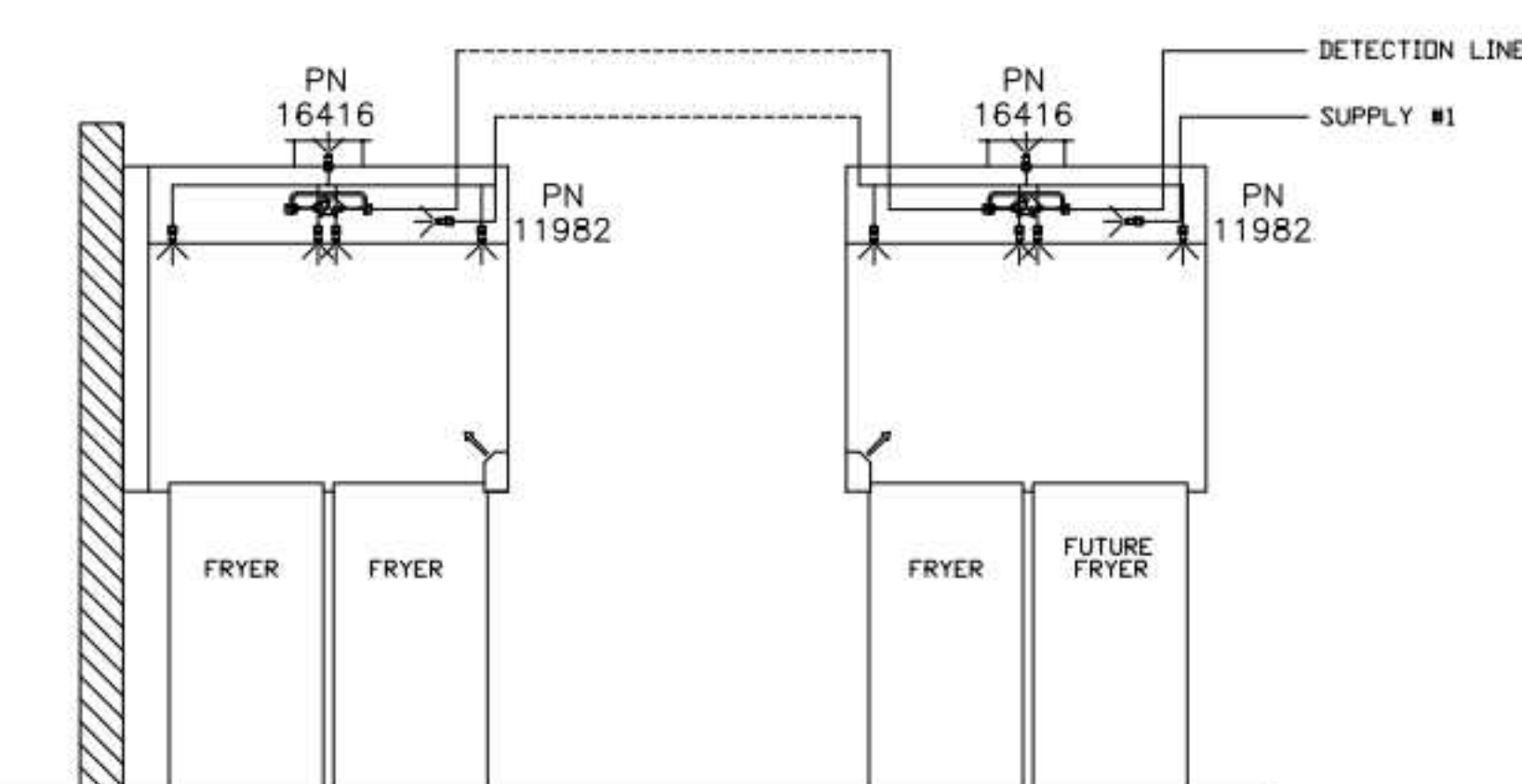


AMEREX FIRE SYSTEM LAYOUT



- AMEREX FIRE SYSTEM**
- (1) SYSTEM ENCLOSURE
  - (2) WALL MOUNTING BRACKET
  - (3) MECHANICAL RELEASE MODULE
  - (4) EXTRA MICRO SWITCH ASSEMBLIES (MOUNTED IN MECHANICAL REL. MODULE)
  - (5) KP475 AGENT CYLINDERS (4.75 GALLON TANK)
- A) (1) KP475 TANKS - 14 FLOW POINTS (REMOTE MOUNTED)
  - (2) FOR HOOD H-2 & H-3
  - B) 1/2" & 3/8" BLACK IRON PIPING W/ 3/8" S.S. APPLIANCE DROPS

ALL APPLIANCE NOZZLES FOR H-2 & H-3 ARE PN 11982 NOZZLES W/ SWIVELS.



AMEREX FIRE SYSTEM LAYOUT

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.  
NOTE TO APPROVER: THIS DRAWING IS EQUIPMENT SPECIFIC. AS INCREASED RISKS IMPACTS AS EQUIPMENT POSITION MAY AFFECT EXHAUST AIRFLOW, HALTON MUST BE NOTIFIED IF ANY OF THESE CHANGES OCCUR. A RE-CALCULATION EXHAUST AIRFLOW MAY BE REQUIRED.  
 REVISE AND RESUBMIT  
 APPROVED FOR FABRICATION  
 WITH CHANGES AS NOTED  
APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_



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

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY BELOW:  
HALTON CO. (CANADA)  
1021 BREVIK PLACE  
MISSISSAUGA, ON L4W 3R7  
1-905-624-0301

PROJECT: CHICK-FIL-A P14 - REVERSE  
LSR BUILDING  
LOCATION: --- DATE: 08.09.22  
SCALE: NTS  
Halton Dwg: U22-606-02FS

Sheet  
MH-1.2

