




PACKAGED ROOF TOP UNIT SCHEDULE

UNIT SYMBOL	RTU 1 (NEW)	RTU 2 (NEW)	RTU 3 (NEW)
LOCATION	ROOF	ROOF	ROOF
BLOWER	CFM	2,000 (5-TON)	4,000 (10-TON)
	OUTSIDE AIR (CFM)	500	750
	TSP (IN W.G.)	0.6"	0.7"
COOLING	BHP/HP	671/1.0	1,902/75
	TOTAL (BTU/HR)	65,170	115,550
	SENSIBLE (BTU/HR)	47,670	93,240
HEATING	AMBIENT (F)	91.0	91.0
	COIL ENTERING	79.8 DB/67.0 WB	78.80 DB/66.30 WB
	COIL LEAVING	57.73 DB/56.64 WB	57.22 DB/56.83 WB
DEHUMIDIFICATION	CAPACITY (BTU/HR)	130,000 (INPUT) / 106,600 (OUTPUT)	250,000 (INPUT) / 200,000 (OUTPUT)
	EAT/LAT	51.8/100.2	56.3/102.8
	HOT GAS REHEAT (MBH)	38.45	91.71
ELECTRICAL	COOLING LDB/DPT	75.45/55.96	78.35/56.59
	TEMP RISE (F)	17.72	21.13
	MOISTURE REMOVAL RATE (GPH)	1.98	2.76
ELECTRICAL	POWER SUPPLY	208V/3PH/60HZ	208V/3PH/60HZ
	COMPRESSOR (RLA)	15.9/13.2	19.6/13.2
	CONDENSER MOTOR (FLA)	2.5	2.7
	EVAPORATOR MOTOR (FLA)	3.4	7.3
ELECTRICAL	MIN. CIRCUIT AMPCACITY	26, HACR = 40	48, HACR = 60
	CONTACT: DEREK VAN RIPER PHONE: 714-883-0474 E-MAIL: DEREK.VANRIPER@TRANE.COM	BY TRANE YHC060 DOWN DISCHARGE COMPLETE WITH 24" ROOF MOUNT CURB, ELECTRONIC PROGRAMMABLE THERMOSTAT, HUMIDITY SENSOR, ENTHALPY ECONOMIZER WITH BAROMETRIC RELIEF. COMB. FAN MOTOR 0.48 AMPS (DOES NOT OPERATE WITH COMPRESSOR). OPER. WT.: 199 LBS APPROX. SEER=NA EER=11.9, AFUE=81.7%	BY TRANE YHC120 DOWN DISCHARGE COMPLETE WITH 24" ROOF MOUNT CURB, ELECTRONIC PROGRAMMABLE THERMOSTAT, HUMIDITY SENSOR, ENTHALPY ECONOMIZER WITH BAROMETRIC RELIEF. COMB. FAN MOTOR 0.48 AMPS (DOES NOT OPERATE WITH COMPRESSOR). OPER. WT.: 1608 LBS APPROX. SEER=15.2 EER=12.4, AFUE=80%
	BY TRANE YHC120 DOWN DISCHARGE COMPLETE WITH 24" ROOF MOUNT CURB, ELECTRONIC PROGRAMMABLE THERMOSTAT, HUMIDITY SENSOR, ENTHALPY ECONOMIZER WITH BAROMETRIC RELIEF. COMB. FAN MOTOR 0.48 AMPS (DOES NOT OPERATE WITH COMPRESSOR). OPER. WT.: 1608 LBS APPROX. SEER=15.2 EER=12.4, AFUE=80%	BY TRANE YHC120 DOWN DISCHARGE COMPLETE WITH 24" ROOF MOUNT CURB, ELECTRONIC PROGRAMMABLE THERMOSTAT, HUMIDITY SENSOR, ENTHALPY ECONOMIZER WITH BAROMETRIC RELIEF. COMB. FAN MOTOR 0.48 AMPS (DOES NOT OPERATE WITH COMPRESSOR). OPER. WT.: 1608 LBS APPROX. SEER=15.2 EER=12.4, AFUE=80%	
ALL ITEMS RELATED TO HVAC SYSTEM SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR. CONTACT TRANE REPRESENTATIVE ABOVE.			
- THERMOSTATS: REMOTE SENSOR TYPE, 24/7 PROGRAMMABLE AND CAPABLE OF OPERATING ROOFTOP UNITS AND ACCESSORIES "TRANE" BAYSENS119A PROVIDE REMOTE SENSOR BAYSENS077A FOR EACH THERMOSTAT			
- DUCT MOUNTED SMOKE DETECTORS: IONIZATION TYPE/UL LISTED, CSFM CERTIFIED, 24 VAC, BY EDWARDS, DH HOUSING WITH 1551F SENSOR. MECHANICAL CONTRACTOR SHALL ADDITIONALLY PROVIDE AND INSTALL ALL REMOTE RESETS, STROBES, AND ALARMS IF REQUIRED BY CODE & INSPECTOR.			
CONTRACTOR TO PROVIDE NEW 2" PLEATED FILTERS AT TURNOVER.			
NOTE:			
1. 1.9 AMPS (5 TON) AND 3.8 AMPS (7.5 AND 10 TON) ECONOMIZER INCLUDED IN ELECTRICAL TOTAL MCA PER MANUFACTURER'S LITERATURE.			
2. UNIT WEIGHTS ABOVE INCLUDE ACCESSORIES AND CURB.			
3. FACTORY OPTIONS SHALL INCLUDE HARD GUARD PROTECTION FOR UNIT.			
4. FACTORY OPTIONS SHALL INCLUDE FACTORY INSTALLED DISCONNECTS AND CONVENIENCE OUTLETS (FIELD POWERED REFER TO ELECTRICAL DRAWING).			
5. PROVIDE THRU THE BASE ELECTRICAL CONNECTION KIT #CRBT#MPWR002A01 FOR ALL UNITS.			
6. PROVIDE ECONOMIZER FAULT DETECTION FOR ALL UNITS.			

EXHAUST FAN SCHEDULE

FAN NO.				
LOCATION		ROOF	ROOF	ROOF
AREA SERVED		KITCHEN GREASE EXHAUST HOOD #1	KITCHEN GREASE EXHAUST HOOD #2	RESTROOMS
FAN DUTY		AIR EXHAUST	AIR EXHAUST	AIR EXHAUST
FAN TYPE		CENTRIFUGAL BELT-DRIVEN	CENTRIFUGAL BELT-DRIVEN	CENTRIFUGAL BELT-DRIVEN
FAN ARRANGEMENT		UPBLAST	UPBLAST	DOWNBLAST
MIN. WHEEL DIAMETER		-	-	-
PERFORMANCE	C.F.M.	3,450	3,450	450
	T.S.P.	1.25"	1.25"	0.25"
	B.H.P.	1.38	1.38	0.085
	FAN R.P.M.	1223	1223	1128
MOTOR	MOTOR H.P.	2.0	2.0	0.25
	ELEC. CHARACTERISTICS	208V/3PH/60HZ	208V/3PH/60HZ	115V/1PH/60HZ
	MOTOR R.P.M.	1725	1725	-
	MOTOR SPECIAL FEATURES	OPEN DRIP-PROOF	OPEN DRIP-PROOF	OPEN DRIP-PROOF
ACCESSORIES		1. VENTED ROOF CURB 2. HINGED AND CHAINED FAN INSTALLATION FOR DUCT ACCESS	1. VENTED ROOF CURB 2. HINGED AND CHAINED FAN INSTALLATION FOR DUCT ACCESS	1. ROOF CURB 2. BACKDRAFT DAMPER
MANUFACTURER		CAPTIVEAIRE MODEL: EABDU18 WT. 222 LBS	CAPTIVEAIRE MODEL: EABDU18 WT. 222 LBS	CAPTIVEAIRE MODEL: EABDCR7 WT. 108 LBS

NOTES:

1. KITCHEN EXHAUST FANS SHALL BE ELECTRICALLY INTERLOCKED WITH MAKE-UP AIR UNIT AND ROOFTOP UNITS.
2. FOR WIRING DIAGRAM SEE 5/M-501

HVAC CONTROL SETTINGS

EACH HVAC UNIT SHALL BE PROVIDED WITH CONTROLS AS FOLLOWS:

THERMOSTAT: TRANE COMMERCIAL PROGRAMMABLE THERMOSTAT WITH REMOTE TEMPERATURE SENSOR. SEE SHEET M-100 FOR THERMOSTAT AND SENSOR LOCATIONS.

ALL THERMOSTATS SHALL HAVE MANUAL OVERRIDE.

EACH UNIT CONTROL SHALL BE SET UP INITIALLY AS FOLLOWS:

CONTRACTOR SHALL DETERMINE OCCUPIED PERIOD FROM OWNER

FAN OPERATION SHALL BE CONTINUOUS DURING OCCUPIED PERIOD AND
CYCLE WITH COOLING/HEATING DURING UNOCCUPIED PERIOD.

PROGRAMMED SETPOINTS (FOR EACH THERMOSTAT):

COOLING UNOCCUPIED: 85°F.

HEATING OCCUPIED: 68°F.
HEATING UNOCCUPIED: 50°F.

NOTE: DEVIATIONS FROM THE ABOVE MAY RESULT IN UNACCEPTABLE AIR QUALITY, COMFORT AND/OR ENERGY CONSUMPTION.

AIR CURTAIN SCHEDULE

EQUIP.	MFR/MODEL	DESCRIPTION
(M8A)	MARS STD242-11U-0B	UNEHEATED AIR CURTAIN (SERVICE DOOR), 115/1160, WEIGHT 65 LBS. PROVIDED BY PANDA EXPRESS
(M9A)	QUICK-SERV CF-25	AIR CURTAIN (WINDOW NON-HEATED), 120/160, 20 AMP WEIGHT 30 LBS REFERENCE ARCHITECTURAL WINDOW SCHEDULE FOR HEATED OR NON-HEATED UNIT. PROVIDED BY GC.
NOTES: INSTALL ACCORDING TO MANUFACTURER'S INSTRUCTIONS.		

MA-1 CONTROL SETTINGS

EACH UNIT CONTROL SHALL BE SET UP INITIALLY AS FOLLOWS:

FAN OPERATION SHALL BE CONTINUOUS DURING COOKING OPERATION
INTERLOCK WITH KITCHEN EXHAUST FANS. REFER TO HOOD DRAWINGS.

PROGRAMMED SETPOINTS :

COOLING: 85°F.
HEATING: 55°F.

MECHANICAL SPECIFICATIONS

1. WORK INCLUDES INSTALLATION OF HVAC SYSTEMS, INCLUDING GREASE EXHAUST FANS AND MAKE-UP AIR UNIT FOR KITCHEN HOODS, SPACE HEATING/AIR CONDITIONING SYSTEMS, SUPPLY, RETURN, EXHAUST, AND GREASE EXHAUST DUCTWORK, GRILLES, REGISTERS, DIFFUSERS, COMPLETE CONTROLS SYSTEM, INTERLOCK WIRING FOR OPERATION OF KITCHEN HOODS, EXHAUST FANS, AND MAKE-UP AIR UNIT, DUCT INSULATION, AND RELATED ITEMS NECESSARY FOR A COMPLETE FUNCTIONING SYSTEM AS INDICATED ON THE PLANS. FURNISH ALL NEW MATERIALS AND EQUIPMENT UNLESS NOTED OTHERWISE (U.N.O.).
2. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT AND REQUIRED EQUIPMENT. DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. AS REQUIRED, REFER TO ARCHITECTURAL AND MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. FURNISH AND INSTALL DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY TO FACILITATE SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND EQUIPMENT SHOWN ON PLANS.
3. CODE COMPLIANCE: ALL WORK COVERED BY THIS SECTION SHALL BE IN ACCORDANCE WITH ALL LOCAL CODES AND ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION.
4. COORDINATE WORK WITH OTHER TRADES. EQUIPMENT FURNISHED BY OTHERS AND OWNER REQUIREMENTS. PROVIDE DUCT RISERS AND DROPS AS REQUIRED FOR INSTALLATION AND/OR TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK. WORK SHALL BE PERFORMED BY EXPERIENCED TRADESMEN AND THEIR WORK SHALL BE OF HIGH STANDARD ACCEPTABLE TO THE OWNER.
5. DUCTWORK: DUCT SYSTEMS SHALL BE CONSTRUCTED, INSTALLED, SEALED AND INSULATED AS PROVIDED IN THE INT'L ENERGY AND MECHANICAL CODES. SHEET METAL SHALL BE IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS. SHEET METAL SHALL BE GALVANIZED OF LOCK-FORMING QUALITY, ASTM A-525. UNLESS OTHERWISE NOTED, DUCT DIMENSIONS ON DRAWINGS ARE NET INSIDE CLEAR DIMENSIONS ON LINED DUCTS OR SHEET METAL DIMENSIONS ON UNLINED DUCTS. ALL ANGLE IRON USED FOR SUPPORT SHALL BE GALVANIZED. ROUND RIGID DUCTWORK SHALL CONFORM TO SMACNA TABLE 3-2.
6. INSTALL DUCT HIGH AS POSSIBLE WITHIN JOIST SPACE. CONSULT ARCHITECT AND ENGINEER FOR ALTERNATE ROUTING IF CONFLICT OCCURS.
7. SEAL ALL TRANSVERSE AND LONGITUDINAL DUCT SEAMS AIR-TIGHT. PROVIDE TURNING VANES AT ALL ELBOWS OR OFFSETS EXCEEDING 30 DEGREES.
8. GREASE EXHAUST SYSTEM: ALL GREASE EXHAUST DUCTS SHALL BE FABRICATED BY WELDED JOINT CONSTRUCTION OF 16 GAUGE WELDED STEEL OR 18 GAUGE STAINLESS STEEL. PROVIDE RATED ACCESS DOORS AT ALL ELBOWS AND OFFSETS NECESSARY FOR COMPLETE ROUTING OF GREASE DUCT. PROVIDE MINIMUM 30"x30" UNOBSTRUCTED ACCESS OR CLEANOUT FROM THE CEILING TO EACH ACCESS DOOR. DO NOT BLOCK ACCESS WITH PLUMBING, ELECTRICAL OR HVAC OBSTRUCTIONS. ALL ELBOWS SHALL BE LONG RADIUS. GREASE DUCT SHALL BE INSTALLED EITHER IN A RATED ENCLOSURE PROVIDED BY THE GENERAL CONTRACTOR OR WRAPPED WITH FIREMASTER GREASE DUCT WRAP.
9. DUCT INSULATION: PROVIDE DUCT WRAP FOR ALL DUCTS ABOVE CEILING, INCLUDING VERTICAL, HORIZONTAL, RIGID AND FLEXIBLE DUCTS, EXCLUDING PREFABRICATED PREINSULATED DUCTS AND GREASE DUCTS. DUCT WRAP SHALL BE JOHNS MANVILLE MICROTEK OR EQUAL WITH FOIL/SCRM/KRAFT, 1 IN THICKNESS, 15 POUNDS/5F3 DENSITY. DUCT WRAP SHALL BE BONDED GLASS FIBERS IN THERMOSETTING RESIN MEETING NFPA 90A, WITH X VALUE NOT TO EXCEED 0.23 AT 75 DEGREES F. FLAME SPREAD AND SMOKE DEVELOPED RATINGS SHALL NOT EXCEED 2550. APPLY 100% ADHESIVE COVERAGE TO SHEET METAL DUCTWORK. PROVIDE ADDITIONAL MECHANICAL FASTENERS ON DUCTS OVER 12" WIDE OR 16" HIGH. MECHANICAL FASTENERS SHALL BE "GRIPNAIL" OR WELDED PIN AND SPEED CLIPS SPACED PER SMACNA STANDARDS.
10. FLEX DUCT: PROVIDE FACTORY ASSEMBLED CLASS 1 AIR DUCT (UL 181) WITH FIBERGLASS INSULATION AND REINFORCED OUTER PROTECTIVE COVER/VAPOUR BARRIER. FLEX DUCT SHALL MEET NFPA 90A WITH FLAME SPREAD UNDER 25, SMOKE DEVELOPED UNDER 50 AND SHALL BE RATED FOR 2" W.C. PRESSURE AND 0 TO 250 DEGREE TEMPERATURE. FLEX DUCT MAXIMUM ALLOWED LENGTH TO BE PER LOCAL CODE.
11. PROVIDE INSULATION APPLIED TO COMPLETE BACKPAN OF AIR DEVICES.
12. ACCESS DOOR: PROVIDE HINGED ACCESS PANELS IN DUCTWORK WHERE SHOWN AND AS REQUIRED FOR ACCESS TO DAMPERS OR EQUIPMENT. PROVIDE INSULATED ACCESS DOORS IN INSULATED DUCTWORK.
13. AUTOMATIC TEMPERATURE CONTROL: CONTRACTOR TO PROVIDE AND INSTALL 24/7 PROGRAMMABLE THERMOSTATS AND REMOTE SENSORS.
14. KITCHEN HOOD EQUIPMENT INTERLOCK: PROVIDE ALL INTERLOCK AND CONTROL WIRING FOR KITCHEN HOOD SYSTEMS, WHICH INCLUDES E1, E2F, MAU1 AND ANSUL SYSTEM SHUT DOWN INTERLOCK TO MAKE-UP AIR FAN. UPON ACTIVATION OF ANSUL SYSTEM, MAKE-UP AIR FAN SHALL BE DEACTIVATED. PROVIDE ALL NECESSARY CONTROLS AND WIRING FOR A COMPLETE AND OPERABLE SYSTEM. INTERLOCK GREASE EXHAUST FANS AND MAKE-UP AIR UNIT TO START SIMULTANEOUSLY FROM SWITCH PROVIDED AT HOOD.
15. TEST AND ADJUST EACH PIECE OF EQUIPMENT AND EACH SYSTEM AS REQUIRED TO ASSURE PROPER AIR BALANCE AND OPERATION. PROVIDE A CERTIFIED AIR BALANCE REPORT TO OWNER SHOWING DESIGN AND MEASURED AIR VOLUMES, STATIC PRESSURES, FAN RPMs, ETC. AIR BALANCE CONTRACTOR SHALL ADJUST SYSTEMS TO MINIMIZE NOISE AND VIBRATION, AND TO ASSURE PROPER FUNCTION OF CONTROLS. MAINTENANCE OF TEMPERATURE AND OPERATION. GENERAL CONTRACTOR TO OBTAIN ALL INSPECTIONS REQUIRED BY LOCAL CODE AND GUARANTEE WORK AND INSTALLATION FOR ONE YEAR AFTER ACCEPTANCE BY OWNER. GENERAL CONTRACTOR TO FURNISH OWNER WITH TWO COMPLETE SETS OF AS-BUILT DRAWINGS INDICATING ALL INSTALLED WORK, INCLUDING ALL CONTROL WIRING DIAGRAMS AND INTERLOCK FOR SYSTEM OPERATION.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF ECONOMIZERS INCLUDING INSTALLATION OF ALL NECESSARY SENSORS AND CONNECTIONS TO THERMOSTAT. PROVIDE SUPPORT OF ECONOMIZERS PER MANUFACTURER'S REQUIREMENTS AND TEST FOR PROPER OPERATION PRIOR TO FINAL TEST AND BALANCE.



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ISSUE DATE:

	STATE PERMIT SET	02/10/2021

DRAWN BY: J. DESKINS

PANDA PROJECT #: D8059

ARCH PROJECT #: JCDT20-0255



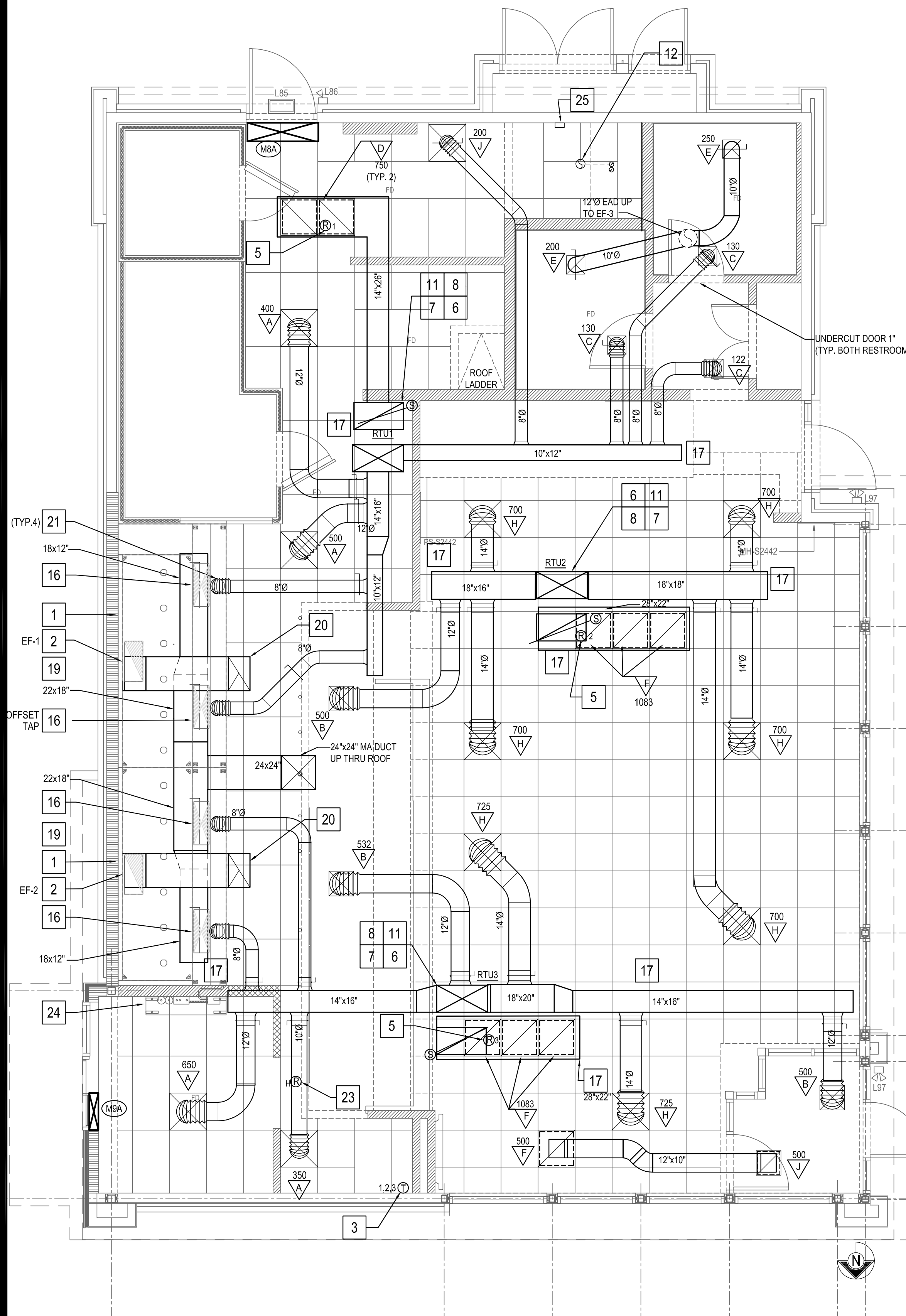
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M-000

MECHANICAL NOTES
SPECIFICATIONS & SCHEDULES

TRUE WARM & WELCOME 2300 R4



HVAC FLOOR PLAN 2

Scale: 1/4"=1'-0"

M-100

MAKE UP AIR CALCULATION:

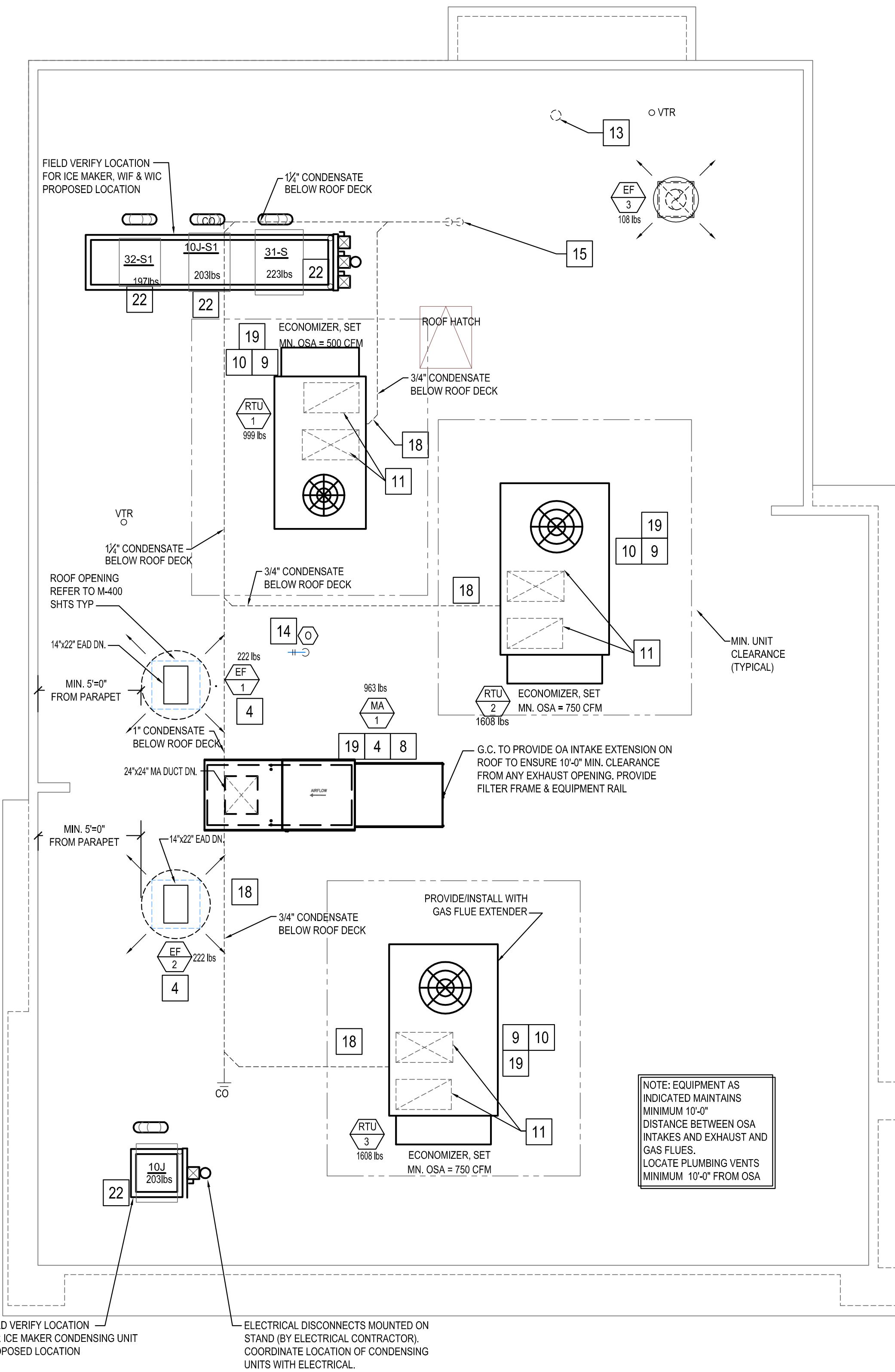
CALCULATION FOR MAKE UP AIR TEMPERATURE DIFFERENTIAL BETWEEN MAKEUP AIR AND THE AIR IN THE CONDITIONED SPACE SHALL NOT EXCEED 10 DEG F. FOR EACH SITE , CALCULATE AVERAGE DAILY TEMPERATURE FOR PREVIOUS 5 YEARS. OCCUPIED COOLING SET POINT IS 75 F. IF TEMPERATURES AVERAGE 85 F OR ABOVE FOR MORE THAN 14 DAYS PROVIDE COOLING ON MAKEUP AIR. OCCUPIED HEATING SET POINT IS 70 F. IF TEMPERATURES AVERAGE 60 F OR BELOW FOR MORE THAN 14 DAYS PROVIDE HEATING ON MAKEUP AIR. FROM THE NATIONAL WEATHER SERVICE CLIMATE DATA FOR: BROWNSBURG, IN (BASED ON INDIANAPOLIS, IN) FROM MAY THRU SEPTEMBER.

YEAR	AVERAGE # OF DAYS TEMP OVER 85 F
2016	2
2017	0
2018	2
2019	1
2020	0

TOTAL: 5
TOTAL AVERAGE 5 / 5 = 1.0 DAYS

MONTHLY AVERAGE # OF DAYS TEMP BELOW 60 F
JAN 2020 31

PANDA HAS APPROVED THAT COOLING IS NOT REQUIRED. HEATING SHALL BE PROVIDED.



HVAC ROOF PLAN 1

Scale: 1/4"=1'-0"

M-100

MECHANICAL KEY NOTES:

1. INSTALL GREASE EXHAUST HOODS FURNISHED BY PANDA. HOOD SHALL BE ONE CAPTIVEAIRE 4824-ND HOOD EXHAUSTING 3,450 CFM. SUPPORT FROM STRUCTURE ABOVE WITH UNISTRUT AND ALL THREAD ROD. MOUNT HOOD PER LOCAL CODE REQUIREMENTS. REFER TO PLAN FOR HOOD CONNECTIONS. SEE CODE COMPLIANCE. DRAWINGS ON SHEET M-500 AND CAPTIVEAIRE HOOD DRAWINGS. FOR ADDITIONAL REQUIREMENTS, (TWO SECTIONS TOTAL).
 2. PROVIDE AND INSTALL 22"x14" GREASE EXHAUST DUCT, ROUTE ON TOP OF MAKE UP AIR DUCT. FROM INLET OF ROOF MOUNTED GREASE EXHAUST FAN, CONNECT TO EXHAUST HOOD COLLAR. FIELD VERIFY WRAP WITH THERMAL CERAMIC FIREMASTER DUCT WRAP+ OR EQUAL. FABRICATE DUCT FROM 16 GAUGE STEEL WITH WELDED SEAM CONSTRUCTION SEAL TO THE ROOF CURB WITH FIRE CAULKING. SEE HOOD DETAIL DRAWINGS ON SHEET M-500 AND CAPTIVEAIRE DRAWINGS.
 3. MOUNT THERMOSTAT AT MANAGER STATION. REFER TO DETAIL #1 ON SHEET E-200. SEE DWG FOR EXACT LOCATION OF REMOTE SENSOR. SEE ROOFTOP UNIT SCHEDULE AND TEMPERATURE CONTROL DIAGRAM DETAIL 5 ON SHEET M-501 FOR ADDITIONAL INFORMATION.
 4. INSTALL GREASE EXHAUST FAN WITH CURB (EF-1 AND EF-2) AND MAKE UP AIR (MA-1) FURNISHED BY PANDA. COORDINATE LOCATION OF UNIT WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
 5. PROVIDE AND INSTALL A REMOTE SENSOR FOR ROOFTOP UNIT AT THIS LOCATION. MOUNT REMOTE SENSOR IN RETURN AIR DUCTWORK. SEE TEMPERATURE CONTROL DIAGRAM ON SHEET M-501 FOR ADDITIONAL INFORMATION.
 6. PROVIDE AND INSTALL DUCT MOUNTED SMOKE DETECTOR AT MAIN SUPPLY AIR DUCT PER UMC SEC. 509 OR AT RETURN AIR DUCT PER IMC SECTION 606.2.1. DETECTORS SHALL BE INTERLOCKED TO SHUT DOWN ROOFTOP UNITS UPON DETECTION OF SMOKE. PROVIDE ALL CONTROL WIRING NECESSARY TO PERFORM THIS OPERATION.
 7. PROVIDE FLEXIBLE CONNECTION BETWEEN UNIT. ROUTE DUCT THRU ROOF CURB AND TRUSS.
 8. FOR GAS OR WATER CONNECTION, SEE PLUMBING DRAWINGS.
 9. PROVIDE FABRICATED CURB PER MANUFACTURERS REQUIREMENTS AND COORDINATE EXACT LOCATION OF UNIT IN FIELD. SHIM ROOF CURB LEVEL FOR PROPER CONDENSATE DRAINAGE.
 10. FURNISH AND INSTALL ALL TEMPERATURE CONTROL WIRING FROM THE UNIT TO THE THERMOSTAT OR OTHER CONTROL DEVICES.
 11. FULL SIZE SA AND RA UP TO RTU. TRANSITION AS REQUIRED TO RTU INLET/OUTLET SIZE.
 12. PVC COMBINATION VENT AND COMBUSTION AIR PIPING PROVIDED AND INSTALLED BY PLUMBING FOR SEALED COMBUSTION WATER HEATER. REFER TO PLUMBING PLANS.
 13. WATER HEATER CONCENTRIC VENT TERMINATION. REFER TO PLUMBING PLANS. OFFSET AS REQUIRED FOR CLEARANCE FROM AIR INTAKES.
 14. ROOF HYDRANT. REFER TO PLUMBING DRAWINGS.
 15. ROUTE CONDENSATE DRAIN IN CEILING SPACE OVER AND DOWN IN WALL. SLOPE 1/4" PER FOOT. STUB-OUT AND ELBOW DOWN OVER MOP SINK. TERMINATE WITH MINIMUM 2" AIR GAP.
 16. MA DUCT (BELOW MAKE UP AIR) CONNECT TO 28"x10" RISER FROM SUPPLY PLENUM. 1,380 CFM
 17. PROVIDE DUCT EXTERNAL INSULATION WRAP AT TRUNK, TYPICAL.
 18. CONDENSATE DRAIN LINE DOWN THRU ROOF. REFER TO DETAIL 16/P-500.
 19. PROVIDE AND INSTALL ALL EQUIPMENT WITH MANUFACTURER'S RECOMMENDED CLEARANCES FOR MAINTENANCE. MAINTAIN MINIMUM CLEARANCES TO ELECTRICAL AND SERVICE ACCESS PANELS AND DISCONNECTS.
 20. GREASE DUCT CLEANOUT LOCATION. PROVIDE ACCESS TO CLEANOUT ABOVE CEILING. REFER TO MECHANICAL SPECIFICATIONS SHEET M-500
 21. 8" CONNECTION TO HOOD RTU SUPPLY PLENUM COLLAR. BALANCE TO 259 CFM.
 22. PROVIDE AND INSTALL ACR TUBING, SIZED AND ROUTED PER MANUFACTURER'S INSTRUCTIONS. FROM REMOTE REFRIGERANT CONDENSERS TO WALK-IN COOLER AND FREEZER FAN COILS, AND ICE MAKER. TEST, PURGE, EVACUATE AND CHARGE LINES AS REQUIRED BY MANUFACTURER. (START-UP FOR ICE MAKER IS BY OWNER'S REPRESENTATIVE). ROUTE REFRIGERANT LINES THROUGH "AIR HUB" PROVIDED AND INSTALLED BY GC (REFER TO ARCH. ISO 3 AND 4, SHEET A-108).
 23. ROOM AIR SENSOR FROM CAPTIVEAIRE HOOD ON BACK OF MENU BOARD WALL, AS CLOSE TO CEILING AS POSSIBLE.
 24. INSTALL ANSUL SYSTEM SUCH THAT TOP OF CABINET IS ON THE UNDERSIDE OF ACT CEILING.
 25. PROVIDE CO2 MONITORING SYSTEM. CO2 SENSOR SHALL BE MOUNTED 12" TO 18" ABOVE FINISHED FLOOR NEAR CO2 LINES. CO2 ALARM SHALL BE MOUNTED VISIBLE TO OCCUPANTS FOR ALARM COORDINATE WITH ARCHITECTURAL AND ELECTRICAL PLANS.
- NOTE: MAXIMUM FLEXIBLE DUCT LENGTH ALLOWED SHALL BE PER 5 FT.



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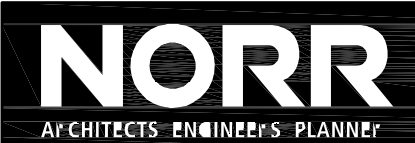
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H.V.A.C. FLOOR PLAN &
H.V.A.C. ROOF PLAN

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MECHANICAL DETAILS

TRUE WARM & WELCOME 2300 R4

HOOD INFORMATION - JOB#4683165

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)						MUA CFM	AC CFM	HOOD CONSTRUCTION	HOOD CONFIG		
										WIDTH	LENG	HEIGHT	DIA	CFM	VEL				SP	END TO END	ROW
1		4824 ND-2-ACPSP-F	CAPTIVEAIRE	11' 6"	600 DEG	I	HEAVY	300	3450	14"	22"	4"		3450	1613	-0.559"	2760	518	430 SS WHERE EXPOSED	LEFT	ALONE
2		4824 ND-2-ACPSP-F	CAPTIVEAIRE	11' 6"	600 DEG	I	HEAVY	300	3450	14"	22"	4"		3450	1613	-0.559"	2760	518	430 SS WHERE EXPOSED	RIGHT	ALONE

HOOD INFORMATION

HOOD NO	TAG	FILTER(S)					LIGHT(S)				UTILITY CABINET(S)					FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
		TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	TYPE	SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY		
1		SS BAFFLE WITH HANDLES	8	20"	16"	30%	10	RECESSED	NO	WALL MNT	12"x54"x24"	ANSUL R102	3.0/3.0/3.0	SC-321110FP-SEP	1 LIGHT 1 FAN	YES	669 LBS
2		SS BAFFLE WITH HANDLES	8	20"	16"	30%	10	RECESSED	NO	RIGHT	20"x48"x24"					YES	759 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1		LEFT END STANDOFF 3' WIDE 48" LONG.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				
							WIDTH	LENG	DIA	CFM	SP
1		Front	141'	22"	6"	MUA	10"	28"		1380	0.696"
						MUA	10"	28"		1380	0.696"
						AC			8"	259	0.160"
						AC			8"	259	0.160"
2		Front	158'	22"	6"	MUA	10"	28"		1380	0.696"
						MUA	10"	28"		1380	0.696"
						AC			8"	259	0.145"
						AC			8"	259	0.145"

WALL-MOUNT UTILITY CABINET

HOOD NO	LOCATION	SIZE	UTILITY CABINET(S)		SWITCHES QUANTITY	WEIGHT
			FIRE SYSTEM	ELECTRICAL		
1	WALL MNT	12"x54"x24"	ANSUL R102	3.0/3.0/3.0	SC-321110FP-SEP 1 LIGHT 1 FAN	305.00 LBS

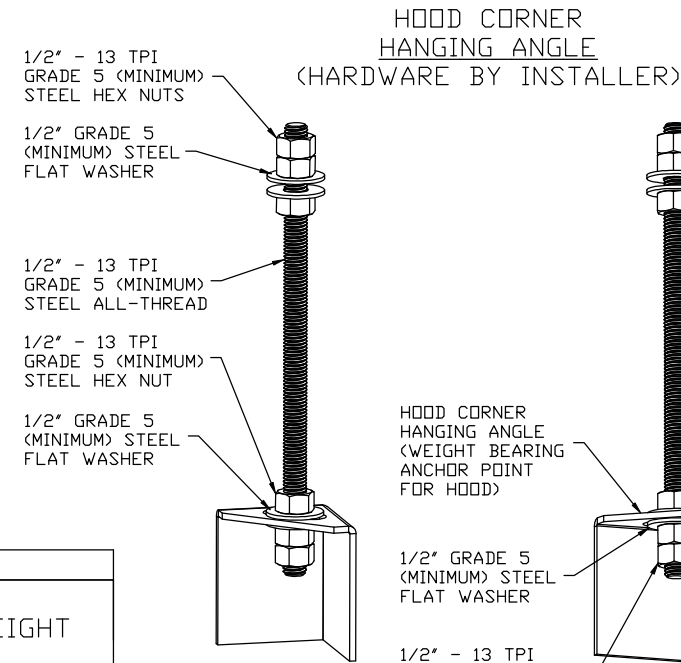
NOTE: UNLESS OTHERWISE STATED, PANDA RESTAURANT GROUP SHALL PROVIDE ALL EQUIPMENT ON THE FOLLOWING CAPTIVEAIRE SHEETS, INCLUDING: HOODS, FIRE SYTEM, EXHAUST FANS, SUPPLY FAN, BATHROOM FAN AND ELECTRICAL INTERLOCK PACKAGE

ANSUL GAS VALVE:

THE ANSUL GAS VALVE IS PROVIDED BY CAPTIVEAIRE SYSTEMS. CONTACT OUR OFFICE WITH THE VALVE SIZE 3 DAYS IN ADVANCE OF WHEN IT IS NEEDED ON SITE.

FOR QUESTIONS CALL THE CAPTIVEAIRE SOUTHERN CALIFORNIA OFFICE

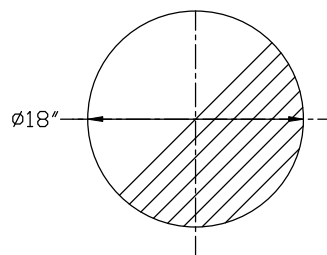
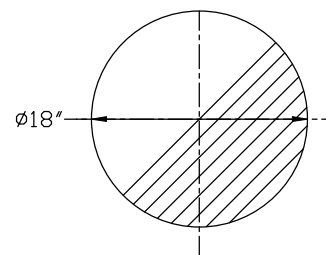
3002 DOW AVENUE, SUITE 410
TUSTIN, CA 92780
TEL: 714-957-1500 EMAIL: REG86@CAPTIVEAIRE.COM



ASSEMBLY INSTRUCTIONS

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 BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

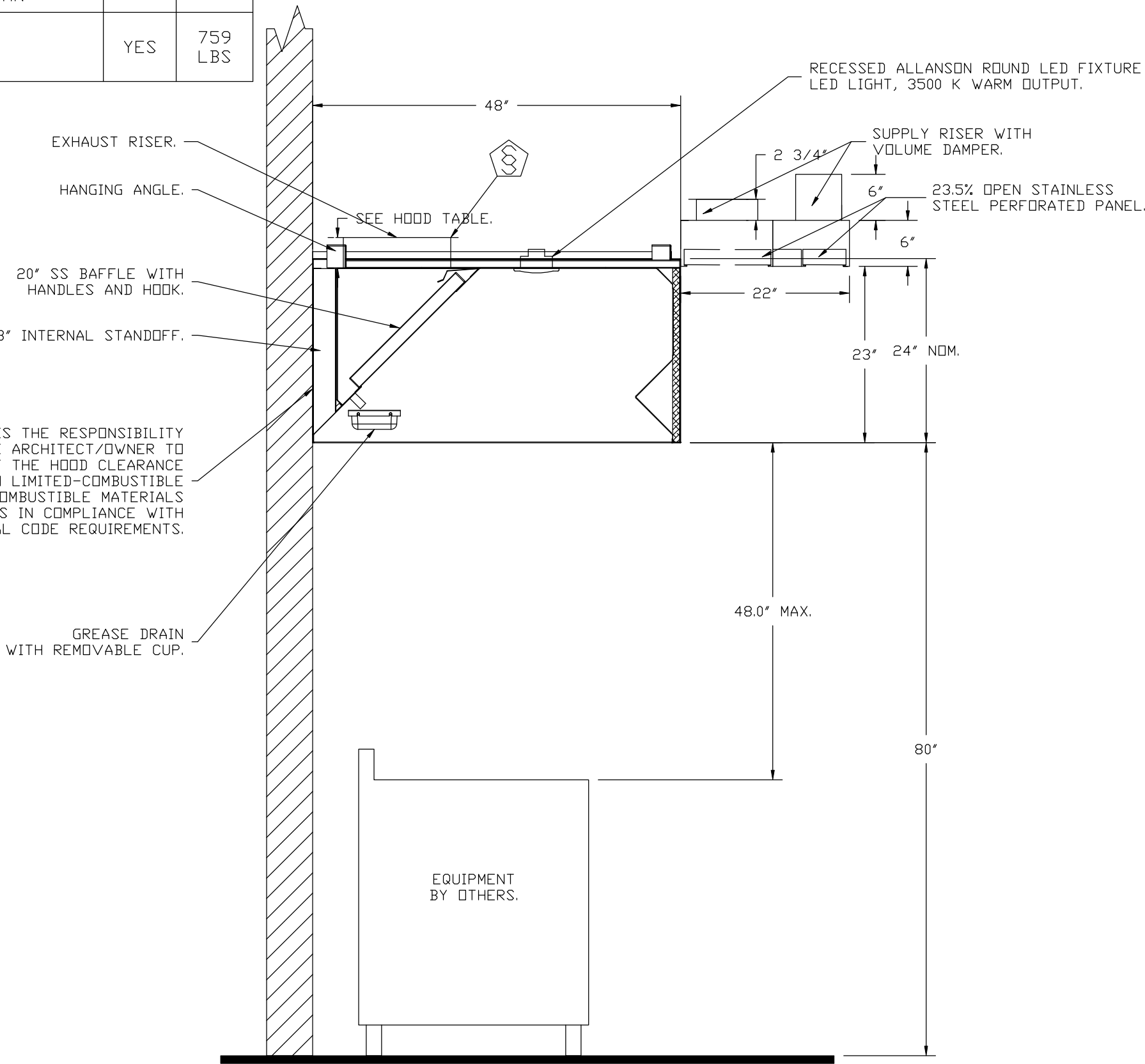
PRE-FABRICATED DOUBLE WALL ROUND DUCTWORK IS AVAILABLE AS AN ALTERNATE HVAC CONTRACTOR OR GENERAL CONTRACTOR TO CONTACT REGION 86 @ 714-957-1500 OR REG86@CAPTIVEAIRE.COM FOR DESIGN AND PRICING



TYPE I HOODS DEPICTED HERE SHALL BE INSTALLED WITH A CLEARANCE TO COMBUSTIBLES OF NOT LESS THAN 18 INCHES PER IMC 2012 SECTION 507.9. CLEARANCE SHALL NOT BE REQUIRED FROM GYPSUM WALLBOARD OR 1/2 INCH OR THICKER CEMENTITIOUS WALLBOARD ATTACHED TO NONCOMBUSTIBLE STRUCTURES PROVIDED THAT A SMOOTH, CLEANABLE, NONABSORBENT AND NONCOMBUSTIBLE MATERIAL IS INSTALLED BETWEEN THE HOOD AND THE GYPSUM OR CEMENTITIOUS WALLBOARD OVER AN AREA EXTENDING NOT LESS THAN 18" IN ALL DIRECTIONS FROM THE HOOD.

TYPE I HOODS DEPICTED HERE SHALL BE INSTALLED WITH MINIMUM 6 INCHES OF HORIZONTAL OVERHANG FROM THE TOP HORIZONTAL SURFACE OF COOKING APPLIANCES IN ACCORDANCE WITH IMC 2012 SECTION 507.12. HOOD SHALL BE PERMITTED TO BE FLUSH WITH THE OUTER EDGE OF THE COOKING SURFACE WHERE THE HOOD IS CLOSED TO THE APPLIANCE SIDE BY A NONCOMBUSTIBLE WALL OR PANEL.

BALANCE OF AIR VOLUME EXHAUSTED FROM HOODS THAT IS NOT MADE UP BY MAKEUP AIR DELIVERED THROUGH SUPPLY PLENUMS MUST BE PROVIDED THROUGH RTUS OR OTHER MEANS IN ACCORDANCE WITH IMC 2012 SECTION 508.1



SECTION VIEW - MODEL 4824ND-2-ACPSP-F
HOOD - #1

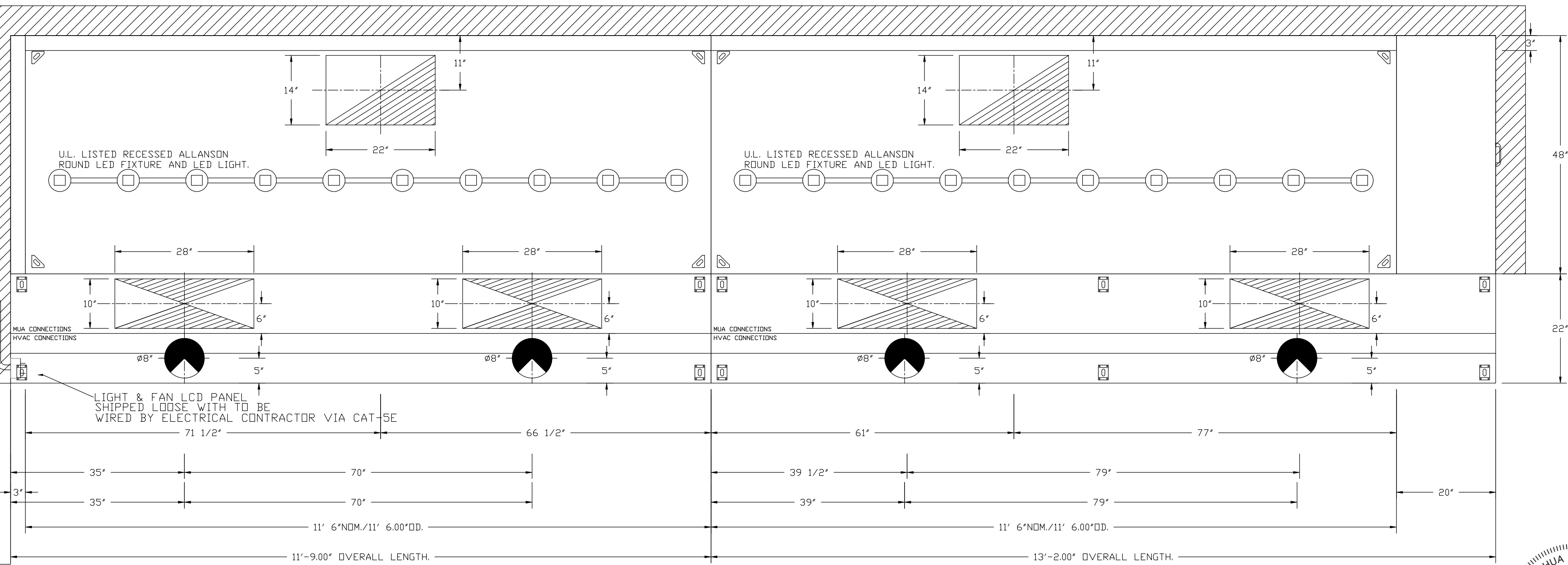
WALL MOUNTED UTILITY CABINET DIMS 54"LX12"WX24"H TO BE FIELD INSTALLED BY HOOD INSTALLER

ANSUL R-102 WET CHEMICAL FIRE SUPPRESSION SYSTEM

FACOTRY PREWIRED CONDUIT

FIELD WIRED BY ELECTRICAL CONTRACTOR

PREWIRED ELECTRICAL PACKAGE WITH FAN STARTERS AND SUPPLY FAN SHUT-DOWN RELAY (SEE ELECTRICAL DRAWINGS FOR DETAILS)



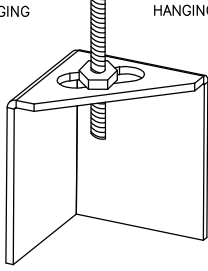
PLAN VIEW - HOOD #1
11' 6.00" LONG 4824ND-2-ACPSP-F

PLAN VIEW - HOOD #2
11' 6.00" LONG 4824ND-2-ACPSP-F

ACPSP SHIPS LOOSE FOR FIELD INSTALLATION

ACPSP SHIPS LOOSE FOR FIELD INSTALLATION

1/2" DIA. ALL THREAD ROD CONNECTED TO ROOF JOIST THROUGH ANOTHER HANGING ANGLE

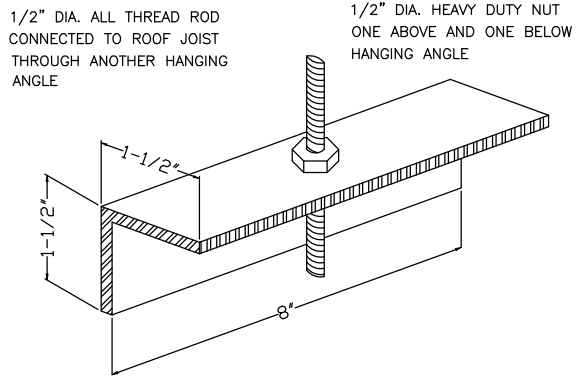


*ROD AND NUTS TO BE SUPPLIED BY INSTALLING CONTRACTOR HANGING ANGLE IS PRE-PUNCHED AT FACTORY

ND-2 HANGING ANGLE DETAIL

HOOD STYLE		DIM FROM REAR	DIM FROM FRONT (24" / 30"H)	DIM FROM LEFT / RIGHT (24" / 30"H)
ND-2				
C A N O P Y B A S E C H K L E	EXHAUST ONLY	4.166"	2.246"	2.25"
	WITH MUA	4.166"	2.246"	2.25"
	EXHAUST ONLY	4.166"	2.246"	2.25"
	WITH MUA	4.166"	2.246"	2.25"

ND-2 HANGING ANGLE LOCATIONS

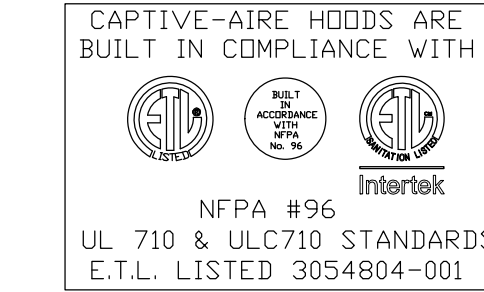


*ROD AND NUTS TO BE SUPPLIED BY INSTALLING CONTRACTOR HANGING ANGLE IS PRE-PUNCHED AT FACTORY

ND HANGING ANGLE DETAIL

HOOD STYLE		DIM FROM REAR	DIM FROM FRONT (24" / 30"H)	DIM FROM LEFT / RIGHT (24" / 30"H)
CANOPY	ND			
CANOPY	EXHAUST ONLY	5.00"	10.5" / 5"	5.00"
	WITH MUA	5.00"	10.5" / 5"	5.00"

ND HANGING ANGLE LOCATIONS



BUILDING CODES

CAPTIVE-AIRE HOODS HAVE OPTIONAL CLEARANCE

REDUCTION SYSTEMS AVAILABLE AS FOLLOWS:

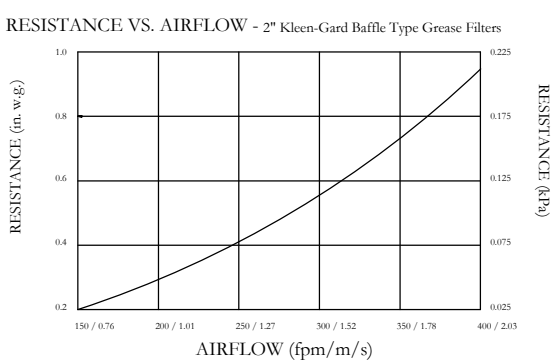
MATERIAL	CLEARANCE REDUCTION SYSTEM
NON-COMBUSTIBLE	NONE REQUIRED
LIMITED-COMBUSTIBLE	3" UNINSULATED STANDOFF
COMBUSTIBLE	3" INSULATED STANDOFF

CLEARANCE TO COMBUSTIBLES

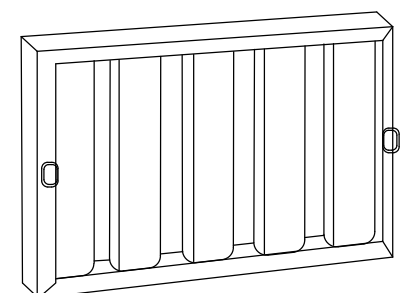
GENERAL NOTES:

- ELECTRICAL HOOK-UP TO CAS MOTOR CONTROLS (MOTOR STARTERS, FAN SWITCHES, FAN DISCONNECTS, RELAYS, ETC.) BY OTHERS.
- FIRE CHASE BY OTHERS, IF REQUIRED.
- ALL PHASES OF INSTALLATION SHALL COMPLY WITH NFPA 96.
- WRITTEN MEASUREMENTS HAVE PRECEDENCE OVER SCALE.
- PROVIDE CLEANOUTS IN EXHAUST AIR DUCTS AS INDICATED TO ALLOW CLEANING AT ALL BENDS AND HORIZONTAL RUNS.
- EXHAUST DUCT TO BE 16 GA. GALV STEEL ALL SEAMS AND JOINTS TO HAVE A LIQUID TIGHT CONTINUOUS EXTERNAL WELD.
- FAN TO HAVE A MINIMUM OF 10 FT. OF CLEARANCE FROM THE OUTLET TO ADJACENT BUILDINGS, PROPERTY LINES, AIR INTAKES OR 3 FT. VERTICAL CLEARANCE PER NFPA 96.
- HORIZONTAL EXHAUST DUCT SLOPE NOT LESS THAN 1/4" PER FOOT TOWARD HOOD FOR DUCT LESS THAN 75' LONG.
- 1" PER FOOT SLOPE FOR DUCT LONGER THAN 75'.
- HOOD TO OVERHANG COOKING EQUIPMENT 6" ON ALL OPEN SIDES.
- EXHAUST DUCT TO BE PROTECTED FROM COMBUSTIBLES PER NFPA 96 AND LOCAL CODE.
- BUILDING PRESSURE SHALL NOT EXCEED 0.05" WATER COLUMN AT EXTERIOR DOORS.
- KITCHEN SHALL BE BALANCED TO BE NEGATIVE WITH RESPECT TO THE DINING ROOM.

GENERAL NOTES



RESEARCH PRODUCTS CORPORATION



Kleen-Gard Baffle Type Filters are UL Classified Grease Extracting Filters.
MEA # 168-78-M Aluminum
MEA # 247-96-E Stainless Steel

FILTER DETAIL

REVISIONS

DESCRIPTION	DATE:



www.captiveaire.com

CAPTIVEAIRE

Southern California Office

3002 Dow Ave., Suite 410, Tustin, CA, 92780 PHONE: (714) 957-1500 FAX: (919) 227-5975 EMAIL: reg86@captiveaire.com

Panda Express - Brownsburg IN (D8059)

1395 N Green St,

Brownsburg, IN, 46112

DATE: 1/11/2021

DWG.#:
4683165

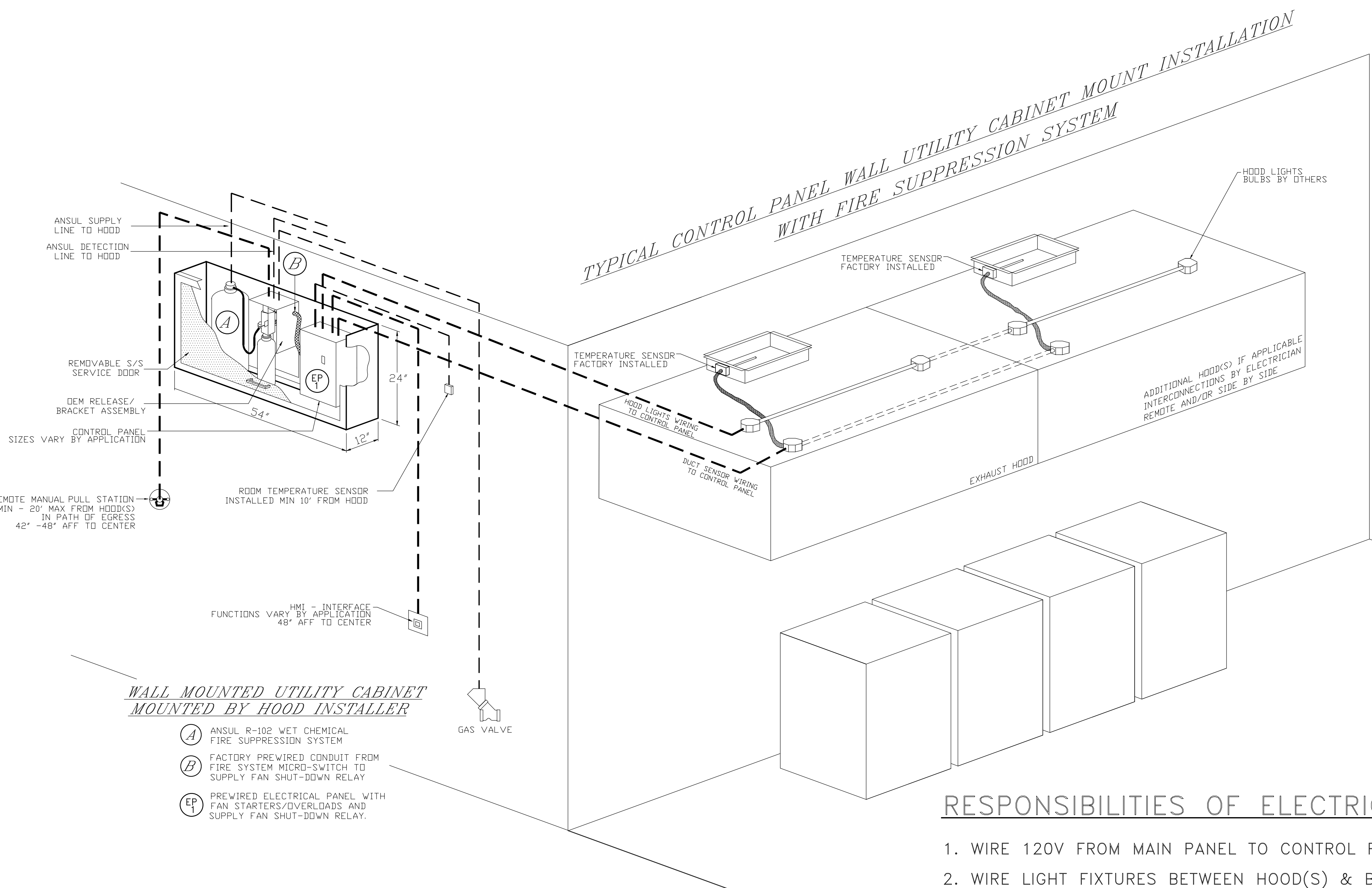
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SCALE:
NO SCALE

MASTER DRAWING

SHEET NO.

1



TERMINAL BLOCK WIRING DETAILS CAN BE FOUND ON ELECTRICAL WIRING DIAGRAMS

RESPONSIBILITIES OF ELECTRICIAN

1. WIRE 120V FROM MAIN PANEL TO CONTROL PANEL
2. WIRE LIGHT FIXTURES BETWEEN HOOD(S) & BACK TO CONTROL PANEL
3. WIRE TEMPERATURE SENSOR(S) FROM EXHAUST COLLARS TO CONTROL PANEL
4. MOUNT & WIRE ROOM SENSOR TO CONTROL PANEL
5. WIRE FAN POWER FROM MAIN PANEL THROUGH CONTROL PANEL TO FAN(S)
6. WIRE SHUNT COIL TO CONTROL PANEL
7. WIRE GAS VALVE (IF APPLICABLE) TO CONTROL PANEL (120V FROM CONTROL PANEL)

ADDITIONAL RESPONSIBILITIES IF APPLICABLE

1. IF MULTIPLE FIRE SYSTEMS ON SINGLE CONTROL PANEL, THE FOLLOWING MUST OCCUR
 - A. ANSUL AUTOMAN MICROSWITCHES TO BE WIRED IN SERIES BACK TO CONTROL PANEL
 - B. ANSUL CATRIDGE MICROSWITCHES TO BE WIRED IN SERIES BACK TO CONTROL PANEL

RESPONSIBILITIES OF ALARM CONTRACTOR

1. WIRE ANSUL ALARM MICROSWITCH TO BUILDING ALARM PANEL

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FOR QUESTIONS CALL THE
CAPTIVEAIRE
SOUTHERN CALIFORNIA OFFICE

3002 DOW AVENUE, SUITE 410
TUSTIN, CA 92780
TEL: 714-957-1500 EMAIL: REG66@CAPTIVEAIRE.COM



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Brownsburg, IN, 46112

DATE: 1/11/2021
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2

EXHAUST FAN INFORMATION – JOB#4683165

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	ø	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SDNES
1		1	EABDU18	ECON-AIR	3450	1.250	1223	DDP	2.000	1.3860	3	208	5.9	797 FPM	184	17.6
2		1	EABDU18	ECON-AIR	3450	1.250	1223	DDP	2.000	1.3860	3	208	5.9	797 FPM	184	17.6
3		1	EABDCR7	ECON-AIR	450	0.250	1128	DDP	0.250	0.0850	1	115	4.8		90	6.3

MUA FAN INFORMATION – JOB#4683165

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	ø	VOLT	FLA	MCA	MOCp	WEIGHT (LBS)	SDNES
4		1	EA3-D.500-G18	G18-PB	A3-D.500	3500	5520	0.750	783	DDP,PREMIUM	5.000	2.5730	3	208	15.0	18.8A	30A	878	13.5

GAS FIRED MAKE-UP AIR UNIT(S)

FAN UNIT NO	TAG	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
4		590400	543168	100°F	7 IN. W.C. – 14 IN. W.C.	NATURAL	92

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1		1	GREASE BOX.
		1	UPBLAST FAN WHEEL ACCESS PORT.
		1	GREASE BOX.
2		1	UPBLAST FAN WHEEL ACCESS PORT.
		1	I 15-BDD DAMPER.
3		1	AC INTERLOCK RELAY – 24VAC COIL.
4		1	LOW FIRE START.
		1	INLET PRESSURE GAUGE, 0-35".
		1	MANIFOLD PRESSURE GAUGE, -5 TO 15" W.C.
		1	MOTORIZED BACKDRAFT DAMPER FOR A3-D HOUSING. MEETS AMCA CLASS 1A RATING.
		1	FREEZESTAT (10).
		1	SEPARATE 120V WIRING PACKAGE (REQUIRED AND USED ONLY FOR DCV DR PREWIRE WITH VFD) – THREE PHASE ONLY.
		1	

FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST			SUPPLY		
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER
1		YES					
2		YES					
3			YES				
4							YES

CURB ASSEMBLIES

NO	ON FAN	WEIGHT	ITEM	SIZE
1	# 1	38 LBS	CURB	26.500"W X 26.500"L X 24.000"H VENTED HINGED.
2	# 2	38 LBS	CURB	26.500"W X 26.500"L X 24.000"H VENTED HINGED.
3	# 3	18 LBS	CURB	19.500"W X 19.500"L X 12.000"H .
4	# 4	84 LBS	CURB	35.000"W X 84.000"L X 20.000"H INSULATED.

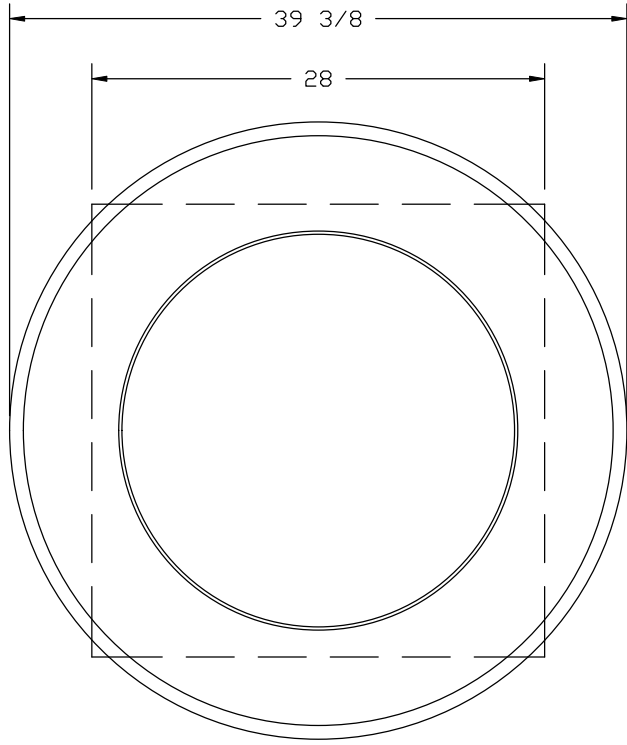
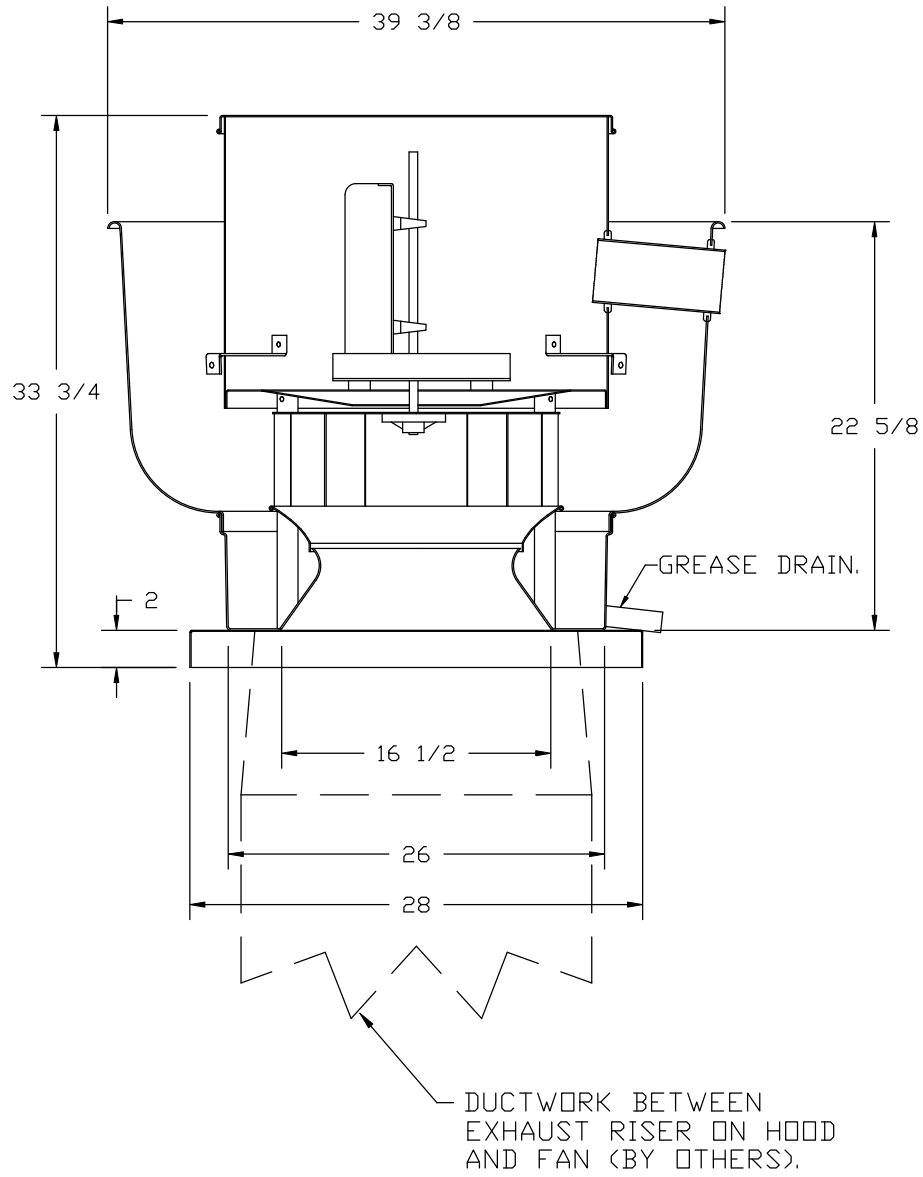
COORDINATE FINAL LOCATION OF GREASERATED EXHAUST FANS AND MAKEUP AIR UNITS IN ACCORDANCE WITH THE REQUIREMENTS OF IMC 2012 SECTION 506.3.13. OUTLET SHALL TERMINATE NOT LESS THAN 40 INCHES ABOVE ROOF SURFACE, NOT LESS THAN 10 FEET HORIZONTALLY FROM PARTS OF THE SAME OR CONTIGUOUS BUILDINGS, ADJACENT BUILDINGS AND ADJACENT PROPERTY LINES, AND NOT LESS THAN 10 FEET ABOVE THE ADJOINING GRADE LEVEL. OUTLET SHALL BE LOCATED NOT LESS THAN 10 FEET HORIZONTALLY FROM OR NOT LESS THAN 3 FEET VERTICALLY ABOVE AIR INTAKE OPENINGS INTO ANY BUILDING. EXCEPTION: OUTLET SHALL TERMINATE NOT LESS THAN 5 FEET HORIZONTALLY FROM PARTS OF THE SAME OR CONTIGUOUS BUILDING, ADJACENT BUILDINGS AND ADJACENT PROPERTY LINES AND AIR INTAKE OPENINGS INTO A BUILDING WHERE AIR FROM THE EXHAUST OUTLET IS DISCHARGED AWAY FROM SUCH LOCATIONS.

CONTRACTOR TO PROVIDE GREASERATED EXHAUST FAN BASE CERAMIC SEAL BETWEEN EXHAUST FAN AND GREASE DUCT IN ACCORDANCE WITH IMC 2012 SECTION 506.3.2.3

COORDINATE FINAL LOCATION OF NON GREASERATED EXHAUST FANS IN ACCORDANCE WITH THE REQUIREMENTS OF IMC 2012 SECTION 506.4.2. OUTLET SHALL TERMINATE NOT LESS THAN 30 INCHES ABOVE ROOF SURFACE AND FROM EXTERIOR VERTICAL WALLS, NOT LESS THAN 3 FEET IN ANY DIRECTION FROM OPENINGS INTO THE BUILDING, AND NOT LESS THAN 10 FEET ABOVE GRADE OR FROM PROPERTY LINES OR BUILDINGS ON THE SAME LOT. OUTLET SHALL NOT BE DIRECTED ONTO WALKWAYS, SHALL BE PROTECTED AGAINST LOCAL WEATHER CONDITIONS, AND SHALL MEET THE PROVISIONS FOR EXTERIOR WALL OPENING PROTECTIVES IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.

MAKEUP AIR TEMPERATURES SHALL BE DELIVERED WITHIN 10 DEGREES F OF ROOM TEMPERATURE AS PER IMC 2012 SECTION 508.1.1, EXCEPT WHERE ADDITIONAL HEATING AND COOLING LOADS OF THE MAKEUP AIR DO NOT EXCEED THE CAPACITY OF THE HVAC SYSTEM.

FANS #1, #2 – EABDU18 EXHAUST FAN



TOP VIEW

FEATURES:

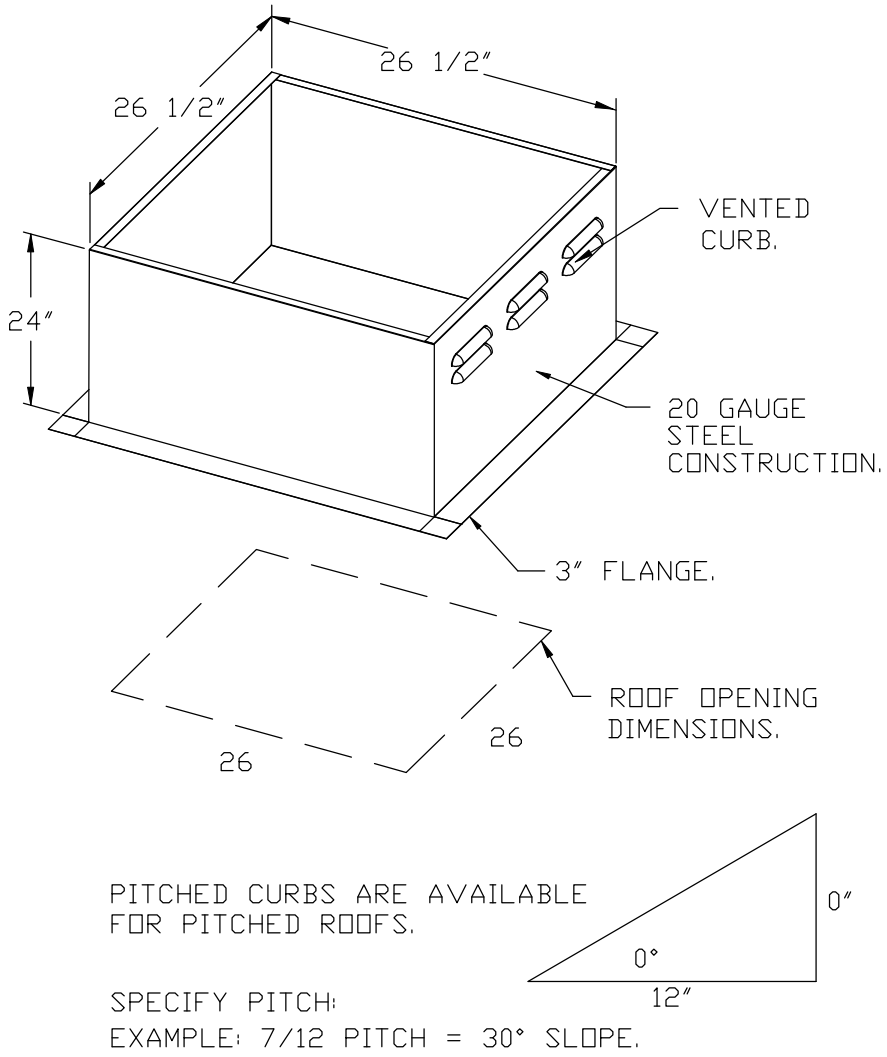
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645.
- AMCA SOUND AND AIR CERTIFIED.
- WIRING FROM MOTOR TO DISCONNECT SWITCH.
- NEMA 3R SAFETY DISCONNECT SWITCH.
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.

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

ABNORMAL FLARE-UP TEST
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.



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE.



REVISIONS

DESCRIPTION	DATE:

Southern California Office

3002 Dow Ave., Suite 410, Tustin, CA, 92780 PHONE: (714) 957-1500 FAX: (919) 227-5975 EMAIL: reg@captivair.com

Panda Express – Brownsburg IN (D8059)

1395 N Green St,

Brownsburg, IN, 46112

DATE: 1/11/2021

DWG.#: 4683165

DRAWN BY: AH-86

SCALE: NO SCALE

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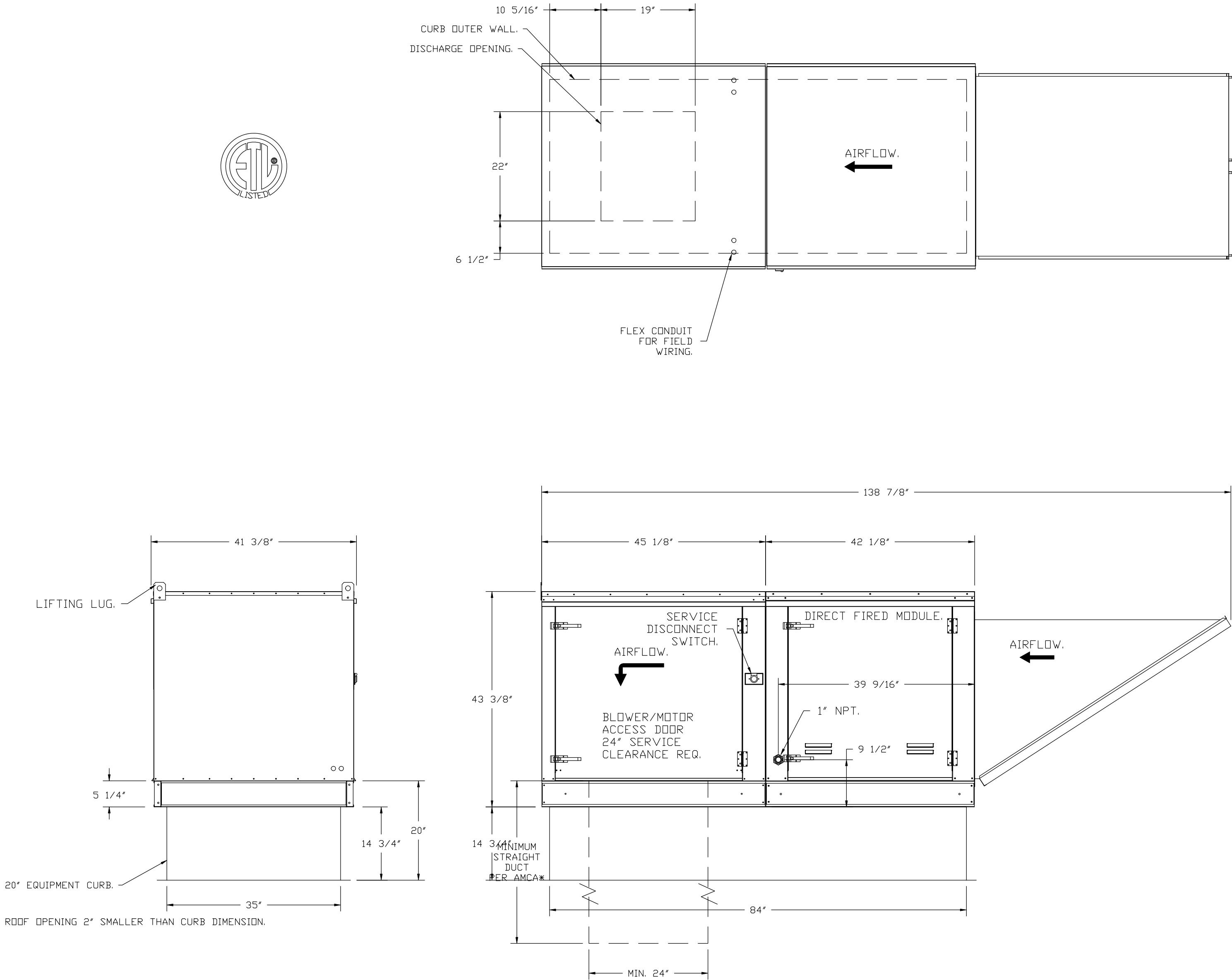
4

- FAN #4 EA2-1500-G18 - HEATER
1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 18" BLOWER AND 12" BURNER.
2. INTAKE HOOD WITH E2 FILTERS.
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
4. COOLING INTERLOCK RELAY, 24VAC COIL, 120V CONTACTS, LOCKS OUT BURNER CIRCUIT WHEN AC IS ENERGIZED.
5. LOW FIRE START, ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
6. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE.
7. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC, 2.5" DIAMETER, 1/4" THREAD SIZE.
8. MOTORIZED BACK DRAFT DAMPER 30" X 30" FOR SIZE 3 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, NF-BUP-S ACTUATOR INCLUDED.
9. FREEZE STAT WITH 10' SENSOR, FACTORY SET AT 35°F AND 10 MINUTES.
10. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH.

*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 24" x 24".

SUPPLY SIDE HEATER INFORMATION:

WINTER TEMPERATURE = 10°F. TEMP. RISE = 98°F.
BTUs CALCULATED OFF ACTUAL AIR DENSITY.
OUTPUT BTUs AT ALTITUDE OF 0.0 FT. = 544333.
INPUT BTUs AT ALTITUDE OF 0.0 FT. = 591666.



DIRECT FIRED PROFILE PLATE SPECIFICATIONS:

DESCRIPTION:
DIRECT FIRED BURNERS SHALL HAVE PATENTED (US PATENT NO. US6662953B2), SELF-ADJUSTING PROFILE PLATES DESIGNED TO ENSURE PROPER AIR VELOCITY AND PRESSURE DROP ACROSS THE BURNER. PROFILE PLATES SHALL ALLOW BURNERS TO ACHIEVE CLEAN COMBUSTION BY LIMITING BY-PRODUCT LEVELS TO A MAXIMUM OF 5PPM OF CARBON MONOXIDE (CO) AND 0.5PPM OF NITROGEN DIOXIDE (NO2). DIRECT FIRED UNITS SHALL BE CONFIGURED WITH THE BLOWER MOUNTED DOWNSTREAM OF THE BURNER. THIS ARRANGEMENT WILL ENSURE A CONSISTENT AIRFLOW, REGARDLESS OF INLET AIR TEMPERATURE.

APPLICATIONS:
SPRING-LOADED BURNER PROFILE PLATES ARE ENGINEERED TO AUTOMATICALLY REACT TO THE MOMENTUM OF A FRESH AIR STREAM, WITHOUT THE NEED FOR ANY MOTORS OR ACTUATORS TO MECHANICALLY ADJUST THEM. WITH THIS FEATURE, ALL DF UNITS ARE DESIGNED FOR DEMAND CONTROL VENTILATION (DCV) REQUIREMENTS.

CERTIFICATIONS:
ALL PROFILE PLATE ASSEMBLIES SHALL BE INCLUDED IN THE DF UNIT'S ETL LISTING AND COMPLY WITH COMBINED SAFETY STANDARDS ANSI Z83.4 AND CSA 3.7 (NON-RECIRCULATING DF HEATERS) AND ANSI Z83.18 (RECIRCULATING DF HEATERS).

GENERAL CONSTRUCTION:
-PROFILE PLATES SHALL BE FORMED FROM G90 GALVANIZED STEEL.
-PROFILE PLATES SHALL VARY IN SIZE PER UNIT.
-PROFILE PLATES SHALL BE MOUNTED ALONG THE SAME PLANE AS THE DISCHARGE OF THE BURNER.
-DESIGN SHALL INCORPORATE PROPERLY TORQUED, PERMANENTLY MOUNTED SPRING HINGES.
-SPRING HINGES SHALL BE MADE FROM PLATED STEEL.



REVISIONS

DESCRIPTION	DATE:
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△	
△	
△	
△	

Southern California Office

3002 Dow Ave., Suite 410, Tustin, CA, 92780 PHONE: (714) 957-1500 FAX: (919) 227-5975 EMAIL: reg@captivair.com

www.captivair.com

Panda Express - Brownsburg IN (D8059)

1395 N Green St,
Brownsburg, IN, 46112

DATE: 1/11/2021

DWG.#:
4683165

DRAWN BY: AH-86

SCALE:
NO SCALE

MASTER DRAWING

SHEET NO.

6

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED			
				LOCATION	QUANTITY		TYPE	HP	VOLT	FLA
1		SC-32110FP-SEP	WALL UTILITY CABINET LEFT	08 - SHIP LOOSE W/ PREWIRE	1 LIGHT	SMART CONTROLS THERMOSTATIC CONTROL	EXHAUST	3	2,000	208 5.9
							EXHAUST	3	2,000	208 5.9
							SUPPLY	3	5,000	208 15.0

HOOD SHALL BE INSTALLED WITH MINIMUM 3 FEET CLEARANCE FROM FACE OF ELECTRICAL CONTROL PANEL AS REQUIRED BY NATIONAL ELECTRICAL CODE SECTION 110-26

JOB NO

4683165

MODEL NUMBER

SC-32110FP-SEP

DRAWN BY

SCHEMATIC TYPE

INSTALL

DESCRIPTION OF OPERATION:

3 Phase w/ control for 2 Exhaust Fans, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Fan(s) On/Off Thermostatically Controlled. Separate Breaker Input for each Fan. Room temperature sensor shipped loose for field installation. INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD.

JOB NAME

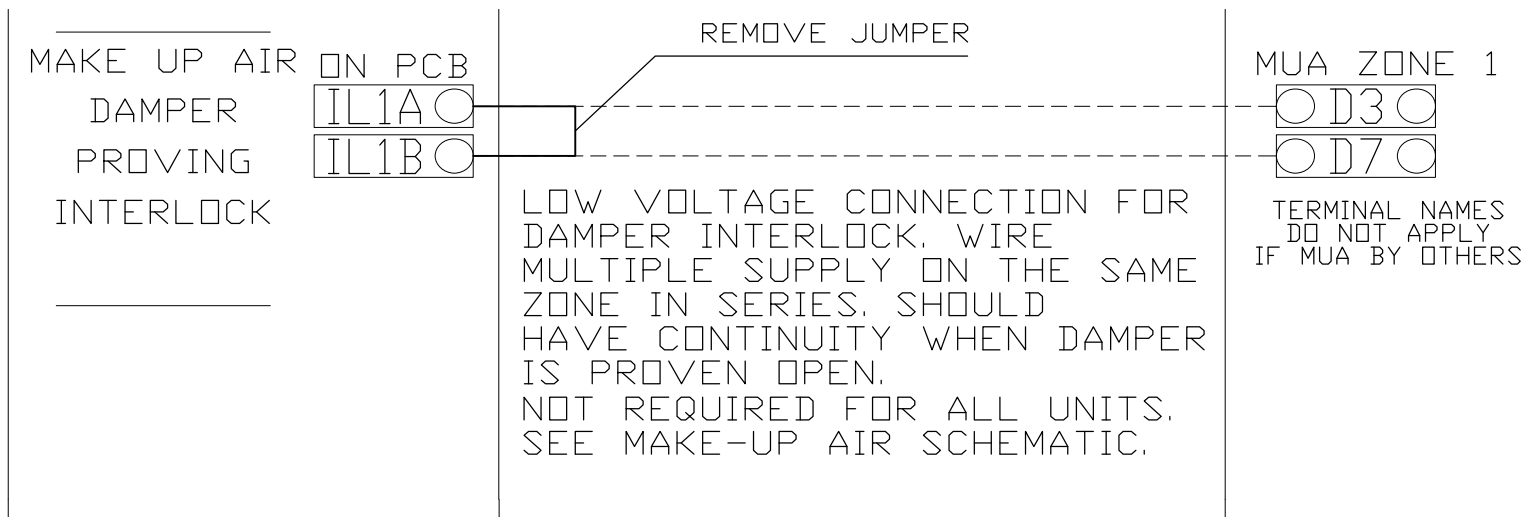
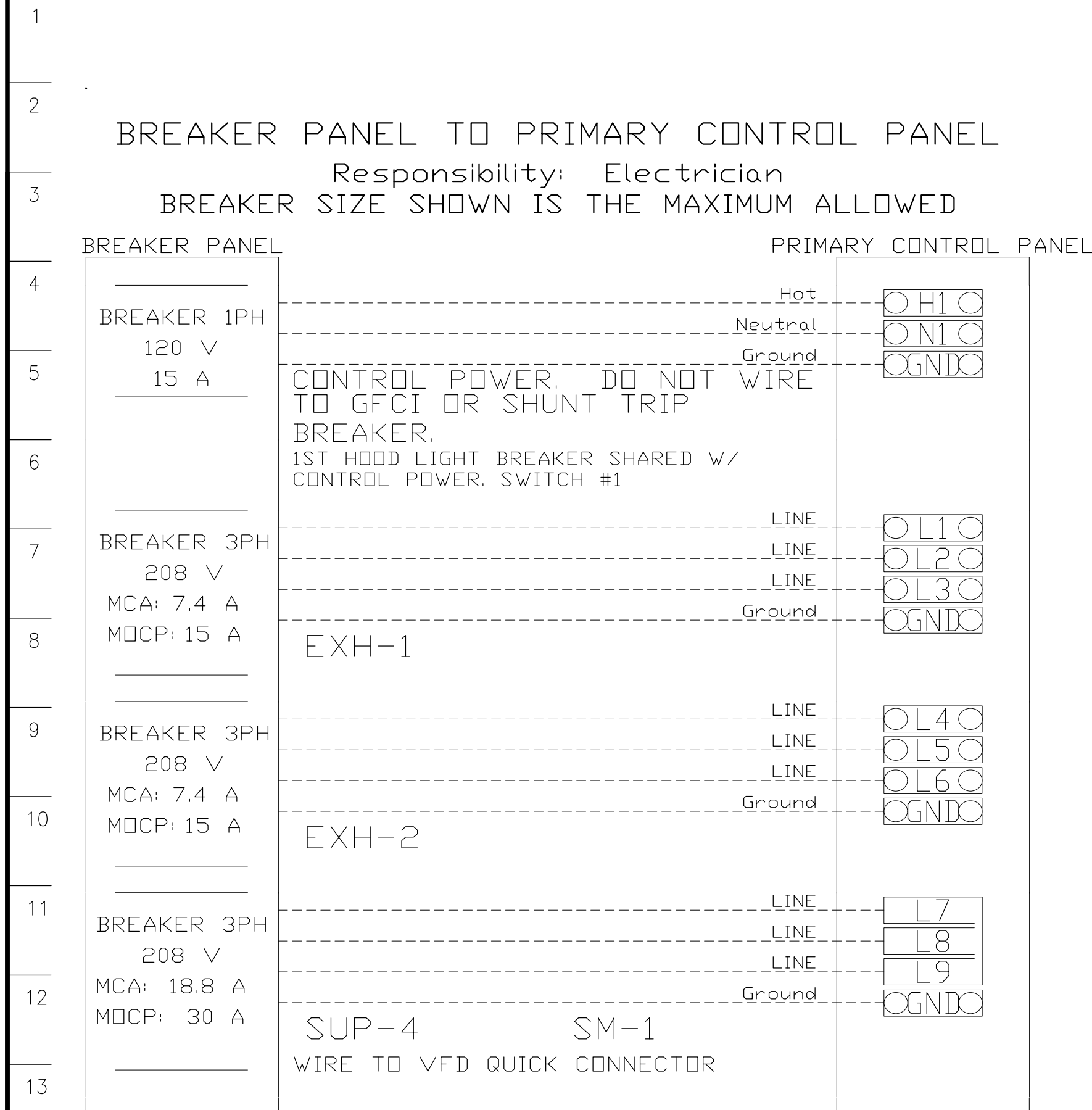
Panda Express - Brownsburg IN...

DATE

1/11/2021

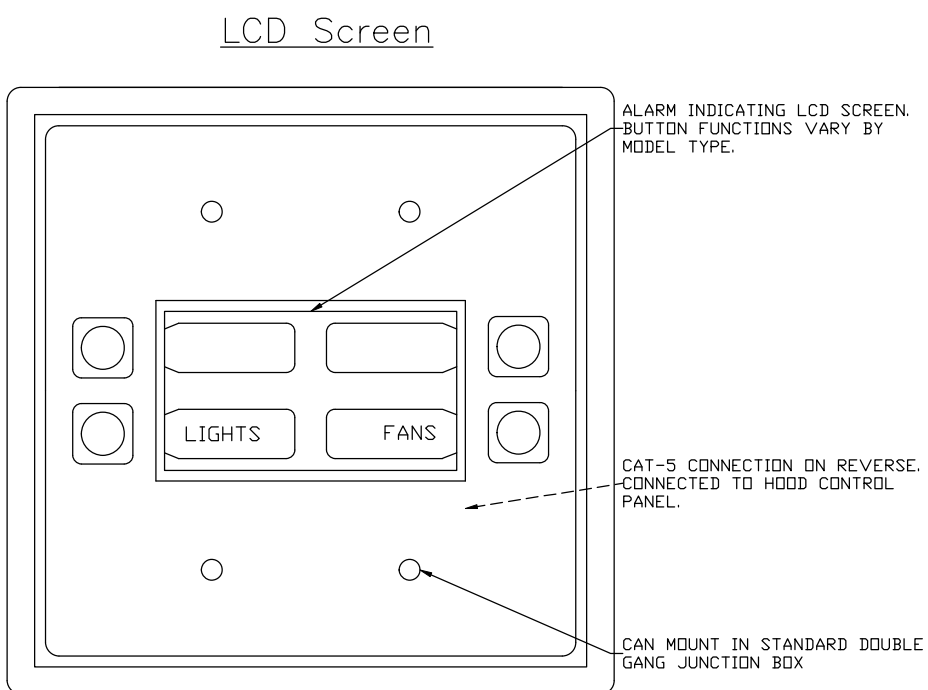
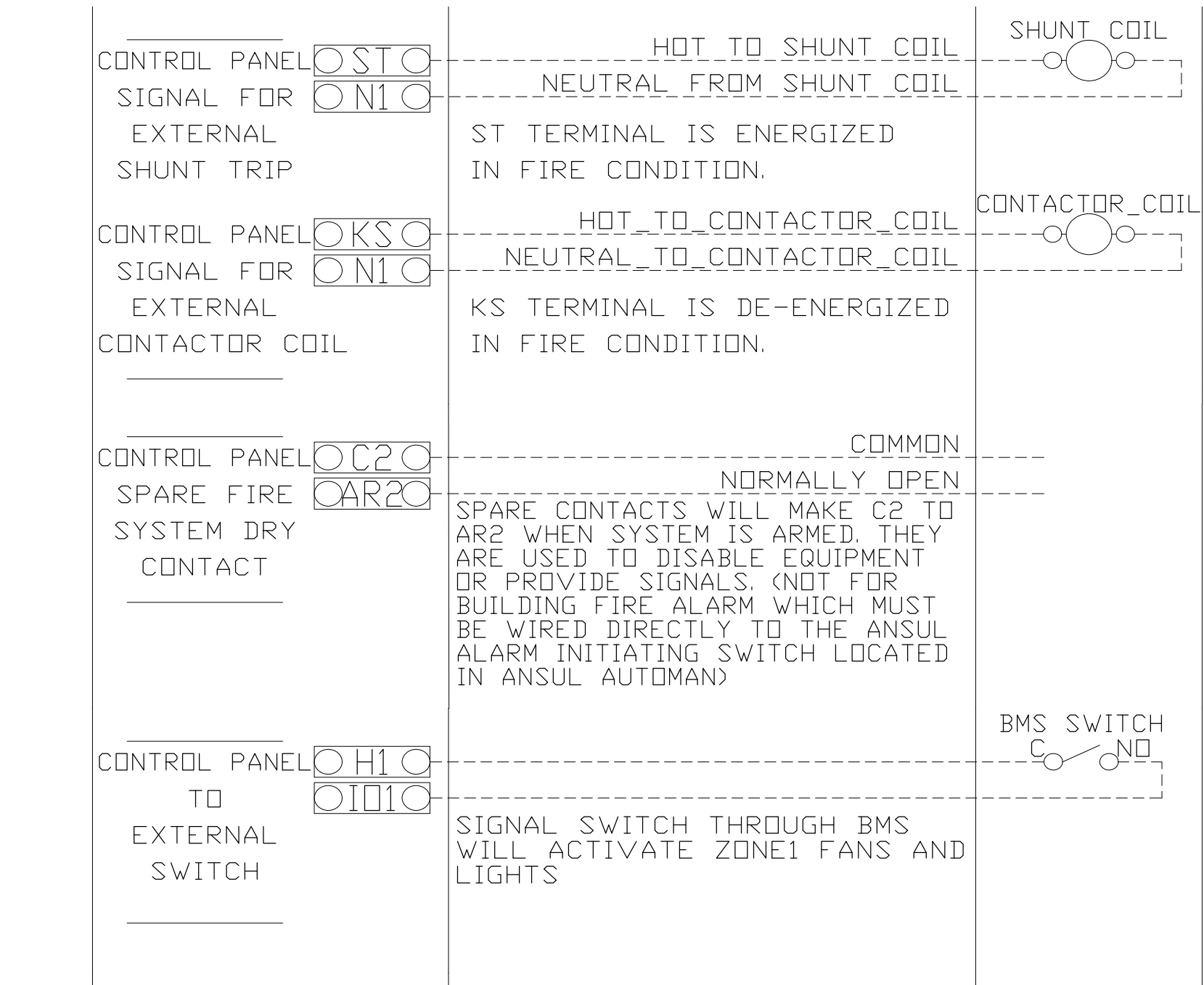
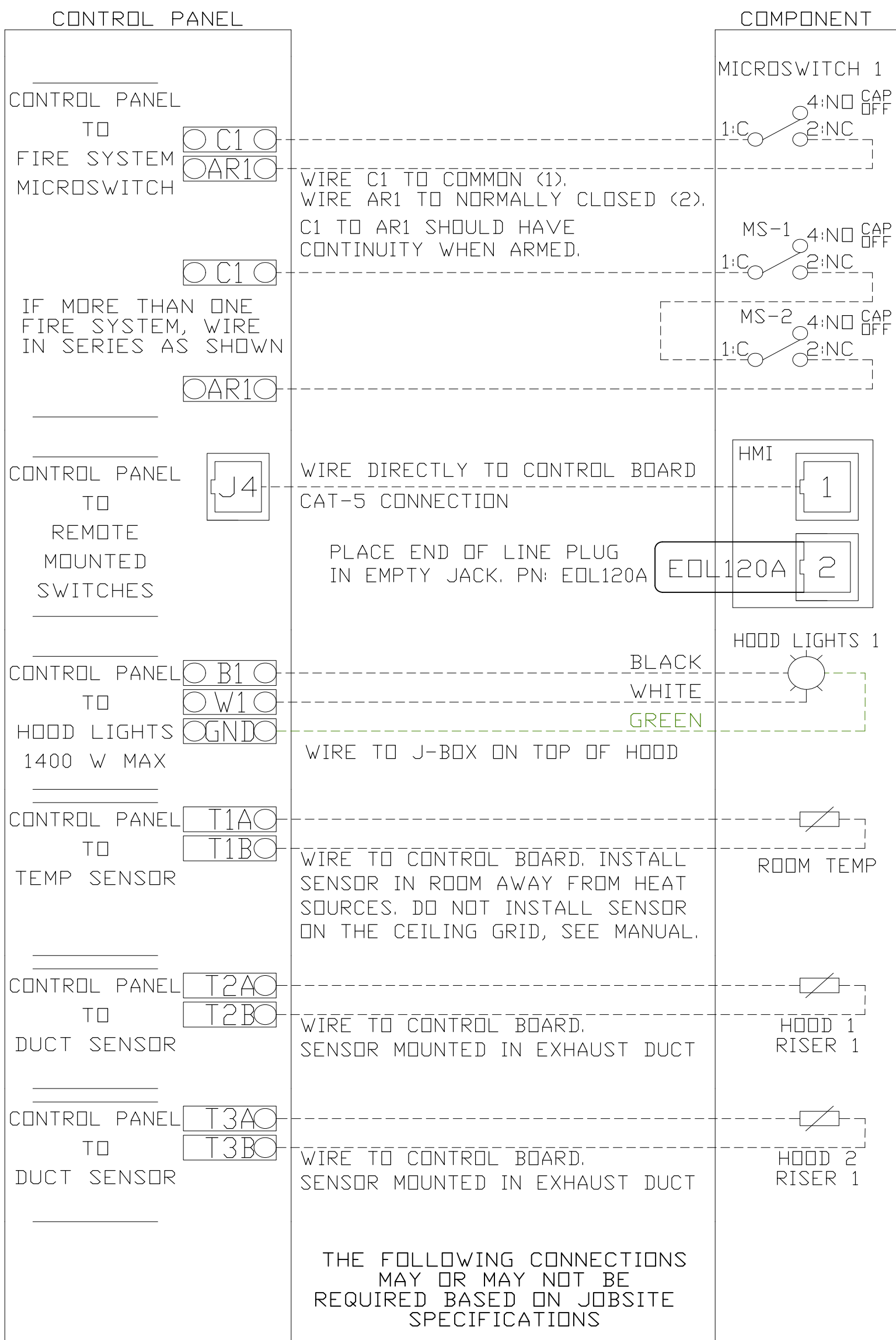
DWG NO

ECP #1-1



CONTROL PANEL TO ACCESSORY ITEMS

Responsibility: Electrician



NOTE: UNLESS OTHERWISE STATED, PANDA RESTAURANT GROUP SHALL PROVIDE ALL EQUIPMENT ON THE FOLLOWING CAPTIVEAIRE SHEETS, INCLUDING: HOODS, FIRE SYTEM, EXHAUST FANS, SUPPLY FAN, BATHROOM FAN AND ELECTRICAL INTERLOCK PACKAGE

ANSUL GAS VALVE:

THE ANSUL GAS VALVE IS PROVIDED BY CAPTIVEAIRE SYSTEMS. CONTACT OUR OFFICE WITH THE VALVE SIZE 3 DAYS IN ADVANCE OF WHEN IT IS NEEDED ON SITE.

FOR QUESTIONS CALL THE CAPTIVEAIRE SOUTHERN CALIFORNIA OFFICE

3002 DOW AVENUE, SUITE 410
TUSTIN, CA 92780
TEL: 714-957-1500 EMAIL: REG66@CAPTIVEAIRE.COM



REVISIONS

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7