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GENERAL MECHANICAL SYMBOLS

	REVISION NUMBER - SHOWN ON PLANS
	POINT WHERE NEW CONNECTS TO EXISTING
	NUMBER OF DETAIL ON SHEET
	NUMBER OF SHEET WHERE DETAIL APPEARS
	KEYNOTE
	CONTINUATION SYMBOL
	ROOM NAME AND NUMBER
	ITEM TO BE DEMOLISHED
	AREA NOT IN CONTRACT
	PIPE SIZE TAG (DIAMETER)
	ABOVE GROUND PIPING
	PIPE SLOPE TAG
	BELOW GROUND PIPING
	PIPE INVERT ELEVATION TAG
	EXISTING PIPE TAG
	PIPING BEING DEMOLISHED

ABBREVIATIONS

Ø	ROUND	LVR	LOUVER
ABV	ABOVE	LWT	LEAVING WATER TEMPERATURE
AC	AIR CONDITIONING	M/A	MIXED AIR
AD	AREA DRAIN	MAX	MAXIMUM
ADD	ADDENDUM	MBH	ONE THOUSAND BTU PER HOUR
AFF	ABOVE FINISHED FLOOR	MGF	ONE THOUSAND CUBIC FEET
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MD	MOTORIZED DAMPER
ALT	ALTERNATE	MECH	MECHANICAL
AP	ACCESS PANEL	MFR	MANUFACTURER
ARCH	ARCHITECT/ARCHITECTURAL	MIN	MINIMUM
BFF	BELOW FINISHED FLOOR	MISC	MISCELLANEOUS
BLW	BELOW	MTR	MOTOR
BTU	BRITISH THERMAL UNITS	MUA	MAKE-UP/AIR
BTUH	BRITISH THERMAL UNITS PER HOUR	NC	NOISE CRITERIA
CAP	CAPACITY	NC	NORMALLY CLOSED
CB	CATCH BASIN	NIC	NOT IN CONTRACT
CFM	CUBIC FEET PER MINUTE	NO	NUMBER
CLG	CEILING	NO	NORMALLY OPEN
CO	CLEAN OUT	NTS	NOT TO SCALE
CW	COLD WATER	O	OXYGEN
D	DEGREE	O/A	OUTSIDE AIR
DB	DRY BULB	ORD	OVERFLOW ROOF DRAIN
DIA	DIAMETER	PD	PRESSURE DROP
DN	DOWN	PIV	POST INDICATOR VALVE
DW	DISTILLED WATER	PLBG	PLUMBING
EA	EACH	PRESS	PRESSURE
EAT	ENTERING AIR TEMPERATURE	PRV	PRESSURE REDUCING VALVE
ELEC	ELECTRICAL	PSI	POUNDS PER SQUARE INCH
EQUIP	EQUIPMENT	PSIG	POUNDS PER SQUARE INCH GAUGE
EWC	ELECTRIC WATER COOLER	PWR	POWER
EWT	ENTERING WATER TEMPERATURE	R	DUCT RISER
E/A	EXHAUST AIR	R/A	RETURN AIR
EXIST	EXISTING	RCP	RADIANT CEILING PANEL
F	DEGREES FAHRENHEIT	RD	ROOF DRAIN
FCO	FLOOR CLEAN OUT	REC	RECESSED
FD	FLOOR DRAIN	RED	REDUCER
FDC	FIRE DEPARTMENT CONNECTION	RH	RELATIVE HUMIDITY
FL	FLOOR	RL/A	RELIEF AIR
FO	FUEL OIL	RM	ROOM
FOV	FUEL OIL VENT	RPM	REVOLUTIONS PER MINUTE
FOR	FUEL OIL RETURN	RW	RAIN WATER
FOS	FUEL OIL SUPPLY	SF	SQUARE FOOT
FPM	FEET PER MINUTE	S/A	SUPPLY AIR
FS	FLOOR SINK	SAN	SANITARY
FT	FOOT/FEET	SF	SQUARE FOOT
FTR	FIN TUBE RADIATION	SD	SMOKE DAMPER
GAL	GALLON	SM	SURFACE MOUNT
GF	GAS-FIRED	SP	STANDPIPE
GC	GENERAL CONTRACTOR	SP	STATIC PRESSURE
GPM	GALLONS PER MINUTE	STM	STEAM
GW	GREASE WASTE	T	THERMOSTAT
HB	HOSE BIB	TD	TEMPERATURE DROP
HP	HORSE POWER	TDR	TRENCH DRAIN
HTG	HEATING	TEMP	TEMPERATURE
HTR	HEATER	TYP	TYPICAL
HW	HOT WATER	UG	UNDERGROUND
HYD	HYDRANT	VAC	VACUUM
ID	INDIRECT	V	VENT
IN	INCH	VAV	VARIABLE AIR VOLUME
INV	INVERT	VENT	VENTILATION
LB	POUND	VTR	VENT THROUGH ROOF
LB/HR	POUNDS PER HOUR	W	WASTE
LAT	LEAVING AIR TEMPERATURE	WB	WET BULB
LP	LOW PRESSURE	WCO	WALL CLEAN OUT
LPG	LIQUEFIED PETROLEUM GAS	WH	WALL HYDRANT

EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT	ET	EXPANSION TANK
ACCU	AIR COOLING CONDENSING UNIT	EWH	ELECTRIC WATER HEATER
AHU	AIR HANDLING UNIT	FCU	FAN COIL UNIT
AS	AIR SEPARATOR	FP	FIRE PUMP
B	BOILER	GI	GREASE INTERCEPTOR
CH	CHILLER	GRV	GRAVITY ROOF VENTILATOR
CT	COOLING TOWER	HWP	HEATING WATER PUMP
CUH	CABINET UNIT HEATER	HRU	HEAT RECOVERY UNIT
CHWP	CHILLED WATER PUMP	PRV	POWER ROOF VENTILATOR
DBP	DOMESTIC WATER BOOSTER PUMP	RE	RETURN/EXHAUST FAN
DC	DUCT MOUNTED COIL	RTU	ROOFTOP UNIT
DCP	DOMESTIC WATER CIRCULATING PUMP	SP	SUMP PUMP
EF	EXHAUST FAN	UH	UNIT HEATER
EDC	ELECTRIC DUCT COIL	WH	WATER HEATER

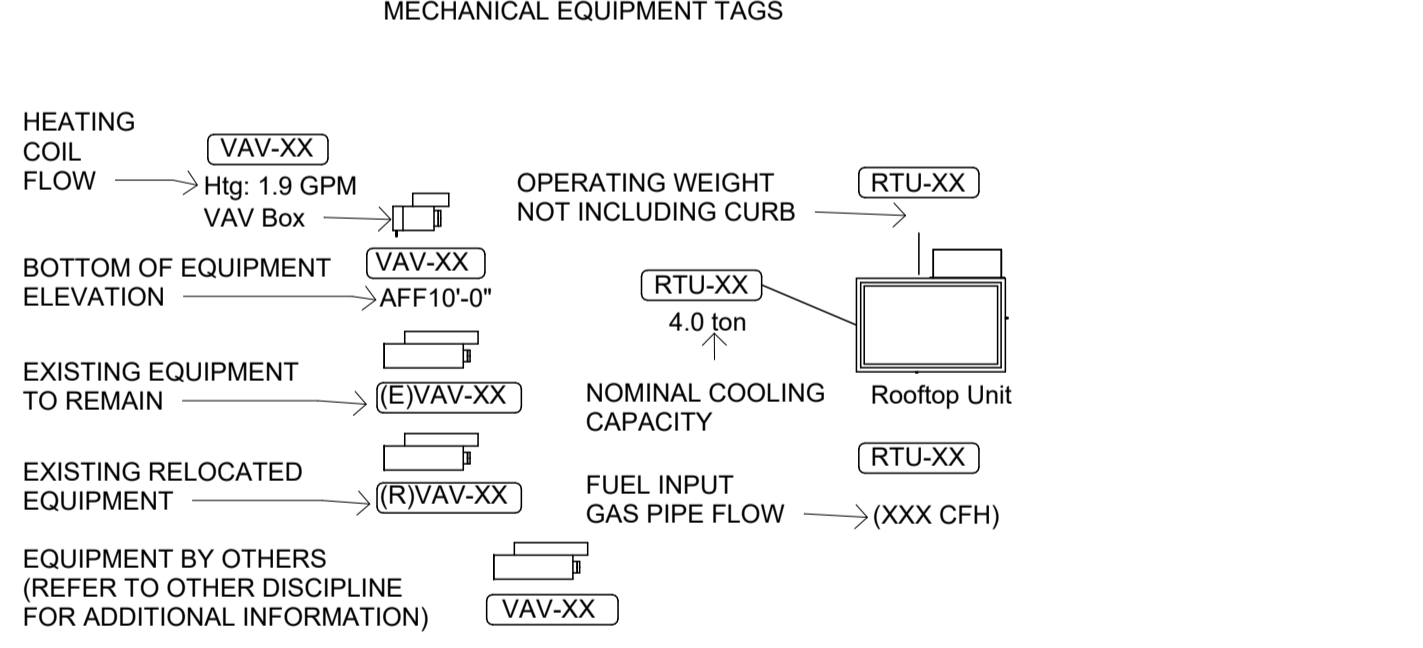
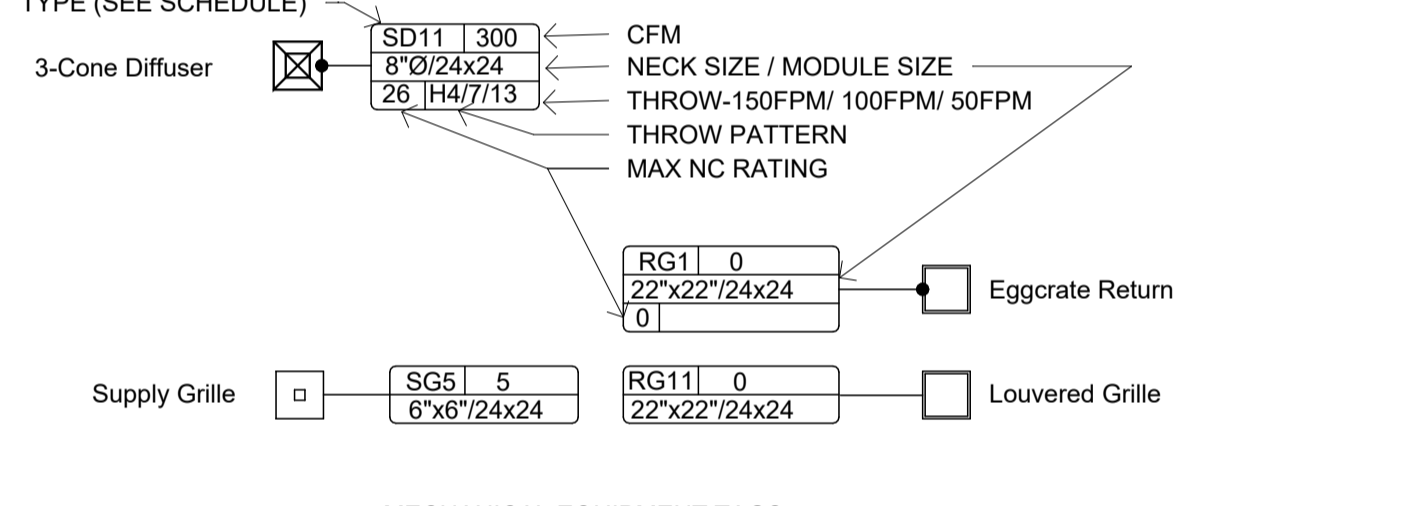
NOTE
ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

HVAC SYMBOLS

	SQUARE DUCT SIZE TAG (WIDTH x HEIGHT)
	OVAL DUCT SIZE TAG (WIDTH / HEIGHT)
	ROUND DUCT SIZE TAG (DIAMETER)
	EXISTING DUCT TAG
	DUCT BEING DEMOLISHED
	SUPPLY AIR
	CONDITIONED OUTSIDE AIR
	OUTSIDE AIR
	RETURN AIR
	TRANSFER AIR
	EXHAUST AIR
	RELIEF AIR
	GREASE EXHAUST AIR
	CONDENSATE EXHAUST AIR
	SMOKE EXHAUST AIR
	EXHAUST GAS FLUE
	COMBUSTION AIR

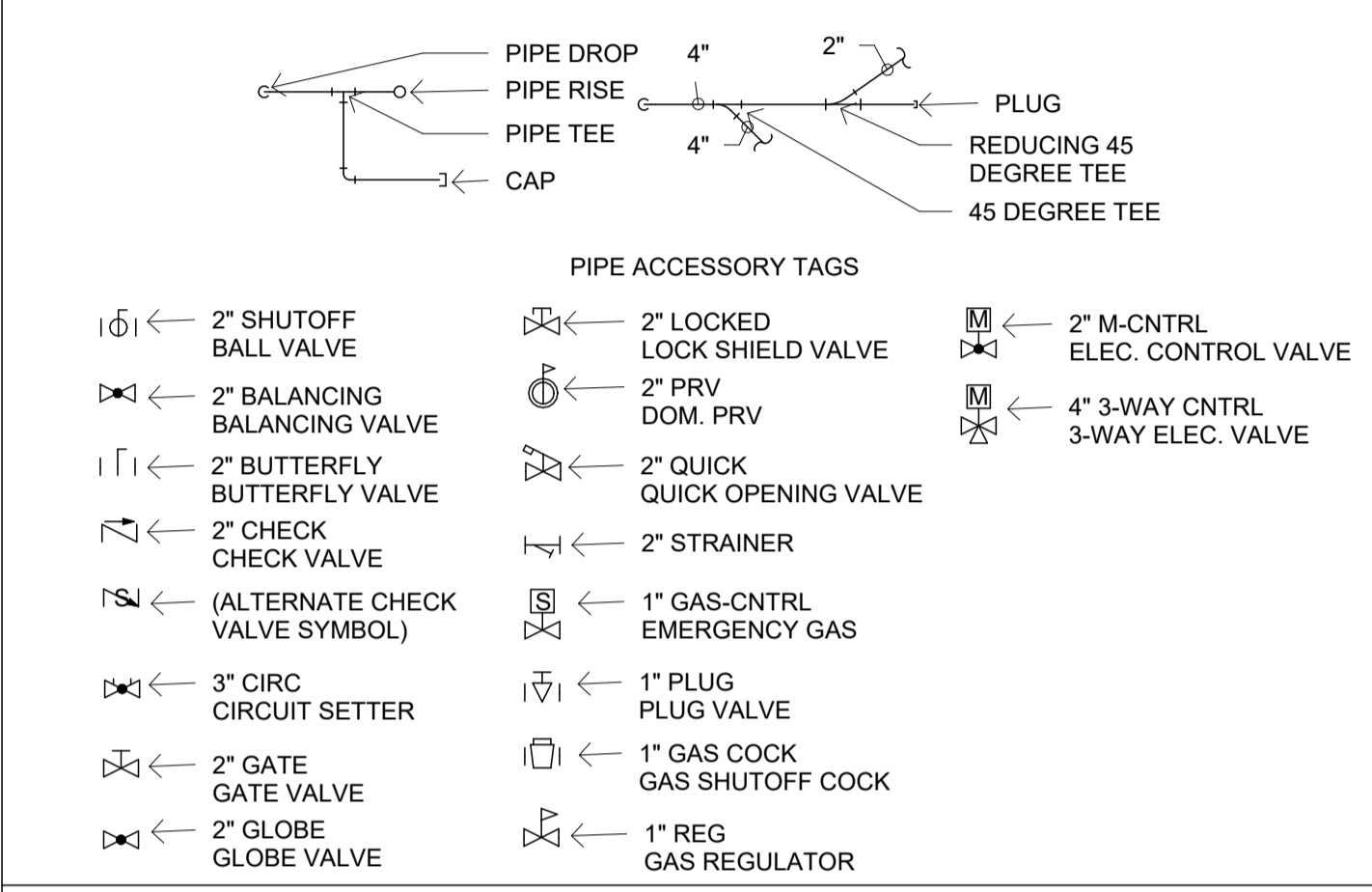
PIPE ACCESSORY TAGS

	2" SHUTOFF BALL VALVE		2" LOCKED LOCK SHIELD VALVE		2" M-CNTRL ELEC. CONTROL VALVE
	2" BALANCING BALANCING VALVE		2" PRV DOM. PRV		4" 3-WAY CNTRL 3-WAY ELEC. VALVE
	2" BUTTERFLY BUTTERFLY VALVE		2" QUICK QUICK OPENING VALVE		2" STRAINER
	2" CHECK CHECK VALVE		1" GAS-CNTRL EMERGENCY GAS		1" PLUG PLUG VALVE
	(ALTERNATE CHECK VALVE SYMBOL)		1" GAS COCK GAS SHUTOFF COCK		1" REG GAS REGULATOR
	3" CIRC CIRCUIT SETTER		2" GATE GATE VALVE		2" GLOBE GLOBE VALVE



PIPING SYMBOLS

	CHWR	CHILLED WATER RETURN
	CHWS	CHILLED WATER SUPPLY
	CD	CONDENSATE DRAINAGE
	CWR	CONDENSER WATER RETURN
	CWS	CONDENSER WATER SUPPLY
	GWR	GEO THERMAL WATER RETURN
	GWS	GEO THERMAL WATER SUPPLY
	HWR	HEATING WATER RETURN
	HWS	HEATING WATER SUPPLY
	G	NATURAL GAS
	PG	PROPANE GAS
	REF-L	REFRIGERANT-LIQUID
	REF-S	REFRIGERANT-SUCTION
	REF-HG	REFRIGERANT-HOT GAS
	STM	STEAM
	CDR	CONDENSATE RETURN



a new restaurant for:
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Denton, TX 76210

date
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Author
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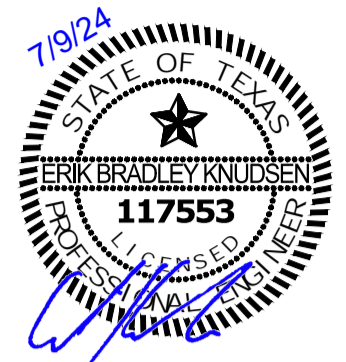
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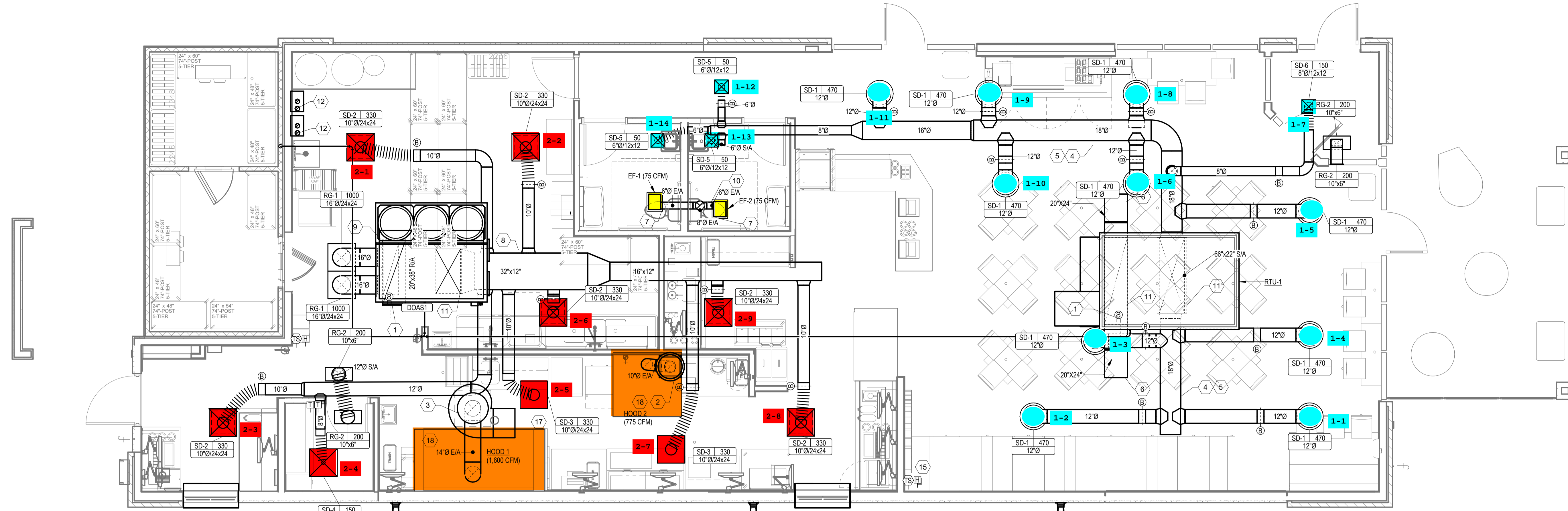
BC PROJECT #: 24305
TEXAS PE COA #F-15878

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1 LEVEL 1 HVAC PLAN
M-100 1/4" = 1'-0"

OUTDOOR AIR CALCULATIONS

UNIT	Area (sqft)	OCCUPANCY CLASSIFICATION	Occupant Density #/1000 sqft	People outdoor airflow rate in breathing zone, (Rp) cfm/person	Area outdoor airflow rate in breathing zone, (Ra) cfm/sqft	Exhaust airflow rate cfm/sqft	Breathing zone outdoor airflow (Vbz)	Zone air distribution effectiveness (Ez)	Zone outdoor airflow (cfm)	
RTU-1	1100	Dining rooms	70	7.5	0.18		776	0.8	969	
	150	Corridors	0	0	0.06		9	0.8	11	
									Total	981

AIR BALANCE SCHEDULE

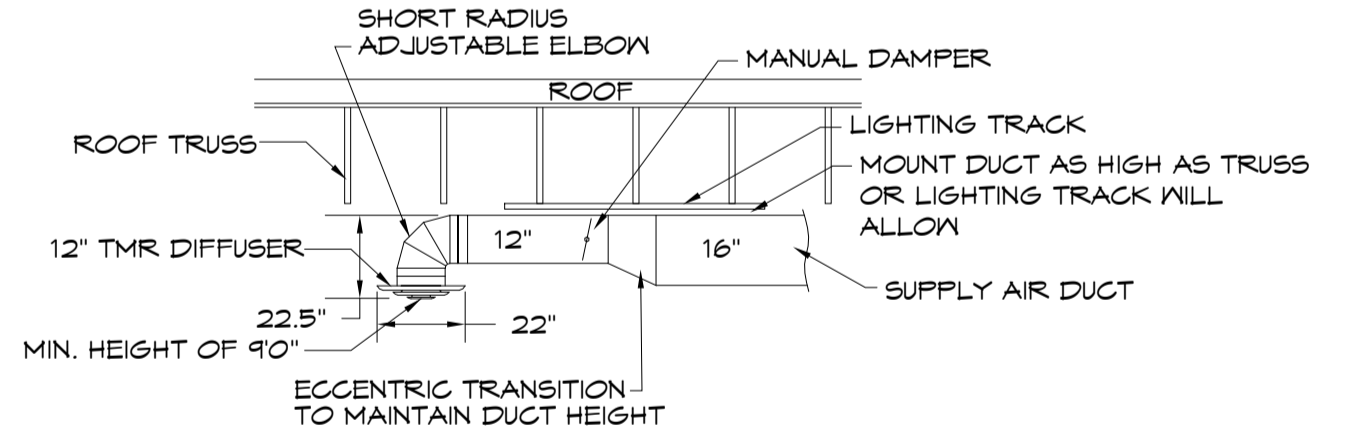
SUPPLY AIR UNIT	OUTSIDE AIRFLOW (CFM)	RETURN AIRFLOW (CFM)	SUPPLY AIRFLOW (CFM)	OA/SA %	EXHAUST AIR UNIT	EXHAUST AIRFLOW (CFM)
RTU-1	981	4,019	5,000	19.6%	KEF-1	1600
DOAS-1	2,300	0	2,300	100.0%	KEF-2	775
					EF-1, EF-2	150
TOTAL	3,281	4,019	7,300	44.94%	TOTAL	2,525
RESULTING BUILDING PRESSURIZATION						756 CFM

THE BUILDING HVAC SYSTEM SHALL BE BALANCED BY NATIONAL TAB HIRED BY THE OWNER. CONTACT Dan Hertenstein - National TAB at: 816-215-1593 - DAN@NATIONALTAB.COM

THE RTU SUPPLY FANS SHALL OPERATE IN SINGLE ZONE VAV MODE WITH 2 STAGES OF FAN CONTROL. LOW SPEED SHALL BE USED DURING PERIODS OF LOW COOLING LOAD AND VENTILATION ONLY OPERATION PER 2021 IECC REQUIREMENTS.

THE ECONOMIZER DAMPERS SHALL HAVE TWO POSITIONS DEPENDENT ON THE FAN SPEED TO MAINTAIN CONSTANT OUTDOOR AIR VOLUME AND BUILDING PRESSURE. REFER TO THE BUILDING AIR BALANCE SCHEDULE ON SHEET M-200.

THE UNIT SHALL HAVE ITS FRESH AIR HEATING OPTION ENABLED TO HEAT VENTILATION AIR TO A NEUTRAL VALUE DURING COLD WEATHER OPERATION. REFER TO THE MANUFACTURERS PROGRAMMING DOCUMENTATION FOR SETUP INSTRUCTIONS.



2 DINING ROOM DIFFUSER DETAIL
M-100 NO SCALE

- ### MECHANICAL KEYNOTES
- LOCATION OF FACTORY DUCT MOUNTED SMOKE DETECTOR IN RETURN OF RTU. PROVIDE REMOTE ENUNCIATOR AUDIOVISUAL. VERIFY LOCATION WITH FIRE MARSHAL PRIOR TO INSTALLATION. REFER TO SPEC SHEET MPO FOR ADDITIONAL INFORMATION.
 - TRANSITION AND CONNECT 10" DIAMETER GREASE DUCT TO EXHAUST HOOD. ROUTE DUCT UP AND CONNECT TO EXHAUST FAN. OFFSET AS NECESSARY TO MISS ROOF STRUCTURE. AND TO MAINTAIN 10'-0" CLEARANCE FROM ALL OUTDOOR AIR INTAKES AND 5'-0" FROM PARAPET WALLS. ALL GREASE DUCT IS TO BE INSTALLED WITH DUCT WRAP AS DETAILED AND PER THE MANUFACTURERS REQUIREMENTS FOR 0" CLEARANCE TO COMBUSTIBLES. REFER TO ROOF PLAN M-101 FOR CONTINUATION.
 - TRANSITION AND CONNECT 14" DIAMETER GREASE DUCT TO EXHAUST HOOD. ROUTE DUCT UP AND CONNECT TO EXHAUST FAN. OFFSET AS NECESSARY TO MISS ROOF STRUCTURE. AND TO MAINTAIN 10'-0" CLEARANCE FROM ALL OUTDOOR AIR INTAKES AND 5'-0" FROM PARAPET WALLS. ALL GREASE DUCT IS TO BE INSTALLED WITH DUCT WRAP AND ACCESS DOORS AS DETAILED AND PER THE MANUFACTURERS REQUIREMENTS FOR 0" CLEARANCE TO COMBUSTIBLES. REFER TO ROOF PLAN M-101 FOR CONTINUATION.
 - COORDINATE DUCT ROUTING WITH LIGHTING. REFER TO SHEET E200.
 - EXPOSED DUCTWORK SHALL BE OF PAINTLOCK CONSTRUCTION AND PAINTED PER THE DIRECTION OF ARCHITECT.
 - RETURN AIR DUCT LOCATED BETWEEN ROOF TRUSSES. OPEN END OF DUCTWORK TURNED UP TOWARD STRUCTURE WITH A MINIMUM 8" CLEARANCE TO DECK.
 - SUPPORT EXHAUST FAN FROM STRUCTURE AS REQUIRED BY THE MANUFACTURER.
 - COORDINATE WITH STRUCTURAL TO BLOCK OUT JOISTS AS REQUIRED TO RUN DUCT THROUGH THE STRUCTURE.
 - RETURN DUCT TO BE ROUTED BETWEEN JOISTS, AS HIGH AS STRUCTURE WILL ALLOW.
 - ROUTE EXHAUST DUCT UP THROUGH ROOF TO ROOF CAP. MAINTAIN 10'-0" CLEARANCE TO ALL OUTDOOR AIR INTAKES. SEAL PENETRATION WEATHERTIGHT.
 - TRANSITION AND CONNECT DUCTWORK TO DUCT DROP WITH FLEXIBLE CONNECTION. COORDINATE WITH STRUCTURAL PLAN AND OFFSET DUCTWORK AS NECESSARY TO FIT BETWEEN JOISTS. REFER TO ROOF PLAN M-101 FOR CONTINUATION.
 - PROVIDE 3" PVC FLUE AND COMBUSTION AIR INTAKE PIPE FOR HOT WATER HEATER THROUGH ROOF. PROVIDE MANUFACTURERS TERMINATION KIT. SEAL PENETRATION WEATHERTIGHT. VERIFY 10'-0" CLEARANCE FROM ALL OUTDOOR AIR INTAKES.
 - LOCATION OF REMOTE TEMPERATURE AND HUMIDITY SENSOR FOR RTU. INSTALL AT 9' AFF.
 - HOOD SHALL BE PROVIDED WITH FACTORY PRE-WIRE PACKAGE AND A PRE-ENGINEERED UL-300 FIRE SUPPRESSION SYSTEM. SEE HOOD DRAWINGS FOR DETAILS.
 - EXHAUST HOOD PROVIDED BY OTHERS. INSTALLED BY THIS CONTRACTOR PER THE MANUFACTURERS INSTRUCTIONS.

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TEXAS PE COA #F-15878

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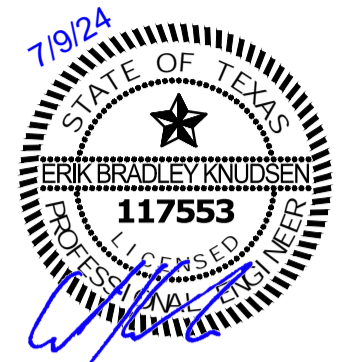
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Freddy's

3812 Teasley Lane - Lot 2A
Denton, TX 76210

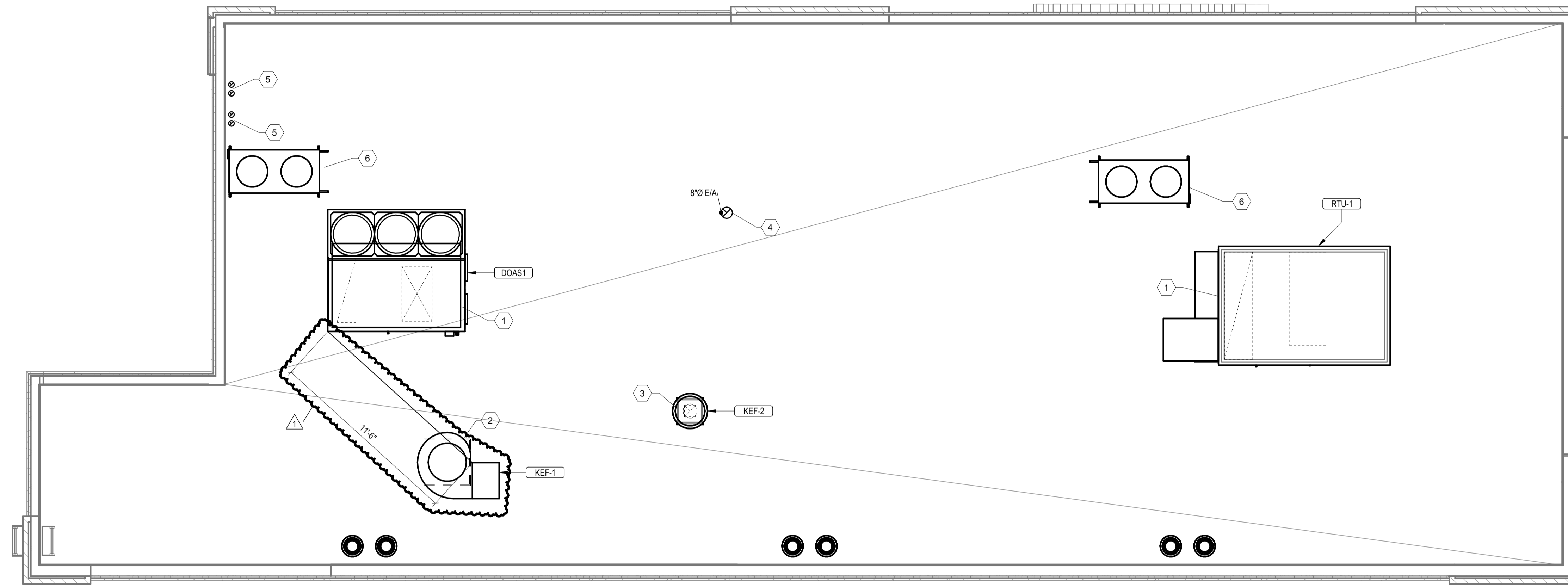
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1 MECHANICAL ROOF PLAN
M-101 1/4" = 1'-0"

MECHANICAL KEYNOTES	
1	PROVIDE RTU/DOAS IN LOCATION AS SHOWN ON PLANS. COORDINATE EXACT RTU LOCATION AND DUCT DROPS WITH STRUCTURAL TRUSS LAYOUT. MAINTAIN MINIMUM 10'-0" CLEARANCE BETWEEN OUTDOOR AIR INTAKES AND EXHAUST TERMINATIONS.
2	PROVIDE TYPE I EXHAUST FAN IN LOCATION AS SHOWN ON PLANS. CONNECT 10" DIAMETER EXHAUST DUCT FROM EXHAUST HOOD UP TO KEF-1 ON ROOF. COORDINATE EXHAUST DUCT ROUTING WITH STRUCTURAL TRUSS LAYOUT.
3	PROVIDE TYPE I EXHAUST FAN IN LOCATION AS SHOWN ON PLANS. CONNECT 8" DIAMETER EXHAUST DUCT FROM EXHAUST HOOD UP TO KEF-2 ON ROOF. COORDINATE EXHAUST DUCT ROUTING WITH STRUCTURAL TRUSS LAYOUT.
4	8" EXHAUST DUCT ROUTED TO ROOF CAP AS REQUIRED.
5	PROVIDE MANUFACTURER'S CONCENTRIC TERMINATION VENT KIT SERVING HOT WATER HEATER BELOW. INSTALL IN STRICT ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. ENSURE AT LEAST 10'-0" DISTANCE BETWEEN OUTDOOR AIR INTAKES.
6	MOUNT CONDENSING UNIT ON ROOF AS DETAILED AND AS REQUIRED BY THE MANUFACTURER. CONNECT REFRIGERANT PIPING TO EVAP COIL AS REQUIRED BY THE MANUFACTURER. SEE SHEET M200 FOR MOUNTING DETAIL.

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Freddy's
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TEXAS FE COA #F-15978

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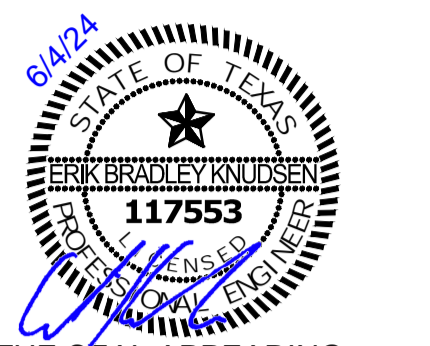


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Freddy's
Hunter's Creek & Teasley Lane - Lot 2A
Denton, TX

date
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Author
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ROOFTOP UNIT SCHEDULE																								
MARK	MANUFACTURER	MODEL NO.	NOM TONS	EVAP CFM	EXT. STATIC P. IN. WG.	COOLING				HEATING (GAS)			ELECTRICAL				SUPPLY FAN TYPE	MINIMUM OUTDOOR AIR	IEER	TOTAL WEIGHT (LBS)	NOTES			
						COOLING STAGES	TOTAL	SENSIBLE	AMB	EVAP.EAT DB/WB	HOT GAS REHEAT	INPUT	OUTPUT	HEATING STAGES	VOLT/PH/Hz	BLOWER MOTOR						POWER EXHAUST	MCA	MCCP
RTU-1	Trane	YSJ-150--	12.5	5000 CFM	1.000	3	149000 Btu/h	105000 Btu/h	105.0 °F	80.0 °F / 67.0 °F	Yes	250000 Btu/h	202500 Btu/h	3	208 V / 3 / 60 Hz	3.00 hp	Yes	65.0 A	90.0 A	VFD	981 CFM	14	2046 lb	1-8
ALTERNATE ROOFTOP UNIT MANUFACTURER																								
RTU-1	Carrier	48HCFE14	12.5	5000 CFM	1.000	2	154800 Btu/h	116100 Btu/h	105.0 °F	80.0 °F / 67.0 °F	Yes	240000 Btu/h	192000 Btu/h	2	208 V / 3 / 60 Hz	5.00 hp	Yes	71.0 A	90.0 A	VFD	981 CFM	13.5	1363 lb	1-8
RTU-1	YORK	ZJ15024D	12.5	5000 CFM	1.000	2	154800 Btu/h	116100 Btu/h	105.0 °F	80.0 °F / 67.0 °F	Yes	240000 Btu/h	192000 Btu/h	2	208 V / 3 / 60 Hz	5.00 hp	Yes	71.0 A	90.0 A	VFD	981 CFM	13.5	1363 lb	1-8

NATIONAL ACCOUNT INFORMATION

FREDDY'S FROZEN GUSTARD HAS NATIONAL ACCOUNT AGREEMENTS FOR ROOF TOP UNITS WITH TRANE, CARRIER, AND YORK. NO ALTERNATE MANUFACTURERS ARE ALLOWED.

FOR TRANE EQUIPMENT EQUAL TO THE UNITS SPECIFIED CONTACT:
JUSTIN BARNES, TRANE ACCOUNT MANAGER - NATIONAL ACCOUNTS, (303) 228-2896
JDBARNES@TRANE.COM

FOR CARRIER EQUIPMENT CONTACT:
TERRI BURNS, ACCOUNT ORDER MANAGER, (915) 432-3653
nationalaccounts@carrier.com

FOR YORK EQUIPMENT CONTACT:
DAVID WALMSEY, ACCOUNT ORDER MANAGER, (774)-573-5125
david.walmsey@jcl.com

FAN SCHEDULE													
ID	LOCATION	MANUFACTURER	MODEL NO.	TYPE	DESIGN AIRFLOW		ESP	FAN		MOTOR			REMARKS
					CFM	Pa		DRIVE TYPE	POWER	RPM	ECM	VOLT	
EF-1	Ceiling	Greenheck	SP-A200-390	Premium (Constant Cfm)	75 CFM	0.250	Direct	0.08 hp	900	Yes	0 V	1	SEE NOTE 1.
EF-2	Ceiling	Greenheck	SP-A200-390	Premium (Constant Cfm)	75 CFM	0.250	Direct	0.08 hp	900	Yes	0 V	1	SEE NOTE 1.

NOTES: 1. PROVIDE CEILING GRILLE, INTEGRAL BACKDRAFT DAMPER, AND ROOF CAP.

GRILLES, REGISTERS AND DIFFUSERS SCHEDULE							
ID	MANUFACTURER	MODEL	MATERIAL	FINISH	NECK		NOTES
					SIZE	SIZE	
RG-1	AMER. LOUVER CO	STRATUS	Aluminum	White Enamel	16"	0"	SEE NOTE 1.
RG-2	Titus	350RL	Steel	White Enamel	0"	0"	
SD-1	Titus	TMR	Steel	White Enamel	12"	0"	FIELD PREP FOR PAINTING
SD-2	Titus	TMS-AA	Aluminum	WHITE ENAMEL	10"	0"	
SD-3	Titus	PAR	Steel	White Enamel	10"	0"	RETURN - NO DEFLECTOR
SD-4	Titus	T350-4	Steel	WHITE ENAMEL	8"	0"	THERMAL VAV DIFFUSER
SD-5	Titus	TMS	Steel	White Enamel	6"	0"	WITH O.B. DAMPER AND TRM KIT
SD-6	Titus	TMS	Steel	White Enamel	8"	0"	WITH O.B. DAMPER AND TRM KIT

NOTES: 1. RETURN GRILLE TO BE PLASTIC FILTER RETURN, FILTER TO BE AMERICAN AIR FILTER (AAF) FRONTLINE GREEN 1", WITH AAF AMERIFRAME SIZE 20X20X1.

FIRE RATED ENCLOSURE - GREASE DUCTS

1. THERMAL CERAMICS FIREMASTER FASTWRAP XL IS TESTED TO ASTM E2336 AND UL LISTED PER HNK1.G18 TO PROVIDE ZERO CLEARANCE TO COMBUSTIBLES AND TO PROVIDE A 1- OR 2- HOUR ENCLOSURE. THROUGH PENETRATIONS FIRESTOP SYSTEMS ARE TESTED IN ACCORDANCE WITH ASTM E 814 (UL 1479). ICC-ES APPROVAL PER REPORT ESR 2213 OR ESR 2832.

2. COMPLIANT TO THE FOLLOWING CODES:
NFPA 96
INTERNATIONAL MECHANICAL CODES
UNIFORM MECHANICAL CODE
CALIFORNIA MECHANICAL CODE

3. INSULATION APPLIED IN TWO LAYERS WITH TIGHT COMPRESSION JOINT ON BOTH LAYERS AT ALL JOINTS.

4. MINIMUM 16 GAUGE CARBON STEEL (OR 18 GAGE STAINLESS STEEL) RECTANGULAR OR ROUND GREASE EXHAUST DUCT

5. INSTALL UL LISTED AND LIQUID TIGHT THERMAL CERAMICS FASTDOOR XL ACCESS DOORS AT ALL CHANGES IN DIRECTION AND AT MINIMUM EVERY 20 FT ON HORIZONTAL RUNS.

6. SUPPORT HANGER SYSTEMS DO NOT NEED TO BE WRAPPED PROVIDED THE HANGER RODS ARE MINIMUM OF 3/8 IN. DIAMETER AND SUPPORTS ARE MINIMUM 2 X 2 X 1/8 IN. STEEL ANGLE OR SMACNA EQUIVALENT SUPPORT SYSTEM.

7. THERMAL CERAMICS DUCT WRAP SHALL BE INSTALLED DIRECTLY ONTO THE DUCT AND APPLIED FROM THE HOOD CONNECTION TO THE CONNECTION TO THE FAN.

8. THERMAL CERAMICS DUCT ENCLOSURE SYSTEM SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND UL LISTINGS.

INSTALL UL LISTED FIRESOP SYSTEM WITH EQUAL F AND T-RATING AT PENETRATIONS OF RATED ASSEMBLIES

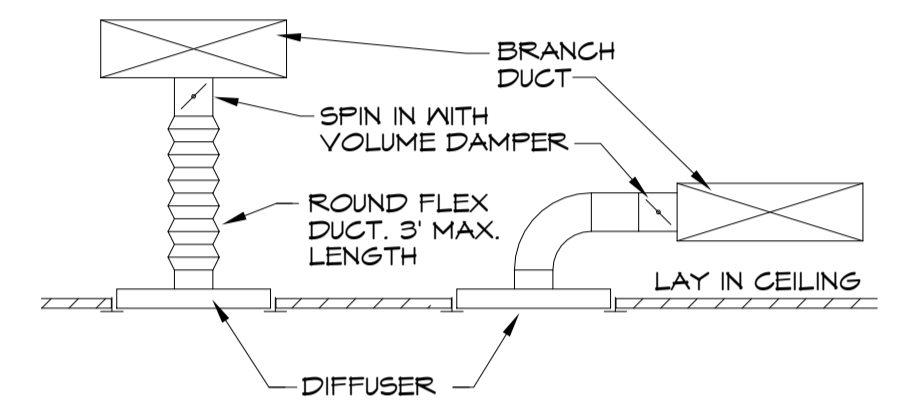
1/2 IN. (13MM) STEEL BANDING PLACED 1-1/2 IN. (38MM) FROM TRANSVERSE JOINTS AND MAXIMUM 12 IN (305 MM) O.C.

FASTDOOR XL - UL LISTED DUCT ACCESS AND 2-HOUR RATED INSULATION COVER

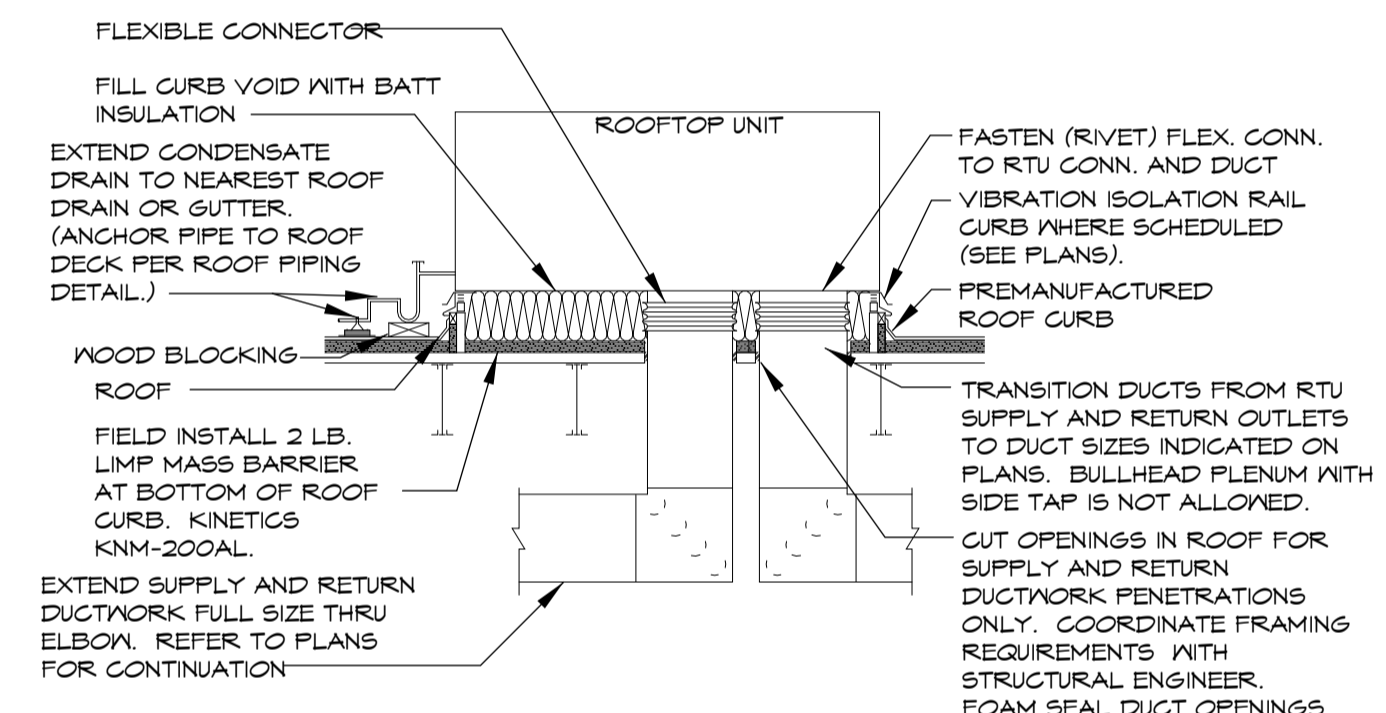
UL LISTED - FASTDOOR XL

TIGHT COMPRESSION JOINT ON BOTH LAYERS

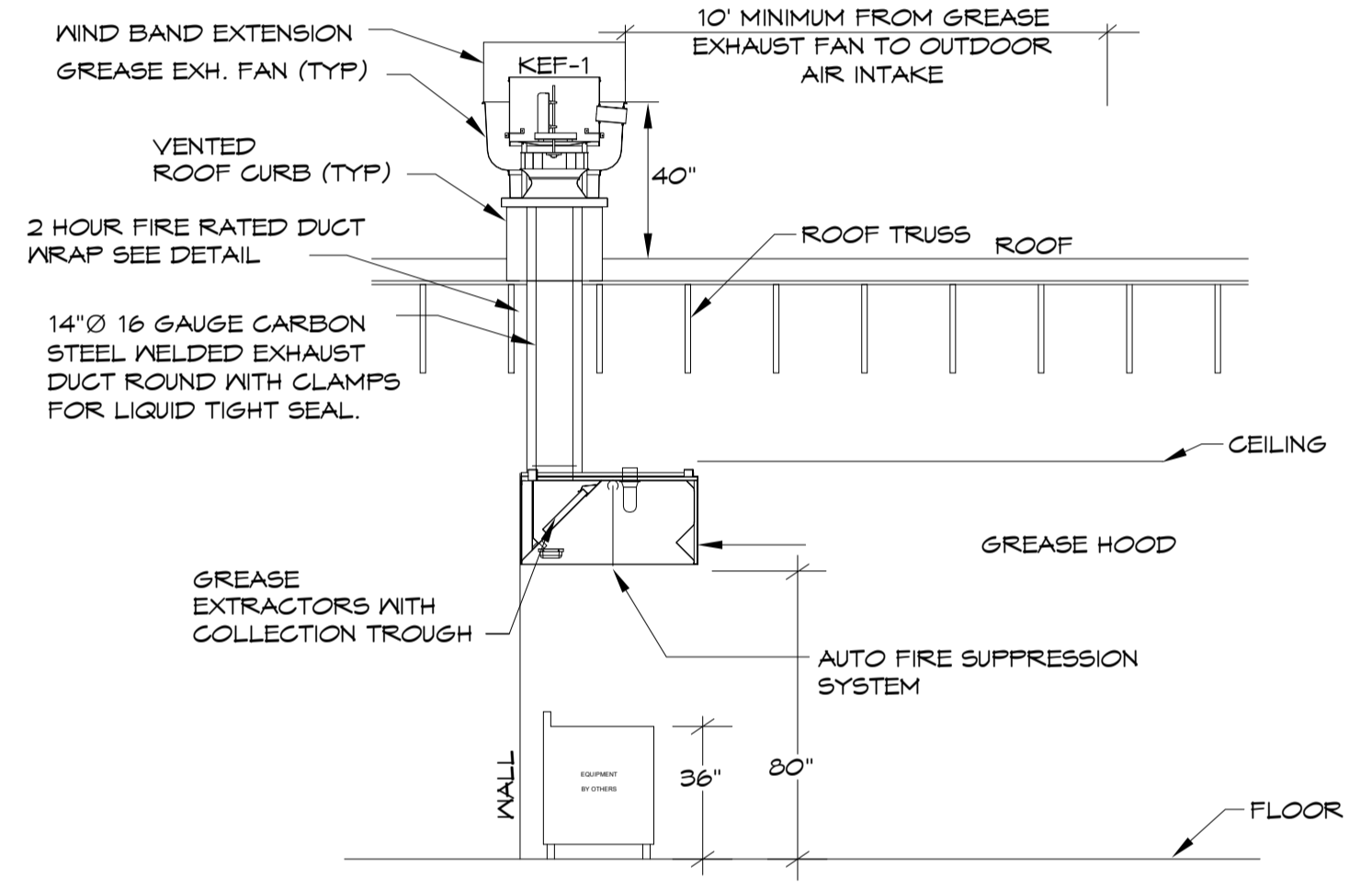
Morgan ThermalCeramics
P.O. Box 923
Augusta, Georgia 30903-0923
Phone: (706) 560-4038



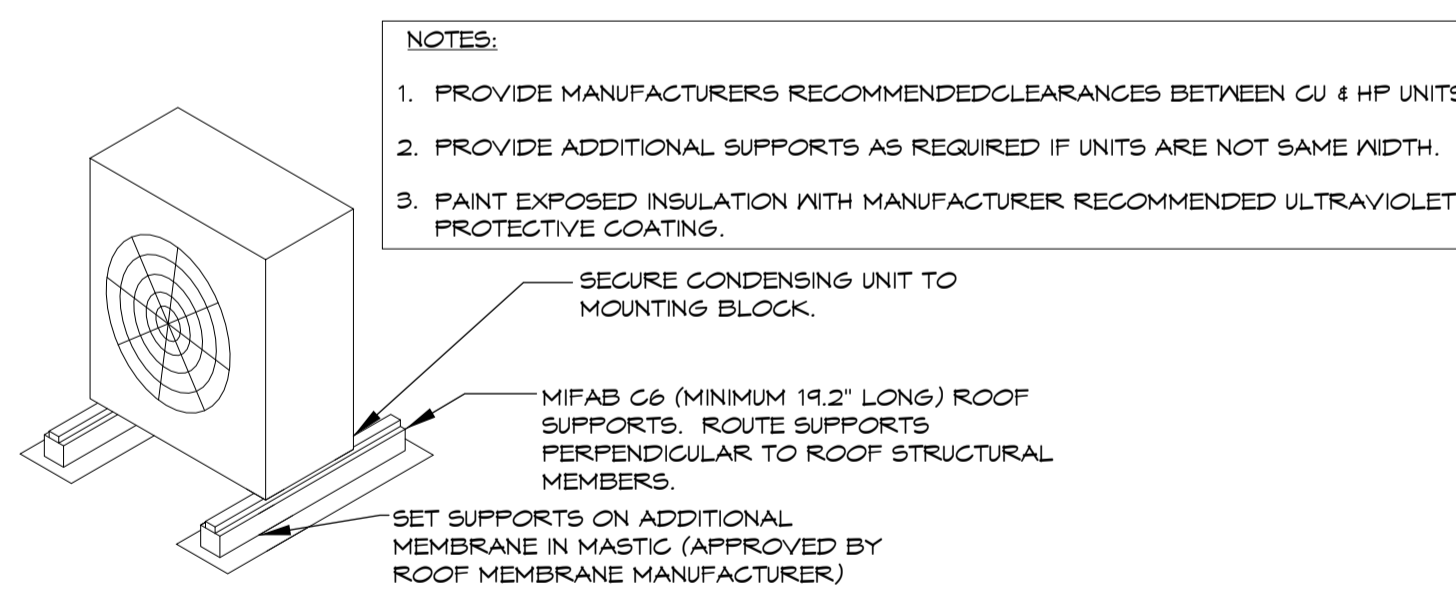
6 DIFFUSER DETAIL
NO SCALE



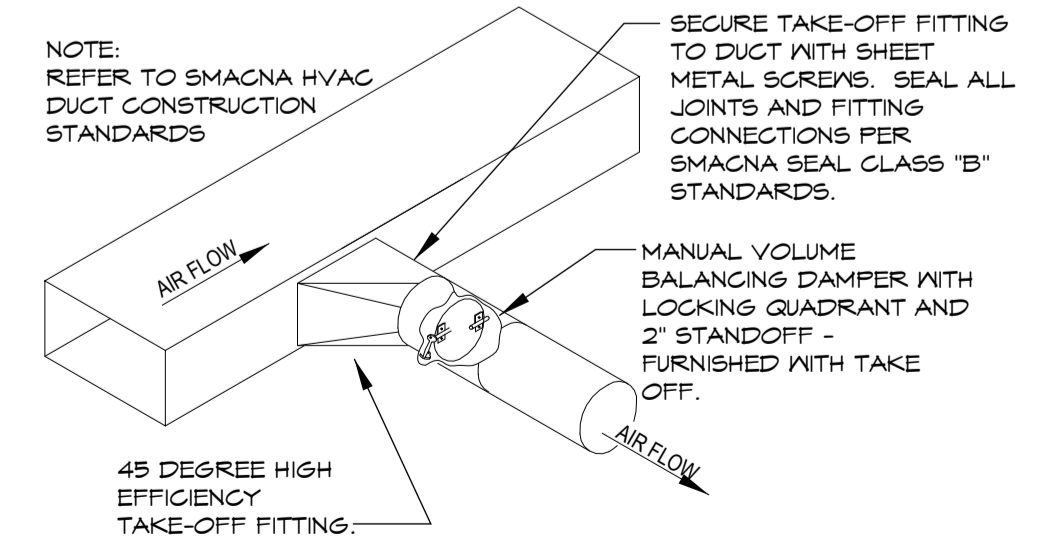
7 DOWNFLOW ROOFTOP UNIT DETAIL
NO SCALE



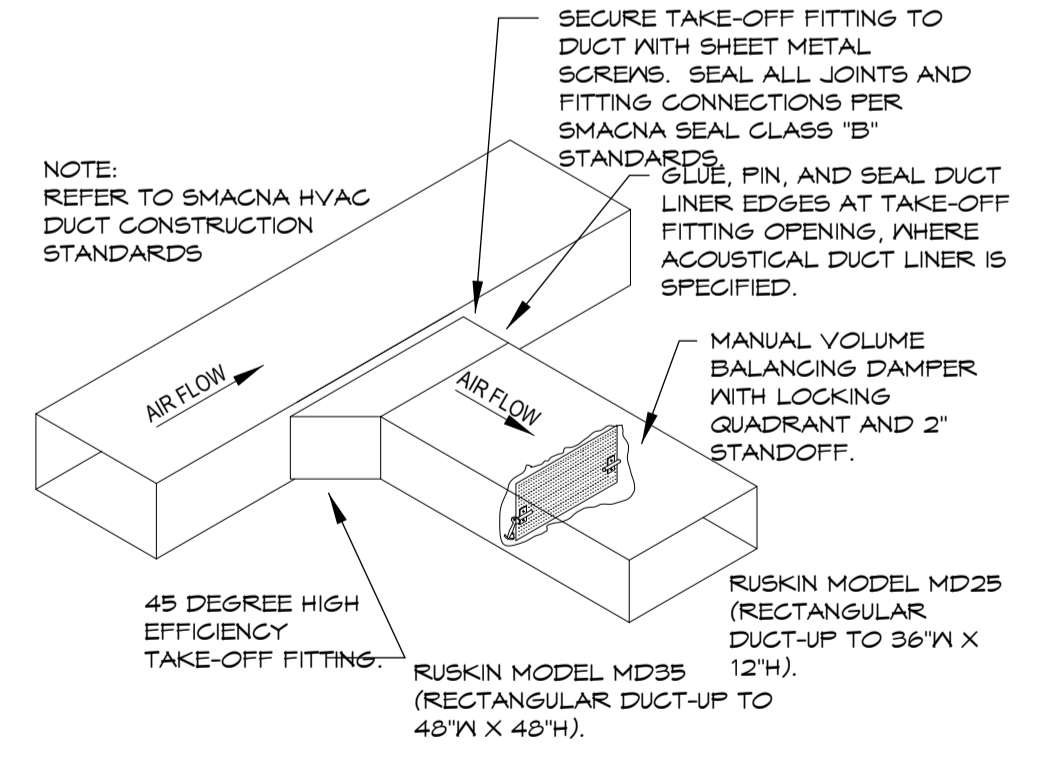
4 GREASE HOOD DETAIL
NO SCALE



5 ROOFTOP CONDENSING UNIT DETAIL
NO SCALE



8 ROUND DUCT TAKE OFF DETAIL
NO SCALE

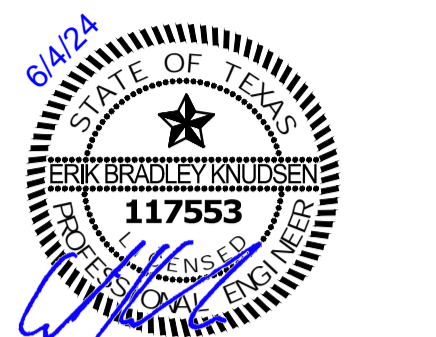


9 RECTANGULAR DUCT TAKE OFF DETAIL
NO SCALE

BC PROJECT #: 24305
TEXAS PE COA #F-15878

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a new restaurant for:
Freddy's
Hunter's Creek & Teasley Lane - Lot 2A
Denton, TX

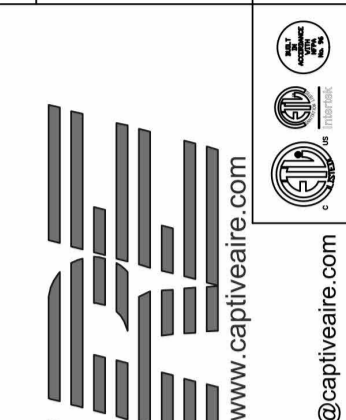
date
06.04.2024
drawn by
Author
checked by
Checker
revisions

sheet number
M-300

drawing type
Permit
project number
23006-16

REVISIONS

NO.	DESCRIPTION	DATE



CAPTIVEAIR
HBT Foodservice
104 W 9th St Suite 204, Kansas City, MO 64105
PHONE: (816) 221-4575 FAX: (816) 221-4311 EMAIL: reg@captivair.com

Freddy's - Denton, TX II
DENTON, TX, 75065

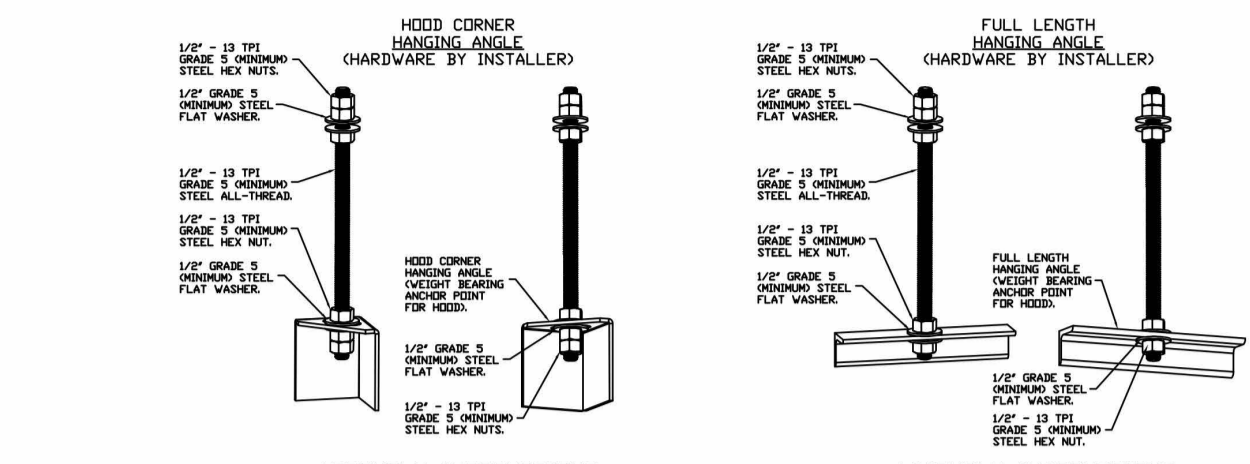
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DWG.#: 6776165
DRAWN BY: michael.co
SCALE: 1/2" = 1'-0"
MASTER DRAWING

SHEET NO. 1
BC PROJECT #: 24305
TEXAS PE COA #F-15978

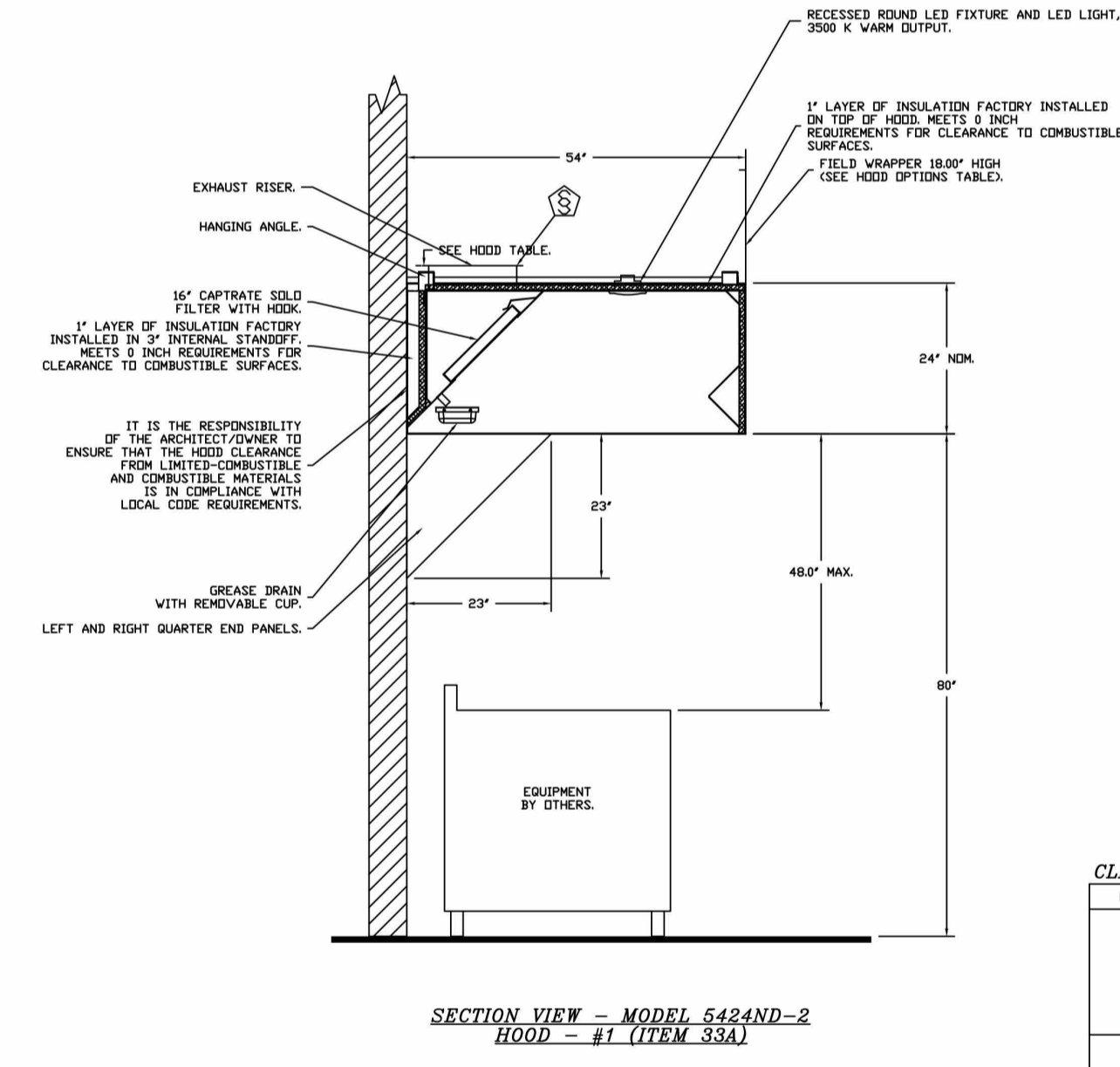
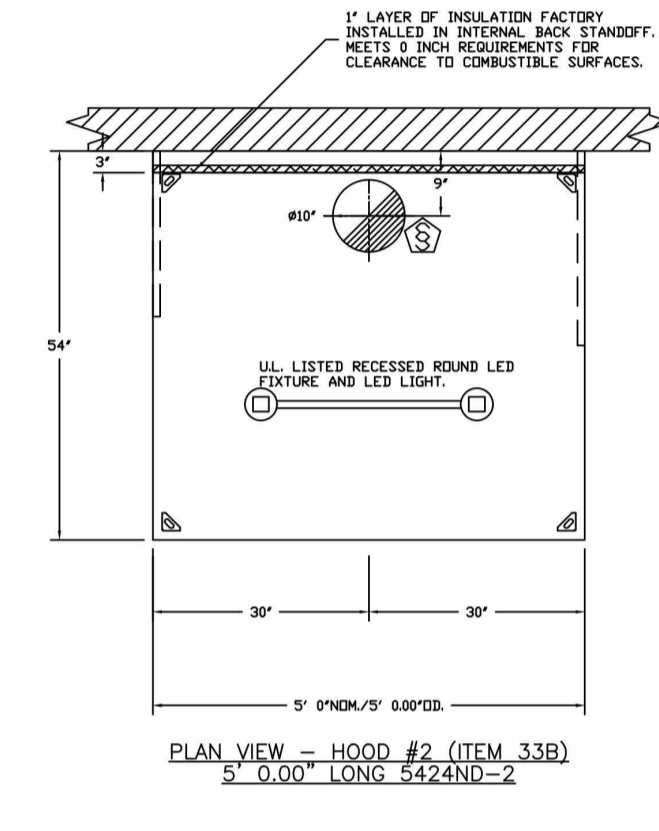
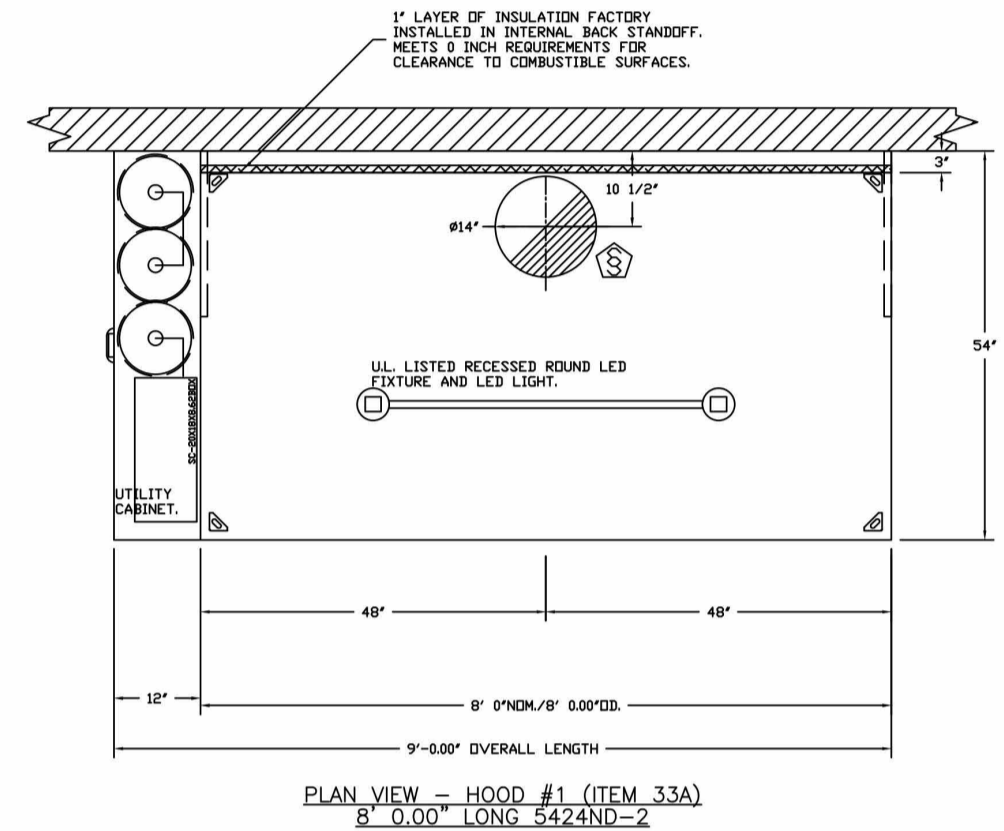
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HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 MINIMUM ALL-THREAD SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 MINIMUM STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 MINIMUM HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR FULL LENGTH HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



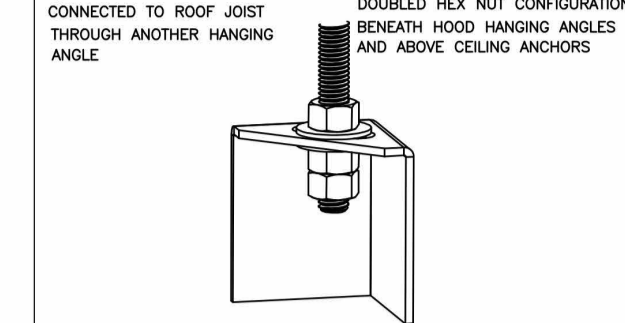
CLEARANCE TO COMBUSTIBLES

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

* 18" CLEARANCE TO COMBUSTIBLES CONFORMS TO UL-710 STANDARDS
* HOOD MOUNTED UTILITY CABINETS REQUIRE 36" SERVICE CLEARANCE.



ND-2 HANGING ANGLE DETAIL



ROD AND NUTS TO BE SUPPLIED BY INSTALLING CONTRACTOR. HANGING ANGLE IS PRE-PUNCHED AT FACTORY.

HANGING ANGLE LOCATIONS

HOOD STYLE	DIM FROM REAR	DIM FROM FRONT (24" H)	DIM FROM FRONT (30" H)
CANOPY ND2	4.166"	2.246"	2.246"
ND2-PSP-F	4.166"	2.246"	2.246"
BACKSHELF BD-2	4.166"	2.246	-
VHB/VHB-G	36"x36"	42"x42"	48"x48"
FRONT/BACK DIMS OF SIZE	2.246"	2.246"	2.246"

CALCULATIONS UTILIZED

EXHAUST CFM=LENGTH OF HOOD X CFM/LIN.FT. (LOAD)
SUPPLY CFM=EXHAUST CFM X PERCENTAGE REQUIRED
TOTAL DUCT AREA=144 X CFM
DUCT LENGTH= TOTAL DUCT AREA
CAPTIVE-AIRE DUCT CONNECTION SIZES ARE CALCULATED USING AN EXHAUST VELOCITY OF 1500-1800 FPM AND A SUPPLY VELOCITY OF 300-400 FPM

BUILDING CODES

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH:
ETL LISTED
UL STANDARD 703
UL STANDARD 100
UL STANDARD 101
UL STANDARD 102
Listed under ETL File number 3054804-001/002

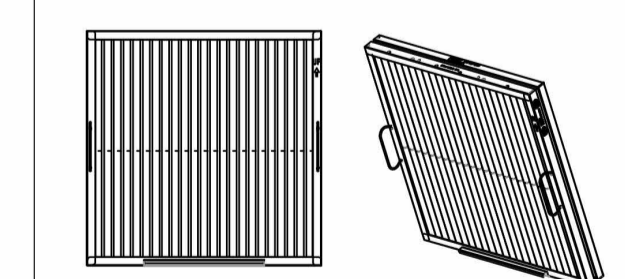
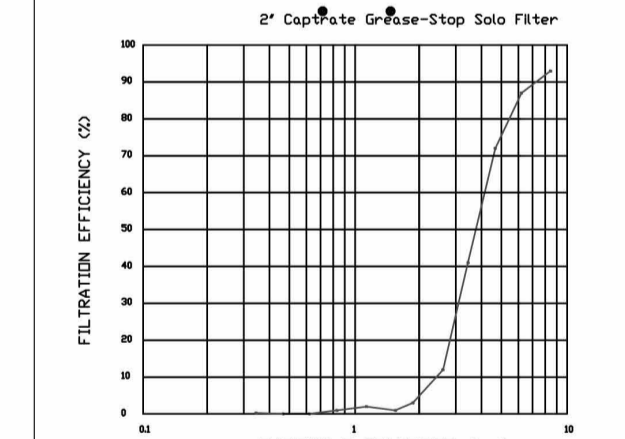
CLEARANCE TO COMBUSTIBLES

CAPTIVE-AIRE HOODS HAVE OPTIONAL CLEARANCE REDUCTION SYSTEMS AVAILABLE AS FOLLOWS:
MATERIAL CLEARANCE REDUCTION SYSTEM
NON-COMBUSTIBLE NONE REQUIRED
LIMITED-COMBUSTIBLE 3" UNINSULATED STANDOFF
COMBUSTIBLE 1" INSULATED STANDOFF

GENERAL NOTES

- INSTALLATION
- ALL ELECTRICAL "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY ELECTRICAL CONTRACTORS.
 - ALL PLUMBING "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY PLUMBING CONTRACTORS.
 - HANGING BRACKETS LOCATED AND WELDED AS SHOWN ON PLANS. ALL OTHER HANGING MATERIALS PROVIDED BY INSTALLING CONTRACTORS.
 - ALL CONNECTIONS FROM CAPTIVE-AIRE DUCT PER MECHANICAL CONTRACTOR'S PLANS.
 - COOKING EQUIPMENT TO SHUTOFF IN EVENT OF FIRE.
 - EXHAUST FANS TO TURN ON IN EVENT OF FIRE.
 - ALL LIGHTS FUTURE SHOWN INSTALLED BY CAPTIVE-AIRE ARE FACTORY PREWIRED. INTERCONNECTING BETWEEN HOODS AND TO SWITCHES BY ELECTRICAL CONTRACTORS.
 - LAMPS FOR LIGHT FUTURES BY INSTALLING CONTRACTORS.
 - SEISMIC RESTRAINTS ARE RESPONSIBILITY OF INSTALLING CONTRACTOR.
 - INSTALLING CONTRACTORS ASSUME ALL RELATED RESPONSIBILITY FOR VERIFICATION OF DIMENSIONAL DATA CONTAINED ON THESE DOCUMENTS FOR ACCURACY, INTERPRETATION AND ADMINISTRATION OF CODE REQUIREMENTS IN EFFECT PRIOR TO ANY RELEASE FOR PRODUCTION OF EQUIPMENT SHOWN.
- BALANCE
- KITCHEN HOODS MUST BE BALANCED WITH KITCHEN.
 - KITCHEN SHALL BE NEGATIVE WITH RESPECT TO DINING AREA.
 - RESTAURANT SHALL BE POSITIVE WITH RESPECT TO AMBIENT PRESSURE.
- ADDITIONAL
- WRITTEN HOOD DIMENSIONS HAVE PRECEDENCE OVER SCALE.
 - SIGNED AND APPROVED COPIES OF THIS DOCUMENT SHALL BE OBTAINED PRIOR TO PRODUCTION.

FILTER DETAIL



CaptiveAir Captrate Solo Filter
ETL Listed Grease Extracting Filter
Made From 430 Stainless Steel

HOOD INFORMATION - JOB#6776165

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST FLEXIBLE SERVICES	HOOD CONSTRUCTION	HOOD CONFIG END TO END	HOOD CONFIG ROW
1	ITEM 33A	5424 ND-2	CAPTIVEAIR	8' 0"	450 DEG	1	MEDIUM	200	1600	4" 14" 1600 1497 -0.734"	430 SS WHERE EXPOSED	ALDNE	FRONT
2	ITEM 33B	5424 ND-2	CAPTIVEAIR	5' 0"	450 DEG	1	MEDIUM	155	775	4" 10" 775 14E1 -0.436"	430 SS WHERE EXPOSED	ALDNE	ALDNE

HOOD INFORMATION

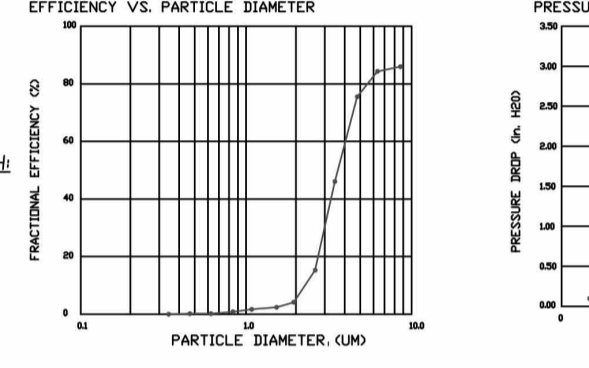
HOOD NO	TAG	TYPE	FILTERS	LIGHTS	WIRE GUARD	LOCATION	SIZE	UTILITY CABINETS	ELECTRICAL	SWITCHES	FIRE SYSTEM	HOOD WEIGHT
1	ITEM 33A	CAPTIVATE SOLID FILTER	3 16" 16" 85% SEE FILTER SPEC	2 RECESSED ROUND	NO	LEFT	12"x54"x24"	TANK FS	4.0/4.0/4.0	DCV-2111 1 QUANTITY	YES	915 LBS
2	ITEM 33B	CAPTIVATE SOLID FILTER	3 16" 16" 85% SEE FILTER SPEC	2 RECESSED ROUND	NO					1 FAN	YES	366 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	ITEM 33A	FIELD WRAPPER 1800" HIGH FRONT, LEFT, RIGHT. LEFT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS. RIGHT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS. INSULATION FOR TOP OF HOOD. INSULATION FOR BACK OF HOOD.
2	ITEM 33B	FIELD WRAPPER 1800" HIGH FRONT, LEFT, RIGHT. RIGHT END PANEL 27" TOP WIDTH, 24" BOTTOM WIDTH, 99.5" HIGH 430 SS. LEFT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS. INSULATION FOR TOP OF HOOD. INSULATION FOR BACK OF HOOD. RISER SENSOR INSTALL 6IN FLEN.

SPECIFICATION: CAPTIVATE GREASE-STOP SOLID FILTER

THE CAPTIVATE GREASE-STOP SOLID FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY. FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNELS.



UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 80% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE. THE CAPTIVATE GREASE-STOP SOLID WAS TESTED TO ASTM STANDARD ASTM F575-05 MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER. EFFICIENCY VS. PARTICLE DIAMETER

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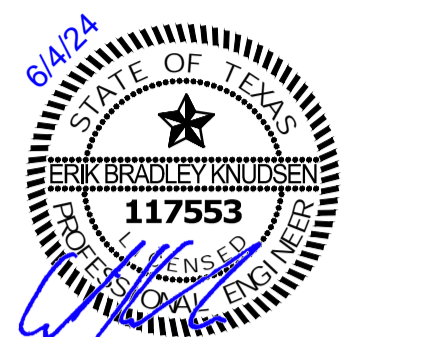
FOR QUESTIONS, CALL THE:
KANSAS CITY REGIONAL OFFICE
1126 SWIFT STREET, KANSAS CITY, MO 64116
PHONE: (816) 221-8575
FAX: (816) 221-8311

CUSTOMER APPROVAL TO MANUFACTURE:
Approved as Noted
Approved with NO Exception Taken
Revise and Resubmit
SIGNATURE _____ Date _____

*** NOTE ***
ALL WALLS AND STRUCTURES THAT COME WITHIN 18" OF HOOD MUST BE METAL STUDS AND SHEETROCK. WOOD STUDS OR ANY OTHER COMBUSTIBLE MATERIAL WITHIN 18" OF HOOD NOT ALLOWED.

*** NOTE ***
HOOD MANUFACTURER RECOMMENDS NO RETURNS OR 4-WAY DIFFUSERS WITHIN 10 FEET OF HOOD IN ALL DIRECTION.

*** NOTE ***
MAKEUP AIR SHALL BE DELIVERED INTO SPACE IN MANNER THAT WILL NOT DISRUPT HOODS ABILITY TO CAPTURE AND CONTAIN.



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a new restaurant for:
Freddy's
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Denton, TX

date
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drawn by
Author
checked by
Checker
revisions

sheet number
M-301

drawing type
Permit
project number
23006-16

REVISIONS

NO.	DESCRIPTION	DATE

CAPTIVE

Freddy's - Denton, TX II
DENTON, TX, 75065

DATE: 5/2/2024
DWG.#: 6776165
DRAWN BY: michael.co
SCALE: 1/2" = 1'-0"
MASTER DRAWING

SHEET NO. 2
BC PROJECT #: 24305
TEXAS PE COA #F-15978

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5720 Reeder Shawnee, KS 66203 (913)262-1772

104 W 9th St Suite 204, Kansas City, MO. 64105 PHONE: (816) 221-8575 FAX: (816) 221-8311 EMAIL: reg@bcengineers.com

www.captivefire.com

SYSTEM SIZE: TANK-SP-3 DESIGN FPI 44, MAXIMUM FPI: 60.
HOOD # 1 8' 0"00" LONG x 54" WIDE x 24" HIGH.
HOOD # 2 5' 0"00" LONG x 54" WIDE x 24" HIGH.
RISER # 1 SIZE: 1 1/2" DIA.
RISER # 2 SIZE: 1" DIA.
HOOD # 2 METAL BLOW-OFF CAPS INCLUDED.

LEGEND - FIRE CABINET TANK SYSTEM

- 4 GALLON TANK
- PRIMARY ACTUATOR RELEASE
- SECONDARY ACTUATOR RELEASE
- PRESSURE SUPERVISION SWITCH
- PRIMARY HOSE ASSEMBLY
- SECONDARY HOSE ASSEMBLY
- REMOTE MANUAL ACTUATION DEVICE

INCLUDES: FIELD INSTALLATION AND HOOKUP DURING NORMAL BUSINESS HOURS BY CERTIFIED INSTALLERS ONLY IN THE LOCATION NOTED ABOVE. TWO SITE VISITS ONLY: ONE VISIT TO SET PULL STATION & SYSTEM HOOKUP AND ONE VISIT FOR ONE TEST. ADDITIONAL VISITS WILL RESULT IN ADDITIONAL CHARGES. ONE MECHANICAL OR ELECTRICAL GAS VALVE PER SYSTEM AT A MAXIMUM SIZE OF 2" PERMIT, AND SYSTEM TEST. EXCLUDES: LAMIN LABOR & PREVAILING WAGE CLAUSE & WAGES WILL BE ADDED IF APPLICABLE, GAS VALVE INSTALLATION, ELECTRICAL HOOKUP AND CONNECTIONS, HANGING OF FIRE CABINET, SPLIT TRIP, HANDHELD EXTINGUISHER(S), ON-SITE RE-PIPING DUE TO EQUIPMENT LAYOUT CHANGES.

NOTES

- FIELD PIPE DROPS AS SHOWN
- PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY GAS
- FIELD INSTALLED DROP FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED
- SHIP LOOSE DROP FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED
- RELIEFATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELIVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION
- IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE
- FACTORY PIPING EXTENDS A MAXIMUM OF 6' ABOVE THE TOP OF THE HOOD.
- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.
- THIS FIRE SYSTEM COMPLIES WITH UL 300 REQUIREMENTS.
- DL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

JOB #: 6776165
JOB NAME: FREDDY'S - DENTON, TX II

SYSTEM SIZE: TANK-SP-3 DESIGN FPI 44, MAXIMUM FPI: 60.
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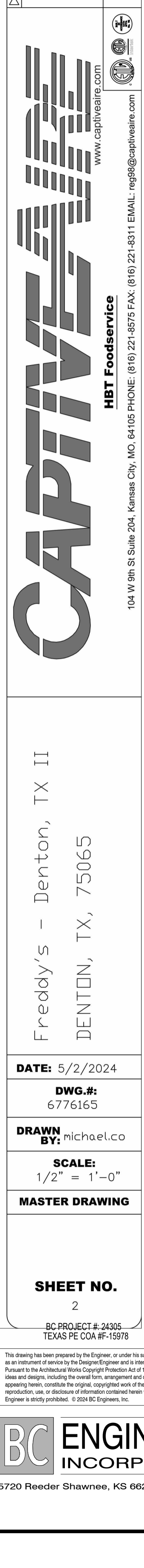
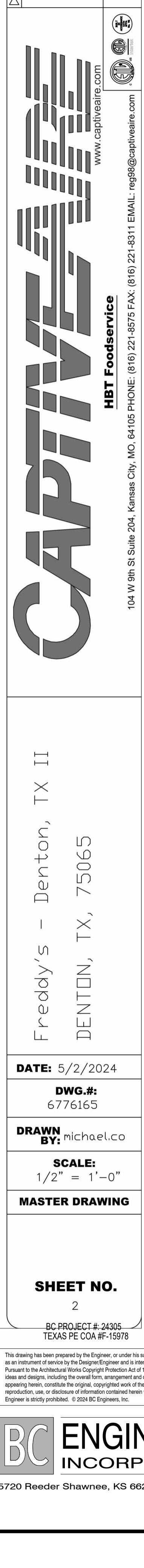
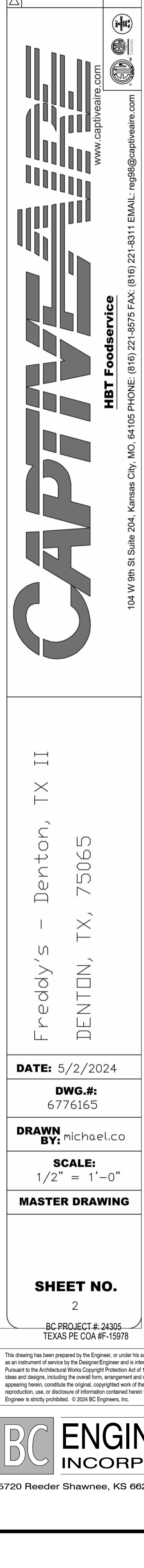
LEGEND - FIRE CABINET TANK SYSTEM

- 4 GALLON TANK
- PRIMARY ACTUATOR RELEASE
- SECONDARY ACTUATOR RELEASE
- PRESSURE SUPERVISION SWITCH
- PRIMARY HOSE ASSEMBLY
- SECONDARY HOSE ASSEMBLY
- REMOTE MANUAL ACTUATION DEVICE

INCLUDES: FIELD INSTALLATION AND HOOKUP DURING NORMAL BUSINESS HOURS BY CERTIFIED INSTALLERS ONLY IN THE LOCATION NOTED ABOVE. TWO SITE VISITS ONLY: ONE VISIT TO SET PULL STATION & SYSTEM HOOKUP AND ONE VISIT FOR ONE TEST. ADDITIONAL VISITS WILL RESULT IN ADDITIONAL CHARGES. ONE MECHANICAL OR ELECTRICAL GAS VALVE PER SYSTEM AT A MAXIMUM SIZE OF 2" PERMIT, AND SYSTEM TEST. EXCLUDES: LAMIN LABOR & PREVAILING WAGE CLAUSE & WAGES WILL BE ADDED IF APPLICABLE, GAS VALVE INSTALLATION, ELECTRICAL HOOKUP AND CONNECTIONS, HANGING OF FIRE CABINET, SPLIT TRIP, HANDHELD EXTINGUISHER(S), ON-SITE RE-PIPING DUE TO EQUIPMENT LAYOUT CHANGES.

NOTES

- FIELD PIPE DROPS AS SHOWN
- PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY GAS
- FIELD INSTALLED DROP FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED
- SHIP LOOSE DROP FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED
- RELIEFATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELIVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION
- IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE
- FACTORY PIPING EXTENDS A MAXIMUM OF 6' ABOVE THE TOP OF THE HOOD.
- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.
- THIS FIRE SYSTEM COMPLIES WITH UL 300 REQUIREMENTS.
- DL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS



GAS VALVES AND STRAINERS															
TYPE	SIZE	VOLTAGE	GAS VALVE SIZING		GAS VALVE DIMENSIONS						INSTALLATION	PART NUMBERS			
			MIN. INLET PRESSURE	MAX. INLET PRESSURE	FLOW AT 1 IN.W.C. DROP PROPANE	FLOW AT 1 IN.W.C. DROP NATURAL GAS	DIM "A"	DIM "B"	DIM "C"	DIM "D"			DIM "E"	DIM "F"	DIM "G"
ELECTRICAL	1-1/4"	120 VAC	0.5 PSI (0 IN.W.C.)	3 PSI (1.38 IN.W.C.)	1,925,000 BTU/HR	1,240,100 BTU/HR	7-5/8"	6-3/8"	3-1/8"	5-15/16"	13-1/2"	12-1/16"	HORIZONTAL/VERTICAL	8214265 4417666	GAS NATURAL GAS STRAINER KIT (SC)GVA1-1/4

SYSTEM REQUIRES A MINIMUM OF 7 FT OF EQUIVALENT PIPE LENGTH BETWEEN TANK AND APPLIANCE NOZZLE FOR EACH APPLIANCE. EACH 90 DEGREE ELBOW ADDS 13 FT OF EQUIVALENT LENGTH. SEE MANUAL FOR DETAILS.

FIRE SYSTEM INFORMATION - JOB#6276165				
FIRE SYSTEM NO.	TAG	TYPE	SIZE	MAX. FPI
1		TANK FS	40/40/40	60

INSTALLATION				
SYSTEM	LOCATION	DN	HOOD	
FIRE CABINET LEFT	LEFT	HOOD 1		

GAS VALVE(S)			
FIRE SYSTEM NO.	TAG	TYPE	SUPPLIED BY
1		SC ELECTRICAL	L250

FIRE SYSTEM PARTS LIST KEY				
FIRE SYSTEM NO.	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST.
0	-	TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
0	-	TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
0	-	10-F28021-38144-OT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO. CLOSE ON TEMP RISE AT 360°F.	2	0
0	-	28-00000 QUIK SEAL - 1/2" O.D.	2	0
0	-	361091 3/8" BRASS FLUG	3	0
0	-	4429153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW, BRASS.	3	0
0	-	4429423 1/2" X 1/4" BRASS REDUCING BUSHING	2	0
0	-	79425 3/8" NPT FEMALE TO 1/2" MALE PROGRESS ADAPTER	3	0
0	-	79525 1/2" 90 PRO-PRESS ELBOW WITH 1/2" NPT FEMALE CONNECTION, VIEGA.	2	0
0	-	79580 1/2" X 1/2" PRO-PRESS TEE X 1/2" NPT FEMALE CONNECTION, VIEGA.	3	0
0	-	87-10040-000 SECONDARY ACTUATOR VALVE (SVA) - SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION	2	0
0	-	87-10040-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5' BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION.	2	0
0	-	87-30001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	3	0
0	-	87-30003-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLID END ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION.	1	0
0	-	87-30010-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION	12	0
0	-	90054555C PRO PRESS 1/2 PRESS X PRESS 90 ELBOW L.B.	9	0
0	-	9097200PC PRO PRESS P0611 1/2 PRESS TEE L.B.	9	0
0	-	98824113 HARDWARE, DATA/LOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	6	0
0	-	A0034332 JUNCTION BOX FOR MANUAL PULL STATION 1.5" DEEP BACK BOX, RED COLOR.	1	0
0	-	A3484 1/4" NPT SCHROEDER VALVE AND CAP, JB INDUSTRIES, 1/4" FLARE X 1/4" NPT HALF UNION USED ON TANK SERVICE POST.	2	0
0	-	B1145 3/8" BLACK IRON 90 ELL.	4	0
0	-	C81-22.5 CHROME PLATED PIPE FITTING 3/8" NPT 22.5 DEGREE ELBOW.	2	0
0	-	DATAN/LOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	3	0
0	-	SLPCDN-03FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN END TO END HOODS WITH LESS THAN A 9" GAP. KIT CONTAINS 5 FEET OF BLACK MG WIRE, 5 FEET OF TAN MG WIRE, 3 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	1	0
0	-	SLPCDN-30FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN HOODS WITH UP TO 30' GAP. KIT CONTAINS 32 FEET OF BLACK MG WIRE, 26 FEET OF TAN MG WIRE, 20 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	2	0
0	-	TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	9	0
0	-	TFS-LTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	3	0
0	-	VK-28952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	3	0
16	-	16 - 79210 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	10	0
16	-	16 - DL-F NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE).	10	0
26	-	26 - 05A-3/8 QUIK SEAL - 3/8" O.D.	10	0
34	-	34 - A0034331 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT, RED COLOR.	1	0

RECESSED ROUND LED FIXTURE AND LED LIGHT, 3500 K WARM OUTPUT.

1" LAYER OF INSULATION FACTORY INSTALLED ON TOP OF HOOD MEETS 6 INCH REQUIREMENTS FOR CLEARANCE TO COMBUSTIBLE SURFACE.

FIELD WRAPPER 360° HIGH (SEE HOOD OPTIONS TABLE).

EXHAUST RISER, HANGING ANGLE.

16" CARTRIDGE SOLID FILTER WITH HOOD.

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GREASE DRAIN WITH REMOVABLE CLIP, LEFT AND RIGHT QUARTER END PANELS.

EQUIPMENT BY OTHER.

SECTION VIEW - MODEL 5424ND-2 HOOD - #1

SECTION VIEW - MODEL 5424ND-2 HOOD - #2

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RIGHT END PANEL.

EQUIPMENT BY OTHER.

SECTION VIEW - MODEL 5424ND-2 HOOD - #2

RECESSED ROUND LED FIXTURE AND LED LIGHT, 3500 K WARM OUTPUT.

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RIGHT END PANEL.

EQUIPMENT BY OTHER.

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RIGHT END PANEL.

EQUIPMENT BY OTHER.

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RIGHT END PANEL.

EQUIPMENT BY OTHER.

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RIGHT END PANEL.

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RIGHT END PANEL.

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RIGHT END PANEL.

EQUIPMENT BY OTHER.

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EQUIPMENT BY OTHER.

SECTION VIEW - MODEL 5424ND-2 HOOD - #1

RECESSED ROUND LED FIXTURE AND LED LIGHT, 3500 K WARM OUTPUT.

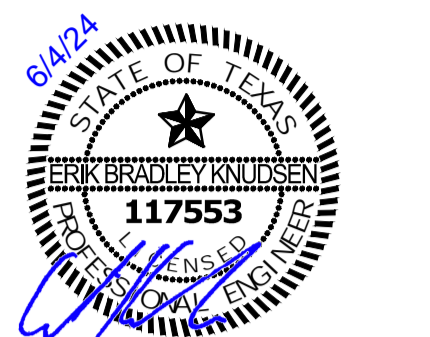
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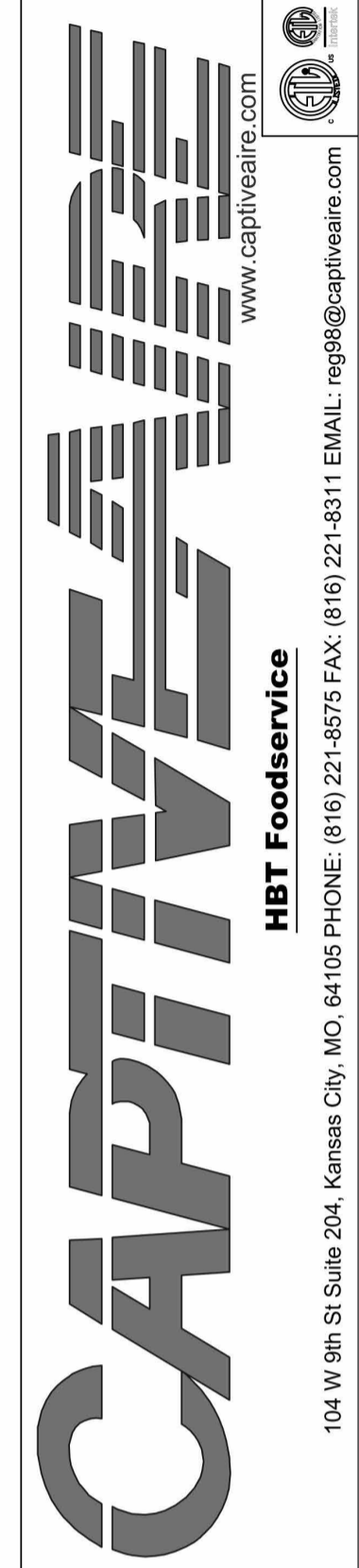
a new restaurant for:
 Freddy's
 Hunter's Creek & Teasley Lane - Lot 2A
 Denton, TX

date
 06.04.2024
 drawn by
 Author
 checked by
 Checker
 revisions

sheet number
 M-302

drawing type
 Permit
 project number
 23006-16

REVISIONS	
DESCRIPTION	DATE



Freddy's - Denton, TX II
 DENTON, TX, 75065

DATE: 5/2/2024
 DWG.#:
 6776165
 DRAWN BY: michael.co
 SCALE:
 1/2" = 1'-0"
 MASTER DRAWING
 SHEET NO.
 3

BC PROJECT # 24805
 TEXAS PE COA #F-15978
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EXHAUST FAN INFORMATION - JOB#6776165																
FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL.	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SDNES
1	ITEM 74.1	1	CASRE18DD	CAPTIVEAIRE	1600	1.400	1105	ODP/PRODM	1.000	0.6270	3	208	3.8	908 FPM	296	15.7
2	ITEM 74.2	1	DUS9FA	CAPTIVEAIRE	775	1.250	1532	TEAD-CCM	0.500	0.3990	1	115	6.3	295 FPM	103	16.4

DOAS/RTU FAN SCHEDULE - JOB#6776165																																			
FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	FAN INFORMATION				ELECTRICAL INFORMATION				CEILING INFORMATION				REHEAT INFORMATION				GAS HEAT INFORMATION				NOTES										
					BLOWER	RETURN AIR CFM	MAX. OUTSIDE AIR CFM	TOTAL CFM	WEIGHT (LBS)	ESP	HP	PHASE	VOLT	NCA	HDCP	DISCHARGE DB	MIXED AIR DB	LEAVING AIR DB	TOTAL CAPACITY	ICEER	DISCHARGE DB	W/B DESIRED	MAX	REHEAT CAPACITY		REHEAT RATE	GAS TYPE	INPUT BTU/H	OUTPUT BTU/H	TEMP RISE	REQUIRED INPUT GAS PRESSURE				
3	ITEM 74.3	1	CAS-HVAC3-1200-15-1ST	CAPTIVEAIRE	15P-3	0	2300	2300	2436	0.500	0.00	3	208	59.2A	60A	83.7°F	77.5°F	77.5°F	55.3°F	52.1°F	186.0 MBH	68.9 MBH	18.8	5.7	70.0°F	59.2°F	37.1 MBH	29.6 MBH	105.5 LBS/HR	NATURAL	166836	135137	51°F	7 IN. W.C. - 14 IN. W.C.	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15

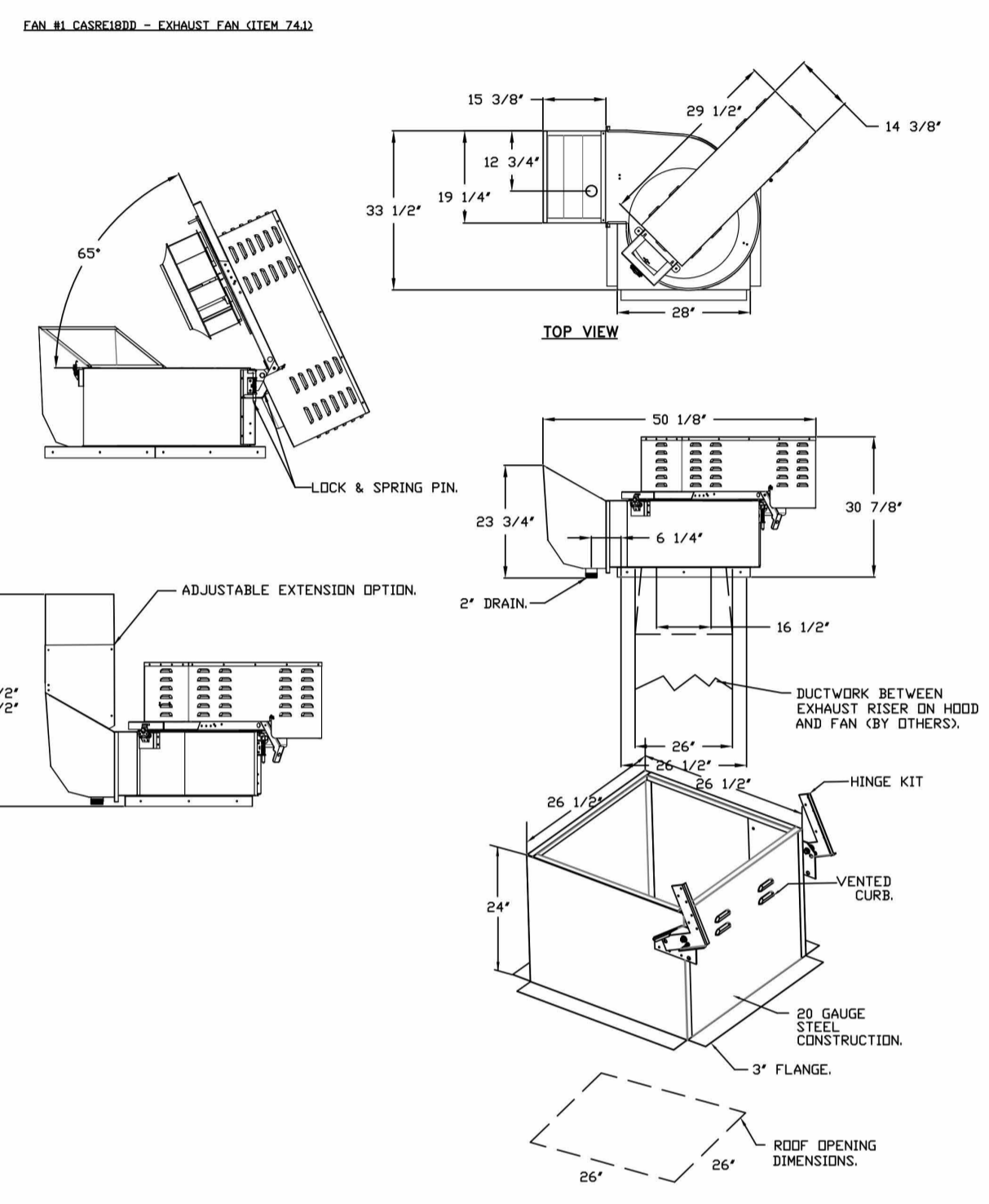
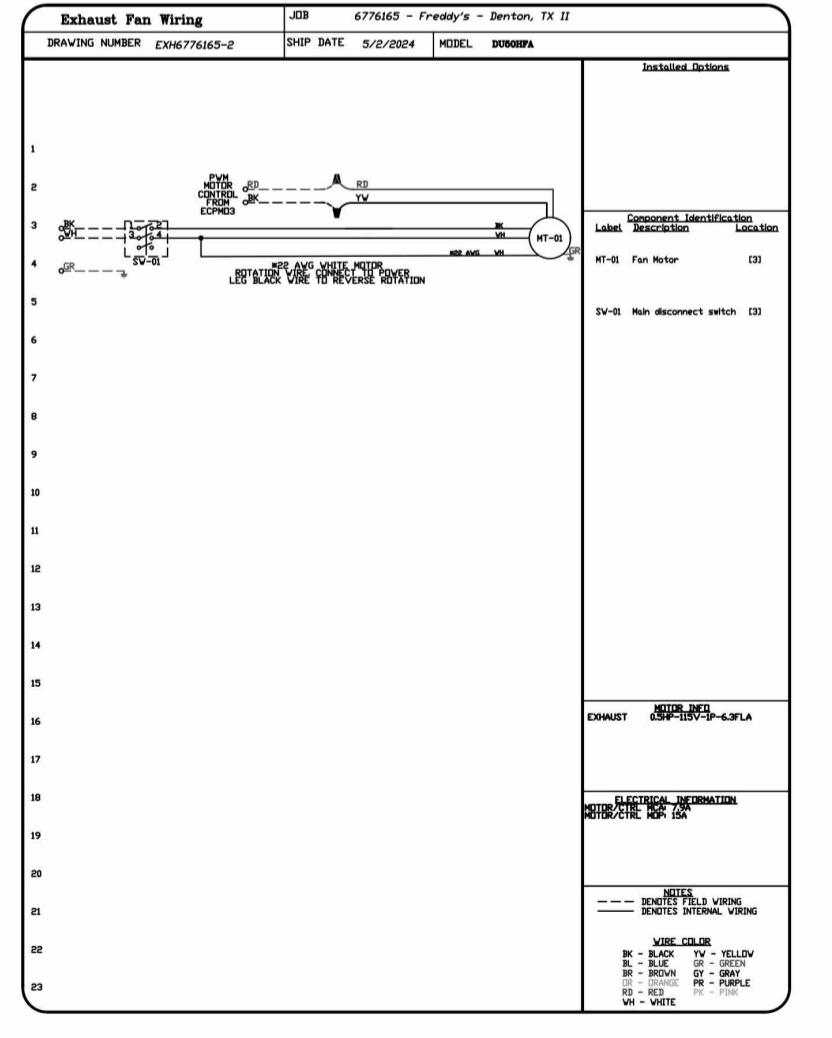
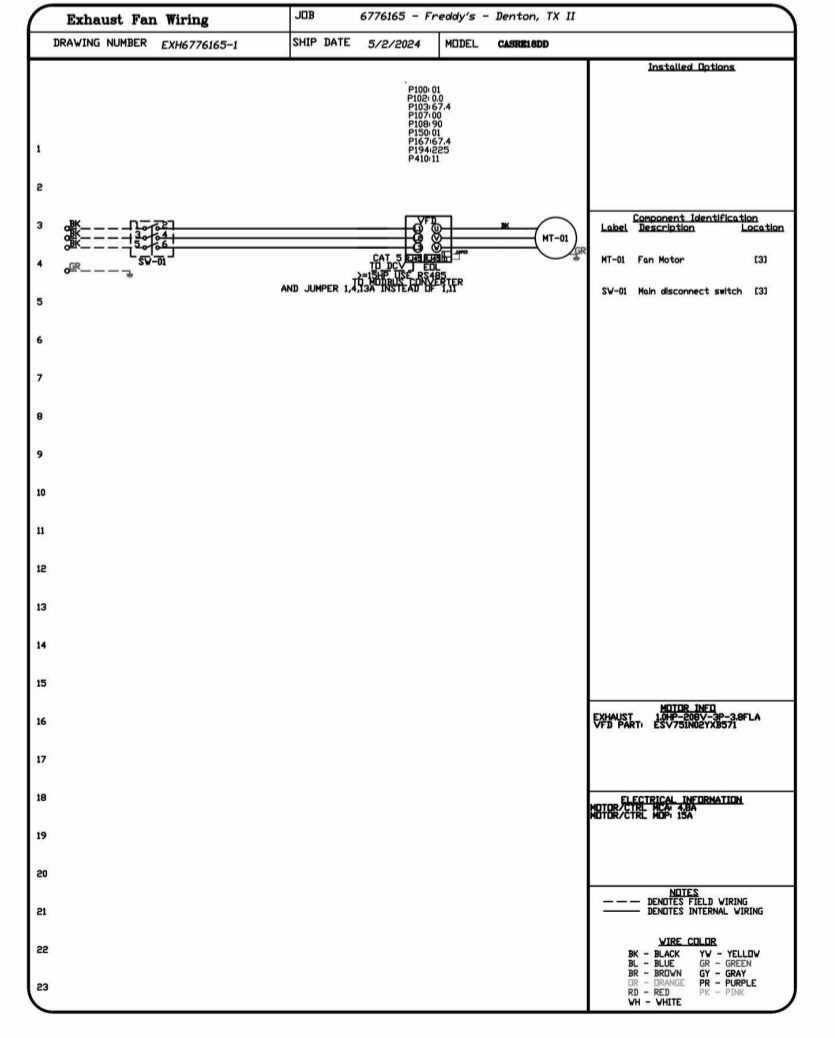
- NOTES:
1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL.
 2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE.
 3. INTERFERED MONITORING BY CELLULAR CONNECTION BY MANUFACTURER.
 4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE.
 5. 10 MOTOR CONDENSING FAN. CELLULAR CONNECTION BY MANUFACTURER.
 6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE.
 7. SUCTION LINE ACCESSOR.
 8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY, 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER.
 9. AVERAGING INTAKE CFM AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT).
 10. 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 20GA EXTERIOR W/ 14GA BASE.
 11. 80% EFFICIENT FURNACE WITH MODULATING BURNER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 64 TURNDOWN WITH NG AND 54 TURNDOWN WITH LP.
 12. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE.
 13. FULLY MODULATING HOT GAS RETURN.
 14. HAIL GUARD FOR CONDENSING COIL.
 15. DOWN DISCHARGE/DOWN RETURN.

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	ITEM 74.1	1	UTILITY SET GREASE CUP
			REB - DISCHARGE EXTENSION ASSEMBLY WITH HARDWARE
			FAN BASE CERAMIC SEAL - CASREB - INSTALLED AT PLANT - FOR GREASE DUCTS
			UNIT MOUNTED VFD FOR USE WITH ECPM03
			VFD MOUNTING BRACKET FOR CASREBDD
			2 YEAR PARTS WARRANTY
			GREASE BOX
			UPBLAST FAN WHEEL ACCESS PORT
			36" TALL STRAIGHT WIND BAND EXTENSION 13 (CHIPS LOOSE)
			GUY LINE BELTS - USED FOR 3 GUY LINE TIE OFF POINTS
2	ITEM 74.2	1	FAN BASE CERAMIC SEAL - DU/DRSD9FA - INSTALLED AT PLANT - FOR GREASE DUCTS
			ECH WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREVIRE (TELECO MOTOR), CCV ROTATION
			2 YEAR PARTS WARRANTY
			INLET PRESSURE GAUGE, 0-35"
			MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
			RTU TOTAL CFM MONITORING
			INTAKE FIRESTAT SET TO 135°F
			FREEZESTAT
			DISCHARGE FIRESTAT SET TO 240°F
			SNIP LOOSE GAS STRAINER 3/4"
3	ITEM 74.3	1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU 750VA TRANSFORMER USED IF A NON-DCV PREVIRE CONTROL THIS UNIT. THE ROL, M4, PM, OR PREVIRE OPTION MUST BE SELECTED DOES NOT PROVIDE SUPPLY STARTER IN PREVIRE
			CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
			2" MERV 13 FILTERS FOR RTU3 QTY: 4)
			2" MERV 8 FILTERS FOR RTU3 QTY: 4)
			OVERHEAT STAT
			OCCUPIED SCHEDULING
			RTU3 CURB DUCT HANGER
			EVACUATE FIRE INPUT
			RTU INTAKE/RETURN DAMPER - MANUAL CONTROL VIA HMI
			RTU3 HAIL GUARD
RTU3 DOWN RETURN			
RTU RETURN MOUNTED SMOKE DETECTOR AND SAMPLING TUBE - FACTORY INSTALLED			
CLOGGED FILTER SWITCH - NOTIFICATION ON HMI			
15 TON MODULATING COOLING OPTION, 208/230V, R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS			
15 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL			
UNIT MOUNTED VFD CONFIGURED FOR DCV			
15 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)			

FAN ACCESSORIES							
FAN UNIT NO	TAG	EXHAUST	SUPPLY	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE DAMPER	MEORIZED WALL MOUNT
1	ITEM 74.1	YES					
2	ITEM 74.2	YES					

CURB ASSEMBLIES					
NO	FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	ITEM 74.1	52 LBS	CURB	26.500"W X 26.500"L X 24.000"H VENTED HINGED.
2	# 2	ITEM 74.2	31 LBS	CURB	19.500"W X 19.500"L X 20.000"H VENTED HINGED.
3	# 3	ITEM 74.3	104 LBS	CURB	59.500"W X 59.500"L X 14.000"H INSULATED.

HMI SCHEDULE					
UNIT NUMBER	HMI #	HMI LOCATION	TEMP AVERAGING	MODBUS ADDRESS	
FAN #3	HMI #1 - UNIT	HMI # 1	MOUNTED IN UNIT	NOT AVERAGED	55
FAN #3	HMI #2 - SPACE	HMI # 1	KITCHEN	AVERAGED	56
FAN #3	HMI #3 - SPACE	HMI # 2	OFFICE	NOT AVERAGED	57

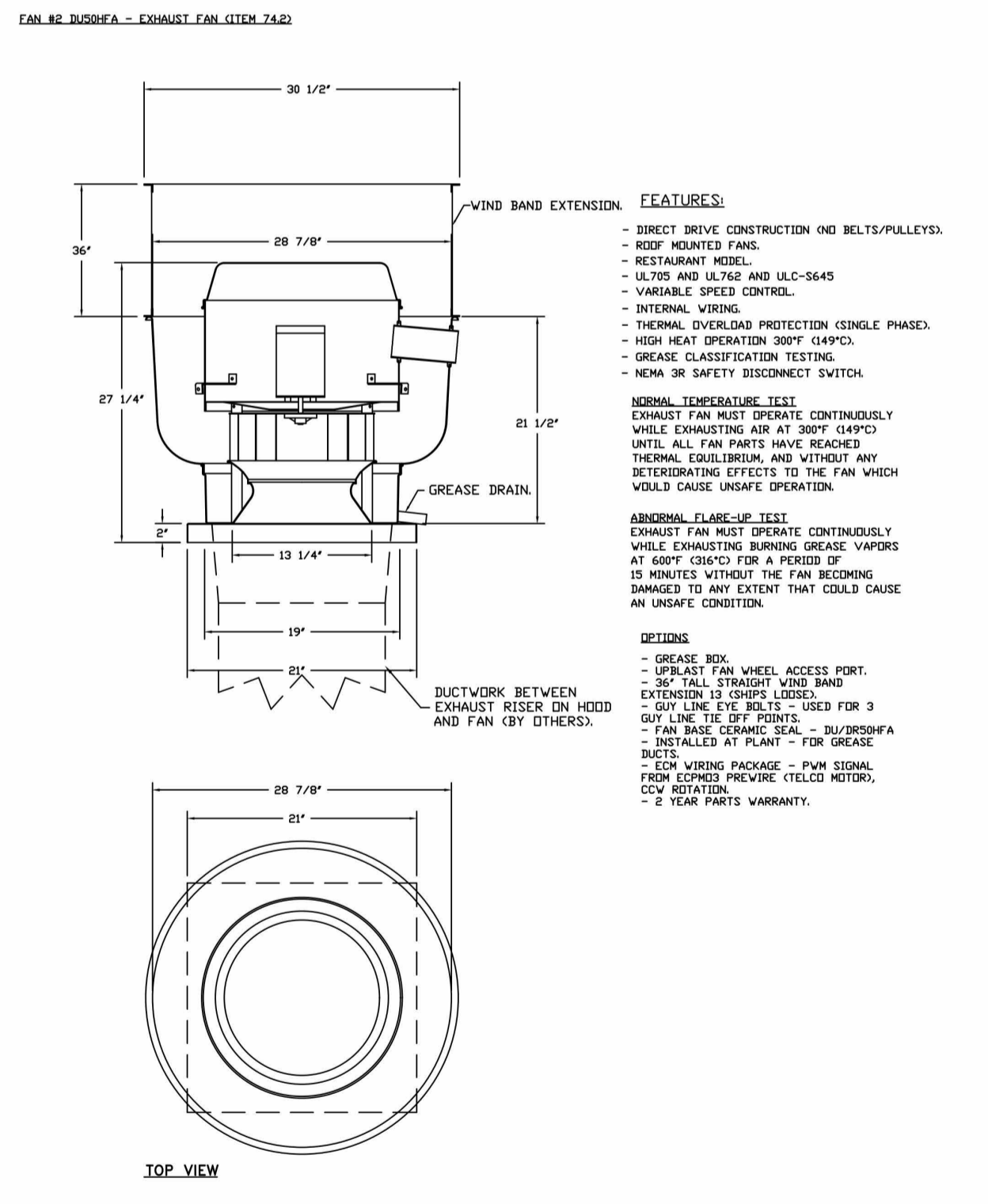


- FEATURES:
- ROOF MOUNTED FAN.
 - RESTAURANT MODEL.
 - UL762 AND ILLC-5645.
 - HIGH HEAT OPERATION DIRECT DRIVE 300°F (149°C).
 - HEAT SLINGER.
 - GREASE CLASSIFICATION TESTING.
 - TILT OUT WHEEL.
 - LOCKING PIN FOR POWER PACK.
 - MOTOR WEATHER COVER.
 - INTERLOCKED DISCONNECT SWITCH.
 - NEMA 4X SAFETY DISCONNECT SWITCH.

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

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

- OPTIONS:
- UTILITY SET GREASE CUP.
 - REB - DISCHARGE EXTENSION ASSEMBLY WITH HARDWARE.
 - FAN BASE CERAMIC SEAL - CASREB - INSTALLED AT PLANT - FOR GREASE DUCTS.
 - UNIT MOUNTED VFD FOR USE WITH ECPM03.
 - VFD MOUNTING BRACKET FOR CASREBDD.
 - 2 YEAR PARTS WARRANTY.

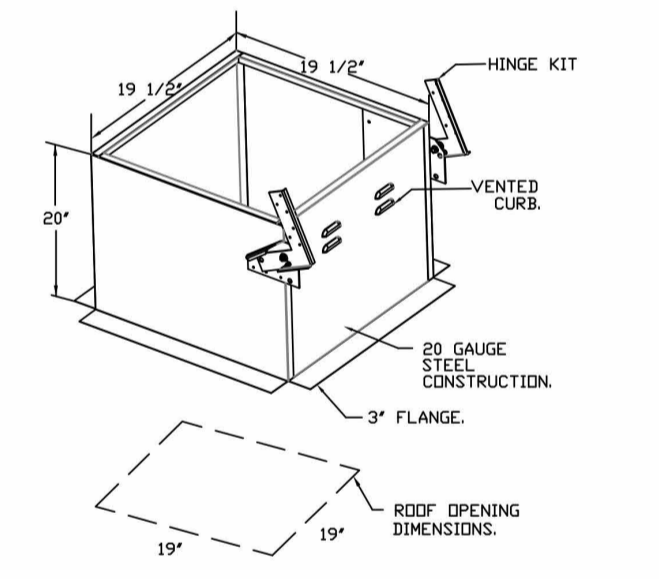


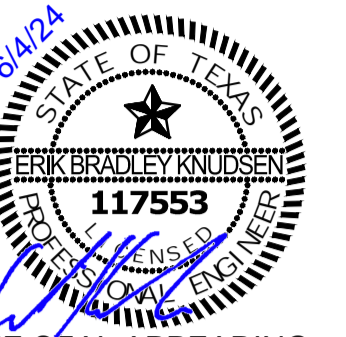
- FEATURES:
- DIRECT DRIVE CONSTRUCTION AND BELTS/PULLEYS.
 - RESTAURANT MODEL.
 - UL762 AND ILLC-5645.
 - VARIABLE SPEED CONTROL.
 - INTERNAL WIRING.
 - THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
 - HIGH HEAT OPERATION 300°F (149°C).
 - GREASE CLASSIFICATION TESTING.
 - NEMA 3R SAFETY DISCONNECT SWITCH.

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

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

- OPTIONS:
- GREASE BOX.
 - UPBLAST FAN WHEEL ACCESS PORT.
 - 36" TALL STRAIGHT WIND BAND EXTENSION 13 (CHIPS LOOSE).
 - GUY LINE BELTS - USED FOR 3 GUY LINE TIE OFF POINTS.
 - FAN BASE CERAMIC SEAL - DU/DRSD9FA - INSTALLED AT PLANT - FOR GREASE DUCTS.
 - ECH WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREVIRE (TELECO MOTOR), CCV ROTATION.
 - 2 YEAR PARTS WARRANTY.





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a new restaurant for:
Freddy's
Hunter's Creek & Teasley Lane - Lot 2A
Denton, TX

date
06.04.2024
drawn by
Author
checked by
Checker
revisions

sheet number

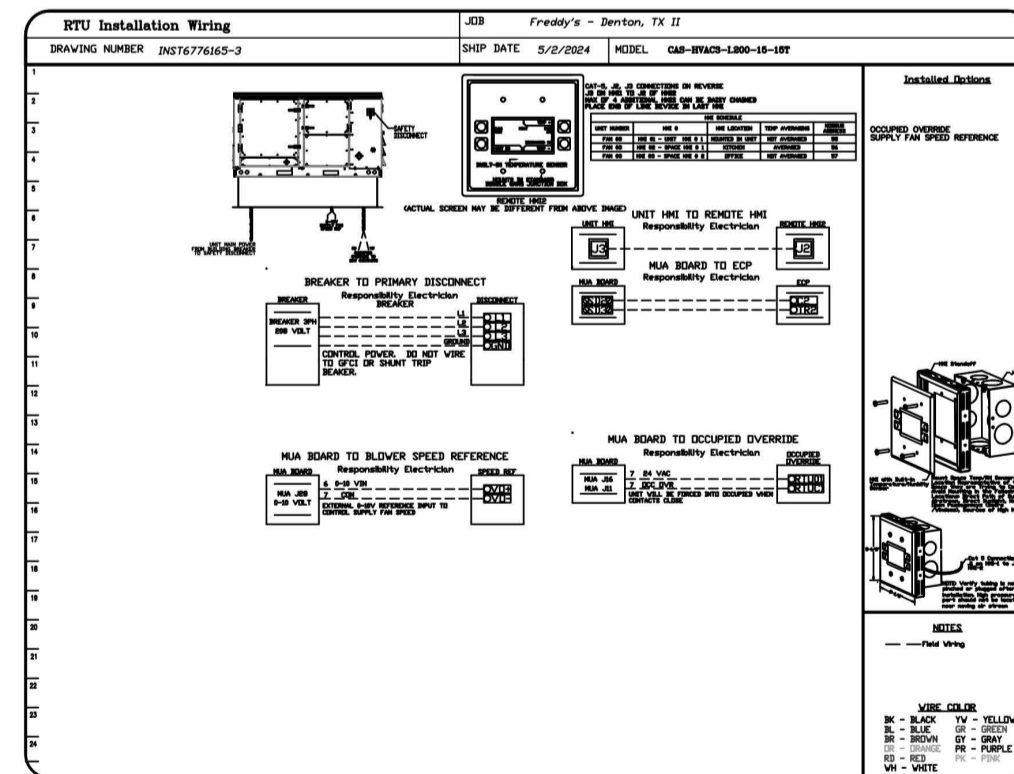
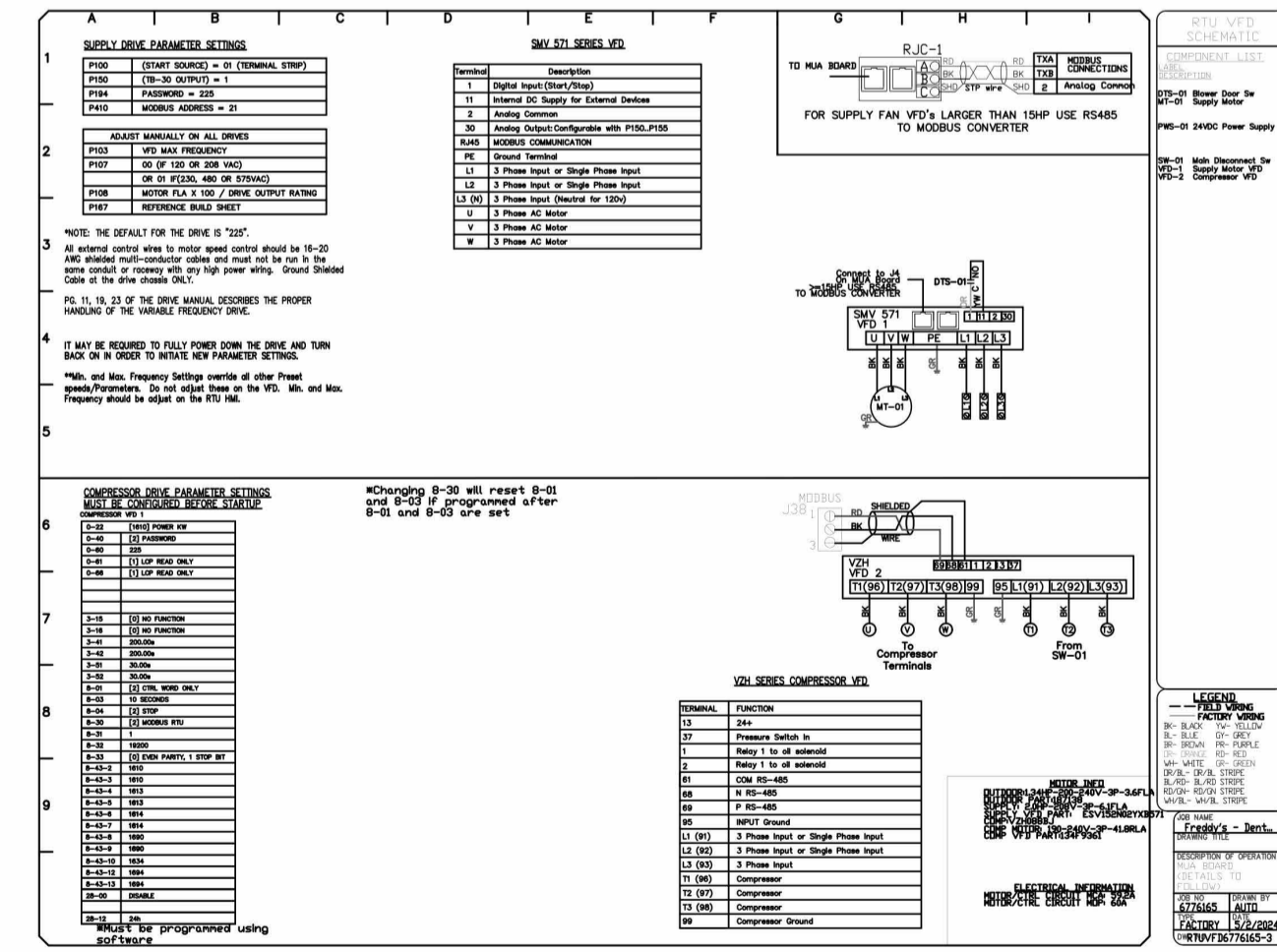
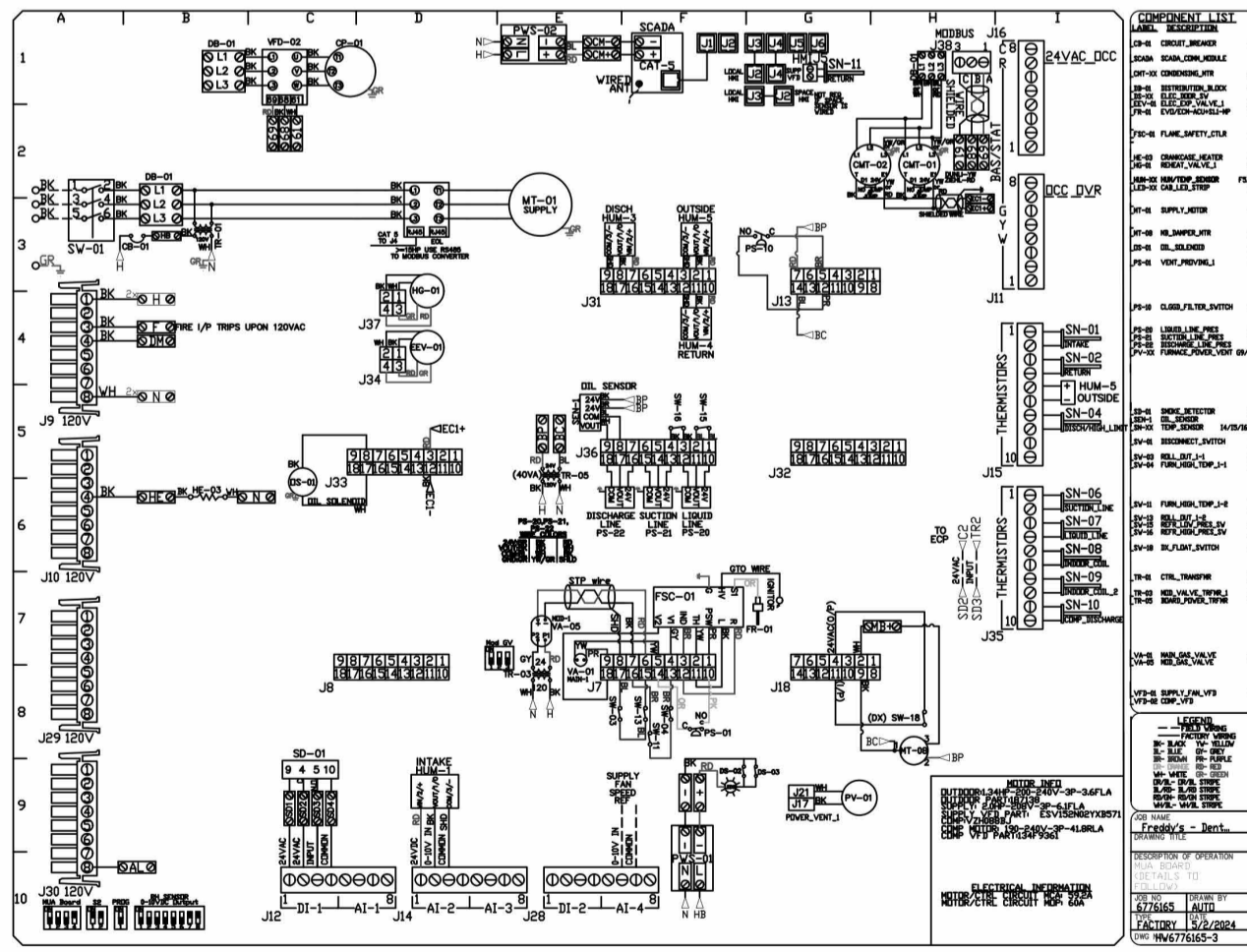
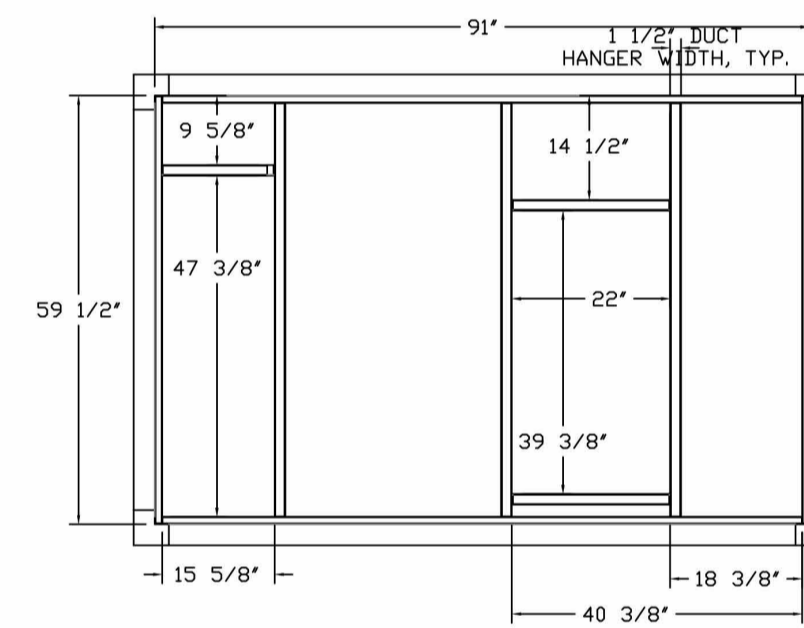
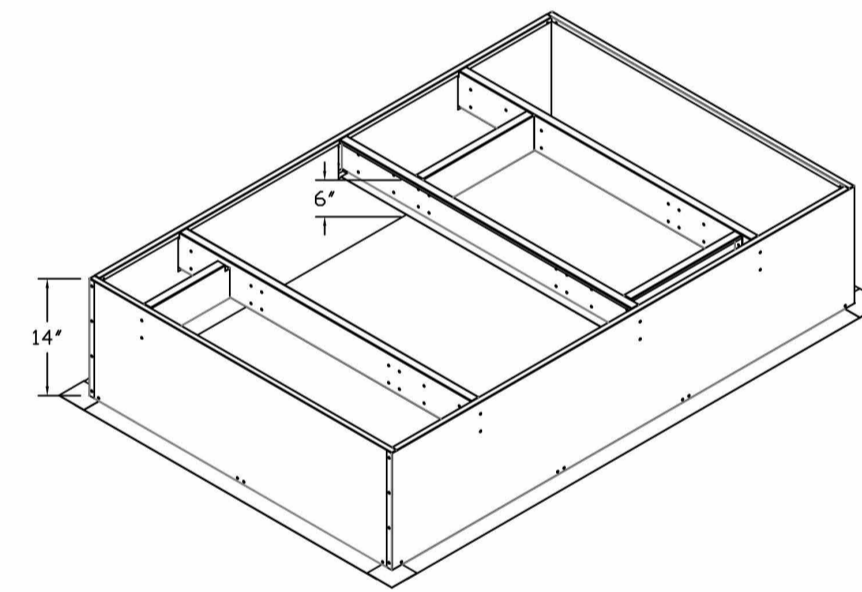
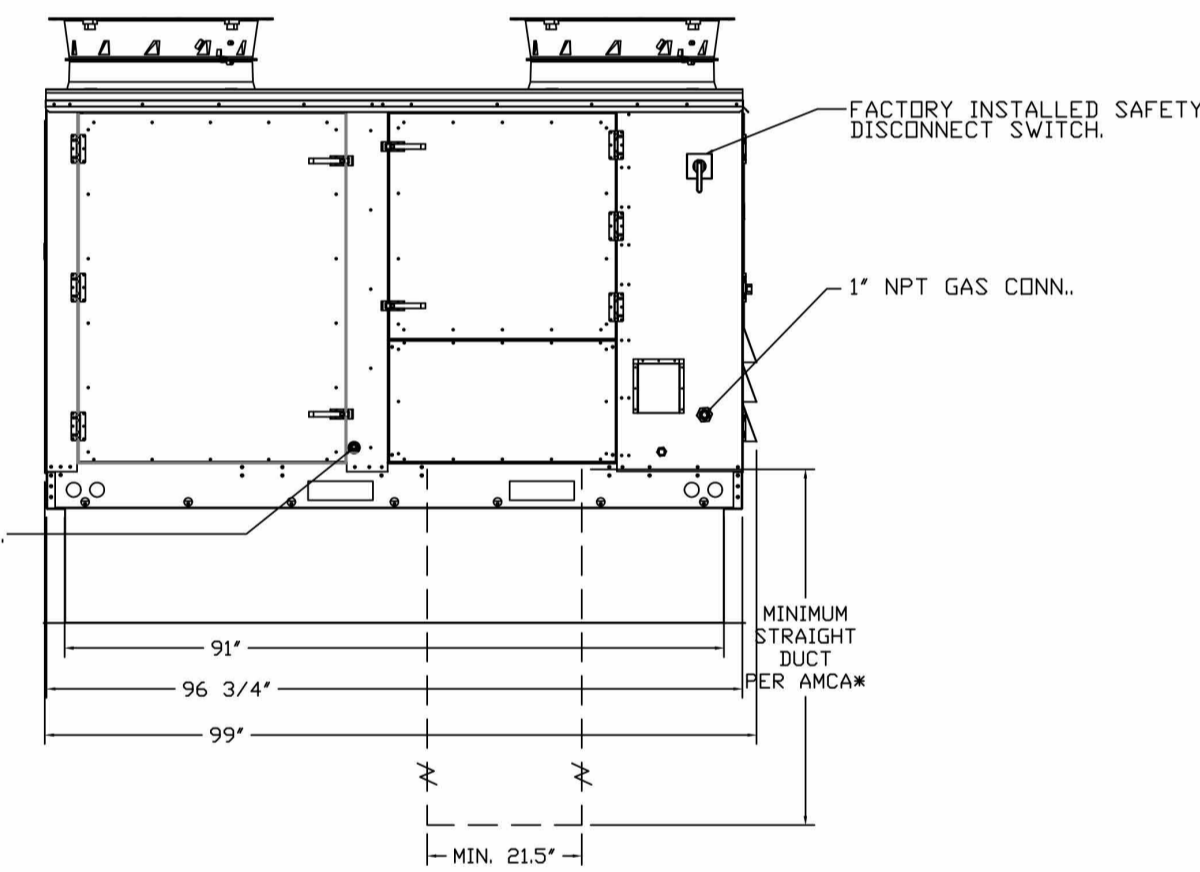
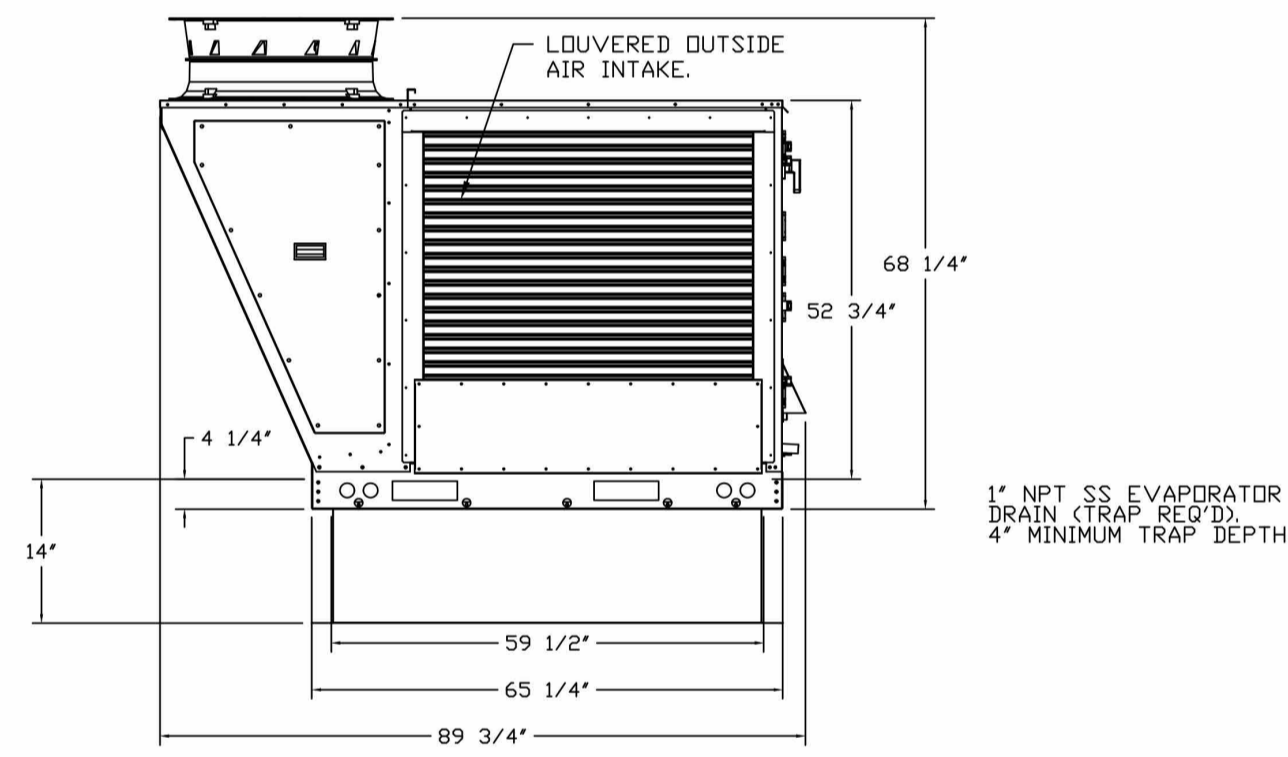
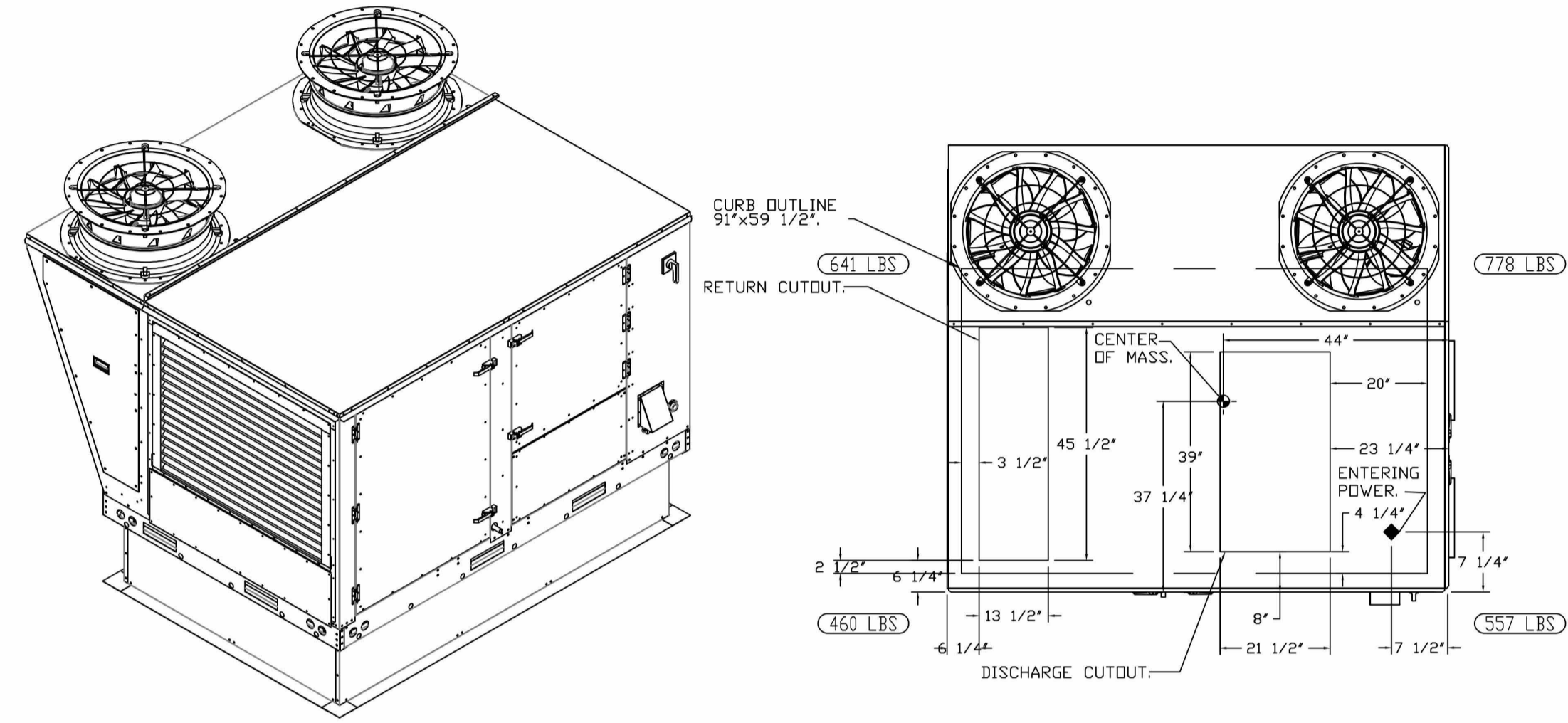
M-303

drawing type
Permit
project number
23006-16

FAN #3 CAS-HVAC3-L200-15-15T - HEATER (ITEM 74.3)

- NOTES:
- DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
 - DENOTES CORNER WEIGHT.
 - ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.
 - CONNECTION FROM BREAKER TO UNITS SAFETY DISCONNECT SWITCH TO BE COPPER WIRE ONLY.

*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 21.5' x 39'.



REVISIONS	
DESCRIPTION	DATE

CAPTIVE
www.captiveair.com
HBT Foodservice
104 W 9th St Suite 204, Kansas City, MO, 64105 PHONE: (816) 221-8311 EMAIL: reg98@captiveair.com

Freddy's - Denton, TX II
DENTON, TX, 75065

DATE: 5/2/2024
DWG.#: 6776165
DRAWN BY: michael.co
SCALE: 1/2" = 1'-0"
MASTER DRAWING

SHEET NO. 4

BC PROJECT # 24305
TEXAS PE COA #F-15878

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