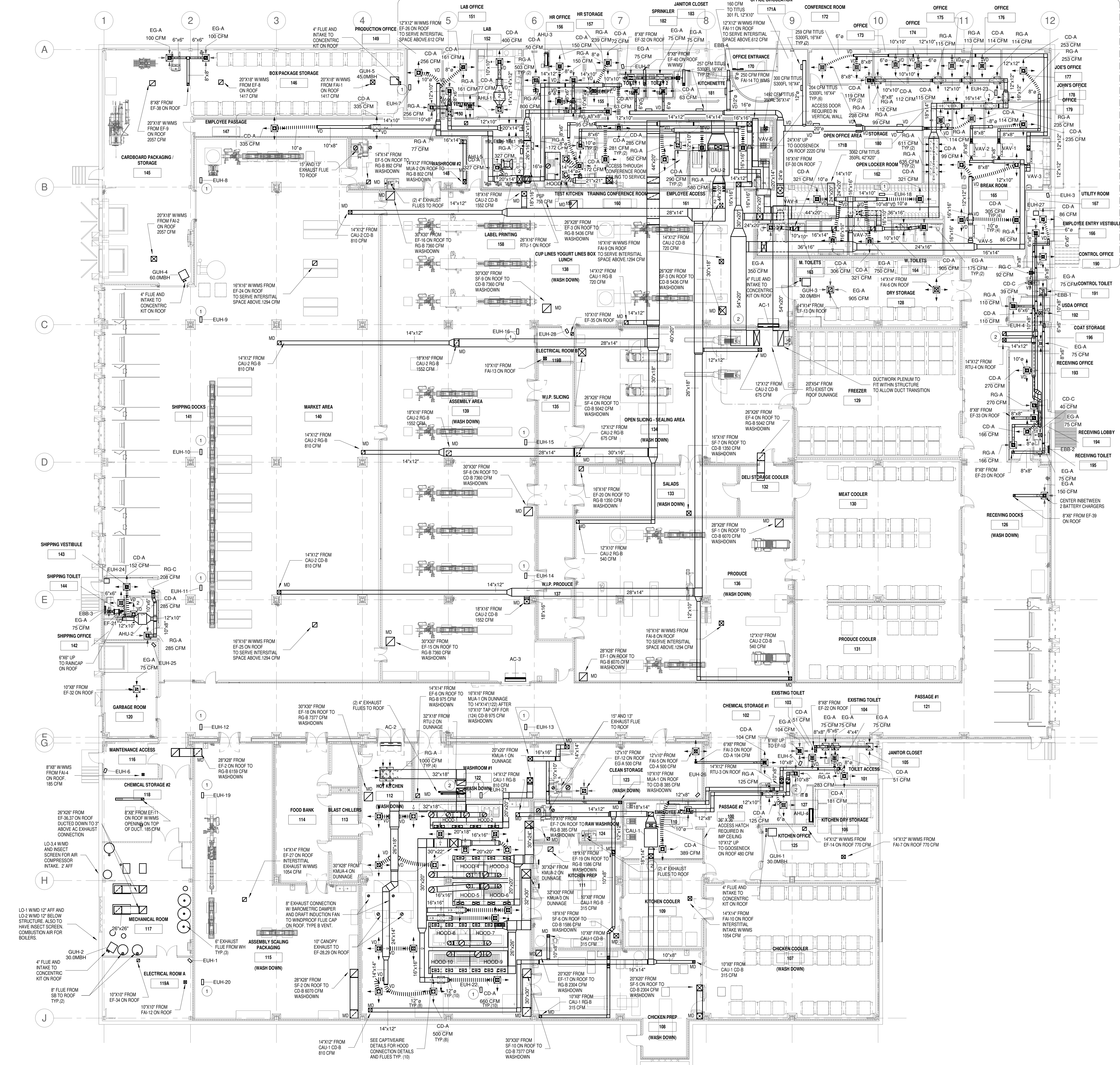


HVAC WORK SPECIFICATIONS		EFFICIENCY OF SPECIFIED PRODUCT		C. RECORD DRAWINGS		G. BALANCING AND TESTING SHALL BE PERFORMED AND SUPERVISED BY A CERTIFIED NEBB OR AABC TECHNICIAN:		3. FLEXIBLE FIBER GLASS BLANKET		BALANCING OR REMOTE CONTROL. BELTDRIVEN FANS MAY USE SHAVE ADJUSTMENTS FOR AIRFLOW BALANCING IN LIEU OF A VARYING MOTOR SPEED.	
1. GENERAL		2. SCOPE OF WORK:		C. RECORD DRAWINGS		G. BALANCING AND TESTING SHALL BE PERFORMED AND SUPERVISED BY A CERTIFIED NEBB OR AABC TECHNICIAN:		3. FLEXIBLE FIBER GLASS BLANKET		BALANCING OR REMOTE CONTROL. BELTDRIVEN FANS MAY USE SHAVE ADJUSTMENTS FOR AIRFLOW BALANCING IN LIEU OF A VARYING MOTOR SPEED.	
A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT A201, LATEST EDITION, AND THESE SPECIFICATIONS AS APPLICABLE ARE PART OF THIS CONTRACT.		B. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE PART OF THESE SPECIFICATIONS. ANY DISCREPANCY SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIAL WHICH VIOLATES ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN COST.		1. THE SCOPE OF WORK SHALL CONSIST OF PROVIDING LABOR, MATERIALS, EQUIPMENT, SERVICES AND FEES NECESSARY FOR COMPLETE AND SAFE INSTALLATION IN CONFORMITY WITH THE APPLICABLE MECHANICAL CODES AND ALL OTHER INDUSTRY, STATE, NATIONAL AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION, AS INDICATED ON THE DRAWINGS AND HEREIN SPECIFIED.		H. THE PERFORMANCE AND CAPACITY OF ALL SYSTEMS AND EQUIPMENT TO BE DEMONSTRATED BY THE CONTRACTOR.		A. INSTALL DUCT WRAP USING MANUFACTURERS' STRETCH-OUT TABLES TO OBTAIN SPECIFIED R-VALUE USING A MAXIMUM COMPRESSION OF 25%.		EXCEPTIONS:	
C. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED WHERE NECESSARY. EQUIPMENT SHALL BE SHIPPED FROM THE MANUFACTURE IN SECTIONS OF A SIZE SUITABLE FOR MOVING THROUGH AVAILABLE RESTRICTIVE SPACES. ASCERTAIN FROM THE BUILDING OWNER AND TENANT AT WHAT TIMES OF THE DAY EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.		D. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. PIPING AND OR DUCT ROUTING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISSES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIGHER PRICE FOR ROUTING OF PIPING AND DUCTS TO AVOID OBSTRUCTIONS. COORDINATION WITH EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES, IS REQUIRED. MAINTAIN HEADROOM AND SPACE CONDITIONS.		2. RECORD DIMENSIONS SHALL CLEARLY AND ACCURATELY DELINEATE THE WORK AS INSTALLED; LOCATIONS SHALL BE SUITABLY IDENTIFIED BY AT LEAST TWO DIMENSIONS TO PERMANENT STRUCTURES.		I. AIR SYSTEM BALANCING. AIR SYSTEMS SHALL BE BALANCED IN A MANNER TO FIRST MINIMIZE THROTTLING LOSSES. THEN, FOR FANS WITH FAN SYSTEM POWER GREATER THAN 1 HP, FAN SPEED SHALL BE ADJUSTED TO MEET DESIGN FLOW CONDITIONS.		B. INSTALLED R-VALUE SHALL BE PER ASHRAE 90.1, UCC CODE; OR OTHER DESIGN CRITERIA.		1. MOTORS IN THE AIRSTREAM WITHIN FAN-COILS AND TERMINAL UNITS THAT OPERATE ONLY WHEN PROVIDING HEATING TO THE SPACE SERVE	
E. SUPPORT ALL DUCTWORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OR SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL FRAMING. INSERTS SHALL BE STEEL, SLOTTED TYPE AND FACTORY PAINTED. SINGLE ROD SHALL BE SIMILAR TO GRINNELL F2, 201. MULTITRACK SHALL BE SIMILAR TO F4 A MASON SERIES 8000 WITH END CAPS AND CLOSURE STRIPS. MAXIMUM LOADING INCLUDING PIPES, DUCTWORK CONTENTS AND COVERING SHALL NOT EXCEED 75% OF RATED INTERIOR CAPACITY. WHEN SUPPORTING FROM BUILDING USE BEAM CLAMPS IN APPROVED MANNER. PROVIDE SEISMIC RESTRAINTS AS REQUIRED BY CODE.		3. SHOP DRAWINGS:		3. PRIOR TO FINAL ACCEPTANCE OF THE WORK OF THIS DIVISION, THE CONTRACTOR SHALL SUBMIT PROPERTY CERTIFIED "RECORD DRAWINGS" TO THE ARCHITECT AND ENGINEER FOR REVIEW AND SHALL MAKE CHANGES, CORRECTIONS, OR ADDITIONS AS THE ARCHITECT MAY REQUIRE TO THE "RECORD DRAWINGS". AFTER THE ARCHITECT AND ENGINEER REVIEW, THE "RECORD DRAWINGS" SHALL BE DELIVERED TO THE OWNER.		J. HYDROIC SYSTEM BALANCING. HYDROIC SYSTEMS SHALL BE PROPORTIONATELY BALANCED IN A MANNER TO FIRST MINIMIZE THROTTLING LOSSES. THEN THE PUMP IMPELLER SHALL BE TRIMMED OR PUMP SPEED SHALL BE ADJUSTED TO MEET DESIGN FLOW CONDITIONS.		D. THE LONGITUDINAL SEAM OF THE VAPOR RETARDER MUST BE OVERLAPPED A MINIMUM OF 2 INCHES. A 2-INCH TAP SHOULD BE PROVIDED ON DUCT WRAP FOR THE CIRCUMFERENTIAL SEAM.		20. CONTROLS	
F. INSTALL WORK AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM THE DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES, WHICH INVOLVE EXTRA COST, SHALL NOT BE MADE WITHOUT OUR OR OWNER APPROVAL.		4. APPROVAL STAMP OF THE PRIME CONTRACTOR:		4. THE HVAC CONTRACTOR SHALL TAG/LABEL ALL EQUIPMENT AND SYSTEM COMPONENTS AND SUBMIT AS-BUILT DRAWINGS LOCATING ALL ACCESS DOORS AND PROVIDE A DETAILED LIST OF ALL SYSTEM COMPONENTS FOR WHICH THE ACCESS DOOR HAS BEEN PROVIDED. THIS DRAWING SHALL SERVE AS A "ROAD MAP" FOR THE OWNER TO PERFORM FUTURE MAINTENANCE.		A. FOR PUMPS WITH PUMP MOTORS OF 10 HP OR LESS OR		E. WHERE VAPOR RETARDER PERFORMANCE IS REQUIRED, ALL PENETRATIONS AND DAMPERS TO THE FACED SURFACE SHALL BE SEALED USING PRESSURE-SENSITIVE TAPE MATCHING THE FACING, OR MASTIC PRIOR TO SYSTEM STARTUP. PRESSURE-SENSITIVE TAPES SHALL BE A MINIMUM 3 INCHES WIDE AND SHALL BE APPLIED WITH MOVING PRESSURE USING A SQUEEGEE OR OTHER APPROPRIATE SEALING TOOL. CLOSURE SHALL HAVE A 2-3/8" FLAME SPREAD SMOKE DEVELOPED RATING PER UL 723.		A. UNLESS OTHERWISE NOTED, EACH THERMOSTAT OR TEMPERATURE SENSOR SHALL CONTROL NO MORE THAN 25,000 SQUARE FEET OF SPACE AND SHALL BE LOCATED IN THE ZONE IT IS CONTROLLING.	
G. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK MAY BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES AND CHARGES IN MAKING UP THE WORK PROPOSED.		5. SHEET METAL WORK		5. EXCEPT AS OTHERWISE SHOWN OR NOTED, ALL DUCTWORK AND OTHER SHEET METAL WORK SHALL BE GALVANIZED SHEET STEEL AND SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC. DUCT CONSTRUCTION STANDARDS, PRESSURE CLASSIFICATION 1 IN. W.G.		B. WHEN THROTTLING RESULTS IN NO GREATER THAN 5% OF THE NAMEPLATE HORSEPOWER DRAW, OR 3 HP.		F. DUCT WRAP SHALL BE ADDITIONALLY SECURED TO THE BOTTOM OF RECTANGULAR DUCTWORK OVER 24 INCHES WIDE USING MECHANICAL FASTENERS ON 18-INCH CENTERS. CARE SHOULD BE EXERCISED TO AVOID OVER-COMPRESSION OF THE INSULATION DURING INSTALLATION. UNFACED DUCT WRAP SHALL BE OVERLAPPED A MINIMUM OF 2 INCHES AND FASTENED USING 4-INCH TO 6-INCH LONG SCREWS SPACED 12 INCHES APART, OR SECURED WITH A WIRE-BANDING SYSTEM. CARE SHOULD BE EXERCISED TO AVOID DAMAGE TO THE DUCT WRAP.		B. UNLESS OTHERWISE NOTED, EACH ZONE THERMOSTATIC CONTROL FOR BOTH HEATING AND COOLING SHALL HAVE A DEAD-BAND CAPABILITY OF AT LEAST 5 DEGREES F.	
H. CONNECTIONS TO EXISTING WORK. INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH A MINIMUM INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS OF EXISTING SERVICES SHALL BE PERFORMED AT NO ADDITIONAL CHARGES. AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION OF EXISTING FACILITIES AND ONLY WITH WRITTEN CONSENT OF THE OWNER. ALARM AND EMERGENCY SYSTEMS SHALL NOT BE INTERRUPTED. MAINTAIN CONTINUOUS OPERATION OF THE EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND ACCEPTABLE MANNER. RESTORE EXISTING DISTURBED WORK TO ORIGINAL CONDITION, INCLUDING MAINTENANCE OF WIRING CONTINUITY AS REQUIRED.		6. AIR OUTLETS		6. TURNING VANES: GALVANIZED STEEL SMALL DOUBLE-THICKNESS VANES WITH 2 IN. INSIDE RADIUS.		C. WRAP AROUND THE DUCT TO ENSURE PROPER FIT. STAPLE THE LAP ON 3 INCH (76 MM) CENTERS WITH OUTWARD CLINCHING STAPLES.		A. GENERAL:		C. CONTROLS SHALL HAVE THE ABILITY TO START AND STOP UNDER DIFFERENT TIME SCHEDULES FOR SEVEN DIFFERENT DAY TYPES PER WEEK AND BE CAPABLE OF RETAINING PROGRAMMING AND TIME SETTING DURING A POWER LOSS PERIOD OF AT LEAST TEN HOURS, AND INCLUDE AN ACCESSIBLE MANUAL OVERRIDE OR EQUIVALENT FUNCTION, THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO TWO HOURS.	
I. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW WORK.		7. VIBRATION ISOLATION		7. LOW PRESSURE FLEXIBLE DUCT. SHALL BE A FACTORY FABRICATED HIGH TEMPERATURE POLYIMIDE IMPREGATED GLASS FIBER, LOCKED TO COLD ROLLED FLAT STEEL SPIRAL. SIMILAR TO THERMAFLEX. MAXIMUM INSTALLED LENGTH SHALL NOT EXCEED 5 FEET.		D. ENDS SHALL BE FIRMLY BUTTED AND SECURED WITH MATCHING BUTT STRIP MATERIAL AT EACH JOINT.		1. PROVIDE ISOLATION FOR EQUIPMENT, PIPING AND DUCTWORK.		D. CONTROLS SHALL HAVE THE ABILITY TO START AND STOP UNDER DIFFERENT TIME SCHEDULES FOR SEVEN DIFFERENT DAY TYPES PER WEEK AND BE CAPABLE OF RETAINING PROGRAMMING AND TIME SETTING DURING A POWER LOSS PERIOD OF AT LEAST TEN HOURS, AND INCLUDE AN ACCESSIBLE MANUAL OVERRIDE OR EQUIVALENT FUNCTION, THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO TWO HOURS.	
J. ALL EXISTING MATERIAL, EQUIPMENT AND CONSTRUCTION DEBRIS TO BE REMOVED UNDER THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR WITH THE EXCEPTION OF SPECIFIC EQUIPMENT AND APPARATUS REQUESTED BY THE BUILDING REPRESENTATIVE, ARCHITECT OR AS NOTED TO BE RELOCATED ON THE DRAWINGS. REMOVED EQUIPMENT SHALL BE PROPERLY DISPOSED OF BY THIS CONTRACTOR.		8. INSULATION		8. TURNING VANES: GALVANIZED STEEL SMALL DOUBLE-THICKNESS VANES WITH 2 IN. INSIDE RADIUS.		E. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		2. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.		E. SETBACK CONTROLS: HEATING ADJUSTABLE AT LEAST 10 DEGREES F BELOW SETPOINT, COOLING ADJUSTABLE AT LEAST 5 DEGREES ABOVE SETPOINT OR TO PREVENT HIGH SPACE HUMIDITY LEVELS.	
K. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.		9. ASHRAE 90.1 REQUIRED COMPLETION DOCUMENTS BUT AS A MINIMUM:		9. ASHRAE 90.1 REQUIRED COMPLETION DOCUMENTS BUT AS A MINIMUM:		F. DUCT SECTIONS SHALL BE ADDITIONALLY REINFORCED PER NAIMAS AND MANUFACTURERS RECOMMENDATIONS WHEN REINFORCEMENT IS DEPENDENT ON DUCT WIDTH AND OPERATING PRESSURE.		3. PROVIDE LEVELING DEVICES AND APPROVED RESILIENT RESTRAINING DEVICES AS REQUIRED TO LIMIT EQUIPMENT AND PIPING MOTION IN EXCESS OF 1/4 IN.		F. OPTIMUM START CONTROLS THE CONTROL ALGORITHM SHALL, AS A MINIMUM, BE A FUNCTION OF THE DIFFERENCE BETWEEN SPACE TEMPERATURE AND OCCUPIED SETPOINT, THE OUTDOOR TEMPERATURE, AND THE AMOUNT OF TIME PRIOR TO SCHEDULED OCCUPANCY. MASS RADIANT FLOOR SLAB SYSTEMS SHALL INCORPORATE FLOOR TEMPERATURE INTO THE OPTIMUM START ALGORITHM.	
L. SEAL OPENING THROUGH PARTITIONS, WALLS AND FLOORS WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL. ALL PENETRATIONS THROUGH NEW AND EXISTING RATED FIRE AND SMOKE PARTITIONS AND/OR FLOORS SHALL BE COMPLETELY SEALED USING MATERIALS AND METHODS DESCRIBED IN SUBSEQUENT "FIRE STOPPING" SPECIFICATIONS SECTIONS.		10. DUCTWORK ISOLATION		10. DUCTWORK ISOLATION		G. ALL LONGITUDINAL AND TRANSVERSE JOINTS HAVING A 1/4" STAPLE FLAP SHALL BE SECURED WITH OUTWARD-CLINCHING STAPLES ON APPROXIMATE 2 INCH CENTERS AND SEALED WITH APPROVED CLOSURE SYSTEM.		4. ACCEPTABLE MANUFACTURERS:		G. SHUTOFF DAMPER CONTROLS - AUTOMATICALLY SHUT WHEN THE SYSTEMS OR SPACES SERVED ARE NOT IN USE. DURING PREOCCUPANCY WARMUP, COOLDOWN, AND SETBACK, EXCEPT WHEN VENTILATION REDUCES ENERGY COSTS OR WHEN VENTILATION MUST BE SUPPLIED TO MEET CODE REQUIREMENTS.	
M. PROVIDE ALL NECESSARY FLASHING AND COUNTERFLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THE BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPING, DUCTWORK AND EQUIPMENT. PROVIDE EQUIPMENT CURBS AS REQUIRED AND POSITIVELY ATTACH THE EQUIPMENT TO THE STRUCTURE BELOW.		11. PIPING ISOLATION		11. PIPING ISOLATION		H. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		A. MASON INDUSTRIES, INC.		H. UNLESS OTHERWISE NOTED, VENTILATION FANS SHALL HAVE AUTOMATIC CONTROLS TO SHUT OFF WHEN NOT REQUIRED EXCEPT FOR SYSTEMS INTENDED TO RUN CONTINUOUSLY.	
N. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, IN A MANNER SATISFACTORY TO THE OWNER. THE WORK SHALL BE PERFORMED AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO THE PRESENT OCCUPANTS.		12. DAMPERS		12. DAMPERS		I. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		B. VIBRATION ELIMINATOR CO.		I. DEMAND CONTROL VENTILATION - REQUIRED FOR SPACES LARGER THAN 500 SFEET SQUARE AND WITH A DESIGN OCCUPANCY FOR VENTILATION OF GREATER THAN OR EQUAL TO 25 PEOPLE PER 1,000 SFEET FLOOR AREA AND SERVED BY SYSTEMS WITH ONE OR MORE OF THE FOLLOWING:	
O. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS. WHEN SO DIRECTED, HOWEVER, THE CONTRACTOR SHALL INSTALL WORK DURING OVERTIME HOURS AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE PREMIUM PORTION OF THE WAGES PAID.		13. VIBRATION ISOLATION		13. VIBRATION ISOLATION		J. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		C. KORFUND DYNAMICS CORP.		A. AIR-SIDE ECONOMIZER	
P. UNLESS OTHERWISE SPECIFICALLY NOTED OF SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.		14. PIPING - GENERAL REQUIREMENTS		14. PIPING - GENERAL REQUIREMENTS		K. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		1. PROVIDE 5/16 IN.-THICK NEOPRENE ACOUSTICAL BASE PADS OF HIBBED OR WAFFLE CONSTRUCTION, SIMILAR TO MASON TYPE W, 50 PSI MAXIMUM LOADING, PROVIDE STEEL BEARING.		B. AUTOMATIC MODULATING CONTROL OF OUTDOOR AIR DAMPER	
Q. REMOVABLE ACCESS TILE AND/OR ACCESS DOOR ARE REQUIRED IN CEILINGS, SHAFTS AND WALLS FOR ALL VOLUME AND FIRE DAMPERS, AUTOMATIC DAMPERS AND ALL OTHER MECHANICAL EQUIPMENT AND DEVICES. HVAC CONTRACTOR IS RESPONSIBLE TO PROVIDE APPROPRIATELY SIZED/RAISED ACCESS DOORS WITH LOCATIONS COORDINATED WITH ALL TRADES AND THE GENERAL CONTRACTOR FOR OVERALL INSTALLATION COORDINATION. IN ORDER TO CLEARLY IDENTIFY THE LOCATION AND PURPOSE OF THE ACCESS DOOR, THE HVAC CONTRACTOR SHALL PROVIDE THE FOLLOWING ACCESS DOOR IDENTIFICATION INFORMATION: BUILDING, FLOOR, ROOM, TAGS, AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES, DAMPERS AND EQUIPMENT.		15. CONDENSATE DRAIN PIPING		15. CONDENSATE DRAIN PIPING		L. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		2. RESERVED DEFLECTION, FACTORY-PRELOADED TO 75% OF RATED LOAD, PROVIDE SUPPLEMENTAL STEEL AS REQUIRED WHERE		C. DESIGN OUTDOOR AIRFLOW GREATER THAN 300 CFM	
R. ALL MATERIAL AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.		16. DAMPERS		16. DAMPERS		M. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		3. EQUIPMENT OR STRUCTURE CANNOT SUPPORT POINT LOADS.		K. HEATING AND/OR AIR CURTAIN HEAT IN VESTIBULES: IF PROVIDED THE VESTIBULE SHALL BE TEMPERATURE CONTROLLED TO A MAXIMUM SETPOINT OF 60 DEGREES F AND SHUT OFF WHEN OUTDOOR AIR TEMPERATURES ARE ABOVE 45 DEGREES F.	
S. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF ALL OF THE PLANS APPLICABLE FOR THE PROJECT AND NOT JUST THE HVAC PLANS IS FAMILIAR WITH ANY PROPOSED CONDITIONS THAT WILL NEED TO BE COORDINATED IN THE FIELD. FOR EXISTING BUILDINGS, THE PORTIONS OF THE EXISTING BUILDING EQUIPMENT, ETC., WHICH AFFECT THIS WORK, AND THE ACCESS TO SUCH SPACES, HAS BEEN MADE AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK. THE CONTRACTOR IS RESPONSIBLE TO INDICATE ANY DISCREPANCIES BETWEEN THE CONTRACT DRAWINGS AND ACTUAL FIELD CONDITIONS PRIOR TO SUBMITTAL OF BID. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT THE CONTRACTOR HAS THOROUGHLY REVIEWED ALL OF THE DOCUMENTATION ASSOCIATED WITH THE PROJECT AND IF AN EXISTING BUILDING REVIEWED ALL OF THE EXISTING CONDITIONS. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN DURING SUCH AN EXAMINATION AND REVIEW. THE ON-SITE INSPECTION SHALL VERIFY EXISTING EQUIPMENT, PIPING AND DUCTWORK (SIZES, CLEARANCES, ETC.) AND CONDITIONS.		17. INSULATION		17. INSULATION		N. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		4. COMPLETE WITH PIPE, FITTINGS, VALVES, STRAINERS, MOTORIZED VALVE OPERATORS, STRAINERS, HANGERS, SUPPORTS, GUIDE, SLEEVES, AND ACCESSORIES.		L. MONITORING ZONE AND SYSTEM DEMAND FOR FAN PRESSURE, PUMP PRESSURE, HEATING, AND COOLING	
T. INSURANCE, IN ACCORDANCE WITH BUILDING REQUIREMENTS AND SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.		18. DAMPERS		18. DAMPERS		O. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		B. ALL ITEMS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING CODES AND STANDARDS:		B. TRANSFERRING ZONE AND SYSTEM DEMAND INFORMATION FROM ZONES TO AIR DISTRIBUTION SYSTEM CONTROLLERS AND FROM AIR DISTRIBUTION SYSTEMS TO HEATING AND COOLING PLANT CONTROLLERS	
U. THE FINAL ACCEPTANCE SHALL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, TESTED AND BALANCED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.		19. INSULATION		19. INSULATION		P. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		1. AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).		C. AUTOMATICALLY DETECTING THOSE ZONES AND SYSTEMS THAT MAY BE EXCESSIVELY DRIVING THE RESET LOGIC AND GENERATE AN ALARM OR OTHER INDICATION TO THE SYSTEM OPERATOR	
V. SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOMPLETE SENTENCES. WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL," "SHALL BE," "FURNISH," "PROVIDE," "A," "THE," AND "ALL" HAVE BEEN OMITTED FOR BREVITY.		20. CONTROLS		20. CONTROLS		Q. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		2. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).		D. READILY ALLOWING OPERATOR REMOVAL OF ZONE(S) FROM THE RESET ALGORITHM	
W. DEFINITIONS:		21. INSULATION		21. INSULATION		R. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		3. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), MANUFACTURERS STANDARDIZATION SOCIETY OF THE		DDC DISPLAY - THE DDC SYSTEM SHALL BE CAPABLE OF TRENDDING AND GRAPHICALLY DISPLAYING INPUT AND OUTPUT POINTS.	
1. "PROVIDE," TO SUPPLY, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.		22. DAMPERS		22. DAMPERS		S. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		4. VALVE AND FITTING INDUSTRY (MSS).		L. AIR ECONOMIZER SYSTEM(S) SHALL BE CAPABLE OF MODULATING OUTDOOR AIR AND RETURN AIR DAMPERS TO PROVIDE UP TO 100% OF THE DESIGN SUPPLY AIR QUANTITY AS OUTDOOR AIR FOR COOLING.	
2. "INSTALL," TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.		23. INSULATION		23. INSULATION		T. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		C. ALL PRESSURIZED PIPING TO BE TESTED HYDROSTATICALLY TO 150PSI OR 150% OF OPERATING PRESSURE, WHICHEVER IS GREATER, BUT NEVER EXCEED TEST PRESSURE AND ANSI B16.1 BASIS. TEST DURATION TO BE 2 HOURS WITH NO PRESSURE CHANGE CORRECTED FOR TEMPERATURE CHANGE. REPAIR OR REPLACE LEAKS OR DEFECTS WITHOUT ADDITIONAL COST.		EXCEPTION: THE USE OF MIXED-AIR TEMPERATURE LIMIT CONTROL SHALL BE PERMITTED FOR SYSTEMS CONTROLLED FROM SPACE TEMPERATURE, SUCH AS SINGLE-ZONE SYSTEMS.	
3. "FURNISH" OR "SUPPLY," TO PURCHASE, PROCURE, ACQUIRE AND DELIVER COMPLETE WITH RELATED ACCESSORIES.		24. INSULATION		24. INSULATION		U. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		D. PROVIDE DIELECTRIC FITTINGS WHERE DISSIMILAR METALS ARE TO BE JOINED.		HIGH-LIMIT SHUTOFF: ALL AIR ECONOMIZERS SHALL BE CAPABLE OF AUTOMATICALLY REDUCING OUTDOOR AIR INTAKE TO THE DESIGN MINIMUM OUTDOOR AIR QUANTITY WHEN OUTDOOR AIR INTAKE WILL NO LONGER REDUCE COOLING ENERGY USAGE. HIGH-LIMIT SHUTOFF CONTROL TYPES AND ASSOCIATED SETPOINTS FOR SPECIFIC CLIMATE ZONE 5	
4. "WORK," LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.		25. INSULATION		25. INSULATION		V. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		E. PIPES SUPPORTS:		DAMPERS, RETURN, EXHAUST/RELIEF, AND OUTDOOR AIR DAMPERS SHALL MEET THE REQUIREMENTS LISTED IN THE DAMPER SECTION OF THE SPECIFICATION.	
5. "CONCEALED," EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED IN FURRED SPACES, WITH DOUBLE PARTITIONS OR HUNG GELINGS, IN TRENCHES, IN CRAWL SPACES, OR IN ENCLOSURES.		26. INSULATION		26. INSULATION		W. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		1. PROVIDE ADEQUATE SUPPORT FOR PIPE AND CONTENTS TO PREVENT SAGGING, VIBRATION OR SWAYING AND ALLOW FOR EXPANSION AND CONTRACTION. PROVIDE SUPPLEMENTAL STEEL AS REQUIRED WHERE STRUCTURE CANNOT SUPPORT POINT LOADS.		RELIEF OF EXCESS OUTDOOR AIR. SYSTEMS SHALL PROVIDE A MEANS TO RELIEVE EXCESS OUTDOOR AIR DURING AIR ECONOMIZER OPERATION TO PREVENT OVERPRESSURIZING THE BUILDING. THE RELIEF AIR OUTLET SHALL BE LOCATED SO AS TO AVOID REACCUSSION INTO THE BUILDING.	
6. "EXPPOSED," NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.		27. INSULATION		27. INSULATION		X. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		2. HORIZONTAL PIPING TO BE SUPPORTED BY FORGED STEEL ADJUSTABLE CLEVIS TYPE HANGER. MAXIMUM SPACING AS FOLLOWS:		SENSOR ACCURACY: OUTDOOR AIR, RETURN AIR, MIXED AIR, AND SUPPLY AIR SENSORS SHALL BE CALIBRATED WITHIN THE FOLLOWING ACCURACIES:	
7. "SIMILAR OR EQUAL," EQUAL IN MATERIALS, WEIGHT, SIZE, DESIGN AND		28. INSULATION		28. INSULATION		Y. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		A. THICKNESS UP TO 4" PIPE SHALL BE 1-1/2" INSULATION MATERIAL TYPE P-1 WITH A VAPORESEAL FINISH.		A. DRY-BULB AND WET-BULB TEMPERATURES SHALL BE ACCURATE TO ±2°F OVER THE RANGE OF 40°F TO 80°F.	
		29. INSULATION		29. INSULATION		Z. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		B. THICKNESS 1-1/4 IN. AND SMALLER: 7 FT.		B. ENTHALPHY AND THE VALUE OF A DIFFERENTIAL ENTHALPHY SENSOR SHALL BE ACCURATE TO ±3 BTU/LB OVER THE RANGE OF 20 TO 36 BTU/LB.	
		30. INSULATION		30. INSULATION		AA. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		C. THICKNESS 1-1/4 IN. AND LARGER: 10 FT.		C. RELATIVE HUMIDITY SHALL BE ACCURATE TO ±5% OVER THE RANGE OF 20% TO 80% RH.	
		31. INSULATION		31. INSULATION		AB. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		D. COPPER 3 IN. AND SMALLER: 7 FT.		HEATING SYSTEM IMPACT: THE ECONOMIZER CONTROLS SHALL BE SUCH THAT ECONOMIZER OPERATION DOES NOT INCREASE THE BUILDING HEATING ENERGY USE DURING NORMAL OPERATION UNLESS VAYS ARE USED ON THE PROJECT AND THE HVAC SYSTEM(S) SHALL CAUSE ZONE-LEVEL HEATING TO INCREASE DUE TO A REDUCTION IN SUPPLY AIR TEMPERATURE.	
		32. INSULATION		32. INSULATION		AC. ON BELOW AMBIENT DUCTWORK, APPROPRIATE UL APPROVED VAPOR RETARDER SHALL BE APPLIED TO ALL LONGITUDINAL AND CIRCUMFERENTIAL JOINTS BEFORE APPLICATION OF BUTT STRIP MATERIAL.		E. ADDITIONAL SUPPORTS AT CHANGES IN DIRECTION, RUNOUTS, AND CONCENTRATED LOADS DUE TO VALVES, ETC.		M. ZONE THERMOSTATIC CONTROLS SHALL PREVENT	
		33. INSULATION		33. INSULATION							



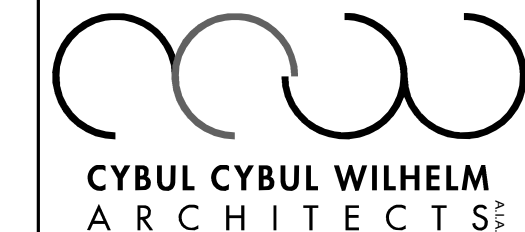
GENERAL NOTES:

- THE EXACT MOUNTING HEIGHTS AND LOCATIONS OF ALL HVAC EQUIPMENT SHALL BE FIELD VERIFIED AND COORDINATED WITH ALL OTHER MECHANICAL, ELECTRICAL, ARCHITECTURAL AND STRUCTURAL SYSTEMS.
- VERIFY ALL EQUIPMENT VOLTAGES WITH THE ELECTRICAL CONTRACTOR PRIOR TO ORDERING EQUIPMENT.
- PROVIDE DISCONNECT SWITCHES FOR ALL HVAC EQUIPMENT INCLUDING WEATHERPROOF DISCONNECT AS REQUIRED.
- PROVIDE PHASE LOSS PROTECTION FOR ALL POLY-PHASE MOTOR DEVICES.
- THE FINAL LOCATION OF AIR DEVICES MUST BE COORDINATED WITH THE REFLECTED CEILING PLAN AND ALL OTHER MECHANICAL, ELECTRICAL, FIRE PROTECTION, ARCHITECTURAL AND STRUCTURAL SYSTEMS.
- PROVIDE FLEXIBLE CONNECTIONS AT ALL DUCT CONNECTIONS TO VIBRATING EQUIPMENT. THESE CONNECTIONS SHALL BE INSTALLED IN CLOSE PROXIMITY TO SUCH EQUIPMENT.
- ALL CEILING MOUNTED EQUIPMENT SHALL BE SUPPORTED DIRECTLY FROM BUILDING STRUCTURE WITH COMBINATION SPRING AND NEOPRENE-IN-SHEAR. HANGERS AND ROD, PROVIDE SUPPLEMENTARY STEEL AS REQUIRED TO ADEQUATELY SUPPORT THE LOAD.
- ALL ROOFTOP HVAC EQUIPMENT SHALL BE INSTALLED SUFFICIENTLY AWAY FROM EDGE OF ROOF SO AS TO ALLOW FOR THE INSTALLATION OF PROPER FLASHING TO ENSURE A WEATHER TIGHT SEAL. IN ADDITION, ADEQUATE CLEARANCES SHALL BE PROVIDED FOR CLEANING AND MAINTENANCE REQUIREMENTS. THE FINAL LOCATION OF ALL ROOFTOP UNITS MUST ALSO COMPLY WITH ALL OSHA SAFETY REQUIREMENTS. WHEN MINIMUM REQUIRED DISTANCE CAN NOT BE MAINTAINED, IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROVIDE AND INSTALL CODE COMPLIANT SAFETY RAILS.
- SUPPLY AND RETURN GRILLES FOR WASHDOWN VENTILATION ARE STAINLESS STEEL WITH MOTORIZED DAMPERS AND A DRAIN. SEE THE DETAIL ON M-301.

HVAC KEY NOTES

Number	Text
1	UNIT HEATER LOCATED ABOVE CEILING TO SERVE INTERSTITIAL SPACE
2	PLACE UV LIGHT IN SUPPLY DUCT. SEE M-302 FOR UV LIGHT SPECIFICATIONS

GENERAL CONDITIONS NOTE:
THIS DRAWING AND THE DESIGN DESCRIBED HEREIN SHALL BE THE PROPERTY OF CYBUL CYBUL WILHELM ARCHITECTS. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. ANY REUSE OR MODIFICATION OF THIS DRAWING WITHOUT THE WRITTEN CONSENT OF CYBUL CYBUL WILHELM ARCHITECTS IS PROHIBITED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR ENSURING THAT ALL WORK IS COMPLETED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR ENSURING THAT ALL WORK IS COMPLETED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR ENSURING THAT ALL WORK IS COMPLETED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.



1064 River Rd.
Edgewater, NJ 07020

KOESTNER ASSOCIATES
P.O. BOX 514
Hackensack, NJ 07602

ALLIED ENGINEERING
730 River Road
New Milford, NJ 07646

BD ENGINEERING, LLC
30 Park Road, Suite 4
Tinton Falls, NJ 07724



Lorenzo Foods Teterboro

25 CENTRAL AVE
TETERBORO, NJ, 07608

DOOR STAMP

ISSUED FOR:
REVIEW
PLANNING BOARD
BUILDING DEPT
CONSTRUCTION

BRIAN D. TANNENHAUS

NJ PROFESSIONAL ENGINEER
NO. 0E 45801
DATE: 09/24/2021

drawing name:

HVAC GROUND FLOOR PLAN

scale: As indicated

release date:

drawing date: 09/24/2021

drawn by: ZW

approved by: KF

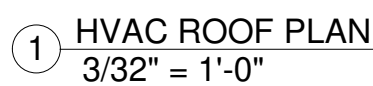
project no: 2102

drawing no: M-200.00

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HVAC LOUVER SCHEDULE

TAG	MANUFACTURER	MODEL	SERVICE	AIR FLOW	Dimensions	FREE AREA VELOCITY	Free Area	NOTES
RTU-1	REST OF OFFICES	TRANE	YH02R24PRLA*H000C1A00A00	2500 CFM	1	178 CFM	2,751	NAT GAS
RTU-2	HOT KITCHEN	TRANE	YH02P4R4RLA*H000C1A00A00	4000 CFM	1	499 CFM	2,751	NAT GAS
RTU-3	101.103.104.105.10.125	TRANE	4YV02A0A100A	800 CFM	4	78 CFM	31	NAT GAS
RTU-4	166.190.191.192.193.194.195	TRANE	4YV02A0A100A	800 CFM	4	96 CFM	31	NAT GAS
RTU-EXIST	OFFICES	TRANE	YSD01Q3R4H0X0000A1000000	8400 CFM	1	770 CFM		NAT GAS

1. SELECTION IS BASED ON PACKAGED ROOFTOP UNIT WITH DX COOLING
2. 30% FILTERS
3. WEATHERPROOF DISCONNECT SWITCH
4. ULTRA HIGH EFFICIENCY BLOWER MOTOR
5. HIGH CAPACITY DX COIL
6. 1" DEFLECTION SPRINGS FOR SUPPLY AIR BLOWER ASSEMBLY
7. MOUNT ON DUNNINGS
8. ALUMINIZED STEEL GAS HEAT EXCHANGER
9. PROVIDE A SMOKE DUCT DETECTOR FAN FOR SHUTDOWN. COORDINATE WITH THE FIRE ALARM CONTRACTOR.
10. COLD START UP KIT
11. PROVIDE A CURB AND POSITIVELY ATTACH THE UNIT TO THE STRUCTURE BELOW. COORDINATE WITH THE ARCHITECT AND/OR STRUCTURAL ENGINEER. THE CURB AND UNIT SHALL WITHSTAND THE WIND LOAD AS SHOWN IN THE CODE REVIEW SECTION ON THE HVAC COVERSHEET
12. MOTOR/BLOWER VIBRATION ISOLATION
13. AIR FLOW PROVING SWITCH
14. TIMED-FREEZE PROTECTION
15. STEP-DOWN TRANSFORMER
16. RAINHOOD W/ INSECT SCREEN
17. DOWNWARD DISCHARGE
18. UV LIGHTS IN SUPPLY DUCT
19. DISCHARGE SENSOR TIED TO DDC SYSTEM
20. DUAL ENTHALPY ECONOMIZER
21. PROVIDE CONDENSATE PIPING WITH TRAP TO DISCHARGE ONTO SPLASH BACK

HVAC INDOOR AIR HANDLER UNIT SCHEDULE

TAG	SERVICE	MANUFACTURER	MODEL	SUPPLY CFM'S	OUTDOOR AIR CFM	E.S.P. (W/G)	SUPPLY FAN HP/QT	TOTAL COOLING CAPACITY MBH	FUEL	STAGES	OUTPUT MBH	VOLTAGE	PHASE	FLA	MAXIMUM OVERCURRENT PROTECTION	MINIMUM CIRCUIT AMP	MAX FUSE	WEIGHT	REFRIGERANT USED	EFFICIENCY SEER/EER/NSFP/C O/P AF/LE	NOTES
AHU-1	152	TRANE	TPEAD0121AA70A	494	66 CFM	.1		12.0	ELEC		18.0	208	1				58.0 lb	R410A	21.1/13	1-5	
AHU-2	142.143.144	TRANE	TPEAD0121AA70A	494	34 CFM	.15		12.0	ELEC		18.0	208	1				58.0 lb	R410A	21.1/13	1-5	
AHU-3	IT ROOM	TRANE	TPKA0241HA70A	775	0.0 CFM			24.0	ELEC	N/A	0.0	208	1				46.0 lb	R410A	21.4/12.2	1-5	
AHU-4	IT ROOM	TRANE	TPKA0241HA70A	775	0.0 CFM			24.0	ELEC	N/A	0.0	208	1				46.0 lb	R410A	21.4/12.2	1-5	
AHU-5	LABEL PRINTING	TRANE	TPLA00121EA70A	530	0.0 CFM			12.0	ELEC	N/A	0.0	208	1				46.0 lb	R410A	27/16.4	1-5	

1. TO BE SUPPLIED WITH STANDARD 2" THROWAWAY FILTERS
2. SUPPLY WITH CONDENSATE PUMP. LITTLE GIANT VOMA-15 OR EQUAL PIPED TO NEAREST AVAILABLE DRAIN
3. SUPPLY WITH 7 DAY PROGRAMMABLE THERMOSTAT
4. POWERED BY CONDENSING UNIT
5. PROVIDE LOW AMBIENT WIND BAFFLE WB-PAS

HVAC MAKE-UP AIR UNIT SCHEDULE

				FAN SECTION			HEATING SECTION			ELECTRICAL SECTION										MISC. SECTION	
TAG	SERVICE	MANUFACTURER	MODEL	SUPPLY CFM	SUPPLY FAN BHP/QT	FUEL	INPUT MBH	OUTPUT MBH	REQUIRED GAS PRESSURE (W/G)	TOTAL COOLING CAPACITY MBH	LEAVING AIR TEMPERATURE	VOLTAGE	PHASE	FLA	MINIMUM CIRCUIT AMP	MAXIMUM OVERCURRENT PROTECTION	AFC RATING	WEIGHT	NOTES		
KMUA-1	HOODS	CAPTIVE AIRE	SEE CAPTIVE AIRE DETAILS																		
KMUA-2	HOODS	CAPTIVE AIRE	SEE CAPTIVE AIRE DETAILS																		
KMUA-3	HOODS	CAPTIVE AIRE	SEE CAPTIVE AIRE DETAILS																		
KMUA-4	SPACE BALANCE	CAPTIVE AIRE	SEE CAPTIVE AIRE DETAILS																		
MUA-1	WASHROOM #1, RAW WASHROOM	TRANE	GRCA15PFGF0	1360 CFM	.631	NAT GAS	150.0	120.0	7"-14"		460	3		3.5	5.2		679.0 lb	1-2,7-13			
MUA-2	WASHROOM #2	TRANE	GRCA10PFGF0	620 CFM	.41	NAT GAS	100.0	80.0	7"-14"		460	3		2.7	3.9		651.0 lb	1-5,7-13			

1. WEATHERPROOF DISCONNECT SWITCH
2. ULTRA HIGH EFFICIENCY INVERTER DUTY RATED BLOWER MOTOR
3. 1" DEFLECTION SPRINGS FOR SUPPLY AIR BLOWER ASSEMBLY
4. 14" FULL PERIMETER CURB
5. PROVIDE A CURB AND POSITIVELY ATTACH THE UNIT TO THE STRUCTURE BELOW. THE CURB AND UNIT SHALL WITHSTAND THE WIND LOAD AS SHOWN IN THE CODE REVIEW SECTION ON THE HVAC COVERSHEET
6. PROVIDE A SMOKE DUCT DETECTOR FOR FAN SHUTDOWN. COORDINATE WITH THE FIRE ALARM CONTRACTOR.
7. MOTOR/BLOWER VIBRATION ISOLATION
8. UV LIGHTS IN SUPPLY DUCT
9. AIR FLOW PROVING SWITCH
10. STEP-DOWN TRANSFORMER
11. RAIN HOOD W/ INSECT SCREEN
12. DOWNWARD DISCHARGE
13. ALUMINIZED STEEL GAS HEAT EXCHANGER

HVAC GAS FIRED UNIT HEATER SCHEDULE

TAG	SERVICE	MANUFACTURER	MODEL	AIR FLOW	INPUT MBH	OUTPUT MBH	REQUIRED GAS PRESSURE (W/G)	HP	VOLTAGE	PHASE	FLA	MAXIMUM OVERCURRENT PROTECTION	CONTROL	EFFICIENCY	WEIGHT	VENT TYPE	NOTES
GUH-1	KITCHEN DRY STORAGE	BEZOR	UDZ-38	466 CFM	30.0	24.6	7.11" WC	0.06	115	1	1.8	15.0	THERMOSTAT	82	58.0 lb	CONCENTRIC	1-6
GUH-2	MECHANICAL ROOM	BEZOR	UDZ-38	466 CFM	30.0	24.6	7.11" WC	0.06	115	1	1.8	15.0	THERMOSTAT	82	58.0 lb	CONCENTRIC	1-6
GUH-3	DRY STORAGE	BEZOR	UDZ-38	466 CFM	30.0	24.6	7.11" WC	0.06	115	1	1.8	15.0	THERMOSTAT	82	58.0 lb	CONCENTRIC	1-6
GUH-4	CARDBOARD PACKAGING	BEZOR	UDZ-40	799 CFM	60.0	49.8	7.11" WC	0.06	115	1	2.4	15.0	THERMOSTAT	82	71.0 lb	CONCENTRIC	1-6
GUH-5	BOX/PACKAGE STORAGE	BEZOR	UDZ-45	629 CFM	45.0	37.4	7.11" WC	0.06	115	1	2.4	15.0	THERMOSTAT	82	63.0 lb	CONCENTRIC	1-6

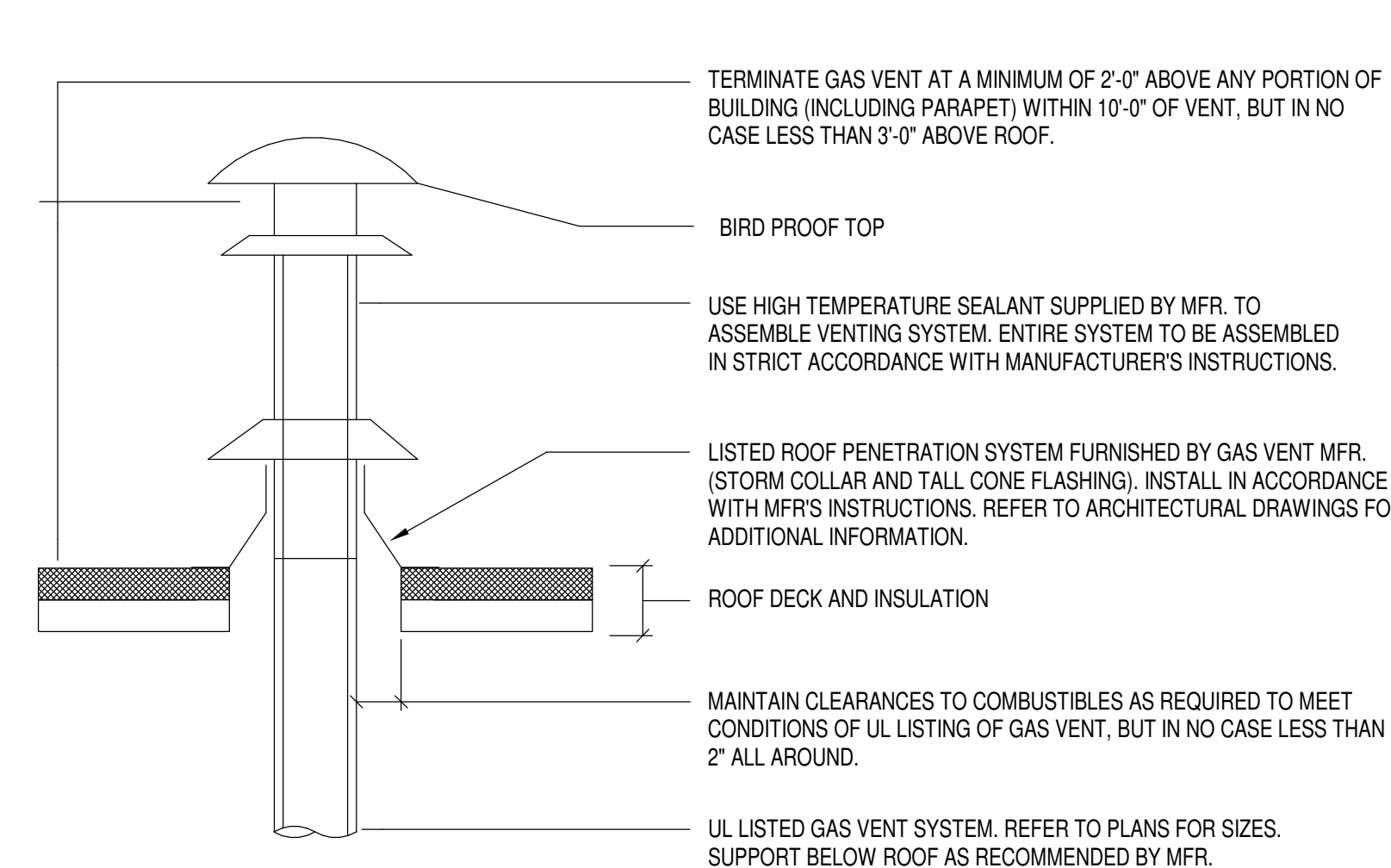
1. ELECTRONIC IGNITION AND ENCLOSED MOTOR
2. 4 POINT SUSPENSION KIT
3. SINGLE STAGE COMBINATION GAS VALVE AND SEPARATED COMBUSTION
4. PROVIDE WITH CC-2 VERTICAL, OR CC-3 HORIZONTAL, CONCENTRIC COMBUSTION AIR INTAKE FLEU VENT KIT
5. PROVIDE WITH DIFFERENTIAL AIR PRESSURE SWITCH TO VERIFY COMBUSTION AIR FLOW. POLISHED ALUMINUM REFLECTORS
6. PROVIDE WITH STEP-DOWN TRANSFORMER FOR 24V CONTROLS
7. FURNISH AND INSTALL CONDENSATE PIPING AND ACID NEUTRALIZER TO NEAREST AVAILABLE DRAIN OR STANDPIPE
8. ATTACH AXIOM NEUTRALIZATION CAPSULE NC-1
9. SUPPLY WITH CONDENSATE PUMP. LITTLE GIANT VOMA-15 OR EQUAL PIPED TO NEAREST DRAIN OR STANDPIPE

HVAC EXHAUST FAN SCHEDULE

TAG	SERVICE	MANUFACTURER	MODEL	AIR FLOW	E.S.P. (W/G)	RPM	DRIVE	HP	VOLTAGE	PHASE	ELECTRICAL SECTION	CONTROL	MISCELLANEOUS SECTION	WEIGHT	NOTES
EF-1	WASHDOWN PRODUCE	GREENHECK	CUE-200-B	6070 CFM	.1	1140	DIRECT	2.00	460	3		WASHDOWN SWITCH, INTERLOCK W/ SF-1	236.0 lb	1-6	
EF-2	WASHDOWN ASSEMBLY SCALING	GREENHECK	CUE-200-B	6159 CFM	.1	1140	DIRECT	2.00	460	3		WASHDOWN SWITCH, INTERLOCK W/ SF-2	236.0 lb	1-6	
EF-3	WASHDOWN CUPLINES	GREENHECK	CUE-200-B	5436 CFM	.1	1140	DIRECT	2.00	460	3		WASHDOWN SWITCH, INTERLOCK W/ SF-3	236.0 lb	1-6	
EF-4	WASHDOWN OPEN SLICE	GREENHECK	CUE-160-A	894 CFM	1	1725	DIRECT	2.00	460	3	3.4	WASHDOWN SWITCH, INTERLOCK W/ SF-4	141.0 lb	1-6	
EF-5	WASHROOM #2 EXHAUST	GREENHECK	CUE-095-D	882 CFM	2	1550	DIRECT	0.13	115	1		PRESSURE SENSOR, INTERLOCK W/MUA-2	73.0 lb	1-6	
EF-6	WASHROOM #1 EXHAUST	GREENHECK	CUE-120-A	975 CFM	.1	1725	DIRECT	0.50	460	3	1.1	PRESSURE SENSOR, INTERLOCK W/MUA-1	100.0 lb	1-6	
EF-7	RAW WASHROOM EXHAUST	GREENHECK	CUE-090-G	385 CFM	2	1300	DIRECT	0.04	115	1		PRESSURE SENSOR, INTERLOCK W/MUA-1	66.0 lb	1-6	
EF-8	VENTILATION BOX PACKAGE	GREENHECK	CUE-100-A	1417 CFM	.1	1725	DIRECT	0.25	460	3	1.1	TSTAT, INTERLOCK W/ FAH-1	102.0 lb	1-6	
EF-9	VENTILATION CARDBOARD	GREENHECK	CUE-120-A	2657 CFM	.1	1725	DIRECT	0.50	115	1	9.8	TSTAT, INTERLOCK W/ FAH-2	78.0 lb	1-6	
EF-10	CHEMICAL STORAGE 1 EXHAUST	GREENHECK	CUE-060-G	104 CFM	.1	1300	DIRECT	0.01	115	1		TIMELOCK	55.0 lb	1-6	
EF-11	CHEMICAL STORAGE 2 EXHAUST	GREENHECK	CUE-060-VG	185 CFM	.1	1725	DIRECT	0.07	115	1	1.3	TIMELOCK	56.0 lb	1-6	
EF-12	VENTILATION CLEAN STORAGE	GREENHECK	CUE-080-VG	500 CFM	.1	1725	DIRECT	0.10	115	1	1.4	TSTAT, INTERLOCK W/ FAH-5	70.0 lb	1-6	
EF-13	VENTILATION DRY STORAGE	GREENHECK	CUE-085-D	905 CFM	.1	1550	DIRECT	0.13	115	1		TSTAT, INTERLOCK W/ FAH-6	73.0 lb	1-6	
EF-14	VENTILATION KITCHEN DRY STORAGE	GREENHECK	CUE-090-D	770 CFM	.1	1550	DIRECT	0.07	115	1		TSTAT, INTERLOCK W/ FAH-7	66.0 lb	1-6	
EF-15	WASHDOWN ASSEMBLY	GREENHECK	CUE-240HP-VG	7360 CFM	.1	1200	DIRECT	3.00	208	3	8.0	WASHDOWN SWITCH, INTERLOCK W/ SF-8.9	241.0 lb	1-6	
EF-16	WASHDOWN ASSEMBLY	GREENHECK	CUE-240HP-VG	7360 CFM	.1	1200	DIRECT	3.00	208	3	8.0	WASHDOWN SWITCH, INTERLOCK W/ SF-8.9	241.0 lb	1-6	
EF-17	WASHDOWN CHICKEN PREP	GREENHECK	CUE-130-A	2304 CFM	.1	1725	DIRECT	0.75	460	3	1.6	WASHDOWN SWITCH, INTERLOCK W/ SF-5	112.0 lb	1-6	
EF-18	WASHDOWN HOT KITCHEN	GREENHECK	CUE-240-C	7377 CFM	.1	1600	DIRECT	2.00	460	3		WASHDOWN SWITCH, INTERLOCK W/ SF-10	252.0 lb	1-6	
EF-19	WASHDOWN CHICKEN PREP	GREENHECK	CUE-120-A	1586 CFM	.1	1725	DIRECT	0.50	460	3	1.1	WASHDOWN SWITCH, INTERLOCK W/ SF-6	100.0 lb	1-6	
EF-20	WASHDOWN SALAD	GREENHECK	CUE-100-A	1350 CFM	.1	1725	DIRECT	0.25	460	3	1.1	WASHDOWN SWITCH, INTERLOCK W/ SF-7	102.0 lb	1-6	
EF-21	BATHROOM 144	GREENHECK	CSP-B110	75 CFM	.15	950	DIRECT	111	1	1.2			11.0 lb	13,4	
EF-22	BATHROOMS 103.104.105	GREENHECK	CUE-060-VG	200 CFM	.1	1725	DIRECT	0.07	115	1	1.3	TIMELOCK	56.0 lb	1-6	
EF-23	BATHROOM CONTROL AND RELIEVING	GREENHECK	CUE-070-D	225 CFM	.15	1300	DIRECT	0.02	115	1		TIMELOCK	56.0 lb	1-6	
EF-24	INTERSTITIAL MIDDLE ZONE	GREENHECK	CUE-100-A	1294 CFM	.1	1725	DIRECT	0.25	460	3	1.1	TSTAT, INTERLOCK W/ FAH-8.9	102.0 lb	1-6	
EF-25	INTERSTITIAL MIDDLE ZONE	GREENHECK	CUE-100-A	1294 CFM	.1	1725	DIRECT	0.25	460	3	1.1	TSTAT, INTERLOCK W/ FAH-8.9	102.0 lb	1-6	
EF-26	INTERSTITIAL TOP ZONE	GREENHECK	CUE-090-G	612 CFM	.1	1300	DIRECT	0.04	115	1		TSTAT, INTERLOCK W/ FAH-11	66.0 lb	1-6	
EF-27	INTERSTITIAL BOTTOM ZONE	GREENHECK	CUE-095-VG	1054 CFM	.1	1725	DIRECT	0.17	115	1	2.2	TSTAT, INTERLOCK W/ FAH-10	72.0 lb	1-6	
EF-28	DOUBLE RACK OVEN	GREENHECK	CUE-100-A	1000 CFM	.1	1725	DIRECT	0.25	115	1	5.8	INTERLOCK W/ OVEN	89.0 lb	1-6	
EF-29	DOUBLE RACK OVEN	GREENHECK	CUE-100-A	1000 CFM	.1	1725	DIRECT	0.25	115	1	5.8	INTERLOCK W/ OVEN	89.0 lb	1-6	
EF-30	BATHROOMS AND LOCKER ROOM	GREENHECK	CUE-120-A	1475 CFM	.1	1725	DIRECT	0.50	460	3	1.1	TIMELOCK	100.0 lb	1-6	
EF-31	BATHROOMS 185.184.183	GREENHECK	CUE-070-G	225 CFM	.1	1300	DIRECT	0.02	115	1		TIMELOCK	56.0 lb	1-6	
EF-32	GARAGE EXHAUST	GREENHECK	CUE-070-D	300 CFM	.1	1550	DIRECT	0.03	115	1	0.0	TIMELOCK	56.0 lb	1-6	
EF-33	CONTROL AND RELIEVING	GREENHECK	CUE-070-G	225 CFM	.15	1300	DIRECT	0.02	115	1		TIMELOCK	56.0 lb	1-6	
EF-34	ELEC ROOM A	GREENHECK	CUE-070-VG	400 CFM	.1	1725	DIRECT	0.06	115	1		TIMELOCK	33.0 lb	1-6	
EF-35	ELEC ROOM B	GREENHECK	CUE-070-VG	400 CFM	.1	1725	DIRECT	0.06	115	1		TIMELOCK	33.0 lb	1-6	
EF-36	AIR COMPRESSOR	GREENHECK	CUE-160-A	4800 CFM	.1	1725	DIRECT	2.00	460	3	3.4	INTERLOCK W/ AC AND TSTAT	145.0 lb	1-6	
EF-37	AIR COMPRESSOR	GREENHECK	CUE-160-A	4800 CFM	.1	1725	DIRECT	2.00	460	3	3.4	INTERLOCK W/ AC AND TSTAT	145.0 lb	1-6	
EF-38	BATTERY CHARGER 1	GREENHECK	CUE-060-D	290 CFM	.1	1725	DIRECT	0.03	115	1	1.3	TIMELOCK	33.0 lb	1-6	
EF-39	BATTERY CHARGER 2	GREENHECK	CUE-060-D	150 CFM	.1	1550	DIRECT	0.03	115	1	1.3	TIMELOCK	33.0 lb	1-6	
EF-40	SPRINKLER ROOM	GREENHECK	CUE-070-G	225 CFM	.1	1300	DIRECT	0.03	115	1		TSTAT, INTERLOCK W/ FAH-14	33.0 lb	1-6	
KEF-1	HOODS	CAPTIVE AIRE	SEE CAPTIVE AIRE DETAILS												
KEF-2	HOODS	CAPTIVE AIRE	SEE CAPTIVE AIRE DETAILS												
KEF-3	HOODS	CAPTIVE AIRE	SEE CAPTIVE AIRE DETAILS												
KEF-4	HOODS	CAPTIVE AIRE	SEE CAPTIVE AIRE DETAILS												
KEF-5	HOODS	CAPTIVE AIRE	SEE CAPTIVE AIRE DETAILS												
KEE-10	WEATHERPROOF DISCONNECT SWITCH														
KEE-11	ROOF CURB														
KEE-12	BAKUPART DAMPER														
KEE-13	PROVIDE VFD FOR CONTROL														
KEE-14	PROVIDE A CURB AND POSITIVELY ATTACH THE UNIT TO THE STRUCTURE BELOW. COORDINATE WITH THE ARCHITECT AND/OR STRUCTURAL ENGINEER. THE CURB AND UNIT SHALL WITHSTAND THE WIND LOAD AS SHOWN IN THE CODE REVIEW SECTION ON THE HVAC COVERSHEET.														

HVAC AIR COOLED CONDENSING UNIT SCHEDULE

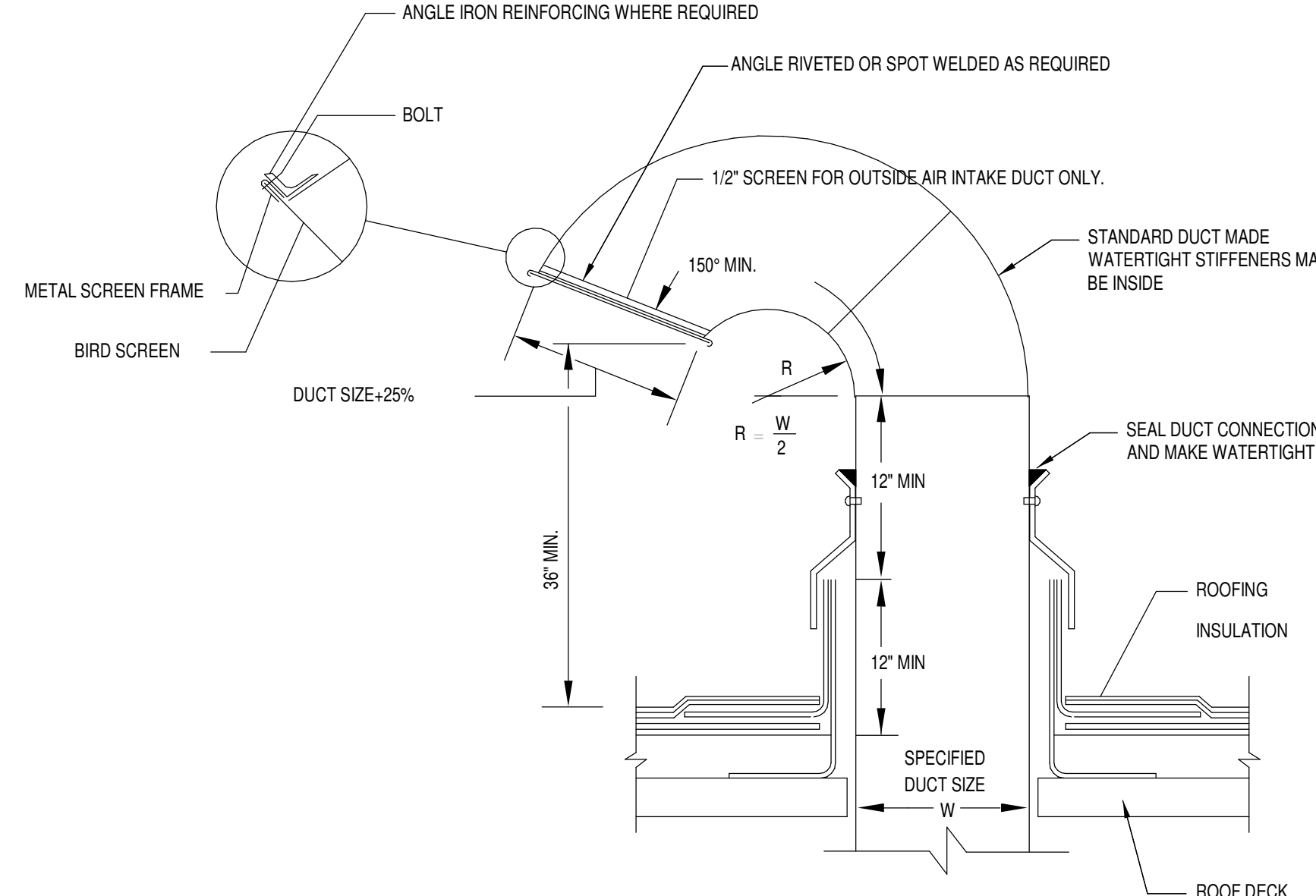
							ELECTRICAL SECTION				MISCELLANEOUS SECTION				MISCELLANEOUS
TAG	SERVICE	MANUFACTURER	MODEL	TOTAL COOLING CAPACITY MBH	TOTAL HEATING CAPACITY MBH	VOLTAGE	PHASE	MINIMUM CIRCUIT	MAXIMUM	FLA	WEIGHT	REFRIGERANT	EFFICIENCY	NOTES	
								AMP	OVERCURRENT PROTECTION			USED	SEER/EER/NSFP/C O/P AF/LE		
CU-1	152	TRANE	TRUYA0121HA70	12.0	18.0	208	1	11.0	28.0	0.5	93.0 lb	R410A	21.1/13	1-4	
CU-2	142.143.144	TRANE	TRUYA0121HA70	12.0	18.0	208	1	11.0	28.0	0.5	93.0 lb	R410A	21.1/13	1-4	
CU-3	IT ROOM	TRANE	TRUYA0241HA70	24.0	0.0	208	1	19.0	26.0	0.4	151.0 lb	R410A	21.4/22.2	1-4	
CU-4	IT ROOM	TRANE	TRUYA0241HA70	24.0	0.0	208	1	19.0	26.0	0.4	151.0 lb	R410A	21.4/22.2	1-4	
CU-5	LABEL PRINTING	TRANE	TRUYA0121HA70	12.0	0.0	208	1	11.0	28.0	0.5	93.0 lb	R410A	27/16.4	1-4	
CU-CAU-1	CAU-1	BOHN	2D3R43KE	54.0	0.0	460	3	15.0	20.0		750.0 lb	R448A		1-5	
CU-CAU-2	CAU-2	BOHN	4DNR28ME	282.0	0.0	460	3	65.7	110.0		1680.0 lb	R448A		1-5	



GAS FLUE DETAIL
SCALE: NONE

(ANSI) VENT SYSTEM CATEGORIES			
NON-CONDENSING		CONDENSING	
Category I Vent Type: B-Vent Double Wall	Category III Vent Type: Forced Draft: UL P-Stack Double Wall Direct Vent: AL29-4C Double Wall	POSITIVE PRESSURE	
Category II Vent Type: AL294C Double Wall	Category IV Vent Type: AL294C Double Wall		

- NOTES:
1. THIS VENT SYSTEM CATEGORY MATRIX IS PROVIDED TO INDICATE THE VENT MATERIAL TYPE THAT WILL BE REQUIRED BASED UPON THE APPLIANCE VENTING REQUIREMENTS.
 2. VENTING MATERIAL SHALL MATCH THE APPLIANCE TYPE AND BE PER THE MANUFACTURERS REQUIREMENTS.
 3. THE VENT TYPE SHOWN IS THE TYPE REQUIRED UNLESS OTHERWISE NOTED ON THE PLANS. ALTERNATES WILL BE REVIEWED IF THE MANUFACTURER OF THE APPLIANCE APPROVES A DIFFERENT VENTING MATERIAL. THIS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER DURING THE BIDDING PROCESS. FAILURE TO PROVIDE THIS DURING THE BIDDING PROCESS WILL RESULT IN THE DENIAL OF ANY ADDITIONAL CHARGES.

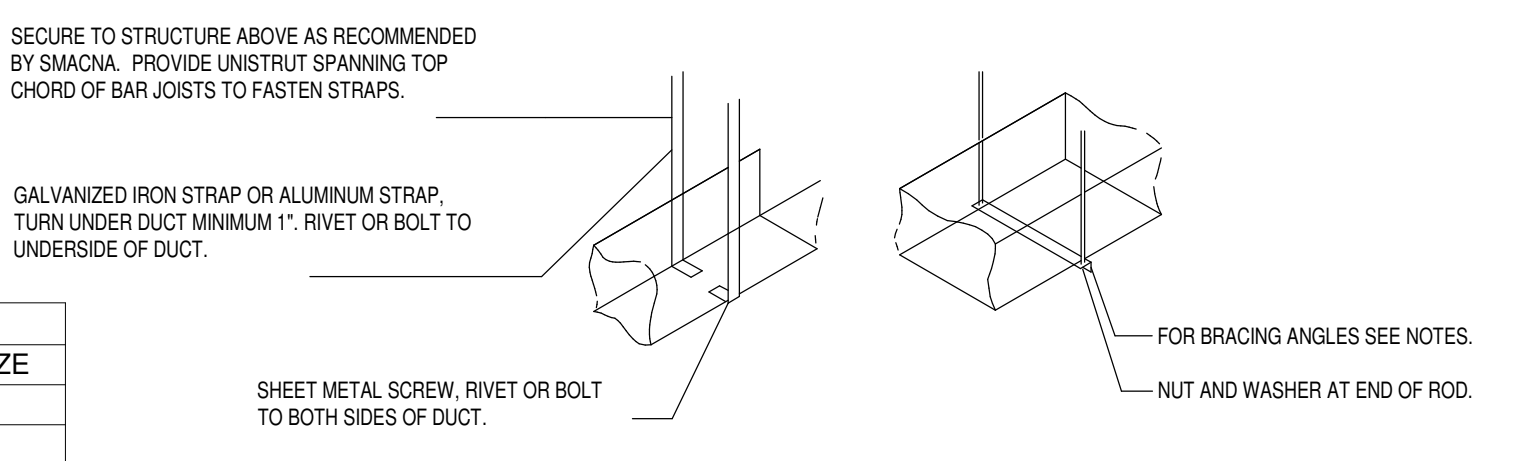


GOOSENECK DETAIL
SCALE: NONE

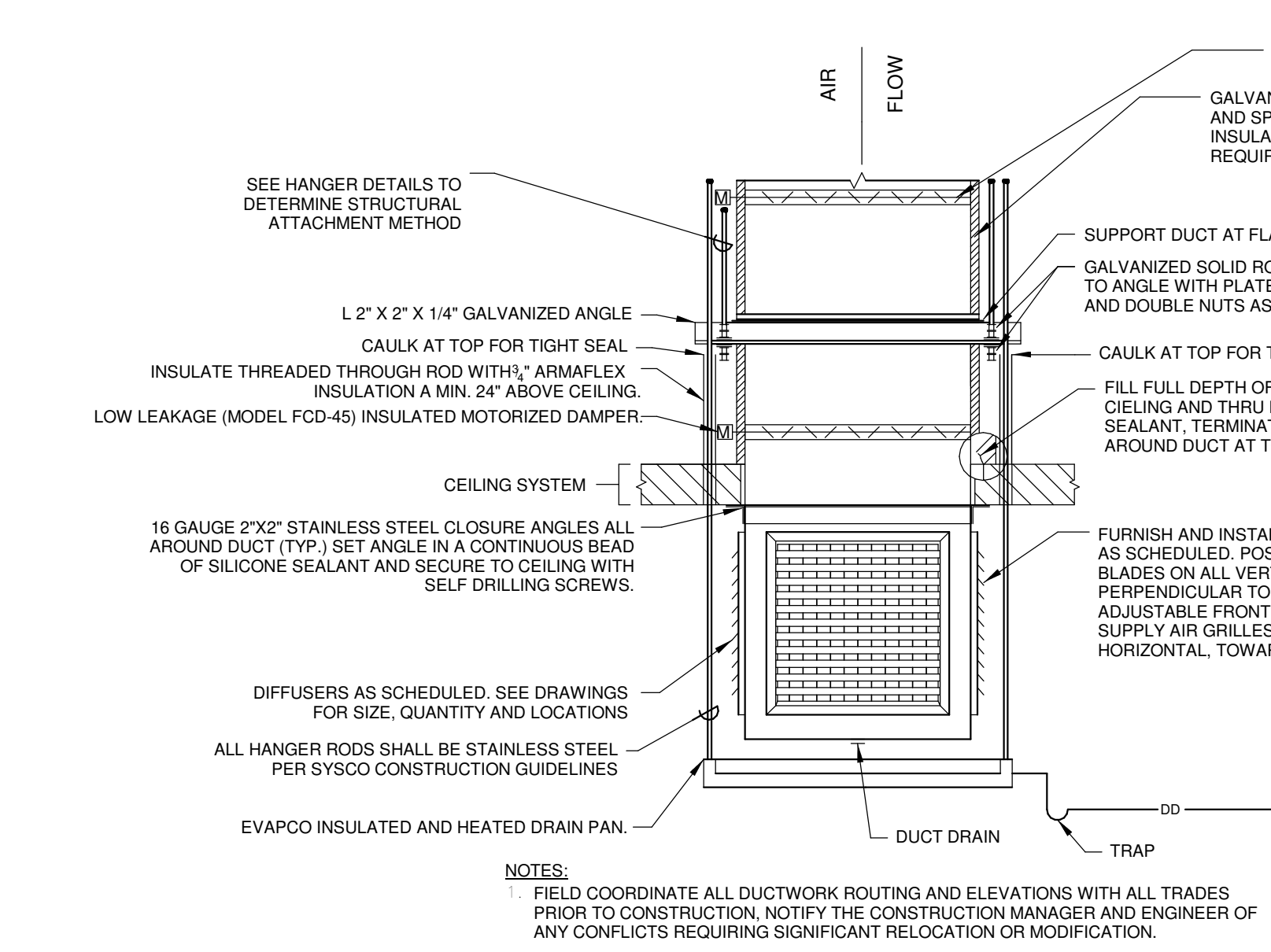
MINIMUM CONDENSATE PIPE SIZES	MIN DRAIN SIZE
TONS OF COOLING	
0-20	1"
21-40	1-1/4"
41-60	1-1/2"
61-100	2"
100-250	3"
250 AND LARGER	4"

HVAC UNIT CONDENSATE PIPING SIZING CHART
SCALE: NONE

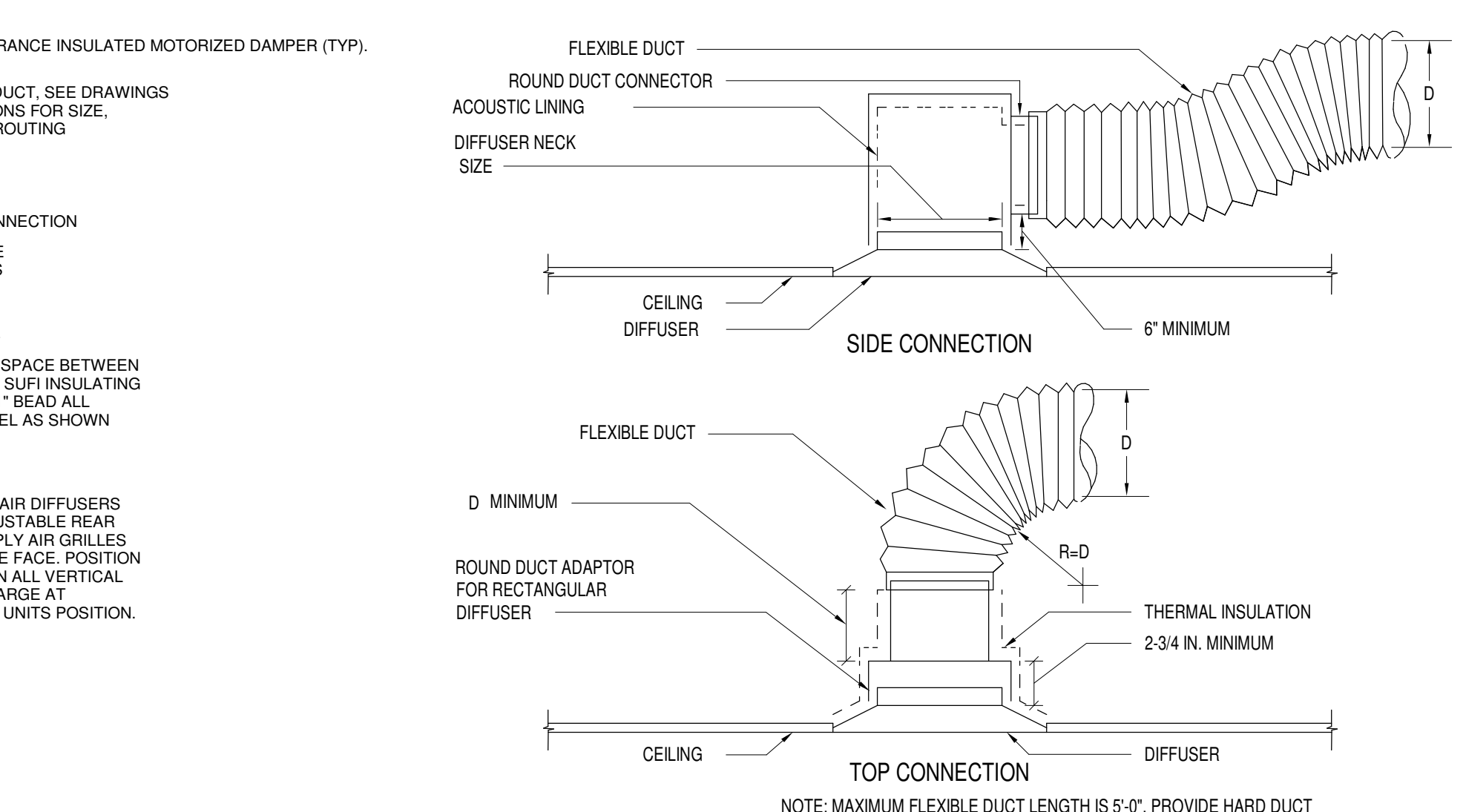
HALF DUCT PERIMETER RANGE	PAIR AT 10' SPACING		PAIR AT 8' SPACING		PAIR AT 5' SPACING		PAIR AT 4' SPACING	
	STRAP	WIRE ROD	STRAP	WIRE ROD	STRAP	WIRE ROD	STRAP	WIRE ROD
P2 < 30'	1 1/2 GA.	10 GA. (0.187)	1 1/2 GA.	10 GA. (0.187)	1 1/2 GA.	10 GA. (0.187)	1 1/2 GA.	10 GA. (0.187)
P2 < 12'	1 1/2 GA.	30"	1 1/2 GA.	1 1/2"	1 1/2 GA.	1 1/2"	1 1/2 GA.	1 1/2"
P2 < 96'	1 1/2 GA.	30"	1 1/2 GA.	30"	1 1/2 GA.	30"	1 1/2 GA.	1 1/2"
P2 < 120'	1-10 1/8 GA.	10"	1 1/2 GA.	30"	1 1/2 GA.	30"	1 1/2 GA.	1 1/2"
P2 < 180'	1-10 1/8 GA.	10"	1 1/2 GA.	10"	1 1/2 GA.	30"	1 1/2 GA.	30"
P2 < 192'		10"	1-10 1/8 GA.	10"	1 1/2 GA.	30"	1 1/2 GA.	30"



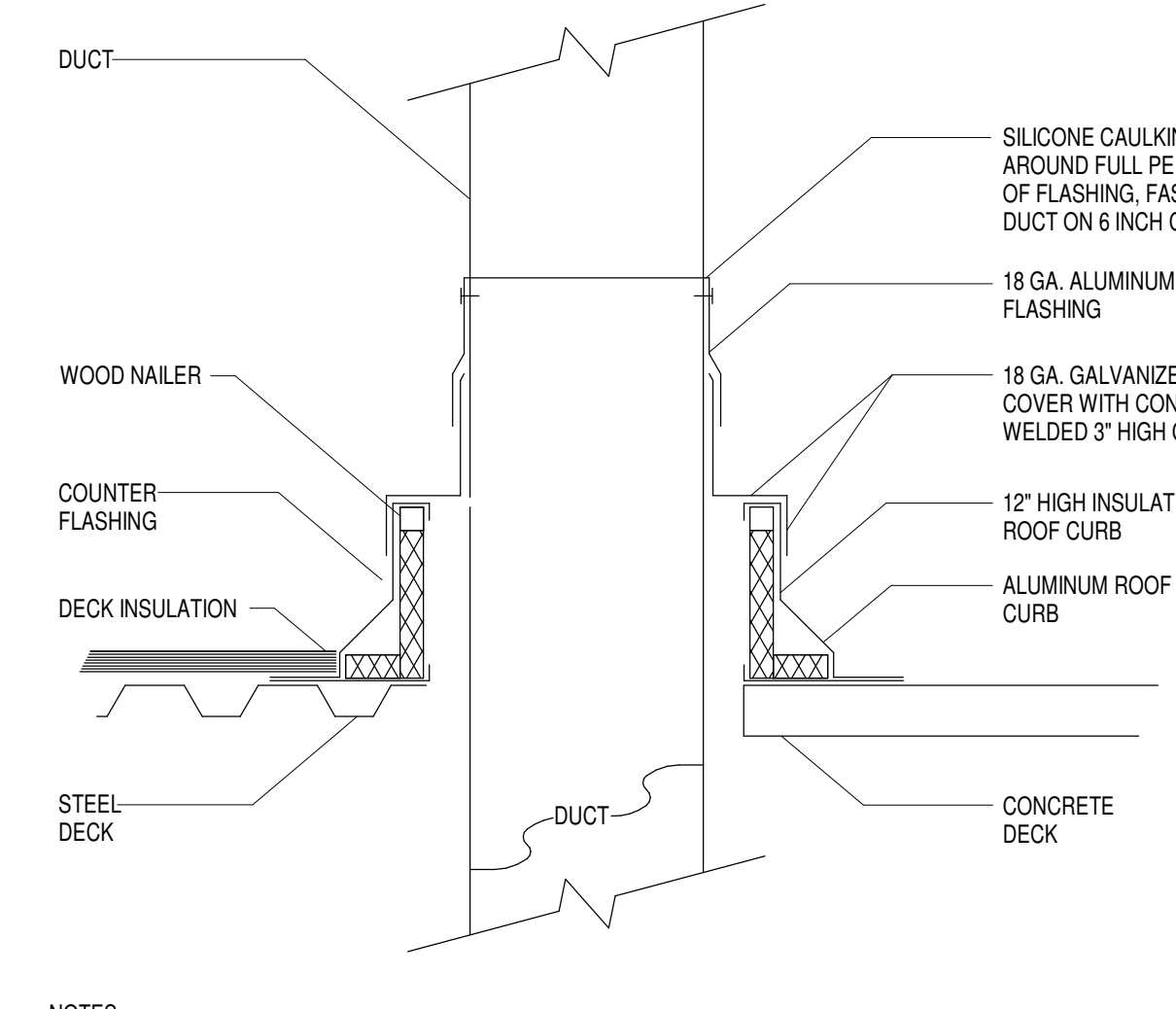
DUCT HANGER DETAILS
SCALE: NONE



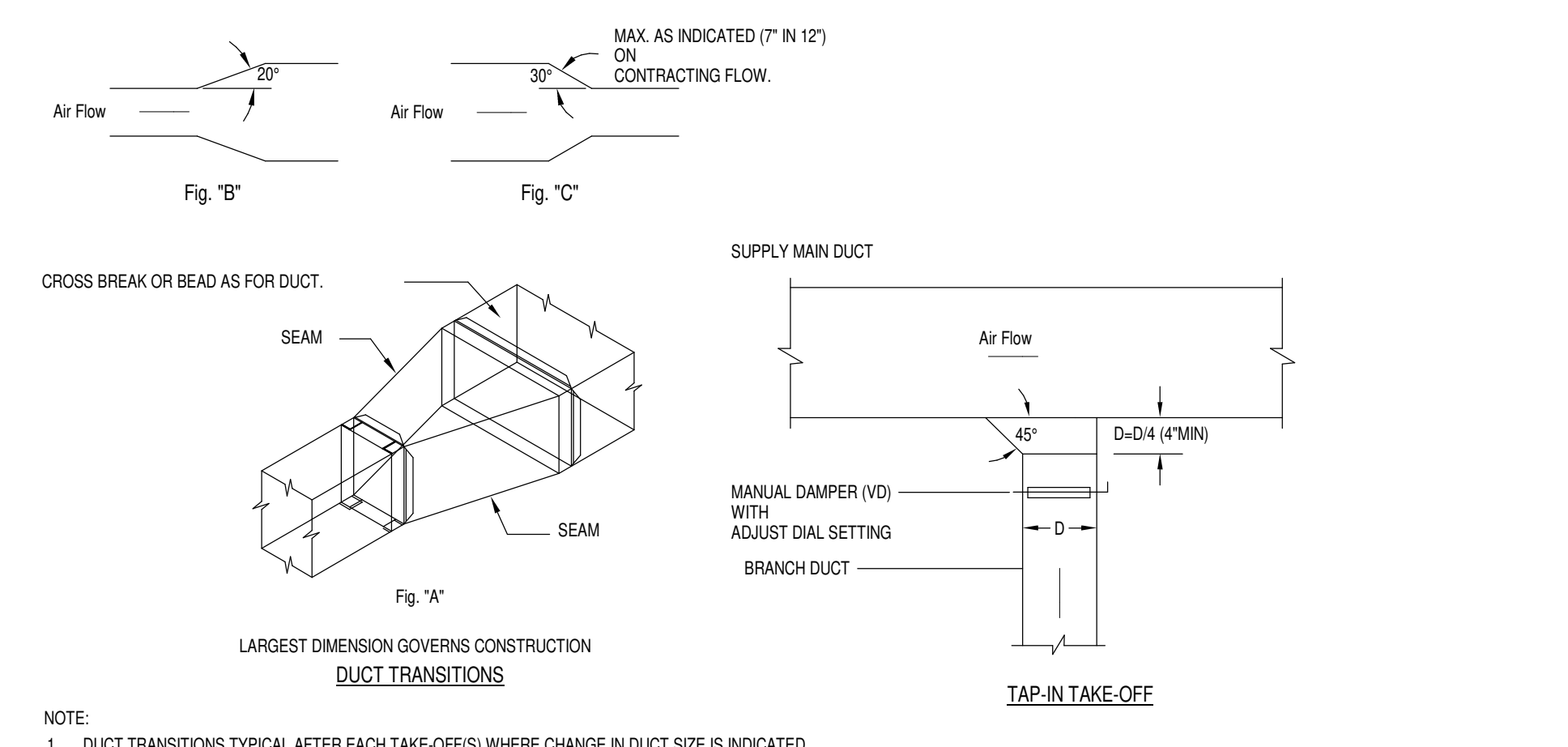
CRITICAL AIR/WASHDOWN EXHAUST/MAKE-UP AIR PLENUM DETAIL: CD-B AND RG-B
SCALE: NONE



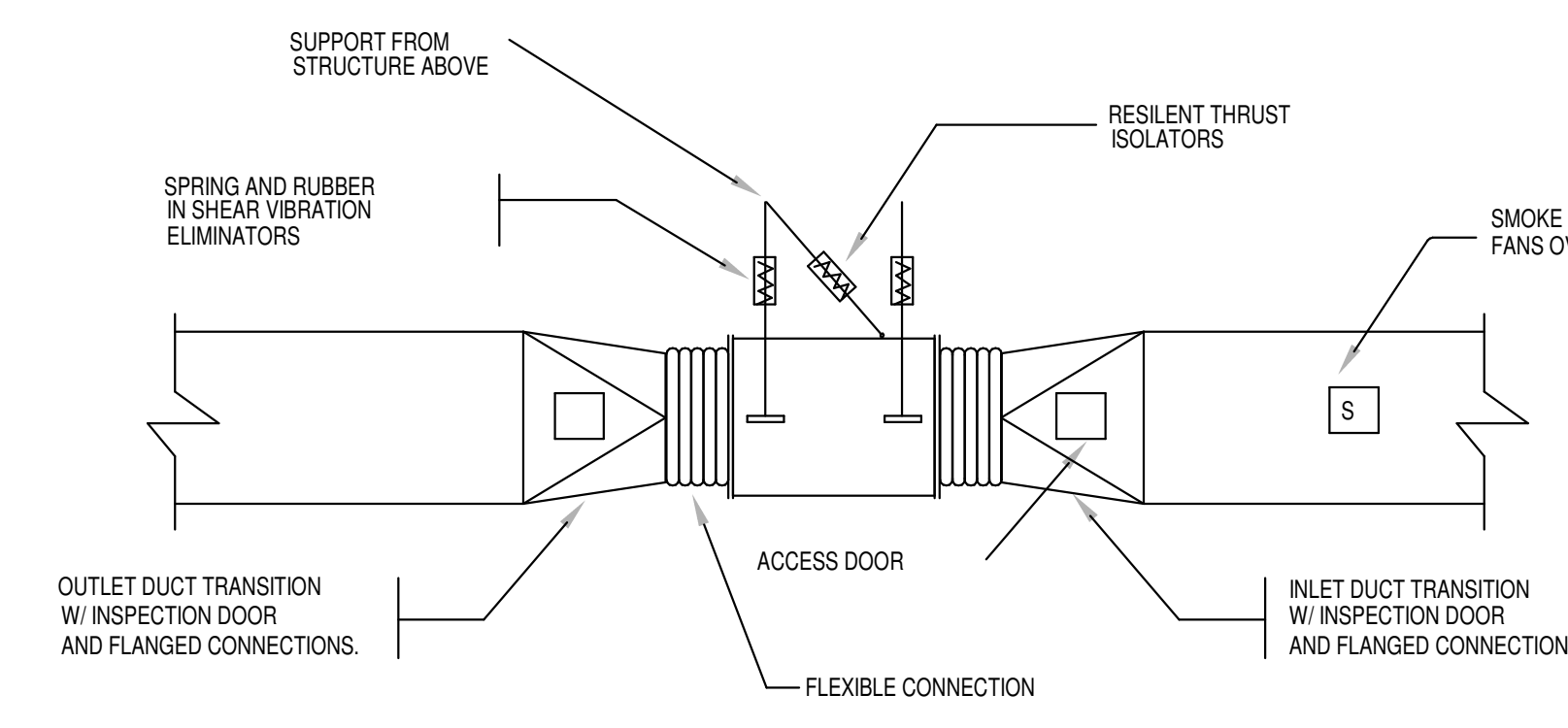
DIFFUSER CONNECTION DETAIL
SCALE: NONE



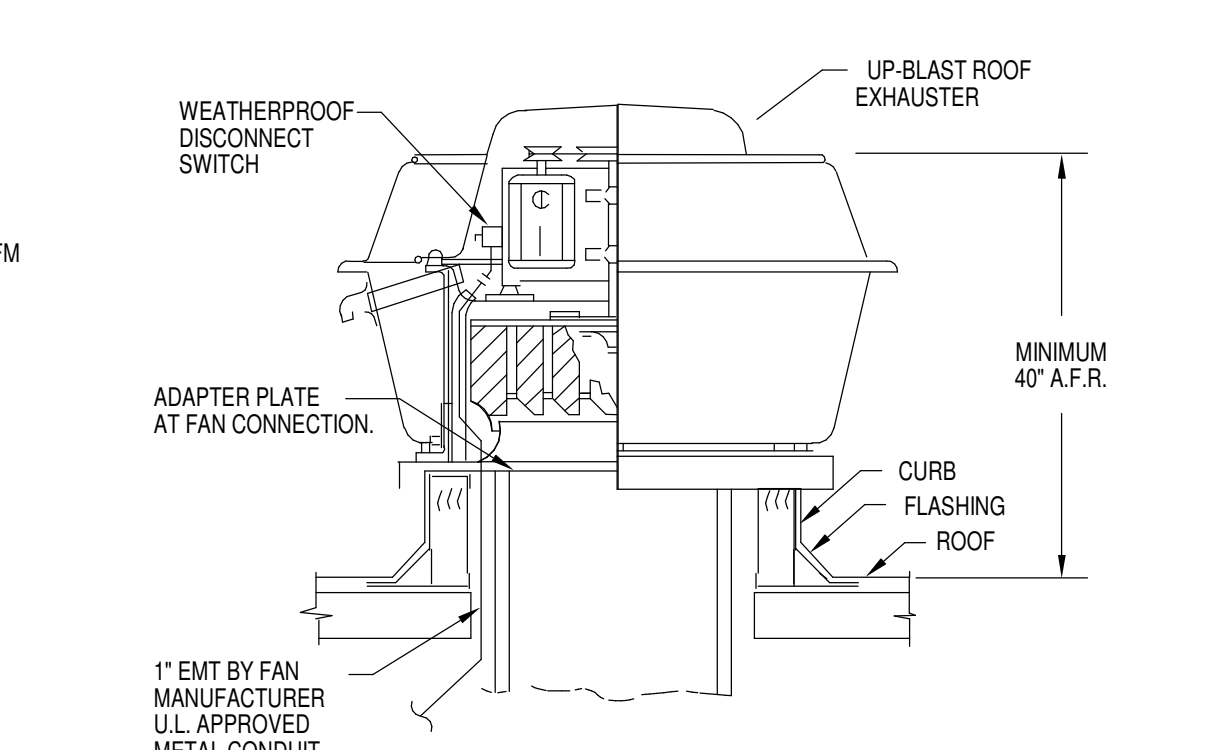
DUCT PENETRATION THROUGH ROOF DETAIL
SCALE: NONE



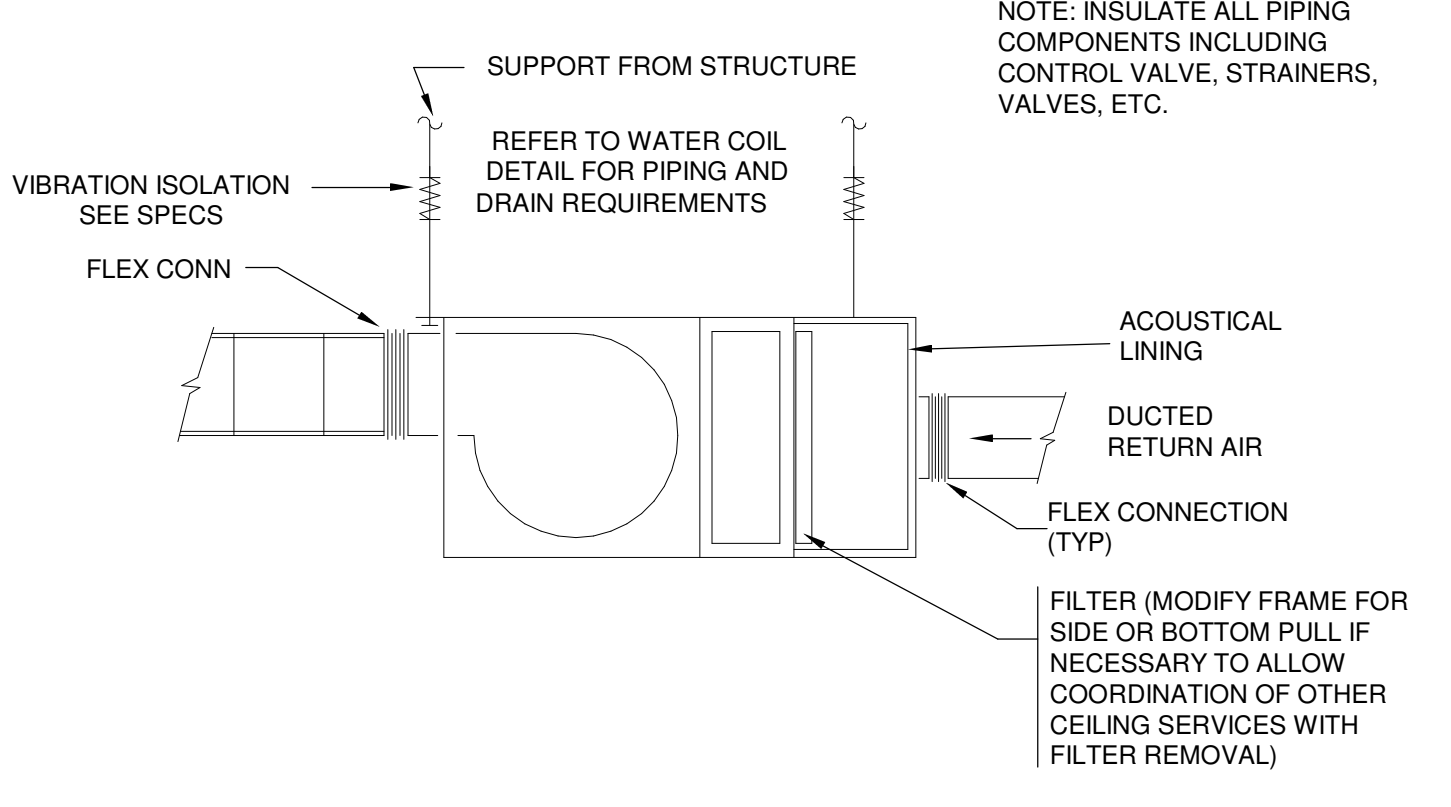
DUCT TRANSITION DETAILS
SCALE: NONE



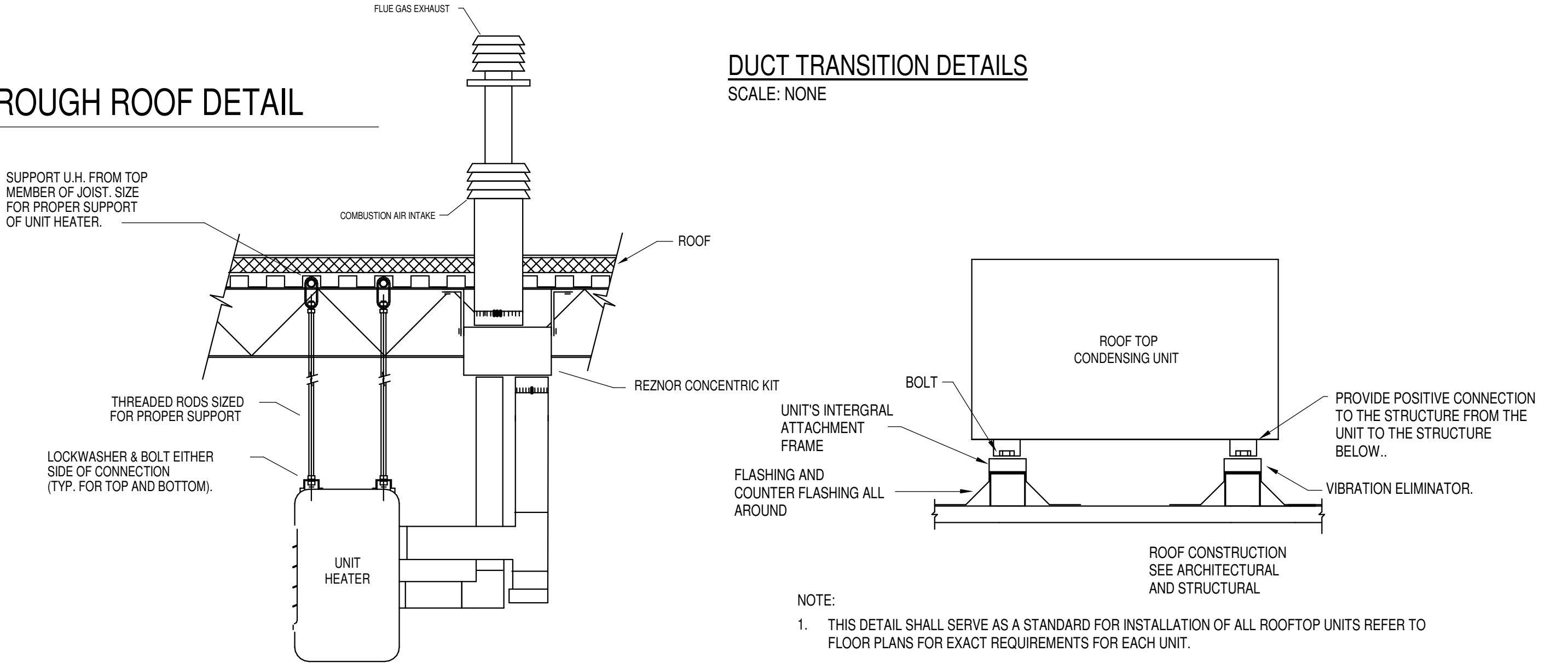
VANE-AXIAL FAN INSTALLATION DETAIL



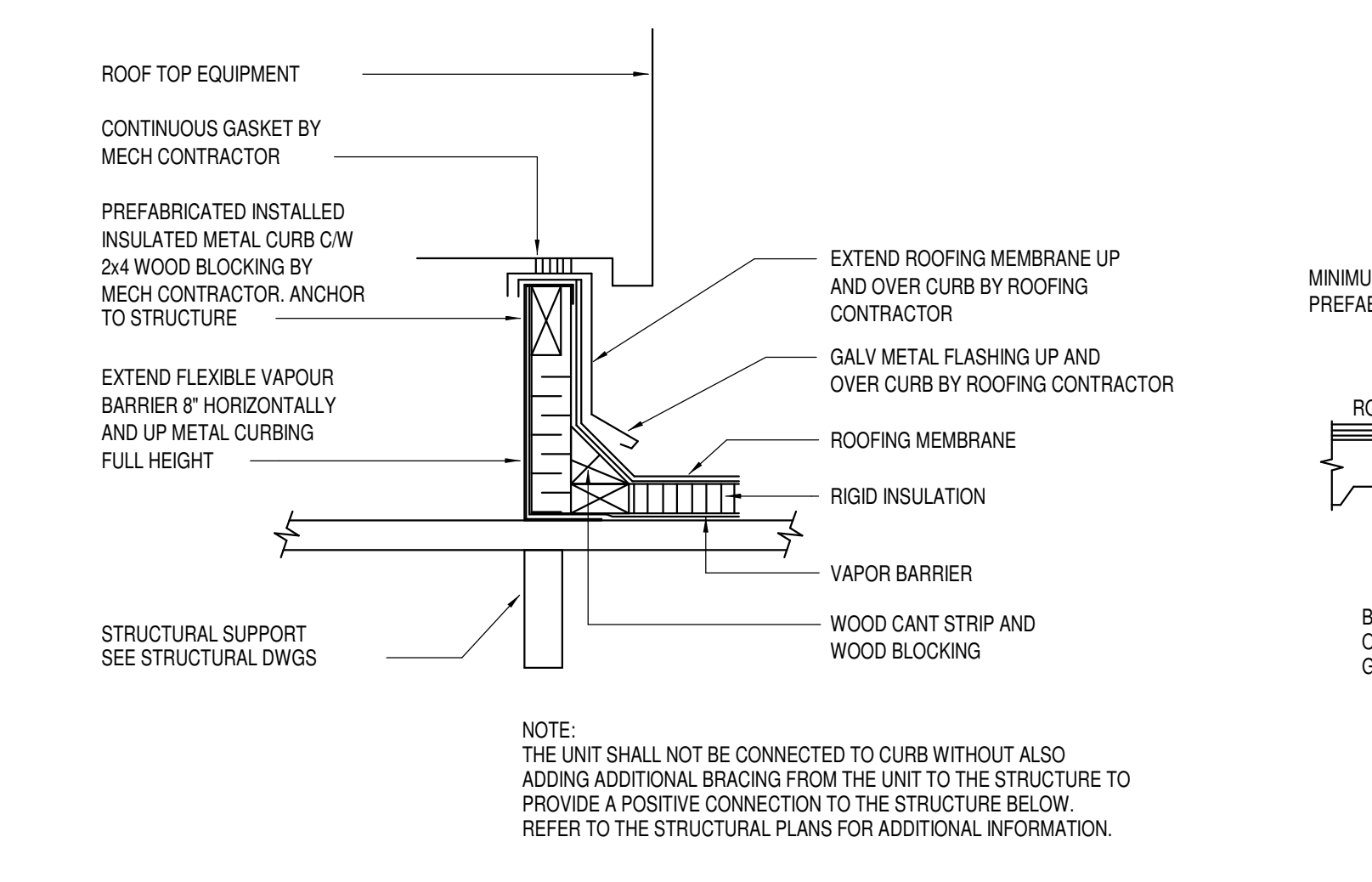
UPBLAST FAN DETAIL
SCALE: NONE



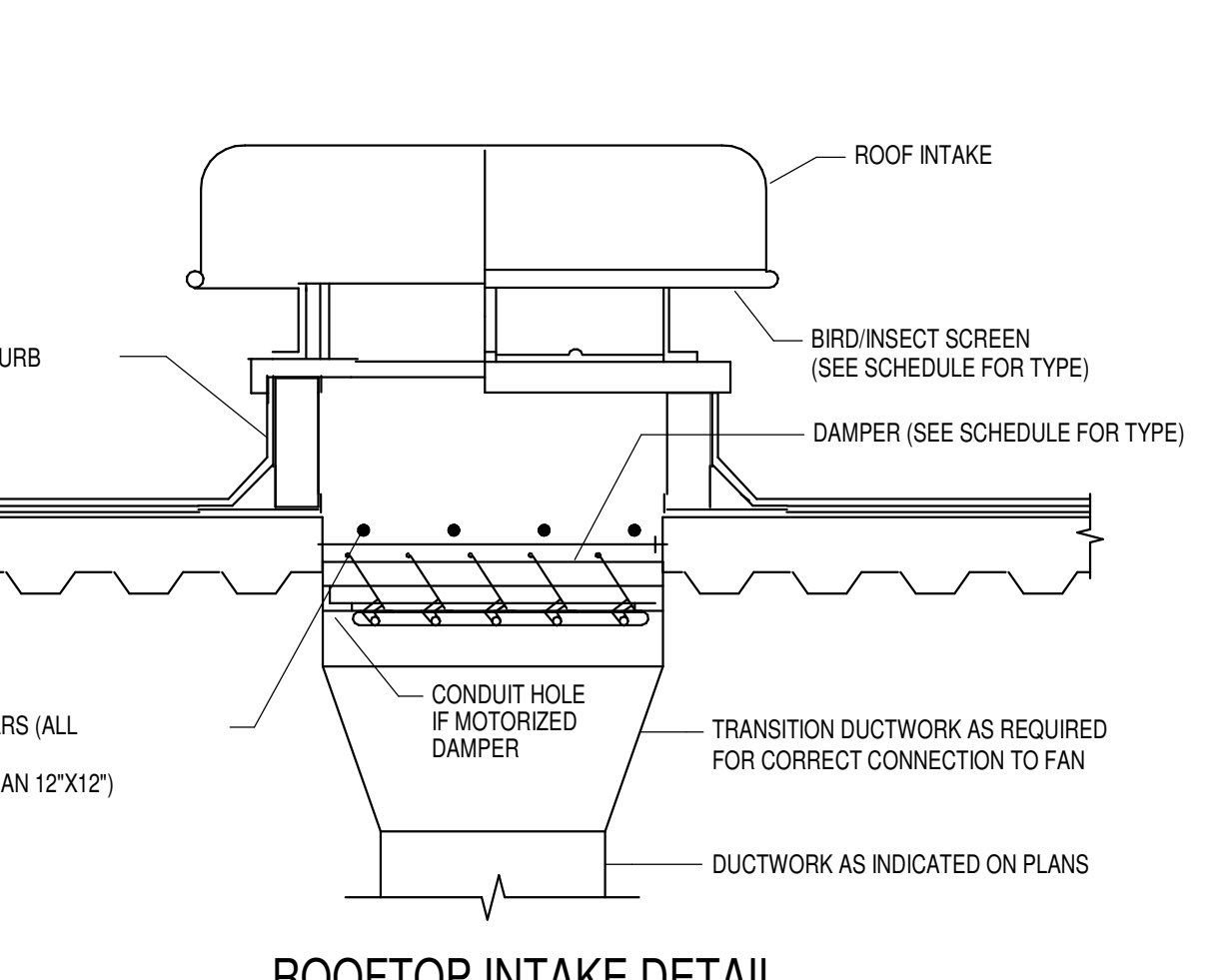
FAN POWERED VAV DETAIL
SCALE: NONE



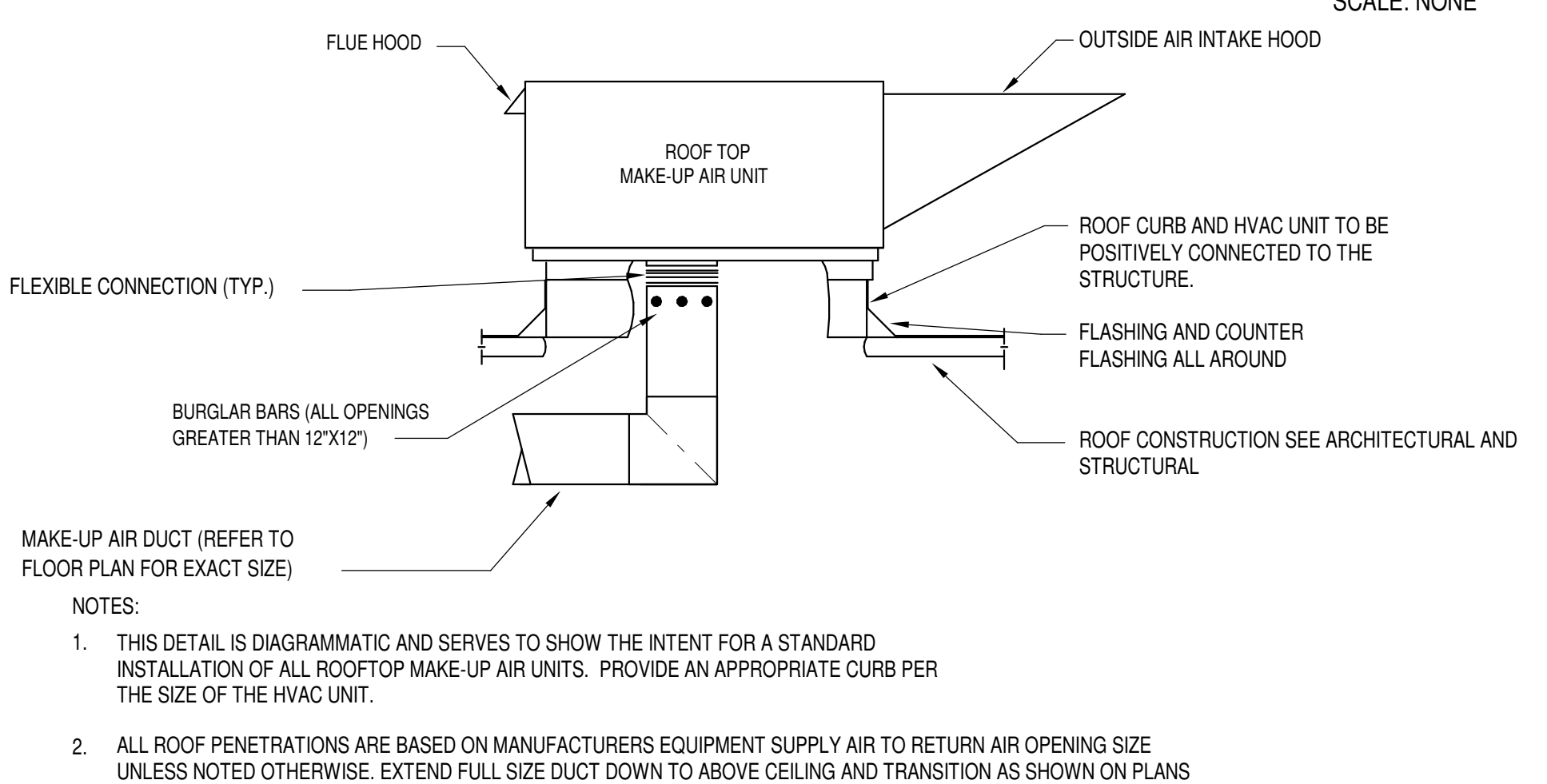
REZTOR UDAS UNIT HEATER DETAIL
SCALE: NONE



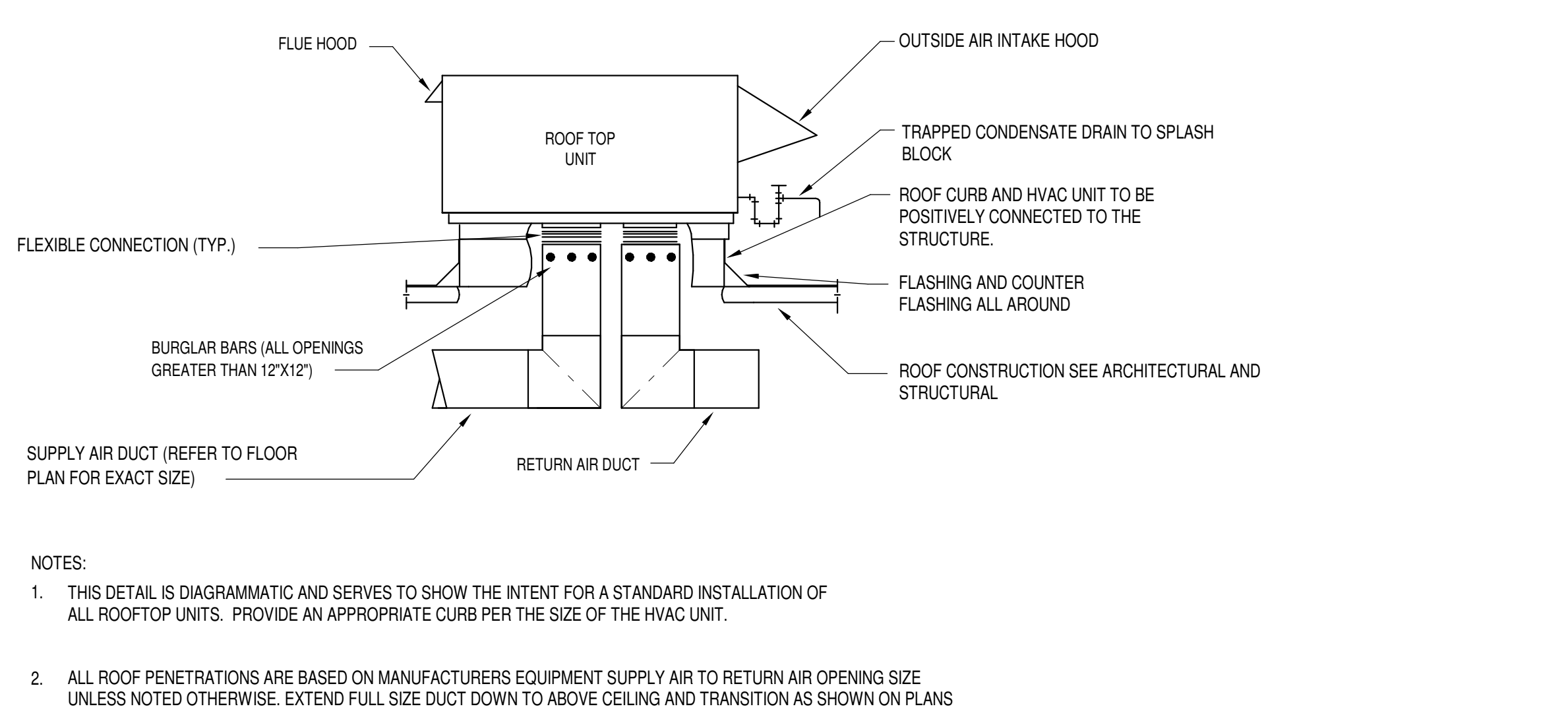
ROOFTOP EQUIPMENT CURB DETAIL
SCALE: NONE



ROOFTOP INTAKE DETAIL
SCALE: NONE



ROOFTOP MAKE-UP AIR UNIT DETAIL
SCALE: NONE



ROOFTOP HVAC UNIT DETAIL
SCALE: NONE

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LORENZO FOODS

1064 River Rd.
Edgewater, NJ 07020

COESTNER ASSOCIATES
P.O. BOX 514
Hackensack, NJ 07602

ALLIED ENGINEERING
730 River Road
New Milford, NJ 07646

BD ENGINEERING, LLC
30 Park Road, Suite 4
Tinton Falls, NJ 07724

lorenzofoodgroup

Lorenzo Foods Teterboro

25 CENTRAL AVE
TETERBORO, NJ, 07608

ISSUED FOR: REVIEW, BUILDING BOARD, BUILDING DEPT, CONSTRUCTION

BRIAN D. TANNENHAUS

NJ PROFESSIONAL ENGINEER
NO. 0E 45801
DATE: 09/24/2021

drawing name: HVAC DETAILS

scale:

release date:

drawing date: 09/24/2021

drawn by: ZW

approved by: KF

project no: 2102

drawing no: M-301.00

DOB BARCODE:

Total

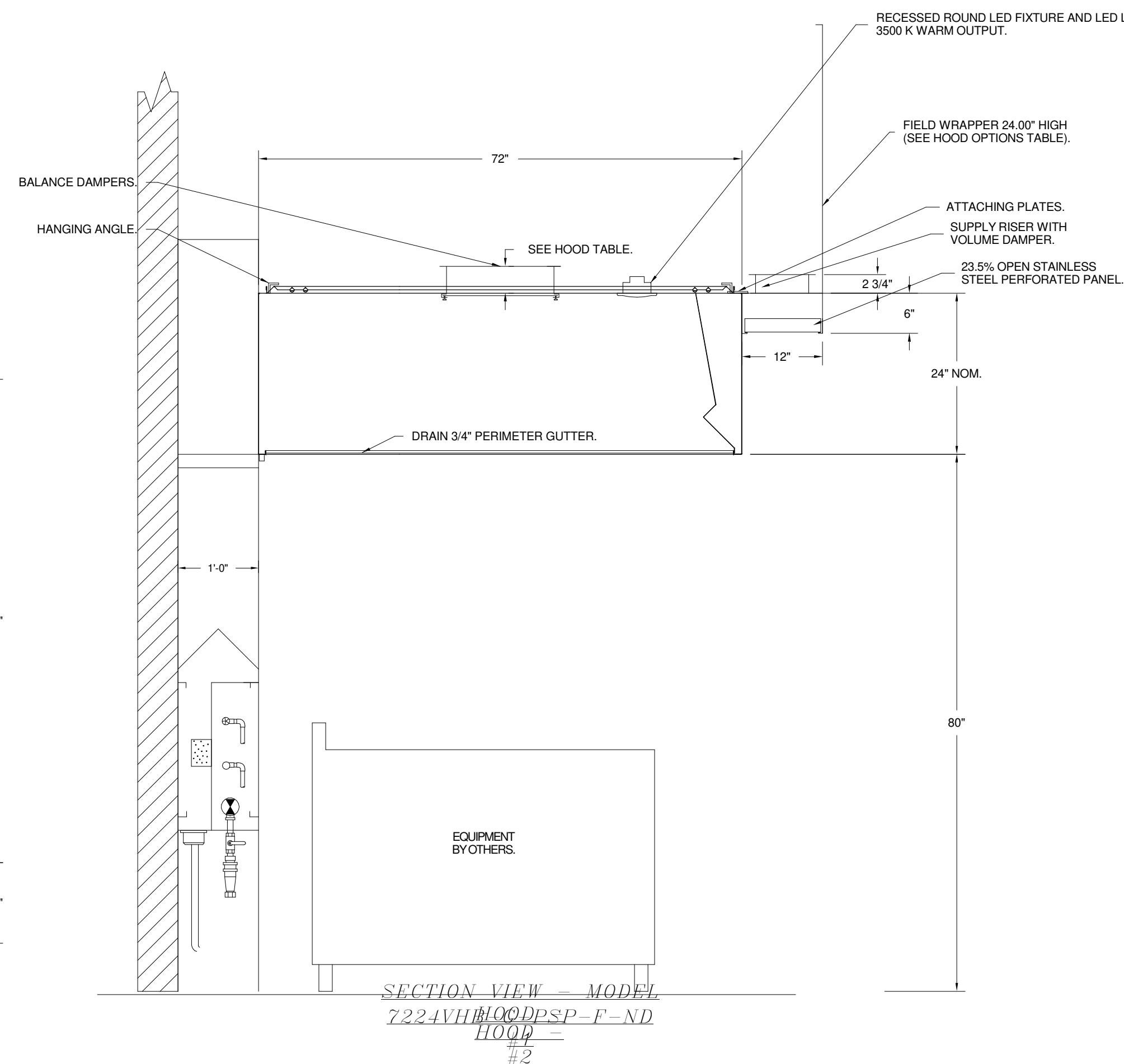
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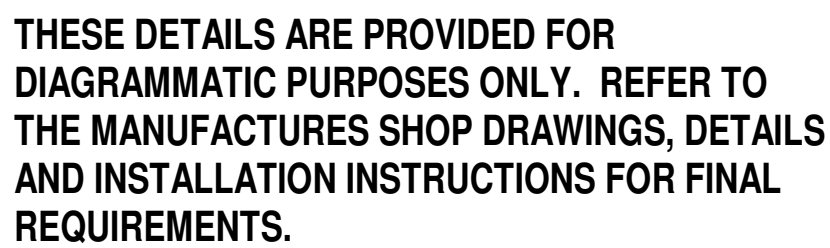
ROOM NO	ROOM INFORMATION TAG	FILTER(S)				LIGHT(S)				UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WEIGHT		
		TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	TYPE	SIZE			ELECTRICAL	SWITCHES
1							5	RECESSED ROUND	NO							NO	553 LBS
2							5	RECESSED ROUND	NO							NO	553 LBS
3		CAPTRATE SOLO FILTER	5	16"	16"	85% SEE FILTER SPEC	3	RECESSED ROUND	NO	LEFT	12"x60"x24"	TANK FIRE SUPPRESSION	4.0/4.0/4.0			YES	1064 LBS
4		CAPTRATE SOLO FILTER	6	16"	16"	85% SEE FILTER SPEC	3	RECESSED ROUND	NO							YES	560 LBS
5		CAPTRATE SOLO FILTER	6	16"	16"	85% SEE FILTER SPEC	3	RECESSED ROUND	NO							YES	560 LBS
6		CAPTRATE SOLO FILTER	5	16"	16"	85% SEE FILTER SPEC	3	RECESSED ROUND	NO	RIGHT	12"x72"x24"	TANK FIRE SUPPRESSION	4.0/4.0	DCV-2111	1 LIGHT 1 FAN	YES	934 LBS
7		CAPTRATE SOLO FILTER	8	20"	16"	85% SEE FILTER SPEC	4	RECESSED ROUND	NO							YES	696 LBS
8		CAPTRATE SOLO FILTER	8	20"	16"	85% SEE FILTER SPEC	3	RECESSED ROUND	NO	RIGHT	12"x72"x24"	TANK FIRE SUPPRESSION	4.0/4.0/4.0	DCV-2111	1 LIGHT 1 FAN	YES	1136 LBS
9		CAPTRATE SOLO FILTER	8	20"	16"	85% SEE FILTER SPEC	4	RECESSED ROUND	NO	LEFT	12"x60"x24"	TANK FIRE SUPPRESSION	4.0/4.0/4.0			YES	1064 LBS
10		CAPTRATE SOLO FILTER	8	20"	16"	85% SEE FILTER SPEC	4	RECESSED ROUND	NO							YES	707 LBS
11	Test Kitchen	CAPTRATE SOLO FILTER	5	16"	16"	85% SEE FILTER SPEC	2	RECESSED ROUND	NO	LEFT	12"x54"x24"	TANK FS	4.0	SC-210110FP	1 LIGHT 1 FAN	YES	579 LBS

SWITCHES	FIRE	HOOD
QUANTITY	SYSTEM	WANSING
	PIPING	WEIGHT
	NO	553 LBS
	NO	553 LBS
	YES	1064 LBS
	YES	550 LBS
	YES	590 LBS
1 LIGHT 1 FAN	YES	934 LBS
	YES	696 LBS
1 LIGHT 1 FAN	YES	1136 LBS
	YES	1064 LBS
	YES	797 LBS
1 LIGHT 1 FAN	YES	579 LBS

FIRE SYSTEM NO	TAG	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0x4.0x4.0	TBD	FIRE CABINET LEFT	LEFT, HOOD 3
2		TANK FS	4.0x4.0	TBD	FIRE CABINET RIGHT	RIGHT, HOOD 6
3		TANK FS	4.0x4.0x4.0	TBD	FIRE CABINET RIGHT	RIGHT, HOOD 8
4		TANK FS	4.0x4.0x4.0	TBD	FIRE CABINET LEFT	LEFT, HOOD 9
5		TANK FS	4.0	TBD	FIRE CABINET LEFT	LEFT, HOOD 11

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25 CENTRAL AV
ETERBORO, NJ. 0

NJ PROFESSIONAL ENGINEER
NO. GE 45801
DATE: 09/24/2021

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Lorenzo Foods
TETERBORO, NJ, 07608

North New Jersey
Mechanical

Summit, NJ, PHONE: (201) 308-6647 FAX: (919) 516-8752 EMAIL: reg138@captiveaire.com

*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF AIR DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT. RADIUS BACK W/ 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 IT 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 20" x 20".



WINTER TEMPERATURE = 15°F.
TEMP. RISE = 60°F.
BTUs CALCULATED OFF ACTUAL AIR DENSITY
OUTPUT
BTUs AT ALTITUDE OF 0.0 FT. = 161533.
INPUT BTUs AT ALTITUDE OF
0.0 FT. = 175579.
OUTPUT BTUs AT ALTITUDE OF 8 FT. =
161486.
INPUT BTUs AT ALTITUDE OF 8 FT. = 175529.



SUPPLY SIDE HEATER INFORMATION:

WINTER TEMPERATURE = 15°F.
TEMP. RISE = 60°F.
BTUs CALCULATED OFF ACTUAL AIR DENSITY.
OUTPUT
BTUs AT ALTITUDE OF 0.0 FT. = 333322.
INPUT BTUs AT ALTITUDE OF
0.0 FT. = 362307.
OUTPUT BTUs AT ALTITUDE OF 8 FT. =
333226.
INPUT BTUs AT ALTITUDE OF 8 FT. = 362202.



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North New Jersey
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Lorenzo Foods
TETERBORO, NJ, 07608

8/24/2021


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ZDK

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MASTER DRAWING

6



CYBUL CYBUL WILHELM
ARCHITECTS

1064 River Rd.
Edgewater, NJ 07020

KOESTNER ASSOCIATES
P.O. BOX 514
Hackensack, NJ 07602

ALLIED ENGINEERING
730 River Road
New Milford, NJ 07646

BD ENGINEERING, LLC.
30 Park Road, Suite 4
Tinton Falls, NJ 07724



lorenzo food group

Lorenzo Foods Teterboro

25 CENTRAL AVE
TETERBORO, NJ. 07608

DOB STAMP:

ISSUED FOR
REVIEW
PLANNING BOARD
BUILDING DEPT
BID
CONSTRUCTION

BRIAN D. TANNENHAUS

NJ PROFESSIONAL ENGINEER
NO. GE 45801
DATE: 09/24/2021

drawing name:

VAC CAPTIVE AIRE DETAILS

scale:

As indicated

release a

ing date: 09/24/2021

dreams be

by: ZW

Approved _____

KF

project n

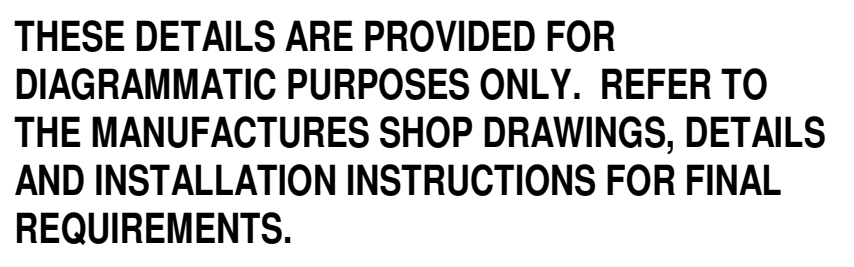
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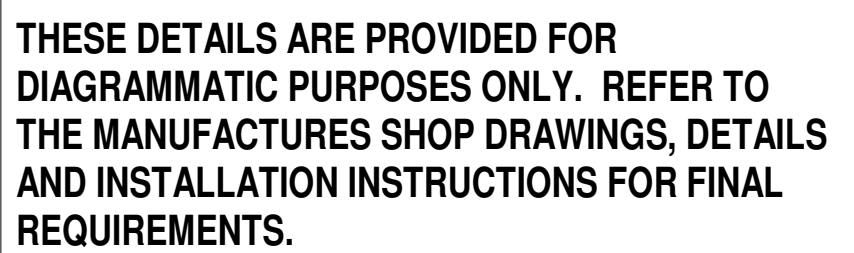
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BARCODE:

Total

 <p>CYBUL CYBUL WILHELM ARCHITECTS</p> <p>1064 River Rd. Edgewater, NJ 07020</p>							
KOESTNER ASSOCIATES P.O. BOX 514 Hackensack, NJ 07602							
ALLIED ENGINEERING 730 River Road New Milford, NJ 07646							
BD ENGINEERING, LLC. 30 Park Road, Suite 4 Tinton Falls, NJ 07724							
 <p>lorenzo foods group</p>							
Lorenzo Foods Teterboro 25 CENTRAL AVE TETERBORO, NJ 07608							
DOR STAMP:							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td rowspan="5" style="width: 15%; text-align: center; vertical-align: middle;"> ISSUED FOR REVIEW PLANNING BOARD BUILDING DEPT BID CONSTRUCTION </td> <td style="text-align: center;"> ISSUED FOR </td> </tr> <tr> <td style="text-align: center;"> REVIEW </td> </tr> <tr> <td style="text-align: center;"> PLANNING BOARD </td> </tr> <tr> <td style="text-align: center;"> BUILDING DEPT </td> </tr> <tr> <td style="text-align: center;"> BID CONSTRUCTION </td> </tr> </table> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p>BRIAN D. TANNENHAU</p> <p style="text-align: right;">NJ PROFESSIONAL ENGINEER NO. GE 45801 DATE: 09/24/2021</p> </div>		ISSUED FOR REVIEW PLANNING BOARD BUILDING DEPT BID CONSTRUCTION	ISSUED FOR	REVIEW	PLANNING BOARD	BUILDING DEPT	BID CONSTRUCTION
ISSUED FOR REVIEW PLANNING BOARD BUILDING DEPT BID CONSTRUCTION	ISSUED FOR						
	REVIEW						
	PLANNING BOARD						
	BUILDING DEPT						
	BID CONSTRUCTION						
drawing name: HVAC CAPTIVE AIRE DETAILS							
scale: _____ As indicated							
release date: _____							
drawing date: _____ 09/24/2021							
drawn by: _____ ZW							
approved by: _____ KF							
project no.: _____ 2102							
drawing no.: _____ M-506.00							
DOR BARCODE: _____							
Total							





CYBUL CYBUL WILHELM
ARCHITECTS

1064 River Rd.
 Edgewater, NJ 07020

ALLIED ENGINEERING
730 River Road
New Milford, NJ 07646



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REVIEW

PLANNING BOARD

BUILDING DEPT

BID

CONSTRUCTION

BRIAN D. TANNENHAUS

SOCIETY

1000

1000

NO. GE 45801
DATE: 09/24/2021

מדינת ישראל

AC CAPTIVE AIR DETAIL S

$$12'' = 1'-0''$$

by:

ed by: VE

2102

11 000.00

Total	
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★	TWO (2) OPTIPURE QT11+CR WATER FILTERS WITH WINDOW.

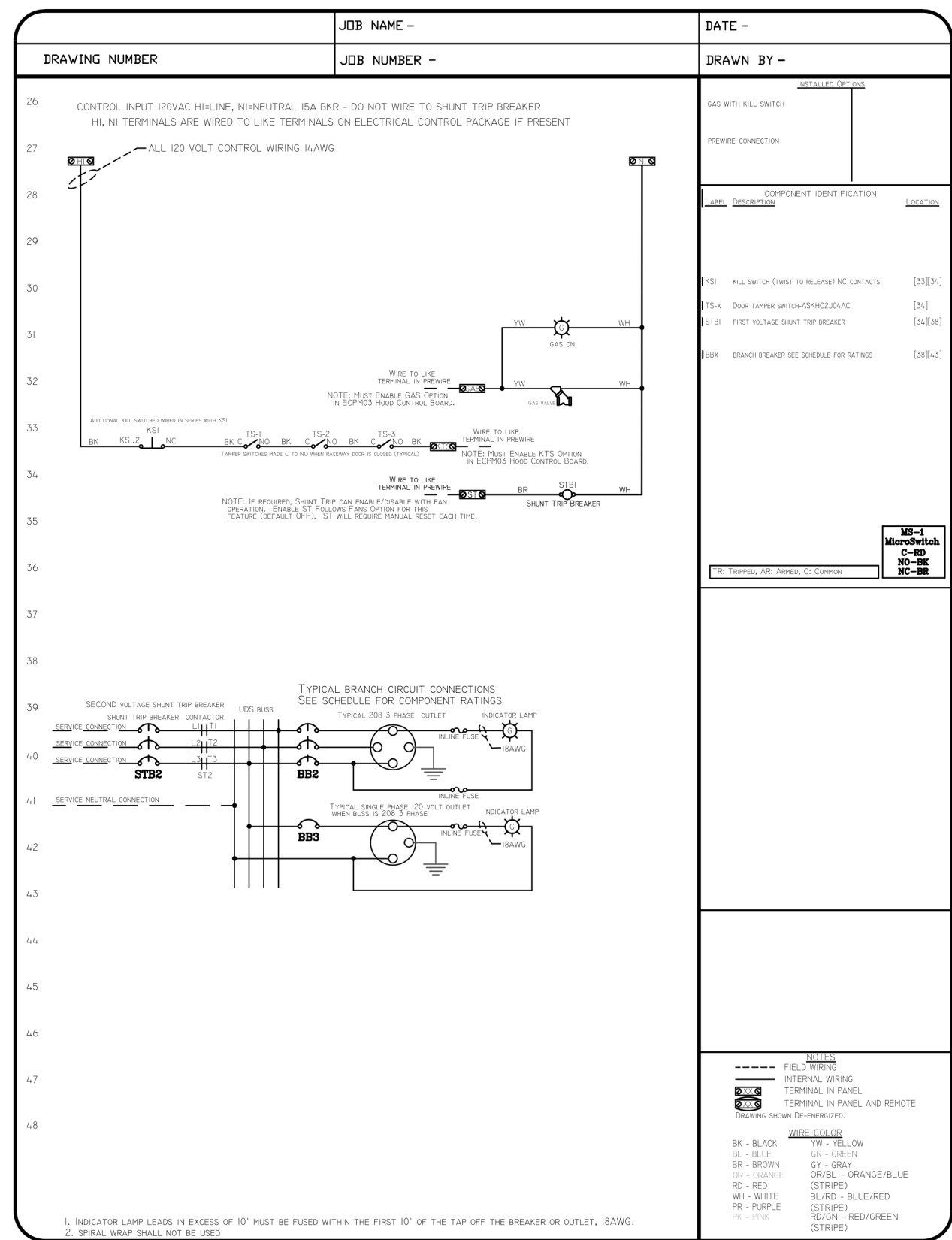
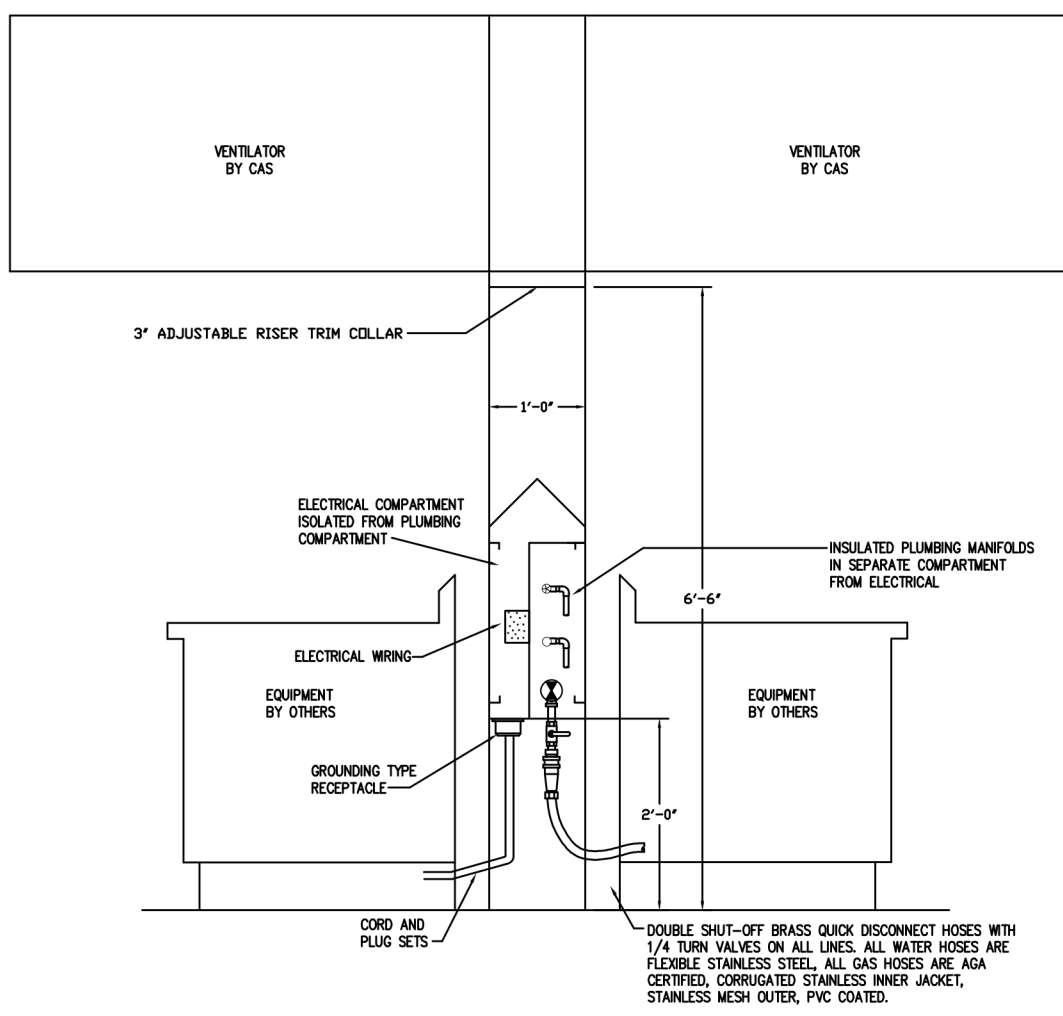
PRIOR TO SCHEDULING UDS FOR PRODUCTION
PLEASE PROVIDE APPROVED SUBMITTAL CUTSHEETS
ON FINAL KITCHEN EQUIPMENT ASSOCIATED WITH
THE UDS (NEW & USED) SO THAT CONNECTION
SIZES, TYPES AND LOCATIONS CAN BE VERIFIED

ANY CHANGES TO SUBMITTAL DRAWING
MAY AFFECT PRICE AND PRODUCTION TIME
PLEASE FORWARD CHANGES ASAP

	COLD WATER
	HOT WATER
	FILTERED WATER
	NATURAL GAS
	PROPANE
	120 VAC 1 PHASE
	208 VAC 1 PHASE
	208 VAC 3 PHASE
	480 VAC 3 PHASE
	STEAM SUPPLY
	STEAM CONDENSATE RETURN

- ELECTRICAL SERVICE PROVIDED FOR SCHEDULE FOR DETAILS PROVIDED
- HORN/PISTON DEVIATE ELECTRICAL CIRCUIT INTO THE TERMINALS "SAL" IN THE ELECTRICAL LINE CENTER WITH INDIVIDUAL CIRCUIT BREAKERS
- HORN/PISTON ELECTRICAL CIRCUIT FROM HORN CENTER, PACTOR TERMINALS "SAL" ST FOR LINE TERMINALS "SAL" ST & "ST" FOR USE SHUT DOWN IN A FIRE CONDITION OF THE HORN CENTER
- GAS SERVICE PROVIDED FOR SCHEDULE FOR SERVICE SIZE AND STYLE PROVIDED BY CONTRACTOR
- C.B. WATER SERVICE FROM ARRIVE, SEE SCHEDULE FOR SERVICE SIZE (PROVIDED BY CONTRACTOR)
- HOT WATER SERVICE FROM ARRIVE, SEE SCHEDULE FOR SERVICE SIZE (PROVIDED BY CONTRACTOR)
- STATUS INDICATOR LIGHTS
- EMERGENCY KILL SWITCH
- 800 RECEPTACLE W/ REAR & WEATHERPROOF COVER
- ELECTRICAL, LINE CENTER WITH INDIVIDUAL CIRCUIT BREAKERS
- ELECTRICAL W/TO APPLIANCE
- ELECTRICAL, CONNECTION W/WEATHERPROOF COVER AS SPECIFIED ON THE EQUIPMENT DATA SHEET FOR EACH EQUIPMENT
- PLUMBING CONNECTION AS SPECIFIED ON THE EQUIPMENT SCHEDULE, SEE THIS SHEET.
- HORN, SHUT OFF VALVE
- HORN, SHUT OFF VALVE
- HORN, SHUT OFF VALVE
- REMOVABLE ACCESS DOORS

CON.NR.		ITEM		EQUIPMENT		MANUFACTURER		MODEL #	KW	AMPS	HP	VOLT	PH	CIRCUIT BREAKER		RECEPTACLE	GAS		WATER		STEAM		CONNECTION		NOTES	
1E	135			PRESSURE FRWHR	HEMFI FENFI	PFG-691	1.2	10.0	-	120	1												SUPPLIED		GH-BREAKER	
1E	135			PRESSURE FRWHR	HEMFI FENFI	PFG-691	1.2	10.0	-	120	1							3/4"	100					QUICK DISCONNECT	5'	
2E	135			PRESSURE FRWHR	HEMFI FENFI	PFG-691	1.2	10.0	-	120	1							3/4"	100					SUPPLIED		GH-BREAKER
2E	135			PRESSURE FRWHR	HEMFI FENFI	PFG-691	1.2	10.0	-	120	1							3/4"	100					QUICK DISCONNECT	5'	
1E	170			TILT SKILLET	VULCAN	VS40	1.1	9.0	-	120	1	20	1					3/4"						SUPPLIED		GH-BREAKER
1E	170			TILT SKILLET	VULCAN	VS40	-	-	-	-	-	-	-					3/4"	120					QUICK DISCONNECT	5'	
3E	170			TILT SKILLET	VULCAN	VS40	-	-	-	-	-	-	-						1/2"					QUICK DISCONNECT	5'	
3E	170			TILT SKILLET	VULCAN	VS40	-	-	-	-	-	-	-						1/2"					QUICK DISCONNECT	5'	
4E	201			TILT SKILLET	ELECTROCLUX	SB7028	1.2	10.0	-	120	1	20	1					3/4"	100					SUPPLIED		GH-BREAKER
4E	201			TILT SKILLET	ELECTROCLUX	SB7028	-	-	-	-	-	-	-											QUICK DISCONNECT	5'	
4E	201			TILT SKILLET	ELECTROCLUX	SB7028	-	-	-	-	-	-	-											QUICK DISCONNECT	5'	
4E	201			TILT SKILLET	ELECTROCLUX	SB7028	-	-	-	-	-	-	-											QUICK DISCONNECT	5'	
5E	169			STEEL FOOT RANGE	WOLF	HW37F	-	-	-	-	-	-	-				3/4"	220						QUICK DISCONNECT	5'	
6E	100			TEN-REY RANGE	VULCAN	VS55-300	0.5	4.0	-	120	1	20	1										SUPPLIED		GH-BREAKER	
6E	100			TEN-REY RANGE	VULCAN	VS55-300	-	-	-	-	-	-	-					1"	358					QUICK DISCONNECT	5'	
7E	215			COMBI OVEN	ALTO-SHAAM	CTP20-205	2.0	9.6	-	208	3	15	3											DIRECT	8'	CONDUIT & WIRE
7E	215			COMBI OVEN	ALTO-SHAAM	CTP20-205	-	-	-	-	-	-	-					3/4"	266					QUICK DISCONNECT	5'	
7E	215			COMBI OVEN	ALTO-SHAAM	CTP20-205	-	-	-	-	-	-	-											QUICK DISCONNECT	5'	
7E	215			COMBI OVEN	ALTO-SHAAM	CTP20-205	-	-	-	-	-	-	-											QUICK DISCONNECT	5'	FILTERED
8E	215			COMBI OVEN	ALTO-SHAAM																					



DESCRIPTION		DATE:
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ALLIED ENGINEERING
730 River Road
New Milford, NJ 07646

BD ENGINEERING, LLC.
30 Park Road, Suite 4
Tinton Falls, NJ 07724

Lorenzo Foods Teterboro

25 CENTRAL AVE
TETERBORO, NJ, 07608

Page 10 of 10

REVIEW ☐

PLANNING BOARD ☐

BUILDING DEPT ☒

BRIAN D. TANNENHA

[illegible]

NJ PROFESSIONAL ENGINE
NO. GE 45801
DATE: 09/24/2021

HVAC CAPTIVE AIRE DETAILS

scale:	12" = 1'-0"
revision date:	

drawn by: 71

project no.: 210

M-509.00

[illegible]

IMPORTANT SPECIAL UDS PARTS/NOTES	

UDS CONSTRUCTION TO BE 16 GA., TYPE 304 STAINLESS STEEL

UTILITY DISTRIBUTION SYSTEM MODEL UDI IS LISTED UNDER ETL FILE NUMBER 5054803 CONFORMS TO UL STD 891 CERTIFIED TO CAN/CSA C22.2 No. 31-M89

PRIOR TO SCHEDULING UDS FOR PRODUCTION PLEASE PROVIDE APPROVED SUBMITTAL CUTSHEETS ON FINAL KITCHEN EQUIPMENT ASSOCIATED WITH THE UDS (NEW & USED) SO THAT CONNECTION SIZES, TYPES AND LOCATIONS CAN BE VERIFIED

ANY CHANGES TO SUBMITTAL DRAWING MAY AFFECT PRICE AND PRODUCTION TIME PLEASE FORWARD CHANGES ASAP

-----NOTE-----
NEC REQUIRES 36"
OF FIELD CLEARANCE
IN FRONT OF CIRCUIT
BREAKERS FOR ACCESS

SYMBOL SCHEDULE	
○	NO WATER
●	FILTERED WATER
⊗	NOTING GSE
⊕	PHASE
①	100 VAC 1 PHASE
②	100 VAC 3 PHASE
③	480 VAC 3 PHASE
⊙	STEAM SUPPLY
⊖	TOTAL CONDENSATE RETURN

STANDARD FLAG NOTES

→ ELECTRICAL SERVICE FROM ABOVE; SEE SCHEDULE FOR DETAILS PROVIDED BY ELECTRICAL CONTRACTOR

→ 120V/208V/240V DEREGISTERED ELECTRICAL CIRCUIT INTO UDS TERMINALS "H/L NO" FOR FIELD/PLANT CONTROL; PROVIDED BY ELECTRICAL CONTRACTOR; SEE SCHEMATIC BELOW

→ 3-WIRE ELECTRICAL CIRCUIT FROM HERS CONTROL PACKAGE TERMINALS "GAS, ST & KTS" TO UDS LINE TERMINALS "GAS, ST & KTS" FOR UDS SHUT DOWN IN A FIRE CONDITION; PROVIDED BY ELECTRICAL CONTRACTOR; SEE SCHEMATIC BELOW

→ GAS SERVICE FROM ABOVE; SEE SCHEDULE FOR SERVICE SIZE AND STYLE PROVIDED BY PLUMBING CONTRACTOR

→ SERVICE MAIN BREAKER W/SHUNT TRIP AND RESET HANDLE; SEE SCHEDULE FOR DETAILS

→ STATUS INDICATOR LIGHTS

→ EMERGENCY KILL SWITCH

→ DO RECEPTACLE W/ BREAKER & WEATHERPROOF COVER

→ ELECTRICAL LOAD CENTER WITH INDIVIDUAL CIRCUIT BREAKERS

→ ELECTRICAL WIRING TO APPLIANCES

→ ELECTRICAL CONNECTION W/WEATHERPROOF COVER AS SPECIFIED ON THE EQUIPMENT SCHEDULE; SEE THIS SHEET

→ PLUMBING CONNECTION AS SPECIFIED ON THE EQUIPMENT SCHEDULE; SEE THIS SHEET

→ MANUAL SHUT OFF VALVE

→ 100V ELECTRICAL GAS VALVE

→ REMOVABLE ACCESS DOORS

UTILITY DISTRIBUTION SYSTEM EQUIPMENT SCHEDULE																					
EQUIPMENT		ELECTRICAL				CIRCUIT BREAKER		RECEPTACLE	GAS	WATER	STEAM		CONNECTION		NOTES						
CONTR.#	ITEM	DESCRIPTION	MANUFACTURER	MODEL	KW	AMPS	HP	VOLT	PH	AMPS	POLES	PART #	SIZE	MMH	HOT/COLD	SUPPLY	CON. RETURN	LB/HR	TYPE	LENGTH	
3E	125	DBL CONV. OVEN	JULICAN	VC35SD	0.9	7.7	-	120	1	20	1	DR20	-	-	-	-	-	-	SUPPLIED	-	-
3E1	125	DBL CONV. OVEN	JULICAN	VC35SD	0.9	7.7	-	120	1	20	1	DR20	-	-	-	-	-	-	SUPPLIED	-	GF BREAKER
1G	125	DBL CONV. OVEN	JULICAN	VC35SD	-	-	-	-	-	-	-	-	3/4"	50	-	-	-	-	QUICK DISCONNECT	5'	-
3G1	125	DBL CONV. OVEN	JULICAN	VC35SD	-	-	-	-	-	-	-	-	3/4"	50	-	-	-	-	QUICK DISCONNECT	5'	-
3E	125	DBL CONV. OVEN	JULICAN	VC35SD	0.9	7.7	-	120	1	20	1	DR20	-	-	-	-	-	-	SUPPLIED	-	GF BREAKER
2G1	125	DBL CONV. OVEN	JULICAN	VC35SD	0.9	7.7	-	120	1	20	1	DR20	-	-	-	-	-	-	SUPPLIED	-	GF BREAKER
3E	125	DBL CONV. OVEN	JULICAN	VC35SD	-	-	-	-	-	-	-	-	3/4"	50	-	-	-	-	QUICK DISCONNECT	5'	-
2G1	125	DBL CONV. OVEN	JULICAN	VC35SD	-	-	-	-	-	-	-	-	3/4"	50	-	-	-	-	QUICK DISCONNECT	5'	-
3E	125	DBL CONV. OVEN	JULICAN	VC35SD	0.9	7.7	-	120	1	20	1	DR20	-	-	-	-	-	-	SUPPLIED	-	GF BREAKER
3E1	125	DBL CONV. OVEN	JULICAN	VC35SD	0.9	7.7	-	120	1	20	1	DR20	-	-	-	-	-	-	SUPPLIED	-	GF BREAKER
3G	125	DBL CONV. OVEN	JULICAN	VC35SD	-	-	-	-	-	-	-	-	3/4"	50	-	-	-	-	QUICK DISCONNECT	5'	-
3G1	125	DBL CONV. OVEN	JULICAN	VC35SD	-	-	-	-	-	-	-	-	3/4"	50	-	-	-	-	QUICK DISCONNECT	5'	-
4E	125	DBL CONV. OVEN	JULICAN	VC35SD	0.9	7.7	-	120	1	20	1	DR20	-	-	-	-	-	-	SUPPLIED	-	GF BREAKER
4E1	125	DBL CONV. OVEN	JULICAN	VC35SD	0.9	7.7	-	120	1	20	1	DR20	-	-	-	-	-	-	SUPPLIED	-	GF BREAKER
4G	125	DBL CONV. OVEN	JULICAN	VC35SD	-	-	-	-	-	-	-	-	3/4"	50	-	-	-	-	QUICK DISCONNECT	5'	-
4G1	125	DBL CONV. OVEN	JULICAN	VC35SD	-	-	-	-	-	-	-	-	3/4"	50	-	-	-	-	QUICK DISCONNECT	5'	-
5G	219	GRIDDLE	MCCORMICK	ACB72	-	-	-	-	-	-	-	-	3/4"	135	-	-	-	-	QUICK DISCONNECT	5'	-
6G	120	CHAR-BROILER	WOLF	ACB72	-	-	-	-	-	-	-	-	3/4"	221	-	-	-	-	QUICK DISCONNECT	5'	-
7G	120	CHAR-BROILER	WOLF	ACB72	-	-	-	-	-	-	-	-	3/4"	221	-	-	-	-	QUICK DISCONNECT	5'	-
8G	120	CHAR-BROILER	WOLF	ACB72	-	-	-	-	-	-	-	-	3/4"	221	-	-	-	-	QUICK DISCONNECT	5'	-
DI1	-	DUPLEX OUTLET	-	-	-	-	-	120	1	20	1	DR20	-	-	-	-	-	-	FACTORY	-	GF BREAKER
DI2	-	DUPLEX OUTLET	-	-	-	-	-	120	1	20	1	DR20	-	-	-	-	-	-	FACTORY	-	GF BREAKER
TOTAL CONNECTED LOAD: 27.4 KW, 20.5 AMP, 0.0 KW, 0.0 AMP, 1198 MBH, H.W., STEAM SUPPLY																					
TOTAL AVAILABLE LOAD CAPACITY: 27.4 KW, 20.5 AMP, 0.0 KW, 0.0 AMP, 1152 MBH, H.W., STEAM SUPPLY																					
SYSTEM CAPACITY: 28.8 KW, 80.0 AMP, 0.0 KW, 0.0 AMP, 2350 MBH, C.W., COND. RETURN																					
SERVICE SIZE: 120/208 V/ 3 PH/ 100 AMP V/ PH/ 4 AMP 2'S PS LOOPED																					

KOESTNER ASSOCIATES
P.O. BOX 514
Hackensack, NJ 07602

BD ENGINEERING, LLC.
30 Park Road, Suite 4
Tinton Falls, NJ 07724

lorenzo *food*
group

Lorenzo Foods Teterboro
25 CENTRAL AVE
TETERBORO, NJ, 07608

REVIEW ☐
 PLANNING BOARD ☐
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 CONSTRUCTION ☐

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drawing name:

HVAC CAPTIVE AIRE DETAILS

release date:	
drawing date:	09/24/202
drawn by:	

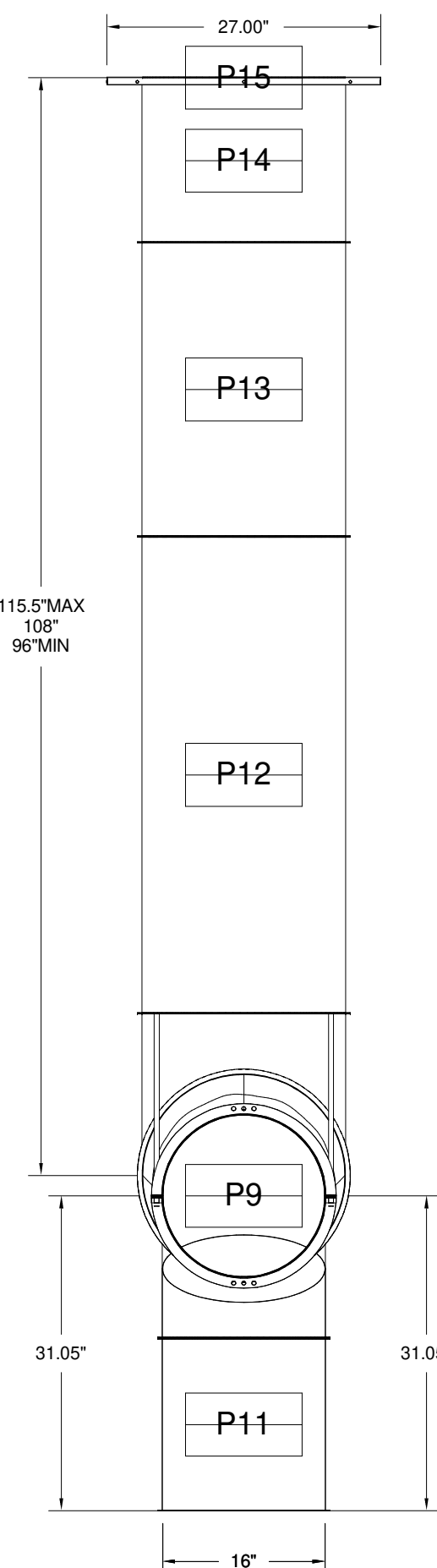
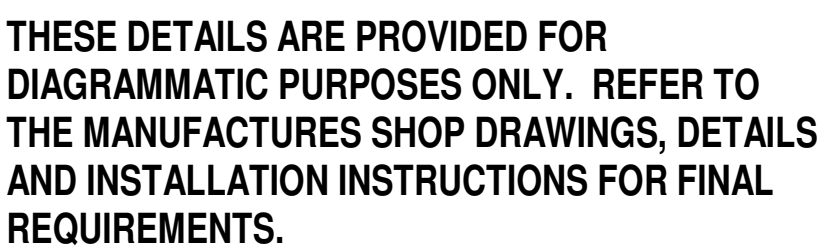
drawing no.:
M-511.00

	Total
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SINGLE WALL FACTORY BUILT DUCTWORK

- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE 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.

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

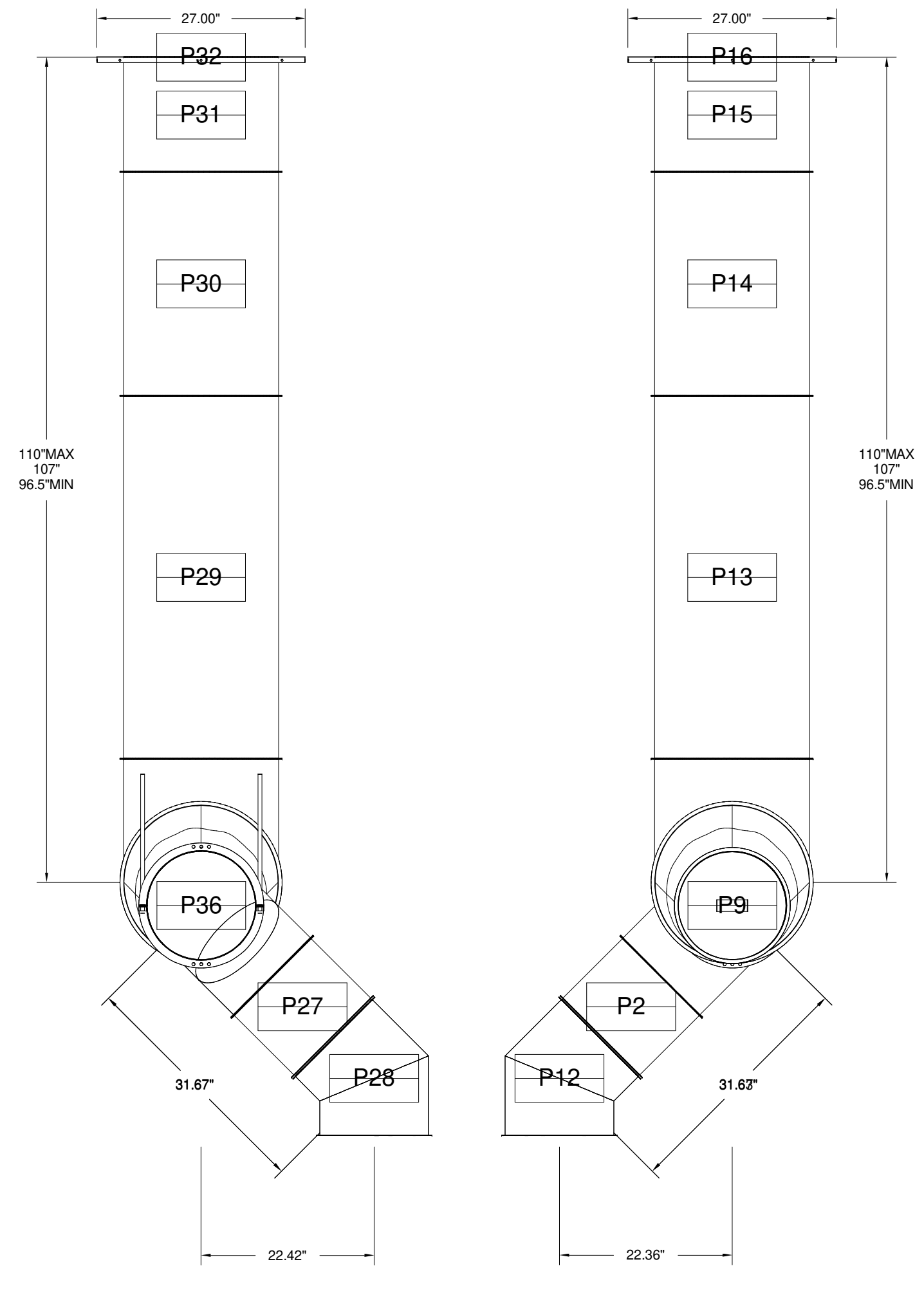
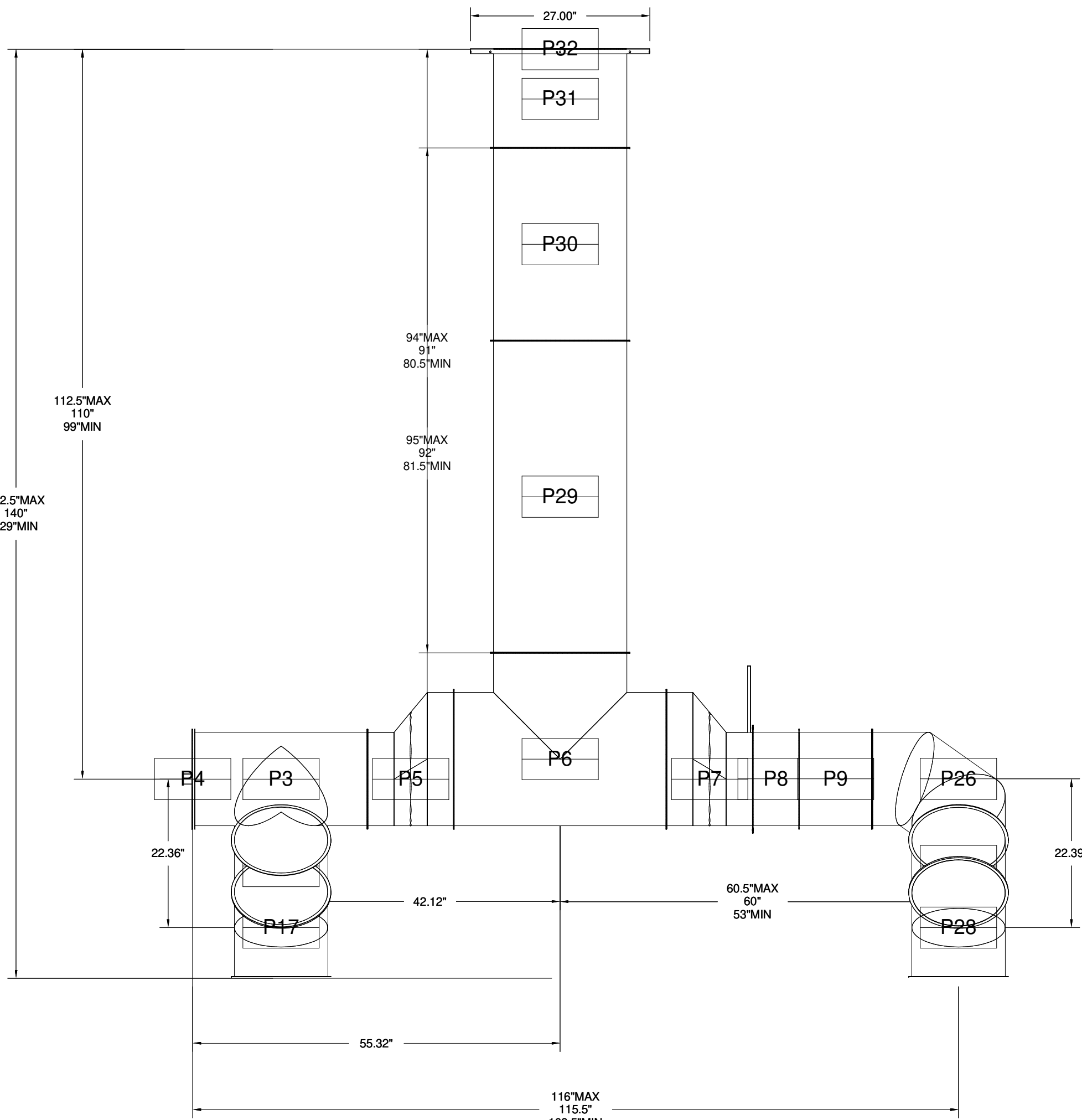
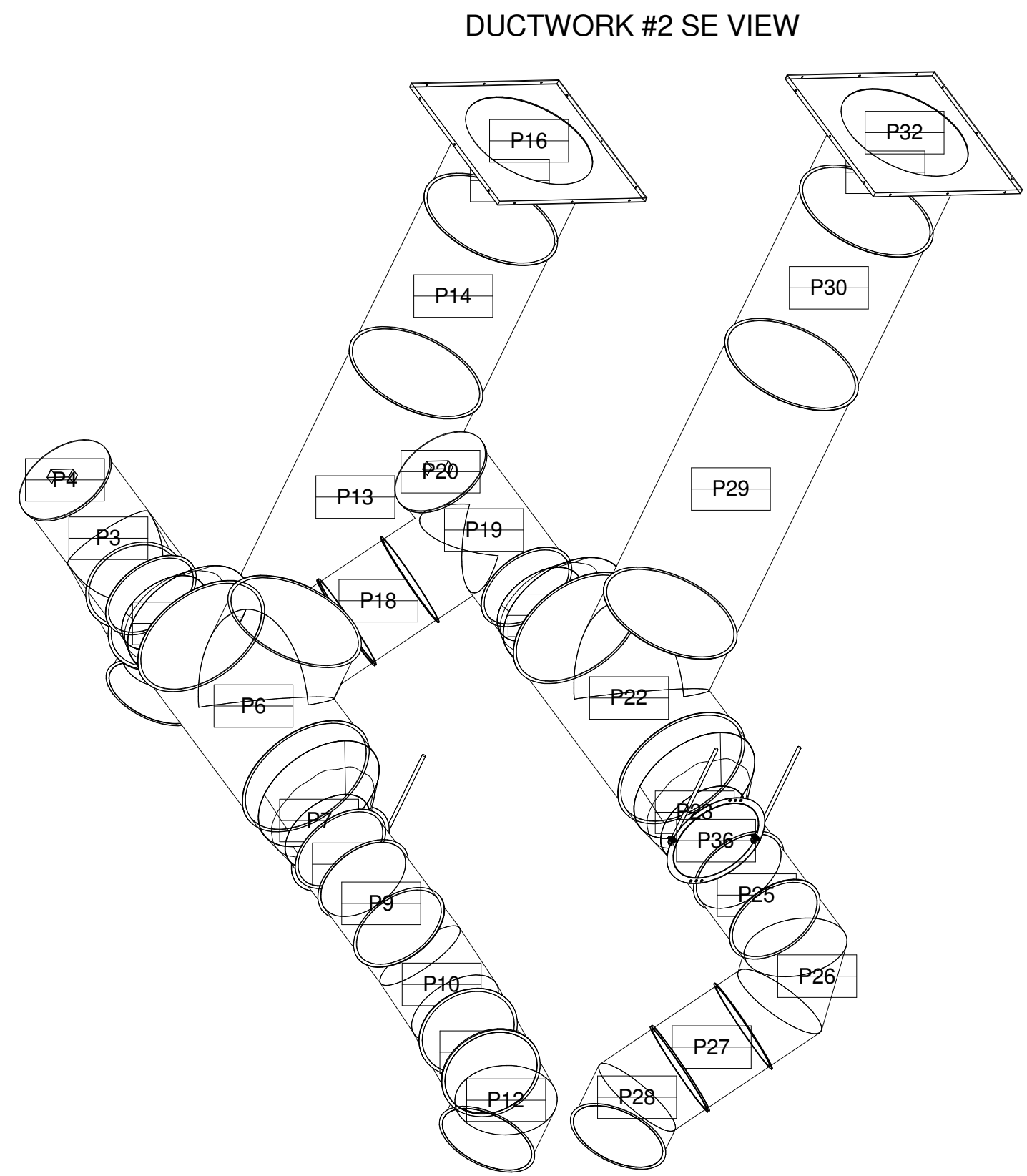
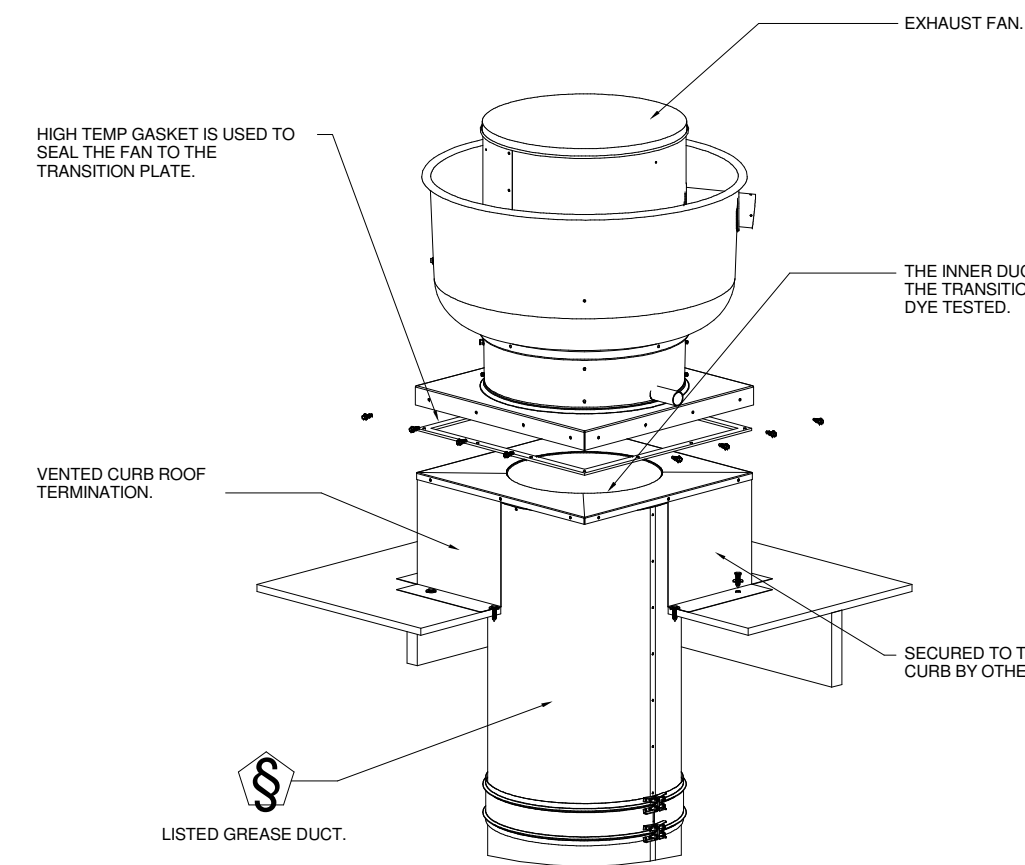
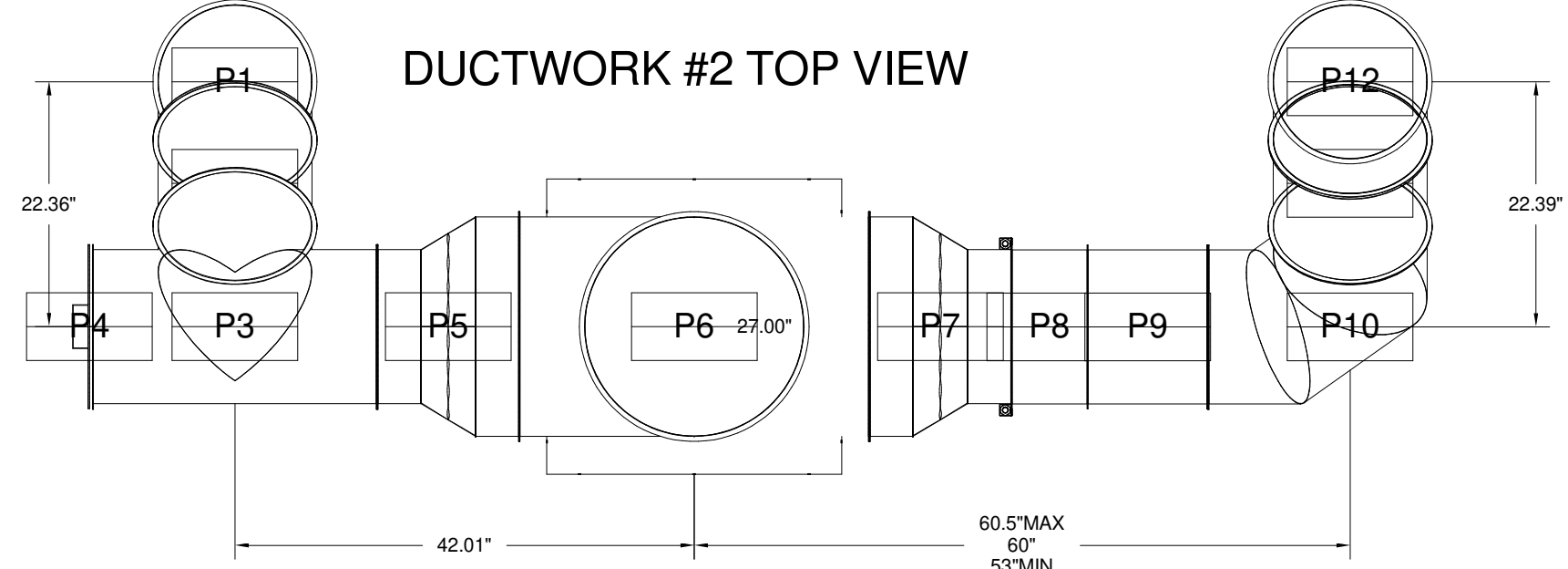
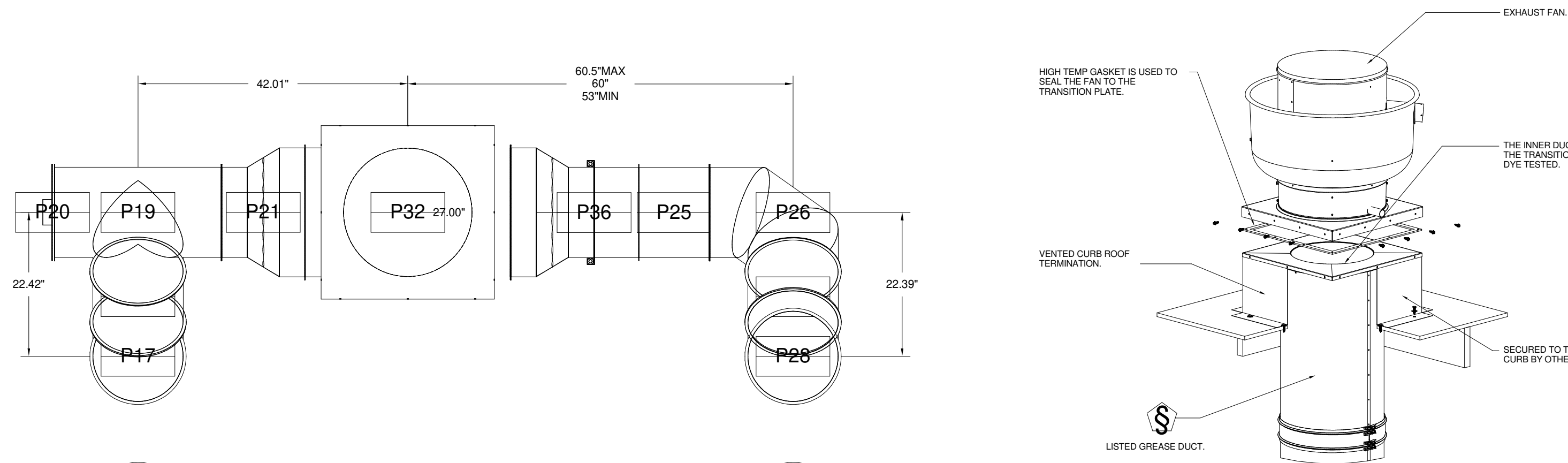


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EC ENGINEERING

D/CUTWORK 22 PARTS - JOB#4967555									
TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY DESCRIPTION
P1	DW1445ASY	1575				0.036	7.52	1473.32	1 SINGLE WALL DUCT 45 DEGREE ELBOW, 14" DUCT, ASSEMBLY.
P2	DW1411LT	1575				0.034	5.46	1473.32	1 SINGLE WALL DUCT 14" DIAMETER, 11" LONG FLANGE AT BOTH ENDS. STAINLESS STEEL.
P3	DW14TEASY	1575			1	0.1256	15.95	1473.32	1 SINGLE WALL DUCT TEE, 14" DUCT, ASSEMBLY.
ASSEMBLED WP19-O.S	DW1415AGKT					3.72			1 DUCT ACCESS DOOR WITH HANDLE & GREASE DAM FOR 14" DUCT USE 15" DOOR. STAINLESS STEEL.
P5	DW1424DPEC	1575				0.075	8.99	1473.32	1 SINGLE WALL DUCT ADAPTER, 14" DUCT TO 20" DUCT DA. ECCENTRIC ASSEMBLY.
P6	DW02TEASY	3175				0.2327	26.18	1453.31	1 SINGLE WALL DUCT TEE, 20" DUCT, ASSEMBLY.
P7	DW1407LT	1600				0.0077	8.99	1486.71	1 SINGLE WALL DUCT ADAPTER, 14" DUCT TO 10" DUCT 20" DACT DA. ECCENTRIC ASSEMBLY.
P8	DW1415AGKT	1600				0.0023	3.63	1486.71	1 SINGLE WALL DUCT 14" DIAMETER, 17" LONG FLANGE AT BOTH ENDS. STAINLESS STEEL.
P9	DW1445ASY	1575				0.036	7.52	1473.32	1 SINGLE WALL DUCT 45 DEGREE ELBOW, 14" DUCT, ASSEMBLY.
P10	DW1411LT	1575				0.034	5.46	1473.32	1 SINGLE WALL DUCT 14" DIAMETER, 11" LONG FLANGE AT BOTH ENDS. STAINLESS STEEL.
P11	DW1445ASY	1600				0.0368	7.22	1486.71	1 SINGLE WALL DUCT 45 DEGREE ELBOW, 14" DUCT, ASSEMBLY.
P12	DW024TLT	3175				0.0078	31.08	1453.31	1 SINGLE WALL DUCT 20" DIAMETER, 47" LONG FLANGE AT BOTH ENDS. STAINLESS STEEL.
P13	DW028BLT	3175				0.0088	19.42	1453.31	1 SINGLE WALL DUCT 20" DIAMETER, 20" LONG FLANGE AT BOTH ENDS. STAINLESS STEEL.
P15	DW0240AJDKT	3175				0.0024	20.76	1453.31	1 SINGLE WALL DUCT ADJUSTABLE 20" DIAMETER, 23" LONG FLANGE AT ONE END WITH A 20" ADJUSTABLE COLLAR. STAINLESS STEEL.
ASSEMBLED WP18	DW0260TPBEX	3175				9.00	1453.31		1 DUCT CURB TRANSITION 3/4" DOWN TURN, 28 1/2" CURB TO 20" DUCT, 16 GA ALUMINIZED, USED ON NCA/IFA/ NCA/IFA+ NCA/IFA. NCA/IFA. TRANSITION PLATE OD IS 27.00" DESIGNED FOR USE WITH EXHAUST FAN. NON-STD PART#
SYSTEM AT P16	DW1445ASY					1.2343	0.00		
P17	DW1445ASY	1575				0.036	7.52	1473.32	1 SINGLE WALL DUCT 45 DEGREE ELBOW, 14" DUCT, ASSEMBLY.
P18	DW1411LT	1575				0.034	5.46	1473.32	1 SINGLE WALL DUCT 14" DIAMETER, 11" LONG FLANGE AT BOTH ENDS. STAINLESS STEEL.
ASSEMBLED WP20	DW14TEASY	1575				0.1256	15.95	1473.32	1 SINGLE WALL DUCT TEE, 14" DUCT, ASSEMBLY.
P20	DW1415AGKT					3.72			1 DUCT ACCESS DOOR WITH HANDLE & GREASE DAM FOR 14" DUCT USE 15" DOOR. STAINLESS STEEL.
ASSEMBLED WP19-O.S	DW1424DPEC	1575				0.075	8.99	1473.32	1 SINGLE WALL DUCT ADAPTER, 14" DUCT TO 20" DUCT DA. ECCENTRIC ASSEMBLY.
P21	DW02TEASY	3175				0.2327	26.18	1453.31	1 SINGLE WALL DUCT TEE, 20" DUCT, ASSEMBLY.
P22	DW1407LT	1600				0.0077	8.99	1486.71	1 SINGLE WALL DUCT ADAPTER, 14" DUCT DA TO 20" DUCT DA. ECCENTRIC ASSEMBLY.
P23	DW1415AGKT	1600				0.0023	3.63	1486.71	1 SINGLE WALL DUCT 14" DIAMETER, 17" LONG FLANGE AT BOTH ENDS. STAINLESS STEEL.
P25	DW1415AGKT	1600				0.0023	3.63	1486.71	1 SINGLE WALL DUCT ADJUSTABLE 14" DIAMETER, 17.5" LONG FLANGE AT ONE END WITH A 14" ADJUSTABLE COLLAR. STAINLESS STEEL.
P26	DW1445ASY	1575				0.0368	10.57	1486.71	1 SINGLE WALL DUCT 45 DEGREE ELBOW, 14" DUCT, ASSEMBLY.
P27	DW1411LT	1600				0.004	5.46	1486.71	1 SINGLE WALL DUCT 14" DIAMETER, 11" LONG FLANGE AT BOTH ENDS. STAINLESS STEEL.
P28	DW1445ASY	1600				0.0368	7.22	1486.71	1 SINGLE WALL DUCT 45 DEGREE ELBOW, 14" DUCT, ASSEMBLY.
P29	DW024TLT	3175				0.0078	31.08	1453.31	1 SINGLE WALL DUCT 20" DIAMETER, 47" LONG FLANGE AT BOTH ENDS. STAINLESS STEEL.
P30	DW028BLT	3175				0.0088	19.42	1453.31	1 SINGLE WALL DUCT 20" DIAMETER, 20" LONG FLANGE AT BOTH ENDS. STAINLESS STEEL.
P31	DW0240AJDKT	3175				0.0024	20.76	1453.31	1 SINGLE WALL DUCT ADJUSTABLE 20" DIAMETER, 23" LONG FLANGE AT ONE END WITH A 20" ADJUSTABLE COLLAR. STAINLESS STEEL.
ASSEMBLED WP32	DW0260TPBEX	3175				9.00	1453.31		1 DUCT CURB TRANSITION 3/4" DOWN TURN, 28 1/2" CURB TO 20" DUCT, 16 GA ALUMINIZED, USED ON NCA/IFA/ NCA/IFA+ NCA/IFA. NCA/IFA. TRANSITION PLATE OD IS 27.00" DESIGNED FOR USE WITH EXHAUST FAN. NON-STD PART#</



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CAPTIVE North new jersey

Lorenzo Foods
TETERBORO, NJ, 07608

8/24/2021

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1064 River Rd.
Edgewater, NJ 07020

KOESTNER ASSOCIATES
P.O. BOX 514
Hackensack, NJ 07602

ALLIED ENGINEERING
30 River Road
New Milford, NJ 07646

3D ENGINEERING, LLC
10 Park Road, Suite 4
Tinton Falls, NJ 07724

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NJ PROFESSIONAL ENGINEER
 NO. GE 45801
 DATE: 09/24/2021

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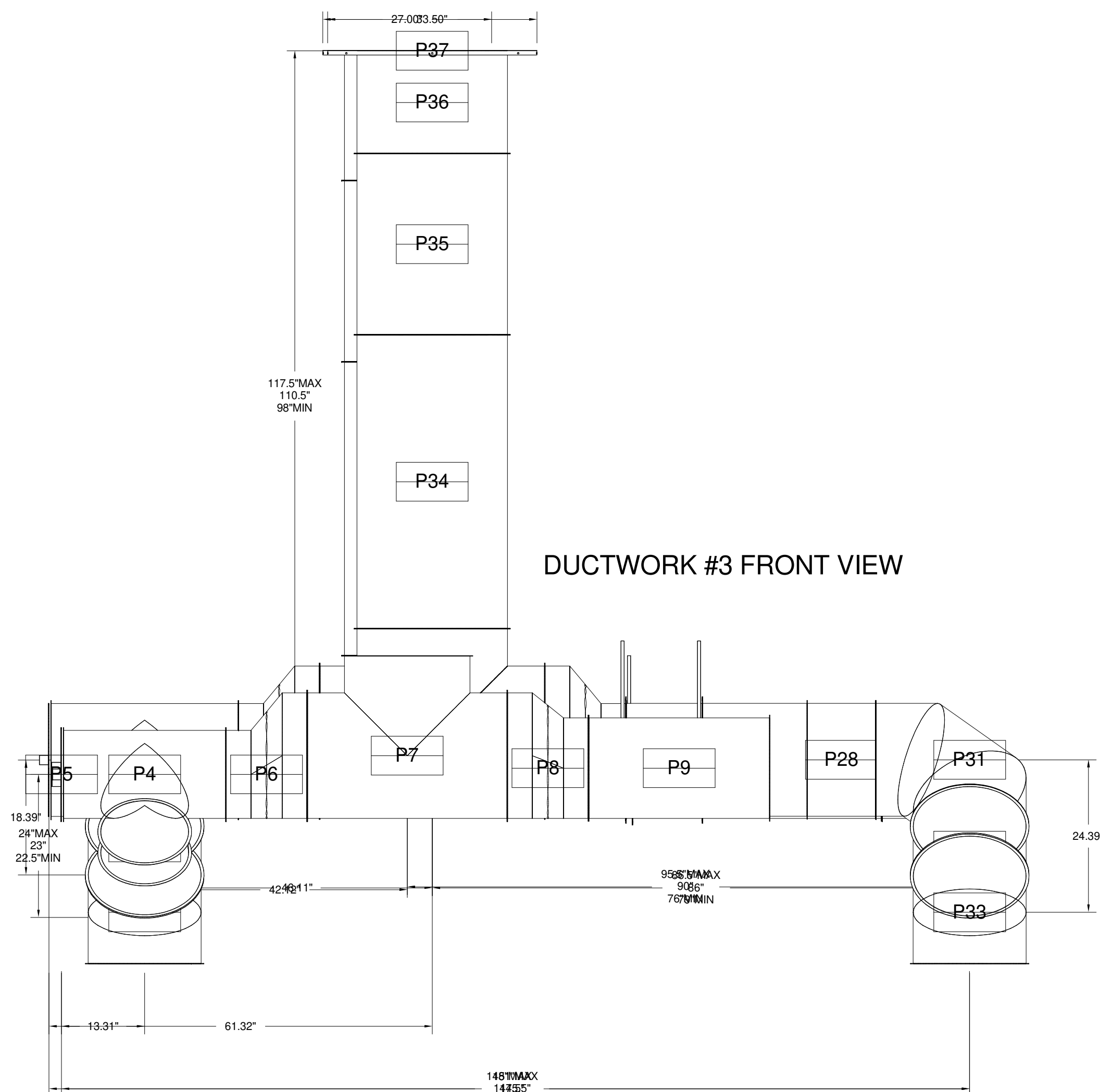
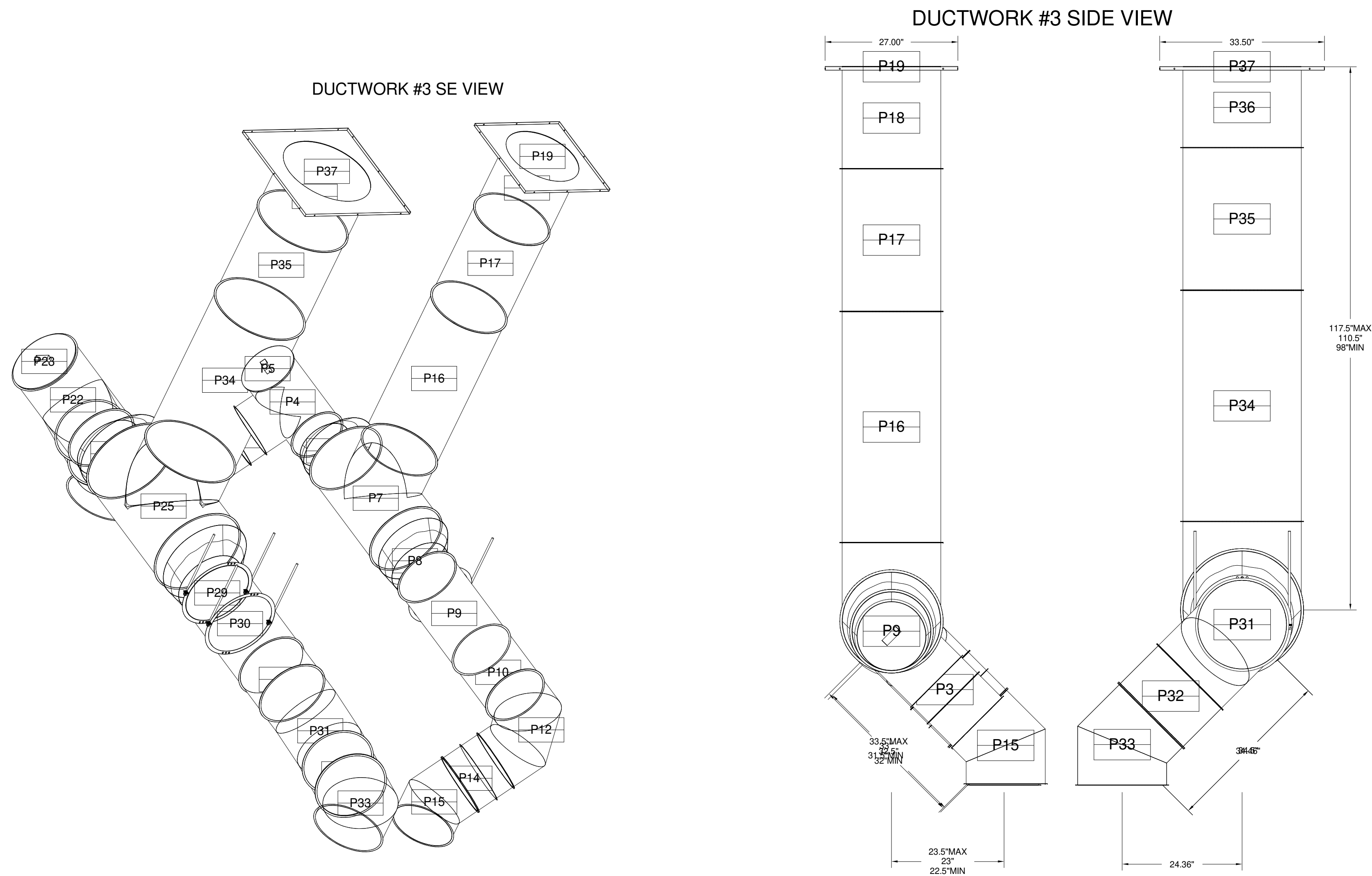
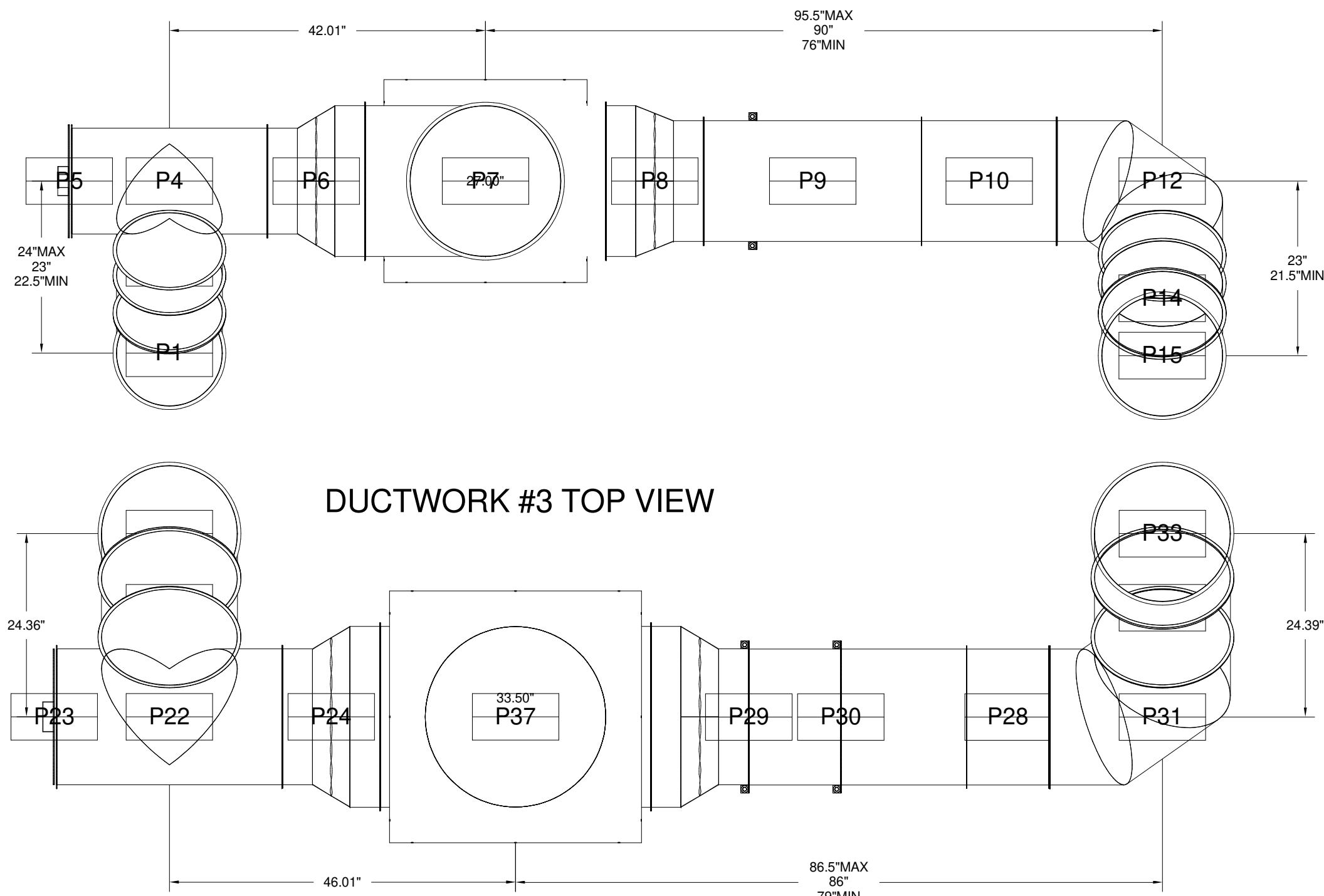
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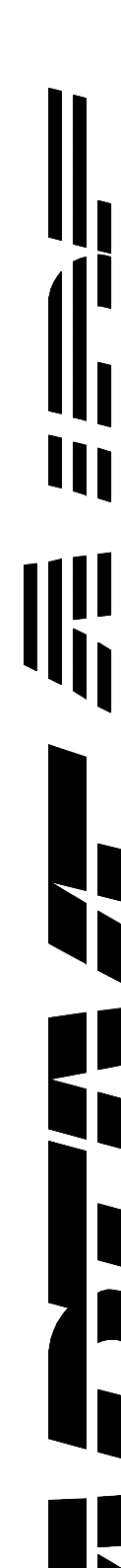



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DUCTWORK 43 PARTS - J094967555									
TAG	PART #	CFM	QPM	ZONE	COVERED/RY	SP	WEIGHT	VELOCITY	QTY DESCRIPTION
P1	DW1445AS	1805				-0.0525	722	1800.72	1 SINGLE WALL DUCT 45 DEGREE ELBOW, 1" DUCT, ASSEMBLY
P2	DW1407LT	1925				-0.0006	363	1900.72	1 SINGLE WALL DUCT 45 DEGREE ELBOW, 1" DUCT, FLANGE AT BOTH ENDS, STAINLESS STEEL
P3	DW1414ADJKT	1925				-0.0004	66	1900.72	1 SINGLE WALL DUCT ADJUSTABLE, 1" DUCT, FLANGE AT ONE END WITH A 1" ADJUSTABLE COLLAR, STAINLESS STEEL
P4	DW1474SE	1925				-0.1882	1595	1800.72	1 SINGLE WALL DUCT 1" DUCT, 14" DUCT, ASSEMBLY
ASSEMBLED WP15	DW1415ADJKT						3.72		1 DUCT ACCESS DOOR WITH HANDLE & GREASE DAM, 1" DUCT, 14" DUCT, 1" DOOR, STAINLESS STEEL
ASSEMBLED WP4-S-O	DW1414ADJKT						1.12		1 SINGLE WALL DUCT ADAPTER, 1" DUCT TO 24" DUCT, DA, ECCENTRIC ASSEMBLY
P6	DW1426ADIC	1825				-0.4465	188	1800.72	1 SINGLE WALL DUCT 24" DUCT ADAPTER, 1" DUCT TO 24" DUCT, ASSEMBLY
P7	DW1426ADIC	2000				-0.025	1200	1575.63	1 SINGLE WALL DUCT ADAPTER, 1" DUCT TO 24" DUCT, DA, ECCENTRIC ASSEMBLY
P8	DW1502LT	2000				-0.0093	1548	1575.63	1 SINGLE WALL DUCT ADAPTER, 1" DUCT TO 24" DUCT, FLANGE AT BOTH ENDS, STAINLESS STEEL
P9	DW1580ADJKT	2200				-0.0057	2600	1575.63	1 SINGLE WALL DUCT ADJUSTABLE, 1" DUCT, 24" DUCT, FLANGE AT ONE END WITH A 1" ADJUSTABLE COLLAR, STAINLESS STEEL
P11	DW1580ABAY						3.18		1 DUCT SUPPORT BRACKET, 1" DUCT, USED FOR HANGING DUCT, 1" GA STEEL, CLEAR ZINC COATING, -2 FINISH, 4 BRACKETS, 4 HARDWARE BRACES
P12	DW1580ABAY	2200				-0.1468	1330	1575.63	1 SINGLE WALL DUCT TO DEGREE ELBOW, 1" DUCT, ASSEMBLY
P13	DW16052LT	2000				-0.0015	400	1575.63	1 SINGLE WALL DUCT 1" DUCT, 24" DUCT, FLANGE AT BOTH ENDS, STAINLESS STEEL
P14	DW1605ADJKT	2200				-0.0015	676	1575.63	1 SINGLE WALL DUCT 1" DUCT, 24" DUCT, FLANGE AT ONE END WITH A 1" ADJUSTABLE COLLAR, STAINLESS STEEL
P15	DW1605ADJKT	2200				-0.0033	1228	1575.63	1 SINGLE WALL DUCT 45 DEGREE ELBOW, 1" DUCT, ASSEMBLY
P16	DW2042LT	4125				-0.0031	31,288	1800.72	1 SINGLE WALL DUCT 20" DUCT ADAPTER, 1" DUCT TO 24" DUCT, FLANGE AT BOTH ENDS, STAINLESS STEEL
P17	DW2052LT	4125				-0.0081	31,442	1800.72	1 SINGLE WALL DUCT 20" DUCT ADAPTER, 1" DUCT TO 24" DUCT, FLANGE AT BOTH ENDS, STAINLESS STEEL
P18	DW2000ADJKT	4125				-0.0058	20,505	1800.72	1 SINGLE WALL DUCT ADJUSTABLE, 20" DUCT, 26" DUCT, FLANGE AT ONE END WITH A 20" ADJUSTABLE COLLAR, STAINLESS STEEL
ASSEMBLED WP19	DW2000ADJKT						9.00	1800.72	DUCT TO CURB TRANSITION 34" DOWN TURN, 26" CURB TO 20" DUCT, 16 GA ALUMINIZED, USED ON NCA15A/FAN TRANSITION PLACE CD 35 TO 27" DESIGNED FOR USE WITH EXHAUST FAN NON-STANDARD PART
ASSEMBLED WP18	DW2052PODBX	4125					1,807	500	
SYSTEM AT P19	DW1580ABAY	3025					0.472	1711.80	1 SINGLE WALL DUCT 45 DEGREE ELBOW, 1" DUCT, ASSEMBLY
P21	DW1811LT	3025				-0.003	6,699	1711.80	1 SINGLE WALL DUCT 1" DUCT, 11" DUCT, FLANGE AT BOTH ENDS, STAINLESS STEEL
P22	DW1817SE	3025				-0.1766	275	1711.80	1 SINGLE WALL DUCT TEE, 1" DUCT, ASSEMBLY
ASSEMBLED WP23	DW1819ADJKT						5.55		1 DUCT ACCESS DOOR WITH HANDLE & GREASE DAM, 1" DUCT, 14" DUCT, 1" DOOR, STAINLESS STEEL
ASSEMBLED WP22-S-O	DW1814ADJKT						0.566	1330.72	1 SINGLE WALL DUCT ADAPTER, 1" DUCT TO 24" DUCT, DA, ECCENTRIC ASSEMBLY
P24	DW1826ADIC	3025				-0.024	381	1711.80	1 SINGLE WALL DUCT ADAPTER, 1" DUCT TO 24" DUCT, DA, ECCENTRIC ASSEMBLY
P25	DW1826ADIC	6000				-0.024	381	1711.80	1 SINGLE WALL DUCT ADAPTER, 1" DUCT TO 24" DUCT, DA, ECCENTRIC ASSEMBLY
P26	DW1826ADIC	3025				-0.024	381	1711.80	1 SINGLE WALL DUCT ADAPTER, 1" DUCT TO 24" DUCT, DA, ECCENTRIC ASSEMBLY
P27	DW1826LT	3025				-0.0033	17,499	1711.80	1 SINGLE WALL DUCT 24" DUCT ADAPTER, 1" DUCT TO 24" DUCT, FLANGE AT BOTH ENDS, STAINLESS STEEL
P28	DW1826ADJKT	3025				-0.0027	1,843	1711.80	1 SINGLE WALL DUCT ADJUSTABLE, 1" DUCT, 17" DUCT, FLANGE AT ONE END WITH A 1" ADJUSTABLE COLLAR, STAINLESS STEEL
P29	DW188UBRAY						3.38		1 DUCT SUPPORT BRACKET, 1" DUCT, USED FOR HANGING DUCT, 1" GA STEEL, CLEAR ZINC COATING, -2 FINISH, 4 BRACKETS, 4 HARDWARE BRACES
P30	DW188UBRAY						3.38		1 DUCT SUPPORT BRACKET, 1" DUCT, USED FOR HANGING DUCT, 1" GA STEEL, CLEAR ZINC COATING, -2 FINISH, 4 BRACKETS, 4 HARDWARE BRACES
P31	DW1890ABAY	3025				-0.1766	1559	1711.80	1 SINGLE WALL DUCT TO DEGREE ELBOW, 1" DUCT, ASSEMBLY
P32	DW1811LT	3025				-0.003	6,699	1711.80	1 SINGLE WALL DUCT 1" DUCT, 11" DUCT, FLANGE AT BOTH ENDS, STAINLESS STEEL
P33	DW1805AS	3025				-0.012	10,214	1711.80	1 SINGLE WALL DUCT 45 DEGREE ELBOW, 1" DUCT, ASSEMBLY
P34	DW2042LT	4000				-0.0031	27,365	1800.72	1 SINGLE WALL DUCT 20" DUCT ADAPTER, 1" DUCT TO 24" DUCT, FLANGE AT BOTH ENDS, STAINLESS STEEL
P35	DW2042LT	6000				-0.0069	22,929	1800.72	1 SINGLE WALL DUCT 20" DUCT ADAPTER, 1" DUCT TO 24" DUCT, FLANGE AT BOTH ENDS, STAINLESS STEEL
P36	DW2000ADJKT	4000				-0.0058	18,009	1800.72	1 SINGLE WALL DUCT ADJUSTABLE, 24" DUCT, 26" DUCT, FLANGE AT ONE END WITH A 24" ADJUSTABLE COLLAR, STAINLESS STEEL
ASSEMBLED WP27	DW2000ADJKT						9.00	1800.72	DUCT TO CURB TRANSITION 34" DOWN TURN, 26" CURB TO 20" DUCT, 16 GA ALUMINIZED, NON-STANDARD PART, USED WITH EXHAUST FANS
ASSEMBLED WP26	DW2042PODBX	4000					10,800	1800.72	DUCT TO CURB TRANSITION 34" DOWN TURN, 26" CURB TO 20" DUCT, 16 GA ALUMINIZED, NON-STANDARD PART, USED WITH EXHAUST FANS
SYSTEM AT P37	3M 2000PLUS						0.80		11 DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS
P38	DW14CLASV						1.06		6 DUCT "Y" CLAMP WITH NEW DESIGN IN 1/4 BRACKETS, 1" DUCT, ASSEMBLY
P39	DW16CLASV						1.18		7 DUCT "Y" CLAMP WITH NEW DESIGN IN 1/4 BRACKETS, 1" DUCT, ASSEMBLY
P40	DW16CLASV						1.30		11 DUCT "Y" CLAMP WITH NEW DESIGN IN 1/4 BRACKETS, 1" DUCT, ASSEMBLY
P41	DW20CLASV						1.41		5 DUCT "Y" CLAMP WITH NEW DESIGN IN 1/4 BRACKETS, 20" DUCT, ASSEMBLY
P42	DW26CLASV						1.65		5 DUCT "Y" CLAMP WITH NEW DESIGN IN 1/4 BRACKETS, 26" DUCT, ASSEMBLY
TOTAL WEIGHT							168.95		



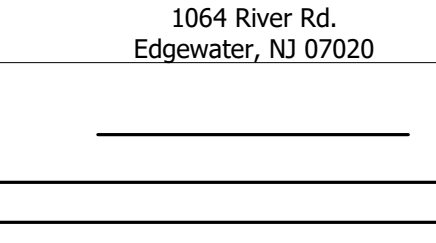


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<p>Lorenzo Foods TETERBORO, NJ, 07608</p>	<p>8/24/2021</p>	<p>4967555</p>	<p>ZDK</p>	<p>3/4" = 1'-0"</p>	<p>MASTER DRAWING</p>	<p>11</p>
	<div> <div>  <p>CAPTIVE North New Jersey Mechanical</p> </div> <div>    </div> </div> <p>Summit, NJ PHONE: (201) 308-6847 FAX: (919) 516-8752 EMAIL: reg13@captiveme.com</p>					

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BD ENGINEERING, LLC. 30 Park Road, Suite 4 Tinton Falls, NJ 07724													
 <p>Lorenzo Foods Teterboro</p> <p>25 CENTRAL AVE TETERBORO, NJ, 07608</p>													
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scale:	As indicated												
release date:													
drawing date:	09/24/2021												
drawn by:	ZW												
approved by:	KF												
project no.:	2102												
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			DUCTWORK #4 PARTS - JOB#1967555 DOUBLE WALL							
TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	DW1445DWASY-2R-S	1505				-0.0333	19.87	1407.84	1	DOUBLE WALL DUCT - 14" INNER 45 DUCT - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL.
P2	DW1427DWAJD-2R-S	1505				-0.005	52.12	1407.84	1	DOUBLE WALL ADJUSTABLE DUCT - 14" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 18" 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.
P3	DW18225ADKIT						7.25		1	DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 18" OD - INCLUDES UNI-STRUT CUT TO LENGTH, DW18225AD, & HARDWARE BAG 4.
P4	DW1445DWASY-2R-S	1505				-0.0475	19.87	1407.84	1	DOUBLE WALL DUCT - 14" INNER 45 DUCT - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL.
P5	DW1427DWAJD-2R-S	1505				-0.005	52.12	1407.84	1	DOUBLE WALL ADJUSTABLE DUCT - 14" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 18" 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 ASSEMBLED W/P7	DW1435DWLTP-2R-S	1505				-0.01	48.06	1407.84	1	DOUBLE WALL DUCT - 14" INNER DUCT, 35" LONG - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL - USED WITH TRANSITION PLATE.
P7 ASSEMBLED W/P6	DW2314TPDBXC	1505					8.00	1407.84	1	DUCT TO CURB TRANSITION 34" DOWN TURN, 23" CURB TO 14" DUCT, 16 GA ALUMINIZED, USED ON NCA14FA & NCA14HPFA. TRANSITION PLATE OD IS 23.5" DESIGNED FOR USE WITH EXHAUST FAN. NON-STANDARD PART.
SYSTEM AT P7						-0.8228	0.00			
	3M-2000PLUS						0.80		2	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
TOTAL WEIGHT							208.89			

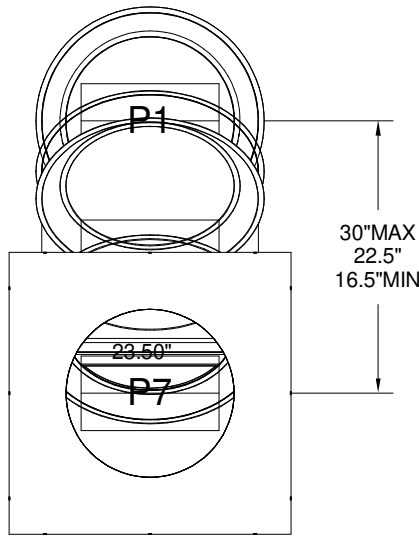
DOUBLE WALL FACTORY BUILT DUCTWORK

- 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.

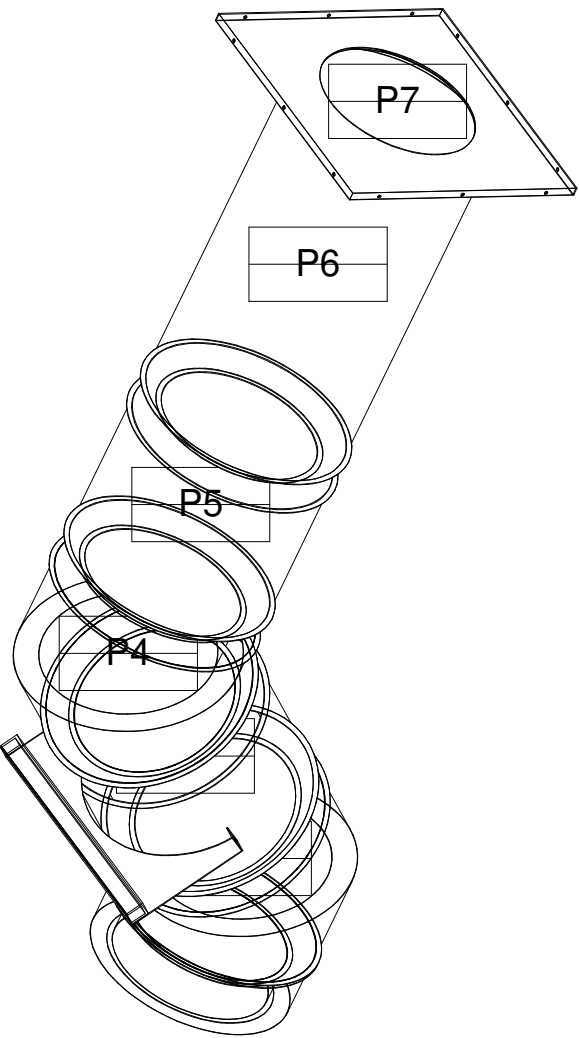
HORIZONTAL	
DUCT DIAMETER	SUPPORT SPACING (FT)
5"	7'
6"	7'
7"	7'
8"	7'
10"	7'
12"	7'
14"	7'
16"	7'
18"	5'
20"	5'
22"	5'
24"	5'
26"	5'
28"	5'
30"	5'
32"	5'
34"	5'
36"	5'

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'

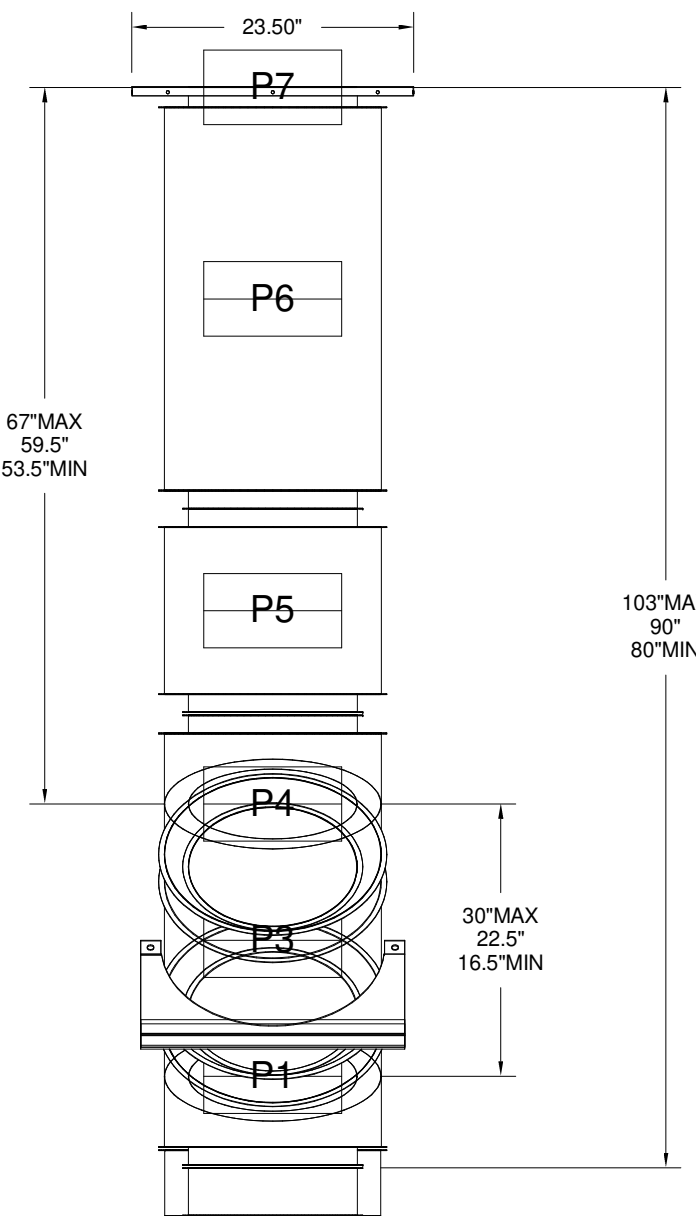
DUCTWORK #4 TOP VIEW



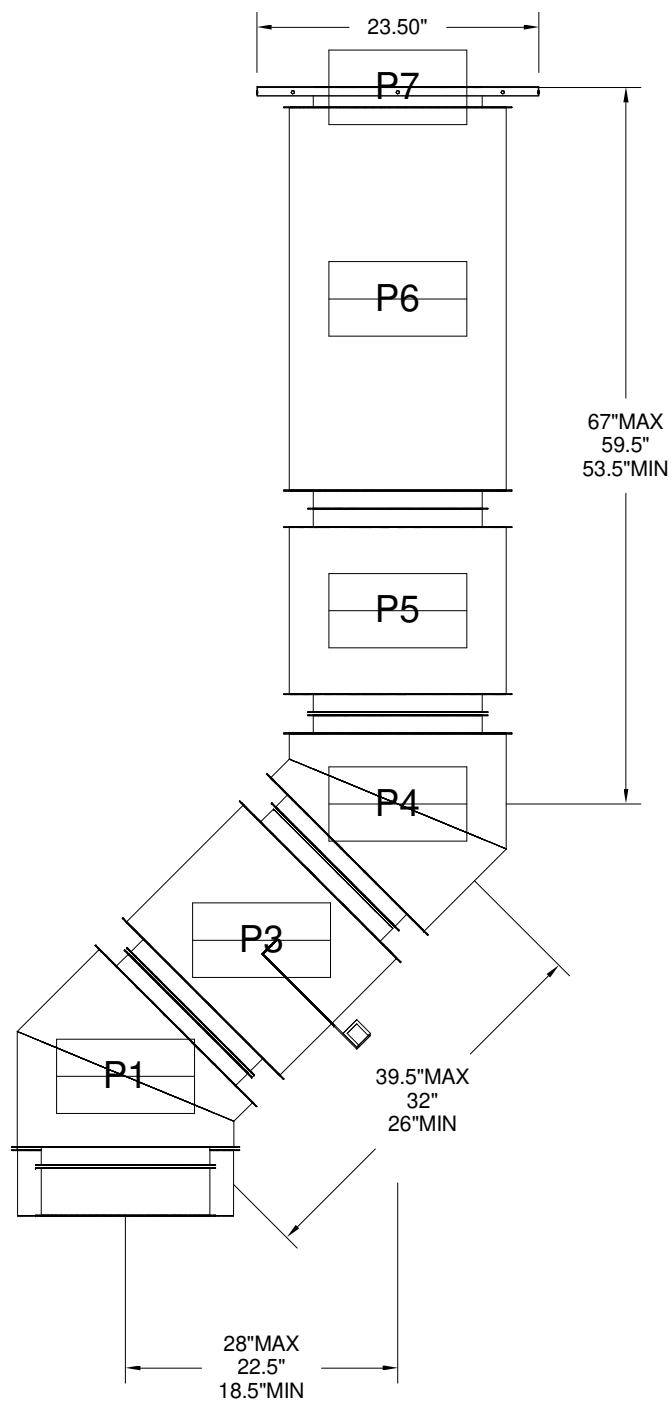
DUCTWORK #4 SE VIEW



DUCTWORK #4 FRONT VIEW





DUCTWORK #4 SIDE VIEW



CAPTIVE
MECHANICAL
 North New Jersey

Summit, NJ PHONE: (201) 308-6647 FAX: (919) 516-8732 EMAIL: ncj138@captiveme.com

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☐ 
☐ 

Summit, N.J. PHONE: (201) 308-6647 FAX: (919) 516-8752 EMAIL: reg138@captiveaire.com

Lorenzo Foods
TETERBORO, NJ, 07608

8/24/2021


4967555

ZDK

$$\frac{3}{4}'' = \frac{1}{2}'' + \frac{1}{4}''$$

MASTER DRAWING

THESE DETAILS ARE PROVIDED FOR
DIAGRAMMATIC PURPOSES ONLY. REFER TO
THE MANUFACTURES SHOP DRAWINGS, DETAILS
AND INSTALLATION INSTRUCTIONS FOR FINAL
REQUIREMENTS.



CYBUL CYBUL WILHELM
ARCHITECTS

1064 River Rd.
Edgewater, NJ 07020

KOESTNER ASSOCIATES
P.O. BOX 514
Hackensack, NJ 07602

ALLIED ENGINEERING
730 River Road
New Milford, NJ 07646

BD ENGINEERING, LLC.
30 Park Road, Suite 4
Tinton Falls, NJ 07724

BD
engineering

lorenzo *food*
group

Lorenzo Foods Teterboro

25 CENTRAL AVE
TETERBORO, NJ, 0760

DOB STAMP:

ISSUED FOR

REVIEW ☒

ANNING BOARD ☐

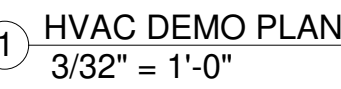
BUILDING DEPT ☐

BID ☐

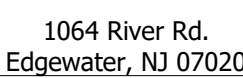
ONSTRUCTION ☐

BRIAN D. TANNENHAU
NJ PROFESSIONAL ENGINEER
NO. GE 45801
DATE: 09/24/2021

drawing name:	
HVAC CAPTIVE AIRE DETAILS	
scale:	As indicated
release date:	
drawing date:	09/24/2021
drawn by:	Author
approved by:	Approver
project no.:	2102
drawing no.:	M-514.00
DOB BARCODE:	
Total	



1. ALL EXISTING HVAC SYSTEMS INCLUDING BUT NOT LIMITED TO HVAC ROOF TOP EQUIPMENT, DUCTWORK, AIR DISTRIBUTION SYSTEMS, CONDENSER PUMPS, COILS, WIRING ETC. TO REMAIN UNLESS SHOWN OR NOTED OTHERWISE.
2. DEMOLITION WORK SHALL BE COORDINATED WITH THE ARCHITECT AND OWNERS REPRESENTATIVE AND ALSO MUST BE COORDINATED WITH ALL ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND STRUCTURAL SYSTEMS.
3. EXISTING CONDITIONS, EQUIPMENT, MATERIALS & SIZES ARE SHOWN FOR REFERENCE ONLY. VERIFY EXISTING CONDITIONS & BRING TO THE ARCHITECTS & ENGINEERS ATTENTION IMMEDIATELY TO BID SUBMISSION.
4. HVAC CONTRACTOR MUST VISIT THE SITE TO CAREFULLY EXAMINE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS PRIOR TO BIDDING. SUBMISSION OF A PROPOSAL WILL BE CONSIDERED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN PERFORMED. CLAIMS FOR EXTRA LABOR OR MATERIALS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED.
5. G.C. TO PATCH ALL UNUSED ROOF, WALL OR FLOOR OPENINGS TO MATCH EXISTING.
6. DISPOSE OF ALL MATERIALS AS DIRECTED BY OWNERS REPRESENTATIVE.



KOESTNER ASSOCIATES
P.O. BOX 514
Hackensack, NJ 07602

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730 River Road
New Milford, NJ 07646

BD ENGINEERING, LLC
30 Park Road, Suite 4
Tinton Falls, NJ 07724



25 CENTRAL AVE
TETERBORO, NJ, 0760

DOB STAMP

ISSUED FOR

REVIEW

PLANNING BOARD

BUILDING DEPT

BID

CONSTRUCTION

BRIAN D. TANNENHAUS

NJ PROFESSIONAL ENGINEER
NO. GE 45801
DATE: 09/24/2021

drawing name:	
HVAC DEMO PLAN	
scale:	As indicated
release date:	
drawing date:	09/24/2021
drawing by:	ZW
approved by:	KF
project no.:	2102
drawing no.:	
MD-100.00	
DCB (BARCODE):	
Total	