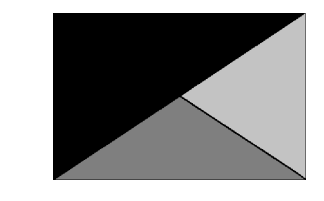






**Chick-fil-A**  
5200 Buffington Road  
Atlanta, Georgia  
30349-2998



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

KURZYNSKE & ASSOCIATES LICENSE  
NO. F-0823, EXPIRES 12/31/23



08/25/23

**CHICK-FIL-A**  
New Bern Ave FSU  
4411 New Bern Ave  
Raleigh, NC 27610

**FSR#04884**  
BUILDING TYPE / SIZE: P13 LE LRG  
RELEASE: v2.20.08

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION
2	06/02/23	Kitchen and EDC

CONSULTANT PROJECT #	21138.EH.S
PRINTED FOR	CONSTRUCTION
DATE	09/17/2021
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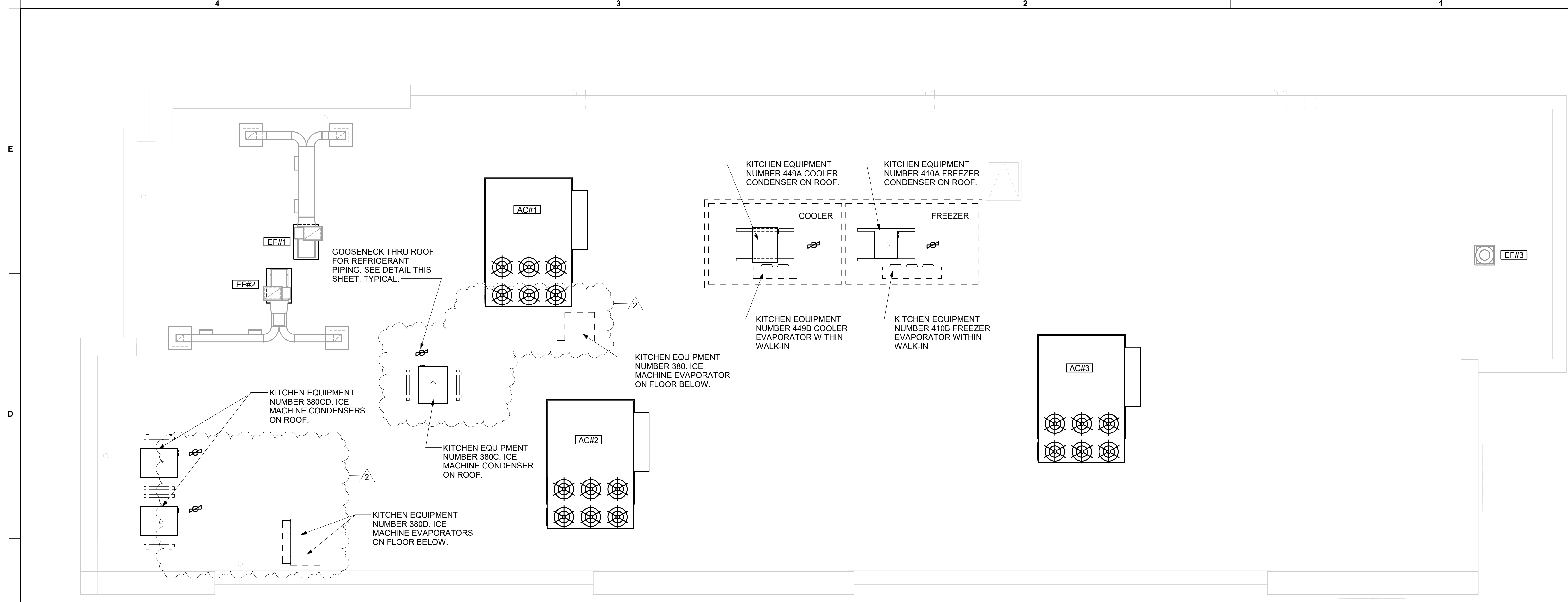
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SHEET REFRIGERATION PLANS

SHEET NUMBER

**M-601**

CONSTRUCTION



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

REFRIGERATION CALCULATIONS AND OTHER INFORMATION REQUIRED PER CHAPTER 11 NCMC

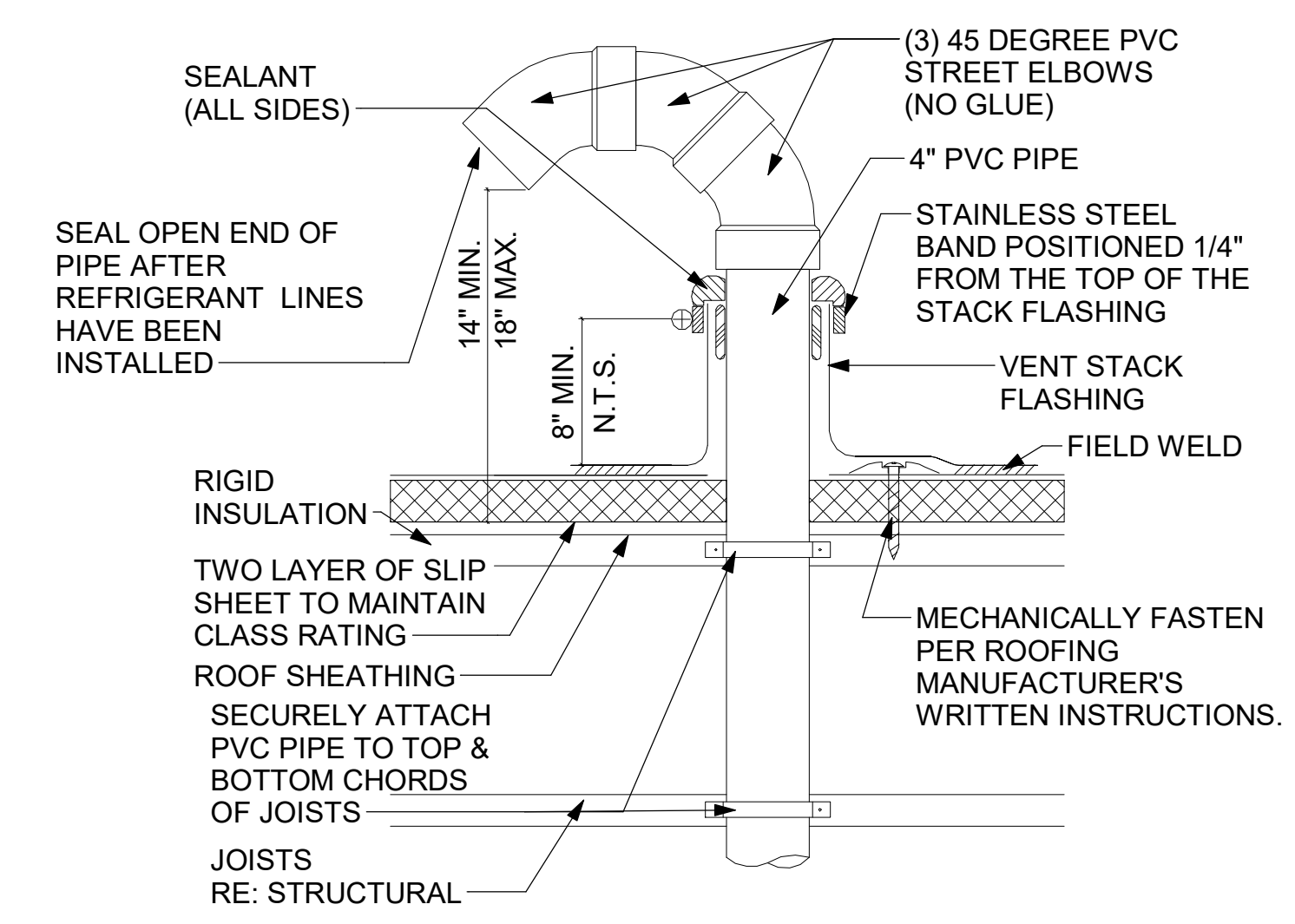
WALK-IN COOLER/FREEZER

1. REFRIGERANT TYPE: R-404A  
2. REFRIGERATION CLASSIFICATION: A1  
3. REFRIGERANT SYSTEM CLASSIFICATION: LOW PROBABILITY  
4. MAXIMUM REFRIGERANT QUANTITY: 31 LBS./1000FT3  
5. SYSTEM APPLICATION/VOLUME CALCULATION:  
A - COOLER VOLUME: 11'-7" L X 7'-6" W X 9'-6" H  
825 FT3  
11'-7" L X 7'-3" W X 9'-6" H  
798 FT3  
B - FREEZER VOLUME:  
6. MAXIMUM ALLOWABLE REFRIGERANT IN SYSTEM:  
A - COOLER: 825 \* (31LB./1000FT3) = 25.6 LB MAX  
B - FREEZER: 798 \* (31LB./1000FT3) = 24.7 LB MAX

FREEZER AND COOLER SHALL HAVE NO MORE THAN THE MAXIMUM ALLOWABLE REFRIGERANT SHOWN ABOVE.

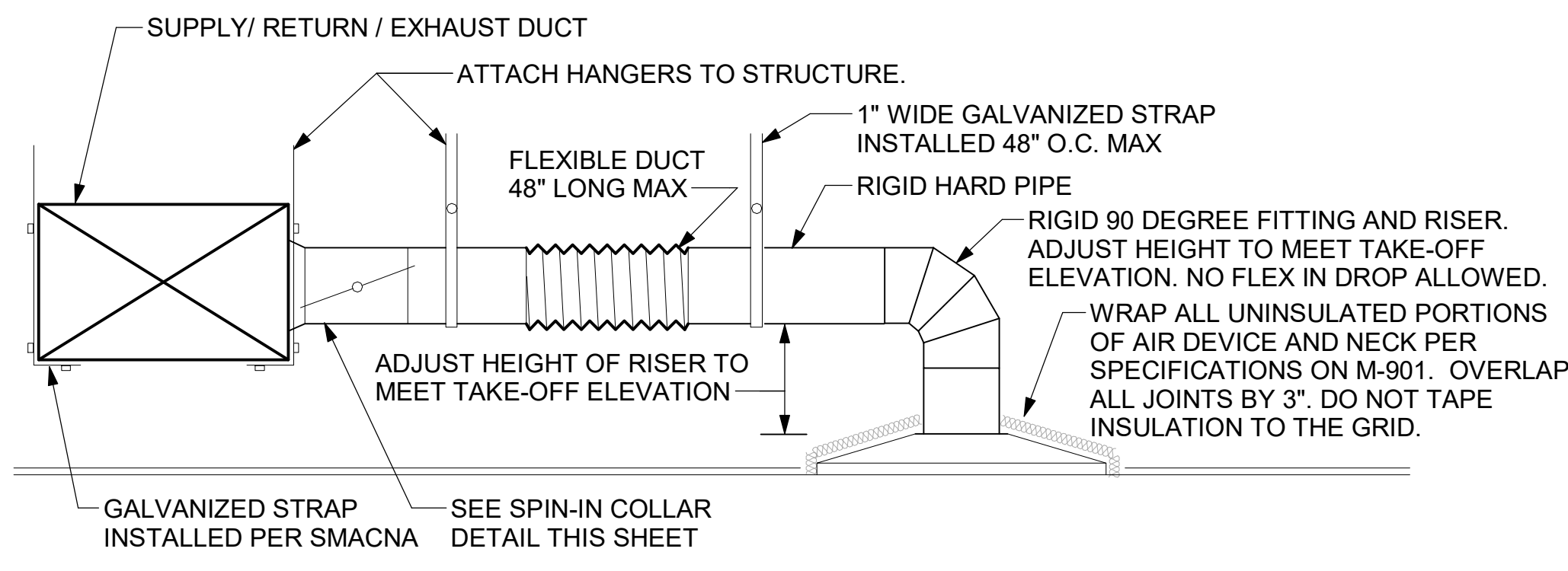
OTHER ITEMS REQUIRED FOR REVIEW:  
1) PIPING MATERIAL SHALL COMPLY WITH 1107.5 NCMC. COPPER REFRIGERANT PIPING IS TO BE USED FOR INSTALLATION.  
2) ROOF REFRIGERANT PIPE PENETRATION SHOWN ON THIS SHEET, "GOOSENECK PENETRATION DETAIL."  
3) WALK-IN COOLER/FREEZER CONDENSING AND EVAPORATOR CUT SHEETS ARE LOCATED ON SHEET M-602.  
4) EVAPORATOR AND CONDENSING UNIT LOCATIONS ARE SHOWN ON THIS SHEET AND ON THE ROOF PLAN.  
5) EVAPORATOR CONDENSATE PIPING IS SHOWN ON SHEETS P-101 AND P-201.

EQUIPMENT	PLAN MARK	MANUFACTURER	MODEL	WIDTH (IN.)	DEPTH (IN.)	HEIGHT (IN.)	REFRIGERANT							PRE-CHARGE LINES (FT)	MATERIAL	WEIGHT (LBS)
							TYPE	CLASSIFICATION	SYSTEM CLASSIFICATION	MAX. ALLOWED (LB / 1000QFT)	SPACE VOLUME (QFT)	MAX. ALLOWED TOTAL (LB)	AMOUNT OF CHARGE (LB)			
ICE MAKER CONDENSER	380C	FOLLET	HCD1410	22.7	24.5	21.25	R 404A	AI	LOW	31	--	--	13.0	35	COPPER	270
ICE MAKER CONDENSER	380CD	FOLLET	HCD1810	30.0	38.5	25.75	R 404A	AI	LOW	31	--	--	14.5	35	COPPER	295
ICE MAKER CONDENSER	380CD	FOLLET	HCD1810	30.0	38.5	25.75	R 404A	AI	LOW	31	--	--	14.5	35	COPPER	295
FREEZER CONDENSER	410A	THERMO-KOOL	MOH031L63	37.75	28.25	19.75	R 404A	AI	LOW	31	777	24	14.0	40	COPPER	223
COOLER CONDENSER	449A	THERMO-KOOL	MOH010X63	23.75	28.25	17.25	R 404A	AI	LOW	31	793	24	5.5	40	COPPER	138



**2 GOOSENECK PENETRATION DETAIL**  
1/4" = 1'-0"

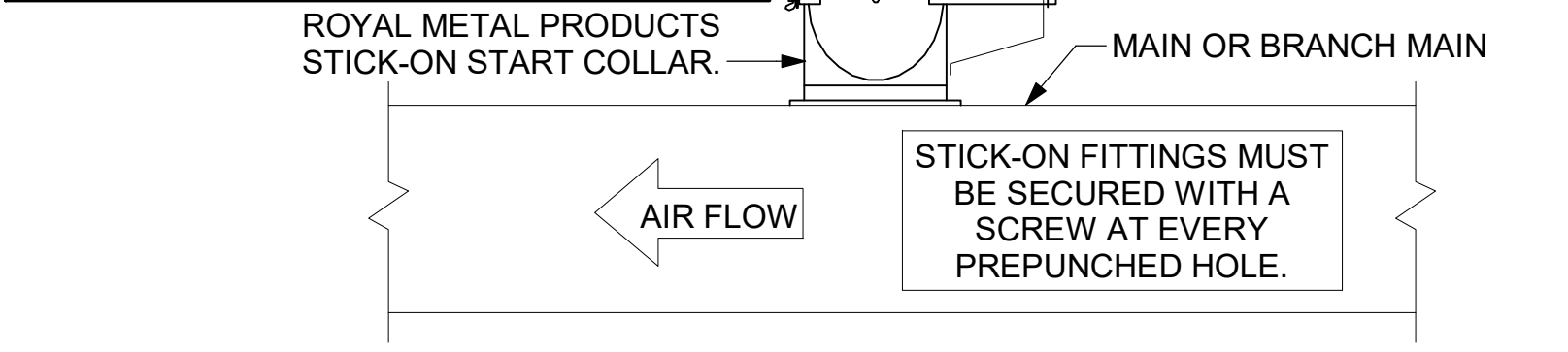
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**1 SAG/RAG/GRILLE TAKE-OFF**  
NOT TO SCALE

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.

DAMPER CONTROL HANDLE MUST BE EXPOSED, LOCATED ON THE LEFT OR RIGHT (9 OR 3 O'CLOCK) SIDE WHEN INSTALLED ON HORIZONTAL DUCTS, AND LOCATED ON THE BOTTOM (6 O'CLOCK) WHEN INSTALLED ON VERTICAL DUCTS. 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

**GAS FIRED ROOFTOP UNIT SCHEDULE**

MARK	TOTAL COOLING MBH	SENSIBLE COOLING MBH	HEATING INPUT MBH	HEATING OUTPUT MBH	STAGES	SUPPLY	O.A.	HP	ESP	MODEL R-410A	MFGR	REMARKS
AC#1	291.6	224.5	260	211	2	9500	1480	10	0.80	LGT300S4M	LENNOX	1,2,3,4,6,7,8,9,10,11,12,13,14,15,16
AC#2	177.4	128.6	260	211	2	5250	1275	5	0.65	LGT180H4M	LENNOX	1,2,3,5,6,7,8,9,10,11,12,13,14,15,16
AC#3	235.4	164.8	360	292	2	6400	1925	5	0.65	LGT240H4M	LENNOX	1,2,3,4,6,7,8,9,10,11,12,13,14,15,16

NOTES

- COOLING CAPACITIES ARE GROSS, BASED ON ENTERING: 80FDB/67FWB, OUTDOOR: 95FDB, AND 400 CFM PER TON.
- CHICK-FIL-A MAINTAINS A NATIONAL ACCOUNT FOR EQUIPMENT WITH LENNOX CORPORATION. CONTACT LENNOX NATIONAL ACCOUNTS AT 800-367-6285 (OR BY FAX AT 972-497-5112) FOR PRICING, ORDERING AND AVAILABILITY.
- MECHANICAL CONTRACTOR TO VERIFY LENNOX SUBMITTAL WITH CONSTRUCTION DOCUMENTS.

REMARKS

- PROVIDE DIFFERENTIAL ENTHALPY ECONOMIZER WITH POWER EXHAUST.
- PROVIDE 14" HIGH ROOF CURB.
- SEE DETAIL 2/M-501 FOR SETTING OF PRODIGY M3 BOARD CONTROL PARAMETERS BY MC.
- PROVIDE FACTORY INSTALLED AND UNIT POWERED 115V GFI SERVICE OUTLET.
- PROVIDE FACTORY INSTALLED 115V GFI SERVICE OUTLET.
- PROVIDE FACTORY INSTALLED RETURN SIDE SMOKE DETECTOR.
- PROVIDE FACTORY INSTALLED NON-FUSED DISCONNECT.
- PROVIDE 2" MERV 13 THROW AWAY FILTERS.
- PROVIDE HINGED PANELS FOR FILTER ACCESS, FAN MOTOR ACCESS, COMPRESSOR ACCESS AND CONTROL COMPARTMENT ACCESS.
- ADJUST GAS MANIFOLD PRESSURE AT LOCATIONS WHERE ELEVATION EXCEEDS 2000' ABOVE SEA LEVEL AS RECOMMENDED BY MANUFACTURER.
- PROVIDE FACTORY INSTALLED COIL HAIL GUARD.
- PROVIDE FACTORY INSTALLED CONDENSATE PAN DRAIN OVERFLOW SWITCH.
- PROVIDE HUMIDITROL OPTION WITH FACTORY WALL MOUNTED HUMIDITY SENSOR.
- FACTORY PROVIDED, FIELD INSTALLED BY TENSIONER.
- PROVIDE FACTORY CONFIGURED PHASE LOSS PROTECTION.
- PROVIDE HIGH FAULT SCCR (100KA).

**EXHAUST FAN SCHEDULE**

MARK	CFM	ESP	RPM	Tip Speed	HP	Area Served	MODEL	MANUFACTURER	REMARKS
EF#1	1912	0.75	1326	5207	3/4	HOOD#1	150 CPS	LOREN COOK	1,2,3,4,5,6,7,8,9,10,11,17
EF#2	1402	1	1217	4783	3/4	HOOD#2 & HOOD#3	150 CPS	LOREN COOK	1,2,3,4,5,6,7,8,9,10,11,17
EF#3	300	0.375	1294	3,091	1/8	RESTROOMS	ACED-90C15DH	LOREN COOK	3,11,12,13,14,15,16
EF#4	450	0.3	1144	---	5/8W	DTT CLOSET	GCVF-700	LOREN COOK	18, 19, 20

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.
- CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARROW COMPANY FOR THE FAN/CURB PACKAGE. THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE FAN/CURB PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. FANS AND CURBS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

REMARKS

- UPBLAST, ARRANGEMENT 10, CCW ROTATION. SEE PLANS TO CONFIRM CONFIGURATION.
- PROVIDE FACTORY STEEL FAN WHEEL.
- PROVIDE FACTORY INSTALLED, PRE-WIRED, NEMA 3 NON-FUSED DISCONNECT.
- PROVIDE FACTORY STEEL INLET FLANGE AND INLET COMPANION FLANGE.
- PROVIDE AND INSTALL ROOFTOP SOLUTIONS G2 DRIP GUARD. MECHANICAL CONTRACTOR TO CONTACT ROOFTOP SOLUTIONS AT 800-913-7034.
- PROVIDE FACTORY WEATHER HOUSING W/ HINGED ACCESS DOOR.
- PROVIDE FACTORY DRAIN CONNECTION.
- PROVIDE FACTORY BOLTED ACCESS DOOR ON SCROLL.
- PROVIDE FACTORY INSTALLED BELT DRIVE WITH ADJUSTABLE MOTOR SHEAVE AND SPARE BELT.
- PROVIDE FACTORY STEEL OUTLET COMPANION FLANGE.
- INTEGRAL THERMAL OVERLOAD WITH AUTOMATIC RESET.
- PROVIDE BIRDSCREEN.
- BACKDRAFT DAMPER IN DUCT BY MECHANICAL CONTRACTOR AS SHOWN ON 4/M-401.
- STARTER BY ELECTRICAL CONTRACTOR. INTERLOCK WITH LIGHTS BY ELECTRICAL CONTRACTOR.
- PROVIDE 12" HIGH CURB.
- PROVIDE FACTORY INSTALLED AND WIRED SPEED CONTROLLER.
- UTILITY SET FAN CURB AND ASSOCIATED EXHAUST DUCT CURB PROVIDED BY TOM BARROW COMPANY.
- PROVIDE NEMA 1 PREWIRED DISCONNECT.
- PROVIDE AIR BALANCE KIT AND SECURE TO FAN.
- PROVIDE THERMOSTAT / TEMPERATURE CONTROLLER. SET TO 76°F.

**BROMIC ELECTRIC HEATER SCHEDULE**

MARK	KW	FRAME LENGTH	FRAME WIDTH	FRAME DEPTH	MOUNTING TYPE	MODEL	MANUFACTURER
EH#1	6.0	56"	8.5"	3.5"	Bracket	BH0420035	Bromic

NOTES

- CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH BROMIC COMPANY FOR THE BROMIC ELECTRIC HEATER PACKAGE. THE MECHANICAL CONTRACTOR SHALL PURCHASE HEATERS DIRECTLY FROM BROMIC COMPANY. CONTACT MR. FRANK SARVER AT 858-400-4063, FOR PRICING AND AVAILABILITY. BROMIC HEATERS NOT PURCHASED THRU BROMIC COMPANY WILL NOT BE ACCEPTED.

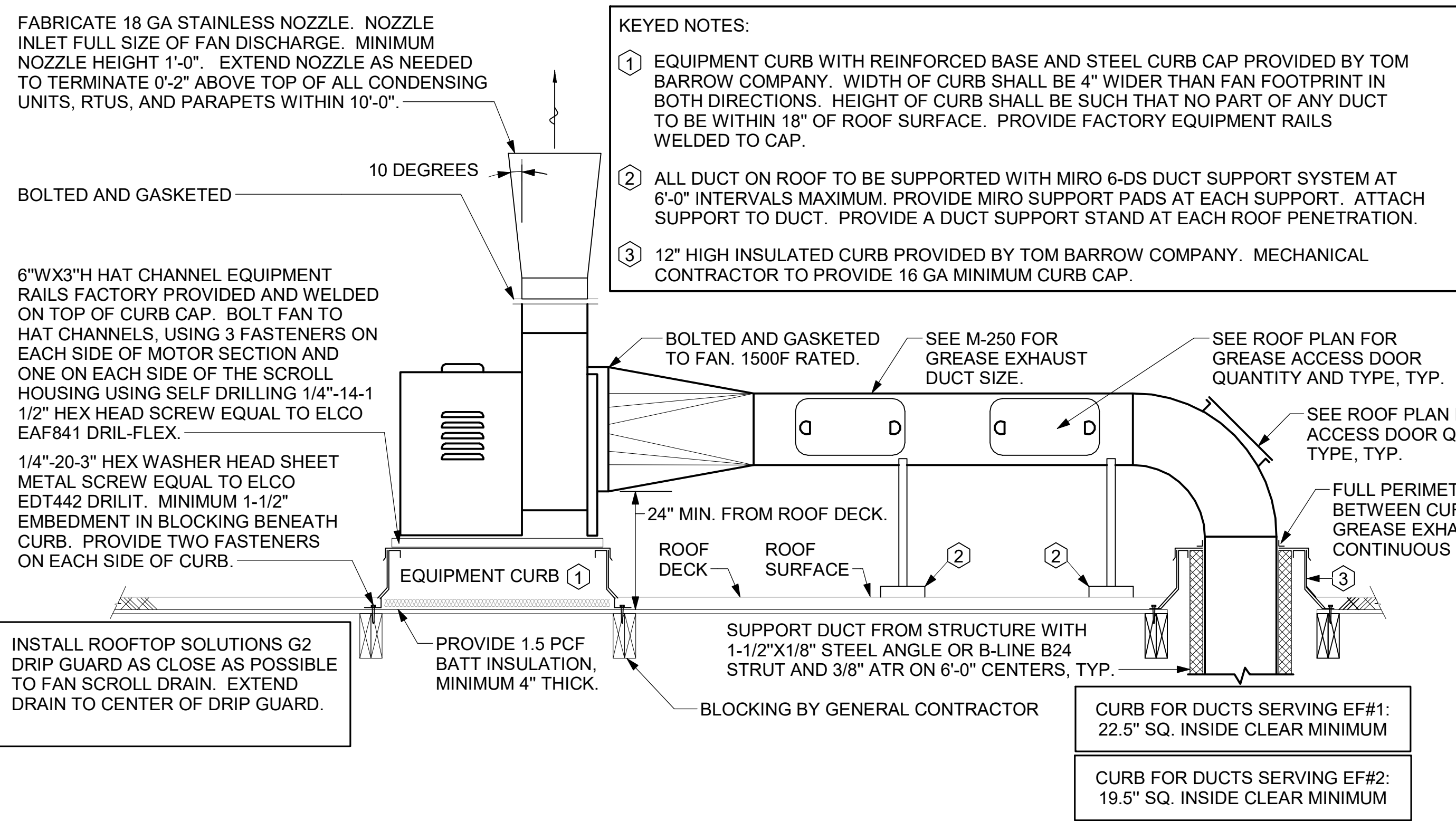
REMARKS

- PROVIDE WITH BLACK HIGH TEMPERATURE COATING.
- PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND.
- PROVIDE WITH MOUNTING BRACKETS PER MANUFACTURER'S RECOMMENDATIONS.

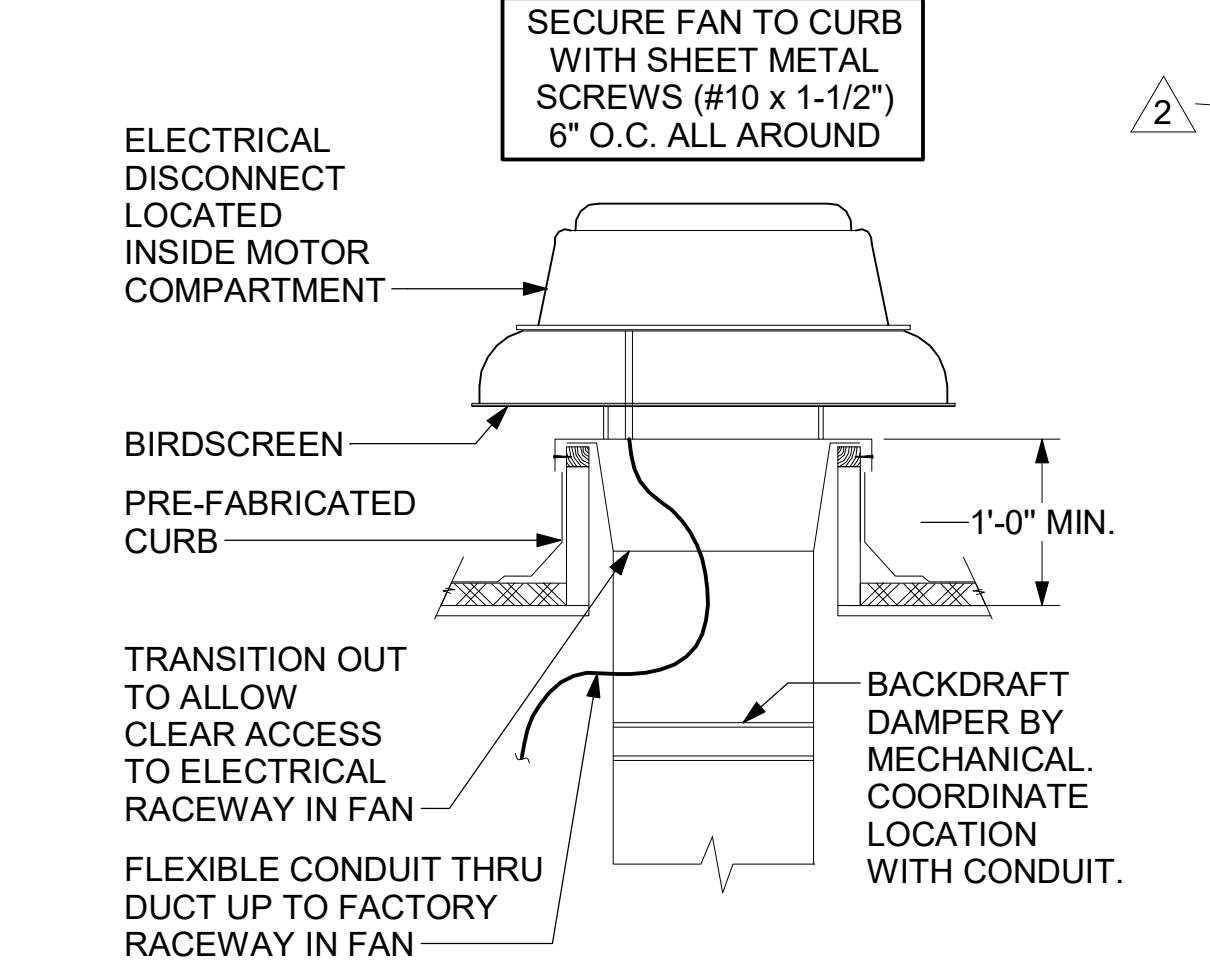
ALL DUCTWORK AND UNFINISHED METAL ON ROOF EXCEPT STAINLESS SHALL BE PREPARED WITH TWO COATS OF SHERWIN WILLIAMS B66-200 SERIES DTM WHITE ACRYLIC SEMI-GLOSS INDUSTRIAL MAINTENANCE COATING. DEGREASE AND PRIME BARE METAL SURFACE WITH ONE COAT OF SHERWIN WILLIAMS DTM ACRYLIC PRIMER PRIOR TO PAINTING.

KEYED NOTES:

- EQUIPMENT CURB WITH REINFORCED BASE AND STEEL CURB CAP PROVIDED BY TOM BARROW COMPANY. WIDTH OF CURB SHALL BE 4" WIDER THAN FAN FOOTPRINT IN BOTH DIRECTIONS. HEIGHT OF CURB SHALL BE SUCH THAT NO PART OF ANY DUCT TO BE WITHIN 18" OF ROOF SURFACE. PROVIDE FACTORY EQUIPMENT RAILS WELDED TO CAP.
- ALL DUCT ON ROOF TO BE SUPPORTED WITH MIRO 6-DS DUCT SUPPORT SYSTEM AT 6'-0" INTERVALS MAXIMUM. PROVIDE MIRO SUPPORT PADS AT EACH SUPPORT. ATTACH SUPPORT TO DUCT. PROVIDE A DUCT SUPPORT STAND AT EACH ROOF PENETRATION.
- 12" HIGH INSULATED CURB PROVIDED BY TOM BARROW COMPANY. MECHANICAL CONTRACTOR TO PROVIDE 16 GA MINIMUM CURB CAP.



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



**4 RESTROOM EXHAUST FAN**  
NOT TO SCALE

**AIR DOOR SCHEDULE**

MARK	CFM	VELOCITY	HEATING CAP	HP	AREA SERVED	MODEL	MANUFACTURER	REMARKS
AD#1	1765	2670 FPM	10 KW	3/4 HP	DRIVE THRU	CHA-148E	Powered Aire	1,2,3
AD#2	3867	4220 FPM	N/A	3/4 HP	REAR DOOR	RBT-148	Powered Aire	4
AD#3	1197	2440 FPM	N/A	3/4 HP	DRIVE THRU	CHA-136	Powered Aire	1,2,4

NOTES

- CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARROW COMPANY FOR THE AIR DOORS. THE MECHANICAL CONTRACTOR SHALL PURCHASE THE AIR DOORS DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010, FOR PRICING AND AVAILABILITY. AIR DOORS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

REMARKS

- FACTORY PROVIDED, WIRED, AND UNIT MOUNTED SPEED CONTROLLER LOCATED 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.

**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/ OFFICE/ KITCHEN	VARIES	24"x24"	LAY-IN	1,7
C	PRICE MODEL SMCD STEEL SUPPLY AIR DIFFUSER FIELD ADJUSTABLE AIR PATTERN CONTROLLERS.	ENTRY	14"x14"	19"x19"	BEVELLED	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	1,7,8
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

- CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARROW COMPANY FOR THE AIR DEVICES. THE MECHANICAL CONTRACTOR SHALL PURCHASE THE AIR DEVICES DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010, FOR PRICING AND AVAILABILITY. AIR DEVICES NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

REMARKS

- STANDARD OFF WHITE FINISH.
- PROVIDE MODEL VCS3 NECK DAMPER.
- SEE DRAWING M-201 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 1/M-401.
- FACTORY INSULATED R-6 BACKPAN.
- PRICE AMF SURFACE MOUNT ADAPTER FRAME. SEE 1/M-201 FOR LOCATION AND QUANTITY.

**GAS FIRED INFRARED HEATER SCHEDULE**

MARK	INPUT (MBH)	FRAME LENGTH	FRAME WIDTH	FRAME DEPTH	MOUNTING TYPE	MODEL	MANUFACTURER
GIH	50	48-1/4"	13"	10"	Bracket	2352-NG	Schwank

NOTES

- CONFIRM HEATER QUANTITY WITH CANOPY SHOP DRAWINGS.
- CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARROW COMPANY FOR THE GAS FIRED INFRARED HEATERS. THE MECHANICAL CONTRACTOR SHALL PURCHASE THE HEATER PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010, FOR PRICING AND AVAILABILITY. HEATERS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

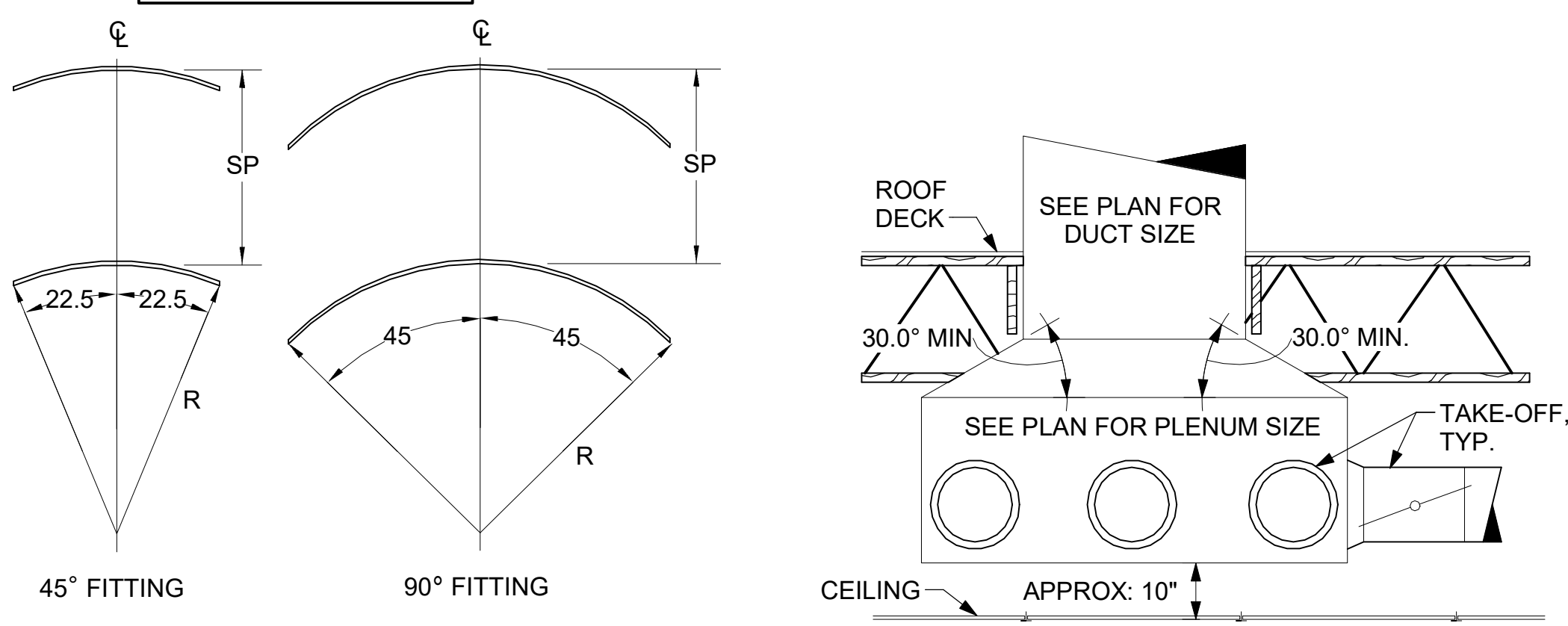
REMARKS

- STEEL BURNER WITH CERAMIC BURNER TILES.
- STAINLESS STEEL LEGS WITH BLACK ENAMEL FINISH 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.

**TURNING VANE SCHEDULE**

R	SP	GA
2"	1.5"	24

- NO TRAILING EDGE.
- SINGLE THICKNESS CONSTRUCTION.

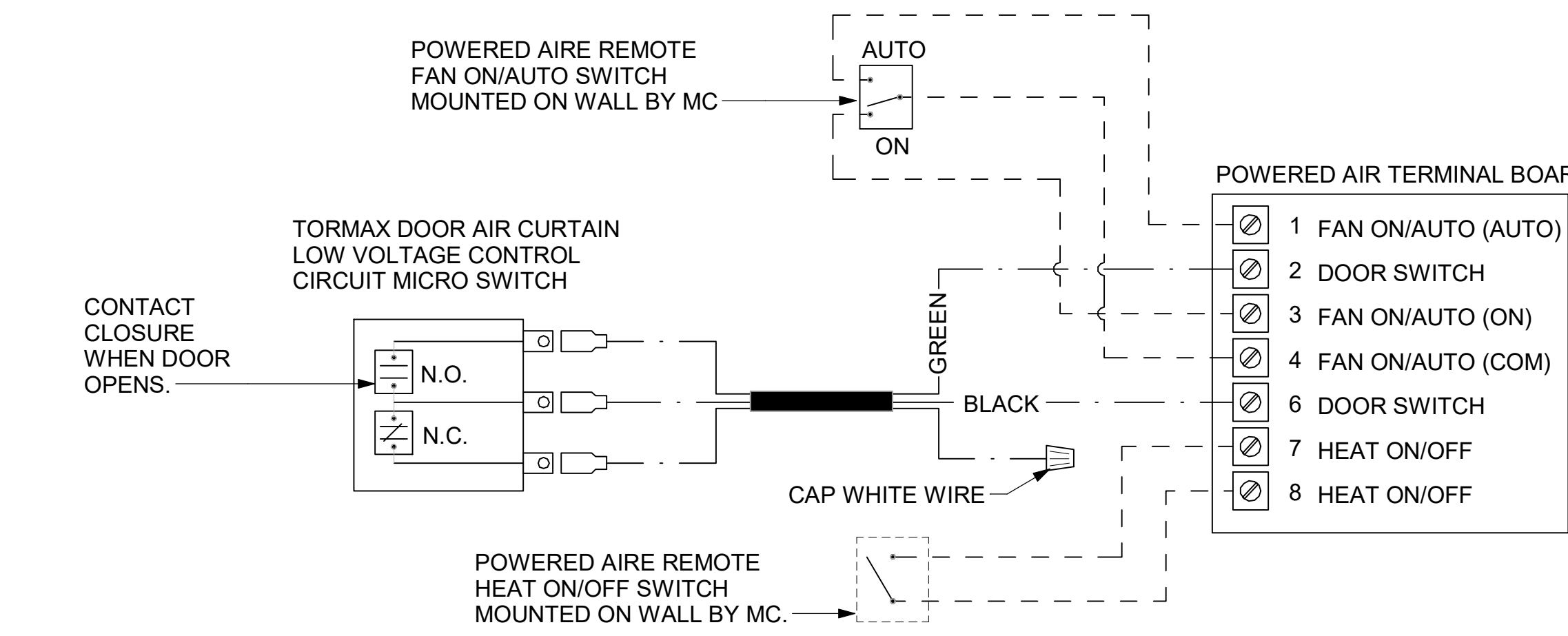


**5 TURNING VANES**  
NOT TO SCALE

**6 RETURN DROP GEOMETRY**  
NOT TO SCALE

**LEGEND**

- 18 AWG MIN LOW VOLTAGE WIRING BY MC, U.N.O.
- 22 AWG LOW VOLTAGE WIRING PROVIDED BY TORMAX, WIRING INSTALLED BY MC.



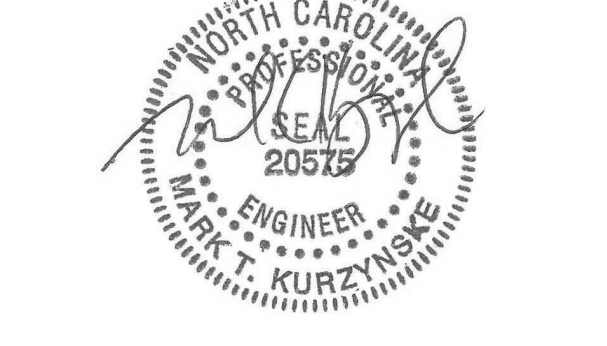
**7 AIR CURTAIN WIRING DIAGRAM**  
NOT TO SCALE



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KURZYNSKE & ASSOCIATES LICENSE NO. F-0823, EXPIRES 12/31/23



08/25/23

**CHICK-FIL-A**  
New Bern Ave FSU  
4411 New Bern Ave  
Raleigh, NC 27610

**FSR#04884**  
BUILDING TYPE / SIZE: P13 LE ALL  
RELEASE: v2.20.08

**REVISION SCHEDULE**

NO.	DATE	DESCRIPTION
2	06/02/23	Kitchen and EDC

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SHEET HVAC DETAILS AND SCHEDULES  
SHEET NUMBER

**M-401**

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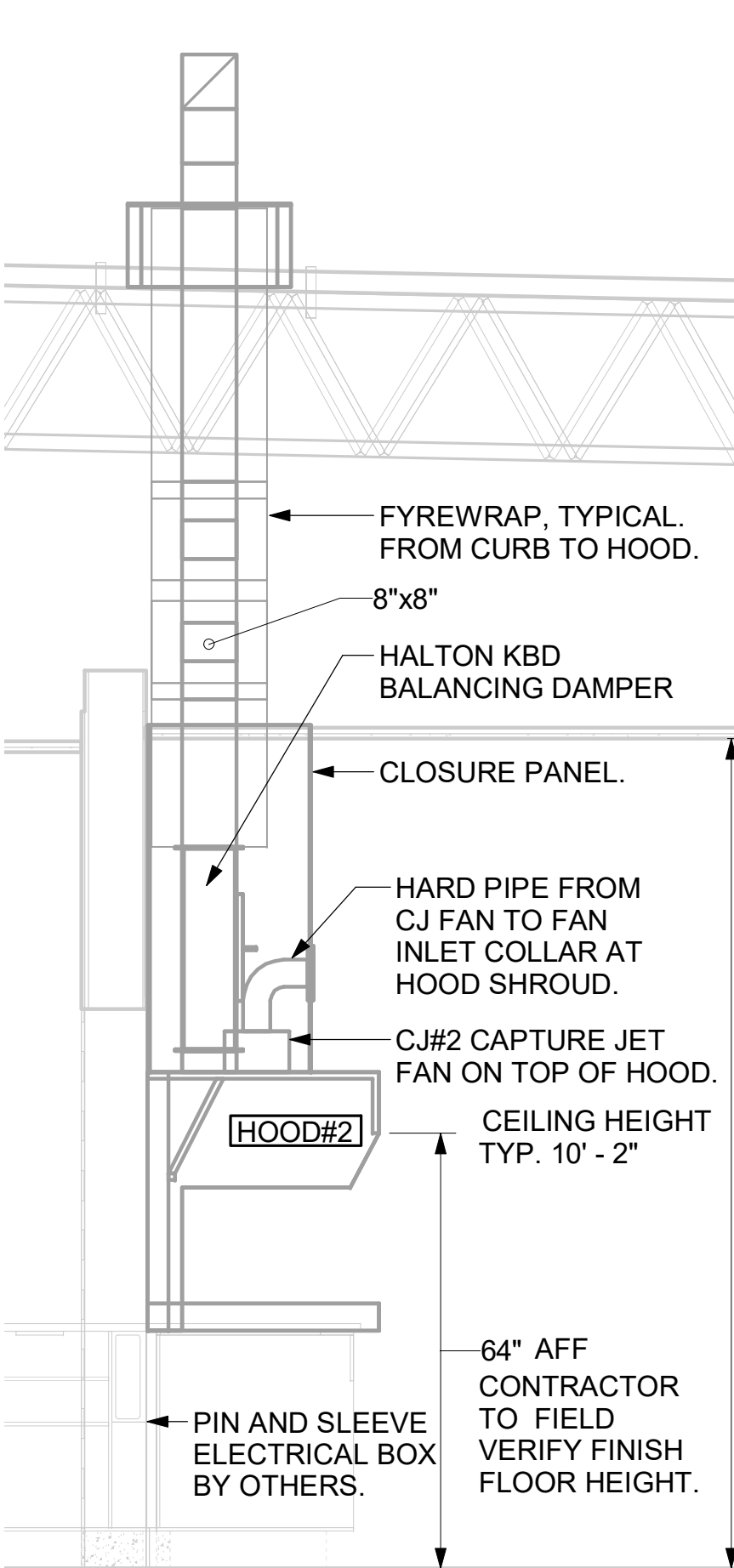
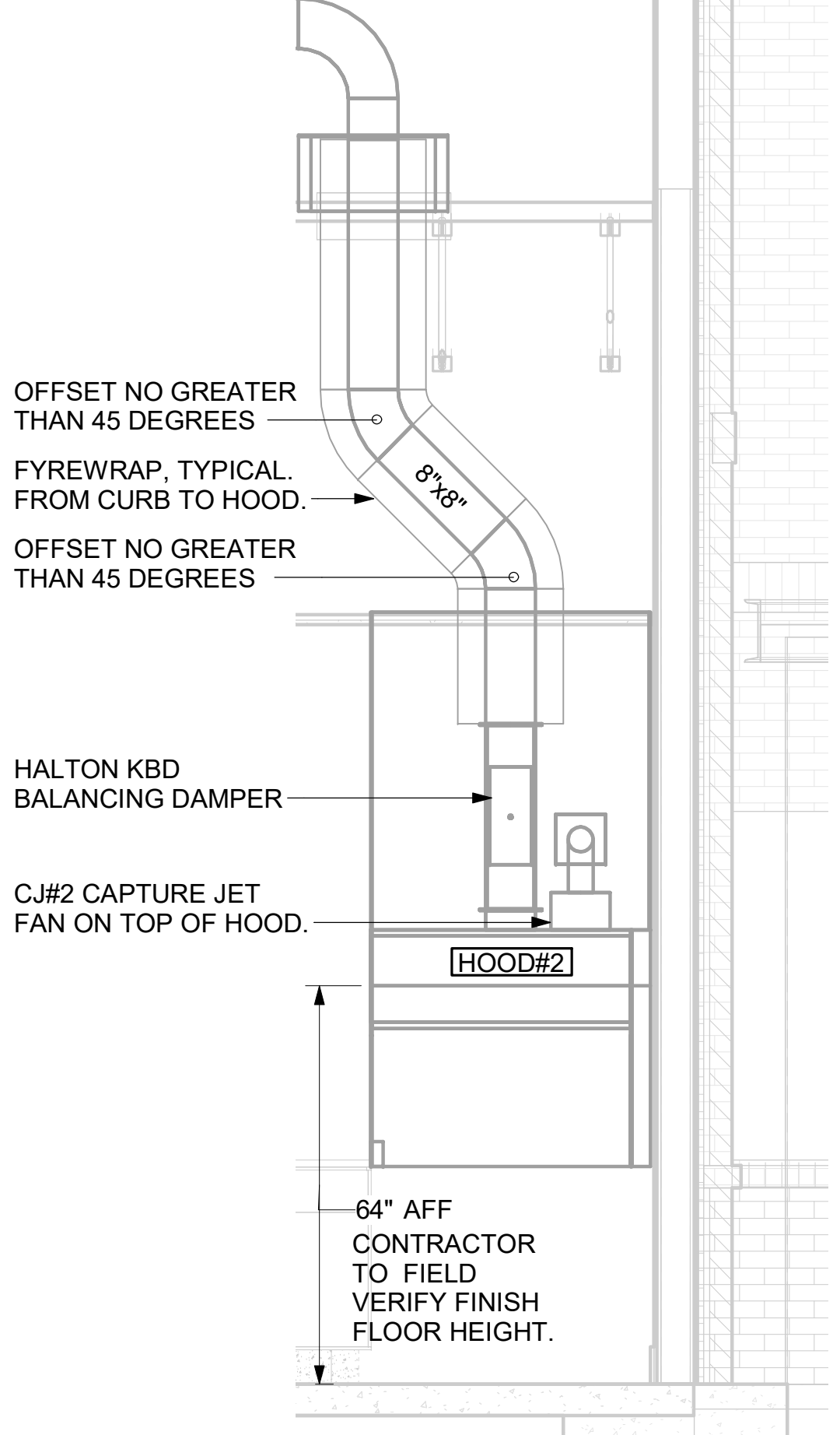
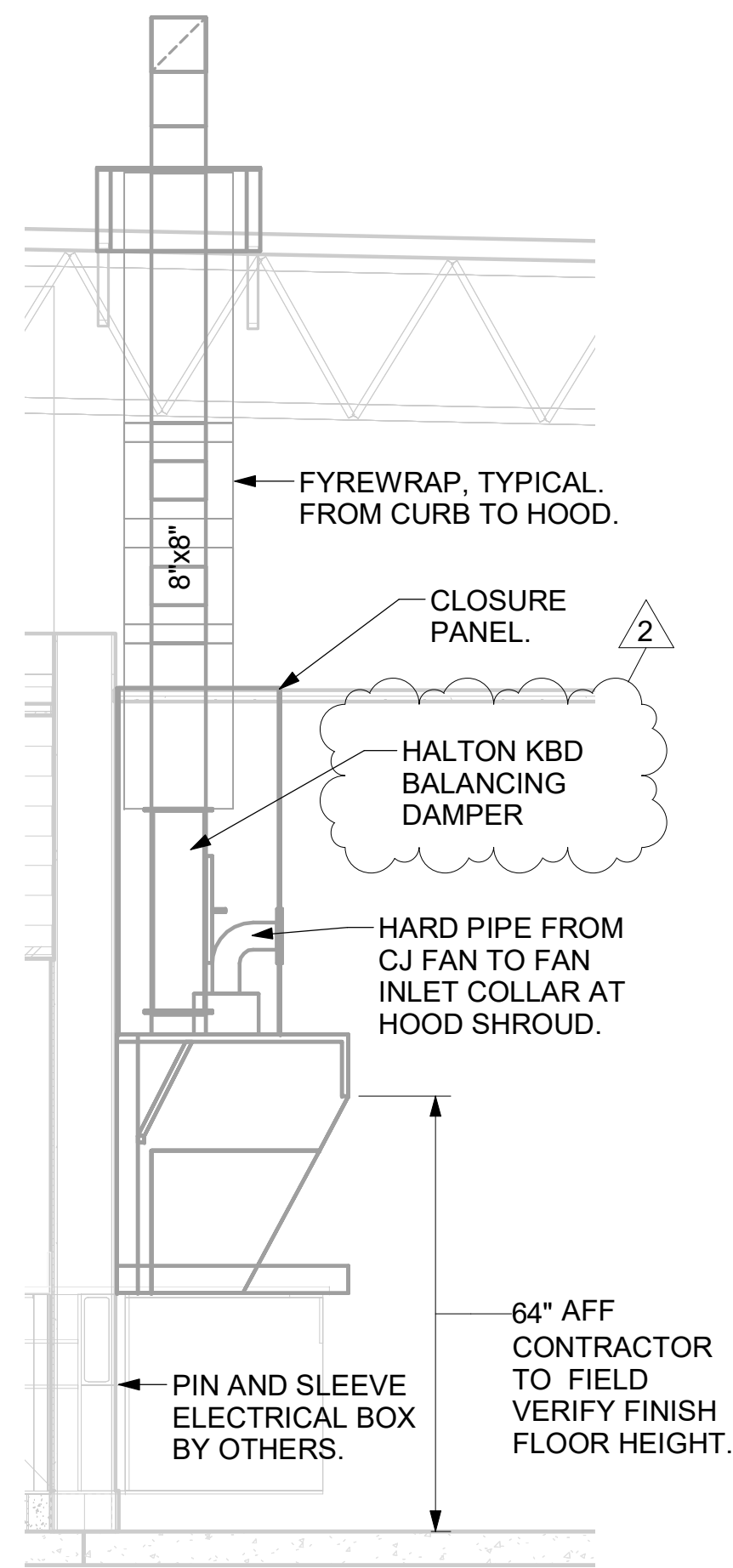
**GREASE EXHAUST DUCT CLEARANCE NOTE:**  
 CLEARANCES ABOVE CEILING ARE TIGHT. MECHANICAL CONTRACTOR TO FIELD VERIFY EXACT ROUTING AND CLEARANCES PRIOR TO FABRICATING GREASE EXHAUST DUCT.

**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.

HOOD SCHEDULE											
MARK	EXHAUST CFM	SP @ TAB PORT	CAPTURE JET CFM & S.P.	TYPE	COLLAR SIZE	WIDTH	DEPTH	HEIGHT	MANUFACTURER	MODEL	REMARKS
HOOD#1L	1080	0.13"	72 @ 0.30"	BACKSHELF	11"x8"	96"	37"	38"	HALTON	KVL-2	1
HOOD#1R	832	0.12"	55 @ 0.30"	BACKSHELF	9"x8"	74"	37"	38"	HALTON	KVL-2	1
HOOD#2	701	0.30"	30 @ 0.29"	BACKSHELF	8"x8"	45"	34"	38"	HALTON	KVL-C	1
HOOD#3	701	0.30"	30 @ 0.29"	BACKSHELF	8"x8"	42"	34"	38"	HALTON	KVL-C	1
NOTES	DIMENSIONS OF HOODS INCLUDE BACK AND SIDE SPACERS (HEIGHT DOES NOT INCLUDE CLOSURE PANELS).										
REMARKS	1. REFER TO HOOD SHOP DRAWINGS FOR HOOD OPTIONS AND CONSTRUCTION. HOOD SHOP DRAWINGS ARE INCLUDED FOR REFERENCE ON SHEET MH-101.										

SET RIGHT SIDE OF HOOD#3 FLUSH WITH FINISHED EDGE OF PASS THRU OPENING.

SET LEFT SIDE OF HOOD#2 FLUSH WITH FINISHED EDGE OF PASS THRU OPENING.

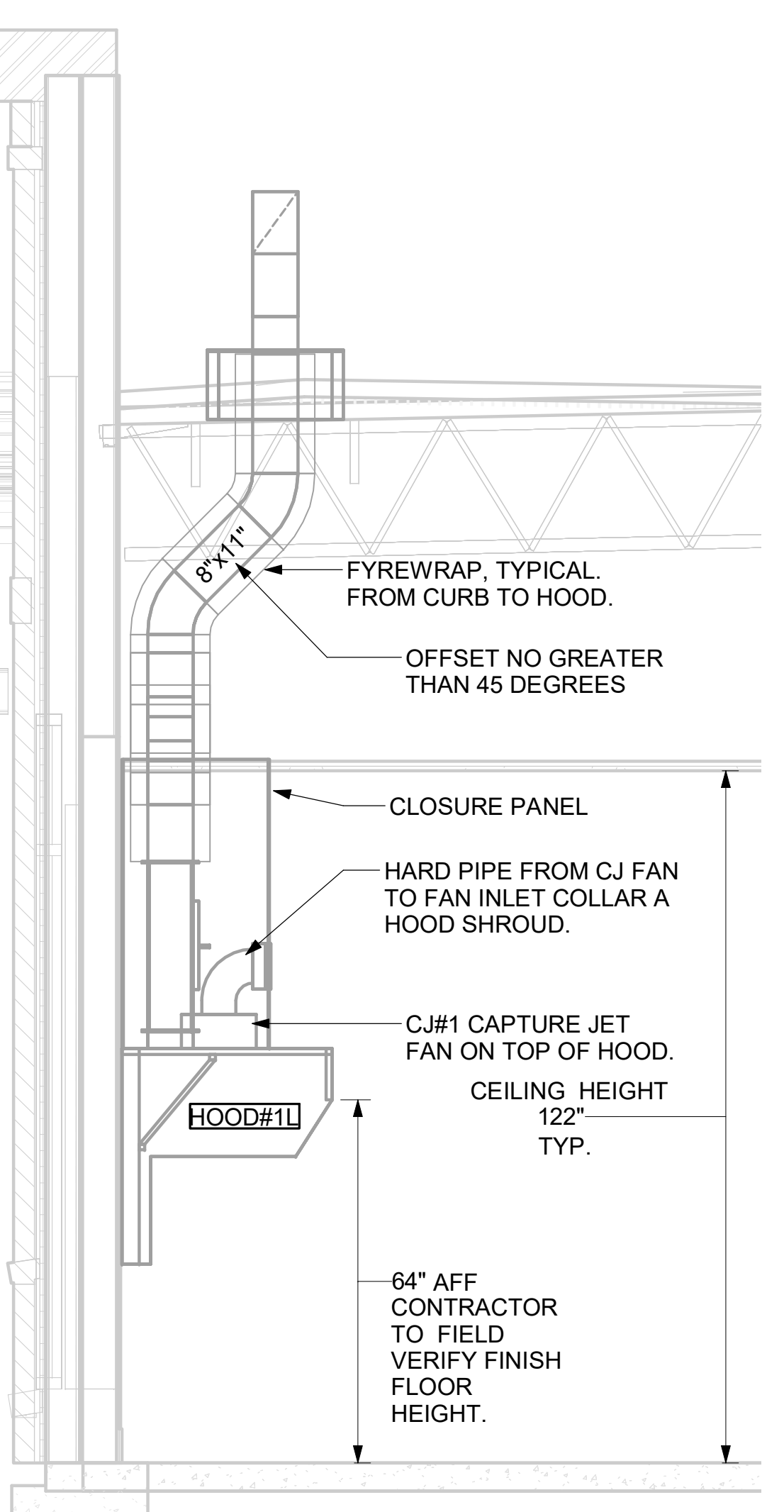
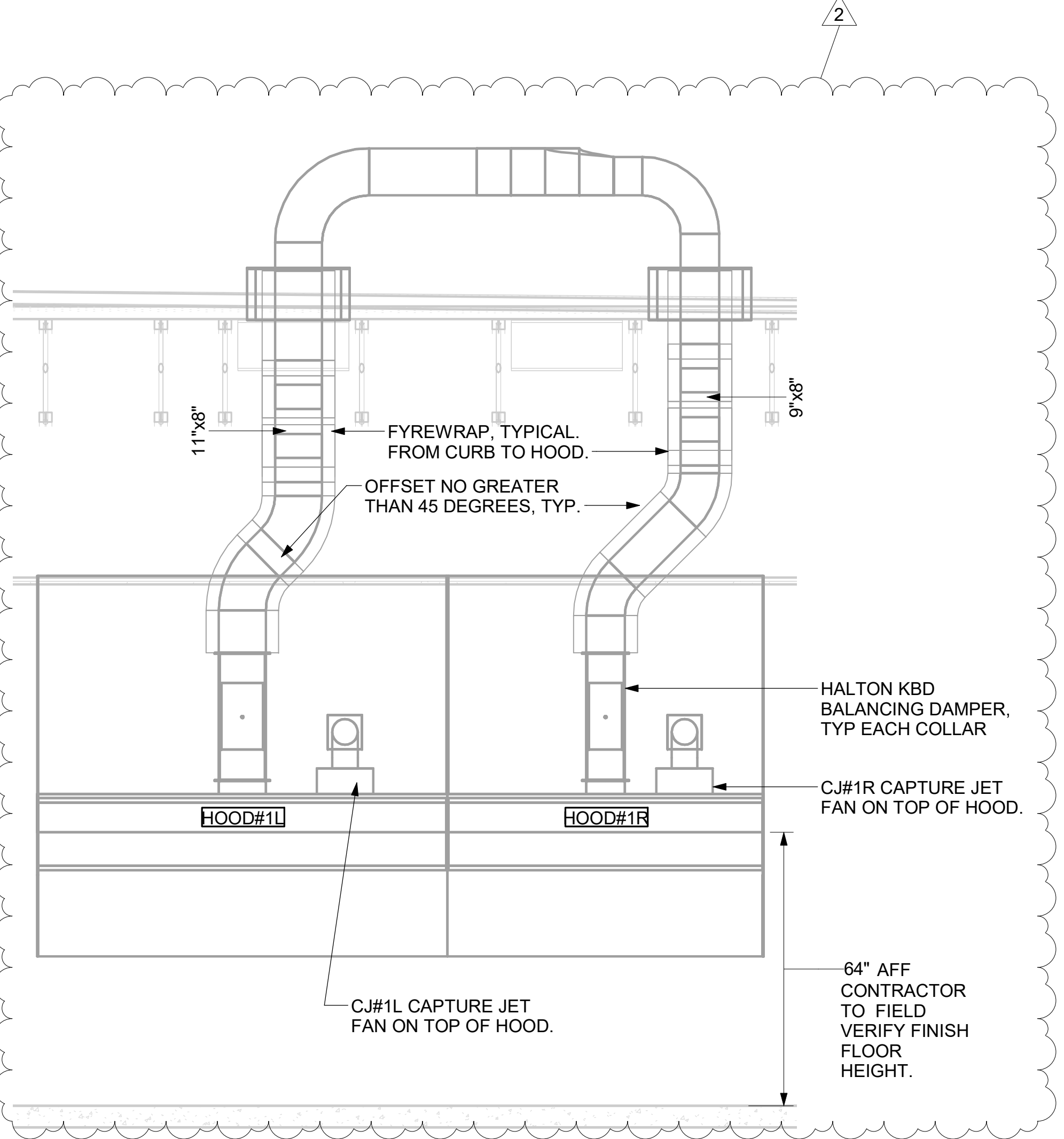


- KITCHEN HOOD SYSTEMS NOTES**
- CHICK-FIL-A MAINTAINS A NATIONAL ACCOUNT WITH HALTON CO. FOR THE HOODS. CHICK-FIL-A WILL PURCHASE AND PROVIDE THE HOODS FOR INSTALLATION BY THE MECHANICAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR RECEIVING THE HOODS. CONTACT HALTON CO. AT 270-237-5600 FOR MORE INFO.
  - THE FIRE SUPPRESSION SYSTEM SHALL CONSIST OF A COMPLETE WET ANSUL SYSTEM FURNISHED BY HALTON. THE HOOD SHALL BE FURNISHED PRE-PIPED BY HALTON.
  - THE R-102 ANSUL FIRE SUPPRESSION SYSTEM EXTERNAL TO THE HOODS SHALL BE INSTALLED IN ACCORDANCE WITH HOOD MANUFACTURER'S SHOP DRAWINGS BY AN AUTHORIZED ANSUL SYSTEM INSTALLER SELECTED AND HIRED BY HALTON. COST FOR ANSUL INSTALLATION INCLUDED IN PRICE OF HOODS TO CFA.
  - HOOD EXHAUST DUCTWORK SHALL BE 16 GA. BLACK STEEL WITH CONTINUOUS LIQUID TIGHT WELD OF JOINTS & SEAMS.
  - TURNS IN GREASE EXHAUST DUCTWORK SHALL BE LONG RADIUS TYPE, WITH A CENTERLINE RADIUS R=3W/2, UNLESS OTHERWISE NOTED. NO MITERED FITTINGS ALLOWED.
  - ALL STAINLESS STEEL CLOSURE PANELS SHALL BE SUPPLIED BY HOOD MANUFACTURER AND INSTALLED BY THE MECHANICAL CONTRACTOR ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
  - SLOPE ALL GREASE EXHAUST DUCT BACK TO HOOD AT 1/4" PER FOOT OF RUN.
  - WRAP NEW GREASE DUCT WITH UNIFRAX FYREWAP. INSULATION ON ACCESS DOORS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTALLATION RECOMMENDATIONS. UNIFRAX FYREWAP PRODUCT USED SHALL MEET LOCAL CODE REQUIREMENTS.
  - 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.
  - MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL SUNCOAST H.E.S. SYSTEM FOR ALL HOODS. SEE HOOD FAN/EQUIPMENT INTERLOCK WIRING DIAGRAM ON M-501 FOR MORE INFORMATION.

7 HOOD ELEVATION - HOOD#3  
 NOT TO SCALE

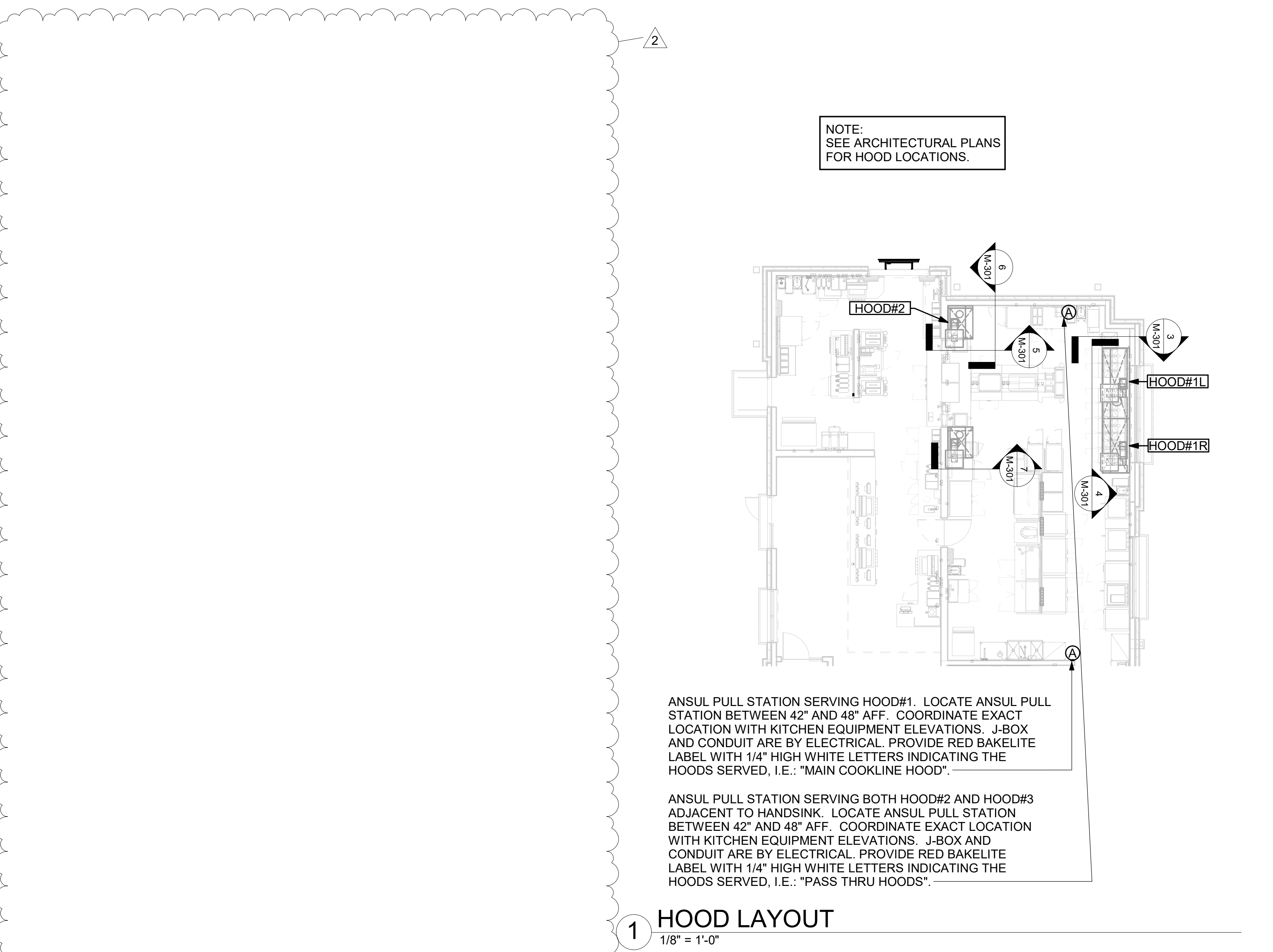
6 HOOD ELEVATION - HOOD#2 - FRONT  
 NOT TO SCALE

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



4 HOOD ELEVATION - HOOD#1 - FRONT  
 NONE

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



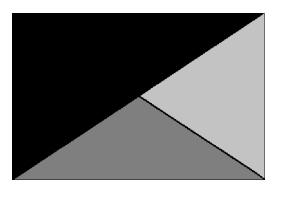
ANSUL PULL STATION SERVING HOOD#1. LOCATE ANSUL PULL STATION BETWEEN 42" AND 48" AFF. COORDINATE EXACT LOCATION WITH KITCHEN EQUIPMENT ELEVATIONS. J-BOX AND CONDUIT ARE BY ELECTRICAL. PROVIDE RED BAKELITE LABEL WITH 1/4" HIGH WHITE LETTERS INDICATING THE HOODS SERVED, I.E.: "MAIN COOKLINE HOOD".

ANSUL PULL STATION SERVING BOTH HOOD#2 AND HOOD#3 ADJACENT TO HANDSINK. LOCATE ANSUL PULL STATION BETWEEN 42" AND 48" AFF. COORDINATE EXACT LOCATION WITH KITCHEN EQUIPMENT ELEVATIONS. J-BOX AND CONDUIT ARE BY ELECTRICAL. PROVIDE RED BAKELITE LABEL WITH 1/4" HIGH WHITE LETTERS INDICATING THE HOODS SERVED, I.E.: "PASS THRU HOODS".

1 HOOD LAYOUT  
 1/8" = 1'-0"



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



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KURZYNSKE & ASSOCIATES LICENSE NO. F-0823, EXPIRES 12/31/23



08/25/23

**CHICK-FIL-A**  
 New Bern Ave FSU  
 4411 New Bern Ave  
 Raleigh, NC 27610

**FSR#04884**  
 BUILDING TYPE / SIZE: P13 LE ALL  
 RELEASE: v2.20.08

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION
2	06/02/23	Kitchen and EDC

**CONSTRUCTION**

CONSULTANT PROJECT # 21138.EH.S  
 PRINTED FOR CONSTRUCTION  
 DATE 09/17/2021  
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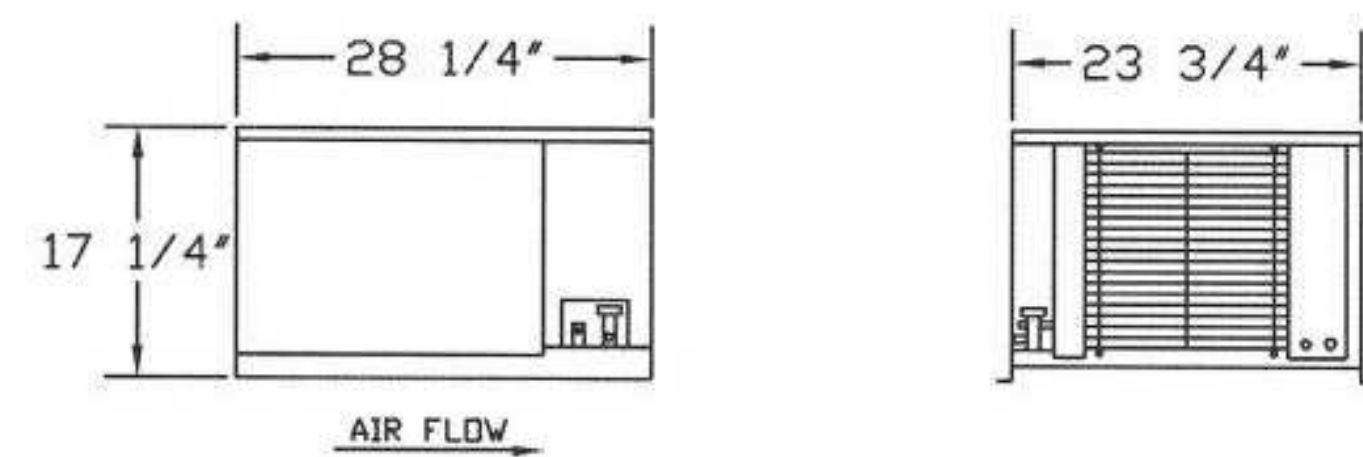
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SHEET HOOD DETAILS AND SCHEDULES  
 SHEET NUMBER  
**M-301**



### CHICK-FIL-A

HERMETIC CONDENSING UNIT R-404A  
208-230/60/3Ø



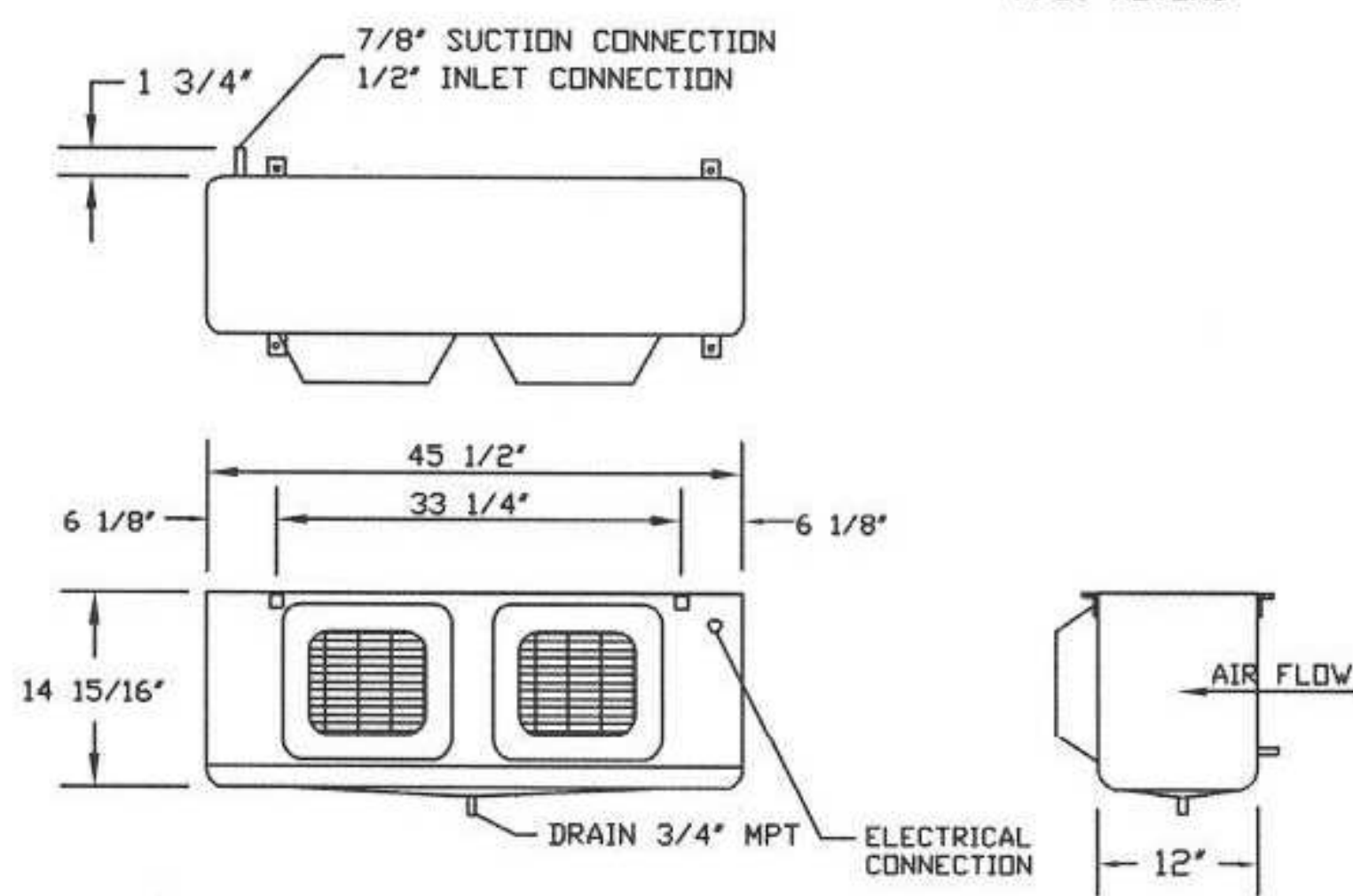
MODEL #	H.P.	ELECTRICAL DATA			CAPACITY @ 35° WALK-IN TEMP. (90° AMBIENT)	LINE SIZES		APPROX. NET WEIGHT
		COMPRESSOR AMPS	MCA	MOPD		LIQUID	SUCTION	
MOH010X63	1	5.75	15	15	9,300 BTU	3/8"	5/8"	138 LBS.

RECEIVER CAPACITY @ 90% FULL: 5.5H

EVAPORATOR COIL  
208-230/60/1Ø

MODEL #	QTY. MOTORS	AIR FLOW (CFM)	ELECTRICAL DATA		LINE SIZES			APPROX. NET WEIGHT
			AMPS	WATTS	INLET	SUCTION	DRAIN	
TKM-0900	2	1400	1.0	118	1/2" OD	7/8" OD	3/4" MPT	48 LBS.

1/4" OD EXTERNAL EQUALIZER CONNECTION W/EC MOTORS



MOH010X63 208-230/60/3Ø W/  
TKM-0900 208-230/60/1Ø

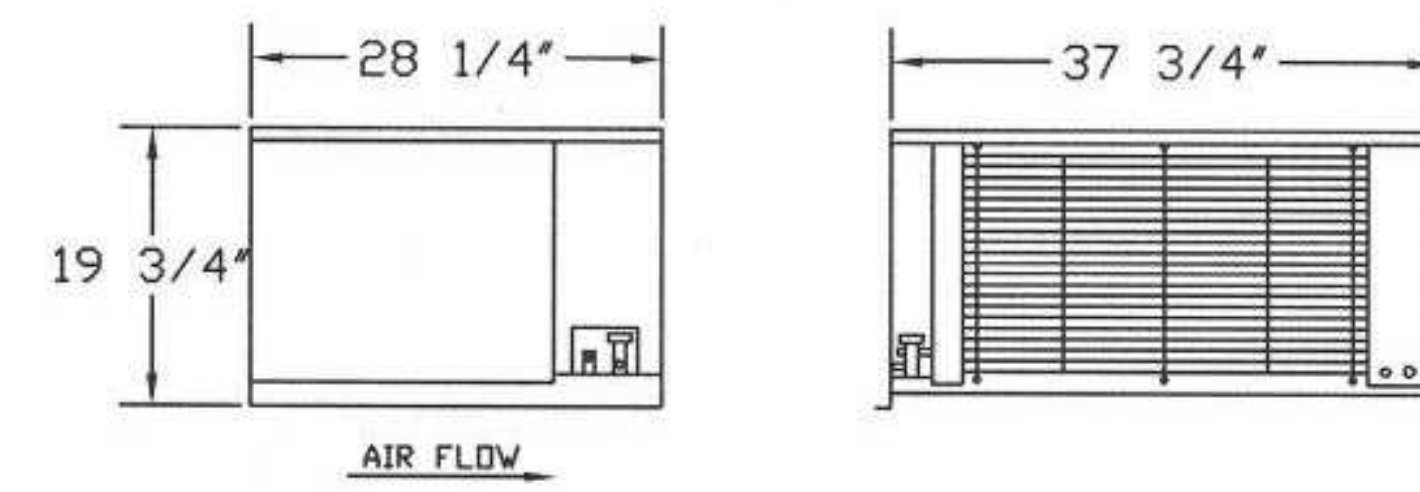


/nh Rev.9-12-11

1 WALK-IN COOLER MECHANICAL EQUIPMENT DETAIL  
1 1/2" = 1'-0"

### CHICK-FIL-A

HERMETIC LOW TEMPERATURE CONDENSING UNIT R-404A  
208-230/60/3Ø



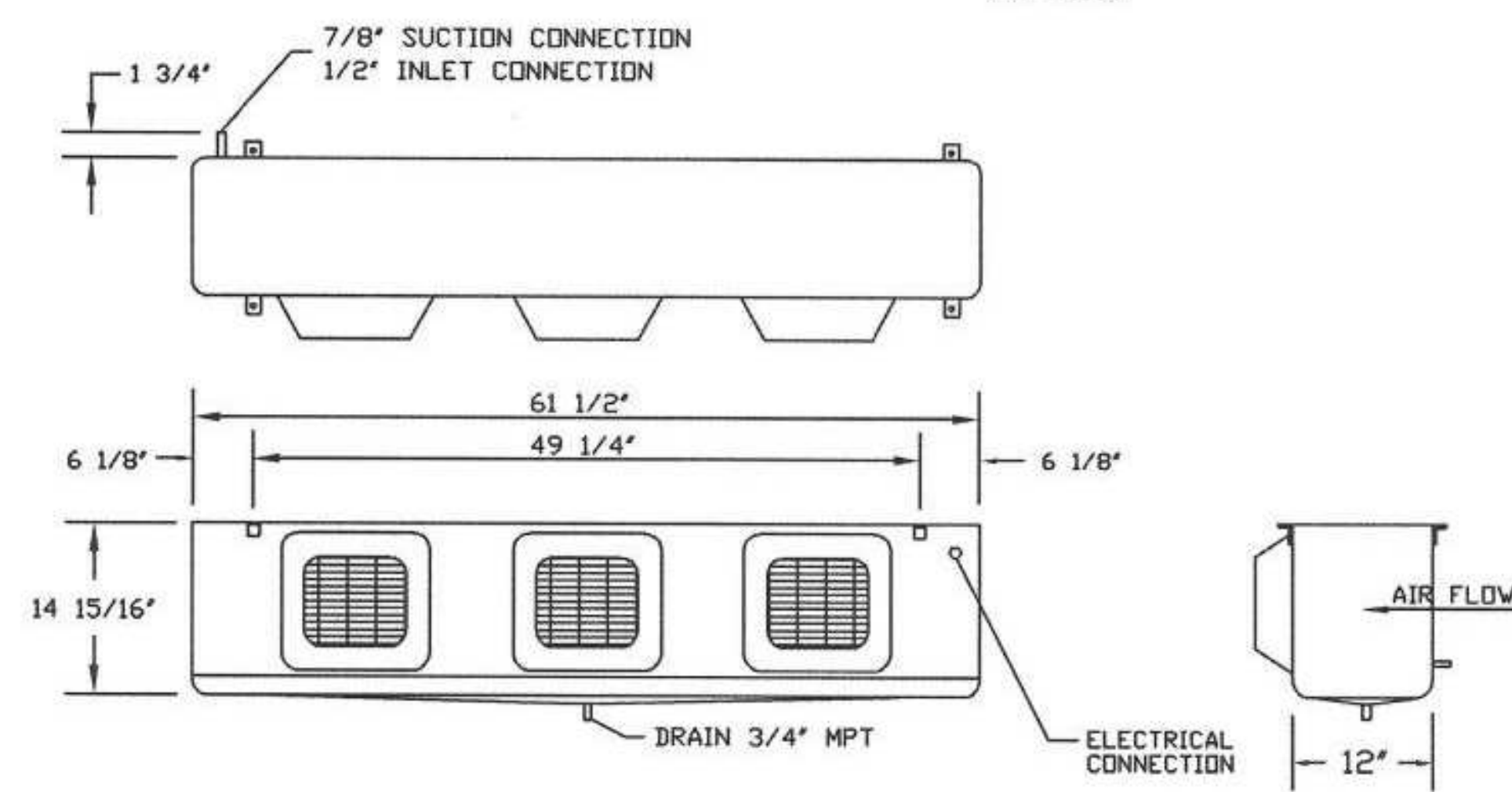
MODEL #	H.P.	ELECTRICAL DATA			CAPACITY @ -10° WALK-IN TEMP. (90° AMBIENT)	LINE SIZES		APPROX. NET WEIGHT
		COMPRESSOR AMPS	MCA	MOPD		LIQUID	SUCTION	
MOH031L63	3	14.38	28.8	30	11,540 BTU	1/2"	7/8"	223 LBS.

RECEIVER CAPACITY @ 90% FULL: 14.0H

EVAPORATOR COIL  
208-230/60/1Ø

MODEL #	QTY. MOTORS	AIR FLOW (CFM)	ELECTRICAL DATA				LINE SIZES			APPROX. NET WEIGHT
			FANS		HEATER		INLET	SUCTION	DRAIN	
			AMPS	WATTS	AMPS	WATTS				
TKL-1201	3	2100	1.5	177	11.7	2700	1/2" OD	7/8" OD	3/4" MPT	60 LBS.

1/4" OD EXTERNAL EQUALIZER CONNECTION W/EC MOTORS



MOH031L63 W/ TKL-1201  
208-230/60/3Ø

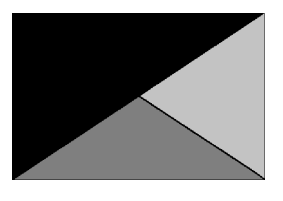


/nh Rev.9-14-11

2 WALK-IN FREEZER MECHANICAL EQUIPMENT DETAIL  
1 1/2" = 1'-0"

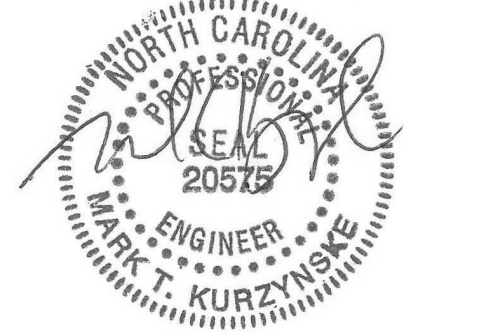


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KURZYNSKE & ASSOCIATES LICENSE  
NO. F-0823, EXPIRES 12/31/23



08/25/23

**CHICK-FIL-A**  
New Bern Ave FSU  
4411 New Bern Ave  
Raleigh, NC 27610

**FSR#04884**

BUILDING TYPE / SIZE: P13 LE LRG  
RELEASE: v2.20.08

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION

CONSULTANT PROJECT #	21138.EH.S
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SHEET  
MECHANICAL REFRIGERATION DETAILS

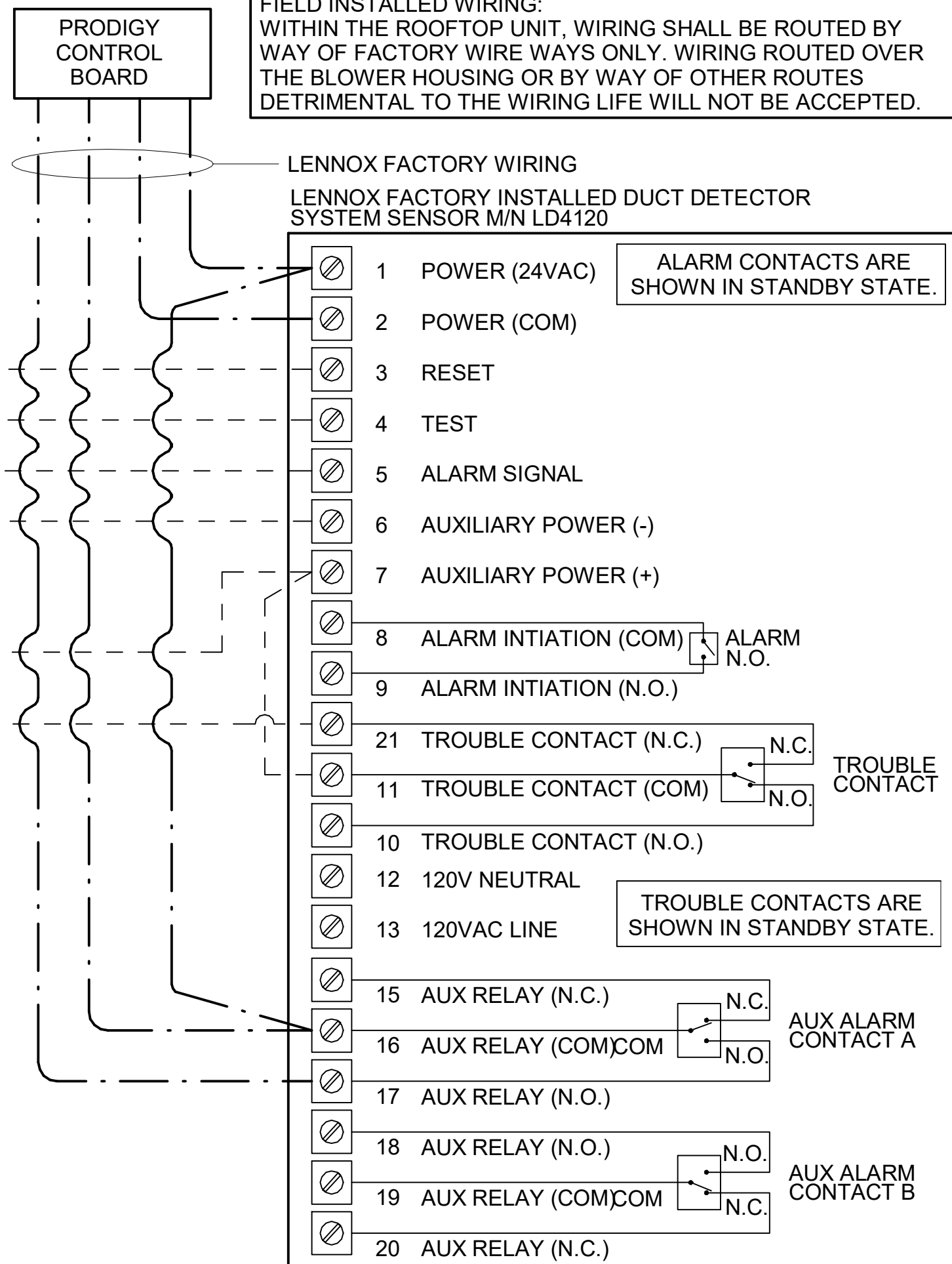
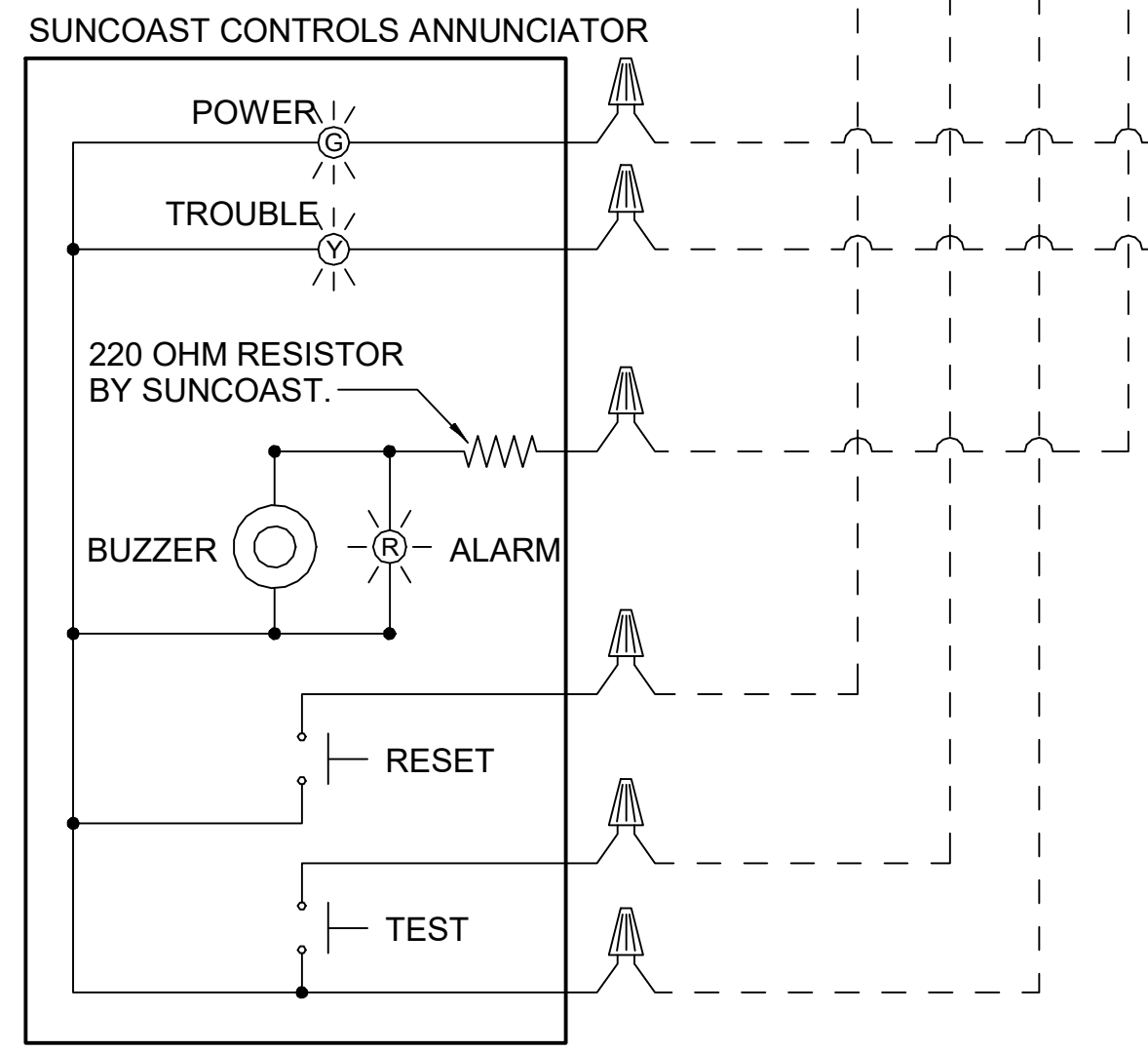
SHEET NUMBER

**M-602**

**SUPPLY SIDE DETECTORS:**  
IF SUPPLY SIDE SMOKE DETECTORS ARE SHOWN ON DWG M-201, 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-201.

**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.



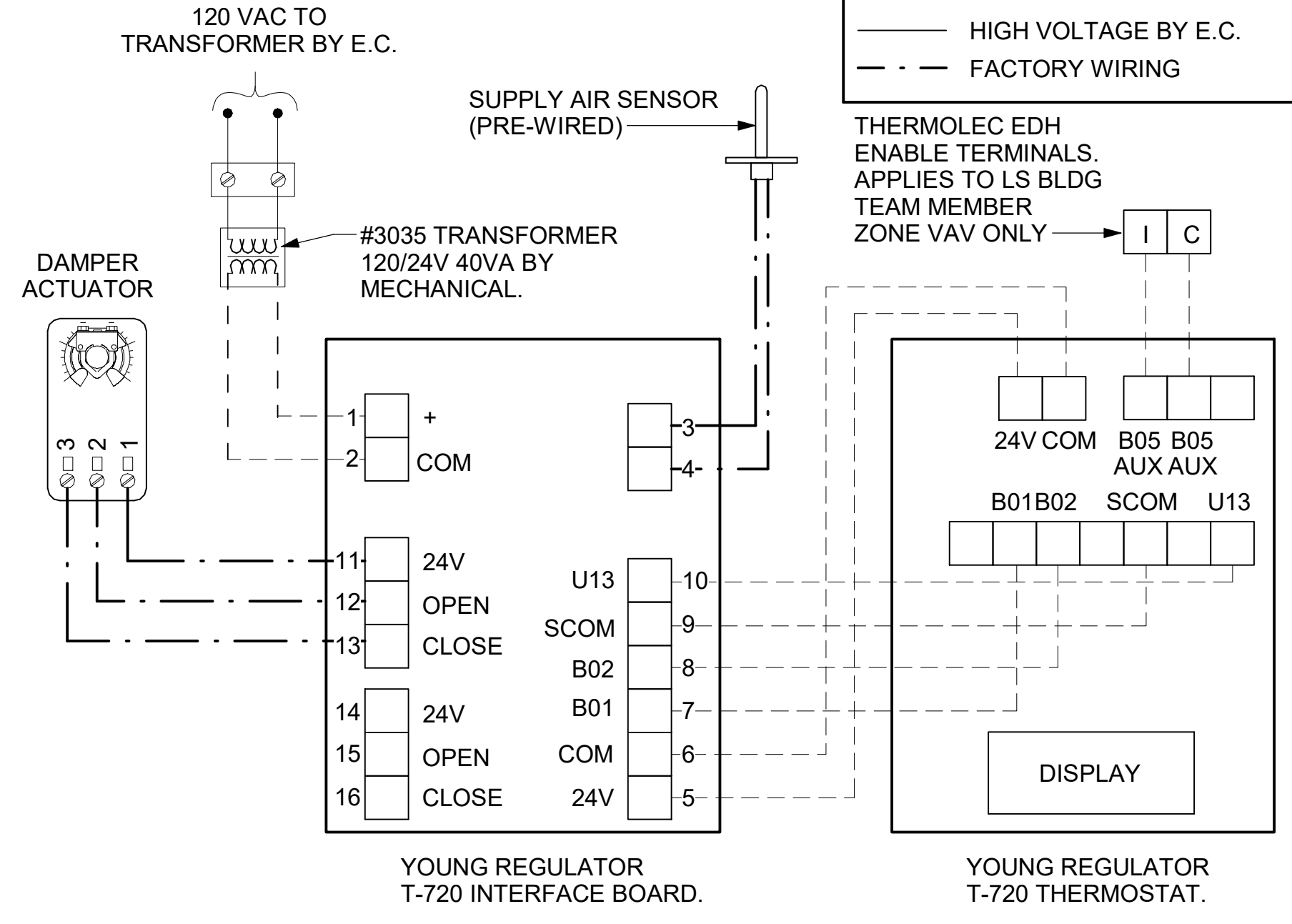
**FIELD INSTALLED WIRING:**  
WITHIN THE ROOFTOP UNIT, WIRING SHALL BE ROUTED BY WAY OF FACTORY WIREWAYS ONLY. WIRING ROUTED OVER THE BLOWER HOUSING OR BY WAY OF OTHER ROUTES DETRIMENTAL TO THE WIRING LIFE WILL NOT BE ACCEPTED.

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.

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

**3 VAV DAMPER AND TSTAT - ALL**  
NOT TO SCALE

**LEGEND**  
 M.C. MECHANICAL CONTRACTOR  
 E.C. ELECTRICAL CONTRACTOR  
 EDH ELECTRIC DUCT HEATER  
 - - - 18 AWG MIN WIRING BY M.C.  
 — HIGH VOLTAGE BY E.C.  
 - - - FACTORY WIRING



**NOTES**

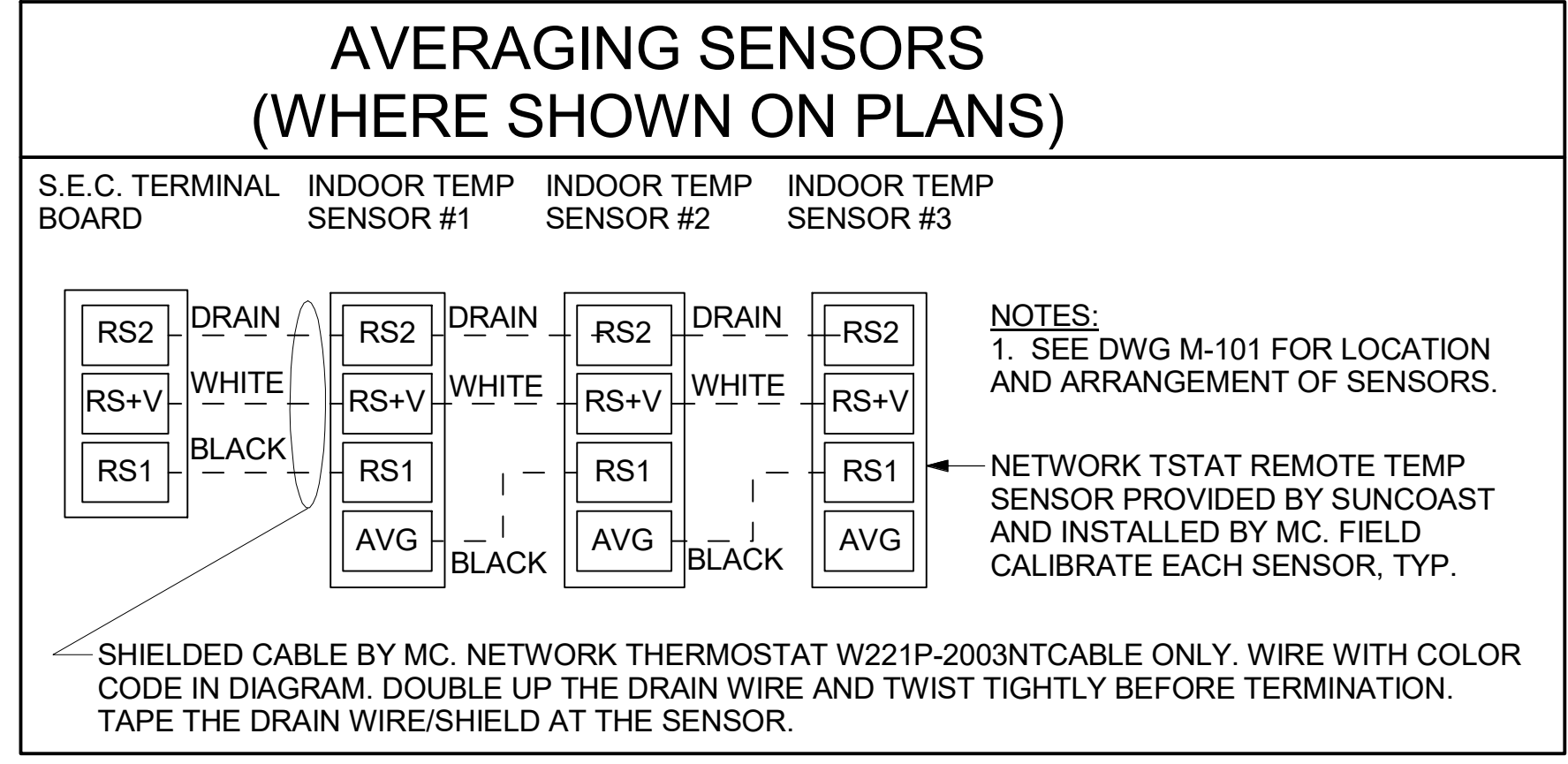
- SEE DWG M-201 FOR COMPONENT MODEL NUMBERS AND ORDERING INFORMATION.
- 120V POWER FOR TRANSFORMER TO BE NON-SWITCHED AND LIVE 24 HOURS EACH DAY.
- PROVIDE ALL NECESSARY WIRING AND COMPONENTS TO MAKE CONTROL AND POWER CONNECTIONS TO TRANSFORMER, ZONE DAMPER, AND THERMOSTAT PER MANUFACTURER'S IOM.
- PROVIDE MYLAR LABEL AT ALL NEW THERMOSTATS WITH 1/4" HIGH WHITE LETTERING ON BLACK BACKGROUND, I.E. "OFFICE THERMOSTAT". PLACE LABELS ON WALL ADJACENT TO DEVICE. DO NOT APPLY DIRECTLY ON DEVICE.

**SEQUENCE OF OPERATION**

- WHEN THE SUPPLY AIR TEMPERATURE IS LESS THAN 72°F THE DAMPER WILL MODULATE ON A RISE IN SPACE TEMPERATURE ABOVE THE SETPOINT.
- WHEN THE SUPPLY AIR TEMPERATURE IS GREATER THAN 71°F THE DAMPER WILL MODULATE ON A FALL IN SPACE TEMPERATURE BELOW THE SETPOINT.
- WHEN SPACE TEMPERATURE FALLS BELOW 66°F (ADJ), THE THERMOSTAT SHALL SEND AN ENABLE SIGNAL TO THE EDH. THE EDH SHALL THEN MODULATE CAPACITY TO MAINTAIN AN 80°F (ADJ) DISCHARGE AIR SETPOINT. (LS BUILDING TEAM MEMBER ZONE ONLY)

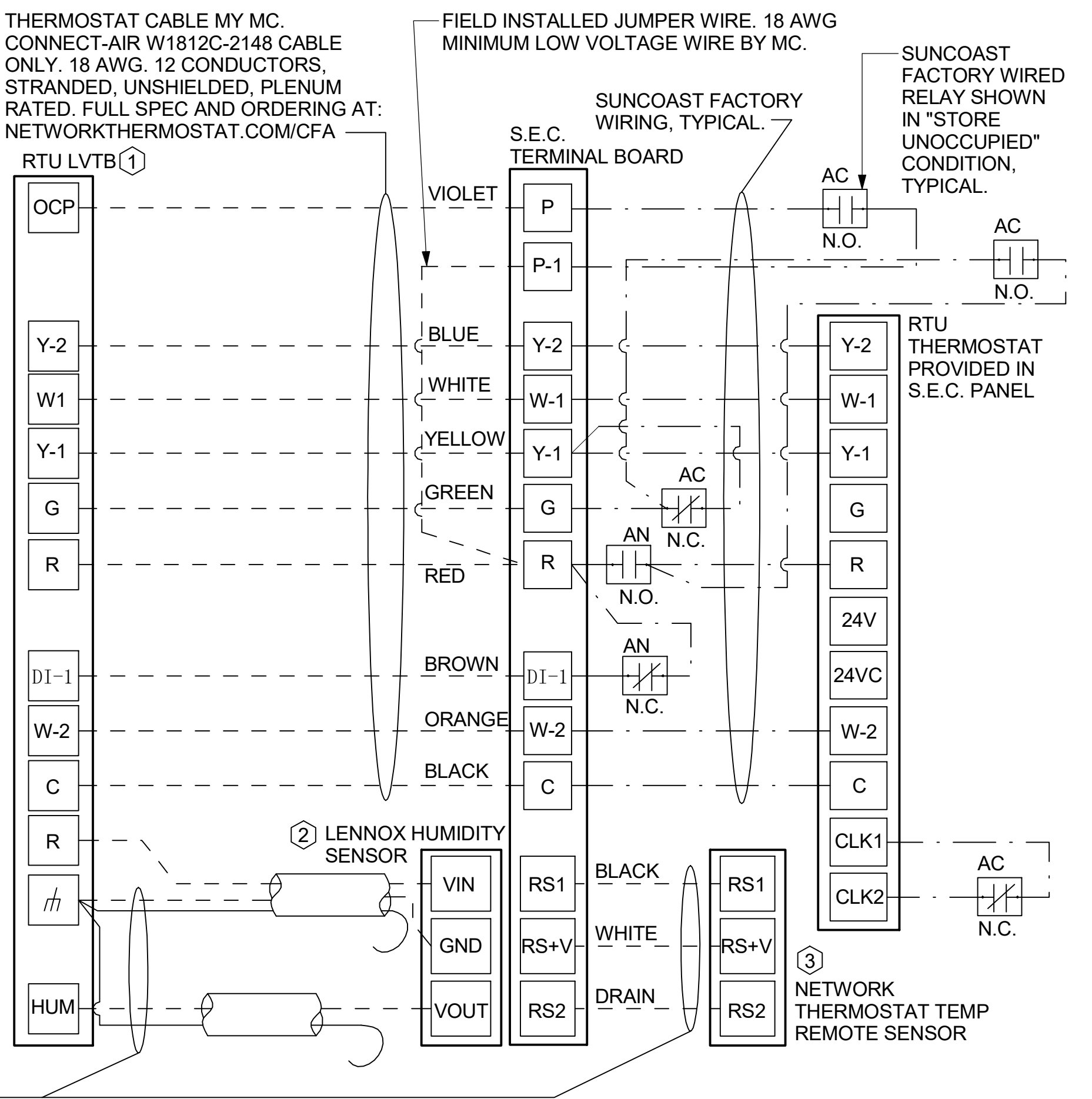
**NOTES:**

- 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 GROUND 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.

**LENNOX PRODIGY 2.0 OR CORE UNIT CONTROLLER SETTINGS:**

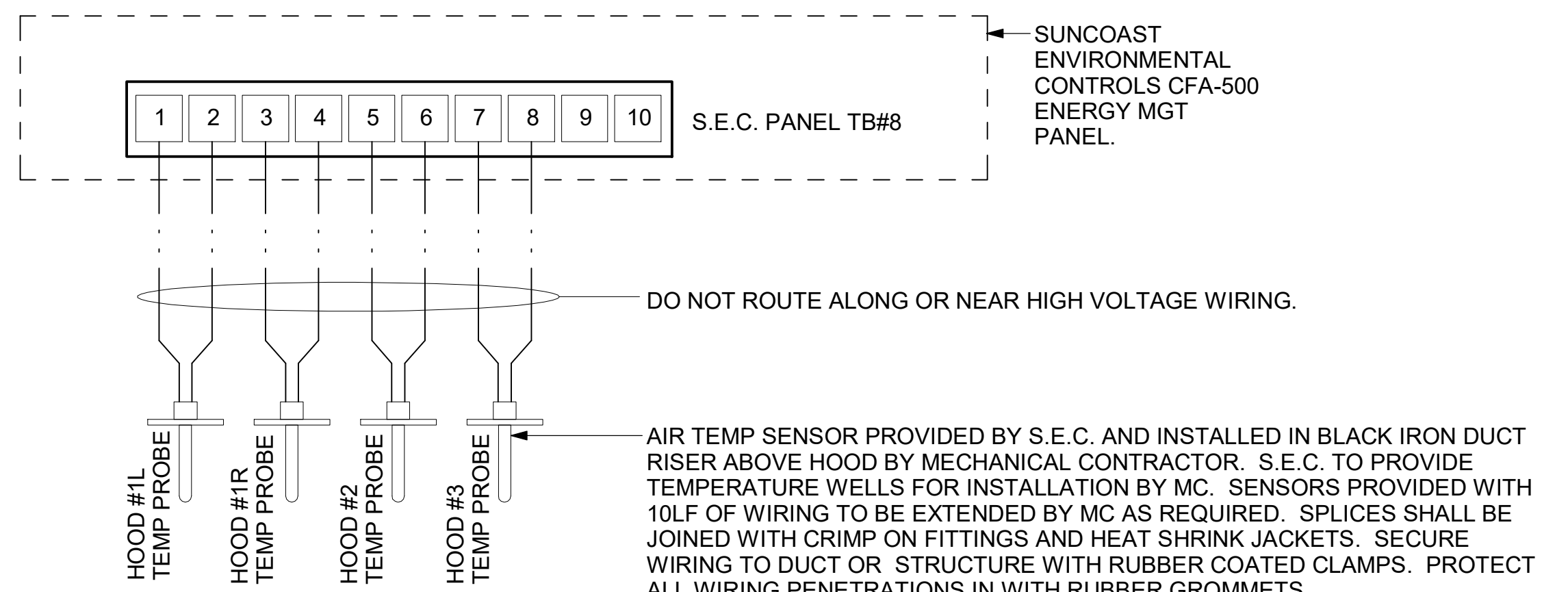
- FOR ALL RTUs EXCEPT AC#1, ELIMINATE THE MORNING WARMUP/OSA DAMPER DELAY. THE MENU PATH IS:  
 • MAIN MENU > SETTINGS > RTU OPTIONS > EDIT PARAMETERS  
 FOR GAS HEAT UNITS (LGT):  
 • CHANGE PARAMETER #65 SETTING TO 1  
 FOR ELECTRIC HEAT UNITS (LCT):  
 • CHANGE PARAMETER #58 TO 1
- ON UNIT AC#1  
 • 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.

**S.E.C. H.E.S. OPERATION**  
 IN THE EVENT THAT ANY COOKING EQUIPMENT ITEM BENEATH ANY HOOD IS STARTED WITHOUT THE "STORE SWITCH" BEING IN THE "OCCUPIED" POSITION, THE H.E.S. CONTROLLER WILL SENSE THE HEAT RISE WITHIN THE HOOD CANOPY AND ENERGIZE THE EXHAUST FANS.

**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.

**LEGEND**  
 S.E.C. SUNCOAST ENVIRONMENTAL CONTROLS CFA-500 ENERGY MGT PANEL  
 M.C. MECHANICAL CONTRACTOR  
 - - - 18 AWG MIN UNSHIELDED LOW VOLTAGE WIRING BY MC, U.N.O.



**GENERAL NOTES**

- THE SUNCOAST H.E.S. SYSTEM HAS BEEN INTEGRATED INTO THE SUNCOAST ENVIRONMENTAL CONTROLS CFA-500 ENERGY MGT PANEL.

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

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



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KURZYNSKE & ASSOCIATES LICENSE NO. F-0823, EXPIRES 12/31/23



08/25/23

**CHICK-FIL-A**  
 New Bern Ave FSU  
 4411 New Bern Ave  
 Raleigh, NC 27610

**FSR#04884**  
 BUILDING TYPE / SIZE: P13 LE ALL  
 RELEASE: v2.20.08

**REVISION SCHEDULE**

NO.	DATE	DESCRIPTION
2	06/02/23	Kitchen and EDC

**CONSTRUCTION**

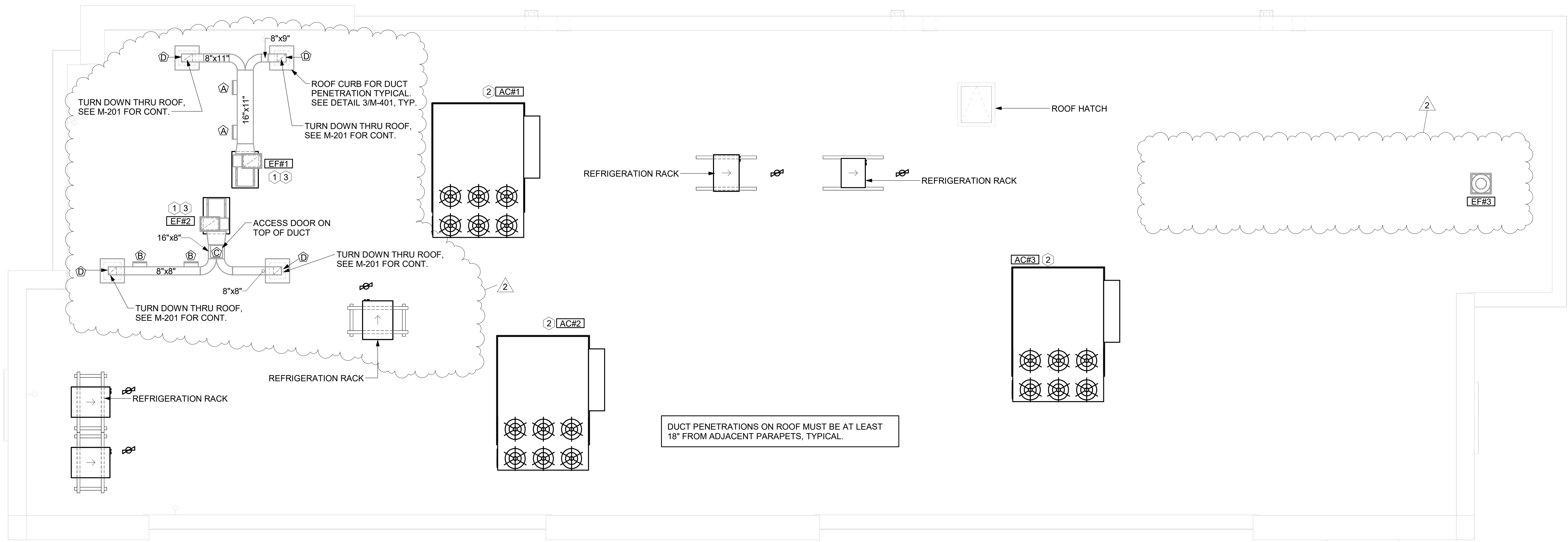
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**HVAC CONTROLS**

**M-501**

BIM 360/INC\_04884\_New Bern Ave FSU\_2021.7\_FSR#04884\_New Bern Ave FSU\_MEC.rvt  
 8/22/2023 7:10:57 PM  
 30-LE-04884-M-501-HVAC CONTROLS



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

GREASE ACCESS DOOR SCHEDULE			
MARK	OPENING SIZE	DOOR SIZE	REMARKS
A	9H X 14W	11H X 16W	1
B	5.5H X 14W	7.5H X 16W	1
C	12H X 12W	14H X 14W	1
D	6H X 14W	8H 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.

SEE FVREWRAP INSTALLATION INSTRUCTIONS FOR ADDITIONAL INFORMATION ON CONFIGURING INSULATION OVER AN ACCESS DOOR.

TUBE SPACERS FOR WRAP TO BE EITHER 3" OR 4-1/2" LONG DEPENDING ON WHETHER A ONE LAYER OR TWO LAYER SYSTEM IS USED.

TUBE SPACERS AND OUTER PLATE NOT REQUIRED ON UNINSULATED DUCT.

SHEET NOTES

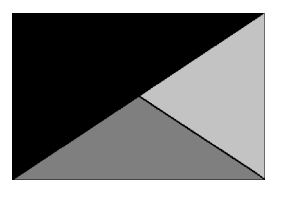
- ALL DUCTWORK AND UNFINISHED METAL ON ROOF EXCEPT STAINLESS SHALL BE PREPARED WITH TWO COATS OF SHERWIN WILLIAMS B66-200 SERIES DTM WHITE ACRYLIC SEMI-GLOSS INDUSTRIAL MAINTENANCE COATING. DEGREASE AND PRIME BARE METAL SURFACE WITH ONE COAT OF SHERWIN WILLIAMS DTM ACRYLIC PRIMER PRIOR TO PAINTING.
- AT EACH PIECE OF ROOF EQUIPMENT, PROVIDE A PLASTIC ENGRAVED LABEL WITH 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. THE LABEL IS TO HAVE A SELF ADHESIVE BACKING.
- MAINTAIN 18" CLEARANCE FROM GREASE EXHAUST DUCTWORK ABOVE ROOF TO ANY COMBUSTIBLE CONSTRUCTION INCLUDING PARAPET WALLS.

KEY NOTES

- FABRICATE DISCHARGE AIR NOZZLE. VERIFY EXHAUST TERMINATION IS A MINIMUM 10'-0" FROM PARAPETS AND OUTSIDE AIR INTAKES. SEE DETAIL 3/M-401.
- MECHANICAL CONTRACTOR TO SEE ARCHITECTURAL ROOF PLAN FOR NOTES REGARDING LEVELING FRAMES FOR RTUS. COORDINATE WITH GENERAL CONTRACTOR EXACT LOCATIONS AND SIZE NEEDED.
- GREASE EXHAUST DUCT LOCATED ON ROOF SHALL SLOPE 1/4" PER FOOT TOWARDS THE HOOD, THE FAN, OR A COMBINATION OF THE TWO SUCH TO 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. THE CONTRACTOR MAY ADD A VERTICAL RISER AT THE RADIUS ELBOW LOCATED AT THE DUCT CURB AS NEEDED IN ORDER TO CENTER THE DUCT ON THE FAN INLET.



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KURZYNSKE & ASSOCIATES LICENSE  
NO. F-0823, EXPIRES 12/31/23



08/25/23

**CHICK-FIL-A**  
New Bern Ave FSU  
4411 New Bern Ave  
Raleigh, NC 27610

**FSR#04884**

BUILDING TYPE / SIZE: P13 LE ALL  
RELEASE: v2.20.08

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DATE 09/17/2021  
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SHEET MECHANICAL ROOF PLAN

SHEET NUMBER

**M-250**

1. SECTION C15000 - MECHANICAL 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 HIS WORK WITH OTHER TRADES. CONTRACTOR SHALL COORDINATE AND MAKE MINOR ADJUSTMENTS IN LOCATION OF EQUIPMENT AND MATERIALS AS NECESSARY TO SECURE COORDINATION.
- B. COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES, INCLUDING BUT NOT LIMITED TO THE LATEST APPROVED EDITIONS OF NFPA-96, NFPA-90A, NFPA-54, SMACNA, ASHRAE 90.1 AND ASHRAE 62.
- 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 (C15730)

- A. FURNISH AND INSTALL R-410A ROOFTOP SINGLE PACKAGE COMBINATION ELECTRIC COOLING AND NATURAL GAS FIRED HEATING UNITS BY LENNOX 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 FULLY 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 STEEL WITH 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. ALL UNITS SHALL BE CAPABLE OF TWO STAGES OF HEAT. HEAT EXCHANGES SHALL HAVE A TEN (10) YEAR WARRANTY. BURNERS SHALL BE ALUMINIZED IN-SHOT TYPE. THE DRAFT MOTOR SHALL BE MONITORED BY THE CONTROL SYSTEM.
- E. CHICK-FIL-A MAINTAINS A NATIONAL ACCOUNT FOR EQUIPMENT WITH LENNOX CORPORATION. PRICING FOR THE EQUIPMENT HAS BEEN ESTABLISHED IN ADVANCE. CONTACT LENNOX NATIONAL ACCOUNTS AT 972-497-6260 (OR BY FAX AT 972-497-5112) FOR PRICING, ORDERING AND AVAILABILITY.

2.02 DUCTWORK (C15735) (SEE DWG M-301 FOR ADDITIONAL GREASE DUCT SYSTEM REQ.)

- A. ACCEPTABLE MANUFACTURERS OF INSULATION ARE 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 INSULATION SHALL MEET MINIMUM R-VALUE REQUIRED BY ASHRAE 90.1 LATEST EDITION. 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. TRUNK DUCTS 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. SEE TAKE-OFF DETAIL ON DRAWING M-401.
- 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.
- 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 90 DEGREE TURNS IN SUPPLY DUCTWORK WHERE ANY ONE DIMENSION IS GREATER THAN 12".
- Q. RADIUS ELBOWS MAY BE SUBSTITUTED FOR 90 DEGREE ELBOWS AT THE DISCRETION OF THE CONTRACTOR. CENTERLINE RADIUS EQUAL TO R-W PER FIGURE NO. 4-2 IN SMACNA HVAC DUCT CONSTRUCTION STANDARDS.
- R. 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 (C15735)

- 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.
- 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. LENNOX UNITS - THERMOSTATS ARE PROVIDED AND INTEGRATED INTO THE TEMPERATURE CONTROL PANEL BY SUNCOAST ENVIRONMENT CONTROLS. SUNCOAST WILL PROVIDE A NETWORK THERMOSTAT US32-CFA THERMOSTAT PRE-WIRED IN THE TEMPERATURE CONTROL PANEL. A REMOTE TEMPERATURE SENSOR FOR EACH THERMOSTAT IS ALSO PROVIDED. MECHANICAL CONTRACTOR SHALL INSTALL ALL WIRING BETWEEN THE THERMOSTAT, THE REMOTE SENSOR 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 ON 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.

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, NBO 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.
- F. THE MC SHALL BE AVAILABLE DURING THE ENTIRE DURATION OF THE TAB EFFORT AND HAVE ON-SITE THE RESOURCES AND TOOLS TO MAKE CORRECTIONS AS NEEDED UNDER THE DIRECTION OF THE TAB TECHNICIAN.

2018 APPENDIX B  
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS  
MECHANICAL DESIGN  
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

<b>Thermal Zone</b>	
winter dry bulb:	16
summer dry bulb:	93
<b>Interior design conditions</b>	
winter dry bulb:	68
summer dry bulb:	75
relative humidity:	65%
<b>Building heating load:</b> 417,533 BTUH	
<b>Building cooling load:</b> 641,287 BTUH	
<b>Mechanical Spacing Conditioning System</b>	
Unitary	(3) DX Coating/Gas-Fired Heating Packaged Rooftop Units
Description of unit:	80% Gas
Heating efficiency:	ACR1: 10.5 EER   ACR2: 12.0 EER   ACR3: 12.0 EER
Cooling efficiency:	ACR1: 25 ton   ACR2: 17.5 ton   ACR3: 20.0 ton
Size category of unit:	NA
Boiler	NA
Size category, if oversized, state reason:	NA
Chiller	NA
Size category, if oversized, state reason:	NA
List equipment efficiencies:	NA

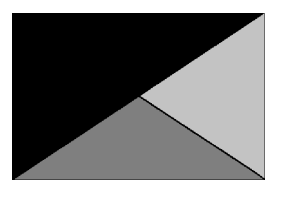
3 APPENDIX B - MECHANICAL  
1/4" = 1'-0"

NATIONAL ACCOUNTS

1. LENNOX EQUIPMENT - CONTACT LENNOX NATIONAL ACCOUNTS AT 972-497-6260 (OR BY FAX AT 972-497-5112) FOR PRICING, ORDERING AND AVAILABILITY. LENNOX EQUIPMENT NOT PURCHASED THRU LENNOX NATIONAL ACCOUNTS WILL NOT BE ACCEPTED.
2. LOREN COOK FAN AND CURB PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE FAN/CURB PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. FANS AND CURBS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
3. PRICE AIR DEVICES - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE AIR DEVICES DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. AIR DEVICES NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
4. AIR DOORS - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE AIR DOORS DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. AIR DOORS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
5. SUNCOAST ENVIRONMENTAL CONTROLS - THE CFA 500 PANEL AND THE TEST/RESET STATIONS WILL BE PURCHASED AND PROVIDED BY THE electrical CONTRACTOR AS A PART OF A NATIONAL ACCOUNT PACKAGE. SEE PART II PARAGRAPH 3A, 3D, AND 3E OF THE MECHANICAL SPECIFICATIONS FOR MORE INFORMATION.
6. HALTON 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.
7. ROYAL METAL PRODUCTS START COLLARS - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE START COLLARS DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. START COLLARS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
8. SCHWANK INFRARED HEATER PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE HEATER PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. HEATERS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.



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



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

KURZYNSKE & ASSOCIATES LICENSE  
NO. F-0823, EXPIRES 12/31/23



08/25/23

**CHICK-FIL-A**  
New Bern Ave FSU  
4411 New Bern Ave  
Raleigh, NC 27610

**FSR#04884**

BUILDING TYPE / SIZE: P13 LE ALL  
RELEASE: v2.20.08

REVISION SCHEDULE

NO.	DATE	DESCRIPTION
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CONSULTANT PROJECT # 21138.EH.S  
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SHEET  
MECHANICAL  
SPECIFICATIONS  
SHEET NUMBER  
**M-901**

BIM: 360/JNC\_04884\_New Bern Ave FSU\_2021.7\_FSR#04884\_New Bern Ave FSU\_MEC.rvt  
8/22/2023 7:11:02 PM  
3D-LE-04884-M-901-MECHANICAL SPECIFICATIONS

**SUBMITTAL DATA**



**2300 SERIES**

MODELS 2312, 2313, 2352

HIGH EFFICIENCY / COMBINED INTENSITY  
INFRA-RED PATIO HEATERS  
FOR OUTDOOR AND INDOOR USE



PROJECT:	
ENGINEER:	
CONTRACTOR:	
DISTRIBUTOR:	
SCHWANK MODEL #:	
FUEL:	<input type="checkbox"/> N.G. <input type="checkbox"/> L.P.G.
APPROVED BY:	
DATE:	
APPROVAL #:	

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2300 SUBMITTAL  
SD010751  
REV. 40  
RD. JAN 2018

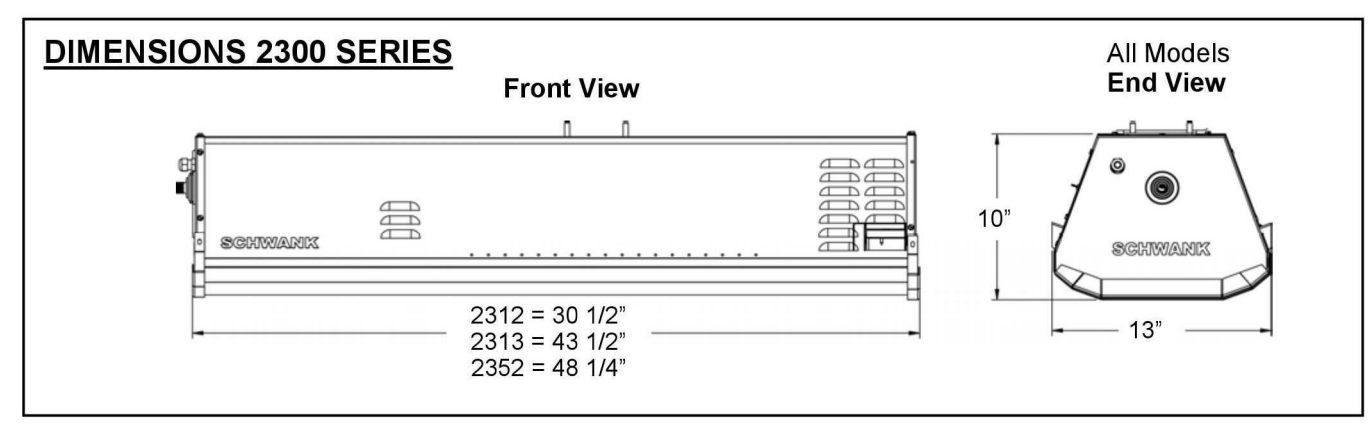
**CERTIFICATION**

The 2300 Series heater is approved for outdoor and indoor use to the following standards:  
• Outdoor: ANSI Z83.26 / CSA 2.37 Gas-Fired Outdoor Infrared Patio Heaters  
• Indoor: ANSI Z83.19 / CSA 2.35 Gas-Fired High Intensity Infrared Heaters

**Outdoor Definition** per ANSI Z83.26 / CSA 2.37 Approval Standard.  
An appliance approved for "outdoor use" may be installed with shelter no more inclusive than:

- With walls on all sides, but with no overhead cover, (overhead permanently open) or
- Within a partial enclosure which includes an overhead cover and no more than two side walls. These side walls may be parallel, as in a breezeway, or at right angle to each other. The open sides must be permanently open or
- Within a partial enclosure which includes an overhead cover and three side walls, as long as 30 percent or more of the horizontal periphery of the enclosure is permanently open.

If "outdoor" conditions are not met, Models 2312 & 2313 are approved for "indoor use" and ventilation requirements of local codes apply.



QTY	MODEL NO.	INPUT CAPACITY BTUH	GAS	12" GAS INLET PIPE SIZE		MANIFOLD PRESSURE	ELECTRICAL	WEIGHT (LBS.)
				MINIMUM GAS LINE PRESSURE	MAXIMUM GAS LINE PRESSURE			
	2312-N	23,000	NAT	6" W.C.	14" W.C.	5" W.C.	VOLT-AGE 24VAC	32
	2312-L	23,000	LP	11" W.C.	14" W.C.	10" W.C.		32
	2313-N	35,000	NAT	6" W.C.	14" W.C.	5" W.C.		44
	2313-L	35,000	LP	11" W.C.	14" W.C.	10" W.C.	CURRENT AMPS 40VA*	44
	2352-N	50,000/35,000	NAT ONLY	6" W.C.	14" W.C.	5" W.C.		49

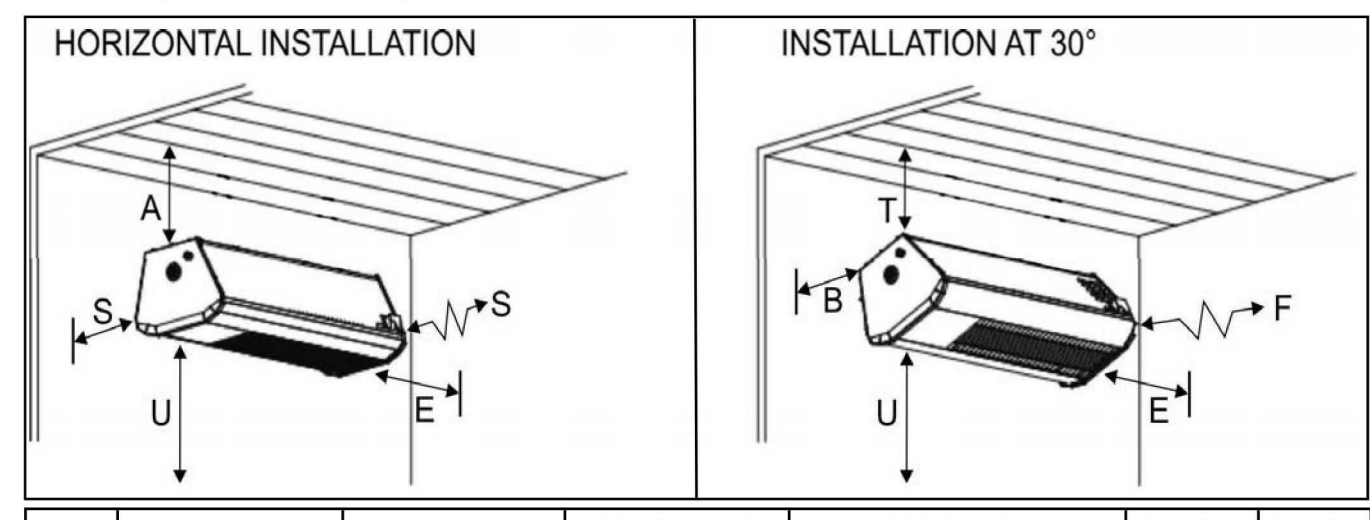
\*For a multiple heater installation, the transformer is sized: 40 VA for the first heater + 20 VA for each additional heater. If total VA is between transformer sizes, select the next higher VA rating.

2

2300 SUBMITTAL  
SD010751  
REV. 40  
RD. JAN 2018

**MINIMUM CLEARANCES TO COMBUSTIBLES**

Note that clearances to combustible material are different for indoor application than for outdoor. (See Table below)



QTY	Application	MODEL NO	Horizontal		30° Angle		Under	Ends	
			A	S	T	B			F
	OUTDOOR	2312	5.5"	7"	9.5"	1"	9.5"	48"	3"
	OUTDOOR	2313	7.5"	9"	9.5"	1.5"	21"	48"	5"
	OUTDOOR	2352	12"	28"	16"	10"	36"	60"	21"
	INDOOR	2312	8"	10"	12.5"	2.5"	14"	60"	4"
	INDOOR	2313	10.5"	14.5"	14.5"	2.5"	26"	60"	6"

SUGGESTED MOUNTING HEIGHT FOR COMFORT:

- 2312: 8 ft to 10 ft
- 2313: 8 ft-6 in to 11 ft
- 2352: 9 ft to 12 ft

Do not mount less than 8 ft [2438 mm] above floor. Do not store or place anything directly under heater.

**Notes:**

1. Ensure mounting height in any location is sufficient to prevent patrons from coming in contact with heater, and clearances to combustibles are maintained.
2. The clearance to combustible material represents the minimum distance that must be maintained between the outer heater surface and a nearby surface. The stated clearance to combustibles represents a surface temperature of Indoor = 90°F (50°C) above room temperature; Outdoor = 117°F (65°C) above ambient temperature.
3. It is the installer's responsibility to ensure that building materials with a low heat tolerance which may degrade at lower temperatures are protected to prevent degradation. Examples of low heat tolerance materials include awnings, vinyl siding, fabrics, some plastics, filmy materials, etc.

3

2300 SUBMITTAL  
SD010751  
REV. 40  
RD. JAN 2018

**2300 SERIES: OPTIONS**

OPTION	QTY	DESCRIPTION
CONTROL OPTIONS		PATIO CONTROL PANEL 24 VOLT
		REMOTE CONTROL
		2-STAGE ILLUMINATED SWITCH GANG (2352 Only)
MOUNTING OPTIONS Heater must be rigidly mounted - not chain		Fits All Models JP-2100-CB-K Ceiling Mount Kit Stainless Steel construction (one end shown)
		Fits All Models - 30° Mount JP-2100-MB Black Painted Steel JP-2100-MB-SS Stainless Steel
		2312 & 2313 Models Only - 30° Mount JP-2300-MB Black Painted Steel JP-2300-MB-SS Stainless Steel
		Fits All Models - 30° Mount at 30 inches from wall JP-2300-MK Black Painted Steel JP-2300-MK-SS Stainless Steel
		Fits All Models - 30° Mount from 4" dia. pole JP-2300-PK Black Painted Steel JP-2300-PK-SS Stainless Steel

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2300 SUBMITTAL  
SD010751  
REV. 40  
RD. JAN 2018

**2300 SERIES: COMPONENT DESCRIPTION**

2312, 2313 COMBINATION GAS VALVE	<input type="checkbox"/>	NATURAL GAS 5" W.C. MANIFOLD PRESSURE; 24 VAC
	<input type="checkbox"/>	PROPANE 10" W.C. MANIFOLD PRESSURE; 24 VAC
2352 COMBINATION GAS VALVE	<input type="checkbox"/>	TWO-STAGE NATURAL GAS ONLY: 5" / 3.0" W.C. MANIFOLD PRESSURE; 24 VAC
IGNITION		DIRECT SPARK MODULE: 3 TRIAL IGNITION SEQUENCE; AUTOMATIC SOFT LOCK-OUT WITH AUTO RESET AFTER 30 MINUTES FOR IGNITION RETRIAL
WIND SCREEN		MARINE GRADE 316 STAINLESS STEEL W/ BLACK EMISSIVE COATING
CABINET		MARINE GRADE 316 STAINLESS STEEL W/ BLACK EMISSIVE COATING
VENTURI TUBE		STEEL BUILT INTO BURNER HOUSING
BURNER		ONE ATMOSPHERIC BURNER COMPLETE WITH IGNITION / FLAME SENSING / MONITORING SYSTEM
CERAMIC TILE		SCHWANK EFFECT TILE 144 WITH INCREASED SURFACE INDENTATIONS AND HARD FINISHED EDGES
TILE RETAINERS		STAINLESS STEEL
COMBUSTION		TILE SURFACE TEMPERATURE: 1,780°F [960°C] "COLD STATE" COMBUSTION TRANSFERS HEAT INSTANTANEOUSLY TO TILE SURFACE AND MINIMIZES EMISSIONS: CO: 10 - 48 ppm, air free [11 - 50 mg/kWh] NOx: 9 - 14 ppm, air free [15 - 25 mg/kWh]

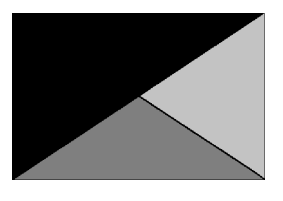
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2300 SUBMITTAL  
SD010751  
REV. 40  
RD. JAN 2018



Chick-fil-A

Chick-Fil-A  
5200 Buffington Road  
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KURZYNSKE & ASSOCIATES LICENSE  
NO. F-0823, EXPIRES 12/31/23



08/25/23

**CHICK-FIL-A**  
New Bern Ave FSU  
4411 New Bern Ave  
Raleigh, NC 27610

**FSR#04884**

BUILDING TYPE / SIZE: P13 LE LRG  
RELEASE: v2.20.08

**REVISION SCHEDULE**

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 21138.EH.S  
PRINTED FOR CONSTRUCTION  
DATE 09/17/2021  
DRAWN BY Author

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SHEET IR HEATER CUT SHEETS

SHEET NUMBER

**M-402**

CONSTRUCTION