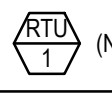
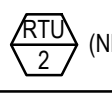
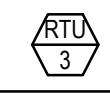


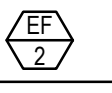
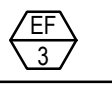


PACKAGED ROOF TOP UNIT SCHEDULE				(LENNOX MODELS TO BE SPECIFIED) (LO NoX in California)	
UNIT SYMBOL	 (NEW)	 (NEW)	 (NEW)		
LOCATION	ROOF	ROOF	ROOF		
BLOWER	SA CFM (TONS)/ OA CFM	2,400 (6-TON)/ 500	4,000 (10-TON)/ 750	4,000 (10-TON)/ 750	
	TSP (IN W.G.)	0.78"	1.14"	1.14"	
COOLING	TOTAL (BTUHR)	74,300	126,400	126,400	
	SENSIBLE (BTUHR)	52,700	83,300	83,300	
	AMBIENT (F)	94	94	94	
	COIL ENTERING	68 WB/80 DB	68 WB/80 DB	68 WB/80 DB	
	HEATING (NATURAL GAS BTUHR)	STAGE (1) 81,000 STAGE (2) 108,000	STAGE (1) 117,000 STAGE (2) 180,000	STAGE (1) 117,000 STAGE (2) 180,000	
ELECTRICAL	POWER SUPPLY	208V/3Ph/60HZ	208V/3Ph/60HZ	208V/3Ph/60HZ	
	COMPRESSOR (RLA)	19.6	27.0	27.0	
	CONDENSER MOTOR (FLA)	(1) 2.4	(1) 4.8	(1) 4.8	
	EVAPORATOR MOTOR (FLA)	4.6	10.6	10.6	
	MIN. CIRCUIT AMPACITY	33, HACR = 50	46, HACR = 50	46, HACR = 50	
PANDA NATIONAL ACCOUNT. NO SUBSTITUTION ALLOWED. FOR PRICING AND ORDERS CONTACT LENNOX NA @ 800-367-6285 FOR INSTALLATION AND START-UP QUESTIONS CONTACT LENNOX NA TECH SUPPORT @ 800-367-6285 EXT. #1 FOR CUSTOMER SERVICE EXT. #2 FOR NAT ACC TECH SUPPORT EMAIL: NATS@LENNOXIND.COM				BY LENNOX MODEL KGB074H4T DOWN DISCHARGE COMPLETE WITH 14" ROOF MOUNT CURB, ELECTRONIC PROGRAMMABLE THERMOSTAT, SINGLE SENSIBLE ECONOMIZER WITH BAROMETRIC RELIEF. OPER. WT. : 858 LBS APPROX. IEER=16.0, EER=12	
ALL ITEMS RELATED TO HVAC SYSTEM SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR. CONTACT LENNOX REPRESENTATIVE ABOVE. - THERMOSTATS; REMOTE SENSOR TYPE; 24/7 PROGRAMMABLE AND CAPABLE OF OPERATING ROOFTOP UNITS AND ACCESSORIES - DUCT MOUNTED SMOKE DETECTORS; IONIZATION TYPE/UL LISTED				BY LENNOX MODEL KGA120H4M DOWN DISCHARGE COMPLETE WITH 14" ROOF MOUNT CURB, ELECTRONIC PROGRAMMABLE THERMOSTAT, SINGLE SENSIBLE ECONOMIZER WITH BAROMETRIC RELIEF. OPER. WT. : 1,337 LBS APPROX. IEER=13.8, EER=12.0	
NOTE: 1. UNIT WEIGHTS ABOVE INCLUDE ACCESSORIES AND CURB. 2. FACTORY COATED EVAPORATOR COIL ON ALL UNITS 3. FACTORY COATED CONDENSER COIL ONLY WITHIN 5 MILES OF SALTWATER COASTLINE 4. SINGLE ENTHALPY ECONOMIZER, HIGH PERFORMANCE, LOW-LEAK DAMPERS, W/ GRAVITY EXHAUST 5. TITLE 24 COMPLIANT 6. RETURN AIR SMOKE DETECTOR (FIELD INSTALLED) 7. FACTORY HINGED ACCESS DOORS 8. MERV 8 FILTERED FILTERS				9. MULTI SPEED (MSAV) BLOWER MOTORS 10. STANDARD 14" ROOF CURB 11. COIL GUARDS (FIELD INSTALL) 12. FACTORY DISCONNECT 13. FACTORY GFG (FIELD WIRED) 14. LENNOX COMMERCIAL CS7500 THERMOSTAT WITH REMOTE SENSOR (FIELD WIRED)	

MAKE-UP AIR UNIT SCHEDULE										
MARK	MFR/ MODEL	LOCATION	SERVICE AREA	GAS HEAT	TYPE	COOLING	CFM	ESP	MOTOR	REMARKS
MA-1	CAPTIVEAIRE A3-D.500-24D-MPU	ROOF-TOP	KITCHEN HOOD #1 & #2	INPUT: 539,830 BTU/H OUTPUT: 496,644	DIRECT FIRE GAS HEATED, DX COOLED SUPPLY, DOWN DISCHARGE	DUAL CIRCUIT 5/5 MODULAR PACKAGED COOLING OPTION	5,040	0.9"	7.5 HP 208V/3PH/60HZ	GAS FIRED MAKEUP AIR UNIT WITH (2) 24ABB360 5 TON, DUAL CIRCUIT AIR COOLED CONDENSING UNITS. REFER TO SHEET M-405 FOR INFORMATION. 4-5 WEEK LEAD TIME. SHIPPING INCLUDED IN PRICE. SHIPS FROM TYLER, TX. SHIPS SEPARATE. FREIGHT INCLUDED. NOTE: FACTORY OPTIONS SHALL INCLUDE NONCORROSIVE COATING AND HAIL GUARD PROTECTION.

	DIFFUSER & GRILLE SCHEDULE									
DESIGNATION	MANUFACTURER	MODEL NO	TYPE	COLOR	NOM NECK SIZE	NOM FACE SIZE	FRAME TYPE	NC MAX	REMARKS	
A	TITUS	PCS-3	PERFORATED ADJUSTABLE CORE	26 WHITE	PER PLAN	24" x 24"	LAY-IN T-BAR	< 30	INSULATION BLANKET FOR BACKPAN, CONTRACTOR FURNISHED ROUND NECK ADAPTER	
B	TITUS	PCS-3	PERFORATED ADJUSTABLE CORE	26 WHITE	PER PLAN	20" x 20"	SURFACE	< 30	WITH 20X20 SURFACE FRAME, REQUIRES A 20.5"X20.5" CEILING OPENING, INSULATION BLANKET, D-100 RADIAL DAMPER	
C	TITUS	PCS-3	PERFORATED ADJUSTABLE CORE	26 WHITE	PER PLAN	12" x 12"	SURFACE	< 30	WITH12X12 SURFACE FRAME, REQUIRES A 12.5"X12.5" CEILING OPENING, INSULATION BLANKET, D100 RADIAL DAMPER	
D	TITUS	PAR-3	PERFORATED RETURN	26 WHITE	22" x 22"	24" x 24"	LAY-IN T-BAR	< 35	CONTRACTOR FURNISHED INSULATE RETURN BOX FOR CONNECTING FLEX DUCT	
E	TITUS	PAR-3	PERFORATED EXHAUST	26 WHITE	PER PLAN	12" x 12"	SURFACE		WITH12X12 SURFACE FRAME, REQUIRES A 12.5"X12.5" CEILING OPENING, D100 RADIAL DAMPER	
F	TITUS	PAR-3	PERFORATED RETURN	26 PANDA BRONZE	22" x 22"	24" x 24"	LAY-IN T-BAR	< 35	CONTRACTOR FURNISHED INSULATE RETURN BOX FOR CONNECTING FLEX DUCT	
H	TITUS	PCS-3	PERFORATED ADJUSTABLE CORE	26 PANDA BRONZE	PER PLAN	24" x 24"	LAY-IN T-BAR	< 30	WITH INSULATION BLANKET, BALANCE USING MANUAL VOLUME DAMPER AT BRANCH DUCT	
J	TITUS	PCS-3	PERFORATED ADJUSTABLE CORE	26 WHITE	PER PLAN	24" x 24"	LAY-IN T-BAR	< 30	AG95 OBD, INSULATION BLANKET FOR BACKPAN, CONTRACTOR FURNISHED ROUND NECK ADAPTER	
K	TITUS	PCS-3	PERFORATED ADJUSTABLE CORE	26 WHITE	PER PLAN	12" x 12"	SURFACE	< 30	WITH12X12 SURFACE FRAME, REQUIRES A 12.5"X12.5" CEILING OPENING, INSULATION BLANKET, D100 RADIAL DAMPER	
L	TITUS	PCS-3	PERFORATED ADJUSTABLE CORE	26 WHITE	PER PLAN	12" x 12"	SURFACE	< 30	WITH12X12 SURFACE FRAME, REQUIRES A 12.5"X12.5" CEILING OPENING	
NOTE: PROVIDE FACTORY INSTALLED BACK PAN INSULATION ON AIR DEVICES. HVAC CONTRACTOR IS TO PURCHASE ALL AIR DEVICES FROM PANDA APPROVED NATIONAL ACCOUNT VENDOR THERMAIR SYSTEMS INC. PLEASE CONTACT RON CAMPTON AT 802-705-5010 OR EMAIL: ronc@thermairsystems.com										

AIR BALANCE SCHEDULE				
ITEM		SUPPLY AIR	RETURN AIR	EXHAUST
MAU1		0	0	+5,040
EF-1		0	0	-3,400
EF-2		0	0	-2,900
RTU-1		+2,400	-1,900	500
RTU-2, RTU-3		+4,000, +4000	-3,250, -3,250	2@750 EA
EF-3		-	-	-450
TOTAL		+10,400	-8,400	+7,040
BUILDING PRESSURE = +290 CFM				
BALANCE TOLERANCES AS FOLLOWS: KITCHEN EXHAUST HOODS: 0% TO +10% OUTDOOR AIR: 0% TO +10% SUPPLY & RETURN DIFFUSERS: ±10% TOILET EXHAUST: ±10% BALANCE RTU SUPPLY AND RETURN PRIOR TO TURNING ON EXHAUST FANS. KITCHEN EXHAUST FANS SHALL BE BALANCED WITH VELOCITY MATRIX OR A 4" ANEMOMETER				

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 DIRECT DRIVE	CENTRIFUGAL DIRECT DRIVE	CENTRIFUGAL DIRECT DRIVE
FAN ARRANGEMENT	UPBLAST	UPBLAST	DOWNBLAST
MIN. WHEEL DIAMETER	-	-	-
PERFORMANCE	C.F.M.	3,400	2,900
	T.S.P.	1.55"	1.78"
	B.H.P.	1.97	1.24
	FAN R.P.M.	1399	1199
MOTOR	MOTOR H.P.	3.0	2.0
	ELEC. CHARACTERISTICS	208V/3PH/60HZ	208V/3PH/60HZ
	MOTOR R.P.M.	1725	1725
	MOTOR SPECIAL FEATURES	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: DU180HFA WT. 221 LBS	CAPTIVEAIRE MODEL: DU180HFA WT. 221 LBS	CAPTIVEAIRE MODEL: DR12HFA WT. 65 LBS

NOTES:

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

HVAC CONTROL SETTINGS

EACH HVAC UNIT SHALL BE PROVIDED WITH CONTROLS AS FOLLOWS:

THERMOSTAT: LENNOX 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 OCCUPIED: 75°F.
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
	MARS STD242-1U-OB	UNHEATED AIR CURTAIN (SERVICE DOOR), 115/1/60 WEIGHT 65 LBS. PROVIDED BY PANDA EXPRESS
	QUICK-SERV CF-25	AIR CURTAIN (WINDOW NON-HEATED), 120/1/60, 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

- 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.).
- 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.
- CODE COMPLIANCE: ALL WORK COVERED BY THIS SECTION SHALL BE IN ACCORDANCE WITH ALL LOCAL CODES AND ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION.
- COORDINATE WORK WITH OTHER TRADES. EQUIPMENT FURNISHED BY OTHERS AND OWNER REQUIREMENTS. PROVIDE DUCT RISES 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.
- DUCTWORK: DUCT SYSTEMS SHALL BE CONSTRUCTED, INSTALLED, SEALED AND INSULATED AS PROVIDED IN THE INTL 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.
- INSTALL DUCT HIGH AS POSSIBLE WITHIN JOIST SPACE. CONSULT ARCHITECT AND ENGINEER FOR ALTERNATE ROUTING IF CONFLICT OCCURS.
- SEAL ALL TRANSVERSE AND LONGITUDINAL DUCT SEAMS AIR-TIGHT. PROVIDE TURNING VANES AT ALL ELBOWS OR OFFSETS EXCEEDING 30 DEGREES.
- GREASE EXHAUST SYSTEM: ALL GREASE EXHAUST DUCTS SHALL BE PREFABRICATED CAPTIVEAIRE DOUBLE WALL GREASE DUCT. PROVIDE RATED ACCESS DOORS AT ALL ELBOWS AND OFFSETS NECESSARY FOR COMPLETE CLEANING OF GREASE DUCT. PROVIDE MINIMUM 30"x30" UNOBSTRUCTED ACCESS OR ROUTE FROM THE CEILING TO EACH ACCESS DOOR. DO NOT BLOCK ACCESS WITH PLUMBING, ELECTRICAL OR HVAC OBSTRUCTIONS. REFER TO SHEETS M-400 TO M-410.
- 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 MICROLITE OR EQUAL WITH FOIL/SCRIMP/KRAFT, 1 IN THICKNESS, 1.5 POUNDS/FT3 DENSITY. DUCT WRAP SHALL BE BONDED GLASS FIBERS IN THERMOSETTING RESIN MEETING NFPA 90A. WITH K VALUE NOT TO EXCEED 0.23 AT 75 DEGREES F. FLAME SPREAD AND SMOKE DEVELOPED RATINGS SHALL NOT EXCEED 25/50. 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.
- FLEX DUCT: PROVIDE FACTORY ASSEMBLED CLASS 1 AIR DUCT (UL 181) WITH FIBERGLASS INSULATION AND REINFORCED OUTER PROTECTIVE COVER/VAPOR 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.
- PROVIDE INSULATION APPLIED TO COMPLETE BACKPAN OF AIR DEVICES.
- 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.
- AUTOMATIC TEMPERATURE CONTROL: CONTRACTOR TO PROVIDE AND INSTALL 24/7 PROGRAMMABLE THERMOSTATS AND REMOTE SENSORS.
- KITCHEN HOOD EQUIPMENT INTERLOCK: PROVIDE ALL INTERLOCK AND CONTROL WIRING FOR KITCHEN HOOD SYSTEMS, WHICH INCLUDES EF1, EF2, 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.
- 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.
- 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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REVISIONS:

	SOLUTION F.2	09.30.21
	OWNER REVISIONS	01.27.22

ISSUE DATE:

ISSUE FOR PERMIT	01-29-21
ISSUE FOR BID	04-30-21
ISSUE FOR BID 2	11-02-21
ISSUE FOR BID (DT)	02-04-22

DRAWN BY: AE

PANDA PROJECT #: D8164

PANDA STORE #: -

ARCH PROJECT #: 261-321



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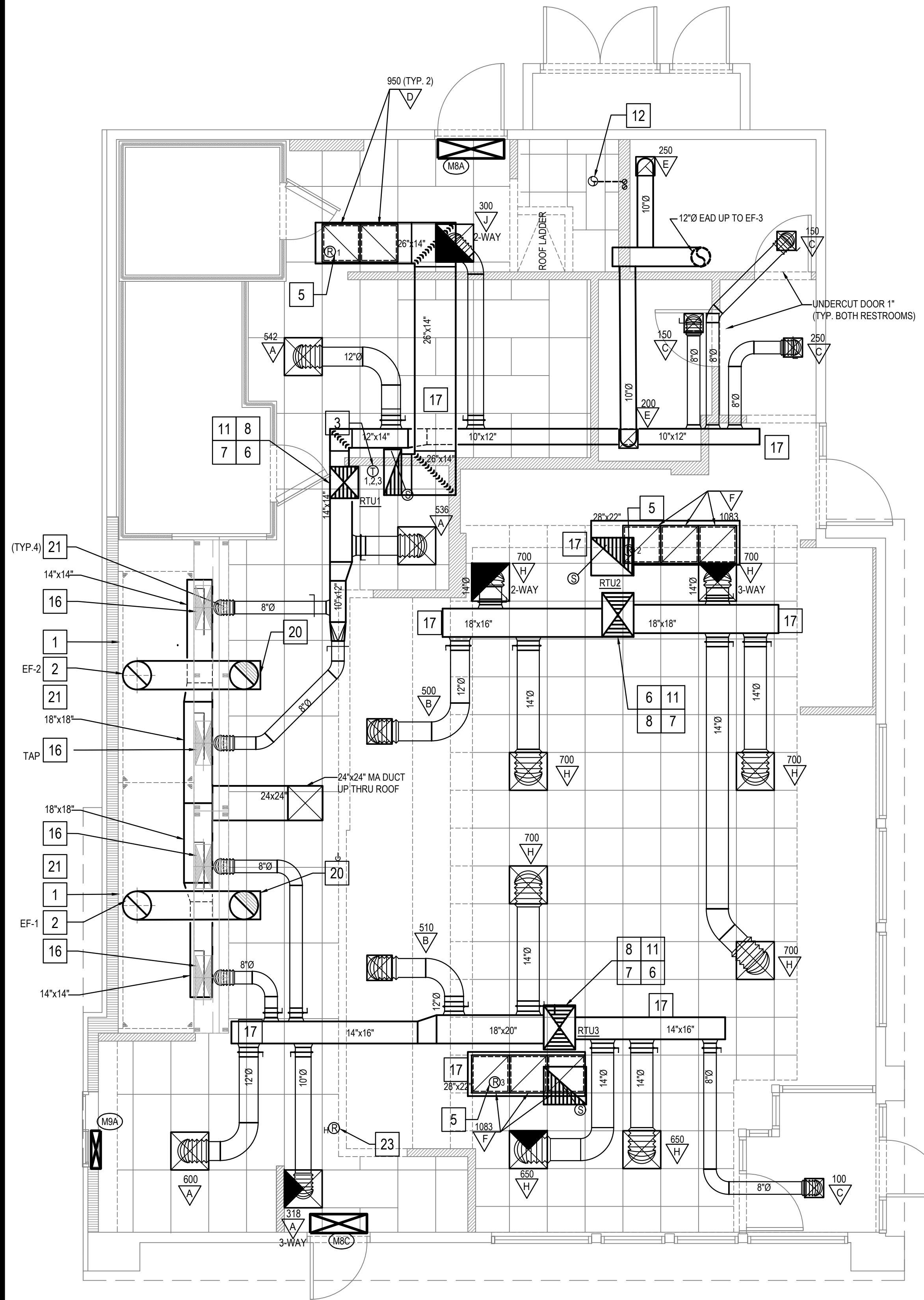
PANDA EXPRESS

TRUE WARM & WELCOME
JEFFERSON AVE. & MORRIS DR.
NEWPORT NEWS, VA 23605

M-000

MECHANICAL NOTES
SPECIFICATIONS & SCHEDULES

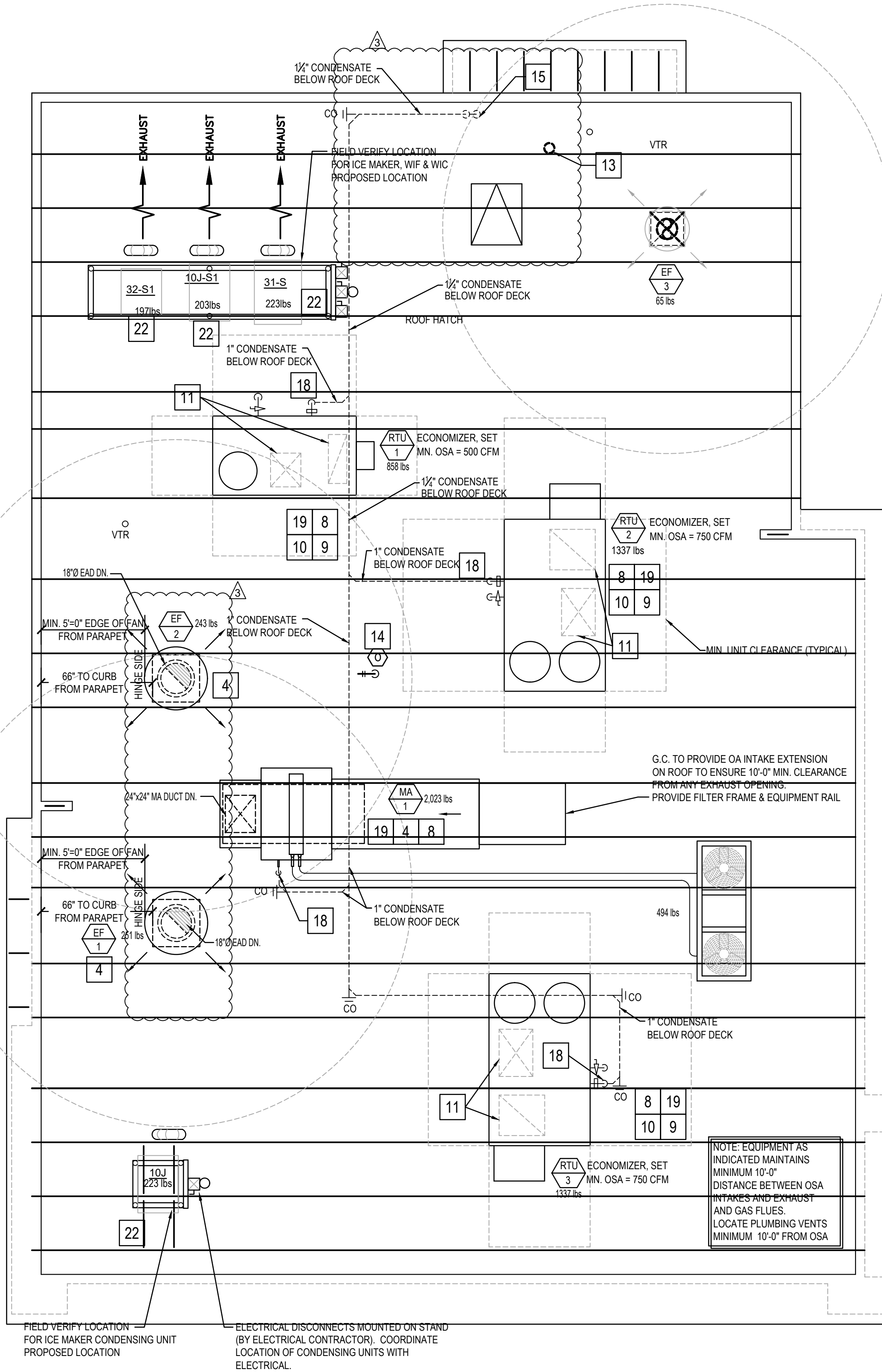
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HVAC FLOOR PLAN 2

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

M-100



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 MANUFACTURED CAPTIVEAIRE 18" 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. SEAL DUCT TO THE ROOF CURB WITH FIRE CAULKING. SEE HOOD DETAIL. DRAWINGS ON SHEET M-500 AND CAPTIVEAIRE DRAWINGS ON SHEETS M-400 TO M-410.
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. 608, 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. 1,200 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 236 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 "ATR HUB" PROVIDED AND INSTALLED BY GC (REFER TO ARCH. ISO 3 AND 4, SHEET A-108). UNITS SECURED TO RACK BY G.C.
23. ROOM AIR SENSOR FROM CAPTIVEAIRE HOOD ON BACK OF MENU BOARD WALL, AS CLOSE TO CEILING AS POSSIBLE.

NOTE: MAXIMUM FLEXIBLE DUCT LENGTH ALLOWED SHALL BE PER LOCAL CODE AND AMENDMENTS. IMC HAS NO LIMITATIONS FOR FLEXIBLE DUCT LENGTHS.



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REVISIONS:

1	SOLUTION F.2	09.30.21
2	OWNER REVISIONS	01.27.22

ISSUE DATE:

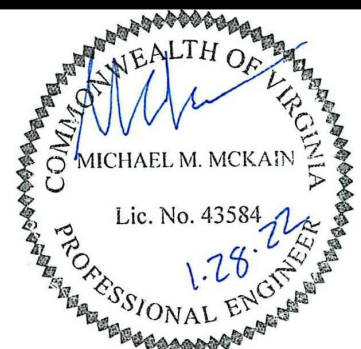
ISSUE FOR PERMIT	01-29-21
ISSUE FOR BID	04-30-21
ISSUE FOR BID 2	11-02-21
ISSUE FOR BID (DT)	02-04-22

DRAWN BY: AE

PANDA PROJECT #: D8164
PANDA STORE #: -
ARCH PROJECT #: 261-321



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PATENT NUMBERS
EXHAUST HOODS ND-2/BD-2/SND-2 (CANADA) - CA PATENT 2520435 C.

HOOD INFORMATION - JOB#5294505

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)							TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG	
										WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP			END TO END	ROW
1		4824 ND-2	CAPTIVEAIRE	13' 0"	600 DEG	I	HEAVY	262	3400			4"	18"	3400	1924	-1.202"	0	430 SS WHERE EXPOSED	LEFT	ALONE
2		4824 ND-2	CAPTIVEAIRE	11' 2"	600 DEG	I	HEAVY	260	2900			4"	18"	2900	1641	-0.897"	0	430 SS WHERE EXPOSED	RIGHT	ALONE
3		226 MISC ACPSP-ONLY	CAPTIVEAIRE	11' 9"	300 DEG	I	N/A	0	0								2520	430 SS WHERE EXPOSED	ALONE	ALONE
4		226 MISC ACPSP-ONLY	CAPTIVEAIRE	14' 4"	300 DEG	I	N/A	0	0								2520	430 SS WHERE EXPOSED	ALONE	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		CAPTRATE SOLO FILTER	9	20"	16"	85% SEE FILTER SPEC	7	L55 SERIES E26	NO	WALL MNT	12"x54"x24"	ANSUL R-102	3.0/3.0/3.0	DCV-2111	1 LIGHT 1 FAN	YES 537 LBS
2		CAPTRATE SOLO FILTER	8	20"	16"	85% SEE FILTER SPEC	6	L55 SERIES E26	NO	RIGHT	20"x48"x24"					YES 548 LBS
3							0									NO 162 LBS
4							0									NO 185 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1		LEFT END STANDOFF (FINISHED) 3' WIDE 48" LONG. RISER SENSOR INSTALL 6IN PLEN.
2		RISER SENSOR INSTALL 6IN PLEN.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				
							WIDTH	LENG	DIA	CFM	SP
3	Front	141"	10"	6"	AC				8"	236	0.135"
						MUA	10"	28"		1260	0.530"
	Back	141"	12"	6"	MUA		10"	28"		1260	0.530"
						AC			8"	236	0.122"
4	Front	172"	10"	6"	AC				8"	236	0.122"
						MUA	10"	28"		1254	0.497"
	Back	172"	12"	6"	MUA		10"	28"		1254	0.497"
						AC			8"	236	0.122"

WALL-MOUNT UTILITY CABINET

HOOD NO	LOCATION	SIZE	UTILITY CABINET(S)			WEIGHT
			FIRE SYSTEM TYPE	ELECTRICAL SIZE	SWITCHES MODEL # QUANTITY	
1	WALL MNT	12"x54"x24"	ANSUL R-102	3.0/3.0/3.0	DCV-2111 1 LIGHT 1 FAN	305.00 LBS

FIRE SYSTEM INFORMATION - JOB#5294505

FIRE SYSTEM NO	TAG	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1		ANSUL R102	3.0/3.0/3.0	29	WALL UTILITY CABINET LEFT	N/A

GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		MECHANICAL	2.000	CAPTIVEAIRE SYSTEMS

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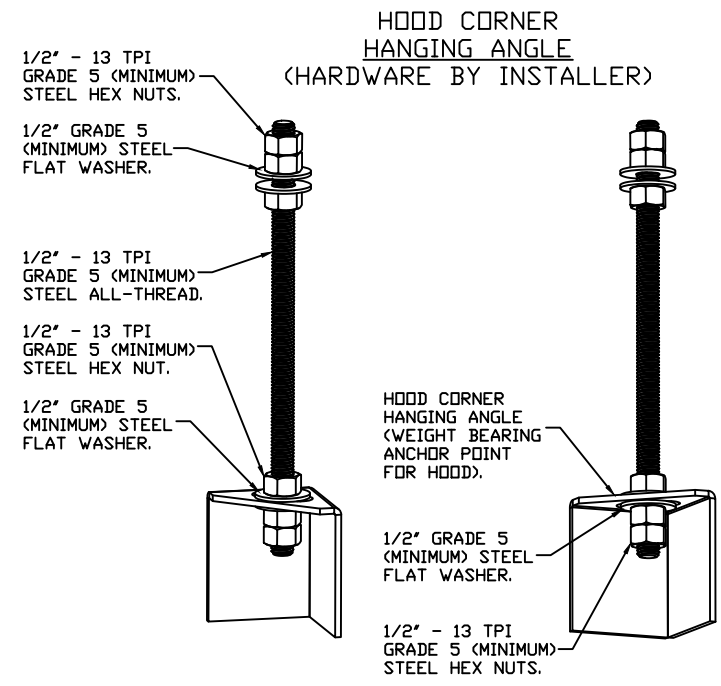
DOUBLE WALL DUCT BY MECHANICAL
PLEASE USE CONTACT BELOW FOR PRICING

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.

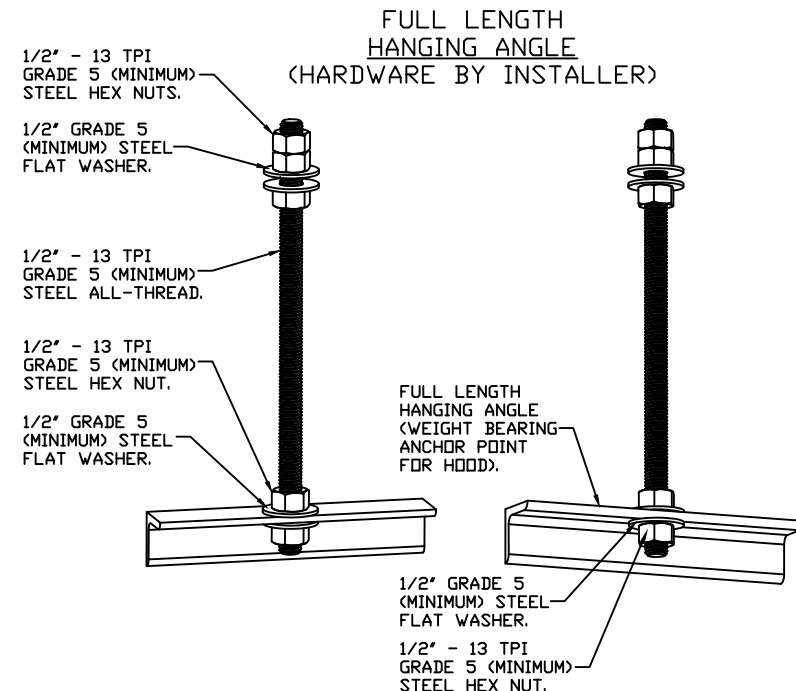
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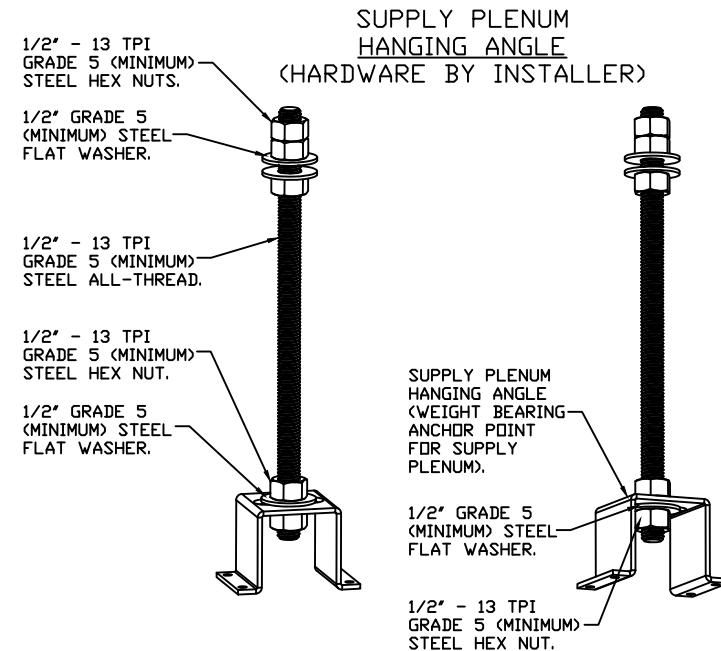
ASSEMBLY INSTRUCTIONS

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.



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 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.



ASSEMBLY INSTRUCTIONS

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DESCRIPTION

DATE

BY

APP'D

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REVISIONS

SOLUTION F.2 09.30.21

OWNER REVISIONS 01.27.22

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ISSUE FOR BID 04-30-21

ISSUE FOR BID 2 11-02-21

ISSUE FOR BID (DT) 02-04-22

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PANDA PROJECT #: D8164

PANDA STORE #: -

ARCH PROJECT #: 261-321

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DWG.#: 5294505

DRAWN BY: AH-86

SCALE: 3/4" = 1'-0

MASTER DRAWING

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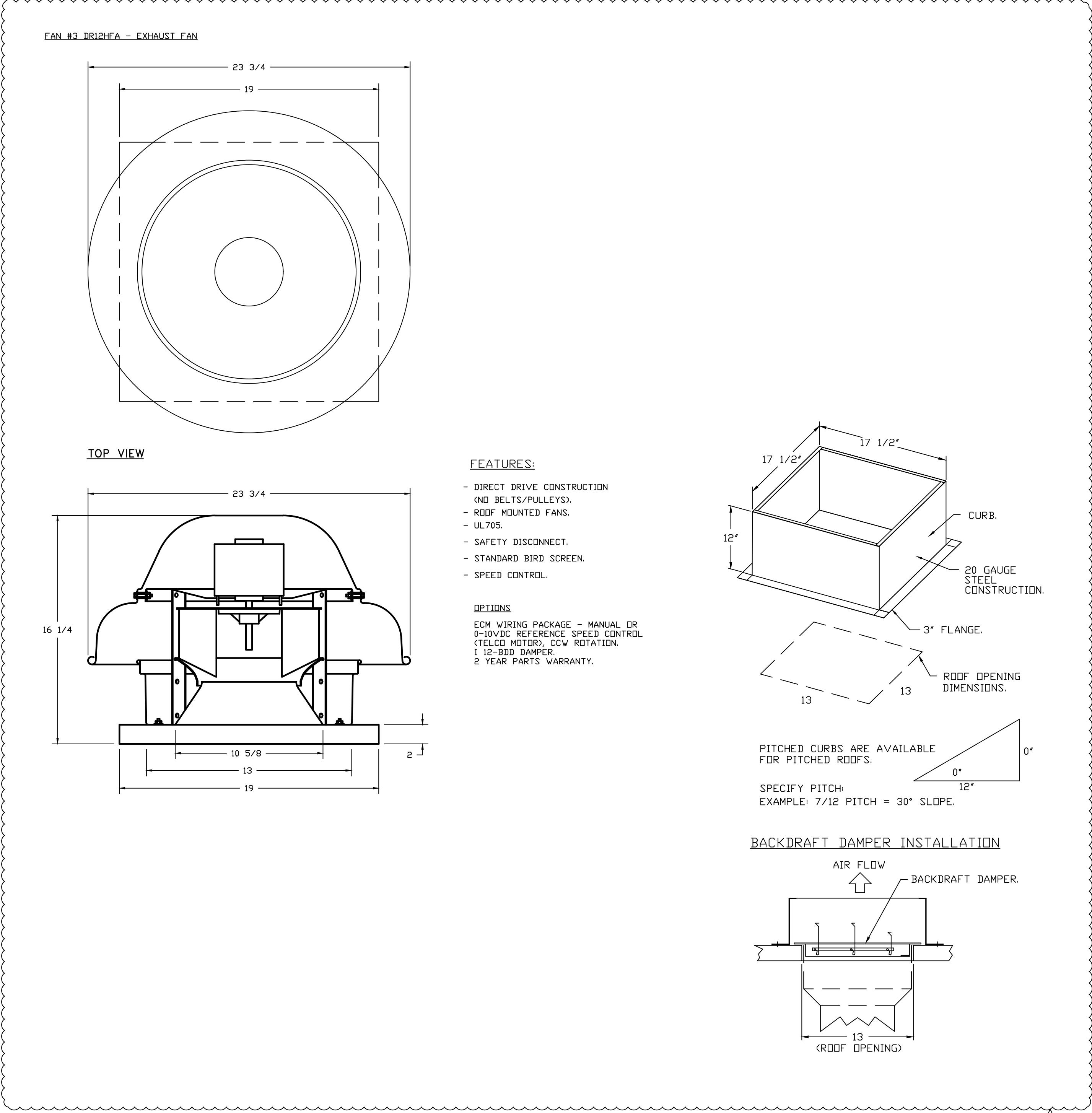
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HOOD DETAIL PLAN

TRUE WARM & WELCOME 2300 R6

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HOOD DETAIL PLAN

TRUE WARM & WELCOME 2300 R6

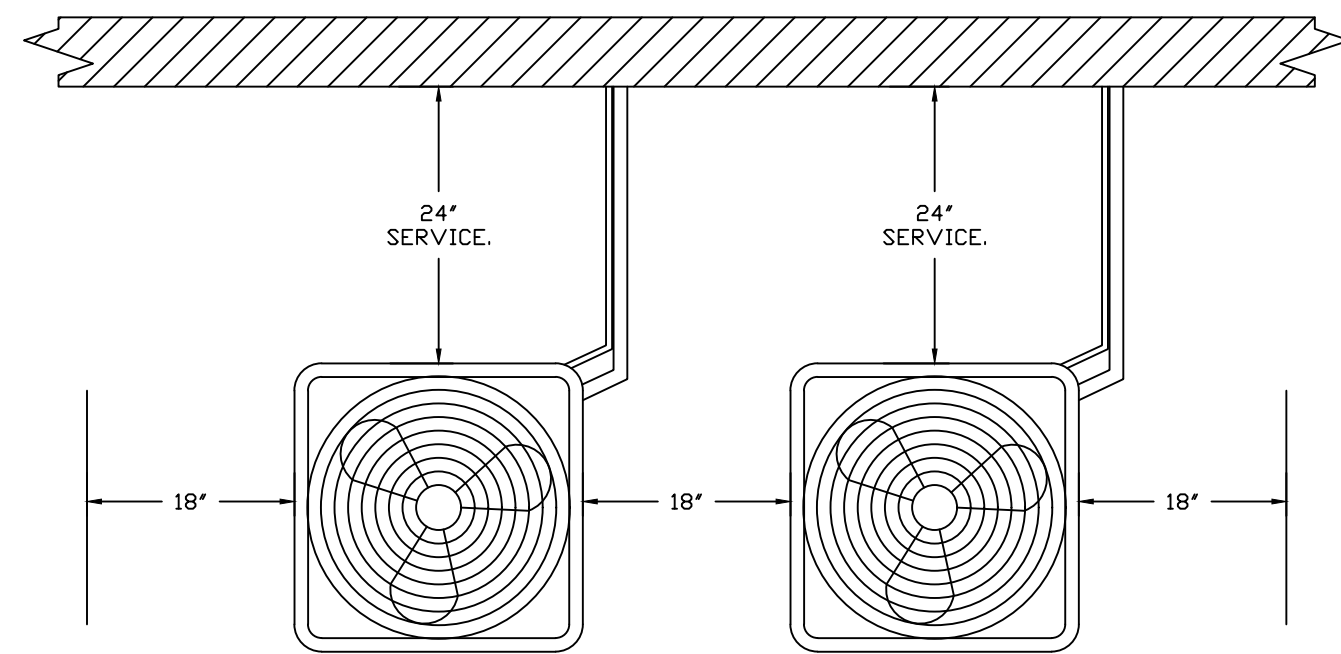
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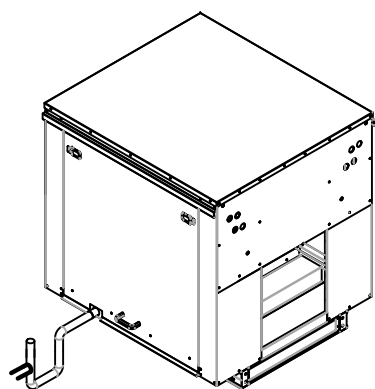
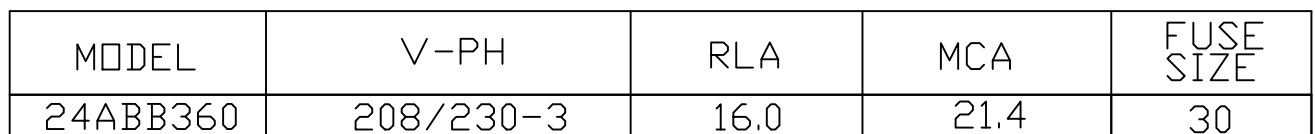
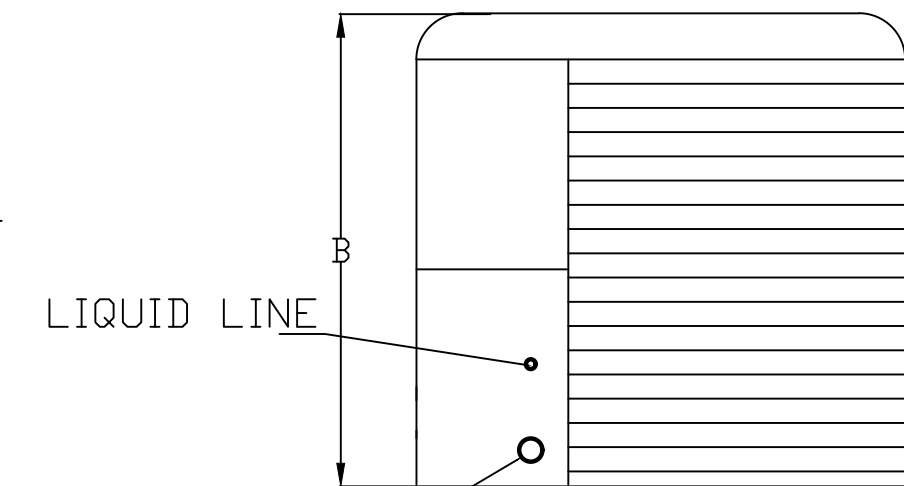
NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET ASMA C240 STANDARDS, A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN ASMA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANE. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/DIVERSION IN THE DUCTWORK MAY CAUSE A SQUARE EFFECT. SQUARE EFFECT WILL INCREASE STATIC PRESSURE, INCREASE AIRFLOW AND 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".

WINTER TEMPERATURE = 20°F. TEMP. RISE = 100°F.
BTUs CALCULATED OFF ACTUAL AIR DENSITY.
OUTPUT BTUs AT ALTITUDE OF 0.0 FT. = 496644.
INPUT BTUs AT ALTITUDE OF 0.0 FT. = 539830.

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48" CLEARANCE REQUIRED ABOVE CONDENSERS.
(NOTE: **CONDENSERS SHOWN HERE ARE NOT DRAWN AT SCALE).



- 1) 1" DIAMETER PVC PIPE ONLY.
- 2) USE ONLY LOW PROFILE COUPLINGS.
- 3) ADD CLEAN OUT AS SHOWN.

DESCRIPTION: DIRECT FIRED BURNERS SHALL HAVE PATENTED (U.S. PATENT NO. US6629523B2), SELF-ADJUSTING PROFILE PLATES DESIGNED TO ENSURE PROPER AIR FLOW, AND PRESSURE LOSS, AND THE BLOWER PROFILE PLATES SHALL ALSO 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.

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

CERTIFICATIONS:
ALL PROFILE PLATE ASSEMBLIES SHALL BE INCLUDED IN THE IDU UNITS ETL LISTING AND COMPLY WITH COMBINED ASHRAE STANDARD 154 AND CSA 3.7 (NON-RE-CIRCULATING OF HEATED) AND ANSI Z39.1 (RE-CIRCULATING OF HEATED).

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 TYPED, PERMANENTLY MOUNTED SPRING HINGES.
-SPRING HINGES SHALL MATE FROM 304 STAINLESS STEEL.

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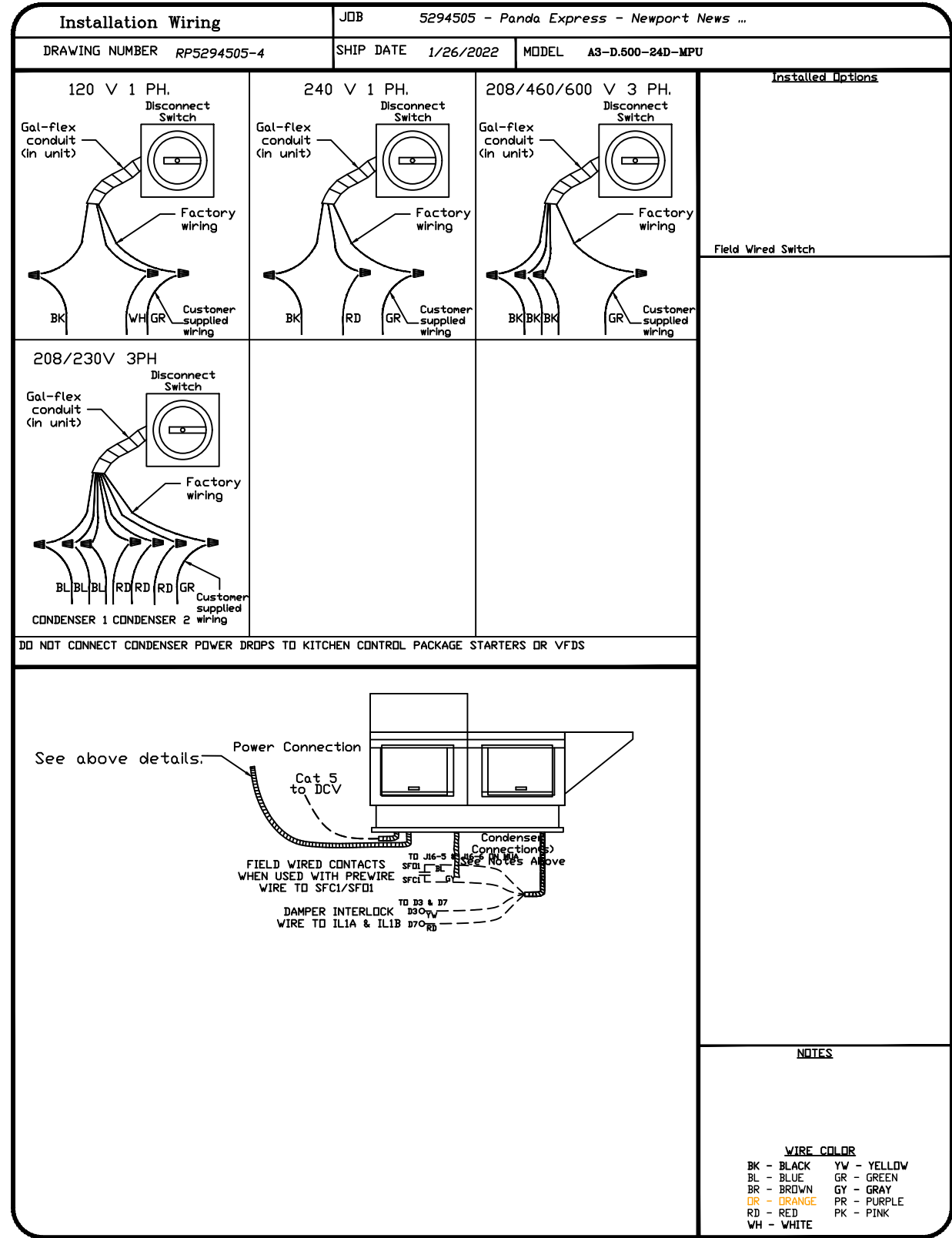
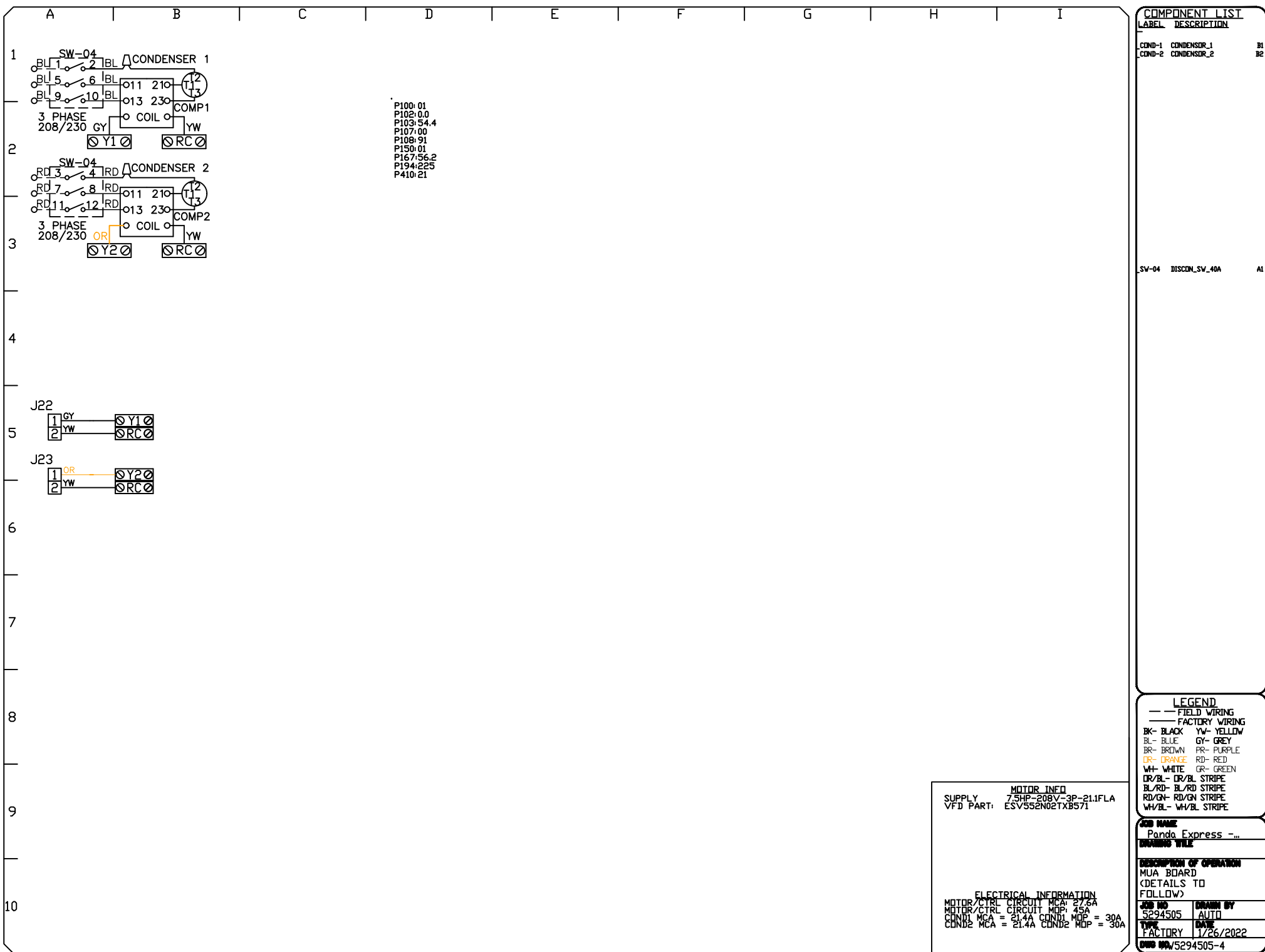
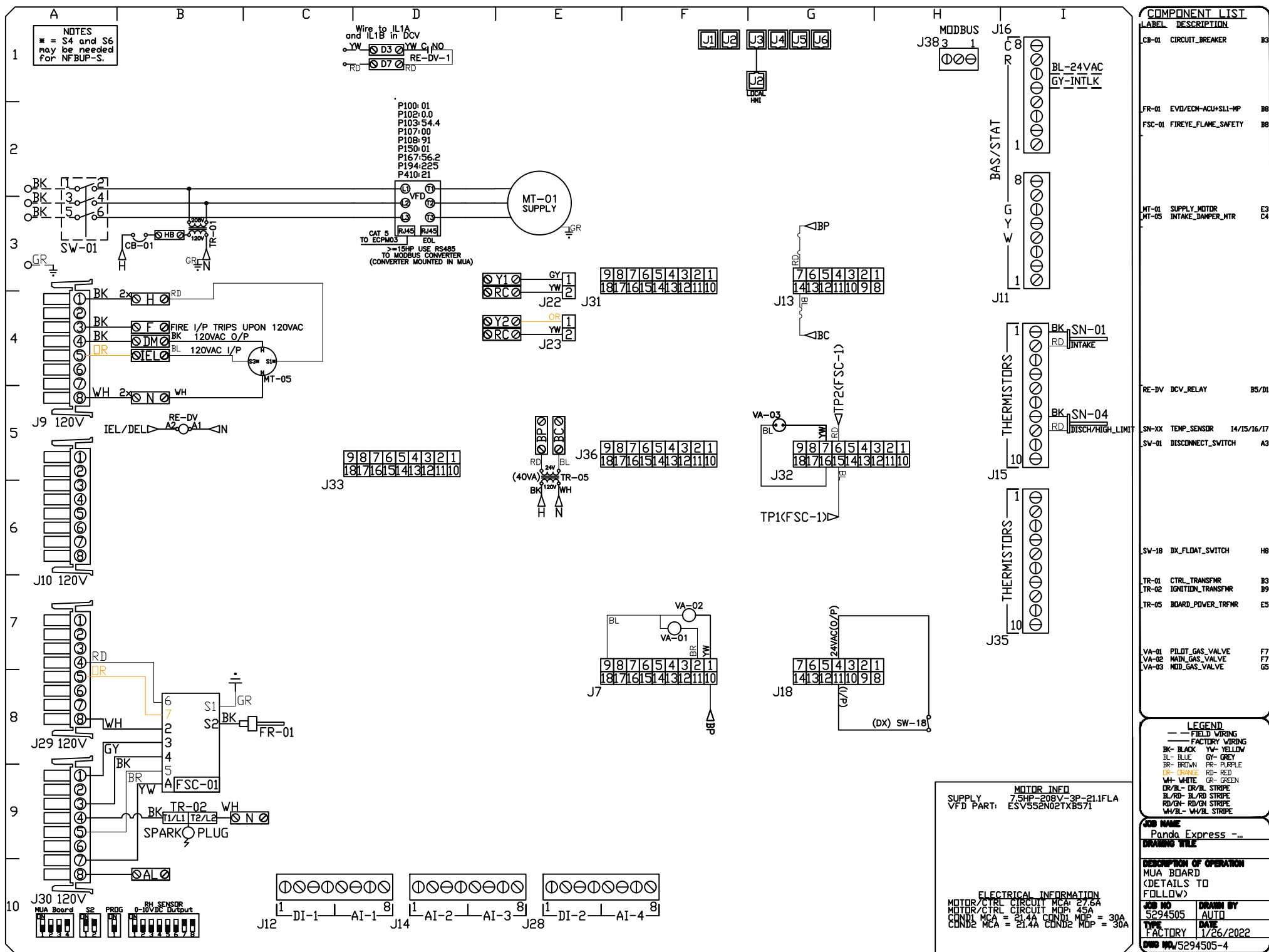
M-405

HOOD DETAIL PLAN

TRUE WARM & WELCOME 2300 R6

ISSUE FOR PERMIT 11-02-21

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1	SOLUTION F.2	09.30.21
2	OWNER REVISIONS	01.27.22

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6104 Jefferson Ave,

Newport News, VA 23605

DATE: 1/26/2022

DWG.#: 5294505

DRAWN BY: AH-86

SCALE: 3/4" = 1'-0"

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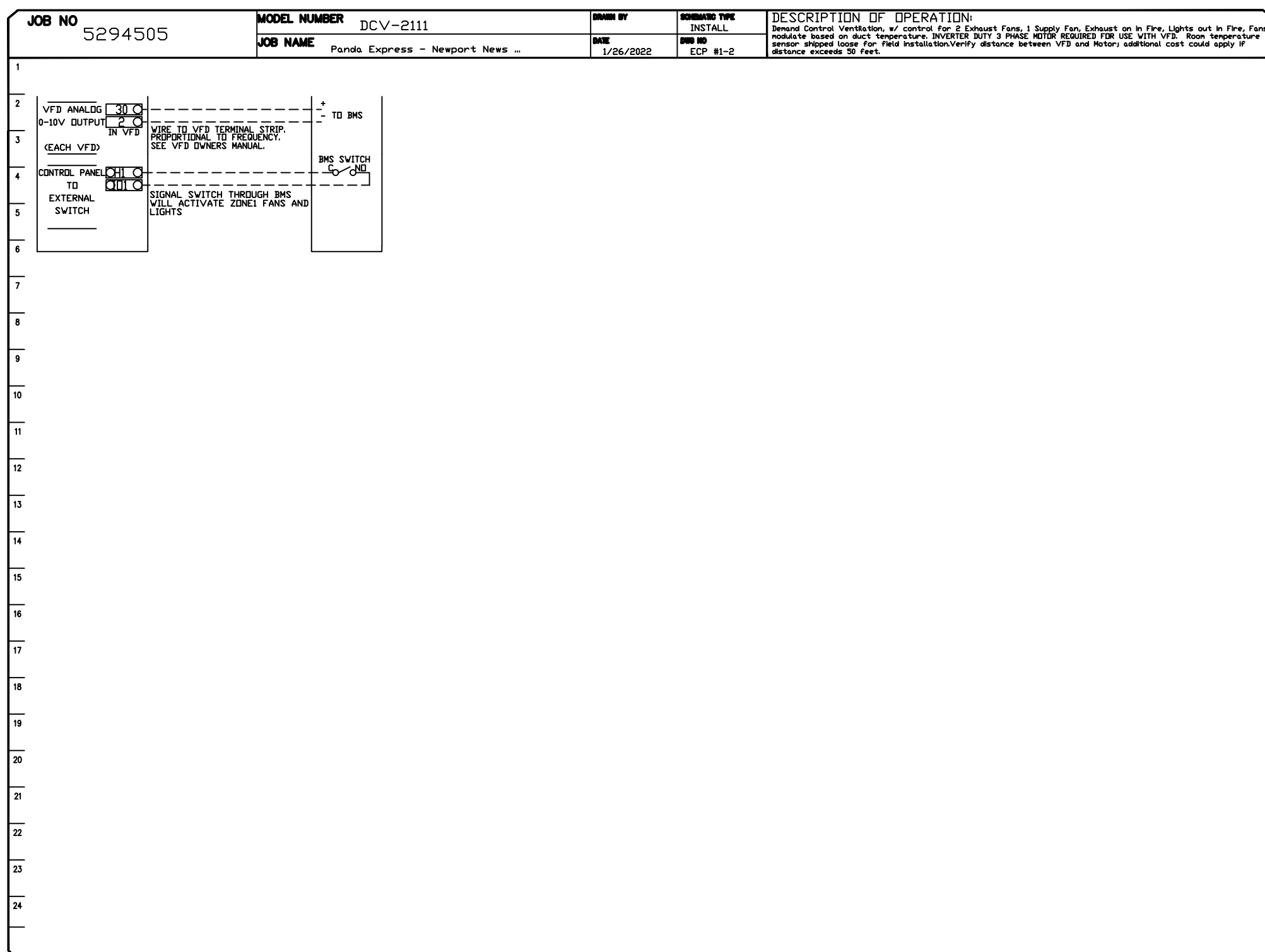


HOOD DETAIL PLAN

TRUE WARM & WELCOME 2300 R6

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NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	#	HP	VOLT	FLA
1		DCV-2111	WALL UTILITY CABINET LEFT	08 - SHIP LOOSE V/ PREVIRE	1 LIGHT 1 FAN	SMART CONTROLS DCV					



SHEET NO.
8



TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	DW1829DWLT-2R-S	3400				-0.009	50.46	924.01	1	DOUBLE WALL DUCT - 18" INNER DUCT, 29' LONG - 2 LAYERS REDUCED CLEARANCE - 22" STAINLESS STEEL OUTER SHELL.
P2	DW1847DWAJD-2R-S	3400				-0.009	107.98	924.01	1	DOUBLE WALL ADJUSTABLE DUCT - 18" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 22" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 48.5' / ADJUSTMENT = 30.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL CLAMPS.
P3	DW1890DWASY-2R-S	3400				-0.115	45.59	924.01	1	DOUBLE WALL DUCT - 18" INNER 90 DUCT - 2 LAYERS REDUCED CLEARANCE - 22" STAINLESS STEEL OUTER SHELL.
P4	DW1801DWDFSETASY-2R-S	3400				-0.003	14.66	924.01	1	DOUBLE WALL DUCT - 18" INNER DUCT RISER & 1 DEGREE OFFSET - 2 LAYERS REDUCED CLEARANCE - 22" STAINLESS STEEL OUTER SHELL.
P5	DW1827DWAJD-2R-S	3400				-0.006	62.85	924.01	1	DOUBLE WALL ADJUSTABLE DUCT - 18" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 22" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 24.5' / ADJUSTMENT = 13.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL 'V' CLAMPS.
P6	DW2226SADKIT						8.80		1	DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 22" OD - INCLUDES UNI-STRUT CUT TO LENGTH, DW2226SAD, & HARDWARE BAG 4.
P7	DW1801DWDFSETASY-2R-S	3400				-0.003	14.66	924.01	1	DOUBLE WALL DUCT - 18" INNER DUCT RISER & 1 DEGREE OFFSET - 2 LAYERS REDUCED CLEARANCE - 22" STAINLESS STEEL OUTER SHELL.
P8 ASSEMBLED W/P9	DW18DWTEASY-2R-S	3400		1		-0.23	55.68	924.01	1	DOUBLE WALL DUCT - 18" INNER TEE DUCT - 2 LAYERS REDUCED CLEARANCE - 22" STAINLESS STEEL OUTER SHELL.
P9 ASSEMBLED W/P8 O=S	DW18DWACDDOORCOV-2R-S						26.16		1	DOUBLE WALL DUCT - 18" INNER ACCESS DOOR & 22" ACCESS DOOR COVER WITH CLAMPS - 2 LAYERS REDUCED CLEARANCE - 22" STAINLESS STEEL OUTER SHELL.
P10 ASSEMBLED W/P11	DW1835DWLTP-2R-S	3400				-0.011	58.74	924.01	1	DOUBLE WALL DUCT - 18" INNER DUCT, 35' LONG - 2 LAYERS REDUCED CLEARANCE - 22" STAINLESS STEEL OUTER SHELL - USED WITH TRANSITION PLATES
P11 ASSEMBLED W/P10	DW2618TPDBEX	3400					9.00	924.01	1	DUCT TO CURB TRANSITION 3/4" DOWN TURN, 26 1/2" CURB TO 18" DUCT, 16 GA ALUMINIZED. USED ON NCA16FA / NCA16HPFA & NCA18FA / NCA18HPFA. TRANSITION PLATE OD IS 27.00" DESIGNED FOR USE WITH EXHAUST FAN. NON-STANDARD PART.
SYSTEM AT P11						-1.588	0.00			
P12	DW2226SADKIT						8.80		1	DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 22" OD - INCLUDES UNI-STRUT CUT TO LENGTH, DW2226SAD, & HARDWARE BAG 4.
	3M-2000PLUS						0.80		3	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	DW18DWCLASY-2R-S						0.70		3	DUCT - 18" DUCT - 22" DOUBLE 'V' CLAMP - 2R INSULATION & SINGLE 'V' CLAMP INCLUDED - REDUCED CLEARANCE.
TOTAL WEIGHT							491.88			

- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE ENTIRE INSTALLATION AND OPERATION MANUAL
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

VERTICAL			
TYPE	WALL SUPPORT (FT)	CURB SUPPORT (FT)	FLOOR SUPPORT (FT)
2R & 2R HT (5'-16")	20'	24'	24'
2R (18")	18'	24'	24'
3R & 3Z (5'-24")	10'	24'	24'
3Z (26" - 36")	10'	20'	20'

REVISIONS		DATE
DESCRIPTION	DATE	DATE
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△		
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Panda Express - Newport News VA 08(64) - rev1

6104 Jefferson Ave,

Newport News, VA 23605

DATE: 1/26/2022

DWG.#: 5294505

DRAWN BY: AH-86

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO.

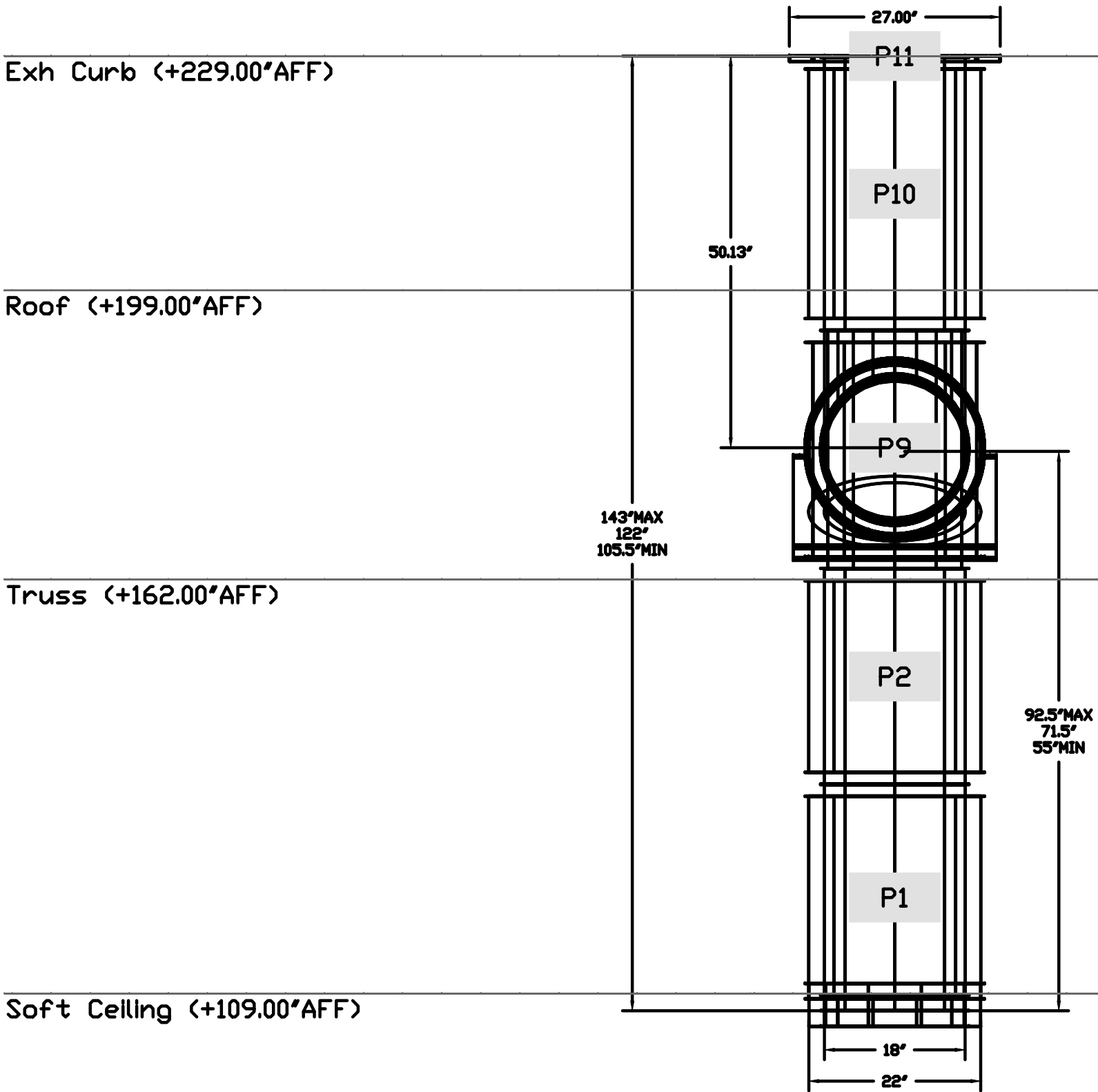
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Southern California Office

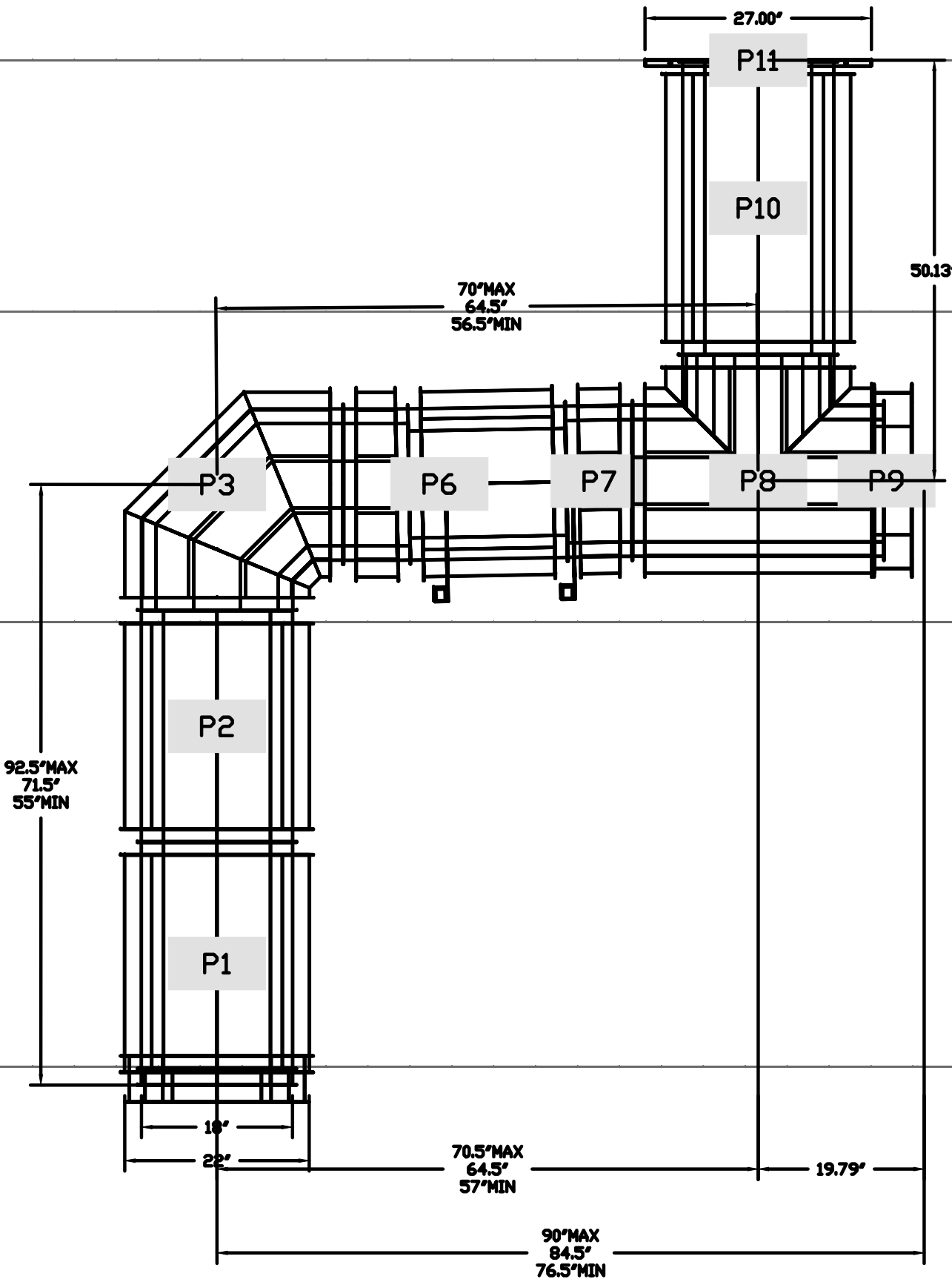
www.caphiveair.com



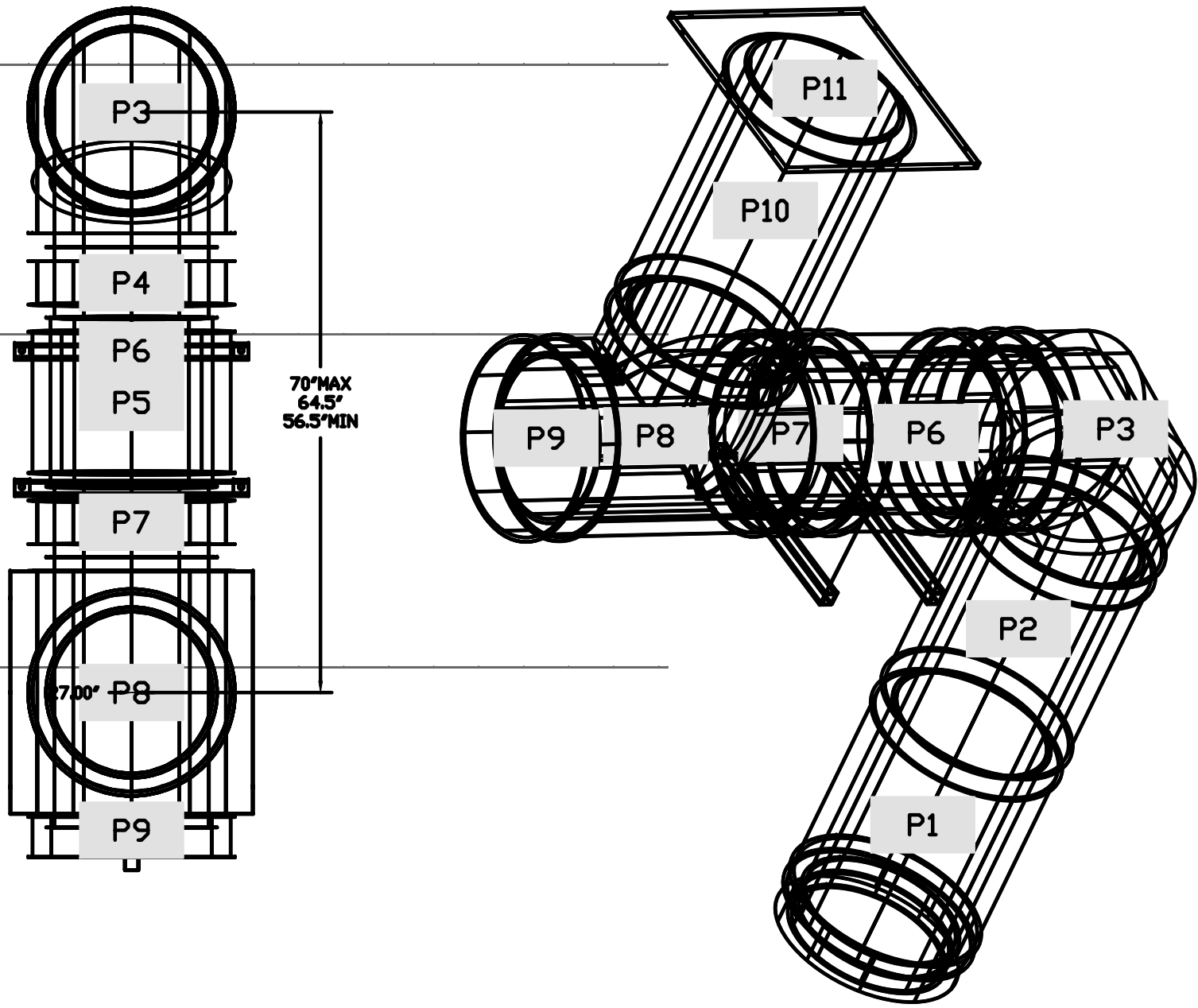
DUCTWORK #1 FRONT VIEW



DUCTWORK #1 SIDE VIEW



DUCTWORK #1 TOP VIEW DUCTWORK #1 SE VIEW



Floor (+0.00'AFF)

REVISIONS

DESCRIPTION	DATE:
Δ	
Δ	
Δ	
Δ	

CAPTIVE

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 - Newport News VA (D8164) - rev1

6104 Jefferson Ave,

Newport News, VA, 23605

DATE: 1/26/2022

DWG.#: 5294505

DRAWN BY: AH-86

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO.

10



PANDA EXPRESS, INC.
1683 Walnut Grove Ave.
Rosemead, California
91770
Telephone: 626.799.9898
Facsimile: 626.372.8288

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REVISIONS:	
Δ SOLUTION F.2	09.30.21
Δ OWNER REVISIONS	01.27.22

ISSUE DATE:	
ISSUE FOR PERMIT	01-29-21
ISSUE FOR BID	04-30-21
ISSUE FOR BID 2	11-02-21
ISSUE FOR BID (DT)	02-04-22

DRAWN BY: AE

PANDA PROJECT #: D8164
PANDA STORE #: -
ARCH PROJECT #: 261-321



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PANDA EXPRESS
TRUE WARM & WELCOME
JEFFERSON AVE. & MORRIS DR.
NEWPORT NEWS, VA 23605

Δ

M-409

HOOD DETAIL PLAN

TRUE WARM & WELCOME 2300 R6

ISSUE FOR PERMIT 11-02-21

ISSUE FOR PERMIT 11-02-21

DUCTWORK #2 PARTS – JOB#5294505 DOUBLE WALL											
TAG	PART #	CFM	GPM	ZONE	COVERED BY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION	
P1	DW1829DWLT-2R-S	2900				-0.007	50.46	1641.06	1	DOUBLE WALL DUCT – 18” INNER DUCT, 29’ LONG – 2 LAYERS REDUCED CLEARANCE – 22” STAINLESS STEEL OUTER SHELL.	
P2	DW1847DWAJD-2R-S	2900				-0.006	107.98	1641.06	1	DOUBLE WALL ADJUSTABLE DUCT – 18” INNER DUCT – 2 LAYERS REDUCED CLEARANCE – 22” STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11’ / MAX LENGTH = 48.5’ / ADJUSTMENT = 30.5’ / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL “V” CLAMPS.	
P3	DW1890DWASY-2R-S	2900				-0.084	45.59	1641.06	1	DOUBLE WALL DUCT – 18” INNER 90 DUCT – 2 LAYERS REDUCED CLEARANCE – 22” STAINLESS STEEL OUTER SHELL.	
P4	DW1801DWOFFSETASY-2R-S	2900				-0.002	14.66	1641.06	1	DOUBLE WALL DUCT – 18” INNER DUCT RISER & 1 DEGREE OFFSET – 2 LAYERS REDUCED CLEARANCE – 22” STAINLESS STEEL OUTER SHELL.	
P5	DW1827DWAJD-2R-S	2900				-0.004	62.85	1641.06	1	DOUBLE WALL ADJUSTABLE DUCT – 18” INNER DUCT – 2 LAYERS REDUCED CLEARANCE – 22” STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11’ / MAX LENGTH = 24.5’ / ADJUSTMENT = 13.5’ / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL “V” CLAMPS.	
P6	DW2226SADKIT						8.80		1	DUCT – HORIZONTAL SADDLE SUPPORT KIT, USED WITH 22” DD – INCLUDES UNI-STRUT CUT TO LENGTH, DW2226SAD, & HARDWARE BAG 4.	
P7	DW1801DWOFFSETASY-2R-S	2900				-0.002	14.66	1641.06	1	DOUBLE WALL DUCT – 18” INNER DUCT RISER & 1 DEGREE OFFSET – 2 LAYERS REDUCED CLEARANCE – 22” STAINLESS STEEL OUTER SHELL.	
P8 ASSEMBLED W/P9	DW18DWTEASY-2R-S	2900		1		-0.168	55.68	1641.06	1	DOUBLE WALL DUCT – 18” INNER TEE DUCT – 2 LAYERS REDUCED CLEARANCE – 22” STAINLESS STEEL OUTER SHELL.	
P9 ASSEMBLED W/P8 □=S	DW18DWACCDORCOV-2R-S						26.16		1	DOUBLE WALL DUCT – 18” INNER ACCESS DOOR & 22” ACCESS DOOR COVER WITH CLAMPS – 2 LAYERS REDUCED CLEARANCE – 22” STAINLESS STEEL OUTER SHELL.	
P10 ASSEMBLED W/P11	DW1835DWLTP-2R-S	2900				-0.008	58.74	1641.06	1	DOUBLE WALL DUCT – 18” INNER DUCT, 35’ LONG – 2 LAYERS REDUCED CLEARANCE – 22” STAINLESS STEEL OUTER SHELL – USED WITH TRANSITION PLATES	
P11 ASSEMBLED W/P10	DW2618TPDBEX	2900					9.00	1641.06	1	DUCT TO CURB TRANSITION 3/4” DOWN TURN, 26 1/2” CURB TO 18” DUCT, 16 GA ALUMINIZED. USED ON NCA16FA / NCA16HPFA & NCA18FA / NCA18HPFA. TRANSITION PLATE DD IS 27.00’ DESIGNED FOR USE WITH EXHAUST FAN. NON-STANDARD PART.	
SYSTEM AT P11						-1.178	0.00				
P12	DW2226SADKIT						8.80		1	DUCT – HORIZONTAL SADDLE SUPPORT KIT, USED WITH 22” DD – INCLUDES UNI-STRUT CUT TO LENGTH, DW2226SAD, & HARDWARE BAG 4.	
	3M-2000PLUS						0.80		3	DUCT – 3M FIRE BARRIER 2000 PLUS SILICONE – USED AS SEALANT TO SEAL DUCT JOINTS.	
	DW18DWCLASY-2R-S						8.70		3	DUCT – 18” DUCT – 22” DOUBLE “V” CLAMP – 2R INSULATION & SINGLE “V” CLAMP INCLUDED – REDUCED CLEARANCE.	
TOTAL WEIGHT							491.88				

DOUBLE WALL FACTORY BUILT DUCTWORK

- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
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- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16” PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16” PER LINEAR FOOT.

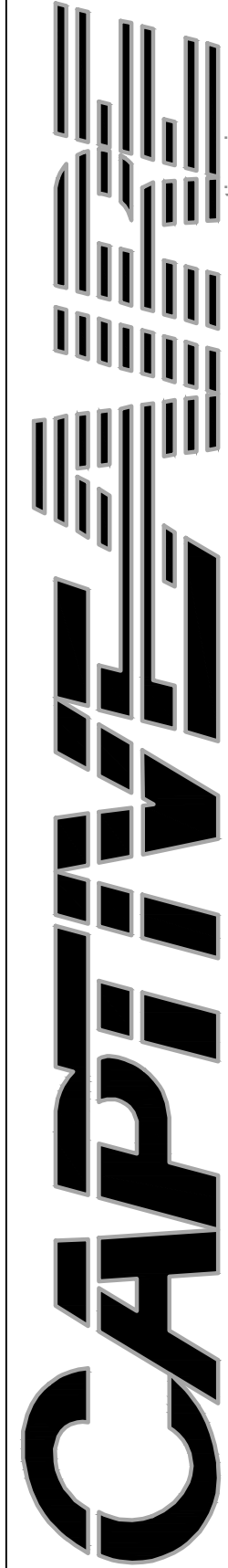
HORIZONTAL	
DUCT DIAMETER	SUPPORT SPACING (FT)
5’	7’
6’	7’
7’	7’
8’	7’
10’	7’
12’	7’
14’	7’
16’	7’
18’	5’
20’	5’
22’	5’
24’	5’
26’	5’
28’	5’
30’	5’
32’	5’
34’	5’
36’	5’

VERTICAL			
TYPE	WALL SUPPORT (FT)	CURB SUPPORT (FT)	FLOOR SUPPORT (FT)
2R & 2R HT (5’-16’)	20’	24’	24’
2R (18’)	18’	24’	24’
3R & 3Z (5’-24’)	10’	24’	24’
3Z (26’ -36’)	10’	20’	20’

DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIRE FOR PROPER LEAK TESTING METHODS.

REVISIONS

DESCRIPTION	DATE



Southern California Office

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Panda Express - Newport News VA (D8164) - rev1

6104 Jefferson Ave,

Newport News, VA 23605

DATE: 1/26/2022

DWG.#: 5294505

DRAWN BY: AH-86

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 11

PANDA EXPRESS, INC.
1683 Walnut Grove Ave.
Rosemead, California 91770
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Facsimile: 626.372.8288

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PANDA PROJECT #: D8164

PANDA STORE #: -

ARCH PROJECT #: 261-321

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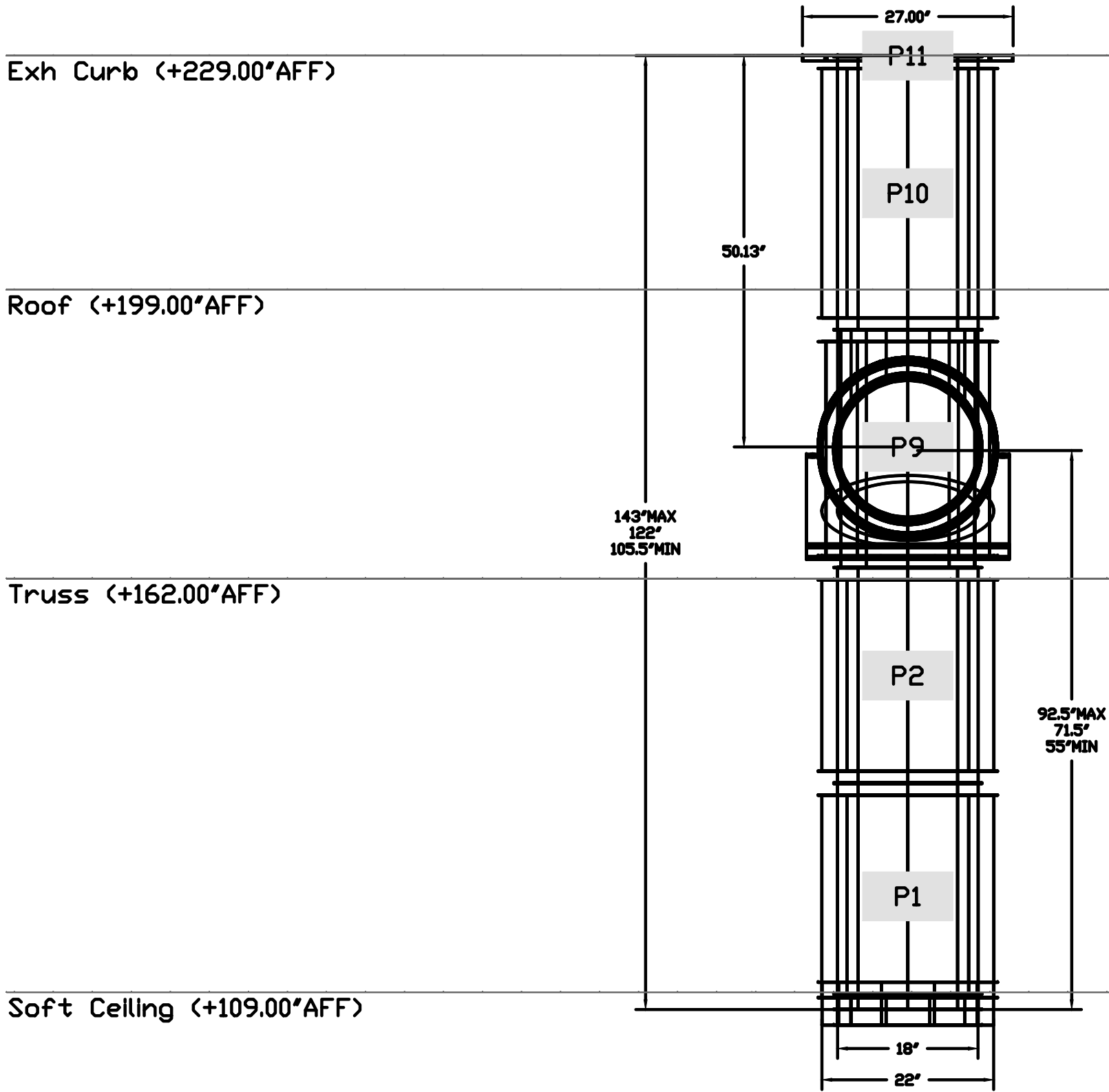
HOOD DETAIL PLAN

TRUE WARM & WELCOME 2300 R6

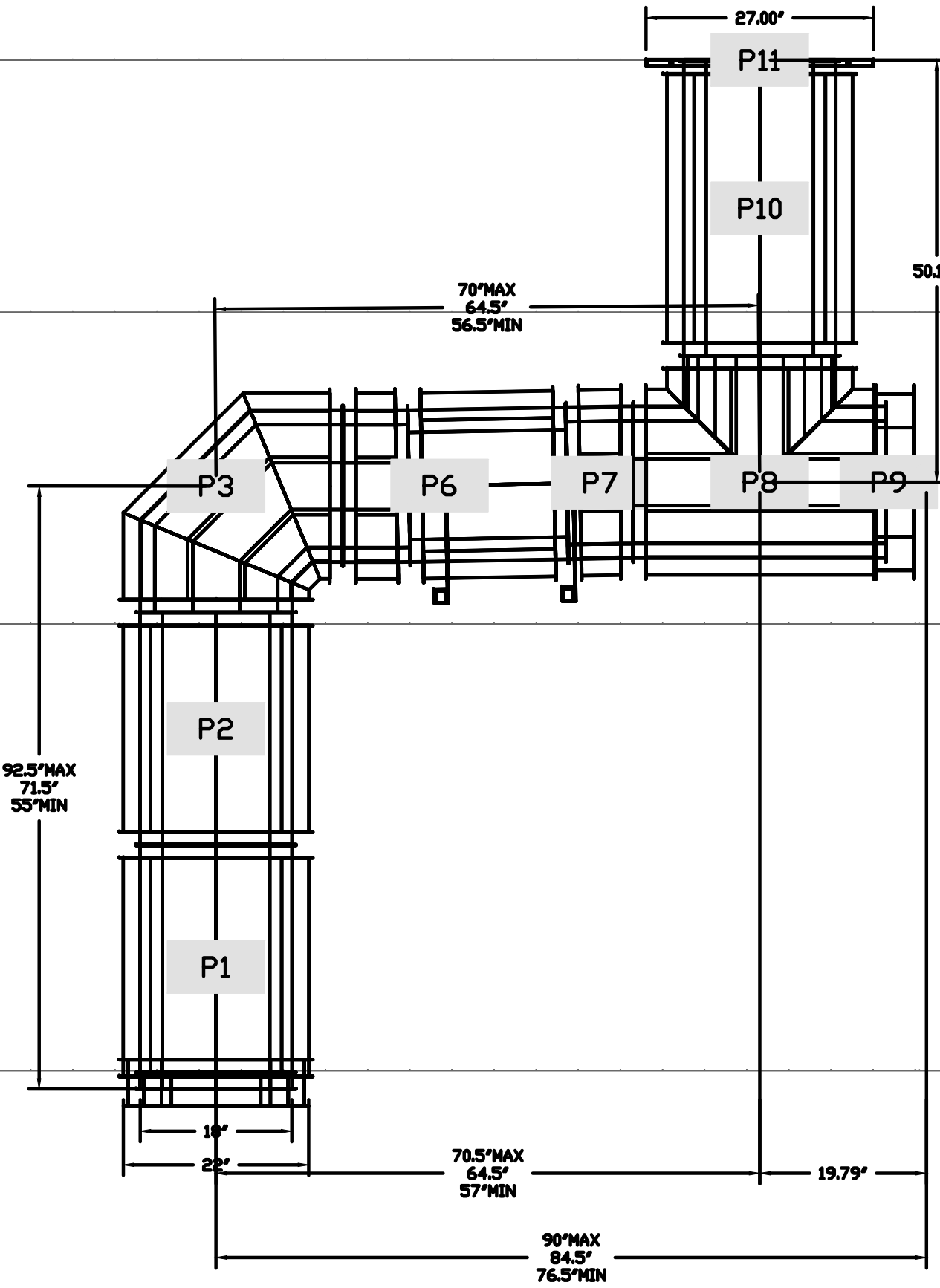
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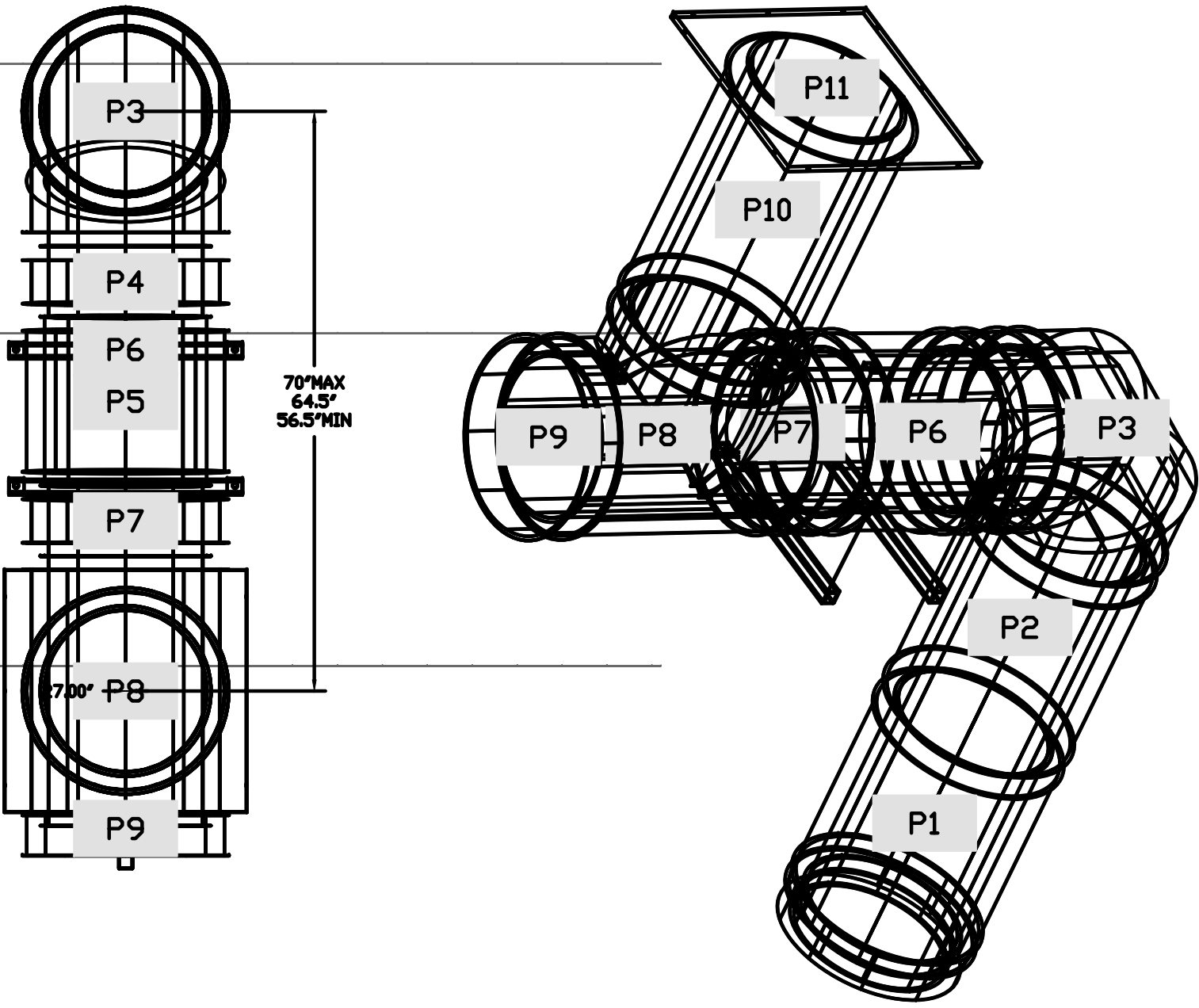
DUCTWORK #2 FRONT VIEW



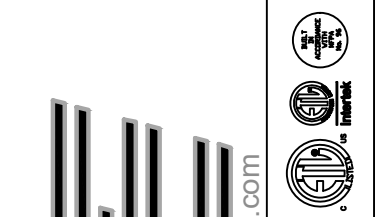
DUCTWORK #2 SIDE VIEW



DUCTWORK #2 TOP VIEW DUCTWORK #2 SE VIEW



REVISIONS	
DESCRIPTION	DATE



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Panda Express - Newport News VA (D8164) - rev1
6104 Jefferson Ave,
Newport News, VA, 23605

DATE: 1/26/2022

DWG.#:
5294505

DRAWN BY: AH-86

SCALE:
3/4" = 1'-0"

MASTER DRAWING

SHEET NO.
12



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MPW ENGINEERING, LLC
110 W. 7TH STREET • SUITE 600 • TULSA, OK 74109
(918) 582-4088 • (918) 582-4087 FAX

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TRUE WARM & WELCOME
JEFFERSON AVE. & MORRIS DR.
NEWPORT NEWS, VA 23605

M-411

HOOD DETAIL PLAN

TRUE WARM & WELCOME 2300 R6



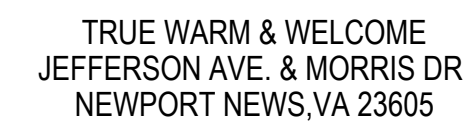
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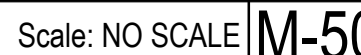
ISSUE DATE:

DRAWN BY: AE

ARCH PROJECT #: 261-321



TRUE WARM & WELCOME 2300 R6



Scale: NO SCALE M-500

M-500

Scale: NO SCALE M-500

