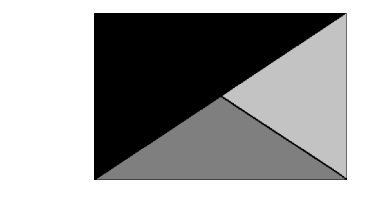




Chick-fil-A
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KURZYNSKE & ASSOCIATES LICENSE NO. F-0823, EXPIRES 12/31/23



02/17/23

CHICK-FIL-A
 University City
 8428 University City Blvd
 Charlotte, NC 28213

FSR#05285

BUILDING TYPE / SIZE: P13 LS SML
 RELEASE: 22.02
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 REVISION SCHEDULE

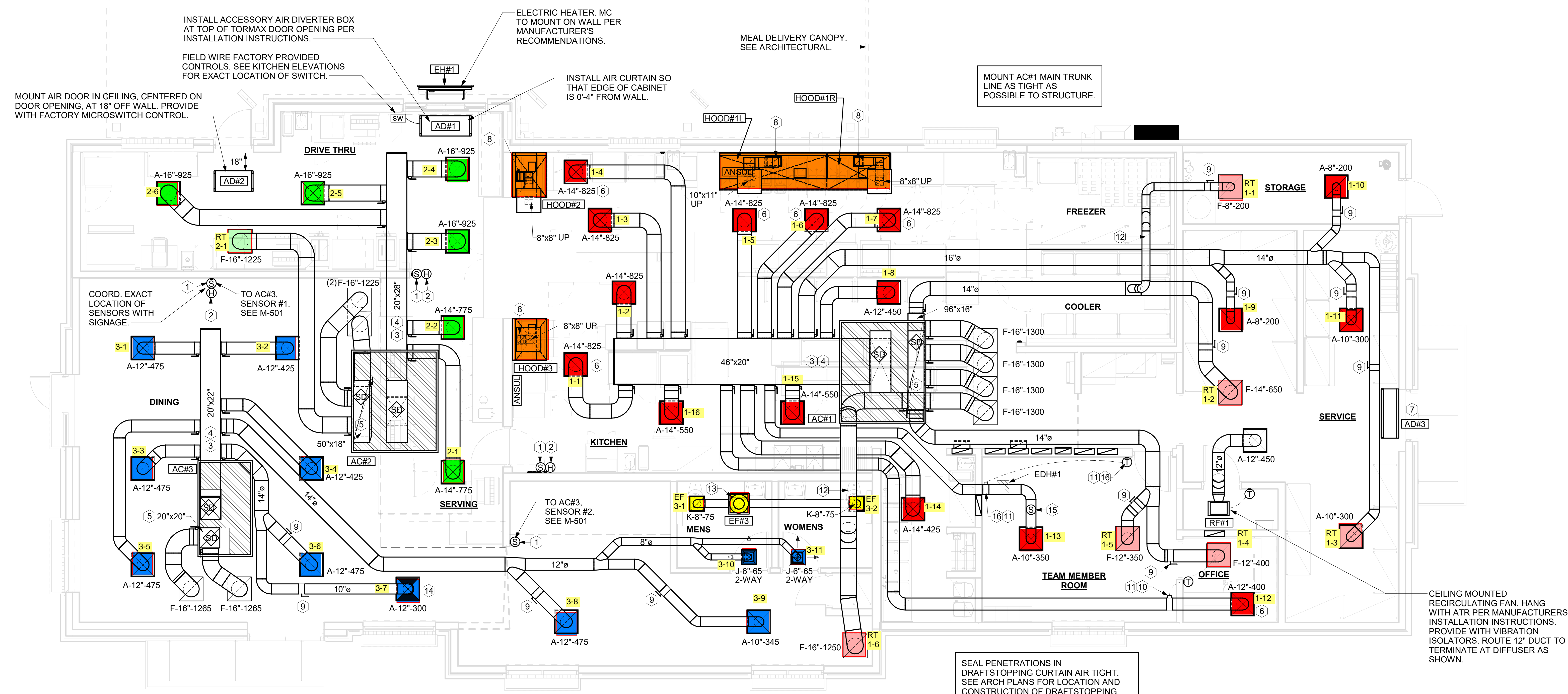
NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 23013.EH.S
 DATE 02/17/2023
 DRAWN BY BLM

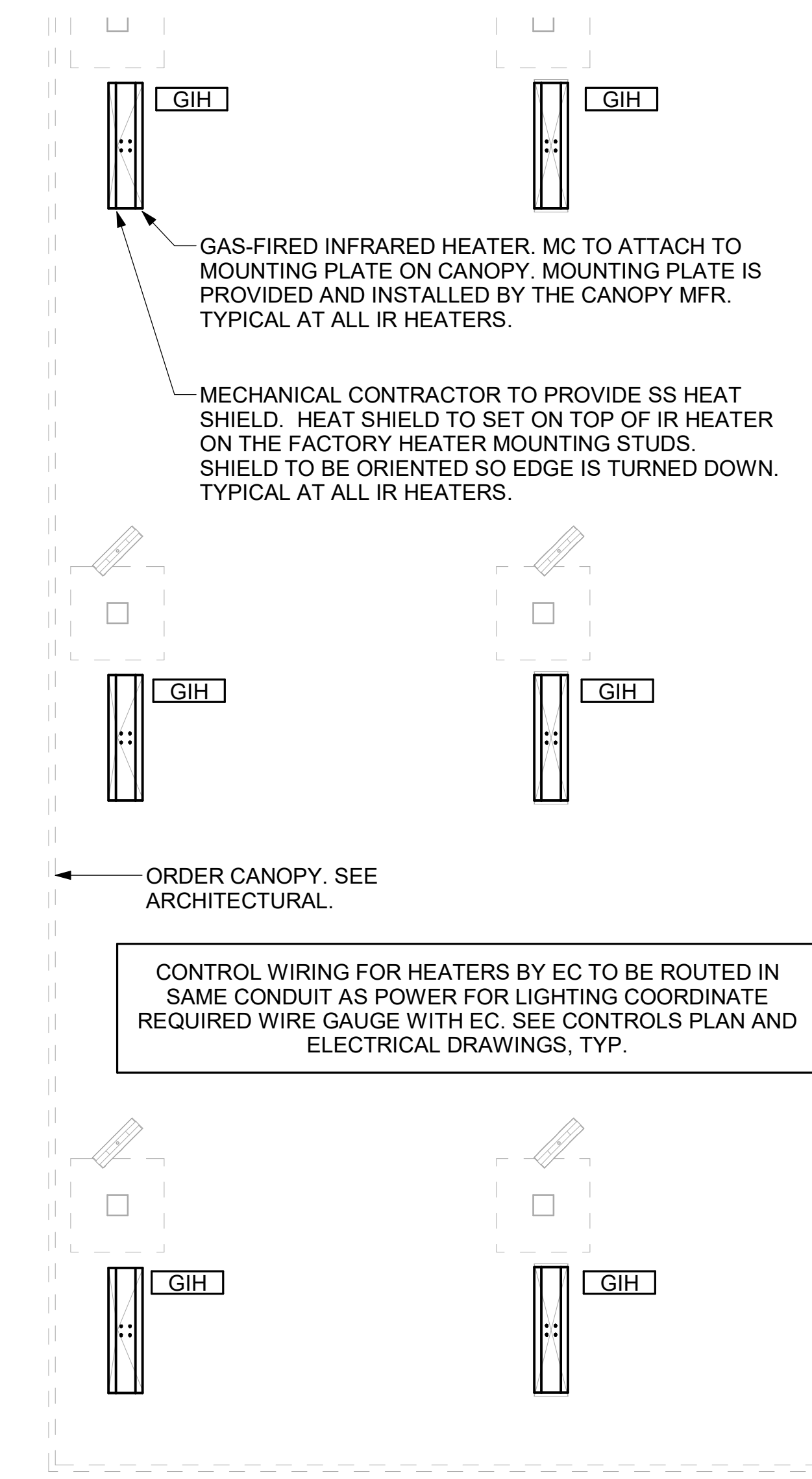
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SHEET MECHANICAL FLOOR PLAN

SHEET NUMBER **M-201**



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



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

CANOPY GENERAL NOTES

- COORDINATE NEW WORK WITH EXISTING CONDUIT, STRUCTURE, AND PIPING. FIELD VERIFY EXISTING CONDITIONS PRIOR TO START OF WORK.
- COORDINATE LOCATION AND RESPONSIBILITIES FOR UNDERGROUND PIPING AND ASSOCIATED TRENCHING WITH GENERAL CONTRACTOR PRIOR TO START OF WORK.
- EXPOSED GAS PIPING SHALL BE PAINTED BY GENERAL CONTRACTOR.
- ACTUAL NUMBER OF GAS INFRARED HEATERS WILL BE DETERMINED BY SITE-SPECIFIC CANOPY LAYOUT AND EQUIPMENT LOCATIONS, AS INDICATED ON ARCHITECTURAL PLANS.
- CONTROL WIRING FOR HEATERS BY EC. COORDINATE REQUIRED WIRE GAUGE WITH EC. SEE CONTROLS PLAN AND ELECTRICAL DRAWINGS, TYP.

SHEET NOTES

- DUCT SIZES SERVING DIFFUSERS AND GRILLES ARE SAME SIZE AS DIFFUSER OR GRILLE NECK UNLESS NOTED OTHERWISE.
- FLEXIBLE DUCT NOT SHOWN FOR CLARITY. ALL TAKE-OFFS SHALL INCLUDE FLEXIBLE DUCT. SEE DETAIL 1M-401 FOR FLEXIBLE DUCT INSTALLATION REQUIREMENTS.
- FOR SUPPLY AND RETURN OPENINGS, CUT OPENING AROUND DUCT DROPS 4" TO 8" MINIMUM (EXCEPT WHERE STRUCTURE PREVENTS THIS). SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- 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.
- UNLESS NOTED OTHERWISE, MC TO ADJUST ALL DIFFUSER AIR PATTERN DEFLECTORS TO THROW HORIZONTALLY ALONG THE CEILING.
- SUPPORT ALL DUCT DROPS AT BASE OF DROP FROM STRUCTURE.

KEY NOTES

- 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.
- MOUNT REMOTE HUMIDITY SENSOR ON WALL ABOVE SPACE TEMP SENSOR AND ROUTE WIRING TO UNIT ON ROOF.
- BRANCH TAKE-OFFS ARE NOT TO BE LOCATED CLOSER THAN 3'-0" FROM ANY OFFSET OR ELBOW INCLUDING THE SUPPLY AIR DROP FROM CURB.
- 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.
- 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 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.
- MECHANICAL CONTRACTOR TO ADJUST PATTERN DEFLECTORS TO THROW STRAIGHT DOWN.
- 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.
- HALTON KBD DAMPER AT HOOD COLLAR BY MECHANICAL CONTRACTOR. SEE HOOD ELEVATIONS ON M-301 FOR LOCATION.
- RUSKIN MDRS25 MVD W/LOCKING QUADRANT HANDLE.
- YOUNG REGULATOR 12" MODEL 4075LMB24-IF ROUND ZONE DAMPER WITH MODEL T-720A AUTOMATIC CHANGEOVER THERMOSTAT. MOUNT T'STAT AT 4'-0" AFF. POWER OPEN/SPRING CLOSE. ADJUST MECHANICAL LIMIT FOR 50 CFM MINIMUM AIRFLOW. CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARROW COMPANY FOR THE ZONE DAMPER. THE MECHANICAL CONTRACTOR SHALL PURCHASE THE ZONE DAMPER DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010. FOR PRICING AND AVAILABILITY. ZONE DAMPERS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
- PROVIDE 120V/24V 40 VA TRANSFORMER TO SERVE YOUNG REGULATOR ZONE DAMPER ACTUATOR AND THERMOSTAT. POWER TRANSFORMER FROM 120V POWER CIRCUIT THAT REMAINS LIVE 24/7. PROVIDE ALL NECESSARY WIRING AND COMPONENTS TO MAKE CONTROL AND POWER CONNECTIONS TO TRANSFORMER, ZONE DAMPER, AND THERMOSTAT PER MANUFACTURER'S IOM. THERE IS NO INTERLOCKING OR MONITORING BY WAY OF THE S.E.C. CFA-500 PANEL. SEE WIRING DIAGRAMS ON M-501.
- ROUTE DUCT WITHIN STRUCTURE.
- 10X10 EXHAUST DUCT DOWN.
- MECHANICAL CONTRACTOR TO CLOSE THE AIR PATTERN DEFLECTORS ON SHADED SIDE.
- LOCATE EDH DUCT TEMPERATURE SENSOR OUT OF 'LINE-OF-SIGHT' FROM HEATING ELEMENTS.
- YOUNG REGULATOR 10" MODEL 4075LMB24-IF ROUND ZONE DAMPER WITH MODEL T-720A AUTOMATIC CHANGEOVER THERMOSTAT. MOUNT T'STAT AT 4'-0" AFF. POWER OPEN/CLOSE/MODULATING. ADJUST MECHANICAL LIMIT FOR 200 CFM MINIMUM AIRFLOW. ADJUST MAXIMUM LIMIT TO FULLY OPEN POSITION. INITIAL BALANCE TO BE DONE WITH VAV AT THE FULL OPEN POSITION. CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARROW COMPANY FOR THE ZONE DAMPER. THE MECHANICAL CONTRACTOR SHALL PURCHASE THE ZONE DAMPER DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010. FOR PRICING AND AVAILABILITY. ZONE DAMPERS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

LEGEND

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

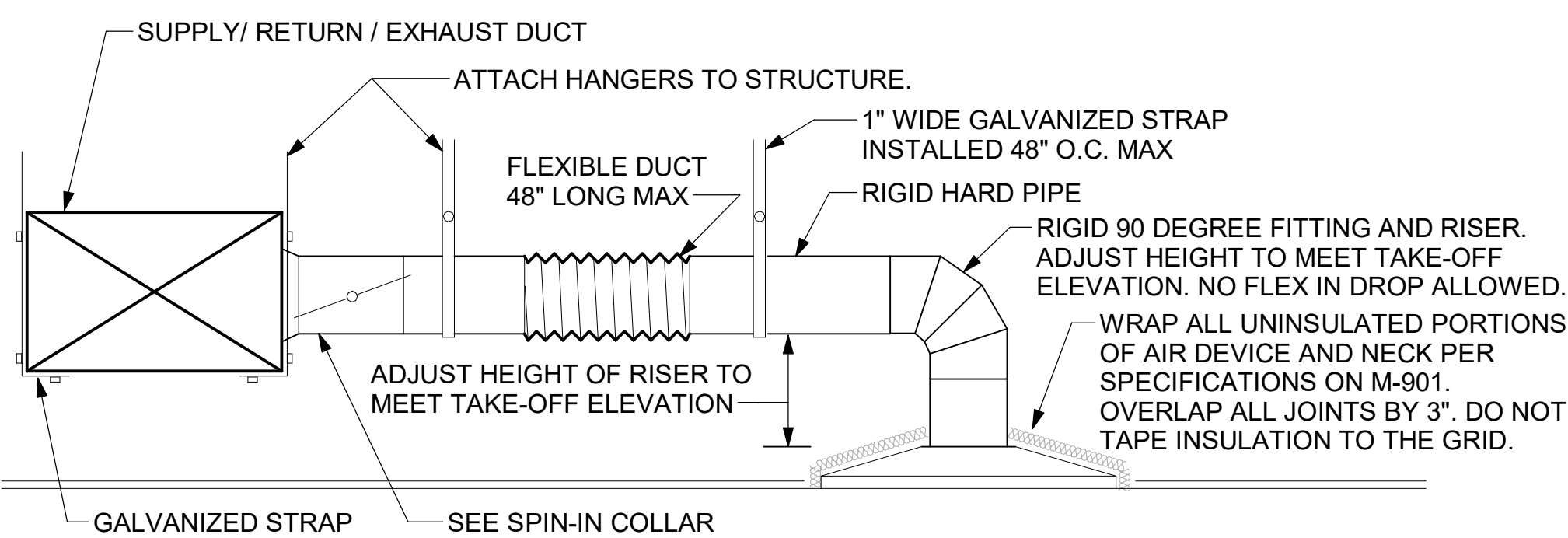
AIR BALANCE SCHEDULE - SMALL

Mark	SUPPLY AIR	RETURN AIR	OUTSIDE AIR	EXHAUST AIR	BUILDING POSITIVE PRESSURE
AC#1	9500	8050	1450		
AC#2	5250	3675	1575		
AC#3	4000	2530	1470		
EF#1				1913	
EF#2				1402	
EF#3				150	
	18750	14255	4495	3465	1030

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-501 FOR MORE INFORMATION.

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 3D-LS-05285-M-201-MECHANICAL FLOOR PLAN

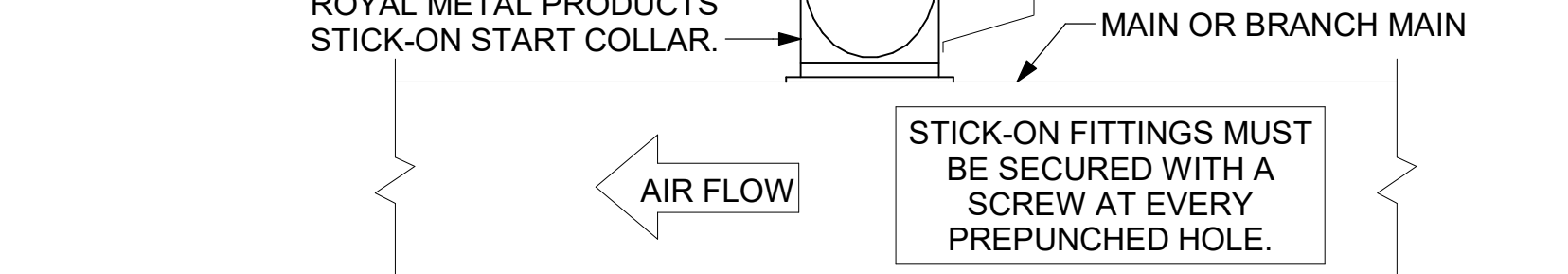


1 SAG/RAG/GRILLE TAKE-OFF
NOT TO SCALE

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.

DO NOT APPLY START COLLAR OVER DUCT WRAP



2 START COLLAR
NOT TO SCALE

GAS FIRED ROOFTOP UNIT SCHEDULE - SMALL

MARK	TOTAL COOLING MBH	SENSIBLE COOLING MBH	HEATING INPUT MBH	HEATING OUTPUT MBH	STAGES	SUPPLY	O.A.	HP	ESP	MODEL	R-10EA	MFR	REMARKS
AC#1	258.8	207.0	360	291	2	9500	1450	10	0.80	LGT300S4M	LENNOX	1-15	
AC#2	166.4	121.5	360	291	2	5250	1575	5	0.65	LGT210H4M	LENNOX	1-15	
AC#3	140.0	93.8	240	194	2	4000	1470	3.75	0.65	LGT150H4E	LENNOX	1-14, 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 SUPPLY & RETURN SIDE SMOKE DETECTORS.
- 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 BELT TENSIONER.
- PROVIDE FACTORY CONFIGURED PHASE LOSS PROTECTION.
- PROVIDE WITH HIGH FAULT SCRR.
- PROVIDE FACTORY INSTALLED AND UNIT POWERED 115V GFI SERVICE OUTLET.
- PROVIDE FACTORY INSTALLED 115V GFI SERVICE OUTLET.

EXHAUST FAN SCHEDULE - SMALL

MARK	CFM	ESP	RPM	Tip Speed	HP	Area Served	MODEL	MANUFACTURER	REMARKS
EF#1	1913	0.75	1331	5226	3/4	HOOD#1	150 CPS	LOREN COOK	1,2,3,4,5,6,7,8,9,10,11,17
EF#2	1402	0.95	1199	4708	3/4	HOOD#2 & HOOD#3	150 CPS	LOREN COOK	1,2,3,4,5,6,7,8,9,10,11,17
EF#3	150	0.375	1164	2780	1/8	RESTROOMS	ACED-90C15DH	LOREN COOK	3,11,12,13,14,15,16

NOTES:

- GREASE EXHAUST FAN RPM BASED ON 80 DEGREE F AIR AT 1000 FEET ABOVE SEA LEVEL.
- GREASE EXHAUST FANS TO BE UL 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 ISOLATION CURB AND ASSOCIATED EXHAUST DUCT CURB PROVIDED BY TOM BARROW COMPANY.

AIR DOOR SCHEDULE - SMALL

MARK	CFM	VELOCITY	HEATING CAP	HP	AREA SERVED	MODEL	MANUFACTURER	REMARKS
AD#1	1765	2670 FPM	10 kW	3/4 HP	DRIVE-THRU	CHA-1-48E	Powered Aire	1,2,3,5
AD#2	1268	2760 FPM	N/A	3/4 HP	DRIVE-THRU	CHA-1-36	Powered Aire	1,2,4
AD#3	3867	4220 FPM	N/A	3/4 HP	REAR DOOR	RBT-1-48	Powered Aire	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.
- PROVIDE WITH A DIVERTER BOX. PROVIDE WITH MOUNTING BRACKETS PER MANUFACTURER'S RECOMMENDATIONS.

AIR DEVICE SCHEDULE - SMALL

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
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	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 VCSS NECK DAMPER.
- SEE DRAWING M-201 FOR THROW.
- PROVIDE MODEL VCRJ 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.

ELECTRIC DUCT HEATER SCHEDULE

MARK	KW	DUCT SIZE (IN)	CFM (MIN)	TEMP RISE (DEG. F.)	TYPE	MODEL	MANUFACTURER
EDH#1	2	10"	200	30	SLIP-IN	SC	THERMOLEC

NOTES:

- MECHANICAL CONTRACTOR SHALL PURCHASE THE THERMOLEC ELECTRIC DUCT HEATERS DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010, FOR PRICING AND AVAILABILITY. ELECTRIC DUCT HEATERS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

REMARKS:

- PROVIDE FACTORY AIR FLOW SWITCH.
- PROVIDE FACTORY INTEGRAL DOOR DISCONNECT WITH INTERLOCK.
- SET DISCHARGE AIR TEMPERATURE SETPOINT FOR 80 DEG. F.
- REFER TO SHEET M-501 DETAIL 5 FOR CONTROL WIRING INFORMATION.

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 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.

BROMIC ELECTRIC HEATER SCHEDULE

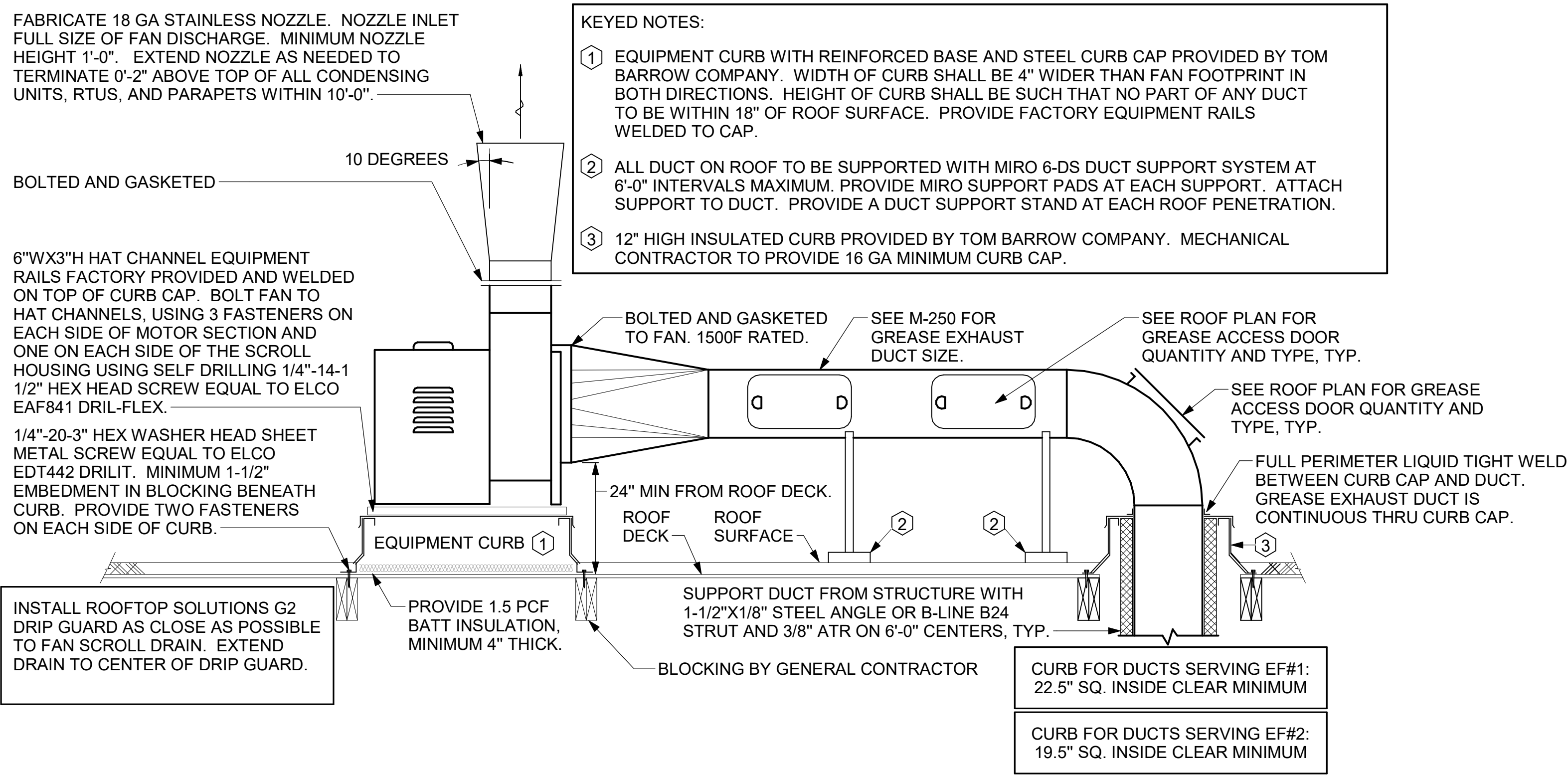
MARK	KW	FRAME LENGTH	FRAME WIDTH	FRAME DEPTH	MOUNTING TYPE	MODEL	MANUFACTURER
EH#1	6.0	56"	8.5"	3.5"	BRACKET	BH0420035	Bromic

NOTES:

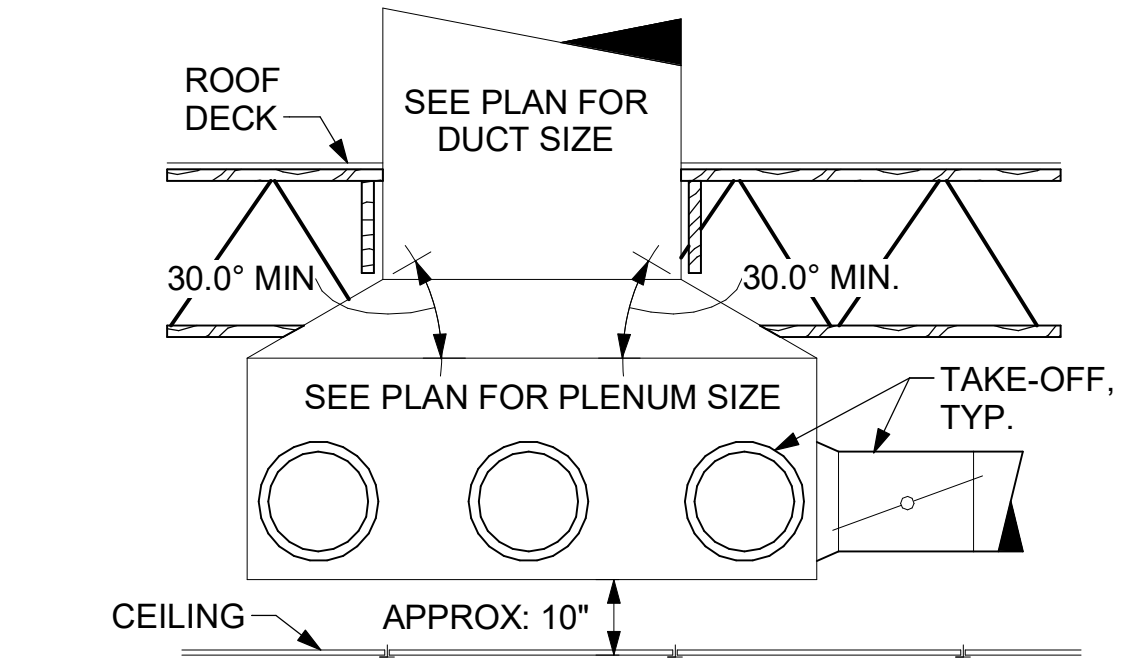
- CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH BROMIC COMPANY FOR THE BROMIC ELECTRIC HEATER PACKAGE. THE MECHANICAL CONTRACTOR SHALL PURCHASE HEATERS DIRECTLY FROM BROMIC COMPANY. CONTACT MR. BLAKE RUSSIE AT 858-381-4850, FOR PRICING AND AVAILABILITY. BROMIC HEATERS NOT PURCHASED THRU BROMIC COMPANY WILL NOT BE ACCEPTED.

REMARKS:

- STAINLESS STEEL LENS 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.



3 KITCHEN HOOD EXHAUST FANS
NOT TO SCALE

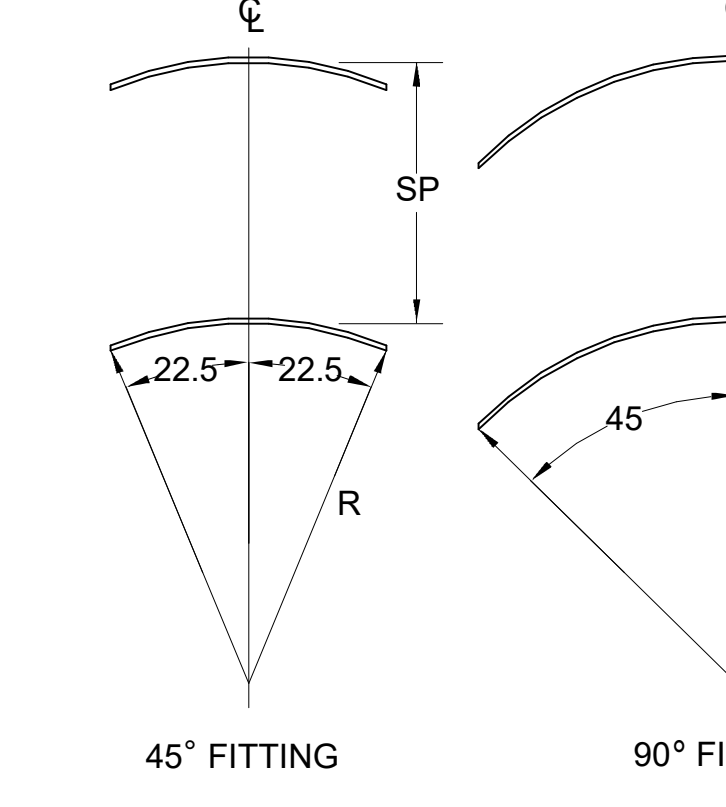


4 RETURN DROP GEOMETRY
NOT TO SCALE

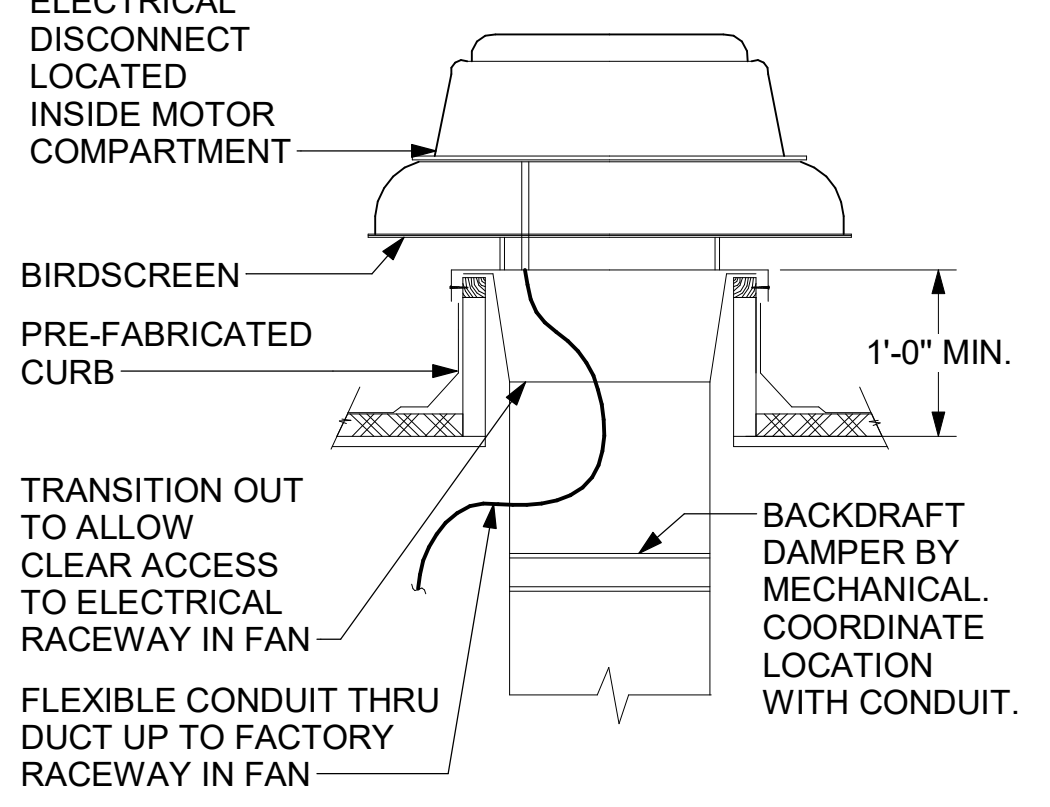
TURNING VANE SCHEDULE

R	SP	GA
2"	1.5"	24

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



5 TURNING VANES
NOT TO SCALE



6 RESTROOM EXHAUST FAN
NOT TO SCALE



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



02/17/23

CHICK-FIL-A
University City
8428 University City Blvd
Charlotte, NC 28213

FSR#05285

BUILDING TYPE / SIZE: P13 LS SML

RELEASE: 22.02

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DATE: 02/17/2023

DRAWN BY: BLM

CONSULTANT PROJECT # 23013.EH.S

DATE: 02/17/2023

DRAWN BY: BLM

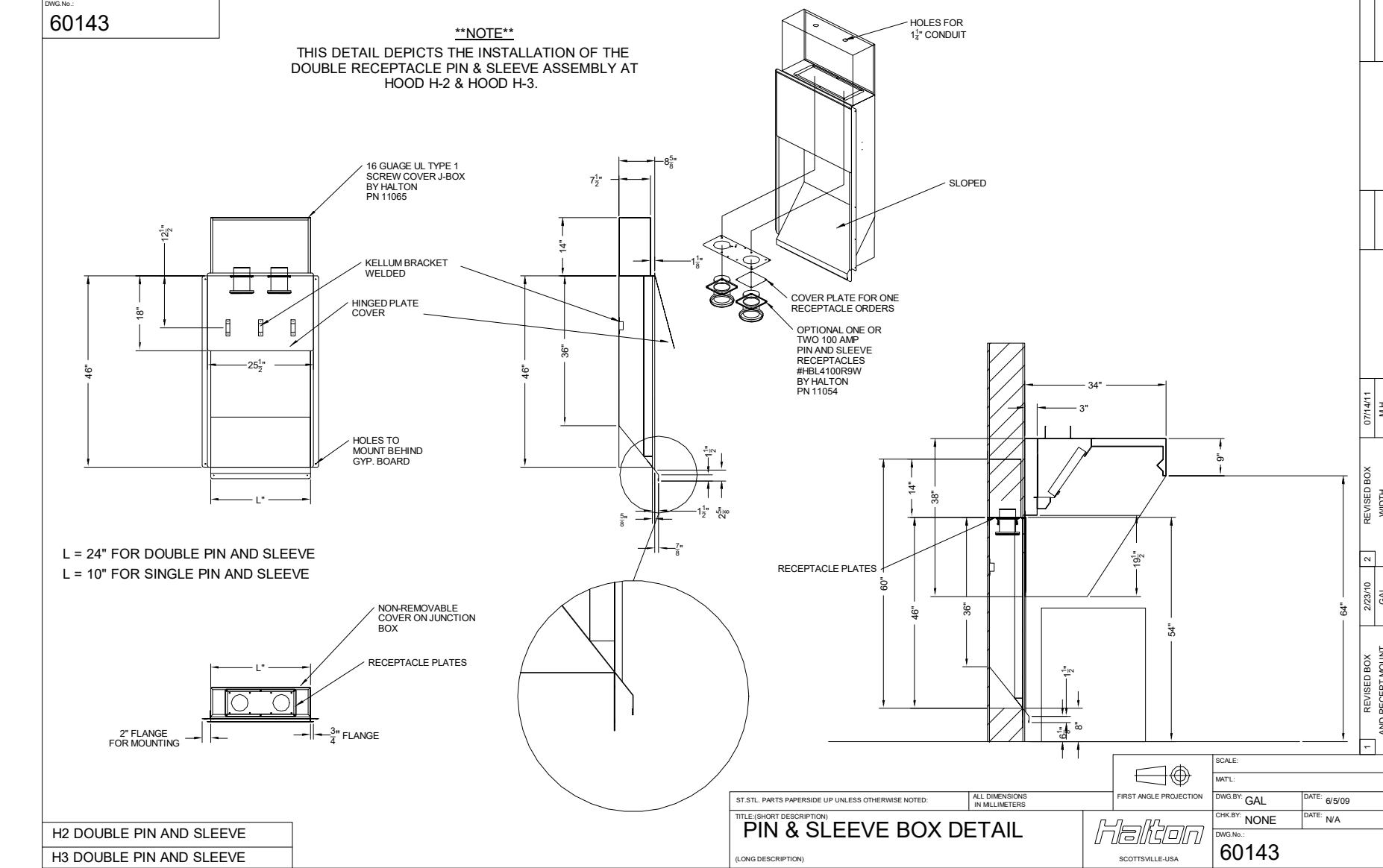
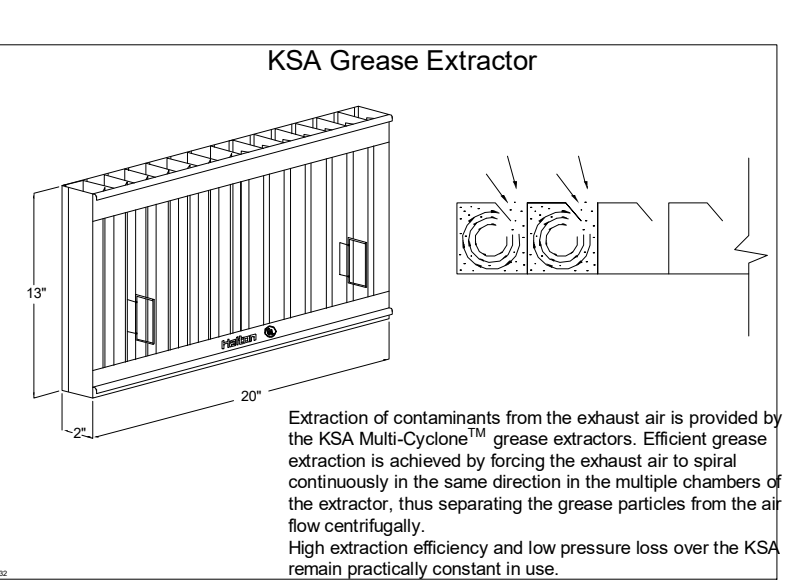
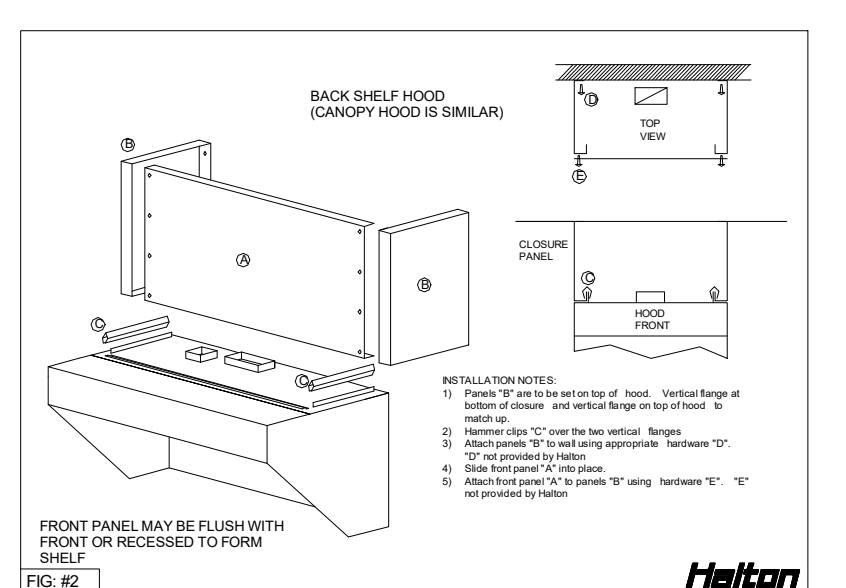
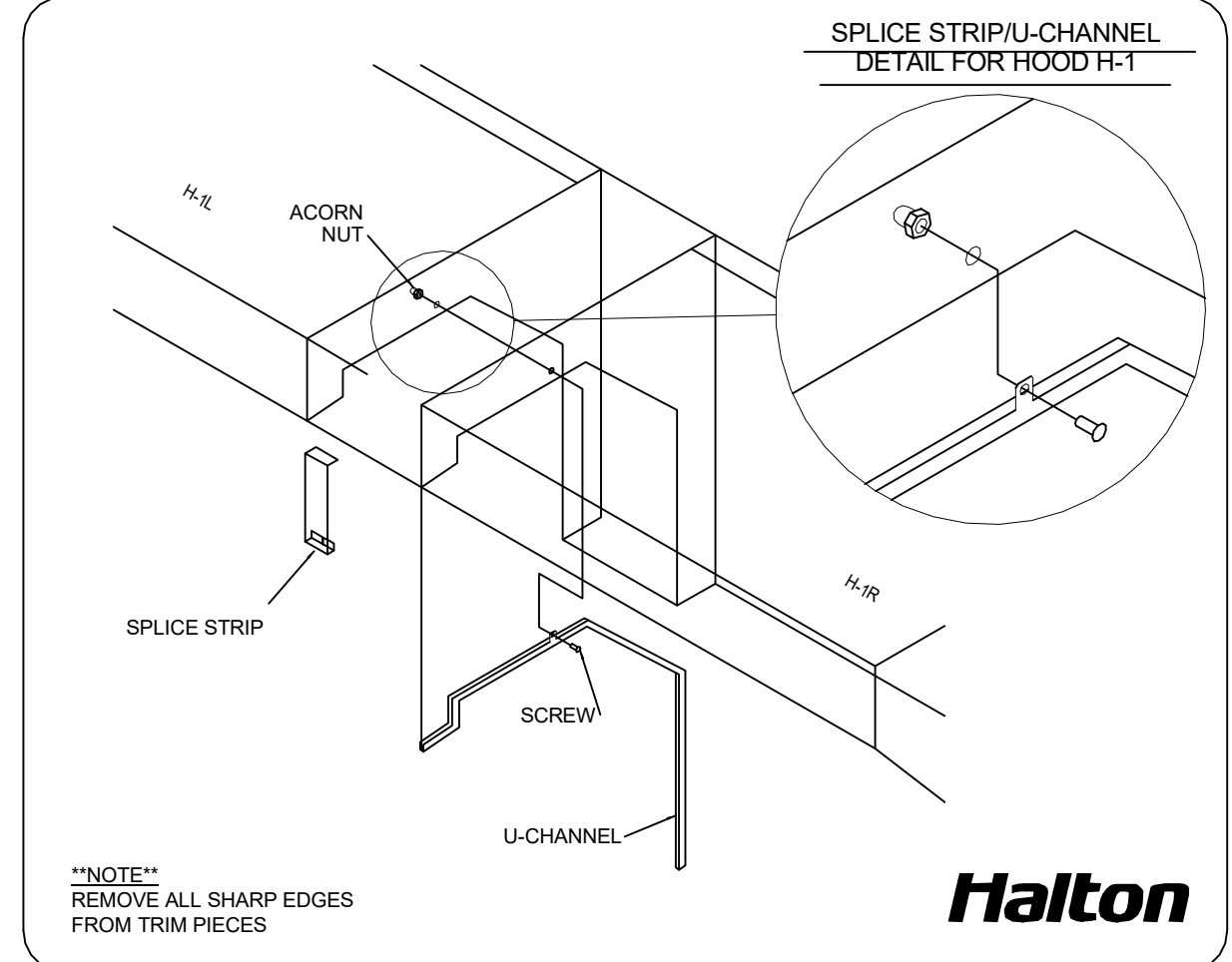
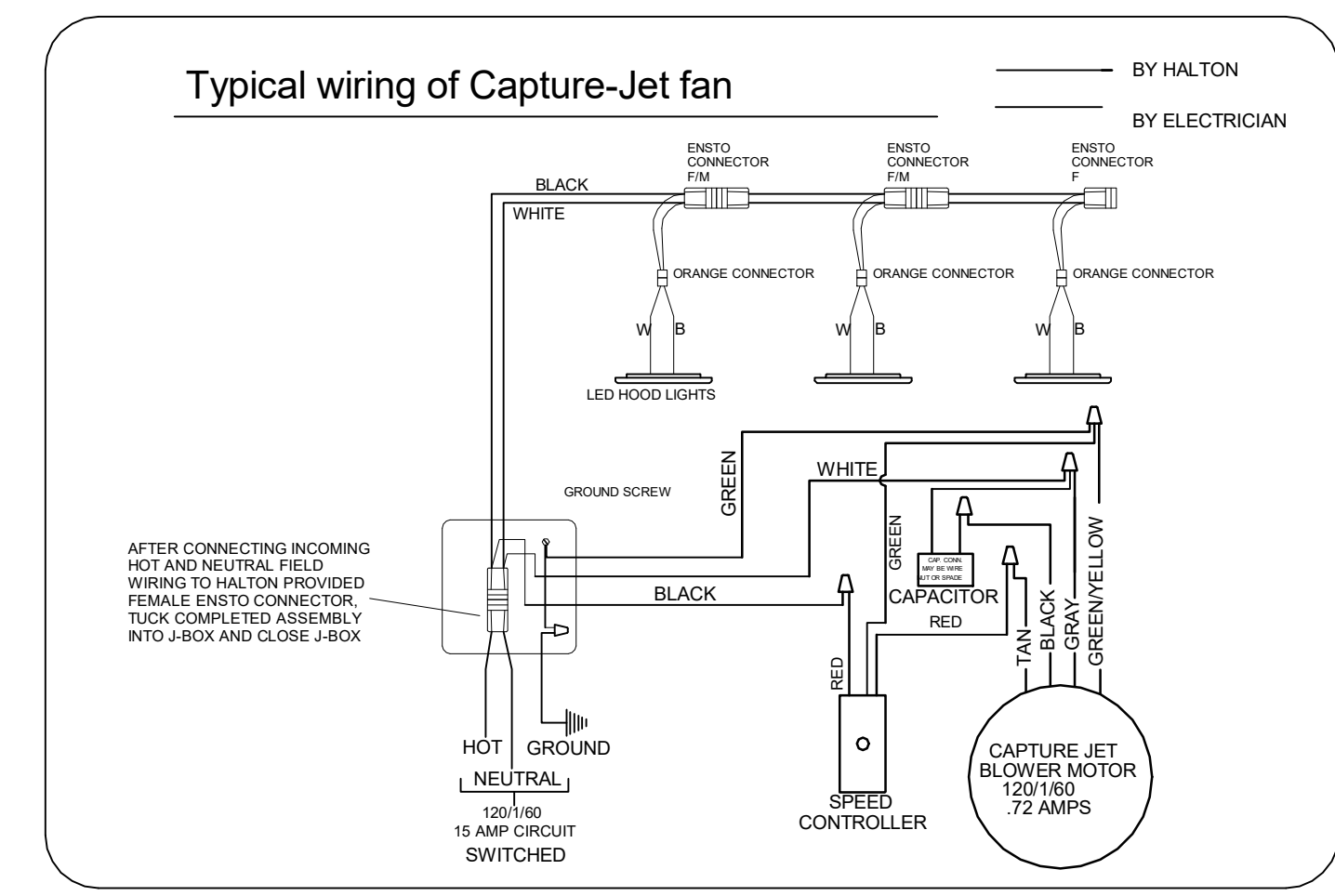
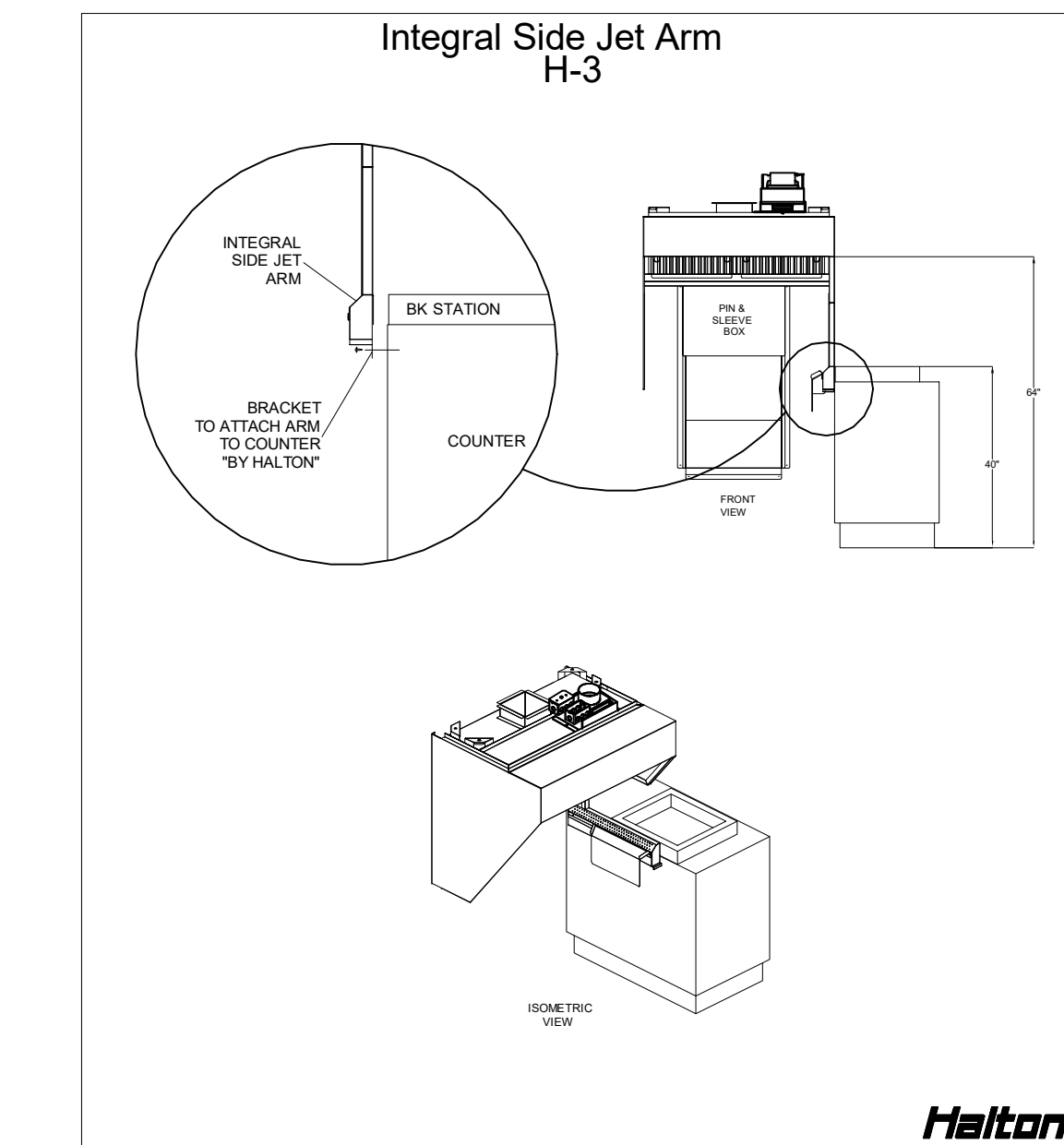
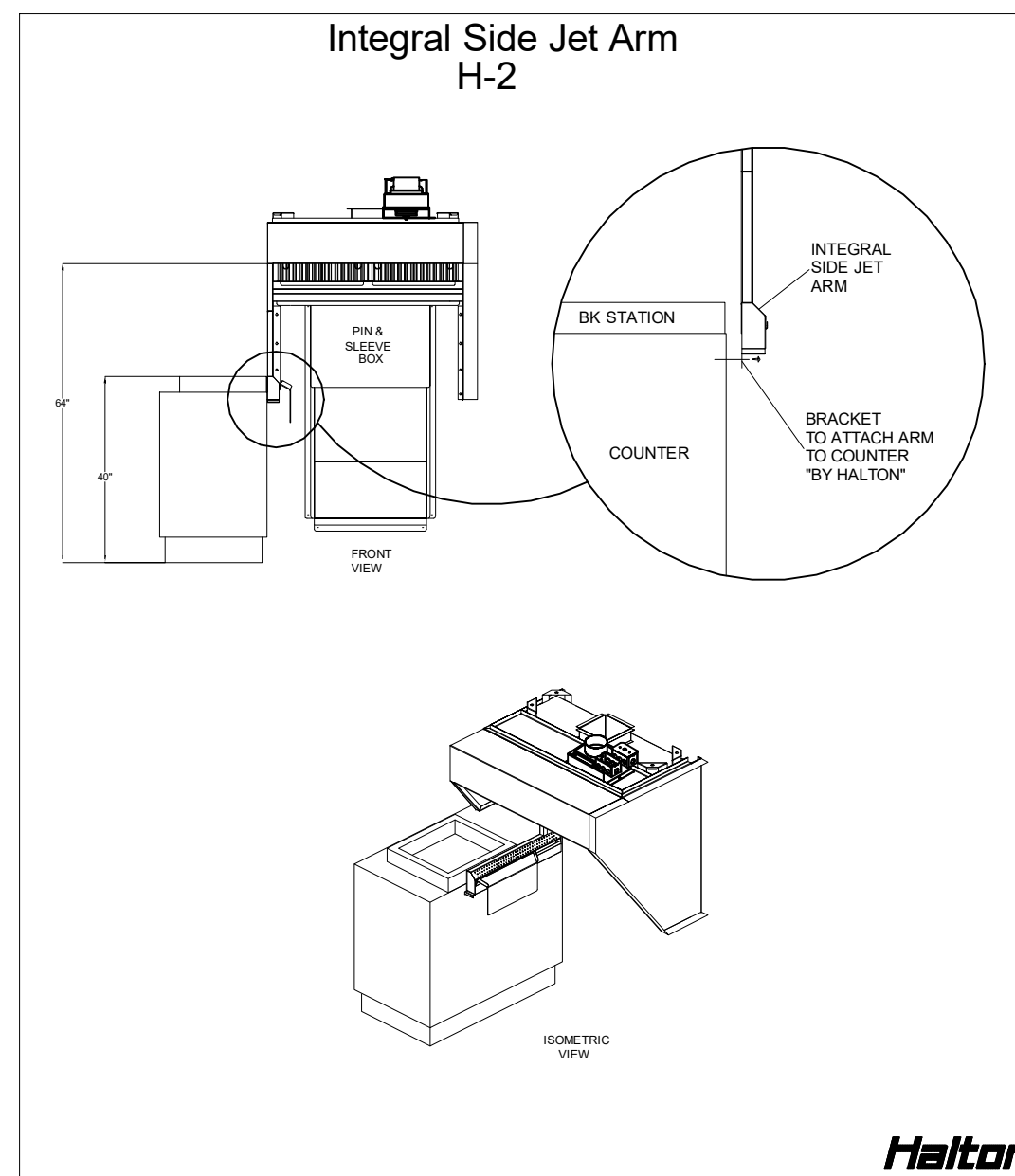
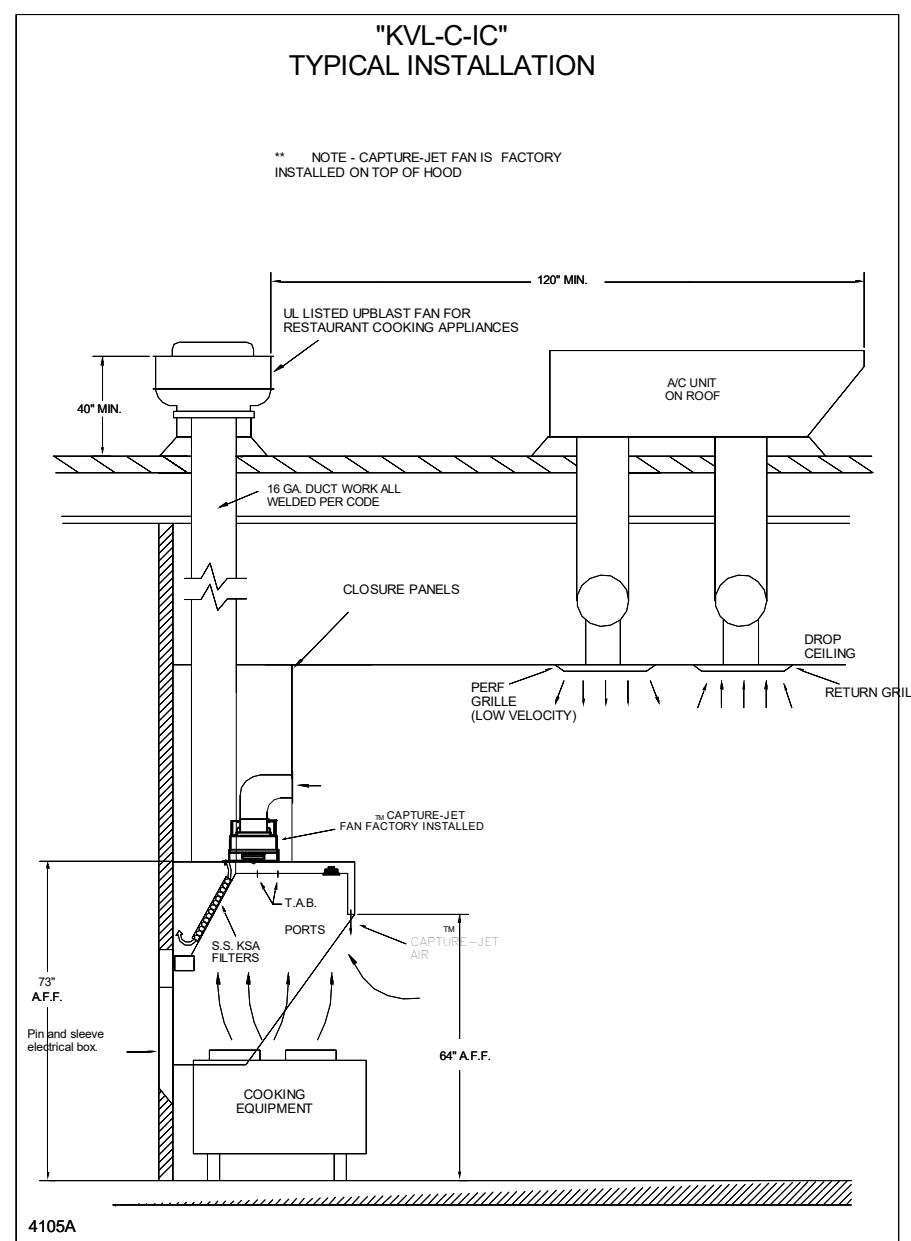
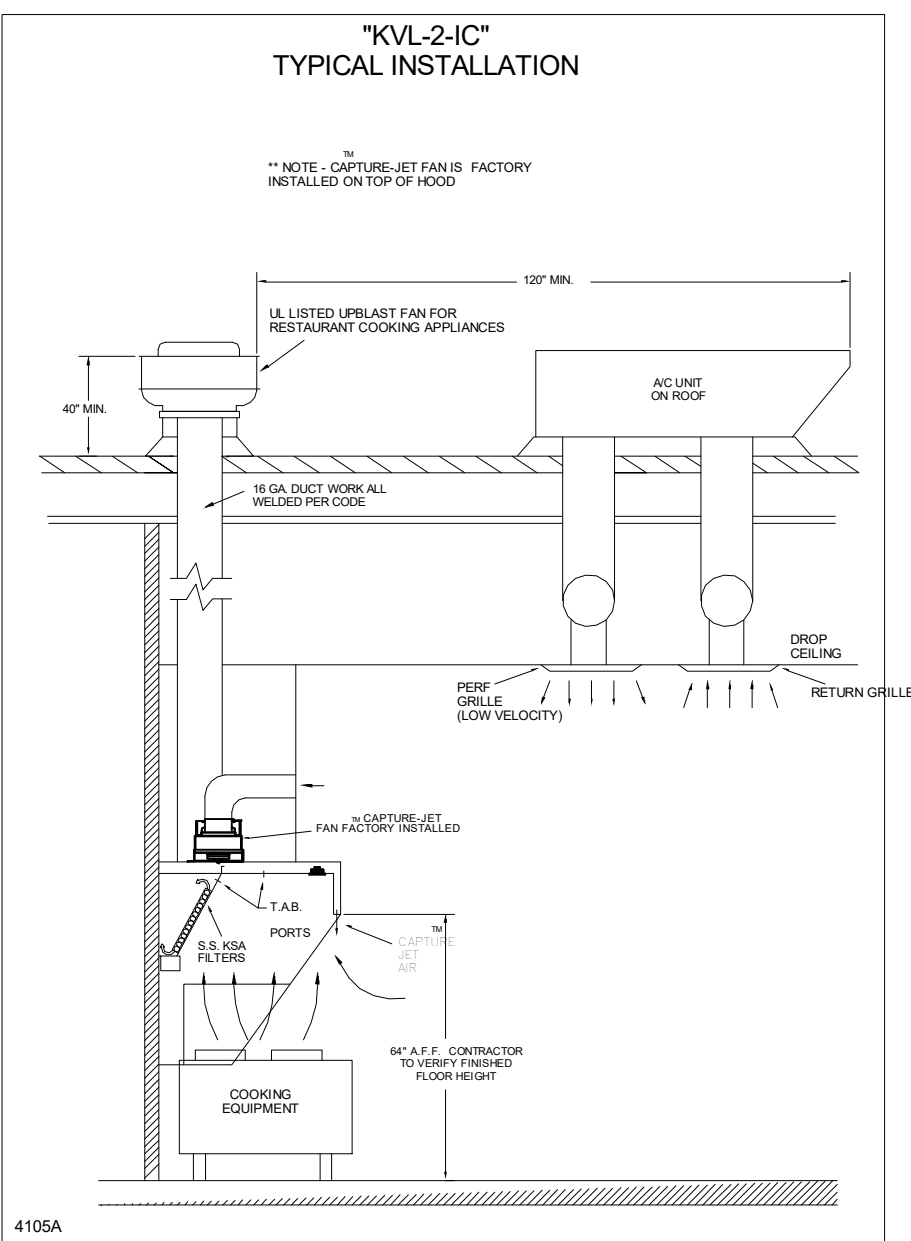
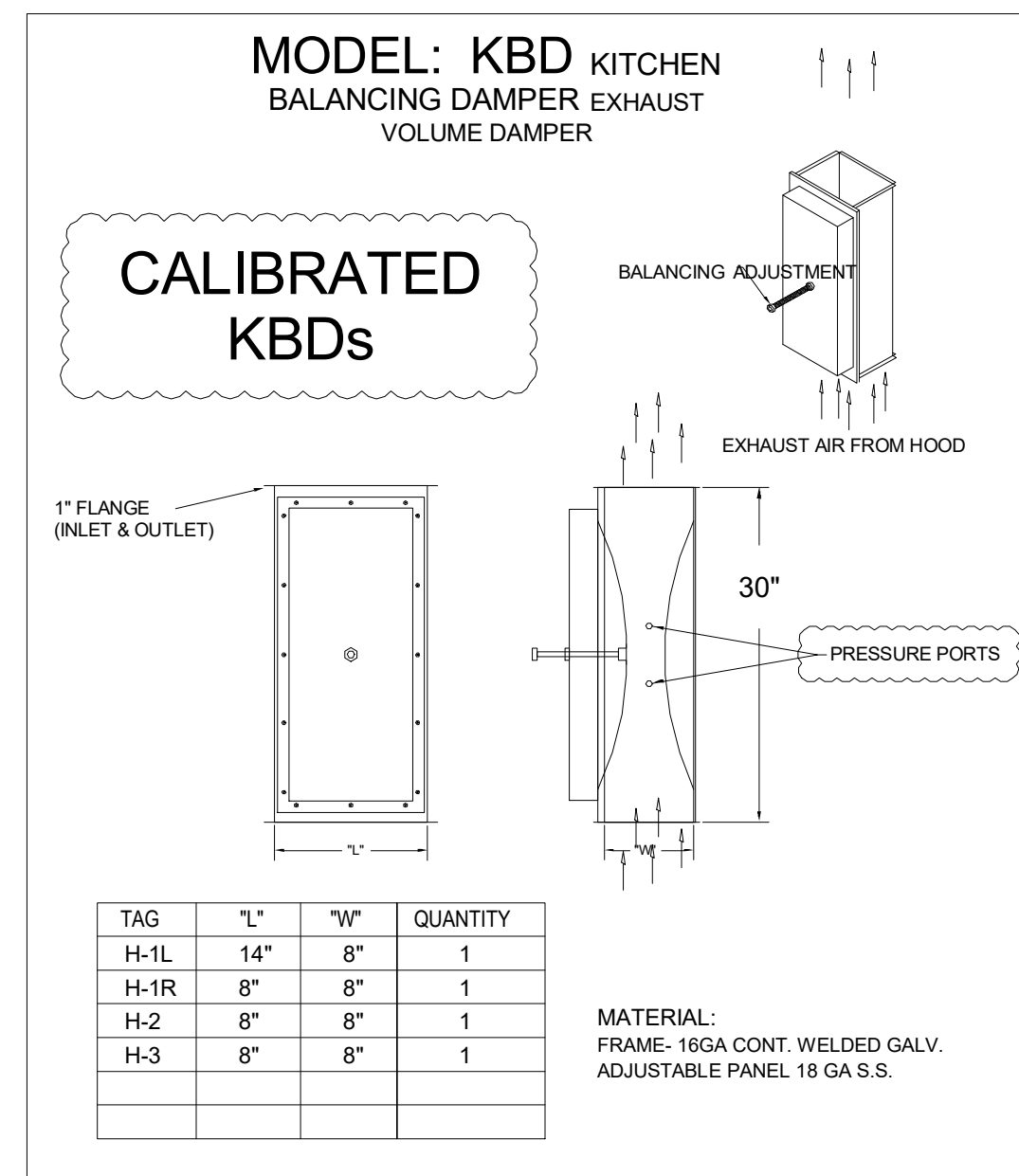
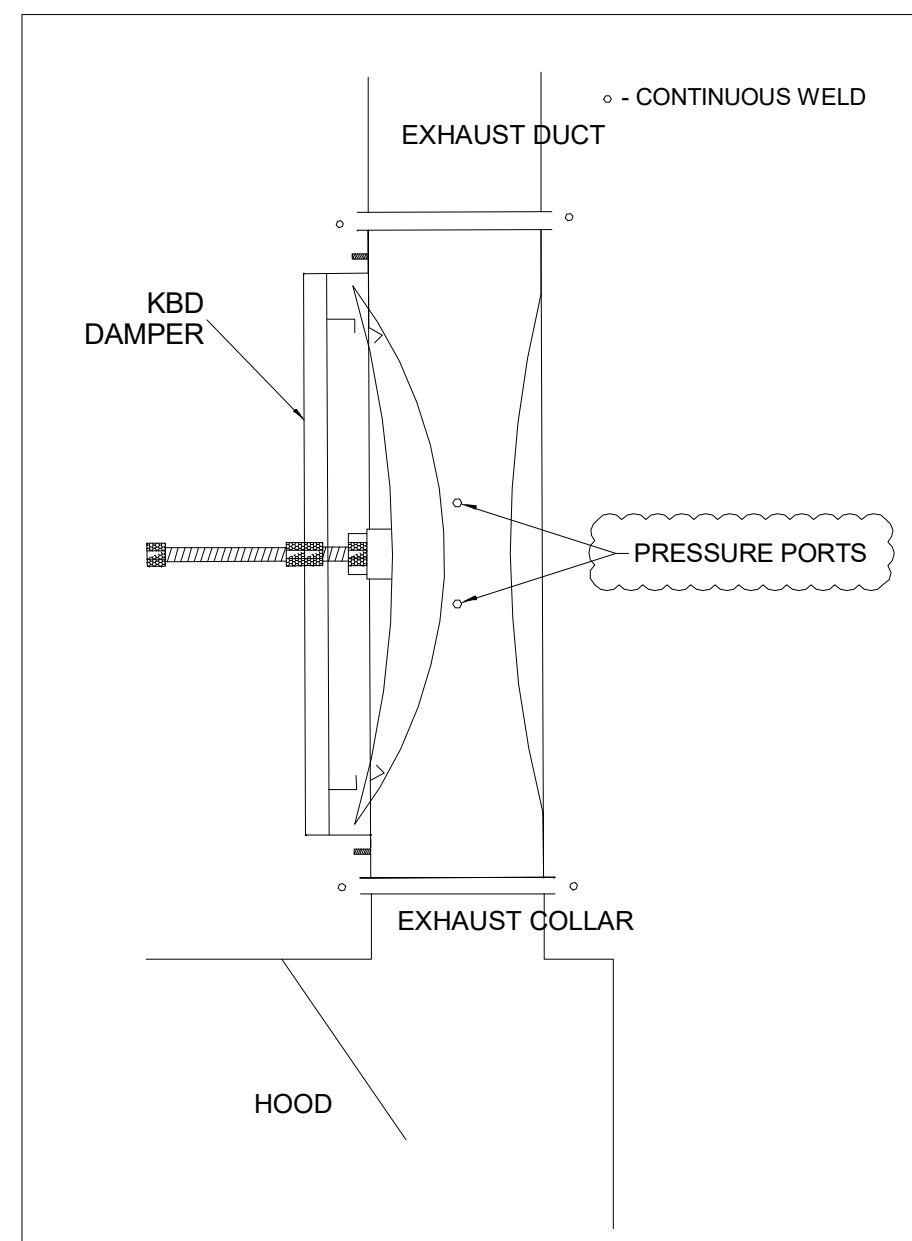
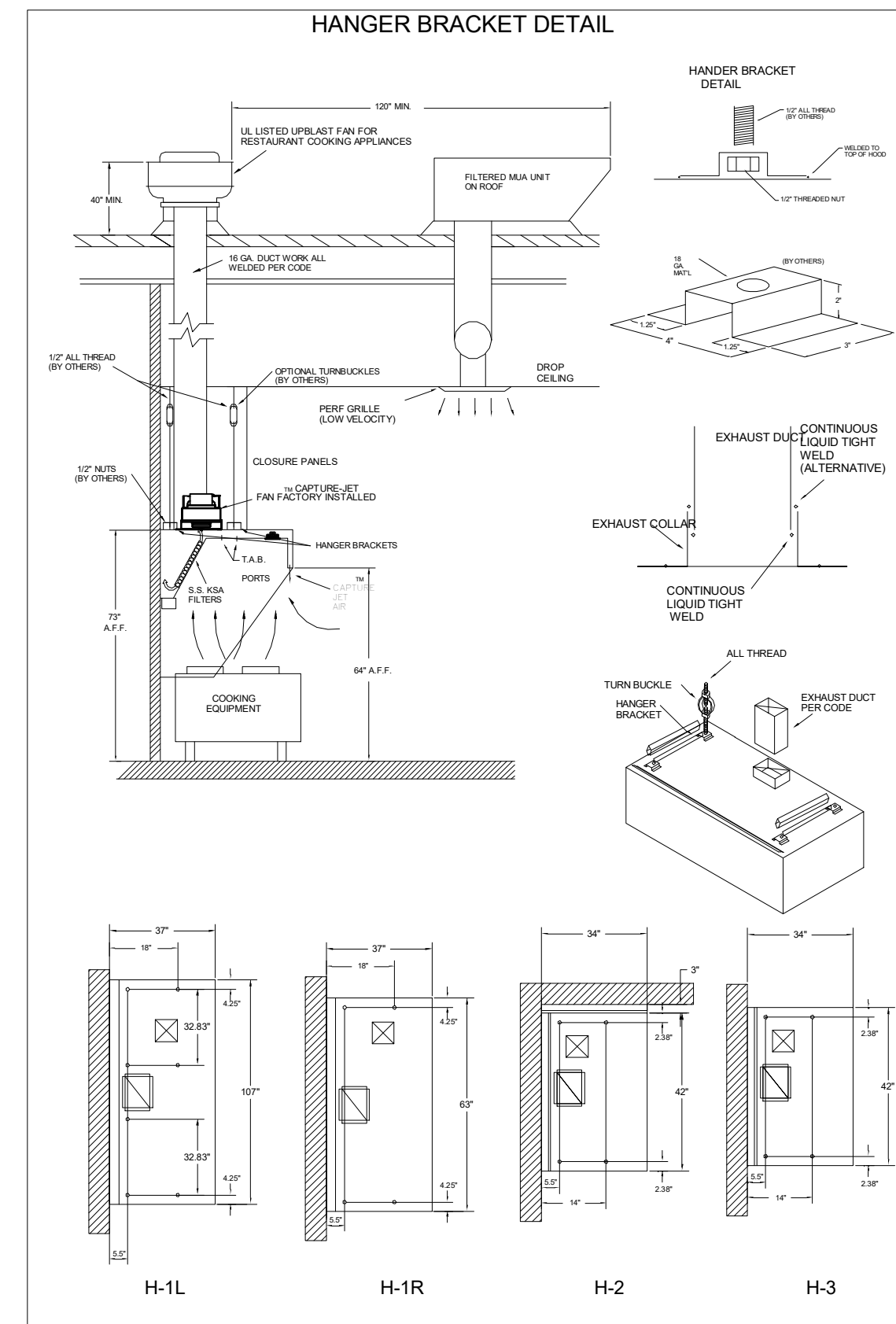
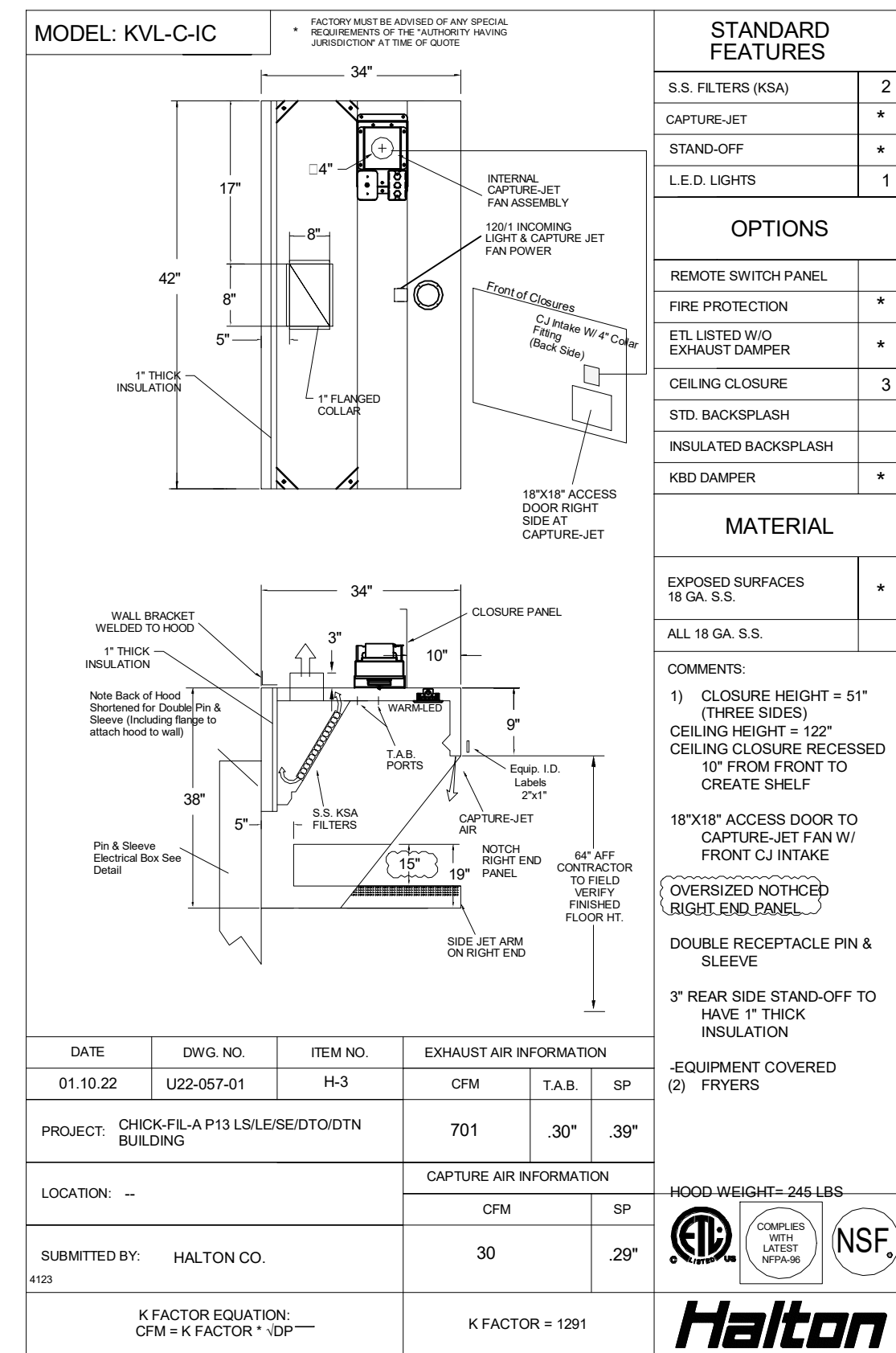
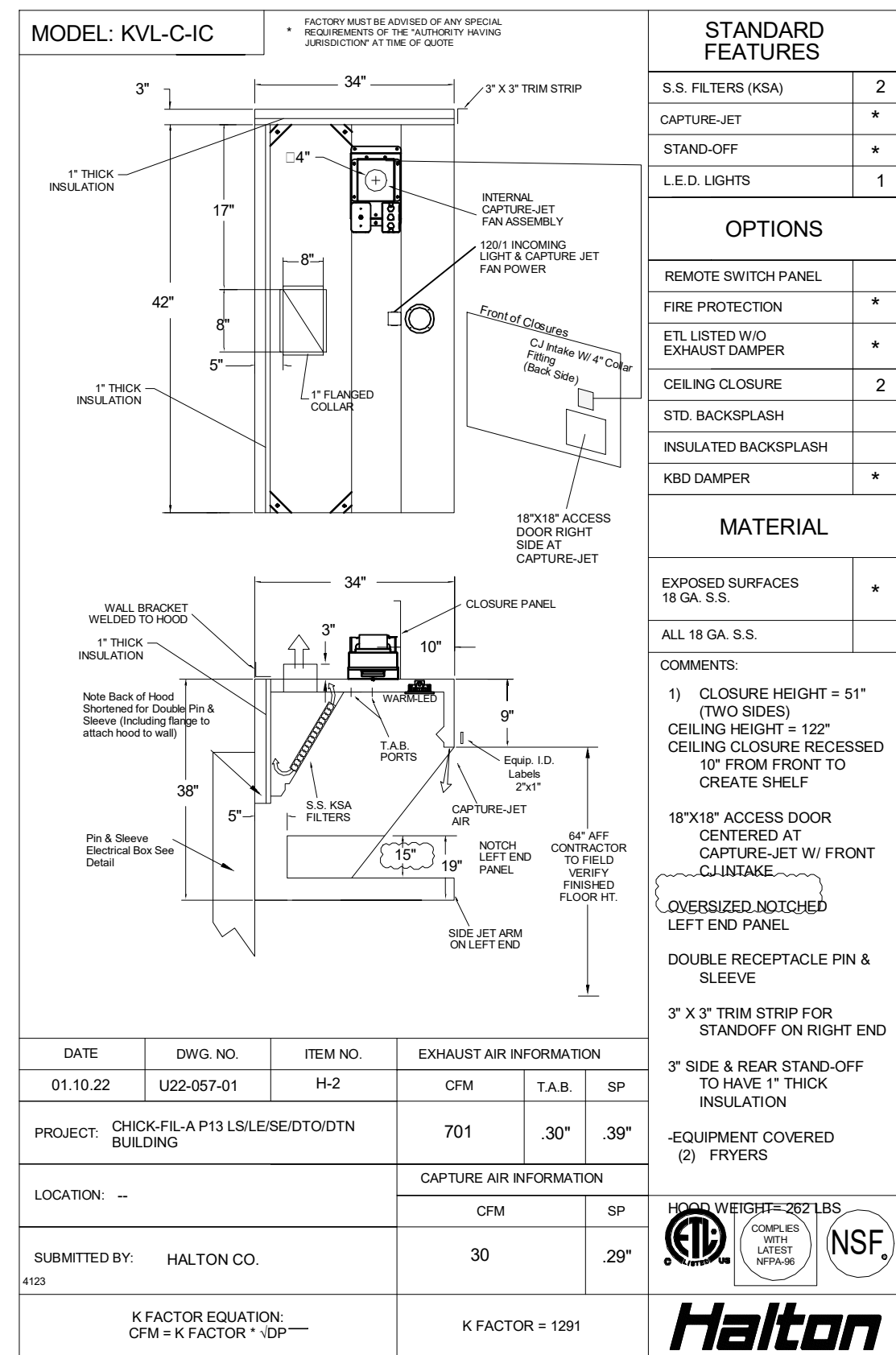
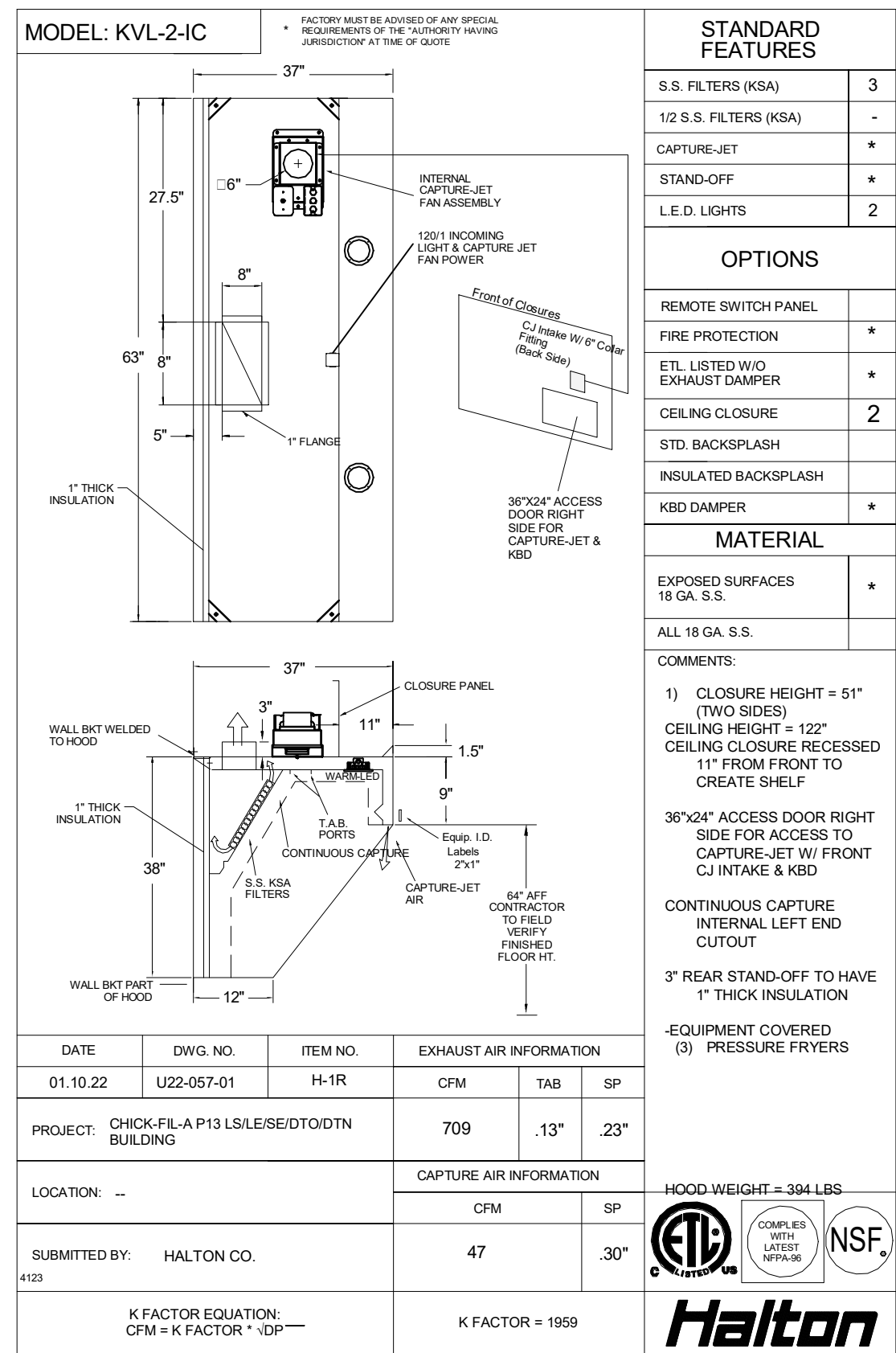
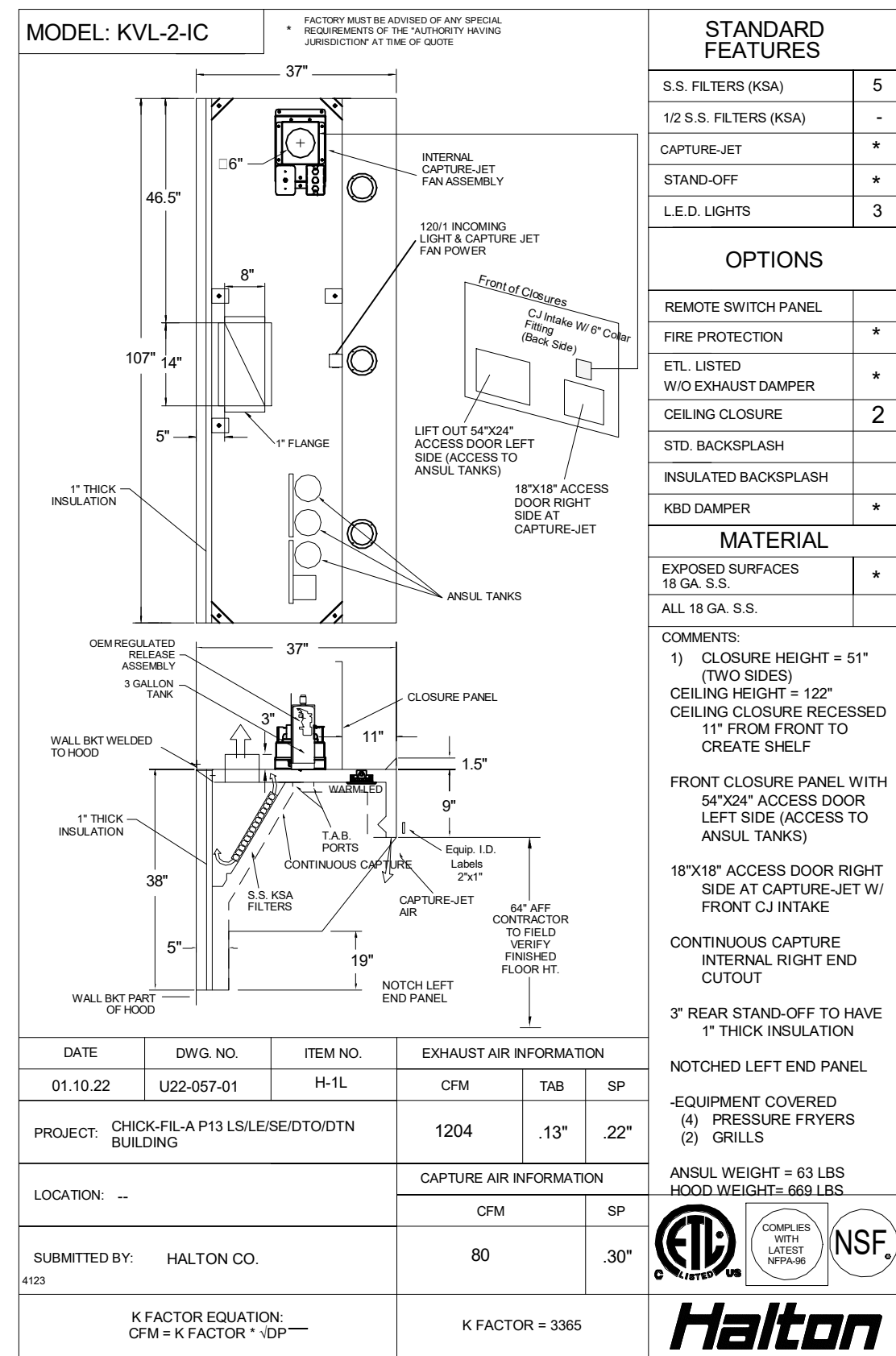
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SHEET HVAC DETAILS AND SCHEDULES

SHEET NUMBER

M-401

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3D-LS-05285-M-401-HVAC DETAILS AND SCHEDULES



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-1L)
 MAXIMUM FLOW POINTS = 33

ANSUL R-102 FIRE SYSTEM NOTES
 TWO TANK SYSTEM REMOTE MOUNTED
 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	14	SERIES DETECTORS W/ FUSIBLE LINKS
#201	2	TERMINAL DETECTOR W/ FUSIBLE LINKS
#202	1	OEM REGULATED RELEASE W/ DOUBLE POLE MICRO SWITCH
#202	1	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

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

HALTON HOODS
 - ETL LISTED PER LATEST 710 STANDARD
 - BUILT PER NFPA 96
 - NSF LISTED

NSF Halton

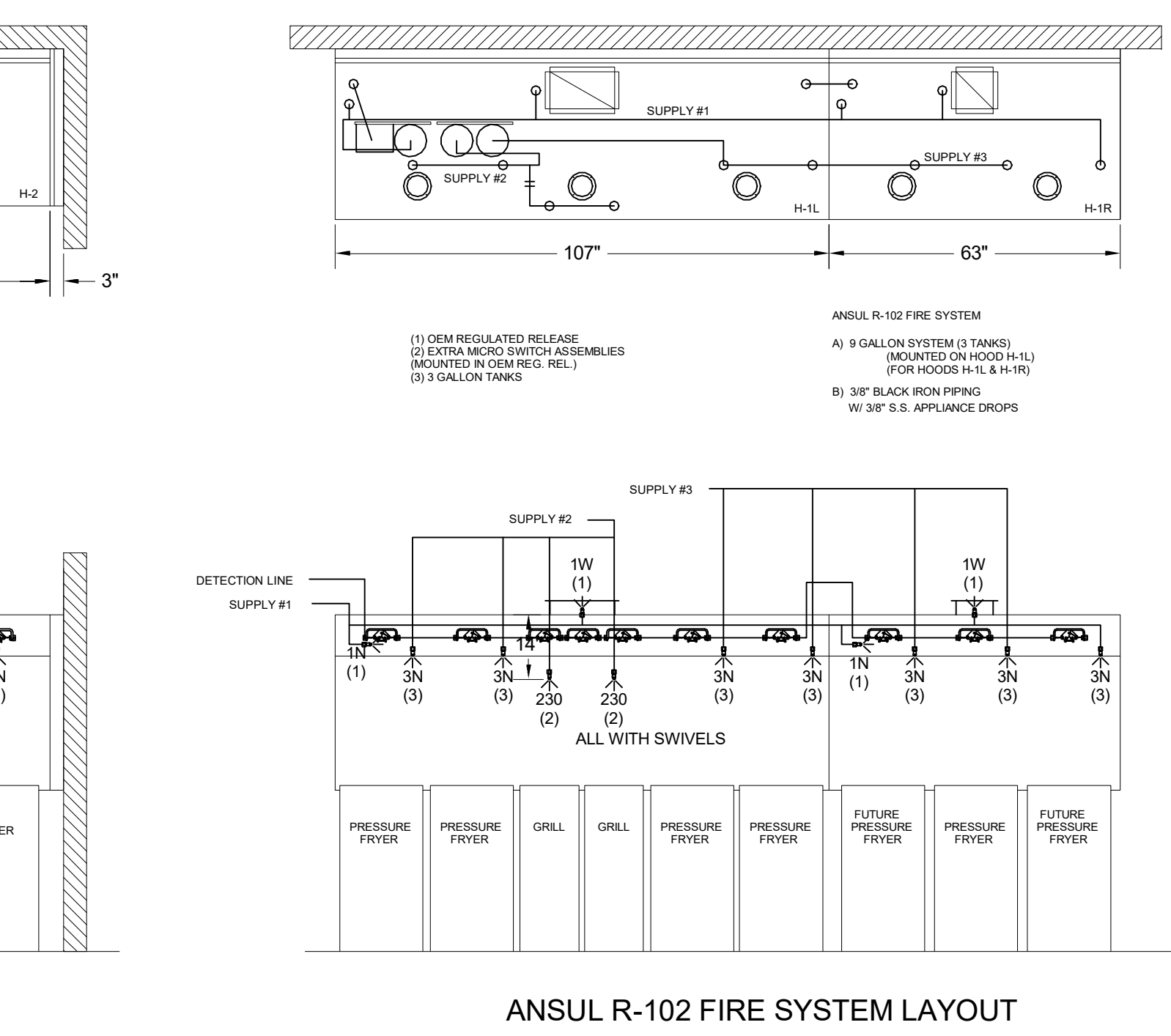
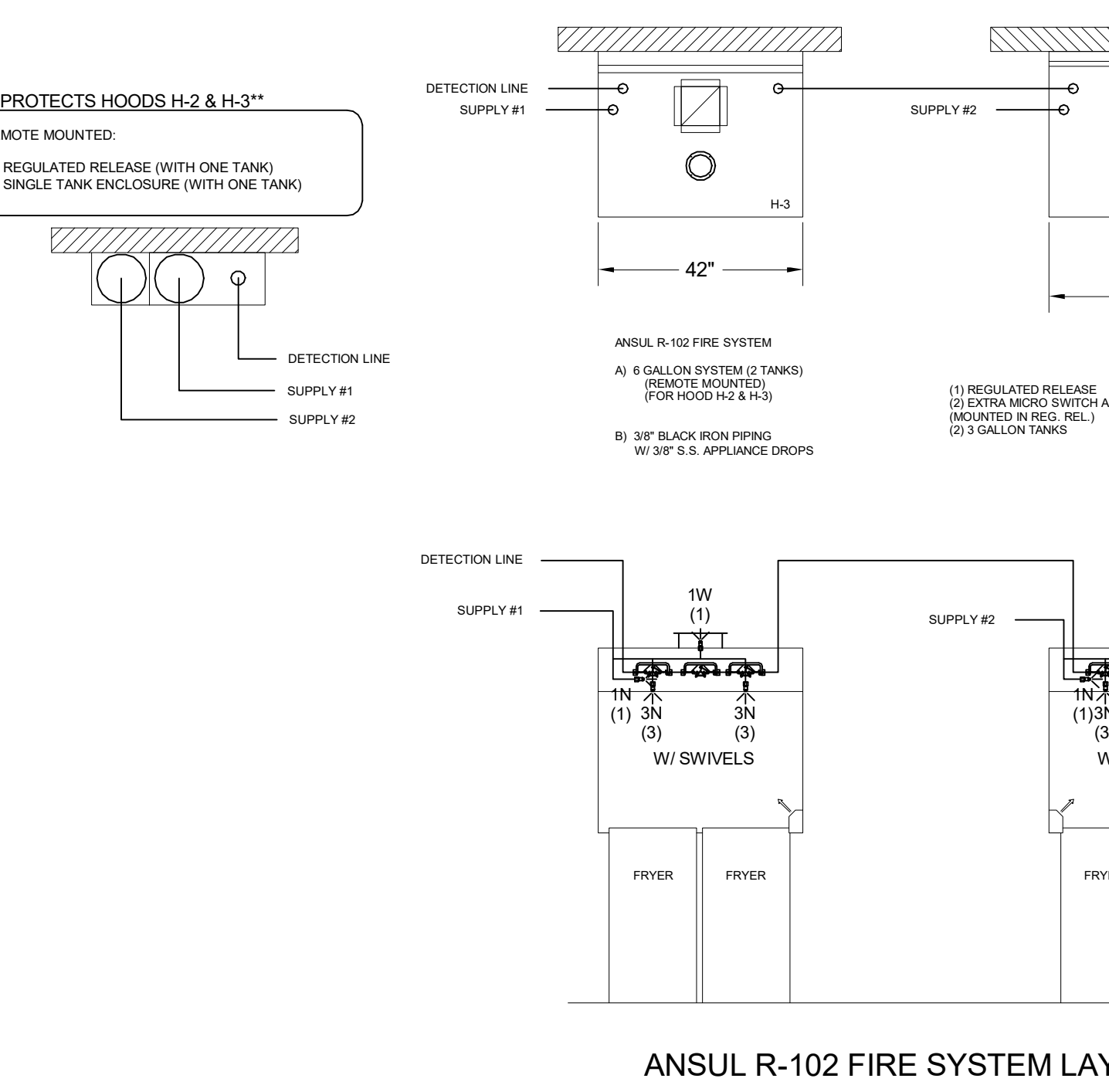
CONFORMS TO UL STD 710 LISTED TO IAC 215666

HALTON COMPANY, 101 INDUSTRIAL DR., SCOTTSDALE, AZ 85258

MODEL NO. KVL-24C SERIAL NO. ITEM NO.

GENERAL REQUIREMENTS:
 FLOW FROM DOWNWARD FLOW FOR COMMERCIAL AND INSTITUTIONAL SYSTEMS
 THE FAN SHOULD BE INSTALLED IN THE DOWNWARD FLOW POSITION.
 THE HOOD SHOULD BE INSTALLED IN THE DOWNWARD FLOW POSITION TO COMPENSATE FOR THE DOWNWARD FLOW OF AIR.
 THE HOOD SHOULD BE INSTALLED IN THE DOWNWARD FLOW POSITION TO COMPENSATE FOR THE DOWNWARD FLOW OF AIR.
 THE HOOD SHOULD BE INSTALLED IN THE DOWNWARD FLOW POSITION TO COMPENSATE FOR THE DOWNWARD FLOW OF AIR.

SUPPLY LEVEL	MINIMUM DRAWING	MINIMUM FLOW RATE	MINIMUM FLOW RATE	MINIMUM FLOW RATE
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9
10	10	10	10	10
11	11	11	11	11
12	12	12	12	12
13	13	13	13	13
14	14	14	14	14
15	15	15	15	15
16	16	16	16	16
17	17	17	17	17
18	18	18	18	18
19	19	19	19	19
20	20	20	20	20



FOR REFERENCE ONLY

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY. FACTORY WEBSITE: WWW.HALTONCOMPANY.COM

HALTON CO. (USA)
 101 INDUSTRIAL DRIVE
 SCOTTSDALE, AZ 85258
 1-220-237-5600

HALTON CO. (CANADA)
 1021 BREWIK PLACE
 MISSISSAUGA, ON L4W 3R7
 1-905-624-0001

REVISION DESCRIPTION

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

PROJECT: CHICK-FLA
 LOCATION: University City
 DRAWN BY: NTS
 DATE: 02/17/2023
 SCALE: NTS
 Halton Dwg: U22-057-01

Sheet **MH-101**

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.

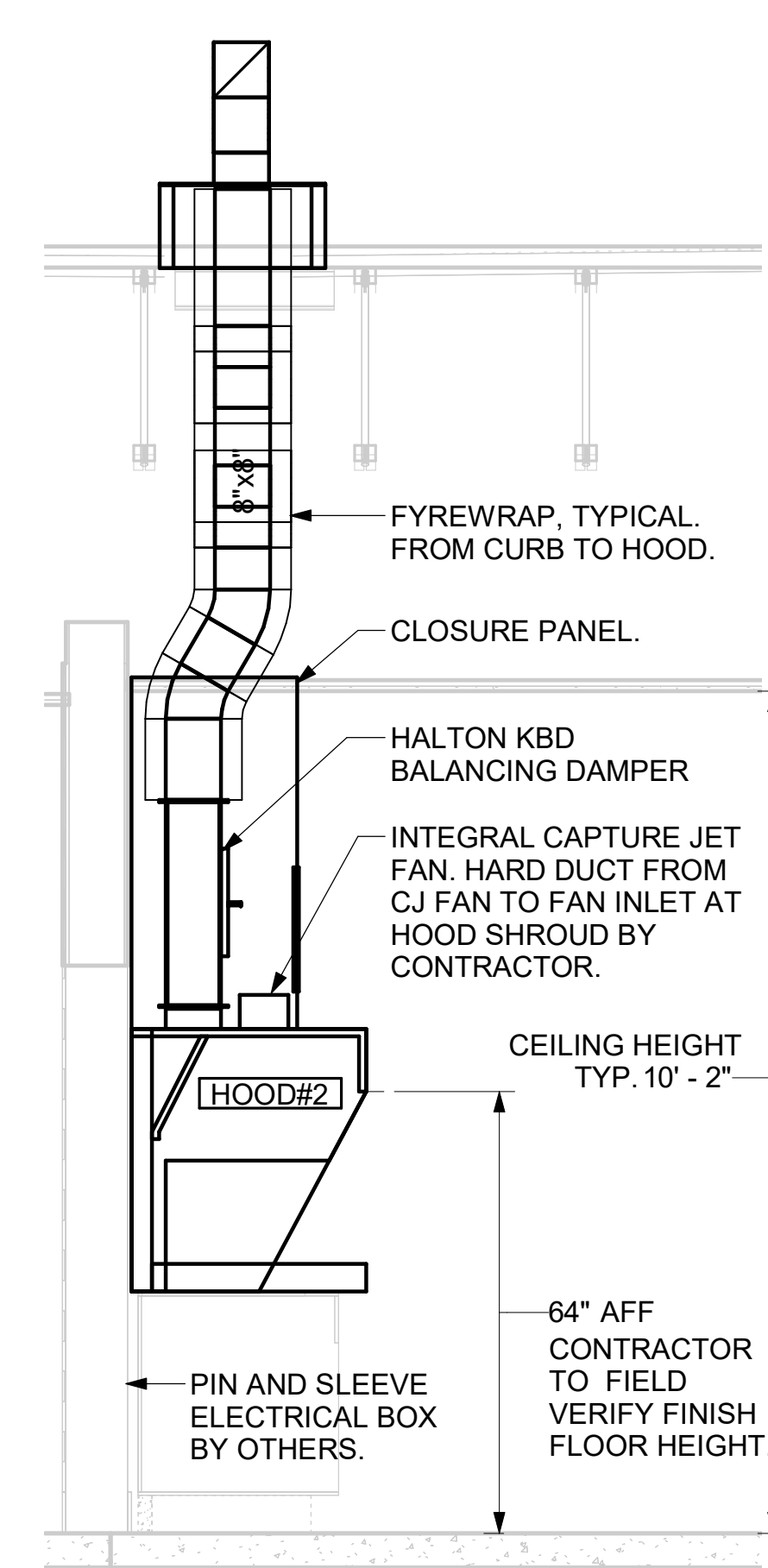
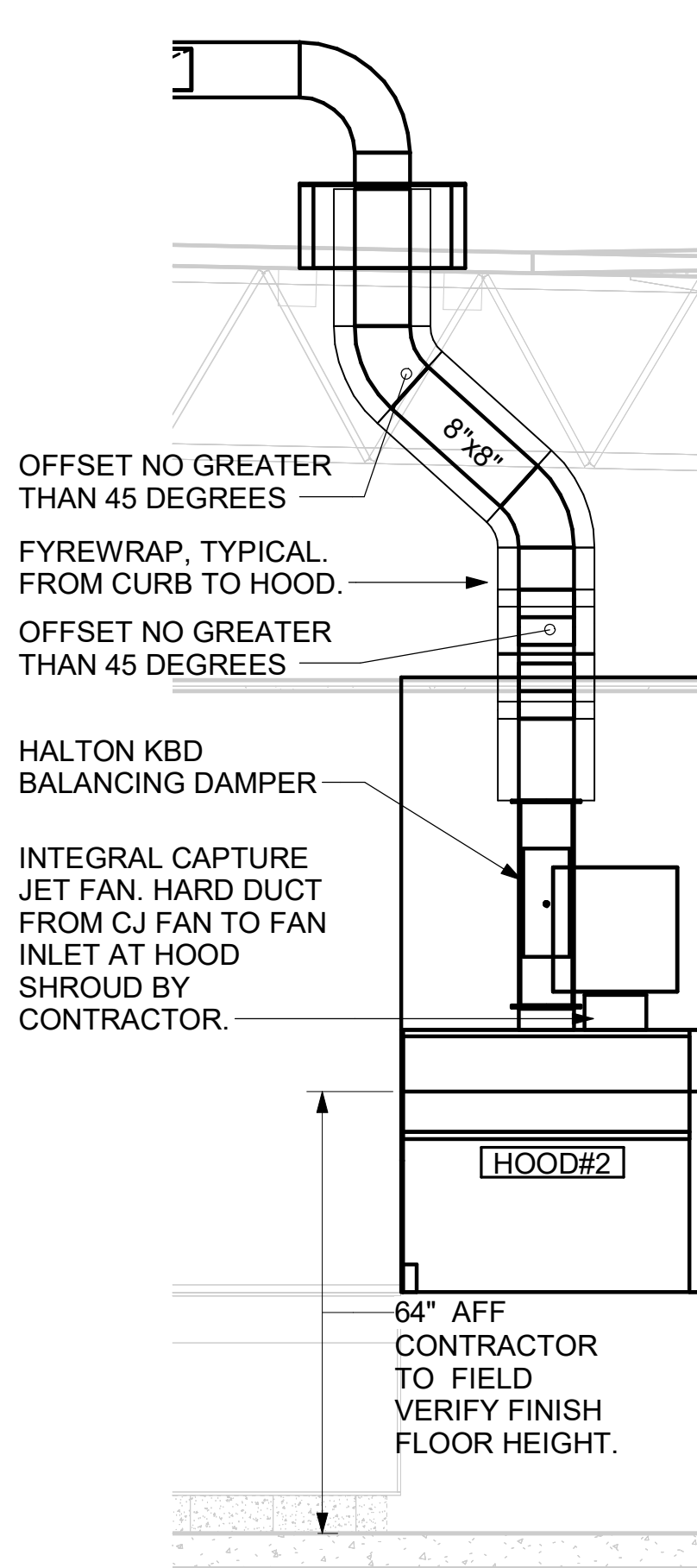
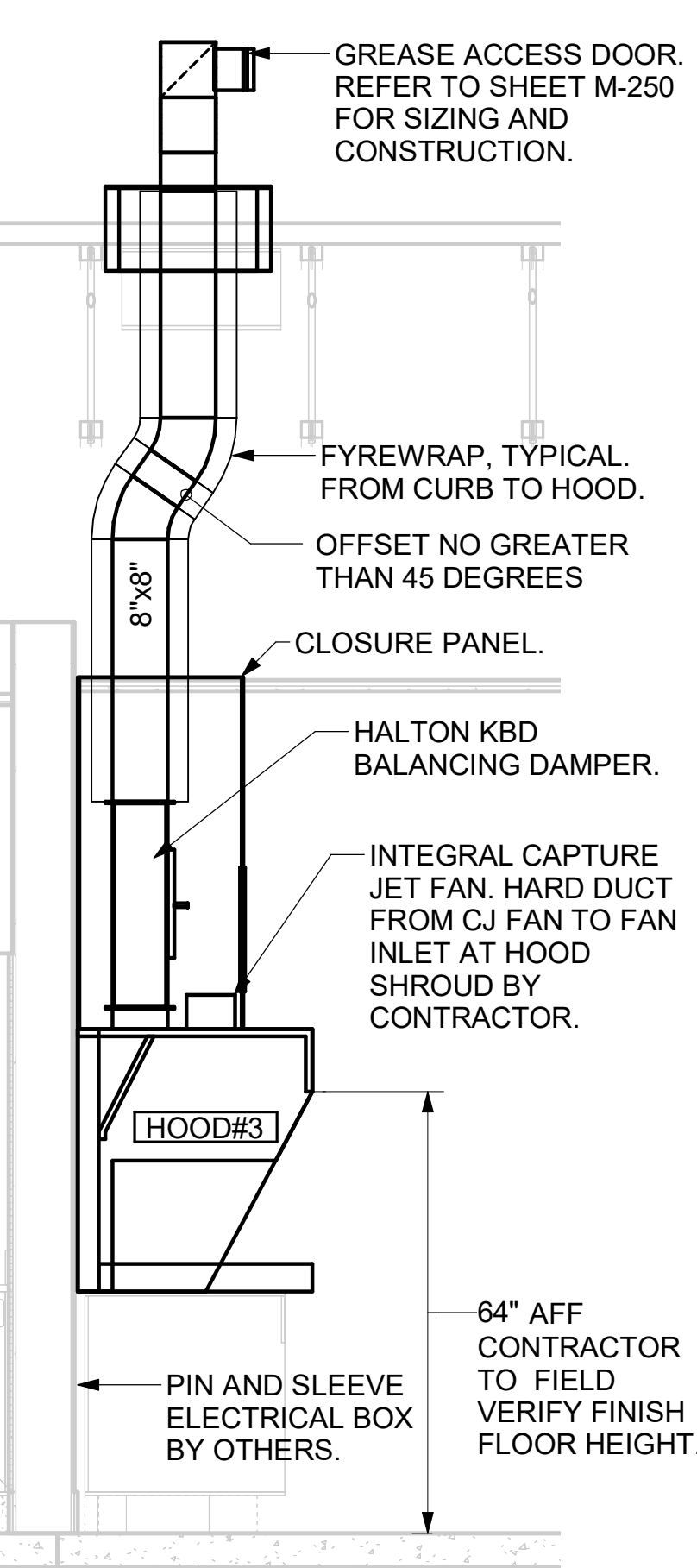
CLEANOUT DOOR NOTE:
 DUCT WRAP SHALL BE APPLIED TO THE CLEANOUT DOOR PER THE WRAP MFR'S INSTALLATION INSTRUCTIONS, NO EXCEPTIONS. ALSO, THE CLEANOUT DOOR MUST BE REMOVABLE WITHOUT TOOLS AND MUST BE CLEARLY AND PERMANENTLY LABELED.

HOOD SCHEDULE											
MARK	EXHAUST CFM	SP @ TAB PORT	CAPTURE JET CFM & S.P.	TYPE	COLLAR SIZE	WIDTH	DEPTH	HEIGHT	MANUFACTURER	MODEL	REMARKS
HOOD#1L	1204	0.13"	80 @ 0.30"	BACKSHELF	14"x8"	107"	37"	38"	HALTON	KVL-2 IC 1	
HOOD#1R	709	0.13"	47 @ 0.30"	BACKSHELF	8"x8"	63"	37"	38"	HALTON	KVL-2 IC 1	
HOOD#2	701	0.30"	30 @ 0.29"	BACKSHELF	8"x8"	45"	34"	38"	HALTON	KVL-C IC 1	
HOOD#3	701	0.30"	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).										
REMARKS	1. REFER TO HOOD SHOP DRAWINGS FOR HOOD CONSTRUCTION AND OPTIONS. HOOD SHOP DRAWINGS ARE PROVIDED FOR REFERENCE ON SHEET MH-101.										

- 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 FYREWRAPE. INSULATION ON ACCESS DOORS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTALLATION RECOMMENDATIONS. UNIFRAX FYREWRAPE 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.

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

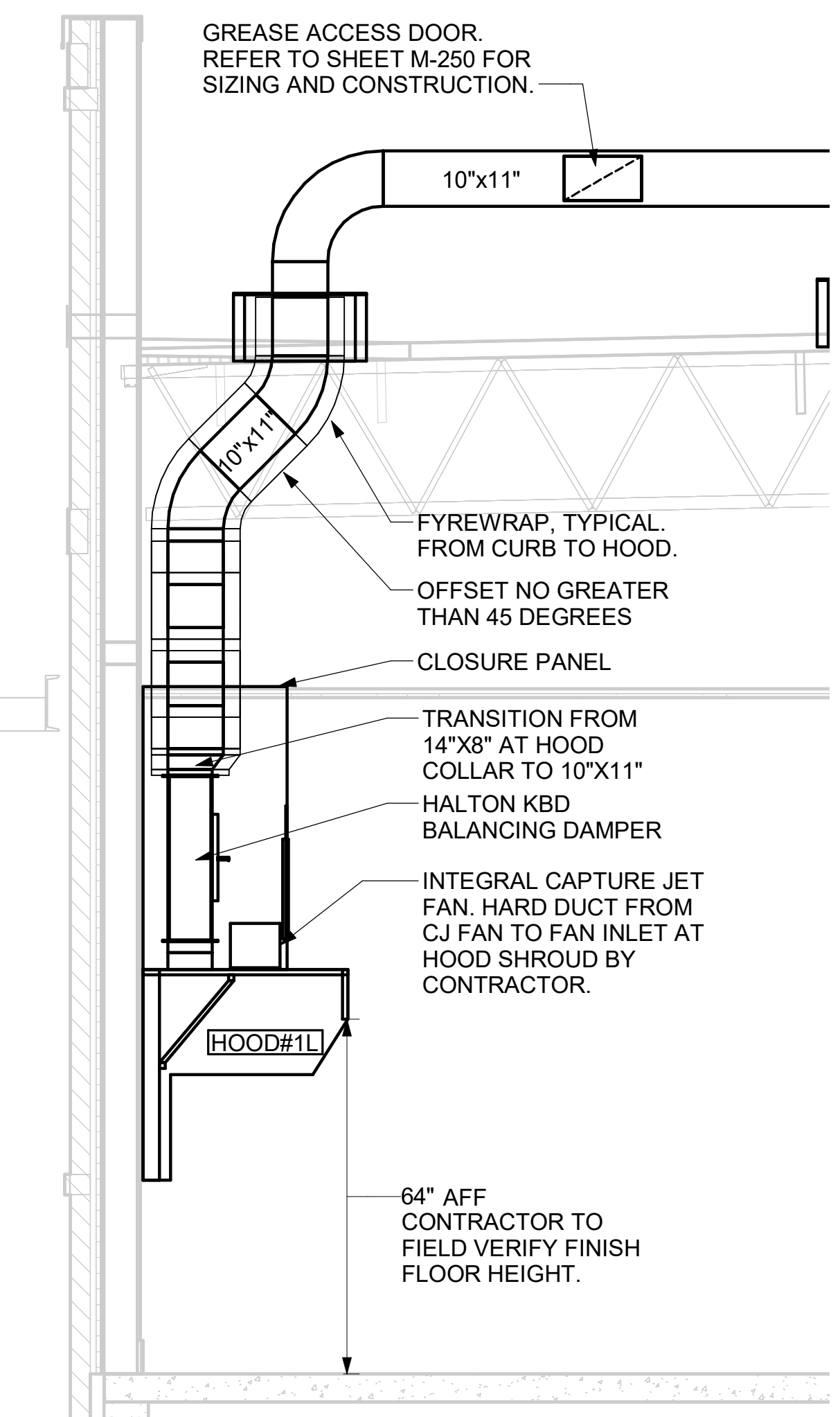
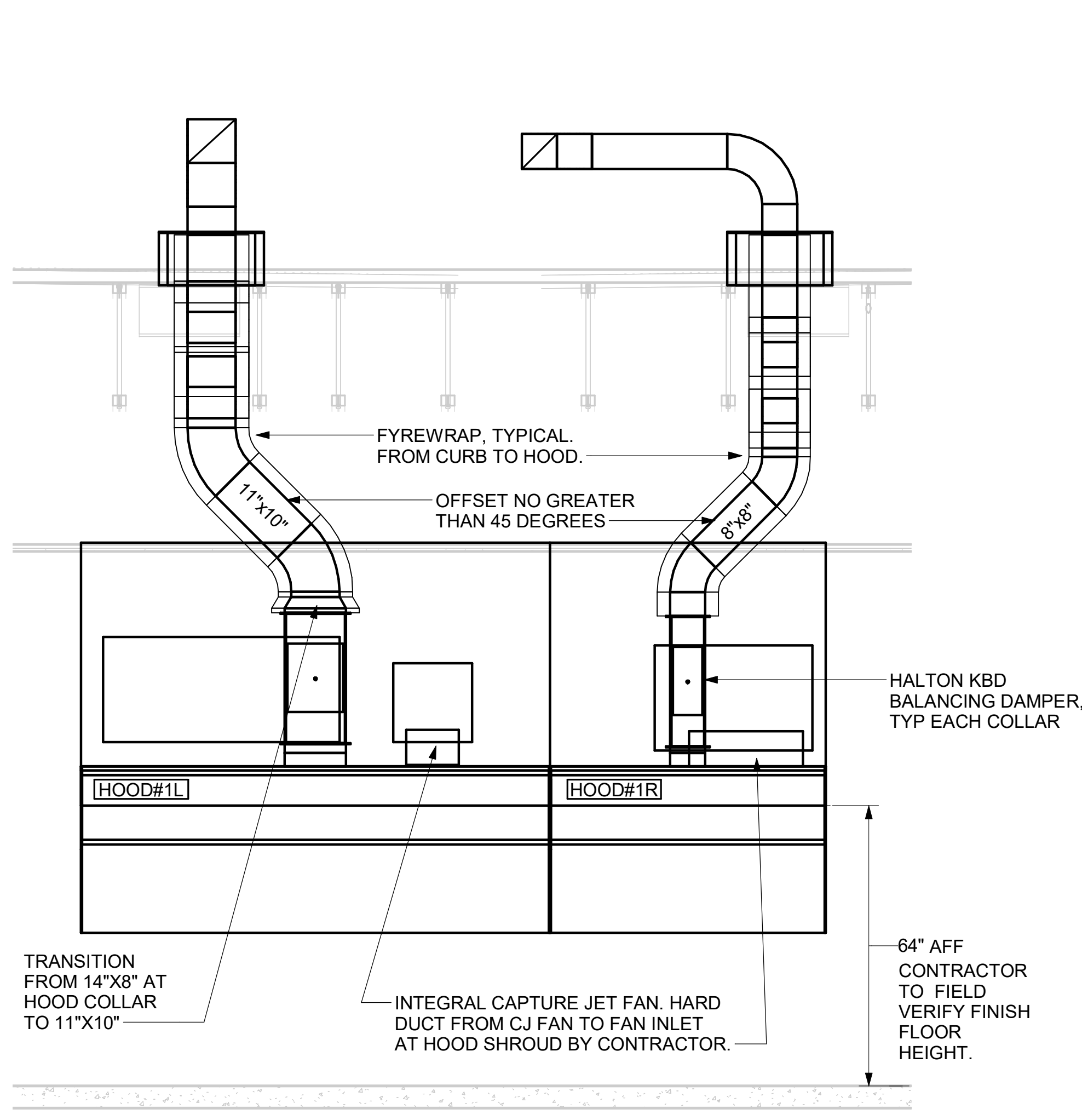
SET LEFT SIDE OF HOOD#2 FLUSH WITH FINISHED EDGE OF PASS THRU OPENING.



7 HOOD ELEVATION - HOOD#3
NOT TO SCALE

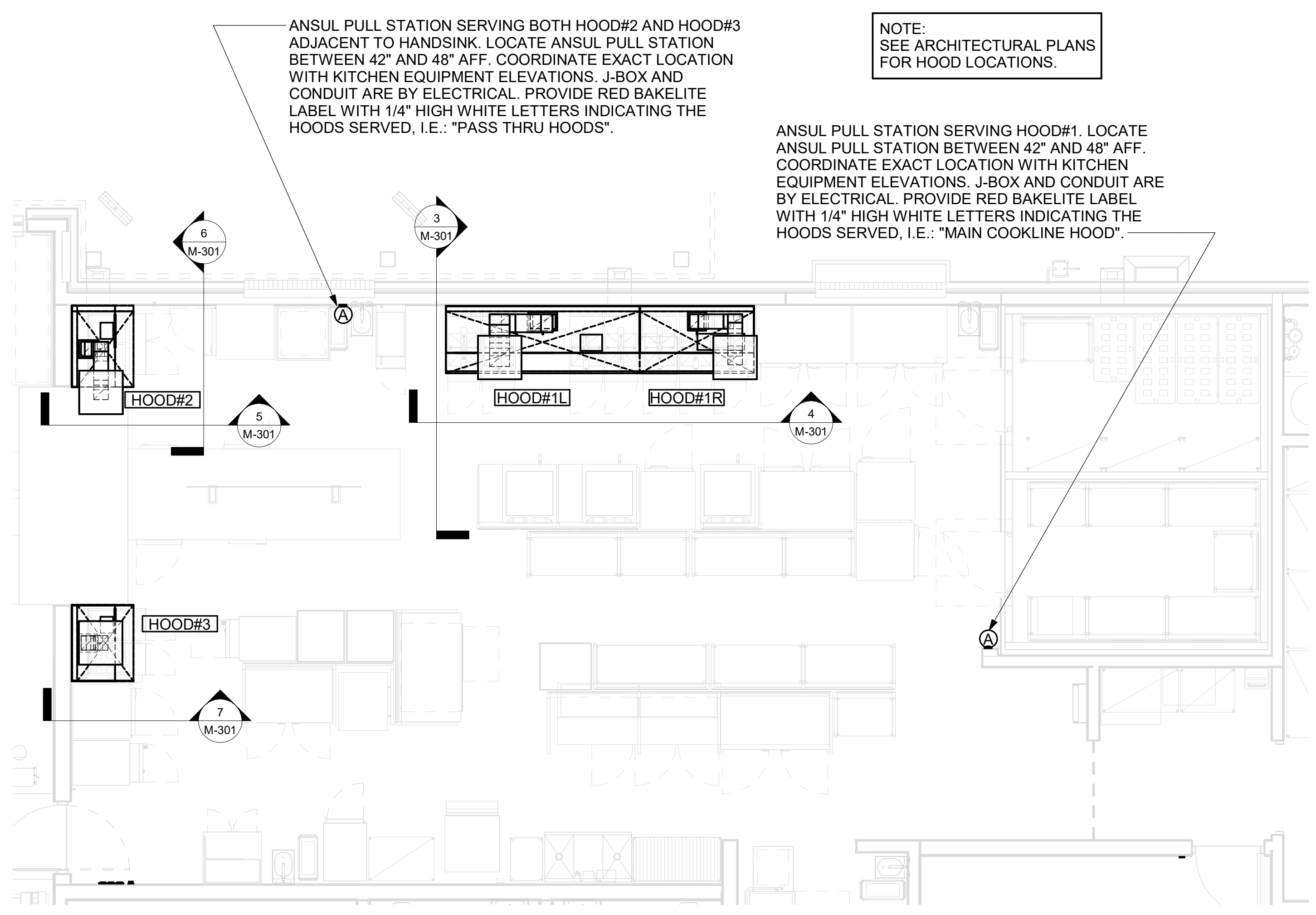
6 HOOD ELEVATION - HOOD#2 - FRONT
NOT TO SCALE

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



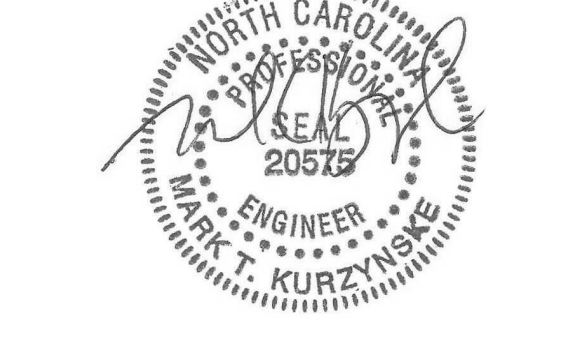
1 HOOD LAYOUT
1/4" = 1'-0"



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



02/17/23

CHICK-FIL-A
 University City
 8428 University City Blvd
 Charlotte, NC 28213

FSR#05285
 BUILDING TYPE / SIZE: P13 LS SML
 RELEASE: 22.02
 PRINTED FOR: PERMIT
 REVISION SCHEDULE

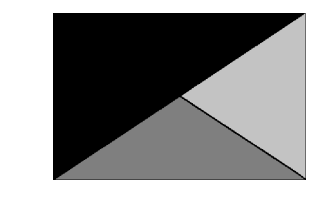
NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 23013.EH.S
 DATE 02/17/2023
 DRAWN BY BLM
 SHEET HOOD DETAILS AND SCHEDULES
 SHEET NUMBER **M-301**



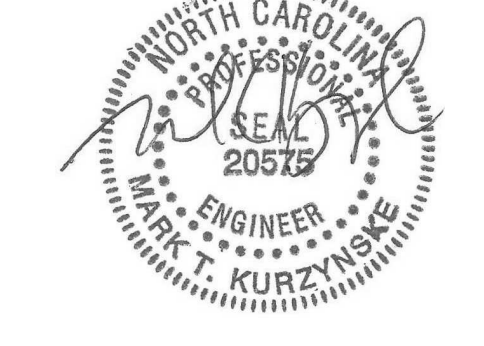
Chick-fil-A

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



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2705 Lebanon Pike - Suite One
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DATE 02/17/2023

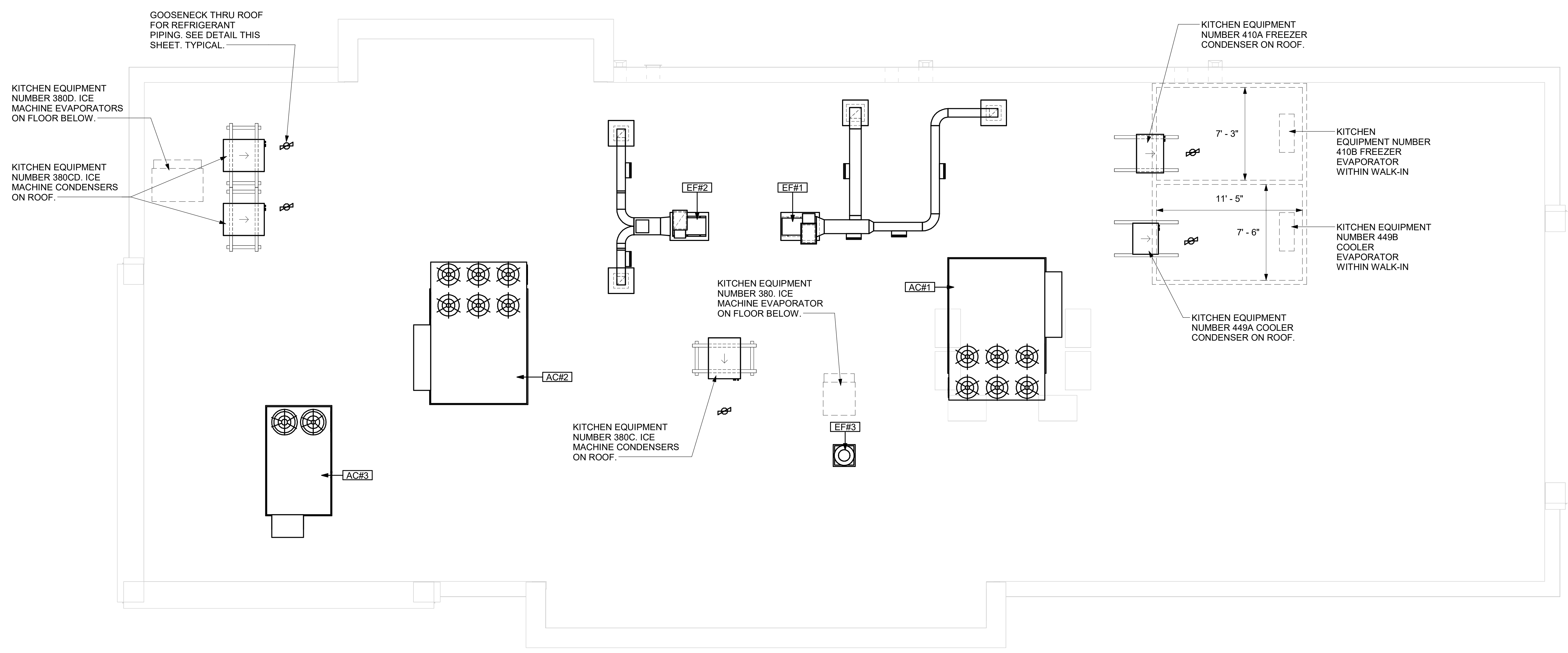
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MECHANICAL REFRIGERATION PLAN

SHEET NUMBER

M-601



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

REFRIGERATION CALCULATIONS AND OTHER INFORMATION REQUIRED PER CHAPTER 11 NCMC

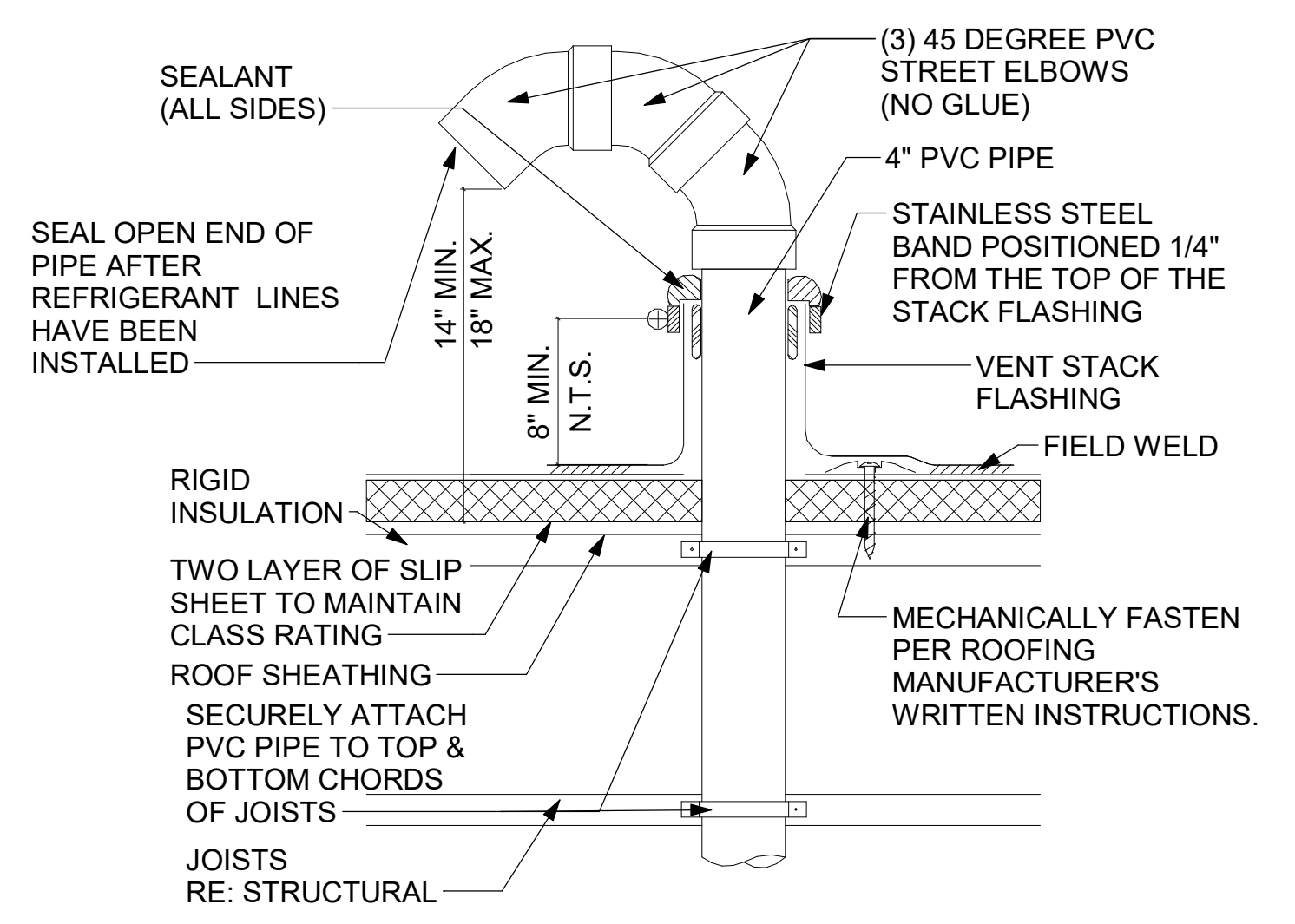
WALK-IN COOLER/FREEZER

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'-5"L X 7'-6"W X 9'-6"H 813 FT3
B - FREEZER VOLUME:	11'-5"L X 7'-3"W X 9'-6"H 786 FT3
6. MAXIMUM ALLOWABLE REFRIGERANT IN SYSTEM:	
A - COOLER:	813 * (31LB./1000FT3) = 25.2 LB MAX
B - FREEZER:	786 * (31LB./1000FT3) = 24.4 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 ON THE ROOF PLAN.
- 5) EVAPORATOR CONDENSATE PIPING IS SHOWN ON SHEETS P-101 AND P-201.

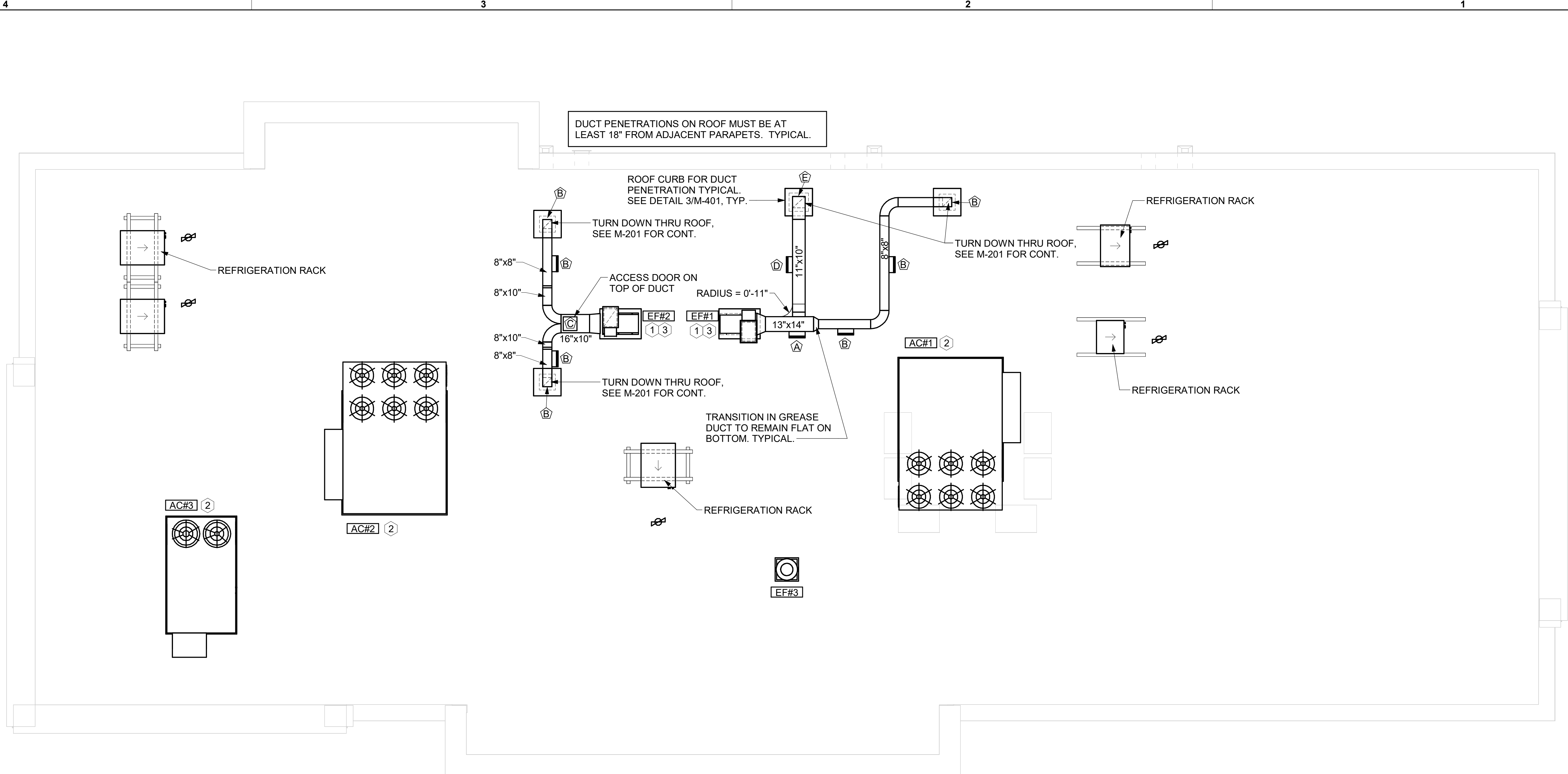


2 GOOSENECK PENETRATION DETAIL
1/4" = 1'-0"

REFRIGERATION EQUIPMENT SCHEDULE

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	A1	LOW	31	--	--	12.5	35	COPPER	270
ICE MAKER CONDENSER	380CD	FOLLET	HCD1810	30.0	38.5	25.75	R 404A	A1	LOW	31	--	--	14.5	35	COPPER	305
ICE MAKER CONDENSER	380CD	FOLLET	HCD1810	30.0	38.5	25.75	R 404A	A1	LOW	31	--	--	14.5	35	COPPER	305
FREEZER CONDENSER	410A	THERMO-KOOL	M0H031L63	37.75	28.25	19.75	R 404A	A1	LOW	31	786	24	14.0	40	COPPER	223
COOLER CONDENSER	449A	THERMO-KOOL	M0H010X63	23.75	28.25	17.25	R 404A	A1	LOW	31	813	25	5.5	40	COPPER	138

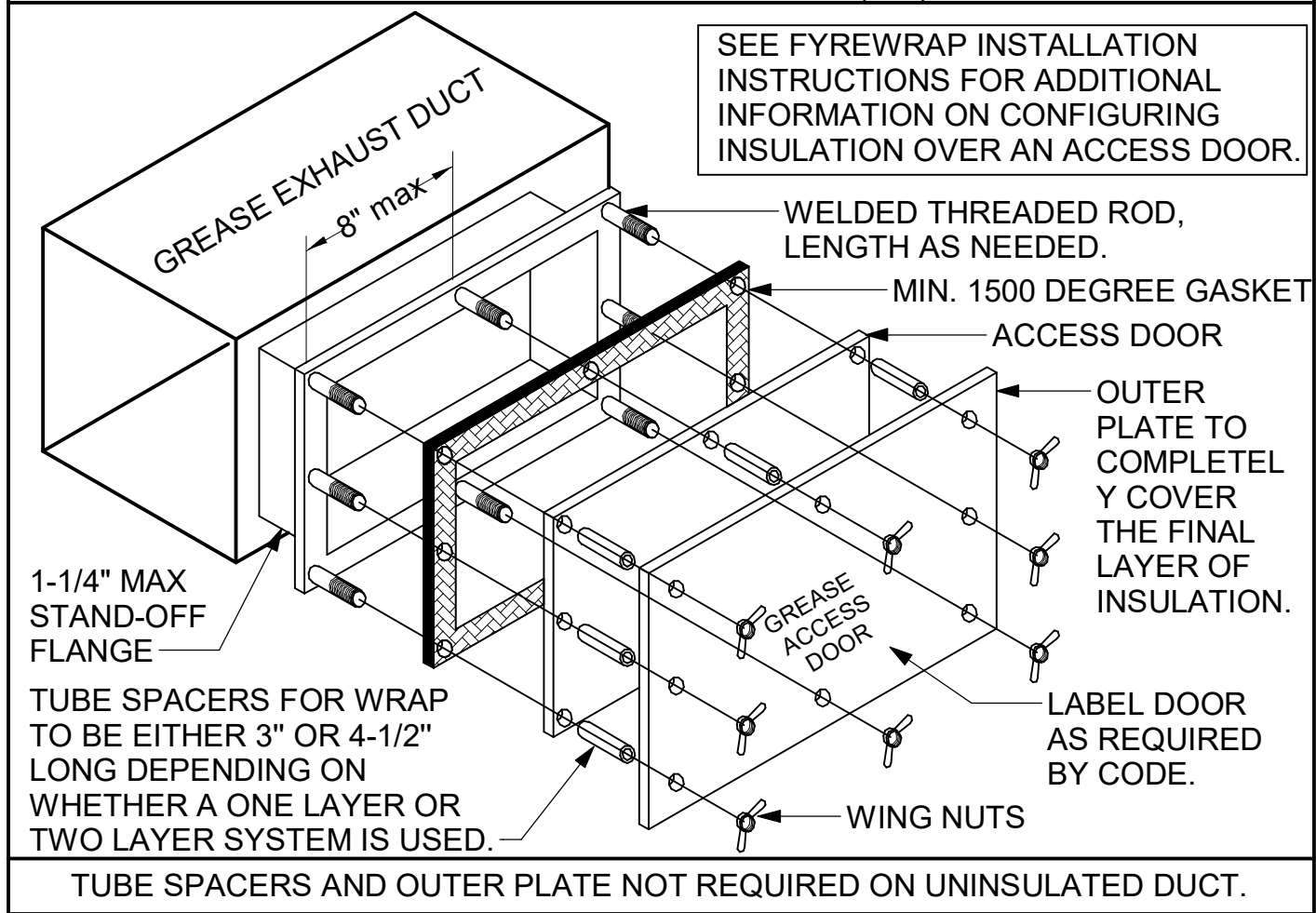
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3D-LS-05285-M-601-MECHANICAL REFRIGERATION PLAN



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

GREASE ACCESS DOOR SCHEDULE			
MARK	OPENING SIZE	DOOR SIZE	REMARKS
A	12H X 14W	14H X 16W	1
B	6H X 14W	8H X 16W	1
C	12H X 12W	14H X 14W	1
D	8H X 14W	10H X 16W	1
E	9H X 14W	11H 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.



SHEET NOTES

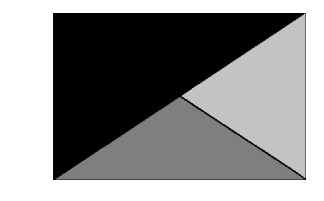
- ALL DUCTWORK AND UNFINISHED METAL ON ROOF EXCEPT STAINLESS SHALL BE PREPARED WITH TWO COATS OF SHERWIN WILLIAMS B66-200 SERIES DTM WHITE ACRYLIC SEMI-GLOSS INDUSTRIAL MAINTENANCE COATING. DEGREASE AND PRIME BARE METAL SURFACE WITH ONE COAT OF SHERWIN WILLIAMS DTM ACRYLIC PRIMER PRIOR TO PAINTING.
- 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.
- MECHANICAL CONTRACTOR TO VERIFY THAT GREASE EXHAUST DUCT AT ROOF PENETRATION IS 18" FROM ROOF PARAPETS.

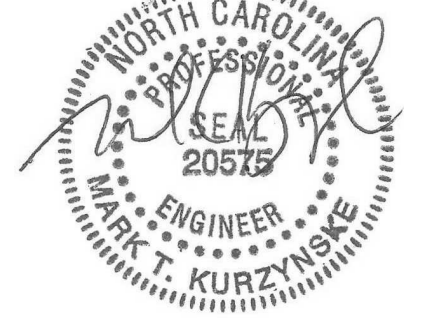


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NO. F-0823, EXPIRES 12/31/23



02/17/23

CHICK-FIL-A
University City
8428 University City Blvd
Charlotte, NC 28213

FSR#05285

BUILDING TYPE / SIZE: P13 LS SML
RELEASE: 22.02
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REVISION SCHEDULE

NO.	DATE	DESCRIPTION

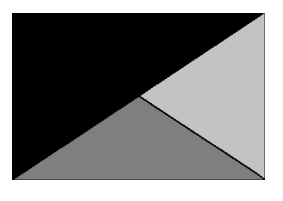
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SHEET MECHANICAL ROOF PLAN

SHEET NUMBER
M-250



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



02/17/23

CHICK-FIL-A
University City
8428 University City Blvd
Charlotte, NC 28213

FSR#05285
BUILDING TYPE / SIZE: P13 LS SML
RELEASE: 2202
PRINTED FOR PERMIT

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION
1	05/23/2022	Construction Set

CONSULTANT PROJECT # 23013.EH.S
DATE 02/17/2023
DRAWN BY BLM

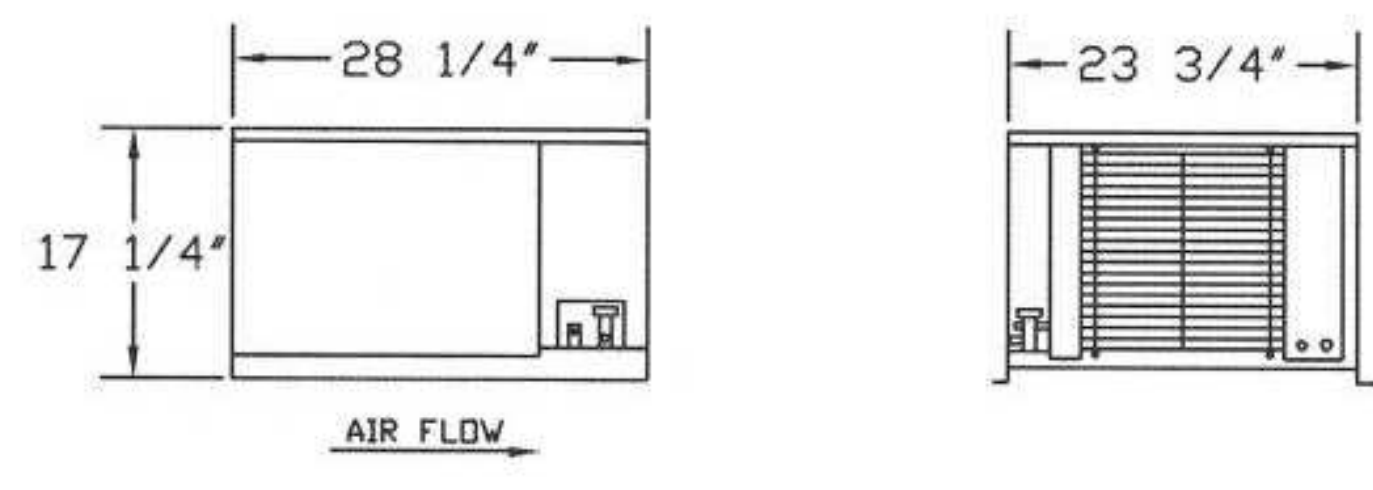
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SHEET MECHANICAL REFRIGERATION DETAILS

SHEET NUMBER **M-602**

CHICK-FIL-A

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

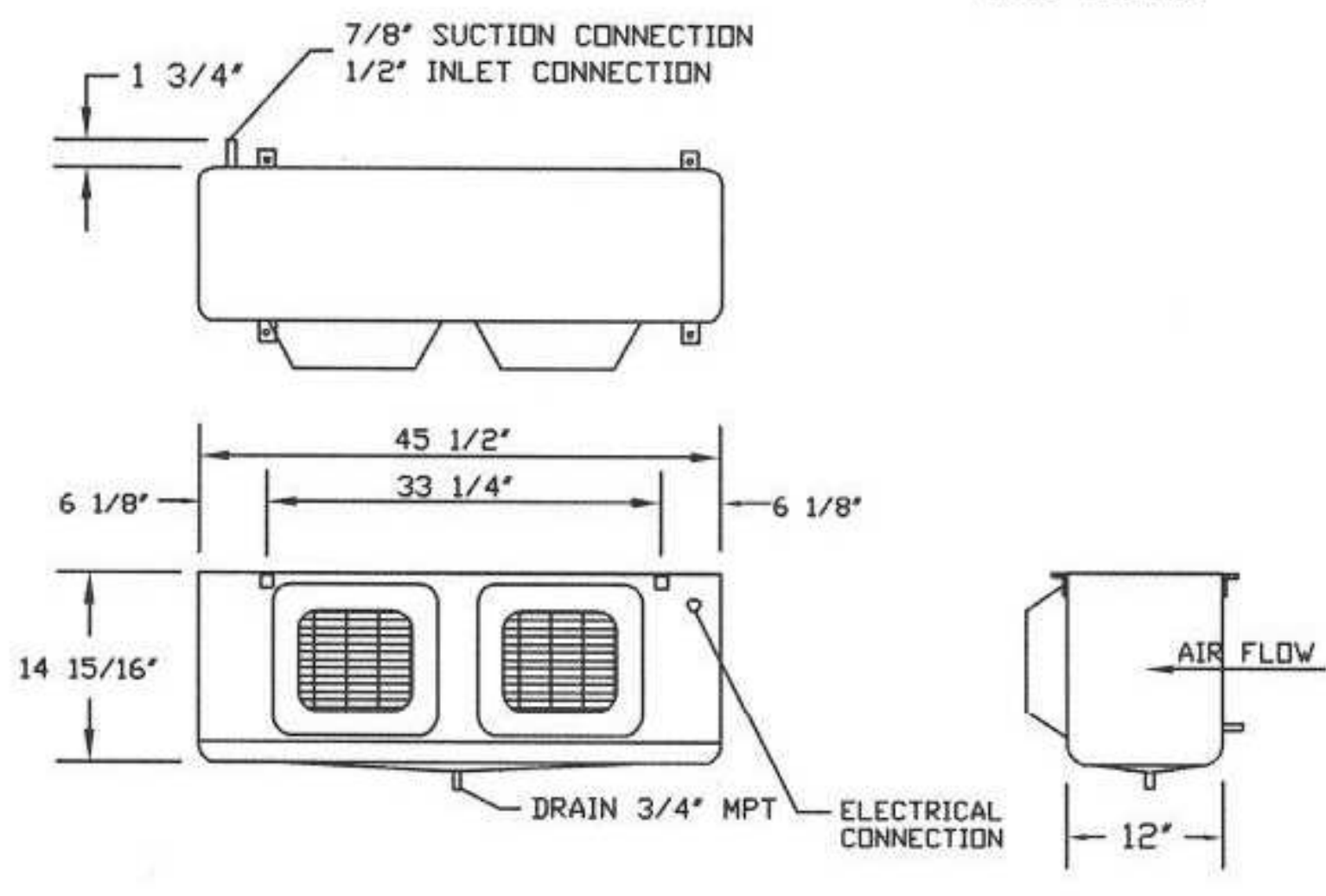


SPECIFICATIONS								
MODEL #	H.P.	ELECTRICAL DATA			CAPACITY @ 35° WALK-IN TEMP. (90° AMBIENT)	LINE SIZES		APPROX. NET WEIGHT
		COMPRESSOR AMPS	MCA	MOPD		LIQUID	SUCTION	
MOH010X63	1	5.75	15	15	9,300 BTU	3/8"	5/8"	138 LBS.
RECEIVER CAPACITY @ 90% FULL: 5.5#								

EVAPORATOR COIL 208-230/60/1Ø

SPECIFICATIONS								
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

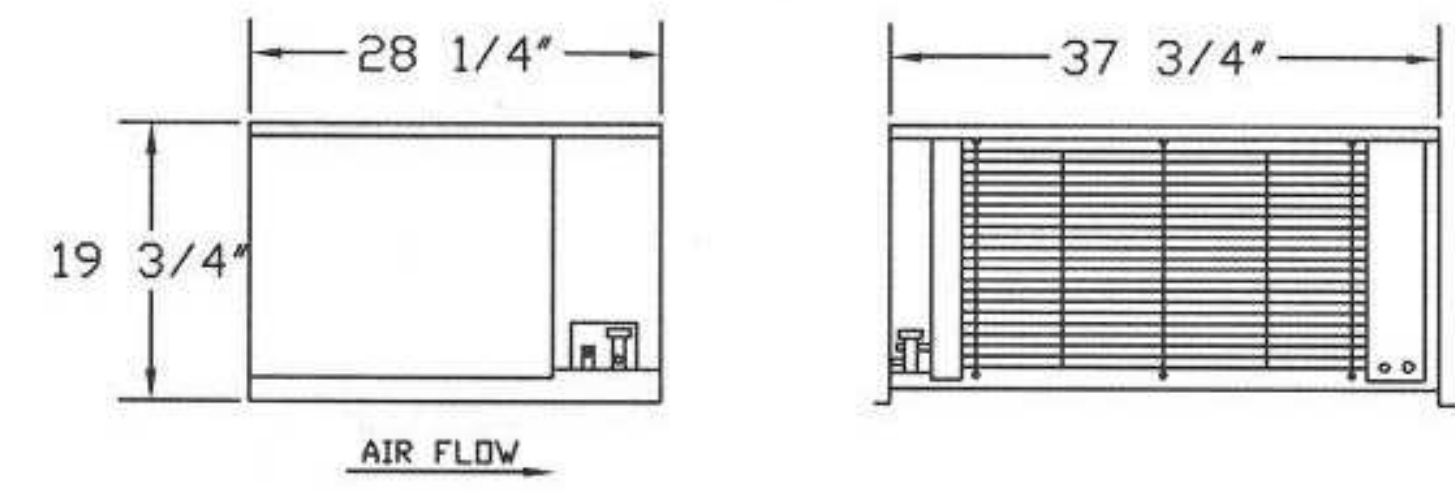


/mh Rev.9-12-11

1 WALK-IN COOLER MECHANICAL EQUIPMENT DETAIL NTS

CHICK-FIL-A

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

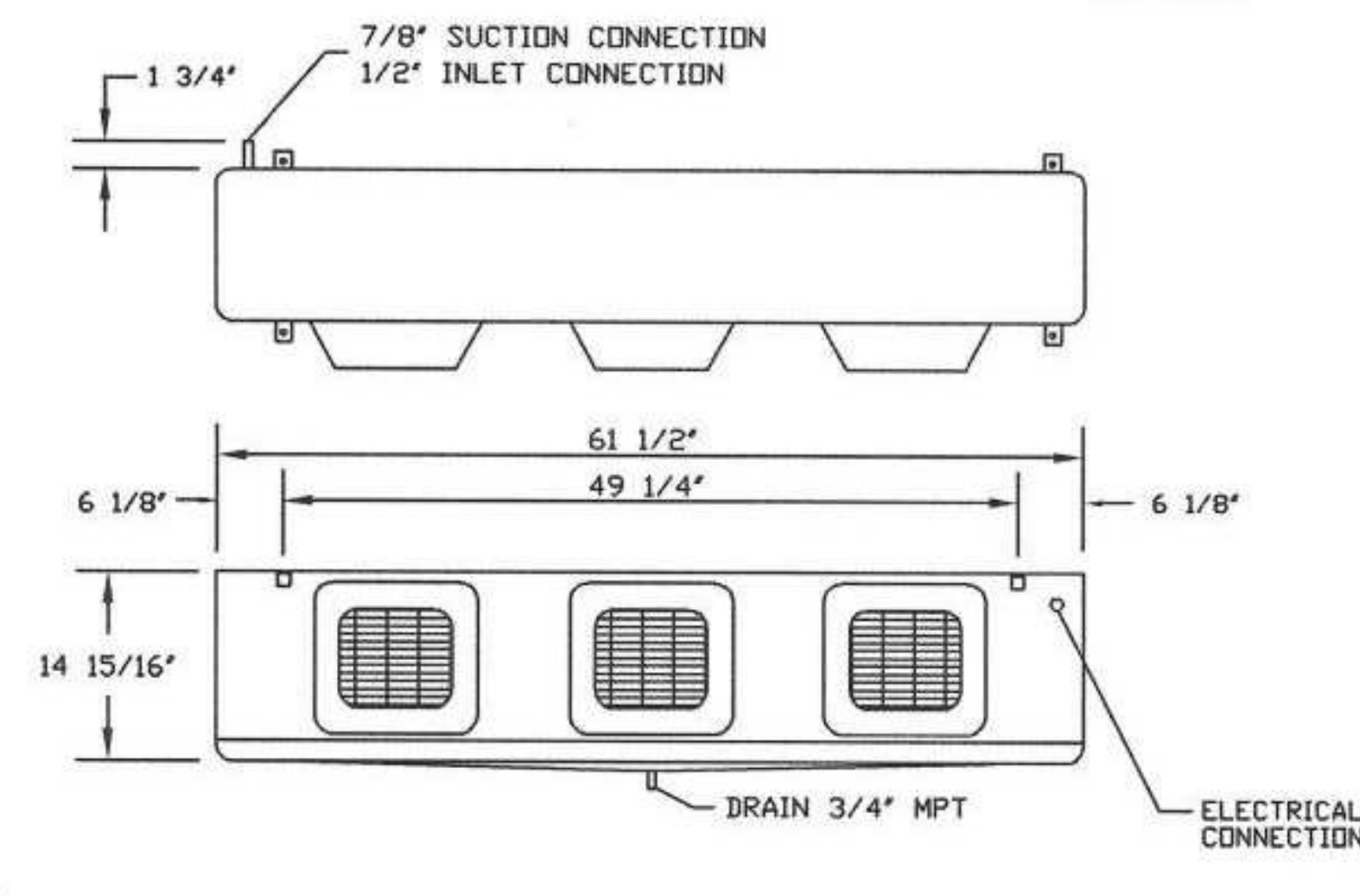


SPECIFICATIONS								
MODEL #	H.P.	ELECTRICAL DATA			CAPACITY @ -10° WALK-IN TEMP. (90° AMBIENT)	LINE SIZES		APPROX. NET WEIGHT
		COMPRESSOR AMPS	MCA	MOPD		LIQUID	SUCTION	
MOH031L63	3	14.38	28.8	30	11,540 BTU	1/2"	7/8"	223 LBS.
RECEIVER CAPACITY @ 90% FULL: 14.0#								

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



/mh Rev.9-14-11

2 WALK-IN FREEZER MECHANICAL EQUIPMENT DETAIL NTS

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3D-LS-05285-M-602-MECHANICAL REFRIGERATION DETAILS

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-94, 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 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, CONVEYANCE 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/KRAFF 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 OF 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 SUPPLY & 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 ENVIRONMENTAL 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 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.

PART III - EXECUTION

3.01 SCOPE

- A. FURNISH AND INSTALL SYSTEM IN ACCORDANCE WITH REFERENCED STANDARDS, APPLICABLE CODES, MANUFACTURER'S RECOMMENDATIONS AND AS INDICATED ON DRAWINGS.
- B. CONTRACTOR SHALL INSTRUCT THE OWNER'S REPRESENTATIVE IN ALL MATTERS PERTAINING TO THE PROPER MAINTENANCE OF EQUIPMENT FURNISHED UNDER THIS CONTRACT THROUGH DEMONSTRATION AND EXPLANATION OF OPERATING & MAINTENANCE MANUALS.
- C. CONTRACTOR SHALL PROVIDE A "SAMPLE MAINTENANCE PROPOSAL" TO THE OWNER'S REPRESENTATIVE IN ALL MATTERS PERTAINING TO THE PROPER MAINTENANCE OF EQUIPMENT FURNISHED UNDER THIS CONTRACT.
- D. CONTRACTOR SHALL COMPLETE A/C EQUIPMENT STARTUP DOCUMENTATION PROVIDED BY OWNER AND/OR MANUFACTURER. THIS SHALL INCLUDE RE-TORQUE OF ALL FIELD AND FACTORY HIGH VOLTAGE CONNECTIONS.

3.02 LEED PROJECTS

- A. CONTRACTOR SHALL COMPLETE RECEIPT INSPECTION CHECKLISTS PROVIDED IN THE COMMISSIONING PLAN WITHIN 5 DAYS OF RECEIVING EQUIPMENT ON SITE.
- B. CONTRACTOR SHALL COMPLETE PRE-FUNCTIONAL CHECKLISTS PROVIDED IN THE COMMISSIONING PLAN. CHECKLISTS SHALL BE RETURNED AT LEAST 5 DAYS PRIOR TO SCHEDULING FUNCTIONAL PERFORMANCE TESTING.
- C. CONTRACTOR SHALL PROVIDE A TECHNICIAN TO ASSIST THE THIRD PARTY COMMISSIONING AUTHORITY WITH FUNCTIONAL TESTING. FUNCTIONAL TESTING SHALL OCCUR AFTER ALL CONTROLS HAVE BEEN INSTALLED AND VERIFIED AND AFTER TEST AND BALANCE IS COMPLETE. THE FUNCTIONAL PERFORMANCE TEST PROCEDURES CAN BE FOUND IN THE COMMISSIONING PLAN.
- D. IF THE TOTAL TIME REQUIRED TO CORRECT PROBLEMS DURING TESTING IS GREATER THAN FORTY-FIVE (45) MINUTES (UNLESS EXTENUATING CIRCUMSTANCES EXIST), THE TEST SHALL BE CONSIDERED FAILED AND MUST BE REPEATED IN ITS ENTIRETY.
- E. RE-TESTING: DURING THE COURSE OF THE RETEST, IF AT ANY POINT A MAJOR DEFICIENCY IS DISCOVERED, THE TEST WILL BE STOPPED. REPEAT TESTS UNTIL ACCEPTABLE RESULTS ARE ACHIEVED. IF MORE THAN TWO FUNCTIONAL PERFORMANCE TESTS (ONE INITIAL TEST AND ONE RETEST) FOR ANY TYPE OF EQUIPMENT DUE TO ISSUES THAT THE CONTRACTOR HAD DIRECT OR INDIRECT CONTROL OVER ARE REQUIRED, THE COSTS FOR THE CXA TO WITNESS RETESTING OF SIMILAR TYPES OF EQUIPMENT UNTIL SATISFACTORY RESULTS ARE OBTAINED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

3.03 TEST & BALANCE

- A. OWNER SHALL TEST AND BALANCE MECHANICAL SYSTEM IN ACCORDANCE WITH NEBB, NBC OR AABC STANDARDS TO ASSURE CONFORMANCE WITH DESIGN. G.C. WILL MAKE MECHANICAL CONTRACTOR AVAILABLE DURING TEST AND BALANCE TO ASSIST TESTING AGENCY AND TO MAKE CORRECTIONS IMMEDIATELY NECESSARY. CONTRACTOR SHALL CORRECT ITEMS ON WRITTEN TEST AND BALANCE REPORT.
- B. ALL EQUIPMENT TO BE BALANCED MUST HAVE GONE THRU SUCCESSFUL START-UP PROCEDURE BY THE MECHANICAL CONTRACTOR (MC) PRIOR TO TAB VISIT.
- C. THE FLOOR OF THE RESTAURANT SHALL BE CLEARED OF DEBRIS, STAGED CONSTRUCTION MATERIALS, EQUIPMENT, ETC. WHICH MAY, IN THE OPINION OF THE TAB TECHNICIAN, OBSTRUCT ACCESS TO AIR DISTRIBUTION COMPONENTS IN AND ABOVE THE CEILING.
- D. EQUIPMENT ACCESS PANELS, DUCT AIR DEVICES SUCH AS BALANCING DAMPERS AND ACTUATORS SHALL BE ACCESSIBLE AND CLEAR OF PIPING, CONDUIT, FRAMING, SUPPORTS ETC...
- E. PROVIDE AN 8 FT PORTABLE A-FRAME STYLE LADDER DEDICATED FOR THE TAB TECHNICIAN'S USE DURING THE ENTIRE TAB EFFORT DURATION.
- 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
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
winter dry bulb: 25
summer dry bulb: 92

Interior design conditions
winter dry bulb: 68
summer dry bulb: 75
relative humidity: 60%

Building heating load: 412,917 BTUH

Building cooling load: 593,908 BTUH

Mechanical Spacing Conditioning System

Unitary description of unit:	(3) DX Cooling/Gas-Fired Heating Packaged Rooftop Units
heating efficiency:	81% - Gas
cooling efficiency:	ACR1: 10.6 EER ACR2: 12.0 EER ACR3: 10.8 EER
size category of unit:	ACR1: 25 ton ACR2: 17.5 ton ACR3: 12.5 ton

Boiler
Size category. If oversized, state reason.: NA

Chiller
Size category. If oversized, state reason.: NA

List equipment efficiencies: NA

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)
SALES (SERVING/DRIVE THRU)	7.5	10	0.12	655	154
DINING (CAFETERIA, FAST FOOD)	7.5	110	0.18	1102	1023
OFFICE	5	1	0.06	57	9
STORAGE	--	--	0.12	598	72
TEAM MEMBER (RECEPTION)	5	7	0.06	220	48
KITCHEN	--	--	--	1322	0

ZONE 1 - TEAM MEMBER (RECEPTION) + STORAGE + OFFICE + KITCHEN = 129 CFM.
129 CFM (Vbz) / 0.8 = 161 CFM (Voz)
AC#1 PROVIDES 1,450 CFM OUTSIDE AIR TO ZONE 1.

ZONE 2 - SALES (SERVING AREA) = 154 CFM.
154 CFM (Vbz) / 0.8 = 193 CFM (Voz)
AC#2 PROVIDES 1,575 CFM OUTSIDE AIR TO ZONE 2.

ZONE 3 - DINING = 1,023 CFM.
1,023 CFM (Vbz) / 0.8 = 1,279 CFM (Voz)
AC#3 PROVIDES 1,470 CFM OUTSIDE AIR TO ZONE 3.

KITCHEN IS 1,322 SQUARE FEET. AT 0.70 CFM EXHAUST REQUIRED PER SQ. FT. KITCHEN IS REQUIRED TO EXHAUST 925 CFM. KITCHEN EXHAUSTS 3,315 CFM.

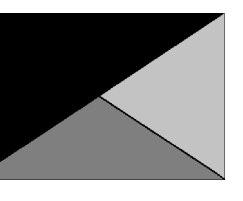
CALCULATIONS ARE BASED ON TABLE 403.3.3.1, 2018 NORTH CAROLINA MECHANICAL CODE.
(FOR OA RATE: Vbz = RpPz + RaAz || FOR ZONE OA RATE: Voz = Vbz/0.8)

NATIONAL ACCOUNTS

- 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.
- LOREN COOK FAN AND CURB PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE FAN/CURB PACKAGE DIRECTLY FROM TOM BARRROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. FANS AND CURBS NOT PURCHASED THRU TOM BARRROW COMPANY WILL NOT BE ACCEPTED.
- PRICE AIR DEVICES - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE AIR DEVICES DIRECTLY FROM TOM BARRROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. AIR DEVICES NOT PURCHASED THRU TOM BARRROW COMPANY WILL NOT BE ACCEPTED.
- AIR DOORS - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE AIR DOORS DIRECTLY FROM TOM BARRROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. AIR DOORS NOT PURCHASED THRU TOM BARRROW COMPANY WILL NOT BE ACCEPTED.
- 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.
- 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.
- ROYAL METAL PRODUCTS START COLLARS - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE START COLLARS DIRECTLY FROM TOM BARRROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. START COLLARS NOT PURCHASED THRU TOM BARRROW COMPANY WILL NOT BE ACCEPTED.
- SCHWANK INFRARED HEATER PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE HEATER PACKAGE DIRECTLY FROM TOM BARRROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. HEATERS NOT PURCHASED THRU TOM BARRROW COMPANY WILL NOT BE ACCEPTED.
- BROMIC ELECTRIC HEATER - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE HEATER DIRECTLY FROM BROMIC HEATING USA. CONTACT MR. BLAKE RUSSIE AT 858-381-4850 FOR PRICING AND AVAILABILITY. HEATERS NOT PURCHASED THRU BROMIC HEATING USA 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



02/17/23

CHICK-FIL-A
University City
8428 University City Blvd
Charlotte, NC 28213

FSR#05285

BUILDING TYPE / SIZE: P13 LS SML
RELEASE: 2202
PRINTED FOR PERMIT

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 23013.EH.S
DATE 02/17/2023
DRAWN BY BLM

MECHANICAL SPECIFICATIONS

SHEET NUMBER

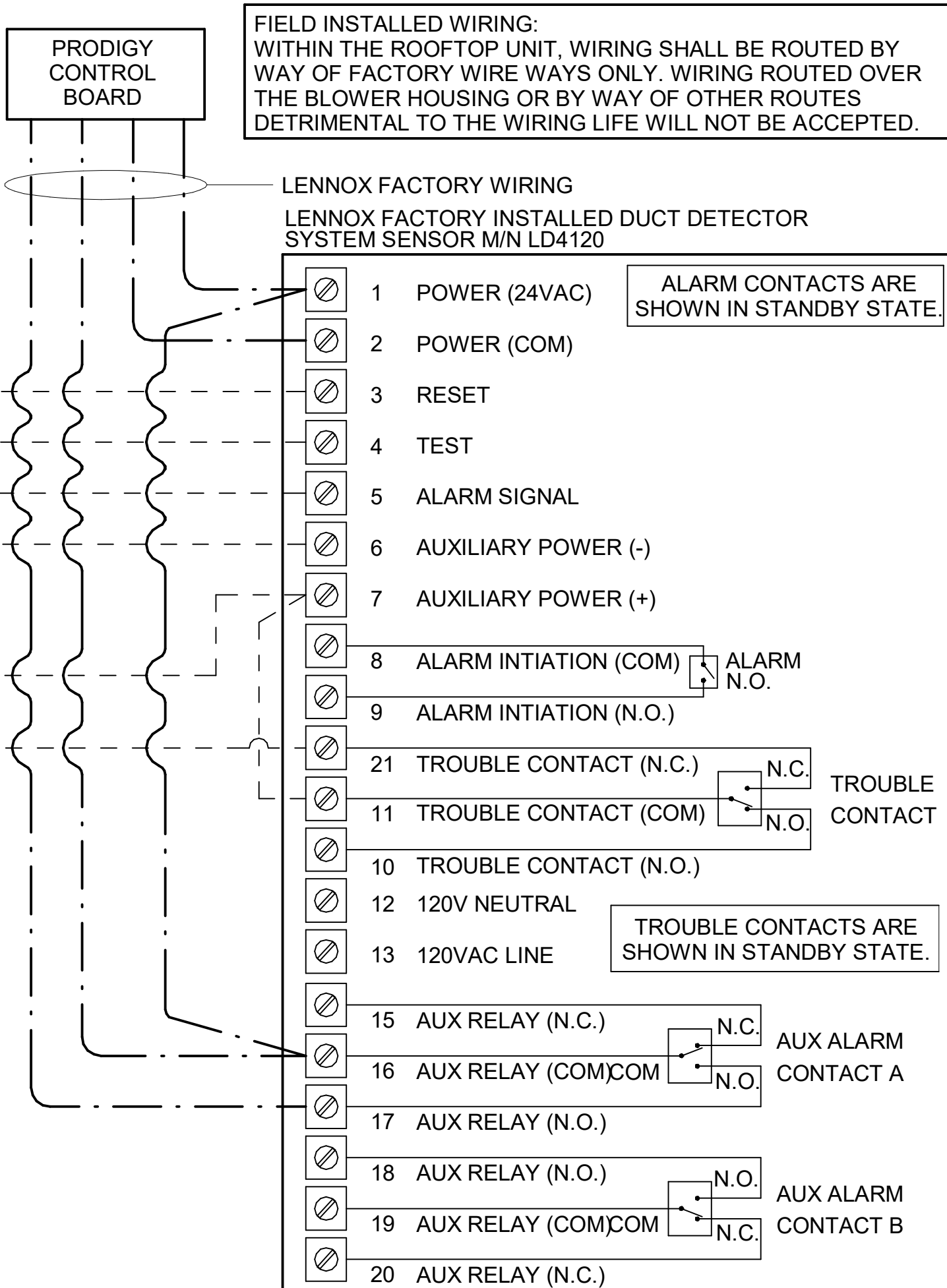
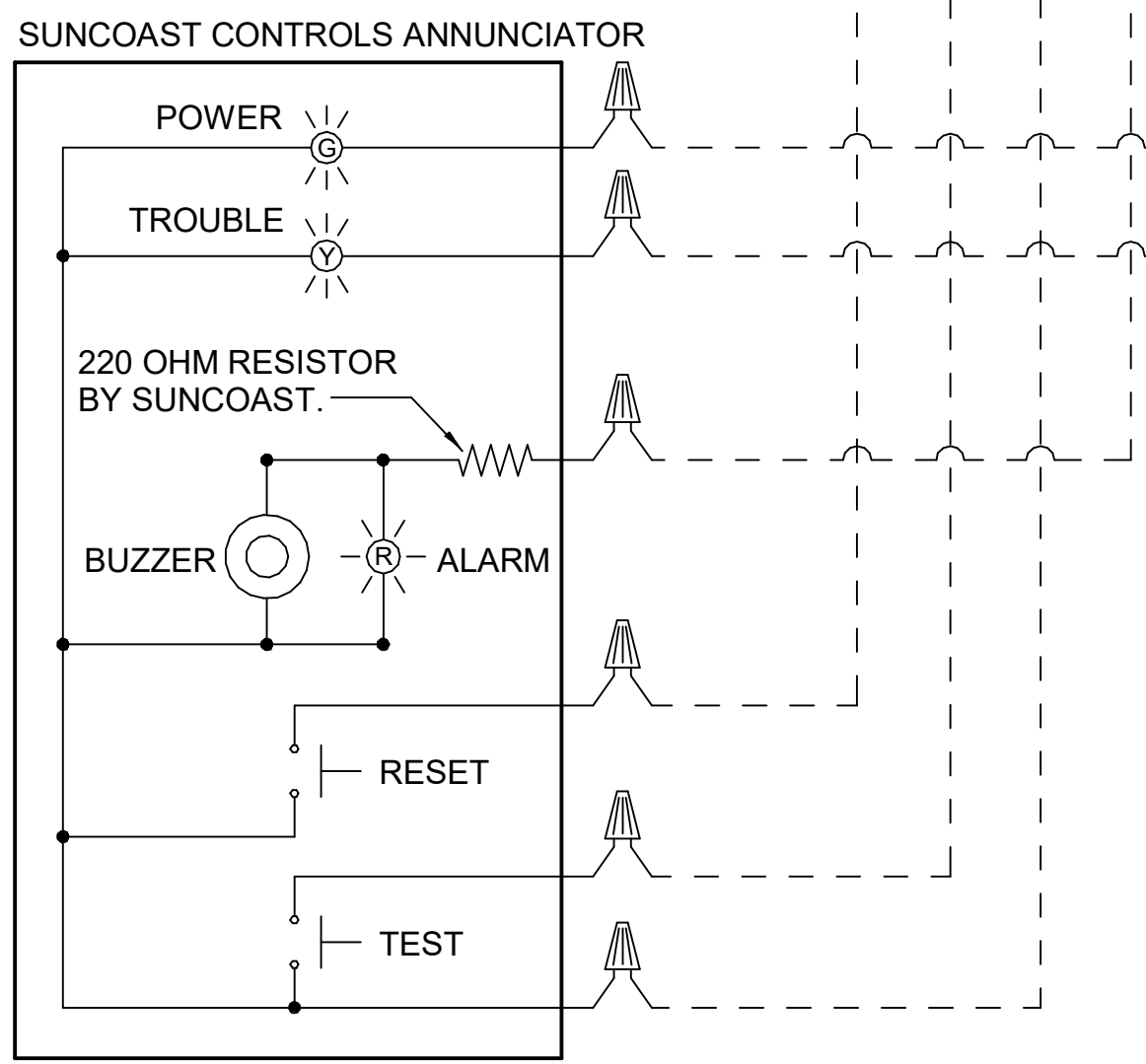
M-901

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3D-LS-05285-M-901-MECHANICAL SPECIFICATIONS

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 M201.

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 WIRE WAYS ONLY. WIRING ROUTED OVER THE BLOWER HOUSING OR BY WAY OF OTHER ROUTES DETRIMENTAL TO THE WIRING LIFE WILL NOT BE ACCEPTED.

ALARM CONTACTS ARE SHOWN IN STANDBY STATE.

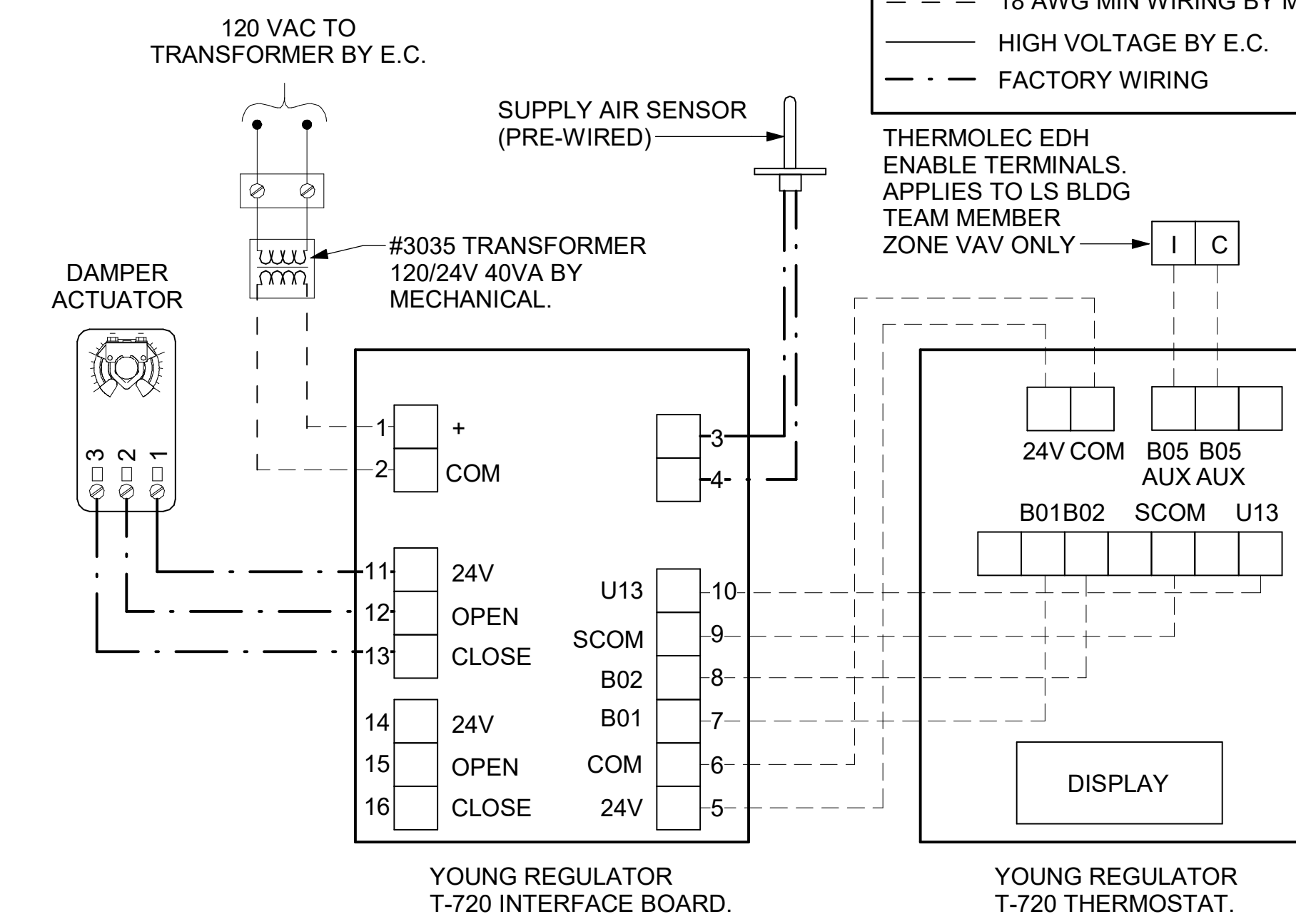
TROUBLE CONTACTS ARE SHOWN IN STANDBY STATE.

1 SMOKE DETECTOR AND ANNUNCIATOR WIRING DIAGRAM
NOT TO SCALE

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.

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

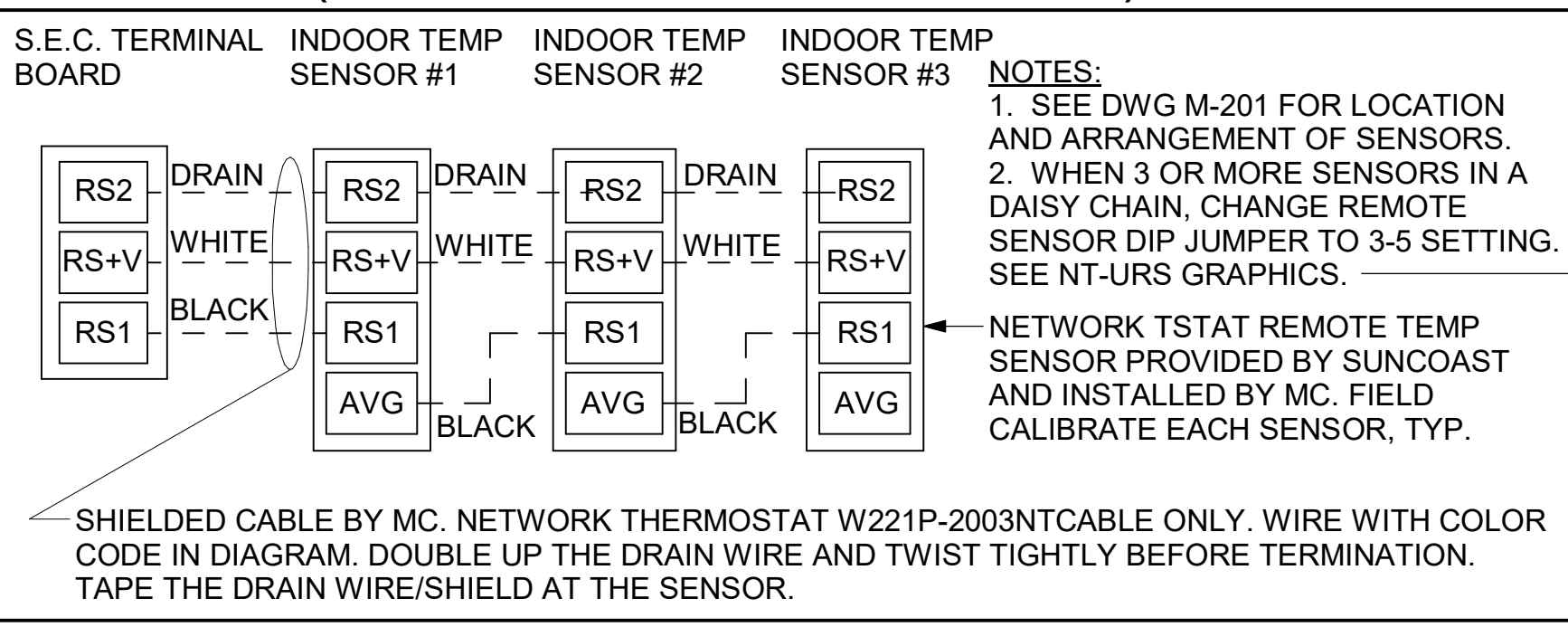
NOTES
 1. SEE DWG M-201 FOR COMPONENT MODEL NUMBERS AND ORDERING INFORMATION.
 2. 120V POWER FOR TRANSFORMER TO BE NON-SWITCHED AND LIVE 24 HOURS EACH DAY.
 3. PROVIDE ALL NECESSARY WIRING AND COMPONENTS TO MAKE CONTROL AND POWER CONNECTIONS TO TRANSFORMER, ZONE DAMPER, AND THERMOSTAT PER MANUFACTURER'S IOM.
 4. 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
 1. WHEN THE SUPPLY AIR TEMPERATURE IS LESS THAN 72F THE DAMPER WILL MODULATE ON A RISE IN SPACE TEMPERATURE ABOVE THE SETPOINT.
 2. WHEN THE SUPPLY AIR TEMPERATURE IS GREATER THAN 71F THE DAMPER WILL MODULATE ON A FALL IN SPACE TEMPERATURE BELOW THE SETPOINT.
 3. WHEN SPACE TEMPERATURE FALLS BELOW 66F (ADJ), THE THERMOSTAT SHALL SEND AN ENABLE SIGNAL TO THE EDH. THE EDH SHALL THEN MODULATE CAPACITY TO MAINTAIN AN 80F (ADJ) DISCHARGE AIR SETPOINT. (LS BUILDING TEAM MEMBER ZONE ONLY)

3 VAV DAMPER AND TSTAT - ALL
NOT TO SCALE

AC AVERAGING SENSORS (WHERE SHOWN ON PLANS)



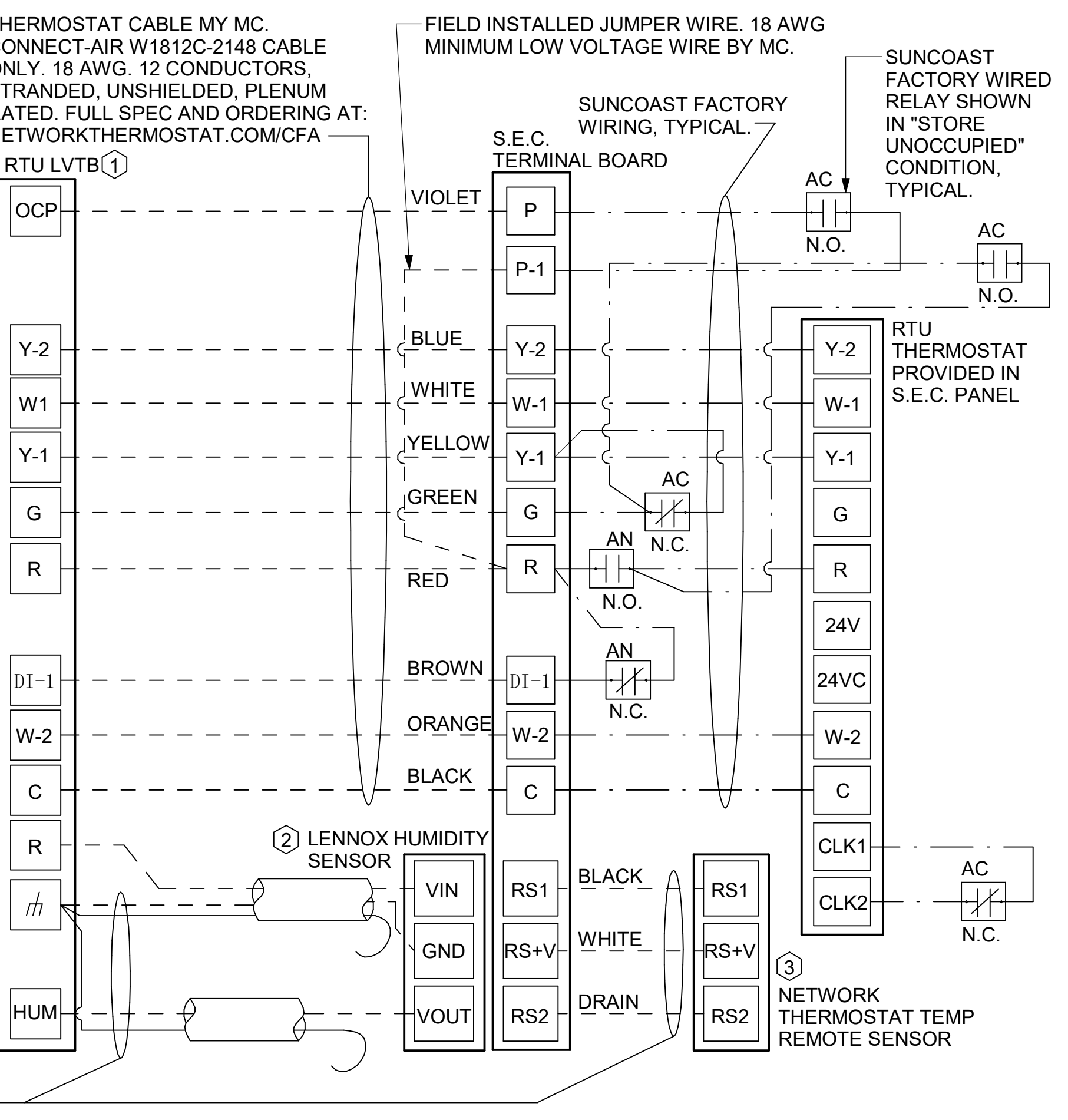
NOTES:
 1. SEE DWG M-201 FOR LOCATION AND ARRANGEMENT OF SENSORS.
 2. WHEN 3 OR MORE SENSORS IN A DAISY CHAIN, CHANGE REMOTE SENSOR DIP JUMPER TO 3-5 SETTING. SEE NT-URS GRAPHICS.
 3. NETWORK TSTAT REMOTE TEMP SENSOR PROVIDED BY SUNCOAST AND INSTALLED BY MC. FIELD CALIBRATE EACH SENSOR, TYP.

SHIELDED CABLE BY MC. NETWORK THERMOSTAT W221P-2003NTCABLE ONLY. WIRE WITH COLOR CODE IN DIAGRAM. DOUBLE UP THE DRAIN WIRE AND TWIST TIGHTLY BEFORE TERMINATION. TAPE THE DRAIN WIRE/SHIELD AT THE SENSOR.

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

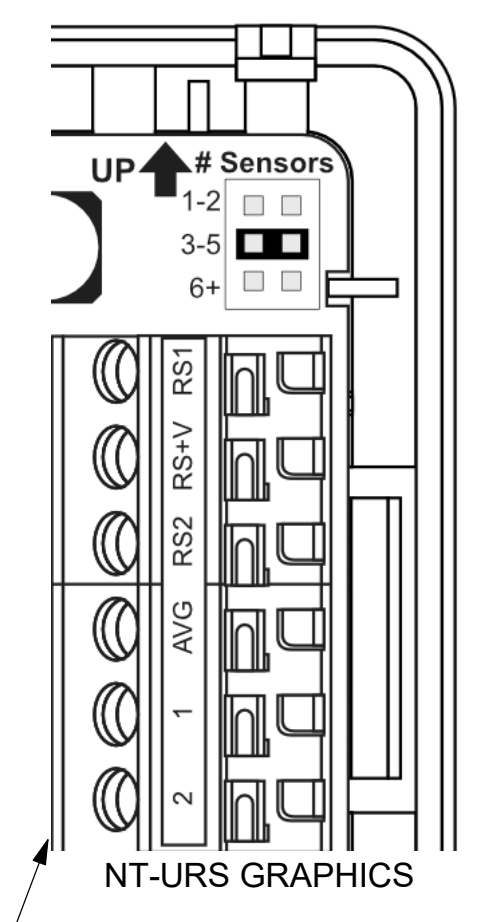
KEYED NOTES:
 1. LOW VOLTAGE WIRING TO RTU TO BE ROUTED TO UNIT THRU FACTORY WIREWAY.
 2. HUMIDITROL UNITS ONLY: WIRING TO HUMIDITY SENSOR TO BE MADE WITH TWO SEPARATE RUNS OF SHIELDED TWISTED PAIR. TERMINATE SHIELD WIRES AT TB-1, LEAVE OPEN AT SENSOR.
 3. NETWORK TSTAT REMOTE TEMP SENSOR PROVIDED BY 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-2003NTCABLE 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.

2 RTU WIRING DIAGRAM
NOT TO SCALE



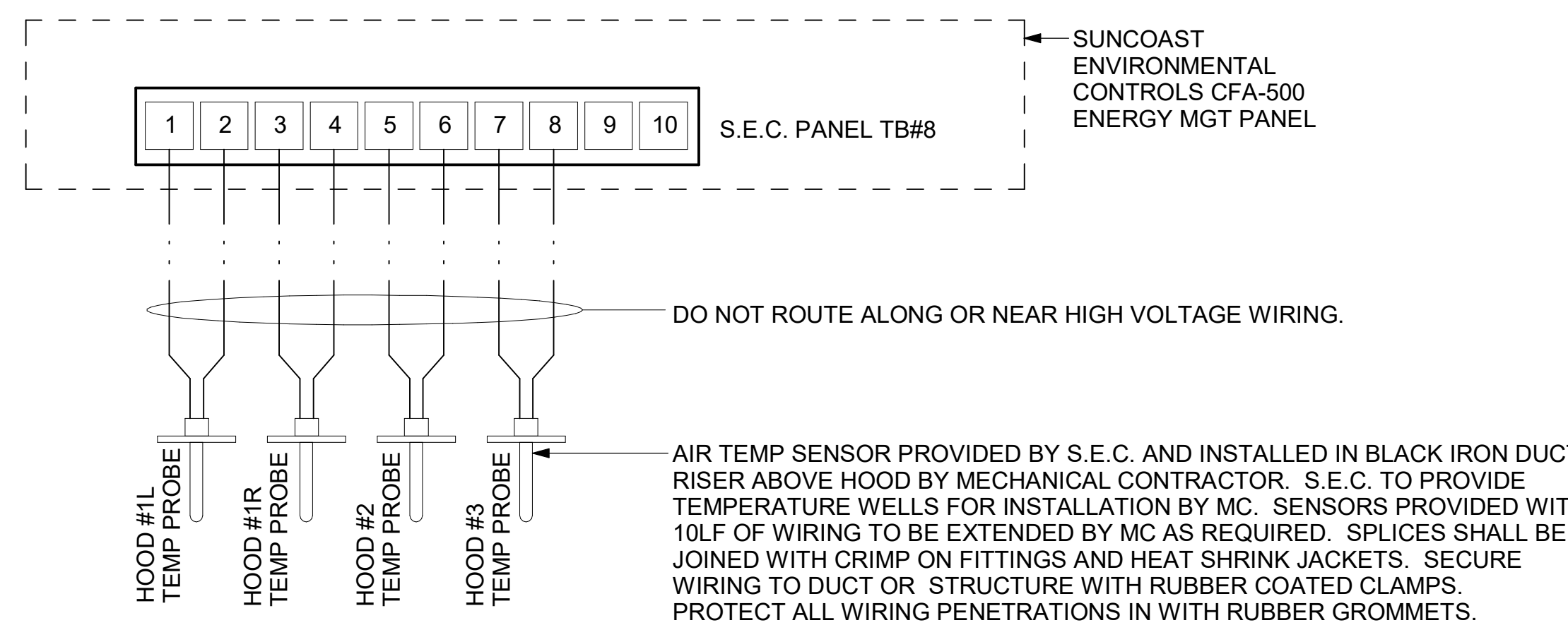
LENNOX PRODIGY 2.0 OR CORE UNIT CONTROLLER SETTINGS:
 1. FOR ALL RTU'S EXCEPT AC#1, ELIMINATE THE MORNING WARMUP/OSA DAMPER DELAY. THE MENU PATH IS:
 • MAIN MENU > SETTINGS > RTU OPTIONS > EDIT PARAMETERS
 FOR GAS HEAT UNITS (LGT):
 • CHANGE PARAMETER #65 SETTING TO 1
 FOR ELECTRIC HEAT UNITS (LCT):
 • CHANGE PARAMETER #58 TO 1
 2. 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%
 3. 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:
 1. INSTALL FRESH AIR HEATING KIT WIRING HARNESS AS RECOMMENDED BY LENNOX.
 2. 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.
 3. 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.
 4. 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.
 5. 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.

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.

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



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



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 30349-2998

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



02/17/23

CHICK-FIL-A
 University City
 8428 University City Blvd
 Charlotte, NC 28213

FSR#05285
 BUILDING TYPE / SIZE: P13 LS SML
 RELEASE: 22.02

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 REVISION SCHEDULE
 NO. DATE DESCRIPTION

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CONSULTANT PROJECT # 23013.EH.S
 DATE 02/17/2023
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 SHEET HVAC CONTROLS

M-501