SERIES FAN POWERED TERMINAL UNIT SCHEDULE

MFG	Tag	Model	DESIGN AIRFLOW					HOT WATER HEAT							
			INLET "Ø	FAN HP	MAX (CFM)	MIN (CFM)	Voltage	EAT (°F)	LAT (°F)	BTUH	EWT/LWT	GPM	Volts / Phase	MCA	MOCP
DAIKIN	VAV-1-1	MQFCI6	8	0.33	815	245	208/1	75	103.0	30.2	160/140	3.1	208/1	3.5	15

1) PROVIDE ALL TERMINAL UNITS WITH SINGLE ELECTRICAL POINT OF CONNECTION, FACTORY MOUNTED 24 VOLT CONTROL TRANSFORMER, EC MOTOR, HW HEAT
2) PROVIDE 1" FOIL FACED INSULATION
3) PROVIDE 1" FIBER-FREE SOLCOUSTIC DUCT LINER OR EQUIVALENT FOR THE FIRST 4 FEET OF SUPPLY DUCT AFTER EACH TERMINAL UNIT. CONTRACTOR SHALL INCREASE SECONDARY DUCTING FOR FIRST 4 FEET TO MAINTAIN INSIDE DUCTING DIMENSIONS NOTED ON FLOORPLAN.
4) CONTACT DERRICK VAN WEST WITH HTS FOR EQUIPMENT SELECTION ASSISTANCE. DERRICK.VANWEST@HTS.COM. 214-846-8668

FAN COIL UNIT SCHEDULE

MARK	MFG.	MODEL #	NOMINAL TONNAGE	EVAPORATOR FAN DATA			COOLING DATA							HEATING DATA						UNIT WEIGHT (LBS.)	ELECTRICAL DATA			
				SUPPLY AIRFLOW	ESP (IN. WC.)	FAN TYPE	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EAT (DB/WB) (°F)	LAT (DB/WB) (°F)	EWT / LWT	GPM	ROWS	TOTAL CAPACITY (MBH)	EAT (DB) (°F)	LAT (DB) (°F)	EWT / LWT	GPM	ROWS		V/PH/HZ	MCA (AMPS)	MOP (AMPS)	MOP (AMPS)
FCU-1	DAIKIN	BCHD0161	4.0	1,545	0.50	ECM	50.3	39.0	78.0 / 65.0	56.6 / 54.9	44.0 / 54.0	10.1	4	49.0	70	99	160.0 / 140.0	5	1	500.0	120/1/60	19.8	25.0	25.0

NOTES:
1) PROVIDE ALL FCUS WITH 2-WAY AUTOFLOW VALVE PIPING PACKAGE, PT PORTS, STRAINER, & SUPPLY/RETURN BALL VALVES
2) PROVIDE STAINLESS STEEL DRAINPAN
3) PROVIDE HORIZONTAL CONCEALED CABINET
4) PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT AND 24V CONTROL VALVES
5) PROVIDE DOUBLE WALL PANELS
6) CONTACT DERRICK VANWEST AT HTS FOR PRICING. DERRICK.VANWEST@HTS.COM OR 214-846-8668

DIFFUSER, REGISTERS & GRILLES SCHEDULE

MARK	MFG.	MODEL	SERVES	MATERIAL	DESCRIPTION	FACTORY FINISH	BLOW PATTERN	NOTES
A	TITUS	TMS	SUPPLY	STEEL	SQUARE CONE DIFFUSER	ARCH. TO SPEC.	4-WAY	24x24
B	TITUS	50F	SUPPLY	STEEL	EGGCRATE	ARCH. TO SPEC.	2-WAY	24x24
C	TITUS	350RL	RETURN	STEEL	LOUVERED GRILLE	ARCH. TO SPEC.	N/A	24X24

NOTES:
1. PROVIDE ALL AIR DEVICES WITH FLAT SURFACE MOUNTING KITS AND BORDERS. COORDINATE SELECTIONS WITH OWNER.

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302 NORTH MARKET ST.
SUITE A250
DALLAS, TEXAS 75202
Ph. (469) 902 4466
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NOT FOR REGULATORY APPROVAL PERMITTING, OR CONSTRUCTION.

05/08/2024

CEN-TEX ENGINEERING
805 North Main St., Unit G
Salado, Texas 76571

STATE OF TEXAS
COOPER GILL
128999
LICENSED
PROFESSIONAL ENGINEER

05/08/2024

DFW
DALLAS
FORT-WORTH
INTERNATIONAL
AIRPORT

Bugatti Bar & Taverna

2040 N. International Parkway
Space ID: A-2-048C-A01
DFW Airport, TX 75261

REVISIONS

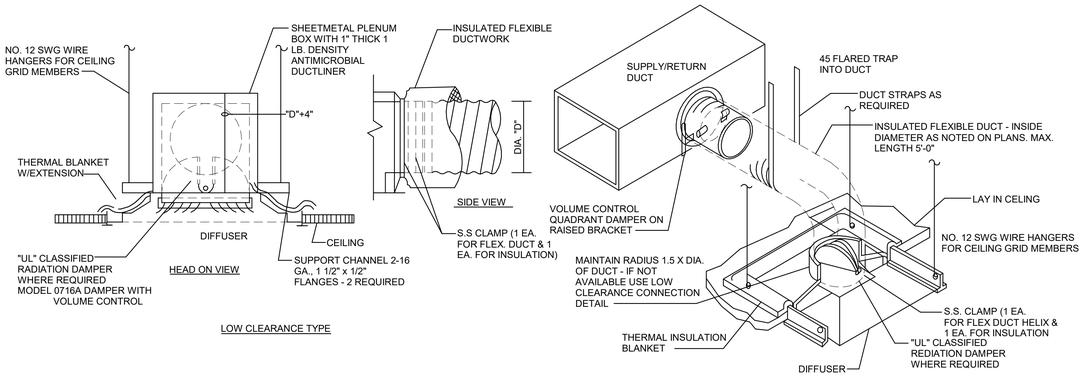
No.	Date

SHEET TITLE
MECHANICAL SCHEDULES

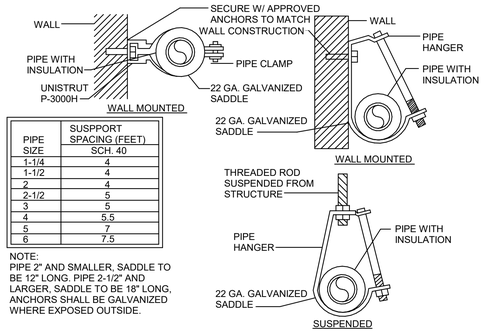
05/08/2024

SHEET NO:

M0.0



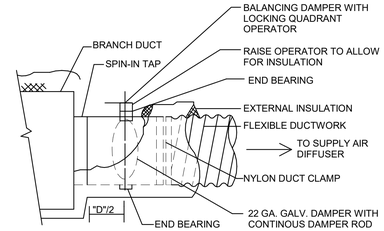
1 DIFFUSER DETAIL
SCALE: NONE



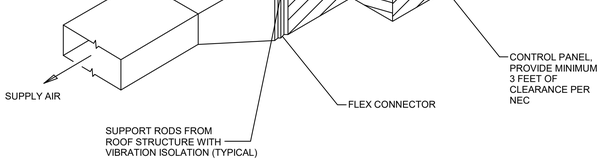
PIPE SIZE	SUSPPORT SPACING (FEET) SCH. 40
1-1/4	4
1-1/2	4
2	4
2-1/2	5
3	5
4	5.5
5	7
6	7.5

NOTE:
PIPE 2" AND SMALLER, SADDLE TO BE 12" LONG. PIPE 2-1/2" AND LARGER, SADDLE TO BE 18" LONG, ANCHORS SHALL BE GALVANIZED WHERE EXPOSED OUTSIDE.

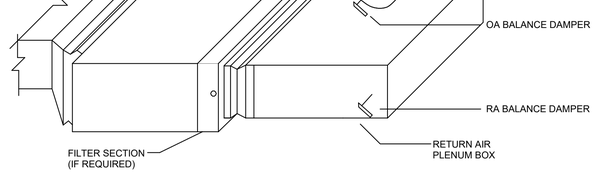
2 DRAIN SUPPORT & INSULATION
SCALE: NONE



3 FLEXIBLE DUCT TAP
SCALE: NONE



4 TYPICAL VAV TERMINAL UNIT
SCALE: NONE



5 DUCTWORK FAN COIL UNIT
SCALE: NONE

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REVISIONS

No.	Date

SHEET TITLE
MECHANICAL DETAILS

05/08/2024

SHEET NO:
M0.1

MECHANICAL SPECIFICATIONS:

1.1 SCOPE:

A. THE WORK OF THIS DIVISION CONSISTS OF PROVIDING LABOR, MATERIALS, PRODUCTS, AND IN PERFORMING ALL OPERATIONS REQUIRED FOR THE COMPLETE OPERATING INSTALLATION OF ALL MECHANICAL AND PLUMBING SYSTEMS IN ACCORDANCE WITH THE SPECIFICATIONS AS WELL AS APPLICABLE DRAWINGS, TERMS, CONDITIONS OF THE CONTRACT AND ALL APPLICABLE CODES AND ORDINANCES GOVERNING THE INSTALLATION OF THE VARIOUS MECHANICAL AND PLUMBING SYSTEMS. ALL WORK SHALL BE FULLY CORRELATED WITH THE WORK OF OTHER CRAFTS.

B. EACH CONTRACTOR SHALL STUDY THE CONTRACT DOCUMENTS TO DETERMINE THE EXTENT OF WORK PROVIDED UNDER THIS CONTRACT AS WELL AS ASCERTAIN THE DIFFICULTY TO BE ENCOUNTERED IN PERFORMING THE WORK ON THE DRAWINGS AND OUTLINED HEREINAFTER AND IN MAKING CONNECTIONS TO EXISTING UTILITIES, INSTALLING NEW EQUIPMENT AND SYSTEMS AND COORDINATING THE WORK WITH THE OTHER TRADES.

C. EXAMINATION OF THE SITE: THE CONTRACTOR SHALL THOROUGHLY EXAMINE SITE AND SATISFY HIMSELF AS THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THE CONTRACTOR SHALL VERIFY, AT THE SITE, ALL MEASUREMENTS AFFECTING HIS WORK AND SHALL BE RESPONSIBLE FOR THE CORRECTNESS OF THE SAME. NO EXTRA COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR EXPENSES DUE TO HIS NEGLECT TO EXAMINE OR FAILURE TO DISCOVER CONDITIONS WHICH AFFECT HIS WORK. NO EXTRA COMPENSATION WILL BE ALLOWED ON ACCOUNT OF DIFFERENCES BETWEEN ACTUAL DIMENSIONS AND THOSE INDICATED ON THE DRAWINGS.

1.2 REGULATORY REQUIREMENTS:

A. CODES AND ORDINANCES/PERMIT AND FEES: PERFORM ALL WORK IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINATES, THE CURRENT EDITION OF NFPA, THE INTERNATIONAL BUILDING CODE, INTERNATIONAL MECHANICAL CODE, INTERNATIONAL PLUMBING CODE, AND ALL CURRENT SUPPLEMENTS THERETO, AND ANY OTHER AUTHORITIES HAVING JURISDICTION OVER THE WORK. PROCURE AND PAY FOR ALL PERMITS, LICENSES, FEES AND CHARGES, AND GIVE ALL NOTICES NECESSARY.

B. IN CASE OF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND REQUIREMENTS OF ANY CODE OR AUTHORITIES HAVING JURISDICTION, THE MOST STRINGENT REQUIREMENTS OF THE AFOREMENTIONED SHALL BE GOVERNED.

C. IN CASE OF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND REQUIREMENTS OF ANY CODE OR AUTHORITIES HAVING JURISDICTION, THE MOST STRINGENT REQUIREMENTS OF THE AFOREMENTIONED SHALL BE GOVERNED.

D. INTENT: THE DRAWINGS SHOW GENERAL ARRANGEMENTS AND THE EXTENT OF THE WORK. THE DRAWINGS DO NOT SHOW, IN MINUTE DETAIL, ALL FEATURES OF THE INSTALLATION. FOLLOW THE DRAWINGS AS CLOSELY AS ACTUAL CONSTRUCTION WILL PERMIT. ALL MATERIAL AND LABOR NECESSARY TO COMPLETE THE WORK IN ACCORDANCE WITH THE INTENT OF THE SPECIFICATIONS AND DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR WITHOUT INTENT: THE DRAWINGS SHOW GENERAL ARRANGEMENTS AND THE EXTENT OF THE WORK. THE DRAWINGS DO NOT SHOW, IN MINUTE DETAIL, ALL FEATURES OF THE I NSTALLATION. FOLLOW THE DRAWINGS AS CLOSELY AS ACTUAL CONSTRUCTION WILL PERMIT. ALL MATERIAL AND LABOR NECESSARY TO COMPLETE THE WORK IN ACCORDANCE WITH THE INTENT OF THE SPECIFICATIONS AND DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR WITHOUT.

1.3 COORDINATION OF WORK:

A. EACH CONTRACTOR SHALL COMPARE HIS DRAWINGS AND SPECIFICATIONS WITH THOSE OF OTHER TRADES. ALL WORK SHALL BE INSTALLED IN COOPERATION WITH ALL OTHER TRADES INSTALLING INTERRELATED WORK. BEFORE INSTALLATION, ALL TRADES SHALL MAKE PROPER PROVISIONS TO AVOID INTERFERENCES.

B. EACH CONTRACTOR SHALL COORDINATE THE LOCATION OF HIS SYSTEMS TO THAT ALL OUTSIDE AIR INTAKES, PLUMBING VENTS, AND EXHAUST FANS ARE LOCATED IN SUCH A WAY AS TO PREVENT CROSS-CONTAMINATION. SUCH A DISTANCE SHALL BE NOT LESS THAN 10'-0

C. LOCATIONS OF CONDUIT, DUCTS, PIPING, SPRINKLER HEADS AND EQUIPMENT SHALL BE ADJUSTED TO ACCOMMODATE THE WORK WITH INTERFERENCES ANTICIPATED AND ENCOUNTERED. EXACT ROUTING AND LOCATION OF SYSTEMS SHALL BE DETERMINED PRIOR TO FABRICATION OR INSTALLATION.

D. OFFSETS AND CHANGES OF DIRECTION IN ALL CONDUIT, DUCTS AND PIPING SYSTEMS SHALL BE MADE AS REQUIRED TO MAINTAIN PROPER HEADROOM AND PITCH OF SLOPING LINES.

1.4 REGULATORY REQUIREMENTS:

A. COMPLY WITH ALL CURRENT LOCAL, STATE, AND NATIONAL CODES, INCLUDING THE AMERICANS WITH DISABILITIES ACT (MOST CURRENT EDITION) AND SECURE AND PAY FOR ALL APPLICABLE COSTS, FEES, PERMITS AND LICENSES. NO ADDITIONAL COSTS SHALL BE PAID BY THE OWNER FOR THESE ITEMS.

B. PERFORM ALL WORK WITH HIGHEST REGARD TO SAFETY. EXCAVATE BY HAND AND WITH CAUTION TO LOCATE ALL UTILITIES IN THE BOUNDS OF THE AREA TO BE EXCAVATED PRIOR TO MACHINE EXCAVATING. PROCEED WITH SAFETY AND CAUTION SO THAT NO UTILITY IS DAMAGED OR INTERRUPTED.

C. PRIOR TO BID, VERIFY AND COORDINATE ALL REQUIRED CONNECTIONS AND/OR RELOCATIONS OF UTILITIES WITH UTILITY COMPANIES. PERFORM SUCH WORK IN ACCORDANCE WITH UTILITY COMPANY REGULATIONS. PAY ALL APPLICABLE FEES AND COSTS INCLUDING THOSE FOR ANY EXTENSIONS, RELOCATIONS AND/OR CONNECTIONS.

D. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ABOVE GROUND AND MARKED UTILITIES.

1.5 SUBMITTALS:

A. SUBMITTALS SHALL BE COMPLETE FOR SYSTEM(S) INVOLVED. PROVIDE SUBMITTALS FOR ALL HVAC EQUIPMENT.

B. WHERE EQUIPMENT OF THE ACCEPTABLE MANUFACTURERS REQUIRE DIFFERENT ARRANGEMENT OR CONNECTIONS FROM THOSE SHOWN, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL THE EQUIPMENT TO OPERATE PROPERLY AND IN HARMONY WITH THE ORIGINAL INTENT OF THE DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL MAKE ALL NECESSARY CHANGES IN ALL AFFECTED RELATED WORK PROVIDED UNDER OTHER SECTIONS INCLUDING LOCATIONS OF ROUGH-IN CONNECTIONS BY OTHER TRADES, CONDUIT SUPPORTS, INSULATION, ETC. ALL CHANGES SHALL BE MADE AT NO INCREASE IN THE CONTRACT AMOUNT OR ADDITIONAL COSTS TO THE OTHER TRADES AND/OR OWNER.

1.6 GUARANTEE:

A. ALL EQUIPMENT AND WORK SHALL BE GUARANTEED FOR A PERIOD OF 12 MONTHS AFTER ACCEPTANCE. ANY DEFECTS IN EQUIPMENT OR WORKMANSHIP SHALL BE PROMPTLY REPAIRED OR REPLACED BY THE CONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER. THE GUARANTEE PERIOD OF ANY PART OF THE REPAIRED ITEMS SHALL BE EXTENDED FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUCH REPAIR OR REPLACEMENT.

1.7 COMPLETION:

A. UPON COMPLETION OF THE MECHANICAL INSTALLATION, DEMONSTRATE TO THE OWNER'S SATISFACTION THAT THE SYSTEMS HAVE BEEN INSTALLED IN A SATISFACTORY MANNER IN ACCORDANCE WITH THE PLANS AND APPLICABLE CODES. SHOW THAT ALL CONTROLS ARE OPERABLE AND ARE PROPERLY ADJUSTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FINAL SYSTEMS BALANCE, THAT ALL SYSTEMS ARE PROPERLY BALANCED, THAT ALL EQUIPMENT OPERATES PROPERLY, THAT FILTERS AND STRAINERS ARE CLEAN, AND THAT ALL COMPONENTS OF ALL SYSTEMS ARE INSTALLED AND ADJUSTED FOR PROPER OPERATION.

PRODUCTS:

2.1 GENERAL:

A. ALL MATERIALS SHALL BE NEW AND OF THE QUALITY SPECIFIED. MATERIALS SHALL BE FREE FROM DEFECTS. MANUFACTURERS SHALL BE AS SPECIFIED HEREIN, OR BY ADDENDA. ALL PIPING EQUIPMENT, ETC., WHICH NEEDS TO BE INSULATED TO CONSERVE HEAT OR COLD, OR TO PREVENT FREEZING OR CONDENSATION, SHALL BE INSULATED. ALL MATERIALS SHALL HAVE THE UNDERWRITERS LABORATORIES, INC. LABEL.

BASIC MECHANICAL METHODS:

1.1 DIMENSION AND FIT:

A. CUT MATERIALS ACCURATELY FROM MEASUREMENTS TAKEN ON THE JOB SITE.

B. DO NOT SPRING OR BEND PIPE TO FIT CONDITIONS OR MAKE JOINTS.

1.2 SERVICEABILITY OF PRODUCTS:

A. FURNISH ALL PRODUCTS TO PROVIDE THE PROPER ORIENTATION OF SERVICEABLE COMPONENTS TO ACCESS SPACE PROVIDED.

B. COORDINATE INSTALLATION OF PIPING, DUCTWORK, EQUIPMENT, SYSTEM COMPONENTS, AND OTHER PRODUCTS TO ALLOW PROPER SERVICE OF ALL ITEMS REQUIRING PERIODIC MAINTENANCE OR REPLACEMENT.

C. REPLACE OR RELOCATE ALL PRODUCTS INCORRECTLY ORDERED OR INSTALLED TO PROVIDE PROPER SERVICEABILITY.

D. PROVIDE ACCESS DOORS AND ACCESS PANELS IN CEILINGS, WALLS, FLOORS, ETC. FOR ACCESS TO TRAPS, VALVES, PRIMERS, DAMPERS, AUTOMATIC DEVICES, AND ALL SERVICEABLE OR OPERABLE EQUIPMENT IN CONCEALED SPACES.

E. PROVIDE VIBRATION ISOLATORS ON ALL EQUIPMENT HAVING MOTORS AND SUPPORTED BY BUILDING STRUCTURE.

1.3 ROUTING:

A. ROUTE ALL PIPELINES AND DUCTWORK PARALLEL WITH BUILDINGS LINES AND AS HIGH AS POSSIBLE.

B. ROUTE PIPING AND DUCTS TO CLEAR ALL DOORS, WINDOWS, AND OTHER OPENINGS AND TO AVOID ALL OTHER PIPES AND DUCTS, LIGHT FIXTURES AND SIMILAR PRODUCTS.

C. PROVIDE UNIONS ADJACENT TO ALL EQUIPMENT AND WHERE REQUIRED FOR DISCONNECT AND MAINTENANCE OF EQUIPMENT.

D. SECURELY FASTEN ALL MECHANICAL/PLUMBING WORK TO THE STRUCTURE TO PREVENT HAZARD HUMAN LIFE AND LIMB, AND TO PREVENT DAMAGE TO PRODUCTS OF CONSTRUCTION UNDER ALL CONDITIONS OF OPERATION.

E. DO ALL SLEEVING, CUTTING, AND PATCHING OF ROUGH CONSTRUCTION FOR PIPING. ALL CUTTING, REPAIRING AND REQUIRED STRUCTURAL REINFORCING FOR INSTALLATION OF THIS WORK SHALL BE DONE IN CONFORMANCE WITH ARCHITECT'S DIRECTIONS AND ANY DAMAGE CAUSED BY CUTTING SHALL BE REPAIRED EQUAL TO ORIGINAL CONDITIONS. NO CUTTING WITHOUT ARCHITECT'S APPROVAL.

F. PLACE ANY SLEEVES, CHASES, CONCRETE INSERTS, ANCHOR BOLTS, ETC., BEFORE CONCRETE IS POURED, AND BE RESPONSIBLE FOR CORRECT LOCATION AND INSTALLATION OF THESE ITEMS.

1.4 SCHEDULED EQUIPMENT:

A. SCHEDULED EQUIPMENT IS FOR BASIS OF DESIGN. ALTERNATE MANUFACTURERS WILL BE CONSIDERED. ALL EQUIPMENT MUST BE APPROVED BY DESIGN ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

VIBRATION AND SEISMIC CONTROL FOR HVAC PIPPING AND EQUIPMENT:

1.1 PERFORMANCE REQUIREMENTS:

A. SEISMIC-RESITANCE LOADING:

a.SITE CLASS AS DEFINED IN THE IBC: AS REQUIRED BY LOCAL JURIDICTION.

b.ASSIGNED SEISMIC USE GROUP OR BUILDING CATEGORY AS DEFINED IN THE IBC; AS REQUIRED BY LOCAL JURISDICTION.

c.DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS (0.2 SECOND).

d.DESIGN SPECTRAL RESPONSE ACCELERATION AT 1-SECOND PERIOD.

1.2 COMPONENTS:

A.VIBRATION ISOLATORS:

a. ISOLATOR PADS: NEOPRENE.
b. MOUNTS: DOUBLE-DEFLECTION TYPE.
c. RESTRAINED MOUNTS: ALL DIRECTIONAL MOUNTINGS WITH SEISMIC RESTRAINT; CAST-DUCTILE-IRON HOUSING.
d. SPRING ISOLATORS: FREESTANDING, LATERALLY STABLE, OPEN-SPRING TYPE.
e. RESTRAINED SPRING ISOLATORS: FREESTANDING, STEEL, OPEN-SPRING TYPE WITH SEISMIC RESTRAINT.
f. HOUSED SPRING MOUNTS: DUCTILE-IRON OR STEEL HOUSING, WITH INTEGRAL, VERTICALLY ADJUSTABLE SEISMIC SNUBBERS.
g. ELASTOMERIC HANGERS: DOUBLE-DEFLECTION TYPE.
h. SPRING HANGERS: COMBINATION COIL-SPRING AND ELASTOMERIC-INSERT HANGERS WITH SPRING AND INSERT IN COMPRESSION.
i. SPRING HANGERS WITH VERTICAL-LIMIT STOP: COMBINATION COIL-SPRING AND ELASTOMERIC-INSERT HANGERS WITH SPRING AND INSERT IN COMPRESSION AND WITH VERTICAL-LIMIT STOP.
j. PIPE RISER RESILIENT SUPPORT: ALL-DIRECTIONAL, ACOUSTICAL PIPE ANCHOR.
k. RESILIENT PIPE GUIDES.

B. AIR-MOUNTING SYSTEMS:

a. AIR MOUNTS: FREESTANDING, SINGLE OR MULTIPLE, COMPRESSED-AIR BELLOWS.
b. RESTRAINED AIR MOUNTS: HOUSED COMPRESSED-AIR BELLOWS.

C. RESTRAINED VIBRATION ISOLATION ROOF-CURB RAILS: FACTORY-ASSEMBLED, FULLY ENCLOSED,INSULATED, AIR- AND WATERTIGHT CURB RAIL; WITH SPRING ISOLATORS MOUNTED ON ELASTOMERIC ISOLATION PADS, AND SNUBBER BUSHINGS.

D. VIBRATION ISOLATION EQUIPMENT BASES:

a. STEEL BASE: FACTORY-FABRICATED, WELDED, STRUCTURAL-STEEL BASES AND RAILS.
b. INERTIA BASE: FACTORY-FABRICATED, WELDED, STRUCTURAL-STEEL BASES AND RAILS READY FOR FIELD-APPLIED, CAST-IN-PLACE CONCRETE.

E. SEISMIC-RESTRAINT DEVICES:

a. SNUBBERS: WELDED STRUCTURAL-STEEL SHAPES AND REPLACEABLE RESILIENT ISOLATION WASHERS AND BUSHINGS.
b. CHANNEL SUPPORT SYSTEM: MFMA-3 SLOTTED STEEL CHANNELS.
c. RESTRAINT CABLES: STAINLESS-STEEL CABLES.
d. ANCHOR BOLTS: MECHANICAL TYPE, SEISMIC RATED.
e. RESILIENT ISOLATION WASHERS AND BUSHINGS: MOLDED NEOPRENE.

1.3 FIELD QUALITY CONTROL:

A. TESTING: BY CONTRACTOR.

AIR DISTRIBUTION

1.1 FILTERS:

A. MANUFACTURERS: AAF OR APPROVED EQUIVALENT.
a. PLEATED FILTERS MERV-8, OR AS NOTED ON THE DRAWINGS.

1.2 DUCTWORK:

A. MATERIALS:

a. STEEL DUCTS: GALVANIZED STEEL SHEET, LOCK-FORMING QUALITY, MINIMUM GAUGE PER SMACNA STANDARDS.
b. INSULATED FLEXIBLE DUCTS: FLEXIBLE DUCT WRAPPED WITH FLEXIBLE GLASS FIBER INSULATION, ENCLOSED BY R-8 METALIZED VAPOR BARRIER JACKET.
c. SEALANT: NON-HARDENING, WATER RESISTANT, FIRE RESISTIVE, USED ALONE OR WITH TAPE.

B. METAL DUCTWORK:

a. FABRICATE AND SUPPORT IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE EXCEPT AS INDICATED.
b. CONSTRUCT T'S, BENDS, AND ELBOWS WITH RADIUS OF 1-1/2 TIMES WIDTH OF DUCT ON CENTER LINE. WHERE NOT POSSIBLE PROVIDE TURNING VANES.
c. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 30 DEGREES DIVERGENCE AND 45 DEGREES CONVERGENCE.
d. CONNECT FLEXIBLE DUCTS TO METAL DUCTS WITH DRAW BANDS
e. USE CRIMP JOINTS WITH OR WITHOUT BEAD FOR JOINING ROUND DUCT SIZES 8 INCHES AND SMALLER WITH CRIMP IN DIRECTION OF AIR FLOW.
f. DUCT SCHEDULE:
fa. SUPPLY DUCTS CONNECTED TO CONSTANT-VOLUME AIR-HANDLING UNITS, SINGLE ZONE VARIABLE-VOLUME AIR-HANDELING UNITS, AND SECONDARY DUCTWORK AFTER TERMINAL UNITS:
faa. PRESSURE CLASS: POSITIVE 2-INCH WG.
fab. MINIMUM SMACNA SEAL CLASS: B
fac. SMACNA LEAKAGE CLASS FOR RECTANGULAR: 12
fad. SMACNA LEAKAGE CLASS FOR ROUND: 12
fb. SUPPLY DUCTS CONNECTED TO VARIABLE-VOLUME AIR-HANDLING UNITS:
fba. PRESSURE CLASS: POSITIVE 4-INCH WG.
fbc. SMACNA LEAKAGE CLASS FOR RECTANGULAR: 6
fbd. SMACNA LEAKAGE CLASS FOR ROUND: 6
fc. RETURN DUCTS CONNECTED TO VARIABLE AND CONSTANT-VOLUME AIR-HANDLING UNITS:
fca. PRESSURE CLASS: POSITIVE OR NEGATIVE 2-INCH WG.
fcb. MINIMUM SMACNA SEAL CLASS: B
fcc. SMACNA LEAKAGE CLASS FOR RECTANGULAR: 12
fcd. SMACNA LEAKAGE CLASS FOR ROUND: 12
fd. EXHAUST DUCTS
fda. PRESSURE CLASS: POSITIVE OR NEGATIVE 2-INCH WG.
fdb. MINIMUM SMACNA SEAL CLASS: B IF NEGATIVE, A IF POSITIVE
fdc. SMACNA LEAKAGE CLASS FOR RECTANGULAR: 12
fdd. SMACNA LEAKAGE CLASS FOR ROUND: 6
fe. OUTSIDE AIR DUCTS:
fea. PRESSURE CLASS: POSITIVE OR NEGATIVE 2-INCH WG.
feb. MINIMUM SMACNA SEAL CLASS: B
fec. SMACNA LEAKAGE CLASS FOR RECTANGULAR: 12
fed. SMACNA LEAKAGE CLASS FOR ROUND: 12

g. SEISMIC-RESTRAINT DEVICES

1. CHANNEL SUPPORT SYSTEM.
2. GALVANIZED STEEL RESTRAINT CABLES.
3. HANGER ROD STIFFENER: STEEL TUBE OR STEEL SLOTTED-SUPPORT-SYSTEM SLEEVE WITH INTERNALLY BOLTED CONNECTIONS OR REINFORCING STEEL ANGLE CLAMPED TO HANGER ROD.

1.3 VOLUME CONTROL DAMPERS:

C. PROVIDE ALL BRANCHES AND DUCT TAKE-OFFS, FABRICATE IN ACCORDANCE WITH SMACNCA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, AND AS INDICATED.
D. FABRICATE SPLITTER DAMPERS OF MATERIAL SAME GAGE AS DUCT TO 24 INCHES SIZE IN EITHER DIRECTION, OR TWO GAGES HEAVIER FOR LARGER SIZES. SECURE WITH CONTINUOUS HINGE OR ROD.OPERATE WITH MINIMUM ¼ INCH DIAMETER ROD.
E. FABRICATE SINGLE BLADE DAMPERS FOR DUCT SIZES TO 12X30 INCH.
F. EXCEPT IN ROUND DUCTWORK 12 INCHES AND SMALLER, PROVIDE END BEARINGS.
G. PROVIDE LOCKING, INDICATING QUADRANT REGULATORS ON SINGLE AND MULTI-BLADE DAMPERS. WHERE WIDTH EXCEEDS 30 INCHES PROVIDE REGULATOR AT BOTH ENDS.

1.4 FLIXIBLE DUCT CONNECTIONS:

A. UL LISTED FIRE-RETARDANT NEOPRENE COATED WOVEN GLASS FIBER FABRIC TO NFPA 90, APPROXIMATELY 3 INCHES (75 MM) WIDE, CRIMPED INTO METAL EDGING STRIP.

1.5 AIR OUTLETS:

A. MANUFACTURERS: PRICE, TITUS, TUTTLE AND BAILEY, KRUEGER, OR APPROVED EQUIVALENT.
B. DIFFUSERS/REGISTERS/GRILLES: PROVIDE AIR DEVICE TYPE, OPERATION, COLOR, ETC. AS SCHEDULED.

2.1 INSTALLATION:

A. INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. INSTALL FLEXIBLE CONNECTIONS SPECIFIED BETWEEN FAN INLET AND DISCHARGE DUCTWORK. FLEXIBLE CONNECTORS SHALL NOT BE IN TENSION WHILE RUNNING.
C. PROVIDE BACK DRAFT DAMPERS ON DISCHARGE OF EXHAUST FANS AND AS INDICATED.
D. PREVENT PASSAGE OF UNFILTERED AIR AROUND FILTERS WITH FELT, RUBBER, OR NEOPRENE GASKETS.
E. LOCATE DUCTS WITH SUFFICIENT SPACE AROUND EQUIPMENT TO ALLOW NORMAL OPERATING AND MAINTENANCE ACTIVITIES.
F. PROVIDE FLEXIBLE CONNECTIONS IMMEDIATELY ADJACENT TO EQUIPMENT IN DUCTS ASSOCIATED WITH FANS AND MOTORIZED EQUIPMENT.
G. CHECK LOCATION OF AIR OUTLETS AND INLETS AND MAKE NECESSARY ADJUSTMENTS IN POSITION TO CONFORM TO ARCHITECTURAL FEATURES, SYMMETRY, AND LIGHTING ARRANGEMENTS.
H. PROVIDE BALANCING DAMPERS ON DUCT TAKE-OFF TO DIFFUSERS, AND GRILLES AND REGISTERS, REGARDLESS OF WHETHER DAMPERS ARE SPECIFIED AS PART OF THE DIFFUSER, OR GRILLE AND REGISTER ASSEMBLY. MECHANICAL INSULATION

MECHANICAL INSULATION:

1.1 SCOPE:

A. GENERAL: FURNISH ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETE INSTALLATION OF THERMAL INSULATION ON ALL HOT AND COLD PIPING SURFACE AND DUCTWORK INSTALLED UNDER THIS CONTRACT WHICH REQUIRE INSULATIONS FOR HEAT OR COLD CONSERVATION: FREEZE PROTECTION, PREVENTION OF CONDENSATION OR DRIPPINGS; COMFORT FOR OCCUPANTS; EFFICIENCY OR COMPLETE AND EFFECTIVE THROUGHOUT THE PROJECT.

B. SYSTEMS TO RECEIVE INSTALLATION INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO:
a. HYDRONIC WATER LINES (SYPPLY AND RETURN).
b. CONDENSATE DRAINAGE.
c. HORIZONTAL RAIN LEADERS AND ROOF DRAINS.
d REFRIGERANT LINES (BOTH HIGH AND LOW PRESSURES).
e. PIPING ACCESSORIES AND SPECIALTIES.
f. DUCTWORK

1.2 PIPE INSULATION:

A. ALL ABOVE GRADE INSULATION SHALL HAVE COMPOSITE (INSULATION, JACKET OR FACING, ALL ADHESIVE OR CEMENT USED TO ADHERE THE JACKET TO THE
B. APPROVED MANUFACTURERS: CERTAINEED, OWENS/CORNING, JOHNS-MANVILLE, UPJOHN, ARMSTRONG, OR APPROVED EQUIVALENT.
C. LOCATE INSULATION AND COVER SEAMS IN LEAST VISIBLE LOCATIONS.
D. NEATLY FINISH INSULATION AT SUPPORTS, PROTRUSIONS, AND INTERRUPTIONS.
E. PROVIDE INSULATED DUAL TEMPERATURE PIPES OR COLD PIPES CONVEYING FLUIDS BELOW AMBIENT TEMPERATURE WITH VAPOR BARRIER JACKETS. FINISH WITH GLASS CLOTH AND VAPOR BARRIER ADHESIVE. INSULATE COMPLETE SYSTEM.
F. FOR INSULATED PIPES CONVEYING FLUIDS ABOVE AMBIENT TEMPERATURE, PROVIDE STANDARD JACKETS. BEVEL AND SEAL ENDS OF INSULATION AT EQUIPMENT, FLANGES, AND UNIONS.
G. PROVIDE INSERT BETWEEN SUPPORT SHIELD AND PIPING ON PIPING 2 INCHES (50 MM) DIAMETER OR LARGER. FABRICATE OF CORK OR OTHER HEAVY DENSITY INSULATING MATERIAL SUITABLE FOR TEMPERATURE, NOT LESS THAN 6INCHES (150 MM) LONG.
H. SCHEDULE:
a. CONDENSATE DRAINS: 1" FLEXIBLE ELASTOMERIC. PROVIDE ALUMINUM JACKETING ON PIPING EXPOSED TO WEATHER.
b. REFRIGERANT LINES; 1" FLEXIBLE ELASTOMERIC, PROVIDE ALUMINUM JACKETING ON PIPING EXPOSED TO WEATHER.

1.3 DUCTWORK INSULATION:

A. MANUFACTURERS: KNAUF, OR APPROVED EQUIVALENT.
B. FIBERGLASS BLANKET INSULATION: GLASS FIBERS BONDED WITH A THERMOSETTING RESIN. COMPLY WITH ASTM C 553, TYPE II AND ASTM C 1290, TYPE III WITH FACTORY-APPLIED FSK JACKET. FACTORY-APPLIED JACKET REQUIREMENTS ARE SPECIFIED IN "FACTORY-APPLIED JACKETS" ARTICLE.
a. 'K' (KSI) VALUE: 0.29 AT 75 DEGREES F (0.042 AT 24 DEGREES C).
b. DENSITY: 0.75 LB/CU FT (24 KG/CU M).
c. DENSITY: 0.75 LB/CU FT (24 KG/CU M).
C. INSULATION PINS AND HANGERS:
a. METAL, ADHESIVELY ATTACHED, PERFORATED-BASE INSULATION HANGERS: BASEPLATE WELDED TO PROJECTING SPINDLE THAT IS CAPABLE OF HOLDING INSULATION, OF THICKNESS INDICATED, SECURELY IN POSITION INDICATED WHEN SELF-LOCKING WASHER IS IN PLACE. COMPLY WITH THE FOLLOWING REQUIREMENTS:
D. GLASS FIBER BLANKET INSULATION SCHEDULE (UNLESS SPECIFIED ON PLANS):
i. EXHAUST DUCTS EXPOSED TO OUTDOOR AIR: 1-1/2"
ii. VENTILATION DUCTS: 2"
iii. SUPPLY DUCTS: 2"
iv. RETURN DUCTS IN UNCONDITIONED SPACES: 1-1/2"

1.4 INSTALATION:

A. INSTALL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. CONTINUE INSULATION VAPOR BARRIER THROUGH PENETRATIONS.
C. MASTICS:
a. MATERIALS SHALL BE COMPATIBLE WITH INSULATION MATERIALS, JACKETS, AND SUBSTRATES; COMPLY WITH MIL-PRF-19565C, TYPE II.
i. FOR INDOOR APPLICATIONS, USE MASTICS THAT HAVE A VOC CONTENT OF 50 G/L OR LESS WHEN CALCULATED ACCORDING TO 40 CFR 59, SUBPART D (EPA METHOD 24).

SYSTEM TESTING, ADJUSTING, AND BALANCING

A. TESTING, ADJUSTING AND BALANCING OF ALL WORK SHALL BE MADE BY AN INDEPENDENT AABC OR NEBB CONTRACTOR WHO IS CURRENTLY LICENSED. THE HVAC CONTRACTOR SHALL INSTALL NEW FILTERS IN ALL UNITS PRIOR TO THE AIR BALANCE. THE COMPLETE AIR BALANCE SHALL TAKE PLACE WITH OUTSIDE AIR DAMPERS IN MINIMUM POSITION.
B. BALANCE AIR AND WATER QUANTITIES TO WITHIN +/- 5% OF THAT INDICATED ON THE DRAWINGS. ANY REQUIRED CHANGES IN SHEAVES, BELTS, PULLEYS, OR THE ADDITION OF DAMPERS REQUIRED TO ACHIEVE SPECIFIED FLOW RATES SHALL BE PERFORMED BY THE HVAC CONTRACTOR WITH NO ADDITIONAL COST.
C. THE BALANCE REPORT SHALL INCLUDE AS A MINIMUM THE FOLLOWING INFORMATION:
a. CERTIFICATION NUMBER AND SIGNATURE OF BALANCING CONTRACTOR.
D. INSTRUMENTATION LIST WITH LAST CALIBRATION DATES.
E. MAKE AND MODEL NUMBERS OF ALL HVAC EQUIPMENT.
b. AIR CFM AND STATIC PRESSURE READINGS (DISCHARGE AND SUCTION) AS MEASURED BY PITOT TUBE DUCT TRAVERSE AT THE UNIT.
c. MOTOR NAMEPLATE DATA WITH ACTUAL FIELD VOLTAGE AND AMPERAGE READINGS FOR EACH LEG.
F. MOTOR AND FAN RPMS, SHEAVE SIZES AND BELT SIZES.
G. OUTSIDE, RETURN, MIXED AND SUPPLY AIR TEMPERATURES AT FULL COOLING AND HEATING.
H. WATER BALANCE DATA INCLUDING GPM WITH INLET AND OUTLET TEMPERATURE AND PRESSURE READINGS (WHERE APPLICABLE)
I. MAKE AND MODEL NUMBERS OF ALL AIR DISTRIBUTION EQUIPMENT.
J. FINAL BALANCED AIR VOLUMES AT ALL OUTLETS (INCLUDING RETURNS WHERE DUCTED).
K. INDEXED PLAN WITH DIFFUSER AND RETURN LOCATIONS.
d. ALL CONTROL SEQUENCES SHALL BE TESTED (INTERLOCKED EQUIPMENT, SMOKE DETECTORS, SMOKE EVACUATION, ECONOMIZER, ETC.) AND OPERATING STATUS RECORDED IN THE REPORT.
e. THREE COPIES OF THE BALANCE REPORT SHALL BE SUBMITTED THROUGH THE GENERAL CONTRACTOR TO THE TENANT'S CONSTRUCTION MANAGER FOR APPROVAL.
f. THE BALANCING CONTRACTOR SHALL PERFORM ALL APPLICABLE TESTING AND BALANCING FUNCTIONS AS REQUIRED FOR THE SYSTEM DESIGNED IN THESE DRAWINGS. THE BALANCING CONTRACTOR SHALL RECHECK ANY ITEMS THAT THE TENANT DEEMS NECESSARY AT NO ADDITIONAL COST TO THE TENANT.
g. CONTROLS CONTRACTOR SHALL PROVIDE, AT NO COST, ALL NECESSARY SOFTWARE AND HARDWARE REQUIRED FOR SYSTEM BALANCE AND VERIFICATION OF CONTROLS. CONTROLS CONTRACTOR SHALL BE PRESENT AND ASSIST TEST & BALANCE CONTRACTOR DURING CONTROLS VERIFICATION. PRIOR TO START OF TEST & BALANCE, THE CONTROLS CONTRACTOR SHALL VERIFY ALL CONTROLS ARE OPERATIONAL AND ALL INPUT VALUES HAVE BEEN ENTERED PER DESIGN DOCUMENTATION. CONTROLS CONTRACTOR SHALL PROVIDE CONTROL SYSTEM START-UP SHEETS VERIFYING CONTROLS OPERATION PRIOR TO THE START OF TEST & BALANCE.
i. FINAL BALANCE REPORT SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUALS.
L. MECHANICAL CONTROLS SHALL COMPLY AND ADHEAR TO ASHRAE GUIDELINE 36.

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Salado, Texas 76571

STATE OF TEXAS
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DFW
DALLAS FORT-WORTH INTERNATIONAL AIRPORT

Bugatti Bar & Taverna
2040 N. International Parkway
Space ID: A-2-048C-A01
DFW Airport, TX 75261

REVISIONS

No.	Date

SHEET TITLE
MECHANICAL SPECS

05/08/2024

SHEET NO:
M0.2

FOR QUESTIONS, CALL THE
Austin Office
REGION 47
PHONE: (512) 539 - 0483
EMAIL: reg47@thermotek.com

HOOD INFORMATION – QUI6769757

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S) WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP	TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG END TO END	ROW
1		5424 T-ND-2-PSP-F	THERMOTEK	8' 5"	600 DEG	I	HEAVY	214	1800			4"	14"	1800	1684	-0.698"	1500	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	FILTER(S) TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	LIGHT(S) QTY	TYPE	WIRE GUARD	UTILITY CABINET(S) LOCATION	SIZE	FIRE SYSTEM TYPE	FIRE SYSTEM SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
1		CAPTRATE SOLO FILTER	6	20"	16"	85% SEE FILTER SPEC	3	RECESSED ROUND	NO							YES	512 LBS

HOOD

HOOD NO	TAG	OPTION
1		FIELD WRAPPER 18.00" HIGH FRONT, RIGHT.
		BACKSPLASH 122.00" HIGH X 103.00" LONG 430 SS VERTICAL.
		LEFT SIDESPLASH 122.00" HIGH X 72.00" LONG 430 SS VERTICAL.
		RIGHT SIDESPLASH 80.00" HIGH X 30.00" LONG 430 SS VERTICAL.
		RIGHT END STANDOFF (FINISHED) 1" WIDE 54" LONG INSULATED.
		LEFT END STANDOFF (FINISHED) 1" WIDE 54" LONG INSULATED.
		INSULATION FOR BACK OF HOOD.
		RIGHT WALL AS END PANEL.
		LEFT WALL AS END PANEL.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S) WIDTH	LENG	DIA	CFM	SP
1		Front	103"	16"	6"	MUA	12"	28"		750	0.211"
						MUA	12"	28"		750	0.211"

WALL-MOUNT UTILITY CABINET

HOOD NO	LOCATION	SIZE	UTILITY CABINET(S) FIRE SYSTEM TYPE	FIRE SYSTEM SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	WEIGHT
1	WALL MNT	12"x48"x24"	TANK FS	4.0/4.0	SC-E011011MA	1 LIGHT 1 FAN	340.00 LBS

SPECIFICATION: CAPTRATE GREASE-STOP SOLO FILTER

THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

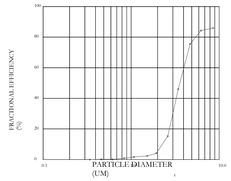
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

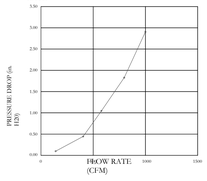
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05.
MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.

EFFICIENCY VS PARTICLE DIAMETER



PRESSURE DROP VS FLOW RATE



CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:.
NFPA #96.
NSF STANDARD #2.
UL STANDARD #1046.
INT. MECH. CODE (IMC).
ULC-S649.

THERMOTEK HOODS ARE BUILT IN COMPLIANCE WITH UL 710 AND NFPA 96 AND ARE RECOGNIZED BY ONE OR MORE OF THE FOLLOWING:

ETL SANITATION LISTED

ETL LISTED FILE# 3054804-001

THERMOTEK HOODS ARE BUILT IN COMPLIANCE WITH

NFPA #96
NSF
ETL LISTED #3054804-001

ETL LISTING DESCRIPTION

THE THERMOTEK MODEL [illegible] HAS BEEN ETL-TESTED, LISTED, AND APPROVED TO EXHAUST A MINIMUM OF 150/200 CFM PER LINEAR FOOT OVER [illegible] DEGREE COOKING EQUIPMENT

GREASE DUCT & CHIMNEY SPECIFICATIONS:
PROVIDE GREASE DUCT EQUAL TO THERMOTEK MODEL "TDW" ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "TDW" IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "TDW" DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER THE MANUFACTURES INSTALLATION GUIDE.
PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER MANUFACTURES LISTING MODEL "TDW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12".
DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE ACCUMULATION IN HORIZONTAL RUNS.

IF THE DUCT OR CHIMNEY IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE UL-2221 OR UL-103 HT LISTED DOUBLE WALL GREASE DUCT OR DOUBLE WALL CHIMNEY EQUAL TO THERMOTEK MODEL "TDW- 2R, 2R TYPE HT, 3R, OR 3Z" ROUND 20 GAUGE 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

THERMOTEK RECOMMENDS THE USE OF LISTED, PRE-FABRICATED ROUND GREASE EXHAUST DUCT TO REDUCE STATIC PRESSURE IN THE SYSTEM, MINIMIZE INSTALLATION AND INSPECTION TIMES, AND ENSURE DUCT IS LIQUID TIGHT

HVAC DISTRIBUTION NOTE

HIGH VELOCITY DIFFUSERS OR HVAC RETURNS SHOULD NOT BE PLACED WITHIN TEN (10) FEET OF THE EXHAUST HOOD. PERFORATED DIFFUSERS ARE RECOMMENDED.

VERIFY CEILING HEIGHT

___' - ___"

HEIGHT REQUIRED TO VERIFY THAT HOOD FITS SPACE AND TO SIZE THE ENCLOSURE PANELS

CUSTOMER APPROVAL TO MANUFACTURE:

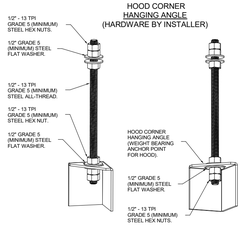
APPROVED AS NOTED ☐
APPROVED WITH NO EXCEPTION TAKEN ☐
REVISE AND RESUBMIT ☐

SIGNATURE _____
YOUR TITLE _____
DATE _____ _____

PATENT NUMBERS

AC-PSP (UNITED STATES) - US PATENT 7963830 B2.
AC-PSP WALL (CANADA) - CA PATENT 2820509.
AC-PSP ISLAND (CANADA) - CA PATENT 2520330.

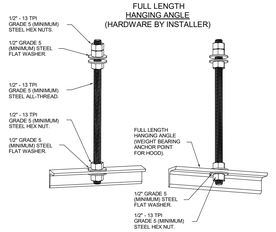
HOOD CORNER
HANGING ANGLE
(HARDWARE BY INSTALLER)



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.

FULL LENGTH
HANGING ANGLE
(HARDWARE BY INSTALLER)



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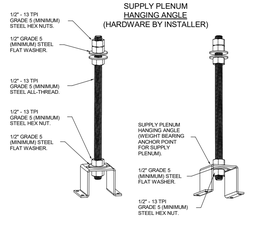
SUPPLY PLENUM
HANGING ANGLE
(HARDWARE BY INSTALLER)



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Bugatti Bar - DFW Airport

4/30/2024
6769757
reg.eden
3/4" = 1'-0"
MASTER DRAWING

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05/08/2024

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STATE OF TEXAS
COOPER GILL
128999
LICENSED PROFESSIONAL ENGINEER
05/08/2024

DFW
DALLAS FORT-WORTH INTERNATIONAL AIRPORT

Bugatti Bar & Taverna

2040 N. International Parkway
Space ID: A-2-048C-A01
DFW Airport, TX 75261

REVISIONS

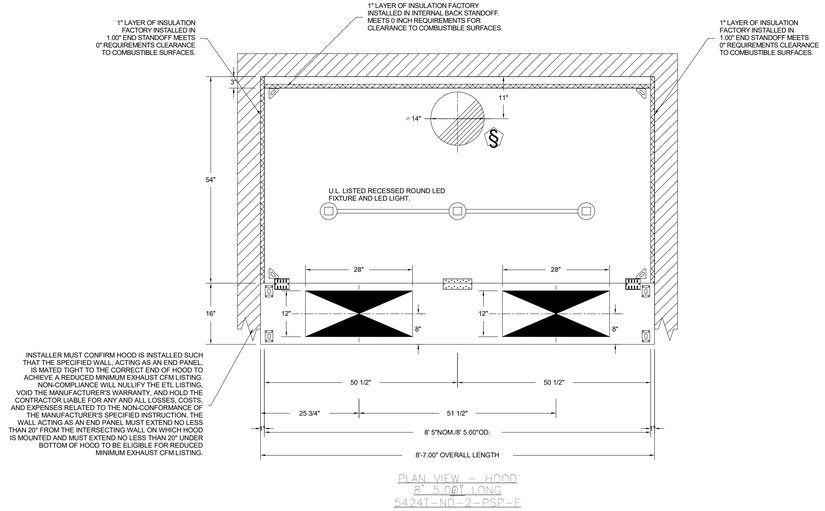
No.	Date

SHEET TITLE
MECHANICAL HOOD SPECS

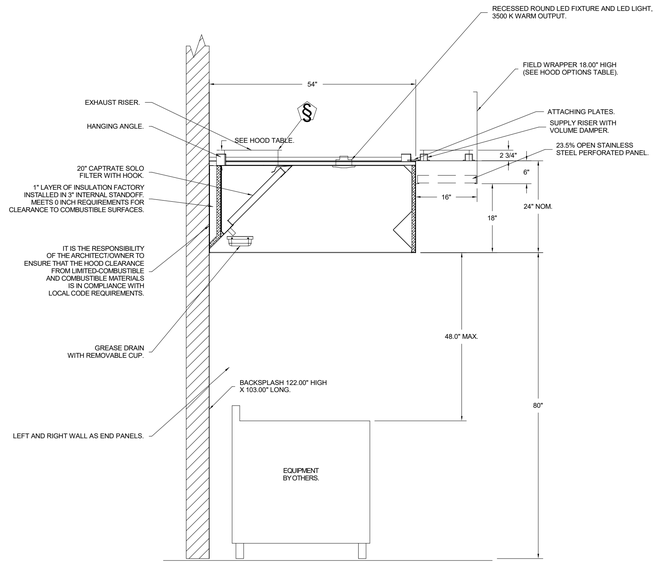
05/08/2024

SHEET NO:
M0.3

C:\Servicenow\Cen-Tex Engineering Dropbox\24-026 - Bugatti Bar & Taverna - Dallas, TX\2 Mechanical\Bugatti - Mechanical Model.rvt

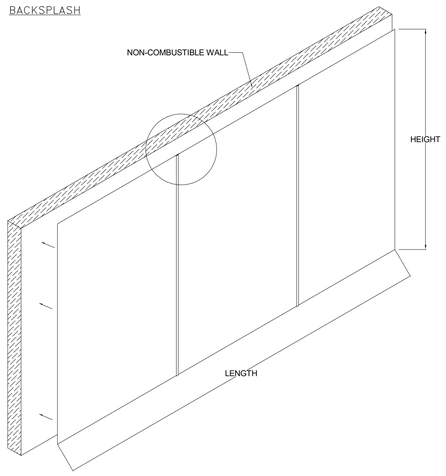


PLAN VIEW – HOOD
8' 5.00" LONG
5424T-ND-2-PSP-F



SECTION VIEW – MODEL
5424T-ND2-PSP-F
#1

BACKSPLASH



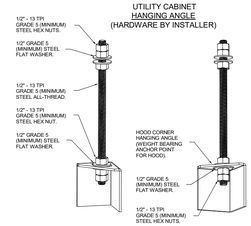
- BACKSPLASH IS NOT INSULATED AND IS UNSUITABLE FOR INSTALL AGAINST COMBUSTIBLE WALLS

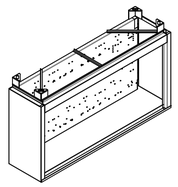
WALL-MOUNT UTILITY CABINET
ASSEMBLY INSTRUCTIONS

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

CABINET TO BE HUNG BY HOOD INSTALLER. SEE UTILITY CABINET SCHEDULE FOR CABINET SIZE.

UTILITY CABINET
HANGING ANGLE
(HARDWARE BY INSTALLER)





CLEARANCE TO COMBUSTIBLES

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

- *0" CLEARANCE TO COMBUSTIBLES CONFORMS TO UL710 STANDARD.

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Bugatti Bar - DFW Airport

4/30/2024

6769757

reg.eden

3/4" = 1'-0"

MASTER DRAWING

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Bugatti Bar & Taverna

2040 N. International Parkway
Space ID: A-2-048C-A01
DFW Airport, TX 75261

REVISIONS

No.	Date

SHEET TITLE
MECHANICAL HOOD SPECS

05/08/2024

SHEET NO:

M0.4

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FIRE SYSTEM INFORMATION -

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION	
						SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0/4.0	40	28	WALL UTILITY CABINET LEFT	N/A

GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		SC ELECTRICAL	2.000	THERMOTEK

FIRE SYSTEM PARTS LIST

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
1		0 - 0 - TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - 12-F28021-32144-OT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 360°F.	1	0
		0 - 0 - 32-00002 QUIK SEAL - 1/2" (UL).	1	0
		0 - 0 - 361091 3/8" BRASS PLUG.	3	0
		0 - 0 - 4429K153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW, BRASS.	2	0
		0 - 0 - 4429K422 1/2" X 1/4" BRASS REDUCING BUSHING.	1	0
		0 - 0 - 79425 3/8" NPT FEMALE TO 1/2" MALE PROPRESS ADAPTER.	3	0
		0 - 0 - 79525 1/2" 90 PRO-PRESS ELBOW WITH 1/2" NPT FEMALE CONNECTION, VIEGA.	1	0
		0 - 0 - 79580 1/2" X 1/2" PRO-PRESS TEE X 1/2" NPT FEMALE CONNECTION, VIEGA.	2	0
		0 - 0 - 87-120042-001 SECONDARY ACTUATOR VALVE (SVA) - SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-120045-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5" BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	2	0
		0 - 0 - 87-300030-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300152-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	8	0
		0 - 0 - 9055455PC PRO PRESS 1/2 PRESS X PRESS 90 ELBOW LD.	3	0
		0 - 0 - 9097200PC PRO PRESS PC611 1/2 PRESS TEE LD.	6	0
		0 - 0 - 98694A115 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	4	0
		0 - 0 - A0034332 JUNCTION BOX FOR MANUAL PULL STATION. 1.5" DEEP BACK BOX, RED COLOR.	1	0
		0 - 0 - A31494 1/4" NPT SCHRADER VALVE AND CAP, JB INDUSTRIES. 1/4" FLARE X 1/4" MPT HALF UNION. USED ON TANK SERVICE PORT.	1	0
		0 - 0 - B1145 3/8" BLACK IRON 90 ELL.	2	0
		0 - 0 - DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - FSPK-SC-DN-S-TAN SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN END TO END HOODS WITH LESS THAN A 4' GAP. KIT CONTAINS 7 FEET OF BLACK MG WIRE, 7 FEET OF TAN MG WIRE, 5 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	1	0
		0 - 0 - FSPK-SC-DN-L-TAN SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN END TO END HOODS WITH LESS THAN A 14' GAP OR BACK TO BACK HOODS. KIT CONTAINS 17 FEET OF BLACK MG WIRE, 17 FEET OF TAN MG WIRE, 15 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	1	0
		0 - 0 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	6	0
		0 - 0 - TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	2	0
		16 - 16 - 79210 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	6	0
		16 - 16 - OL-F NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE).	6	0
		26 - 26 - QSA-3/8 QUIK SEAL - 3/8" (UL).	6	0
		34 - 34 - A0034331 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT, RED COLOR.	1	0

ThermoTek

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Bugatti Bar - DFW Airport

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3/4" = 1'-0"

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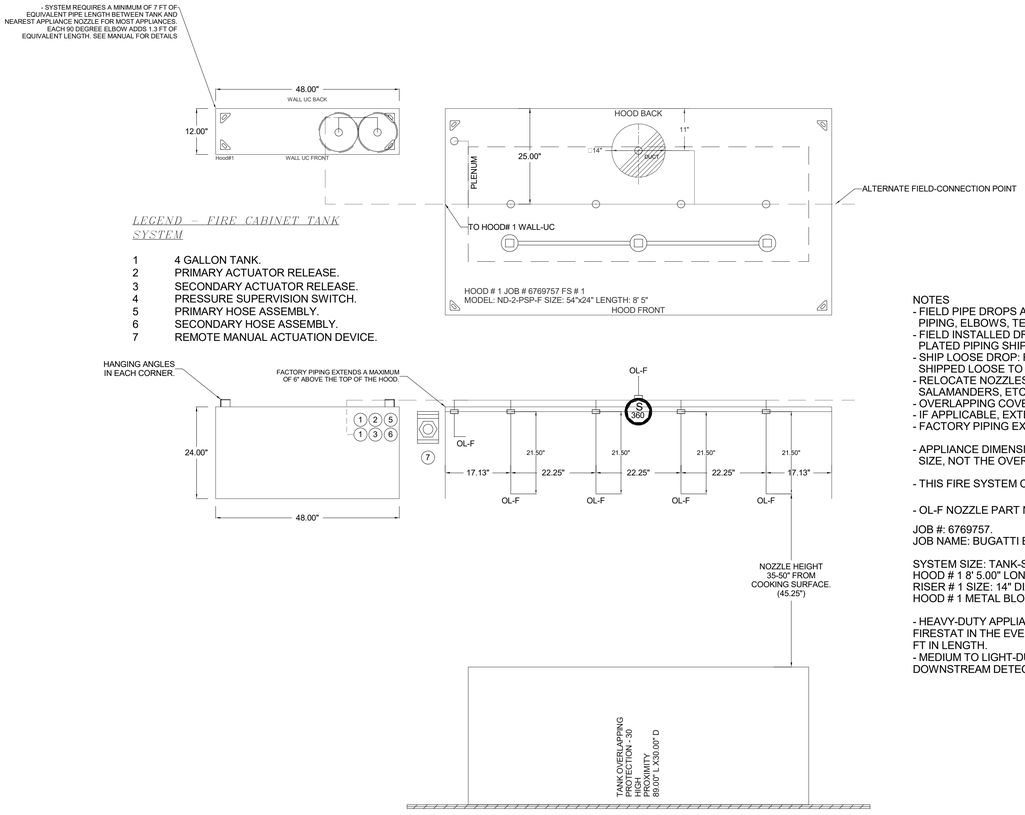

NOTES
- FIELD PIPE DROPS AS SHOWN
  PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROP: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
- SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.

- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.

- OL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

JOB #: 6769757.
JOB NAME: BUGATTI BAR - DFW AIRPORT.

SYSTEM SIZE: TANK-SP-2-WC DESIGN FP: 28. MAXIMUM FP: 40.
HOOD # 1 8' 5.00" LONG x 54" WIDE x 24" HIGH.
RISER # 1 SIZE: 14" DIA.
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

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EXHAUST FAN INFORMATION –

JOB#6769757

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	KEF-1	1	DU85HTH	THERMOTEK	1800	1.200	1450	TEAO-ECM	1.000	0.5440	1	115	11.6	570 FPM	94	13.6

DOAS/RTU FAN SCHEDULE –

JOB#6769757

FAN INFORMATION										ELECTRICAL INFORMATION					COOLING INFORMATION											REHEAT INFORMATION					NOTES
FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	BLOWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	WEIGHT (LBS)	ESP	HP	PHASE	VOLT	MCA	MOCP	OUTSIDE AIR		MIXED AIR		LEAVING AIR			CAPACITY		IEER	ISMRE	DISCHARGE		CAPACITY		MOISTURE REMOVAL RATE	
																DB	WB	DB	WB	DB	WB	DP	TOTAL	SENS.			DB	WB	DESIRED	MAX		
2	MAU-1	1	TTRTU1-15-4T-MPU	THERMOTEK	15P-1	0	1500	1500	1090	0.500	1.50	3	208	22.8A	25A	100.0°F	76.0°F	100.0°F	76.0°F	77.6°F	66.2°F	60.4°F	52.8 MBH	34.4 MBH	17.9	6.1	-1.0°F	-1.0°F	7 MBH	0 MBH	16.8 LBS/HR	1,2,3,4,5,6,7,8,9,10,11,12,13

NOTES:

1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL
2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE
3. INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER
4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE
5. EC MOTOR CONDENSING FANS
6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE
7. SUCTION LINE ACCUMULATOR
8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY
9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT)
10. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE
11. FULLY MODULATING HOT GAS REHEAT
12. HAIL GUARD FOR CONDENSING COIL
13. 1" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-4.3 INSULATION-MINIMUM 24GA EXTERIOR W/ 18GA BASE

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1		1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR85HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -MSC- (TELCO), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
2		1	RTU TOTAL CFM MONITORING
		1	INTAKE FIRESTAT SET TO 135°F
		1	FREEZESTAT SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV
		1	PREWIRE CONTROLS THIS UNIT, THE #28, #47, "MA", OR "E2" PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
		1	2" MERV 13 FILTERS FOR RTU1 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU1 (QTY. 4)
		1	RTU1 DOWN DISCHARGE
		1	RTU FIXED 100% OA INTAKE CONTROL
		1	RTU1 NO RETURN - 100% OA - MPU
		1	RTU1 CURB DUCT HANGER
		1	4 TON MODULATING COOLING OPTION, 208/230V: R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FAN
		1	MOISTURE ELIMINATOR FOR SIZE 1, 4 TON RTU. NO REHEAT
		1	RTU1 HAIL GUARD
		1	UNIT MOUNTED VFD CONFIGURED FOR DCV
		1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT

FAN ACCESSORIES

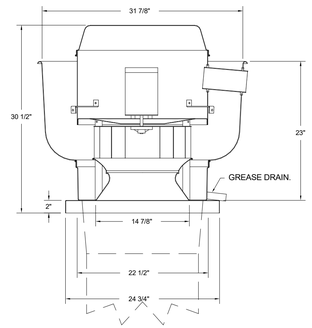
FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1		YES						

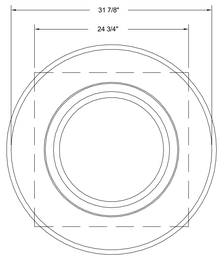
CURB ASSEMBLIES

NO	ON FAN	WEIGHT	ITEM	SIZE
1	# 1	44 LBS	CURB	23.000"W X 23.000"L X 26.000"H VENTED HINGED.
2	# 2	83 LBS	CURB	41.000"W X 71.000"L X 14.000"H INSULATED.

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

FAN #1 DU85HTH - EXHAUST FAN





TOP VIEW

FEATURES:

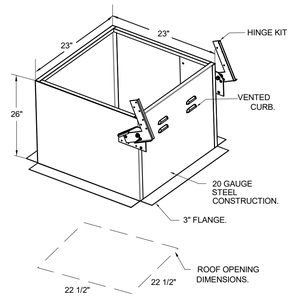
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

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

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

OPTIONS

- GREASE BOX.
- FAN BASE CERAMIC SEAL - DU/DR85HFA - INSTALLED AT PLANT - FOR GREASE DUCTS.
- ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -MSC- (TELCO), CCW ROTATION.
- 2 YEAR PARTS WARRANTY.



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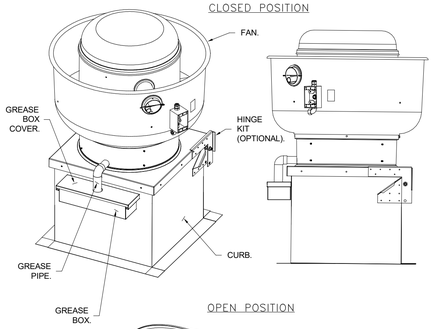
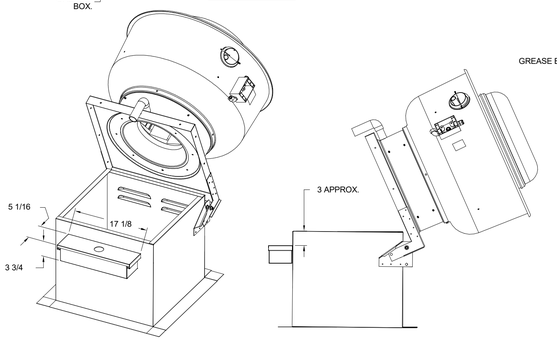
GREASE BOX INSTALLATION

GREASEBOX
REV.#2 05/19/22

CLOSED POSITION



OPEN POSITION



PARTS INCLUDED

GREASE BOX.
GREASE BOX COVER.
GREASE PIPE.

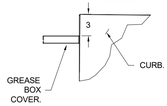
SHEET METAL SCREWS
3 - LONG (3/4" LG.).

GREASE BOX FIELD INSTALLATION

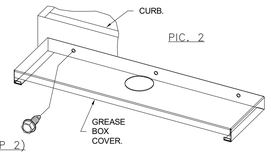
STEP 1)

ATTACH GREASE BOX COVER TO THE CURB,
HOLD 3" DIMENSION AS SHOWN ON PIC. 1.
SCREW GREASE BOX COVER TO CURB USING (3) LONG (3/4" LG.)
SCREWS AS SHOWN ON PIC. 2.

PIC. 1



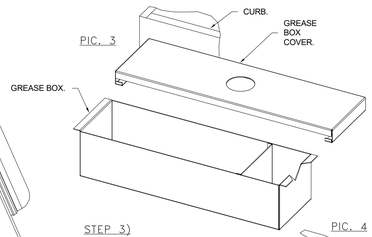
PIC. 2



STEP 2)

ATTACH GREASE BOX TO GREASE BOX COVER, SLIDE AND DROP.
AS SHOWN ON PIC. 3.

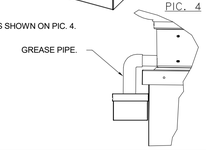
PIC. 3



STEP 3)

INSTALL GREASE PIPE AS SHOWN ON PIC. 4.

PIC. 4



*NOTE: UL 705 INSTALL.

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AIR DIFFUSION SUPPLY DUCT SPECIFICATIONS:
PROVIDE AIR DIFFUSION SUPPLY DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL DW-S0(HC), DW-S90(HC), & DW-S180(HC).
THREE DISTINCT HOLE PATTERN OPTIONS TO COVER A VARIETY OF CEILING HEIGHTS.
NO ADDITIONAL DIFFUSERS REQUIRED, AS THE DUCT ITSELF PROVIDES AIR DIFFUSION.
MADE OF HIGH QUALITY STAINLESS STEEL DESIGNED TO LAST 20+ YEARS.
HIGH INDUCTION SUPPLY DUCT IS CONSTRUCTED USING 24 GAUGE, 430 SS - 5" THRU 24".
HIGH INDUCTION SUPPLY DUCT IS CONSTRUCTED USING 20 GAUGE, 430 SS - 26" THRU 36".
QUICK ONSITE ASSEMBLY USING EPDM GASKETS & UNIVERSAL V-BANDS.
DOUBLE WALL SUPPLY DUCT AVAILABLE FOR INTERIOR AND EXTERIOR SPACES, EITHER CONDITIONED OR UNCONDITIONED.
DOUBLE WALL SUPPLY DUCT AVAILABLE IN DW-1S, DW-2S, & DW-3S TO MEET SPECIFIC REGIONAL "R" VALUE REQUIREMENTS.

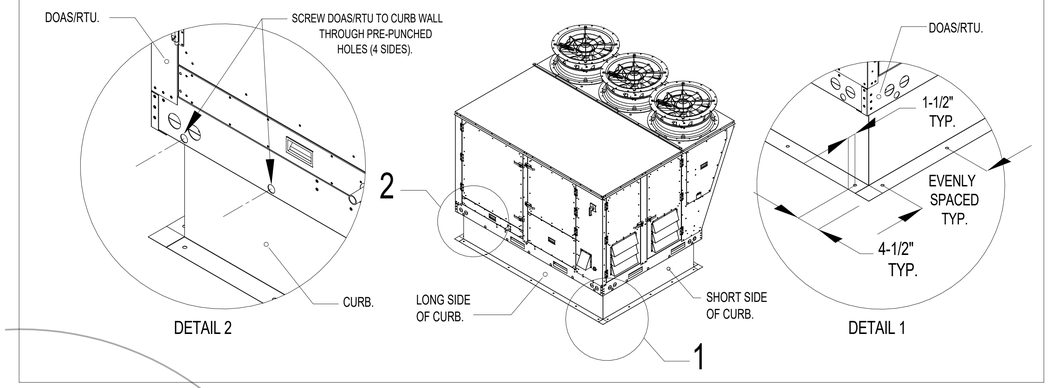
Insulation R-Value Recommendations		
Supply Duct Type	Minimum R-value	Space Type
Single Wall - S & -HC	N/A	Conditioned Space Only
Double Wall - 1S	R-4	Unconditioned Interior Space Only
Double Wall - 2S	R-8	Unconditioned Space Climate Zones 1-4
Double Wall - 3S	R-12	Unconditioned Space Climate Zones 5-8

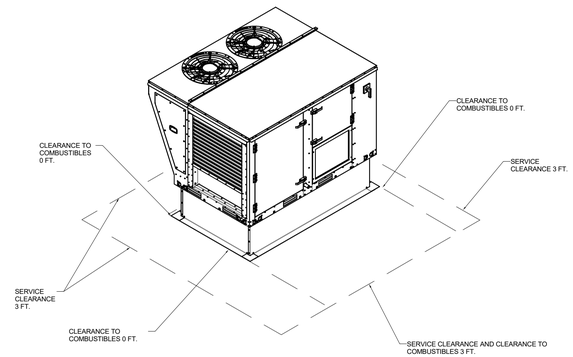
DOUBLE WALL SUPPLY DUCT IS INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.
AIR DIFFUSION SUPPLY DUCT COMPLIES WITH SMACNA (SHEET METAL AND AIR CONDITIONING CONTRACTORS) BEST PRACTICES.
POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTION TO DISCHARGE, SEE NFPA 13, TABLE 8.12.5.1.1.

TYPICAL DOAS/RTU ROOF MOUNTING INSTALLATION INSTRUCTIONS

1. SECURE THE CURB TO THE ROOF FRAMING MEMBERS BY DRILLING 1/4" PILOT HOLES IN THE CURB FLANGES AT LOCATIONS SHOWN IN THE DIAGRAM BELOW. USING 3/8" X 2" ZINC PLATED STEEL LAG BOLTS, AND ZINC PLATED WASHERS, SCREW THROUGH THE CURB FLANGES AND INTO THE ROOF FRAMING MEMBERS. A MINIMUM OF (5) LAG BOLTS ON EACH SHORT SIDE, AND (7) LAG BOLTS ON EACH LONG SIDE IS REQUIRED.

2. SECURE THE UNIT BASE TO THE SIDE WALLS OF THE CURB USING (24) 1/4"-14 X 2" SELF-DRILLING, STEEL ZINC PLATED SCREWS. PRE-PUNCHED HOLES HAVE BEEN PROVIDED FOR EACH SCREW LOCATION.





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Bugatti Bar - DFW Airport
4/30/2024
6769757
reg.eden
3/4" = 1'-0"
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Bugatti Bar & Taverna

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Space ID: A-2-048C-A01
DFW Airport, TX 75261

REVISIONS

No.	Date

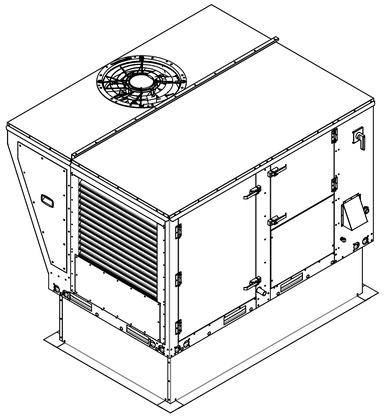
SHEET TITLE
MECHANICAL HOOD SPECS
05/08/2024

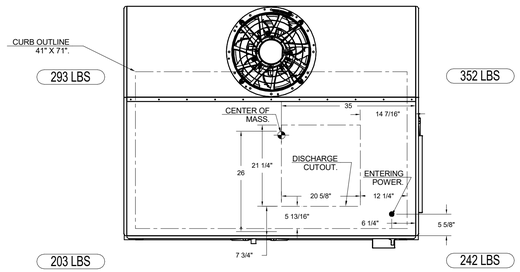
SHEET NO:
M0.9

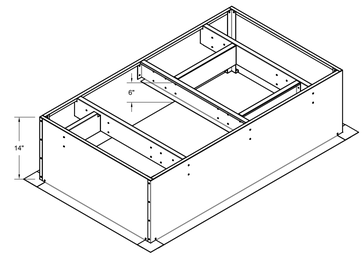
FAN #2 TTRTU1-15-4T-MPU - SUPPLY FAN

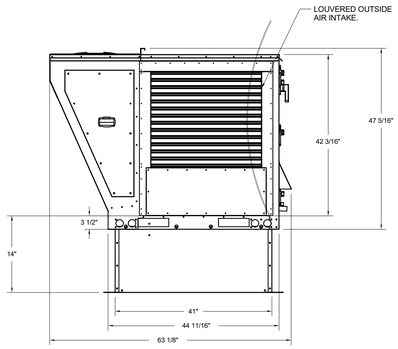
NOTES:
1. DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
2. ( ) DENOTES CORNER WEIGHT.
3. ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.
4. CONNECTION FROM BREAKER TO UNITS SAFETY DISCONNECT SWITCH TO BE COPPER WIRE ONLY.

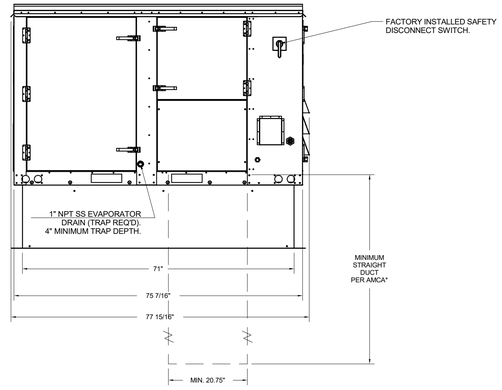
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 20.75" x 21.5".

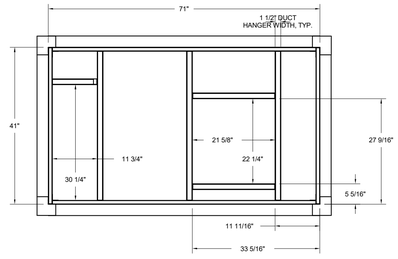












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REVISIONS

No.	Date

SHEET TITLE
MECHANICAL HOOD SPECS

05/08/2024

SHEET NO:
M0.10

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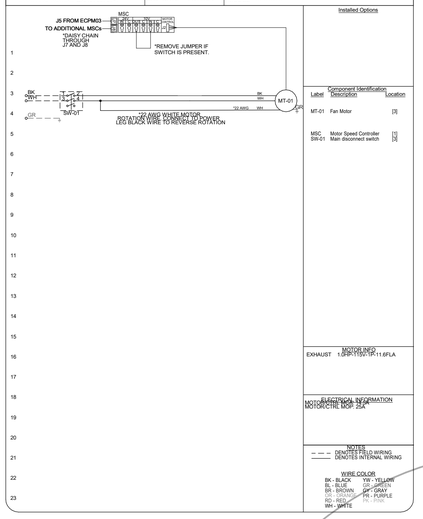
Exhaust Fan Wiring

JOB	6769757 - Bugatti Bar - DFW Airport		
DRAWING NUMBER	EXH6769757-1	SHIP DATE 4/30/2024	MODEL BUG60TH



Installed Options

Label	Component Identification Description	Location
MT-01	Fan Motor	[3]
MSC	Motor Speed Controller	[4]
SW-01	Main disconnect switch	[4]

MOTOR INFO

EXHAUST 1/3HP/115V/1PH/11.6FLA

ELECTRICAL INFORMATION

MOTOR CTRL MSP 25A

NOTES:
- - - DENOTES FIELD WIRING
——— DENOTES INTERNAL WIRING

WIRE COLOR

BK - BLACK	YW - YELLOW
BL - BLUE	GN - GREEN
BR - BROWN	GY - GRAY
OR - ORANGE	PK - PURPLE
RD - RED	
WH - WHITE	

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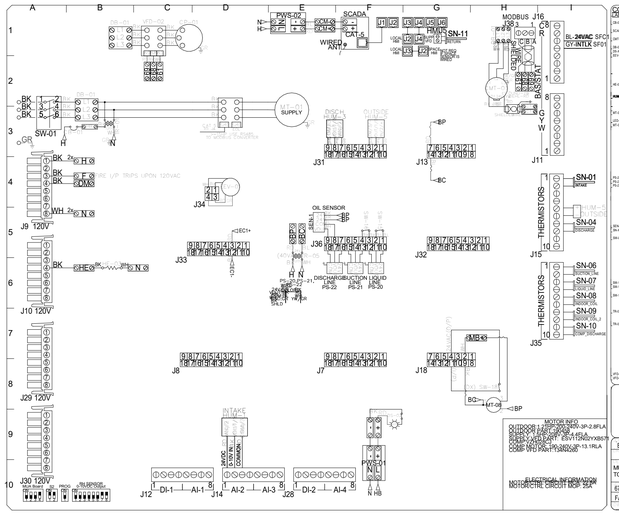
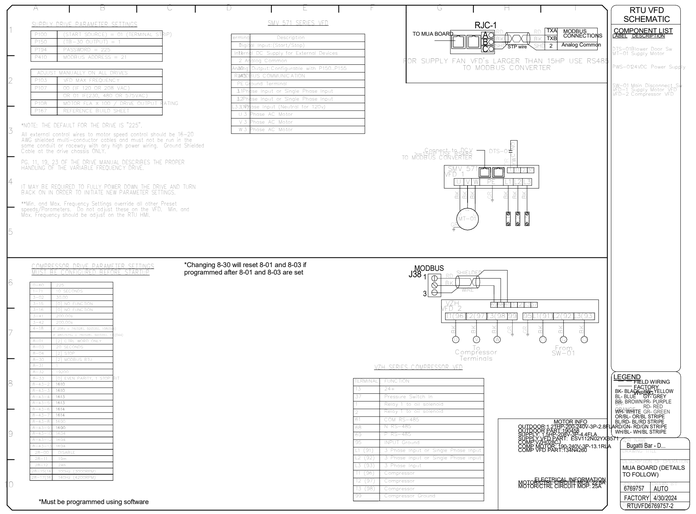
05/08/2024

SHEET NO:

M0.11





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REVISIONS

No.	Date

SHEET TITLE

MECHANICAL HOOD SPECS

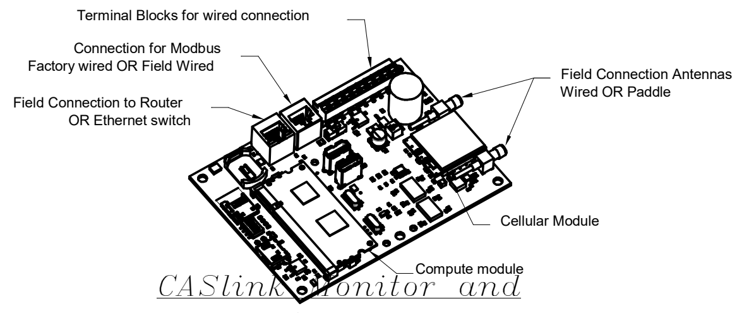
05/08/2024

SHEET NO:

M0.12

ELECTRICAL PACKAGE – JOB #6769757

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	ϕ	HP	VOLT	FLA
1		SC-E011011MA	WALL UTILITY CABINET LEFT	FACE MOUNT LEFT SIDE OF HOOD	1 LIGHT	SMART CONTROLS THERMOSTATIC CONTROL W/ RELAY ON/OFF WITH SUPPLY	EXHAUST	1	1.000	115	11.6
				HOOD # 1	1 FAN		SUPPLY	3	1.500	208	4.4



CASlink Monitor and Control

– Hood control panel to support communications to cloud-based Building Management System. Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list. Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the points list. Hood Control Panel to allow cloud-based Building Management System to implement SYSTEM ECONOMIZER control strategies for fully integrated Building Management.

MONITORING AND CONTROL POINTS LIST

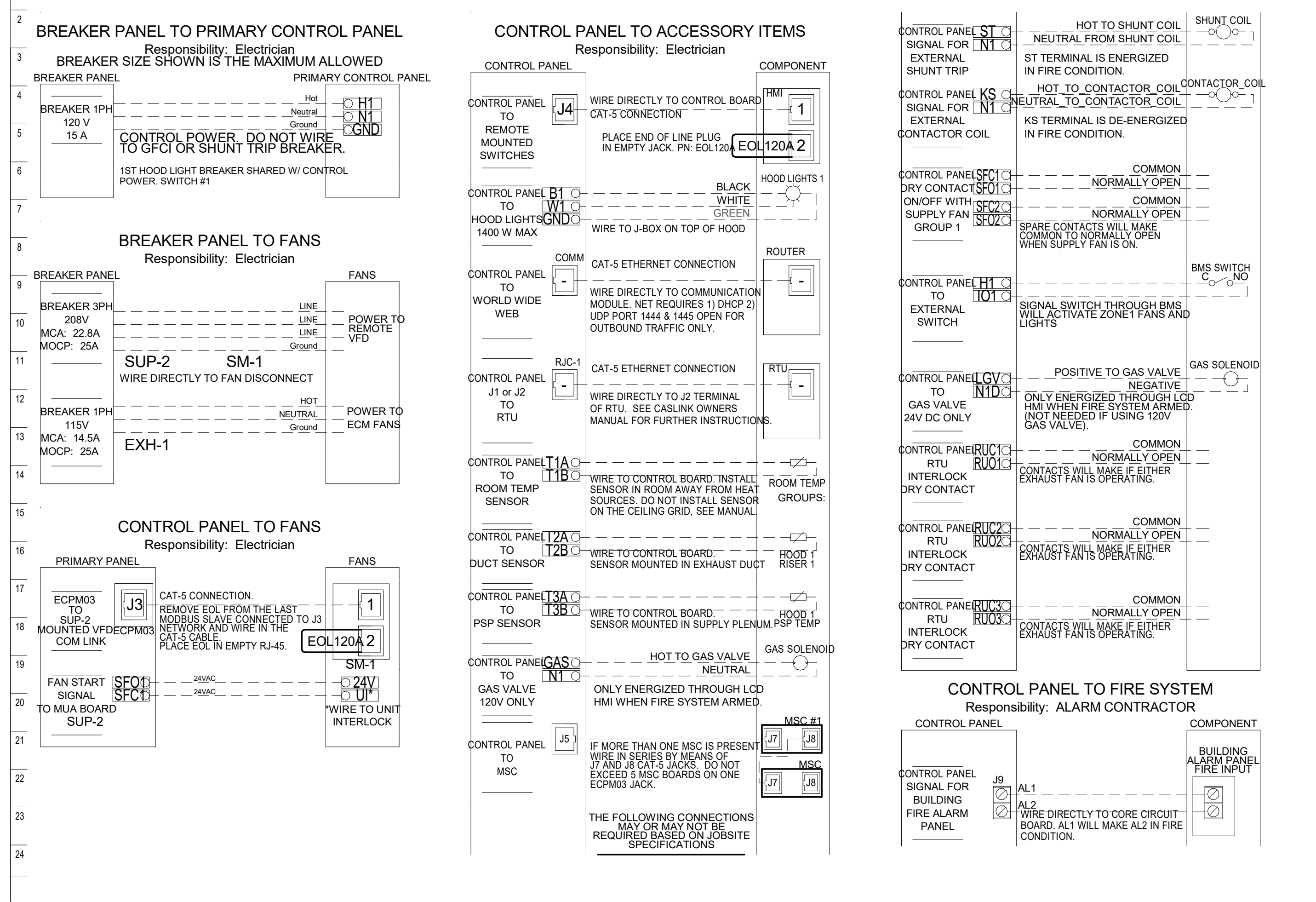
DCV

Packages Room	*Function*
Temperature Duct	*MONITOR*
Temperature(s) MUA Discharge	*MONITOR*
Temperature Kitchen RTU Discharge	*MONITOR*
Temperature Fan	*MONITOR*
Speed Fan	*MONITOR*
Amperage Fan	*MONITOR*
Power VFD	*MONITOR*
Faults Controller	*MONITOR*
Faults Fan	*MONITOR*
Faults Fan	*MONITOR*
Status PCU	*MONITOR*
Faults PCU Filter Clog	*MONITOR*
Percentages Fire	*MONITOR*
Condition CORE Fire	*MONITOR*
System Building	*MONITOR*
Pressures Prep Time	*MONITOR MONITOR &*
Button Fans	*CONTROL MONITOR &*
Button Lights	*CONTROL MONITOR &*
Button Wash	*CONTROL MONITOR &*
Button	*CONTROL*

SC

Packages Room	*Function*
Temperature(s) Duct	*MONITOR*
Temperature(s) MUA Discharge	*MONITOR*
Temperature Kitchen RTU Discharge	*MONITOR*
Temperature Controller	*MONITOR*
Faults Fan	*MONITOR*
Faults Fan	*MONITOR*
Status PCU	*MONITOR*
Faults PCU Filter Clog	*MONITOR*
Percentages Fire	*MONITOR*
Condition CORE Fire	*MONITOR*
System Building	*MONITOR*
Pressures Fans	*MONITOR MONITOR &*
Button(s) Lights	*CONTROL MONITOR &*
Button(s) Wash	*CONTROL MONITOR &*
Button	*CONTROL*

JOB NO	MODEL NUMBER	DRAWN BY	SCHEMATIC TYPE	DESCRIPTION OF OPERATION:
6769757	SC-E011011MA		INSTALL	Mixed Voltage w/ control for 1 3Ph Supply Fan, 1 120V 1Ph Exhaust Fan, Exhaust on in Fire, Lights out in Fire, Relay On/Off with Supply Fan, Fan(s) On/Off Thermostatically Controlled. Room temperature sensor shipped loose for field installation. INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD.
	JOB NAME: Bugatti Bar - DFW Airport	DATE: 4/30/2024	DWG NO: ECP #1-1	



BREAKER PANEL TO PRIMARY CONTROL PANEL

Responsibility: Electrician

BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED

CONTROL POWER. DO NOT WIRE TO GFCI OR SHUNT TRIP BREAKER.

1ST HOOD LIGHT BREAKER SHARED W/ CONTROL POWER. SWITCH #1

BREAKER PANEL TO FANS

Responsibility: Electrician

WIRE DIRECTLY TO FAN DISCONNECT

CONTROL PANEL TO FANS

Responsibility: Electrician

CAT-5 CONNECTION. REMOVE EOL FROM THE LAST MODBUS SLAVE CONNECTED TO J3 NETWORK AND WIRE IN THE CAT-5 CABLE. PLACE EOL IN EMPTY RJ-45.

CONTROL PANEL TO ACCESSORY ITEMS

Responsibility: Electrician

WIRE DIRECTLY TO CONTROL BOARD CAT-5 CONNECTION

PLACE END OF LINE PLUG IN EMPTY JACK. PN: EOL120A

WIRE TO J-BOX ON TOP OF HOOD

CAT-5 ETHERNET CONNECTION

WIRE DIRECTLY TO COMMUNICATION MODULE. NET REQUIRES 1) DHCP 2) UDP PORT 1444 & 1445 OPEN FOR OUTBOUND TRAFFIC ONLY.

CAT-5 ETHERNET CONNECTION

WIRE DIRECTLY TO J2 TERMINAL OF RTU. SEE CASLINK OWNERS MANUAL FOR FURTHER INSTRUCTIONS.

WIRE TO CONTROL BOARD. INSTALL SENSOR IN ROOM AWAY FROM HEAT SOURCES. DO NOT INSTALL SENSOR ON THE CEILING GRID, SEE MANUAL.

WIRE TO CONTROL BOARD. SENSOR MOUNTED IN EXHAUST DUCT

WIRE TO CONTROL BOARD. SENSOR MOUNTED IN SUPPLY PLENUM.

ONLY ENERGIZED THROUGH LCD HMI WHEN FIRE SYSTEM ARMED.

IF MORE THAN ONE MSC IS PRESENT WIRE IN SERIES BY MEANS OF J7 AND J8 CAT-5 JACKS. DO NOT EXCEED 5 MSC BOARDS ON ONE ECPM03 JACK.

THE FOLLOWING CONNECTIONS MAY OR MAY NOT BE REQUIRED BASED ON JOBSITE SPECIFICATIONS

ST TERMINAL IS ENERGIZED IN FIRE CONDITION.

KS TERMINAL IS DE-ENERGIZED IN FIRE CONDITION.

SPARE CONTACTS WILL MAKE COMMON TO NORMALLY OPEN WHEN SUPPLY FAN IS ON.

SIGNAL SWITCH THROUGH BMS WILL ACTIVATE ZONE1 FANS AND LIGHTS

ONLY ENERGIZED THROUGH LCD HMI WHEN FIRE SYSTEM ARMED. (NOT NEEDED IF USING 120V GAS VALVE).

CONTACTS WILL MAKE IF EITHER EXHAUST FAN IS OPERATING.

CONTACTS WILL MAKE IF EITHER EXHAUST FAN IS OPERATING.

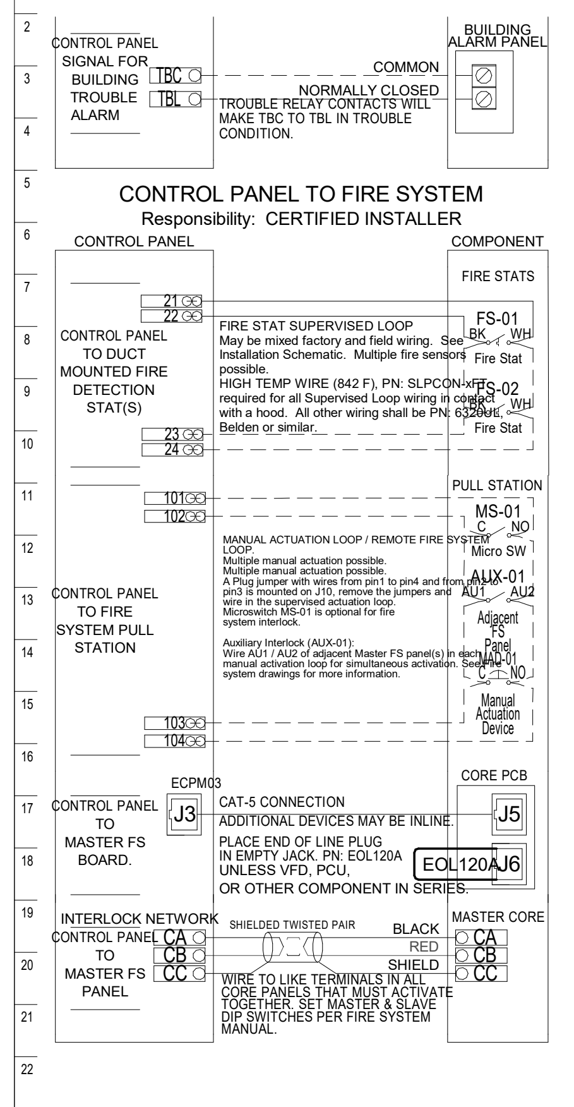
CONTACTS WILL MAKE IF EITHER EXHAUST FAN IS OPERATING.

CONTROL PANEL TO FIRE SYSTEM

Responsibility: ALARM CONTRACTOR

WIRE DIRECTLY TO CORE CIRCUIT BOARD. AL1 WILL MAKE AL2 IN FIRE CONDITION.

JOB NO	MODEL NUMBER	DRAWN BY	SCHEMATIC TYPE	DESCRIPTION OF OPERATION:
6769757	SC-E011011MA		INSTALL	Mixed Voltage w/ control for 1 3Ph Supply Fan, 1 120V 1Ph Exhaust Fan, Exhaust on in Fire, Lights out in Fire, Relay On/Off with Supply Fan, Fan(s) On/Off Thermostatically Controlled. Room temperature sensor shipped loose for field installation. INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD.
	JOB NAME: Bugatti Bar - DFW Airport	DATE: 4/30/2024	DWG NO: ECP #1-2	



TROUBLE RELAY CONTACTS WILL MAKE TBC TO TBL IN TROUBLE CONDITION.

CONTROL PANEL TO FIRE SYSTEM

Responsibility: CERTIFIED INSTALLER

FIRE STAT SUPERVISED LOOP
May be mixed factory and field wiring. See Installation Schematic. Multiple fire sensors possible.
HIGH TEMP WIRE (842 F), PN: SLPCON-xFT required for all Supervised Loop wiring in contact with a hood. All other wiring shall be PN: 6320UL, Belden or similar.

MANUAL ACTUATION LOOP / REMOTE FIRE SYSTEM LOOP.
Multiple manual actuation possible.
Multiple manual actuation possible.
A Plug jumper with wires from pin1 to pin4 and from pin2 to pin3 is mounted on J10, remove the jumpers and wire in the supervised actuation loop.
Microswitch MS-01 is optional for fire system interlock.

Auxiliary Interlock (AUX-01):
Wire AU1 / AU2 of adjacent Master FS panel(s) in each manual activation loop for simultaneous activation. See Fire system drawings for more information.

CAT-5 CONNECTION
ADDITIONAL DEVICES MAY BE INLINE.
PLACE END OF LINE PLUG IN EMPTY JACK. PN: EOL120A UNLESS VFD, PCU, OR OTHER COMPONENT IN SERIES.

WIRE TO LIKE TERMINALS IN ALL CORE PANELS THAT MUST ACTIVATE TOGETHER. SET MASTER & SLAVE DIP SWITCHES PER FIRE SYSTEM MANUAL.

JOB NO	MODEL NUMBER	DRAWN BY	SCHEMATIC TYPE	DESCRIPTION OF OPERATION:
6769757	SC-E011011MA		INSTALL	Fire System #1 TANK FS - 4.0/4.0.
	JOB NAME: Bugatti Bar - DFW Airport	DATE: 4/30/2024	DWG NO: ECP #1-3	

10/01/2023 Rev. 03

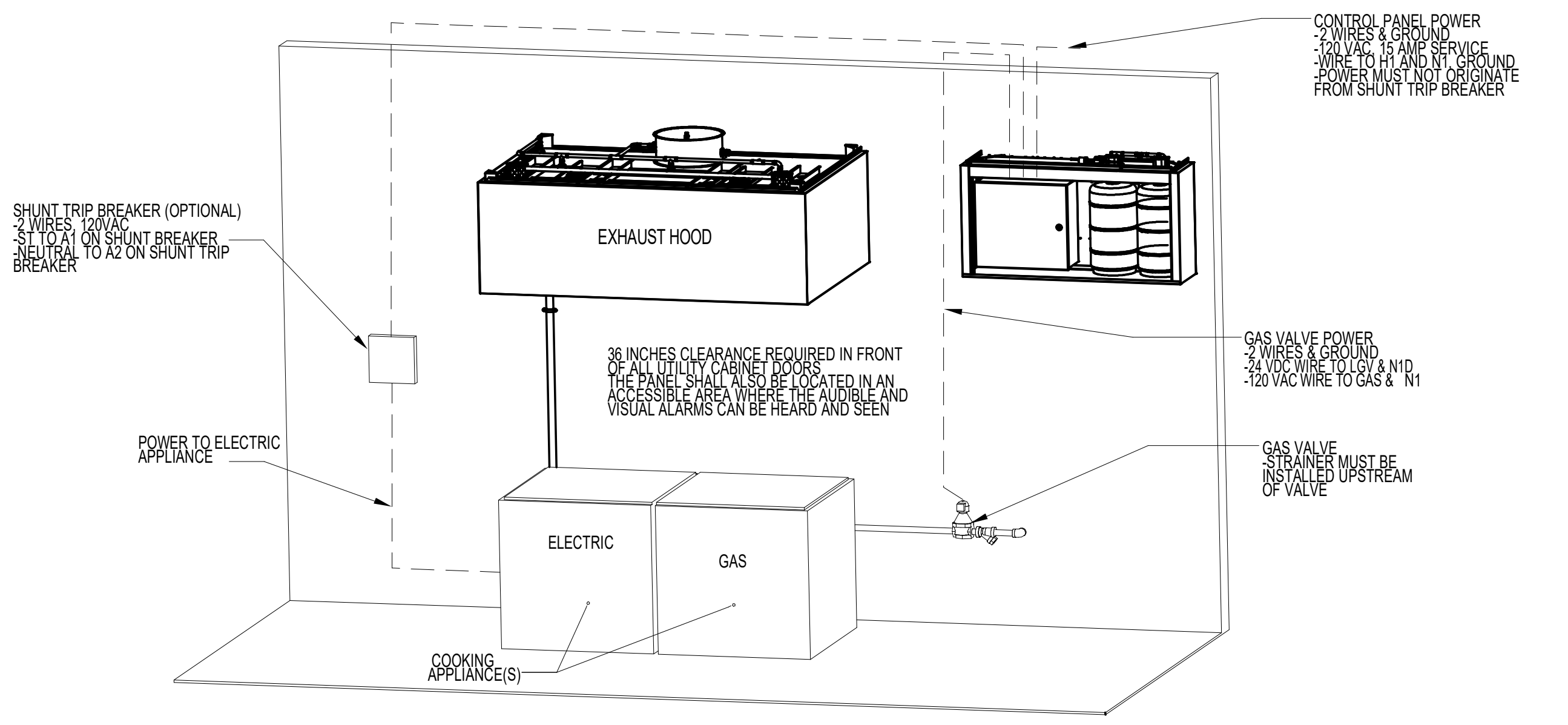
WALL MOUNT UTILITY CABINET TANK PROTECTION ELECTRICAL DETAIL

FS-1: MASTER

ELECTRICIAN:
1. WIRE MAIN CONTROL PANEL PER INCLUDED SCHEMATIC
2. WIRE ALL FANS PER INCLUDED SCHEMATIC
3. WIRE SHUNT TRIP BREAKER (OPTIONAL)
4. WIRE UDS APPLIANCE KILL SWITCH, IF EQUIPPED (OPTIONAL)
5. WIRE GAS VALVE

ELECTRICAL CONTRACTOR REQUIREMENT

ITEM	CONNECTION IN PANEL	CONNECTION IN DEVICE	VOLTAGE	AMPERAGE	COMMENTS
SHUNT TRIP BREAKER (OPTIONAL)	ST & N1	BREAKER COIL (A1 & A2)	120 VAC	< 4 AMPS	ST TO A1 ON SHUNT BREAKER COIL, AND NEUTRAL TO A2 ON SHUNT TRIP BREAKER COIL
CONTROL PANEL POWER	H1 & N1 + GROUND	CIRCUIT BREAKER	120 VAC	15 AMPS	CONTROL PANEL POWER MUST NOT BE RUN THROUGH SHUNT TRIP BREAKER
UDS APPLIANCE KILL SWITCH (OPTIONAL)	KTS & N1	KTS & N1	120 VAC	< 4 AMPS	KILL SWITCH TERMINALS MUST BE IN SERIES WITH OTHER KILL SWITCHES
REMOTE 120VAC ANSUL AUTOMAN (OPTIONAL)	AU1, AU2	SOLENOID	120 VAC	< 6 AMPS	120V TO AU1, AU2 TO ANSUL ELECTRIC AUTOMAN, ANSUL SOLENOID TO NEUTRAL
GAS VALVE	LGV & N1D (IF 24 VDC) GAS & N1 (IF 120 VAC)	RED/RED/GREEN	24 VDC OR 120 VAC	< 1.0 AMPS	IF 24 VDC - 2 WIRES & GROUND, N1D TO RED, LGV TO RED, AND GREEN TO GROUND IF 120 VAC - 2 WIRES & GROUND GAS TO RED, N1 TO RED, AND GREEN TO GROUND



CONTROL PANEL POWER
-2 WIRES & GROUND
-120 VAC, 15 AMP SERVICE
-WIRE TO H1 AND N1, GROUND
-POWER MUST NOT ORIGINATE FROM SHUNT TRIP BREAKER

SHUNT TRIP BREAKER (OPTIONAL)
-2 WIRES, 120VAC
-ST TO A1 ON SHUNT BREAKER
-NEUTRAL TO A2 ON SHUNT TRIP BREAKER

GAS VALVE POWER
-2 WIRES & GROUND
-24 VDC WIRE TO LGV & N1D
-120 VAC WIRE TO GAS & N1

36 INCHES CLEARANCE REQUIRED IN FRONT OF ALL UTILITY CABINET DOORS
THE PANEL SHALL ALSO BE LOCATED IN AN ACCESSIBLE AREA WHERE THE AUDIBLE AND VISUAL ALARMS CAN BE HEARD AND SEEN

POWER TO ELECTRIC APPLIANCE

GAS VALVE
-STRAINER MUST BE INSTALLED UPSTREAM OF VALVE

COOKING APPLIANCE(S)

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

JOB NO	MODEL NUMBER	DRAWN BY	SCHEMATIC TYPE	DESCRIPTION OF OPERATION:
6769757	SC-E011011MA		INSTALL	Fire System #1 TANK FS - 4.0/4.0.
	JOB NAME: Bugatti Bar - DFW Airport	DATE: 4/30/2024	DWG NO: ECP #1-4	

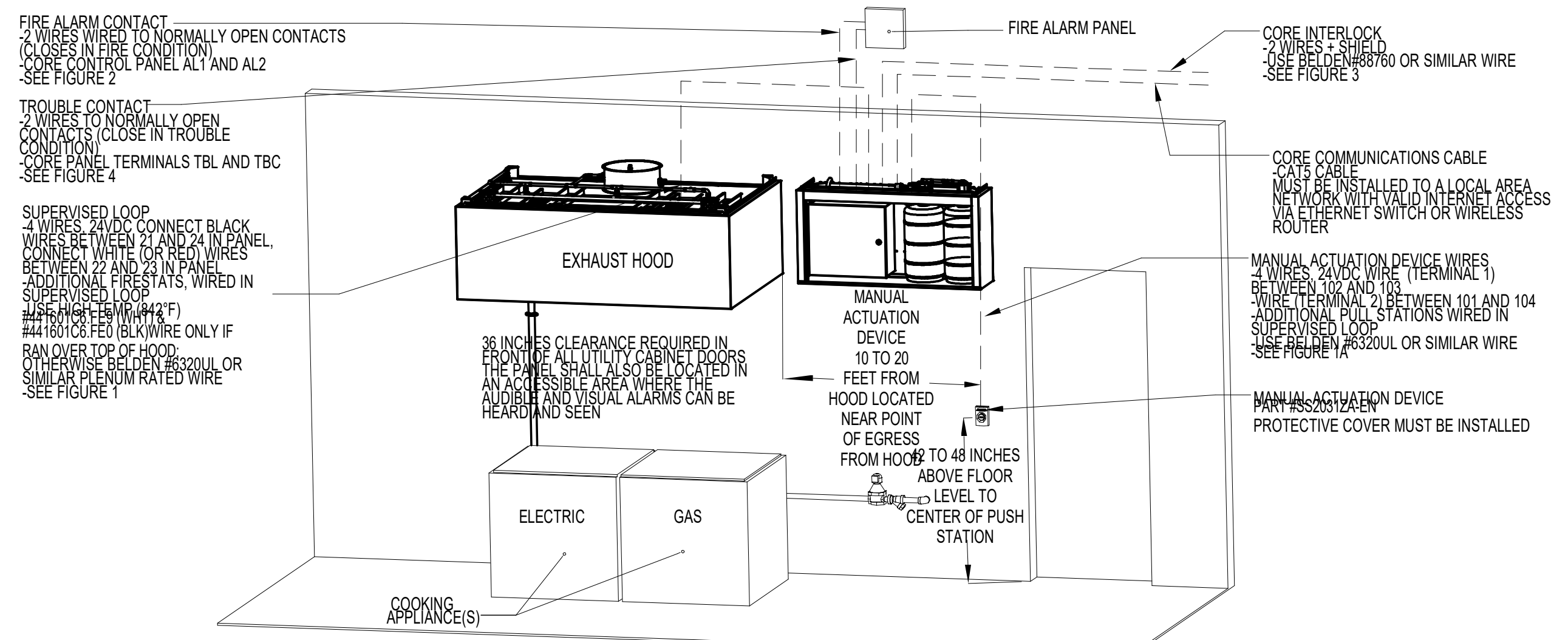
10/01/2023 Rev. 3

FS-1: MASTER

ALARM CONTRACTOR:
1. WIRE MANUAL ACTUATION DEVICE(S), REMOTE FIRESTAT(S), CORE INTERLOCK(S), FIRE SENSOR(S) AND FIRE ALARM CONTACTS
2. COMPLETE FINAL HOOKUP OF SYSTEM
3. VERIFY FINAL FIRE SYSTEM TEST

ALARM CONTRACTOR REQUIREMENT

ITEM	CONNECTION IN PANEL	CONNECTION ON DEVICE	VOLTAGE	AMPERAGE	COMMENTS
MANUAL ACTUATION DEVICE(S)	101 AND 104 102 AND 103	1 & 2	24 VDC	< 1.0 AMPS	WIRE MANUAL ACTUATION DEVICE TERMINAL 1 BETWEEN CORE PANEL TERMINALS 102 AND 103 WIRE MANUAL ACTUATION DEVICE TERMINAL 2 BETWEEN CORE PANEL TERMINALS 101 AND 104 JUMPER 101 TO 104 AND 102 TO 103 IF NO MANUAL ACTUATION DEVICE IS INSTALLED
MANUAL ACTUATION DEVICE COVER	N/A	N/A	N/A	N/A	MANUAL ACTUATION DEVICE COVER MUST BE INSTALLED IF SURFACE MOUNTED, USE COVER EXTENSION STI-6531B
REMOTE FIRESTAT SENSOR(S)	21 AND 24 22 AND 23	BLACK AND WHITE	24 VDC	< 1.0 AMPS	WIRE FIRE SENSOR WHITE WIRES BETWEEN HOOD CORE PANEL TERMINALS 22 AND 23 WIRE FIRE SENSOR BLACK WIRE BETWEEN HOOD CORE PANEL TERMINALS 21 AND 24 HIGH TEMP (842°F) #441601C6.FE9 (WHT) & #441601C6.FE0 (BLK)WIRE OR SIMILAR ONLY IF RAN OF HOOD; OTHERWISE BELDEN #6320UL OR SIMILAR PLENUM RATED WIRE; SEE FIGURE 1
FIRE ALARM CONTACT	AL1, AL2	VARIES	50V MAX (AC/DC)	UP TO 1 AMP	FIRE ALARM RELAY CONTACTS FOR BUILDING FIRE ALARM LOCATED IN THE CORE ELECTRICAL CONTROL PANEL
CORE INTERLOCK(S)	CA, CB, CC	CA, CB, CC	RS-485 COMMUNICATIONS SIGNAL		CORE SYSTEM (1) CA, TO CORE SYSTEM (2) CA, CORE SYSTEM (1) CB, TO CORE SYSTEM (2) CB, CORE SYSTEM (1) CC, TO CORE SYSTEM (2) CC. USE BELDEN# 88760 OR SIMILAR WIRE
TROUBLE CONTACT	TBC, TBL, TOK	VARIES	MAX 120 VAC	UP TO 6 AMPS	WIRE TO TBL & TBC NORMALLY OPEN CONTACT, CLOSES IN TROUBLE CONDITION
CORE COMMUNICATIONS CABLE	RJ-45 Jack	INTERNET CONNECTION	SIGNAL	<1.0 AMPS	TYPICAL CONNECTION CAT5 CABLE TO LOCAL AREA NETWORK VIA ETHERNET SWITCH OR WIRELESS ROUTER WITH VALID INTERNET CONNECTION



FIRE ALARM CONTACT
-2 WIRES WIRED TO NORMALLY OPEN CONTACTS (CLOSES IN FIRE CONDITION)
-CORE CONTROL PANEL AL1 AND AL2
-SEE FIGURE 2

TROUBLE CONTACT
-2 WIRES TO NORMALLY OPEN CONTACTS (CLOSE IN TROUBLE CONDITION)
-CORE PANEL TERMINALS TBL AND TBC
-SEE FIGURE 4

SUPERVISED LOOP
-4 WIRES, 24VDC CONNECT BLACK WIRES BETWEEN 21 AND 24 IN PANEL, CONNECT WHITE (OR RED) WIRES BETWEEN 22 AND 23 IN PANEL
-ADDITIONAL FIRESTATS, WIRED IN SUPERVISED LOOP
-USE HIGH TEMP (842°F) #441601C6.FE9 (WHT) & #441601C6.FE0 (BLK)WIRE ONLY IF RAN OVER TOP OF HOOD; OTHERWISE BELDEN #6320UL OR SIMILAR PLENUM RATED WIRE
-SEE FIGURE 1

CORE INTERLOCK
-2 WIRES + SHIELD
-USE BELDEN#88760 OR SIMILAR WIRE
-SEE FIGURE 3

CORE COMMUNICATIONS CABLE
-CAT5 CABLE
MUST BE INSTALLED TO A LOCAL AREA NETWORK WITH VALID INTERNET ACCESS VIA ETHERNET SWITCH OR WIRELESS ROUTER

MANUAL ACTUATION DEVICE WIRES
-4 WIRES, 24VDC WIRE (TERMINAL 1) BETWEEN 102 AND 103
-WIRE (TERMINAL 2) BETWEEN 101 AND 104
-ADDITIONAL PULL STATIONS WIRED IN SUPERVISED LOOP
-USE BELDEN #6320UL OR SIMILAR WIRE
-SEE FIGURE 1A

36 INCHES CLEARANCE REQUIRED IN FRONT OF ALL UTILITY CABINET DOORS
THE PANEL SHALL ALSO BE LOCATED IN AN ACCESSIBLE AREA WHERE THE AUDIBLE AND VISUAL ALARMS CAN BE HEARD AND SEEN

MANUAL ACTUATION DEVICE 10 TO 20 FEET FROM HOOD LOCATED NEAR POINT OF EGRESS FROM HOOD

42 TO 48 INCHES ABOVE FLOOR LEVEL TO CENTER OF PUSH STATION

MANUAL ACTUATION DEVICE
PART #SS2031ZA-EN
PROTECTIVE COVER MUST BE INSTALLED

COOKING APPLIANCE(S)

ATTENTION: LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

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3/4" = 1'-0"

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Space ID: A-2-048C-A01
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REVISIONS

No.	Date

SHEET TITLE
MECHANICAL HOOD SPECS

05/08/2024

SHEET NO:

M0.13

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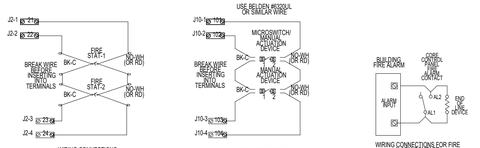
DESCRIPTION OF OPERATION:

10/01/2023 Rev. 17

TOTAL PROTECTION LOW-VOLTAGE FIGURES

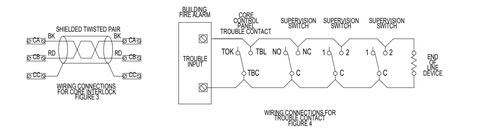
FS-1: MASTER



WIRING CONNECTIONS FOR FIRESTAT LOOP
FIGURE 1

WIRING CONNECTIONS FOR MANUAL ACTUATION LOOP
FIGURE 1A

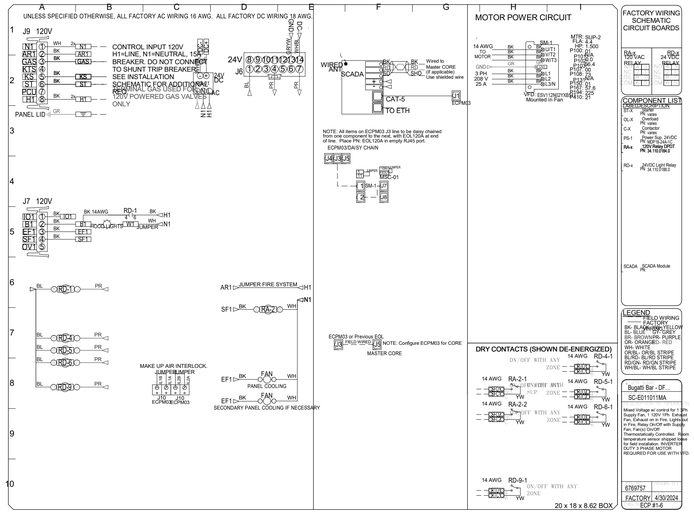
WIRING CONNECTIONS FOR FIRE ALARM CONTACT
FIGURE 2

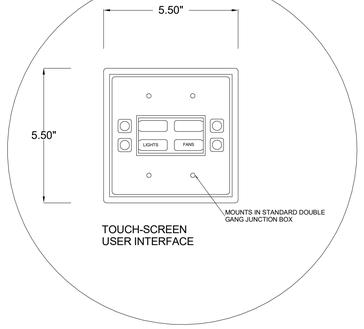


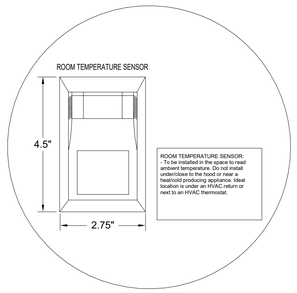
WIRING CONNECTIONS FOR TROUBLE SWITCH
FIGURE 4

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

ATTENTION: LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES







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SHEET TITLE
MECHANICAL HOOD SPECS

05/08/2024

SHEET NO:

M0.14

DUCTWORK #1 PARTS – JOB#6769757 DOUBLE WALL

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
H1-E1	DW18DWRISER-2R-S	1800				-0.6975	8.15	0.00	1	DOUBLE WALL RISER COVER - USED ON 14" INNER RISER, 4" LONG - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
P1	DW1445DWASY-2R-S	1800				-0.0473	19.87	1683.79	1	DOUBLE WALL DUCT - 14" INNER 45 DUCT - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL.
P2	DW1445DWASY-2R-S	1800				-0.0675	19.87	1683.79	1	DOUBLE WALL DUCT - 14" INNER 45 DUCT - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL.
P3	DW1435DWLT-2R-S	1800				-0.0149	46.53	1683.79	1	DOUBLE WALL DUCT - 14" INNER DUCT, 35" LONG - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL.
P4	DW1447DWAJD-2R-S	1800				-0.0141	93.18	1683.79	1	DOUBLE WALL ADJUSTABLE DUCT - 14" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 18" 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.
P5 ASSEMBLED W/P6	DW1435DWLTTP-2R-S	1800				-0.015	48.06	1683.79	1	DOUBLE WALL DUCT - 14" INNER DUCT, 35" LONG - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL - USED WITH TRANSITION PLATE.
P6 ASSEMBLED W/P5 O=B	DW2314TPDBEX	1800					8.00	1683.79	1	DUCT TO CURB TRANSITION 3/4" 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 P6						-0.8563	0.00			
RC1	DW18DWRISER-2R-S						8.15		1	DOUBLE WALL RISER COVER - USED ON 14" INNER RISER, 4" LONG - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
	3M-2000PLUS						0.80		2	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	DW14DWCLASY-2R-S						7.21		2	DUCT - 14" DUCT - 18" DOUBLE "V" CLAMP - 2R INSULATION & SINGLE "V" CLAMP INCLUDED - REDUCED CLEARANCE.
TOTAL WEIGHT							267.83			

DOUBLE WALL FACTORY BUILT DUCTWORK

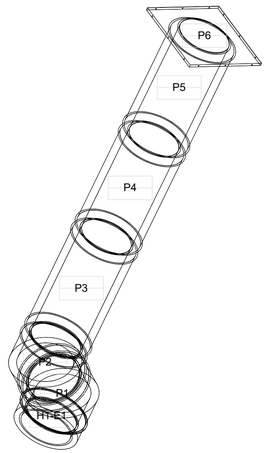
- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE ENTIRE INSTALLATION AND OPERATION MANUAL
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.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

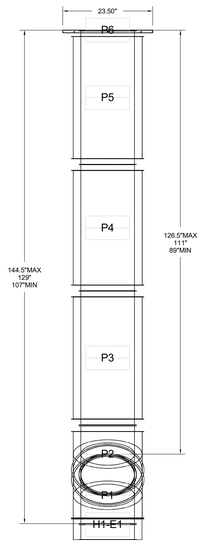
VERTICAL			
TYPE	WALL SUPPORT (FT)	CURB SUPPORT (FT)	FLOOR SUPPORT (FT)
2R & 2R HT (5"-16")	20'	24'	24'
2R (18")	18'	24'	24'
3R & 3Z (5"-24")	10'	24'	24'
3Z (26" -36")	10'	20'	20'

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

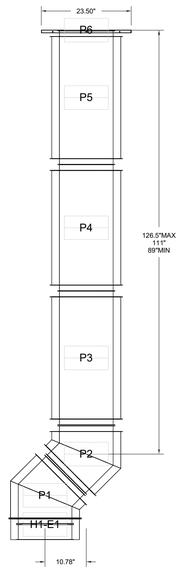
DUCTWORK #1 SE VIEW



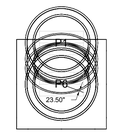
DUCTWORK #1 FRONT VIEW



DUCTWORK #1 SIDE VIEW



DUCTWORK #1 TOP VIEW



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05/08/2024

SHEET NO:
M0.15

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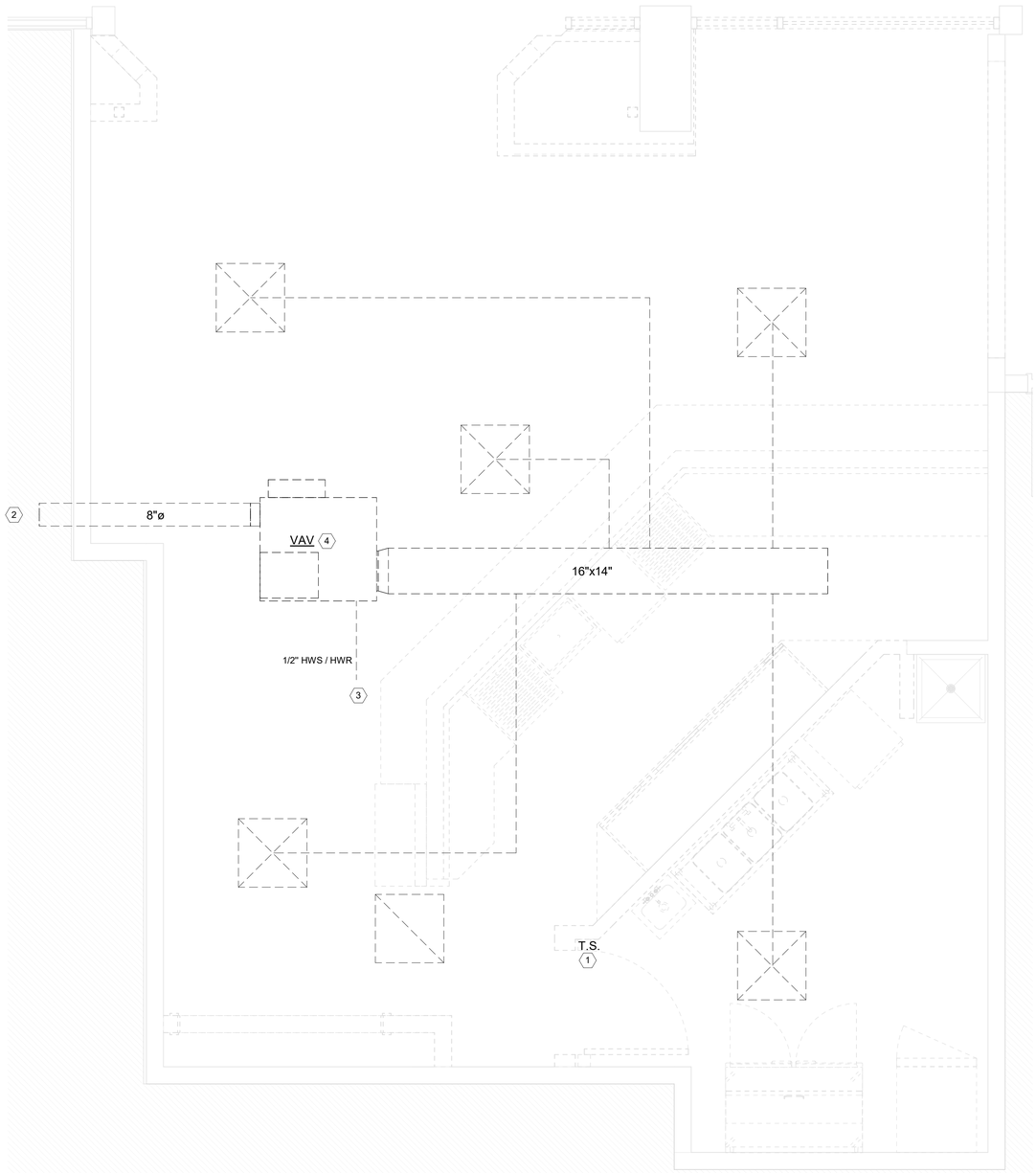


1 MECHANICAL LAYOUT - DEMO

SCALE: 1/2" = 1'-0"

MECHANICAL GENERAL NOTES:

1. CODES, RULES AND REGULATIONS - DESIGN OF SYSTEM
   A) ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES AND CODES.
   B) WHEN THE DRAWINGS CALL FOR MATERIALS OR CONSTRUCTION OF A BETTER QUALITY OR LARGER SIZES THAN REQUIRED BY THE ABOVE MENTIONED CODES AND RULES. WORK SHALL BE AS SPECIFIED OR SHOWN RATHER THAN AS REQUIRED BY CODE. ALL ITEMS OR FEATURES OF THE Q MECHANICAL SYSTEMS REQUIRED BY CODE SHALL BE INCLUDED, EVEN THOUGH NOT SPECIFIED HEREIN.
   C) INSTALLATION OF THE SYSTEMS SHALL BE IN ACCORDANCE WITH THE ABOVE MENTIONED CODES AND REGULATIONS AND ALSO SHALL CONFORM TO GOOD, ACCEPTED MECHANICAL PRACTICES.
2. PROVED AND INSTALL VOLUME DAMPERS IN ALL BRANCH DUCTS.
3. FLEXIBLE CONNECTIONS AT SUPPLY AND RETURN AIR OPENINGS OF ALL AIR CONDITIONING UNITS.
4. FLEXIBLE DUCTS TO BE R-8 GLASS-FLEX 15'-0" MAXIMUM IN LENGTH, WHERE APPLICABLE.
5. COORDINATE EXACT LOCATION OF ALL AIR OUTLETS AND INLETS (DIFFUSERS, REGISTERS AND GRILLES) WITH APPROPRIATE ARCHITECTURAL PLAN, AND VERIFY THEIR LOCATION WITH ARCHITECT ON THE JOB SITE BEFORE INSTALLATION. COLOR AS DIRECTED BY ARCHITECT/OWNER.
6. AUTOMATIC TEMPERATURE CONTROL DEVICE FOR REGULATION OF SPACE TEMPERATURE SHALL BE CAPABLE OF BEING SET FROM 55 TO 85°F, AND HAVE THE ABILITY TO OPERATE THE HEATING AND COOLING IN SEQUENCE. CONTROL SHALL BE ADJUSTABLE TO PROVIDE A RANGE OF UP TO 5°F BETWEEN FULL HEATING AND FULL COOLING.
7. APPLIANCES DESIGNED TO BE FIXED IN POSITION SHALL BE FASTENED IN PLACE.
8. A MAINTENANCE LABEL SHALL BE AFFIXED TO MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR THE OWNERS USE.
9. PROVIDE ACCESS PANEL FOR ALL CEILING MOUNTED EQUIPMENT & YOUNG PROVIDE ACCESS PANEL FOR ALL CEILING MOUNTED EQUIPMENT & YOUNG
10. PROVIDE MIN. 10'-0" SEPARATION BETWEEN POINT OF EXHAUST AND ANY PROVIDE MIN. 10'-0" SEPARATION BETWEEN POINT OF EXHAUST AND ANY FRESH AIR INTAKE, OR A/C UNIT OUTSIDE AIR INTAKE.
11. PROVIDE FIRE DAMPERS OR SMOKE/FIRE DAMPERS WHERE DUCT PENETRATES FIRE RATED CEILING OR WALL IF APPLICABLE.
12. TRANSVERSE JOINTS FOR ALL AIR SUPPLY DUCTS INSTALLED WHERE AIR LEAKAGE WOULD BE NON-BENEFICIAL TO THE OCCUPIED AREA, TEMPERATURE REQUIREMENTS SHALL BE SEALED WITH APPROVED MASTIC OR TAPE.
13. ALL DUCT SIZES SHOWN ON THE FLOOR PLANS ARE CLEAR INSIDE DIMENSIONS. CONTRACTOR SHALL ENLARGE DUCT SIZE IN ORDER TO ACCOMMODATE LINING INSIDE OF DUCT.
14. THE MECHANICAL CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMIT AND FEES.
15. SHOP PRIME ALL MISCELLANEOUS INTERIOR BRACKETS AND HANGERS UNLESS GALVANIZED OR STAINLESS STEEL.
16. ENERGY CONSERVATION STANDARDS FOR NEW NONRESIDENTIAL BUILDINGS HAVE BEEN REVIEWED AND DESIGN SUBSTANTIALLY CONFORMS TO THEM.
17. EACH SINGLE SYSTEM PROVIDING HEATING OR COOLING AIR IN EXCESS OF 2,000 CFM SHALL BE EQUIPPED WITH AN AUTOMATIC SHUT-OFF. THE SMOKE DETECTOR SHALL BE INSTALLED IN THE MAIN RETURN DUCT AHEAD OF OSA INTAKE. SEE CODE FOR EXEMPTIONS AND LOCAL AUTHORITY FOR CODE INTERPRETATION, OR AS INDICATED ON PLAN.
18. ALL EQUIPMENT AND APPLIANCES ARE LISTED PRODUCTS, AND WILL BE INSTALLED ACCORDING TO THEIR LISTING, AND ALL LISTING INFORMATION WILL BE AVAILABLE FOR INSPECTION.
19. REFER TO DETAILS OR GUIDELINES FOR MECHANICAL CONSTRUCTION REQUIREMENTS. INSTALL IN FULL ACCORDANCE WITH PROPER CODES AND GUIDELINES.
20. COORDINATE IN THE FIELD THE EXACT LOCATION OF ALL CEILING MOUNTED GRILLES AND DIFFUSERS WITH LIGHT FIXTURES AND (ARCHITECTURAL) REFLECTED CEILING PLAN.
21. ALL EXTERIOR BRACKETS CLAMPS AND HANGERS SHALL BE HOT DIPPED GALVANIZED. COAT ALL CUT ENDS AND WELDS WITH "ZRC" COLD GALVANIZING COMPUTE.

(X) MECHANICAL KEYNOTES:

(1) PROTECT AND REUSE THE EXISTING HVAV THERMOSTAT. IF THERMOSTAT IS DAMAGED, A NEW CONTROLLED MODULE WILL NEED TO BE INSTALLED ON THE HVAC UNIT. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO INSTALLATION.

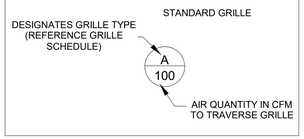
(2) LOCATION OF EXISTING LANDLORD PROVIDED MEDIUM PRESSURE SUPPLY AIR DUCT. MECHANICAL CONTRACTOR SHALL VERIFY THAT THE EXISTING DUCT IS A MINIMUM OF 14".

(3) AIRPORT PROVIDED HW HVAC LINES. MECHANICAL CONTRACTOR SHALL VERIFY SIZE OF EXISTING LINES PRIOR TO MAKING CONNECTION. IF EXISTING SIZE IS SMALLER THAN INDICATED CONTACT DESIGN ENGINEER.

(4) REMOVE EXISTING VAV AND PLACE IN OWNER STOCK.

MECHANICAL CONTRACTOR NOTES
PIPING BOTH VERTICAL AND HORIZONTALLY TO ROUTE MECHANICAL SYSTEM.

GRILLE SIZING SCHEDULE



CONDENSATE DRAIN SIZING SCHEDULE

PIPE DIA.	EQUIPMENT CAPACITY
3/4"Ø	UP TO 5 TONS
1"Ø	OVER 5 TONS TO 25 TONS
1-1/4"Ø	OVER 25 TONS TO 60 TONS
1-1/2"Ø	OVER 60 TONS TO 100 TONS
2"Ø	OVER 100 TONS TO 200 TONS

RETURN FLEX DUCT SIZING SCHEDULE

SIZE	AIRFLOW (CFM)
4"Ø	0 - 50
6"Ø	50 - 100
8"Ø	100 - 200
10"Ø	200 - 300
12"Ø	300 - 400
14"Ø	400 - 500

SUPPLY DIFFUSER NECK SIZING SCHEDULE

SIZE	AIRFLOW (CFM)
4"Ø	0 - 50
6"Ø	50 - 100
8"Ø	100 - 210
10"Ø	210 - 380
12"Ø	380 - 500
14"Ø	500 - 700

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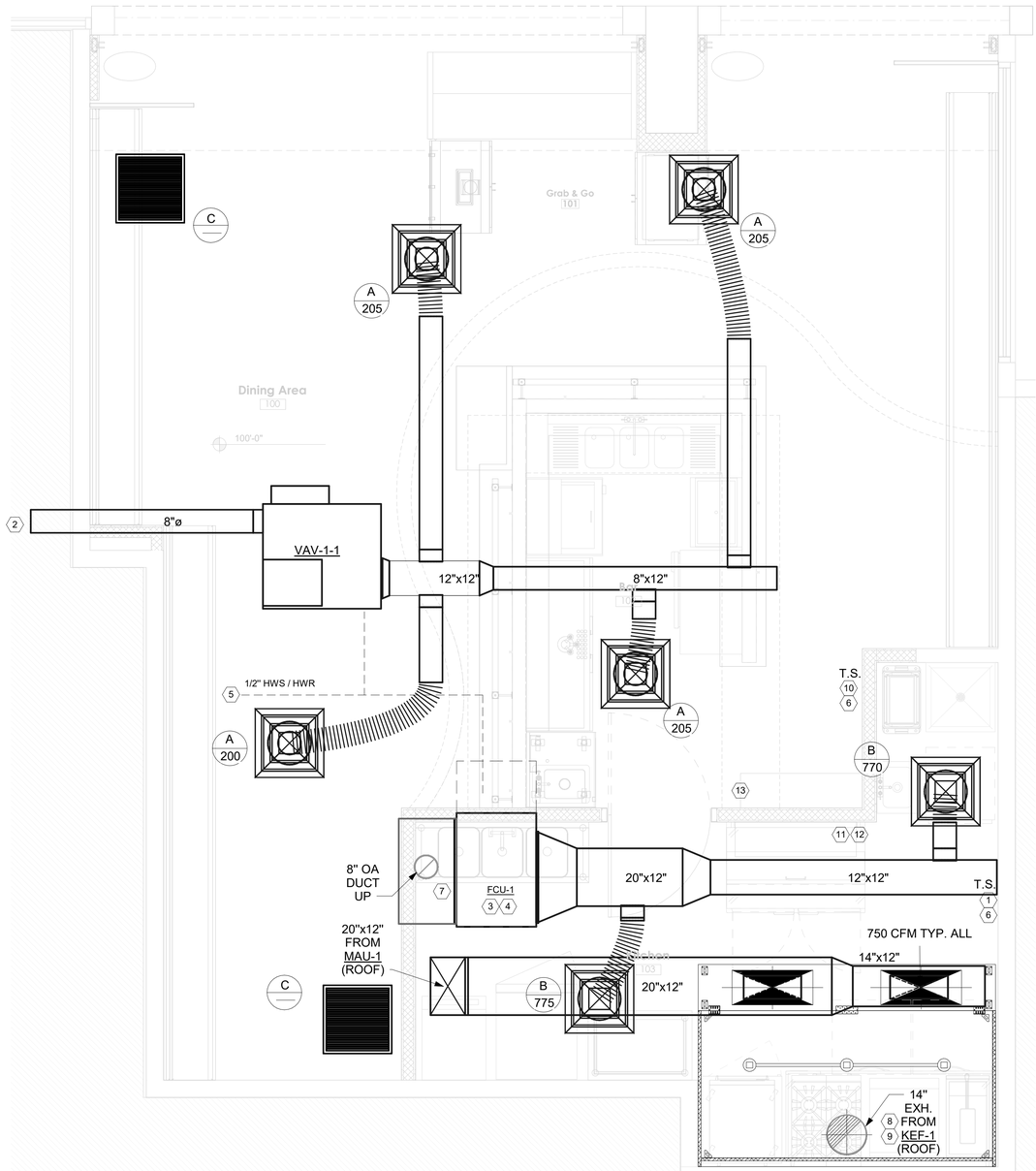
SHEET TITLE
MECHANICAL LAYOUT - DEMO

05/08/2024

SHEET NO:
M1.0

MECHANICAL GENERAL NOTES - AIRPORT:

•A MINIMUM OF A 30" CLEARANCE SHALL BE MAINTAINED IN FRONT OF ALL GREASE DUCT CLEAN OUTS.
•ALL GREASE DUCT SHALL BE TESTED WITH A 100-WATT MINIMUM LIGHT ON THE FLOOR PRIOR TO INSTALLING IT.
•GREASE DUCT BRACING AND SUPPORTS SHALL BE OF NONCOMBUSTIBLE MATERIAL SECURELY ATTACHED TO THE STRUCTURE AND DESIGNED TO CARRY GRAVITY AND SEISMIC LOADS WITHIN THE STRESS LIMITATIONS OF THE INTERNATIONAL BUILDING CODE. BOLTS, SCREWS, RIVETS, AND OTHER MECHANICAL FASTENERS SHALL NOT PENETRATE DUCT WALLS.
•ALL GREASE DUCT MUST BE INSPECTED ON THE FLOOR BEFORE INSTALLING IT WITH ONLY THE FINAL CONNECTIONS TESTED AFTERWARD.
•506.3.1.1 GREASE DUCT MATERIALS
•GREASE DUCTS SERVING TYPE I HOODS SHALL BE CONSTRUCTED OF STEEL HAVING A MINIMUM THICKNESS OF 0.0575 INCH (1.463 MM)(NO. 16 GAGE) OR STAINLESS STEEL NOT LESS THAN 0.0450 INCH (1.14 MM)(NO. 18 GAGE) IN THICKNESS.
•EXCEPTION: FACTORY-BUILT COMMERCIAL KITCHEN GREASE DUCTS LISTED AND LABELED IN ACCORDANCE WITH UL 1978 AND INSTALLED IN ACCORDANCE WITH SECTION 304.1
•SEPARATION OF GREASE DUCT SYSTEM •A SEPARATE GREASE DUCT SYSTEM SHALL BE PROVIDED FOR EACH TYPE I HOOD. A SEPARATE GREASE DUCT SYSTEM IS NOT REQUIRED WHERE ALL OF THE FOLLOWING CONDITIONS ARE MET:
•ALL INTERCONNECTED HOODS ARE LOCATED WITHIN THE SAME STORY.
•ALL INTERCONNECTED HOODS ARE LOCATED WITHIN THE SAME ROOM OR IN ADJOINING ROOMS.
•INTERCONNECTING DUCTS DO NOT PENETRATE ASSEMBLIES REQUIRED TO BE FIRE-RESISTANCE RATED.
•THE GREASE DUCT SYSTEM DOES NOT SERVE SOLID FUEL FIRED APPLIANCES.
•506.3.12 GREASE DUCT FIRE-RESISTIVE ACCESS OPENING WHERE CLEANOUT OPENINGS ARE LOCATED IN DUCTS WITHIN A FIRE-RESISTANCE-RATED ENCLOSURE, ACCESS OPENINGS SHALL BE PROVIDED IN THE ENCLOSURE AT EACH CLEANOUT POINT. ACCESS OPENINGS SHALL BE EQUIPPED WITH TIGHT-FITTING SLIDING OR HINGED DOORS THAT ARE EQUAL IN FIRE-RESISTIVE PROTECTION TO THAT OF THE SHAFT OR ENCLOSURE. AN APPROVED SIGN SHALL BE PLACED ON ACCESS OPENING PANELS WITH WORDING AS FOLLOWS: "ACCESS PANEL. DO NOT OBSTRUCT." •
•507.1.1 OPERATION COMMERCIAL KITCHEN EXHAUST HOOD SYSTEMS SHALL OPERATE DURING THE COOKING OPERATION. THE HOOD EXHAUST RATE SHALL COMPLY WITH THE LISTING OF THE HOOD OR SHALL COMPLY WITH SECTION 507.5. THE EXHAUST FAN SERVING A TYPE I HOOD SHALL HAVE AUTOMATIC CONTROLS THAT WILL ACTIVATE THE FAN WHEN ANY APPLIANCE THAT REQUIRES SUCH TYPE I HOOD IS TURNED ON, OR A MEANS OF INTERLOCK SHALL BE PROVIDED THAT WILL PREVENT OPERATION OF SUCH APPLIANCES WHEN THE EXHAUST FAN IS NOT TURNED ON. WHERE ONE OR MORE TEMPERATURE OR RADIANT ENERGY SENSORS ARE USED TO ACTIVATE A TYPE I HOOD EXHAUST FAN, THE FAN SHALL ACTIVATE NOT MORE THAN 15 MINUTES AFTER THE FIRST APPLIANCE SERVED BY THAT HOOD HAS BEEN TURNED ON. A METHOD OF INTERLOCK BETWEEN AN EXHAUST HOOD SYSTEM AND APPLIANCES EQUIPPED WITH STANDING PILOT BURNERS SHALL NOT CAUSE THE PILOT BURNERS TO BE EXTINGUISHED. A METHOD OF INTERLOCK BETWEEN AN EXHAUST HOOD SYSTEM AND COOKING APPLIANCES SHALL NOT INVOLVE OR DEPEND UPON ANY COMPONENT OF A FIRE-EXTINGUISHING SYSTEM. AIRFLOW SENSORS SHALL CONTINUOUSLY MONITOR AIR FLOW OPTIMIZING PERFORMANCE AND GREASE REMOVAL WHILE AN INTERLOCKING SYSTEM WILL NOT ALLOW COOKING APPLIANCES TO FUNCTION IF FILTERS ARE MISSING, CLOGGED, OR IN THE EVENT OF A FIRE.
•507.2 TYPE I HOODS TYPE I HOODS SHALL BE INSTALLED WHERE COOKING APPLIANCES PRODUCE GREASE OR SMOKE AS A RESULT OF THE COOKING PROCESS. TYPE I HOODS SHALL BE INSTALLED OVER MEDIUM-DUTY, HEAVY-DUTY AND EXTRA-HEAVY-DUTY COOKING APPLIANCES. EXCEPTION: A TYPE I HOOD SHALL NOT BE REQUIRED FOR AN ELECTRIC COOKING APPLIANCE WHERE AN APPROVED TESTING AGENCY PROVIDES DOCUMENTATION THAT THE APPLIANCE EFFLUENT CONTAINS 5 MG/M3 OR LESS OF GREASE WHEN TESTED AT AN EXHAUST FLOW RATE OF 500 CFM (0.236 M3/S) IN ACCORDANCE WITH UL 710B.
•507.2.6 CLEARANCES FOR TYPE I HOOD A TYPE I HOOD SHALL BE INSTALLED WITH A CLEARANCE TO COMBUSTIBLES OF NOT LESS THAN 18 INCHES (457 MM). EXCEPTION: CLEARANCE SHALL NOT BE REQUIRED FROM GYPSUM WALLBOARD OR 1/2 -INCH (12.7 MM) OR THICKER CEMENTITIOUS WALLBOARD ATTACHED TO NONCOMBUSTIBLE STRUCTURES PROVIDED THAT A SMOOTH, CLEANABLE, NONABSORBENT AND NONCOMBUSTIBLE MATERIAL IS INSTALLED BETWEEN THE HOOD AND THE GYPSUM OR CEMENTITIOUS WALLBOARD OVER AN AREA EXTENDING NOT LESS THAN 18 INCHES (457 MM) IN ALL DIRECTIONS FROM THE HOOD.
•AN APPROVED MECHANICAL PLAN REVIEW DOES NOT RELIEVE COMPLIANCE WITH THE A TEST AND BALANCE REPORT MUST BE REVIEWED BY THE ENGINEER OF RECORD, STAMPED, SIGNED, AND APPROVED THEN SENT TO DFW CODE PRIOR TO RECEIVING A MECHANICAL FINAL.
•CONDENSATE DRAINS SHALL DISCHARGE INTO THE SANITARY SEWER
•ALL HVAC CONTROLS, VALVES, STRAINERS, COILS, AND FILTERS MUST BE ACCESSIBLE.
•PER THE MECHANICAL CODE, THERE MUST BE A 30" MINIMUM CLEARANCE IN FRONT OF ALL CONTROLS, VALVES, AND FILTERS. IF A VAV IS ABOVE A HARD CEILING. A MINIMUM OF 24"X24" ACCESS DOOR SHALL BE INSTALLED TO PROVIDE ACCESS TO ALL COMPONENTS; INCLUDING BUT NOT LIMITED TO FILTERS.
•ALL CONTROL DAMPERS MUST BE ACCESSIBLE.
•ALL FIRE DAMPERS MUST HAVE A FIRE RATED ACCESS DOOR LARGE ENOUGH TO SERVICE THE FIRE DAMPER.
•ALL EQUIPMENT ON THE ROOF MUST HAVE A CONVENIENCE RECEPTACLE FOR MAINTENANCE PURPOSES WITHIN 25'.



1 MECHANICAL LAYOUT

SCALE: **1/2" = 1'-0"**

MECHANICAL GENERAL NOTES:

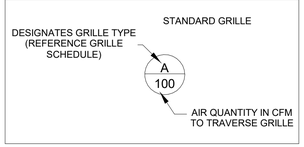
1. CODES, RULES AND REGULATIONS - DESIGN OF SYSTEM
   A) ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES AND CODES.
   B) WHEN THE DRAWINGS CALL FOR MATERIALS OR CONSTRUCTION OF A BETTER QUALITY OR LARGER SIZES THAN REQUIRED BY THE ABOVE MENTIONED CODES AND RULES, WORK SHALL BE AS SPECIFIED OR SHOWN RATHER THAN AS REQUIRED BY CODE. ALL ITEMS OR FEATURES OF THE Q MECHANICAL SYSTEMS REQUIRED BY CODE SHALL BE INCLUDED, EVEN THOUGH NOT SPECIFIED HEREIN.
   C) INSTALLATION OF THE SYSTEMS SHALL BE IN ACCORDANCE WITH THE ABOVE MENTIONED CODES AND REGULATIONS AND ALSO SHALL CONFORM TO GOOD, ACCEPTED MECHANICAL PRACTICES.
2. PROVED AND INSTALL VOLUME DAMPERS IN ALL BRANCH DUCTS.
3. FLEXIBLE CONNECTIONS AT SUPPLY AND RETURN AIR OPENINGS OF ALL AIR CONDITIONING UNITS.
4. FLEXIBLE DUCTS TO BE R-8 GLASS-FLEX 15'-0" MAXIMUM IN LENGTH, WHERE APPLICABLE.
5. COORDINATE EXACT LOCATION OF ALL AIR OUTLETS AND INLETS (DIFFUSERS, REGISTERS AND GRILLES) WITH APPROPRIATE ARCHITECTURAL PLAN, AND VERIFY THEIR LOCATION WITH ARCHITECT ON THE JOB SITE BEFORE INSTALLATION. COLOR AS DIRECTED BY ARCHITECT/OWNER.
6. AUTOMATIC TEMPERATURE CONTROL DEVICE FOR REGULATION OF SPACE TEMPERATURE SHALL BE CAPABLE OF BEING SET FROM 55 TO 85°F, AND HAVE THE ABILITY TO OPERATE THE HEATING AND COOLING IN SEQUENCE. CONTROL SHALL BE ADJUSTABLE TO PROVIDE A RANGE OF UP TO 5°F BETWEEN FULL HEATING AND FULL COOLING.
7. APPLIANCES DESIGNED TO BE FIXED IN POSITION SHALL BE FASTENED IN PLACE.
8. A MAINTENANCE LABEL SHALL BE AFFIXED TO MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR THE OWNERS USE.
9. PROVIDE ACCESS PANEL FOR ALL CEILING MOUNTED EQUIPMENT & YOUNG PROVIDE ACCESS PANEL FOR ALL CEILING MOUNTED EQUIPMENT & YOUNG
10. PROVIDE MIN. 10'-0" SEPARATION BETWEEN POINT OF EXHAUST AND ANY PROVIDE MIN. 10'-0" SEPARATION BETWEEN POINT OF EXHAUST AND ANY FRESH AIR INTAKE, OR A/C UNIT OUTSIDE AIR INTAKE.
11. PROVIDE FIRE DAMPERS OR SMOKE/FIRE DAMPERS WHERE DUCT PENETRATES FIRE RATED CEILING OR WALL IF APPLICABLE.
12. TRANSVERSE JOINTS FOR ALL AIR SUPPLY DUCTS INSTALLED WHERE AIR LEAKAGE WOULD BE NON-BENEFICIAL TO THE OCCUPIED AREA, TEMPERATURE REQUIREMENTS SHALL BE SEALED WITH APPROVED MASTIC OR TAPE.
13. ALL DUCT SIZES SHOWN ON THE FLOOR PLANS ARE CLEAR INSIDE DIMENSIONS. CONTRACTOR SHALL ENLARGE DUCT SIZE IN ORDER TO ACCOMMODATE LINING INSIDE OF DUCT.
14. THE MECHANICAL CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMIT AND FEES.
15. SHOP PRIME ALL MISCELLANEOUS INTERIOR BRACKETS AND HANGERS UNLESS GALVANIZED OR STAINLESS STEEL.
16. ENERGY CONSERVATION STANDARDS FOR NEW NONRESIDENTIAL BUILDINGS HAVE BEEN REVIEWED AND DESIGN SUBSTANTIALLY CONFORMS TO THEM.
17. EACH SINGLE SYSTEM PROVIDING HEATING OR COOLING AIR IN EXCESS OF 2,000 CFM SHALL BE EQUIPPED WITH AN AUTOMATIC SHUT-OFF. THE SMOKE DETECTOR SHALL BE INSTALLED IN THE MAIN RETURN DUCT AHEAD OF OSA INTAKE. SEE CODE FOR EXEMPTIONS AND LOCAL AUTHORITY FOR CODE INTERPRETATION, OR AS INDICATED ON PLAN.
18. ALL EQUIPMENT AND APPLIANCES ARE LISTED PRODUCTS, AND WILL BE INSTALLED ACCORDING TO THEIR LISTING, AND ALL LISTING INFORMATION WILL BE AVAILABLE FOR INSPECTION.
19. REFER TO DETAILS OR GUIDELINES FOR MECHANICAL CONSTRUCTION REQUIREMENTS. INSTALL IN FULL ACCORDANCE WITH PROPER CODES AND GUIDELINES.
20. COORDINATE IN THE FIELD THE EXACT LOCATION OF ALL CEILING MOUNTED GRILLES AND DIFFUSERS WITH LIGHT FIXTURES AND (ARCHITECTURAL) REFLECTED CEILING PLAN.
21. ALL EXTERIOR BRACKETS CLAMPS AND HANGERS SHALL BE HOT DIPPED GALVANIZED. COAT ALL CUT ENDS AND WELDS WITH "ZRC" COLD GALVANIZING COMPUTE.

X MECHANICAL KEYNOTES:

1. PROVIDE TEMPERATURE SENSOR. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO INSTALLATION.
2. LOCATION OF EXISTING AIRPORT PROVIDED MEDIUM PRESSURE SUPPLY AIR DUCT. MECHANICAL CONTRACTOR SHALL VERIFY THAT THE EXISTING DUCT IS A MINIMUM OF 14".
3. ROUTE CONDENSATE DRAIN LINE DOWN TO MOP SINK OR SINK TAIL PIECE. CONDENSATE DRAIN TO BE SLOPED A MINIMUM OF 1/4" PER FOOT. SEE PLANS FOR DRAIN TERMINATION POINT.
4. PROVIDE UNIT WITH MANUFACTURERS SUGGESTED CLEARNACES FOR ACCESS AND MAINTENANCE. CONTRACTOR SHALL COORDINATE WILL ALL OTHER TRADES PRIOR TO INSTALL OR FABRICATION TO ENSURE PROPER CLEANACES OF SYSTEMS AND CODE REQUIREMENTS ARE MAINTAINED. PROVIDE AHU WITH INTEGRAL FILTER RACK.
5. AIRPORT PROVIDED HW HVAC LINES. MECHANICAL CONTRACTOR SHALL VERIFY SIZE OF EXISTING LINES PRIOR TO MAKING CONNECTION. IF EXISTING SIZE IS SMALLER CONTACT DESIGN ENGINEER.
6. INSTALL HONEYWELL GAS DETECTION SYSTEM. VERIFY FINAL LOCATION WITH ARCHITECT/OWNER PRIOR TO CONSTRUCTION. GAS DETECTION SYSTEM TO BE PROVIDED BY MECHANICAL CONTRACTOR.
7. PROVIDE OUTSIDE AIR INTAKE COOK PR-24 OR APPROVED EQUIVALENT.
8. EXHAUST DUCT IN 2-HR. FIRE RATED WRAP. EXHAUST DUCT SHALL BE BLACK MINIMUM 16 GAUGE WITH WELDED JOINTS AND GREASE TIGHT. KITCHEN EXHAUST FAN HEIGHT SHALL BE COORDINATED WITH ARCHITECT.
9. FINAL DUCT SIZE SHALL BE VERIFIED WITH MANUFACTURER PRIOR TO CONSTRUCTION. SEE HOOD MANUFACTURER'S DUCT DRAWINGS.
10. PROTECT AND REUSE THE EXISTING HVAV THERMOSTAT. IF THERMOSTAT IS DAMAGED, A NEW CONTROLLED MODULE WILL NEED TO BE INSTALLED ON THE HVAC UNIT. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO INSTALLATION.
11. CONTRACTOR SHALL EVALUATE EXISTING ROOF PENETRATIONS AND REUSE IF APPLICABLE.
12. CONTRACTOR SHALL INSPECT FOR EXISTING UNUSED EQUIPMENT AND REMOVE. CAP AND SEAL ALL PENETRATIONS IF NOT UTILIZED.
13. MASTER TEMPERATURE CONTROL. COORDINATE MASTER CONTROLS WITH TEMPERATURE SENSORS TO ENSURE PROPER OPERATION.

MECHANICAL CONTRACTOR NOTES
PIPING BOTH VERTICAL AND HORIZONTALLY TO ROUTE MECHANICAL SYSTEM.

GRILLE SIZING SCHEDULE



CONDENSATE DRAIN SIZING SCHEDULE

PIPE DIA.	EQUIPMENT CAPACITY
3/4"Ø	UP TO 5 TONS
1"Ø	OVER 5 TONS TO 25 TONS
1-1/4"Ø	OVER 25 TONS TO 60 TONS
1-1/2"Ø	OVER 60 TONS TO 100 TONS
2"Ø	OVER 100 TONS TO 200 TONS

RETURN FLEX DUCT SIZING SCHEDULE

SIZE	AIRFLOW (CFM)
4"Ø	0 - 50
6"Ø	50 - 100
8"Ø	100 - 200
10"Ø	200 - 300
12"Ø	300 - 400
14"Ø	400 - 500

SUPPLY DIFFUSER NECK SIZING SCHEDULE

SIZE	AIRFLOW (CFM)
4"Ø	0 - 50
6"Ø	50 - 100
8"Ø	100 - 210
10"Ø	210 - 380
12"Ø	380 - 500
14"Ø	500 - 700

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05/08/2024

DFW
DALLAS FORT-WORTH INTERNATIONAL AIRPORT

Bugatti Bar & Taverna

2040 N. International Parkway
Space ID: A-2-048C-A01
DFW Airport, TX 75261

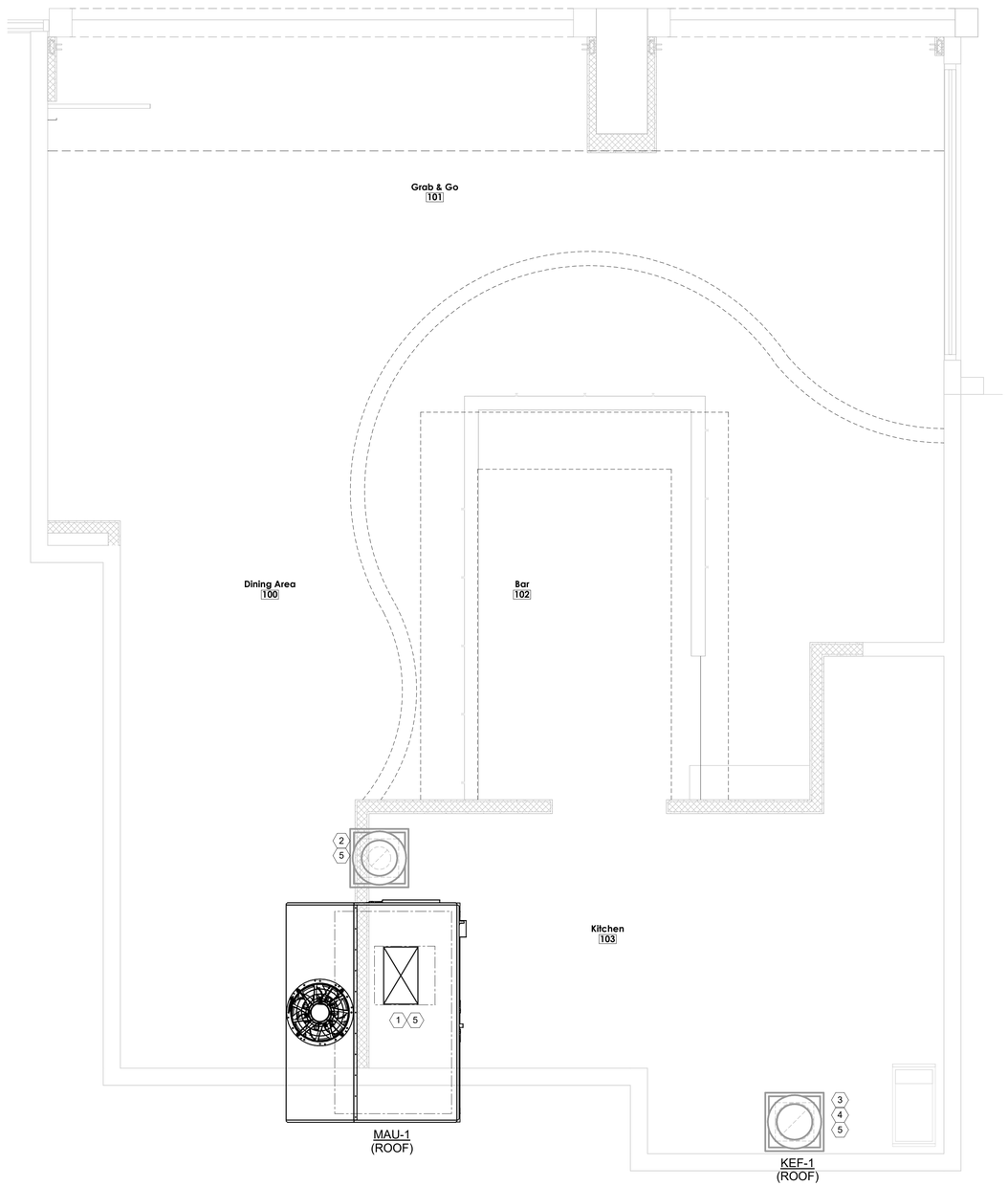
REVISIONS

No.	Date

SHEET TITLE
MECHANICAL LAYOUT

05/08/2024

SHEET NO:
M1.1



1 ROOF PLAN

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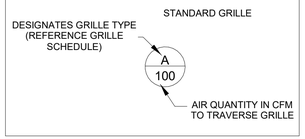
4. FINAL DUCT SIZE SHALL BE VERIFIED WITH MANUFACTURER PRIOR TO CONSTRUCTION. SEE HOOD MANUFACTURER'S DUCT DRAWINGS.
5. KEEP ALL EQUIPMENT 10' FROM EDGE OF ROOF.

MECHANICAL CONTRACTOR NOTES
PIPING BOTH VERTICAL AND HORIZONTALLY TO ROUTE MECHANICAL SYSTEM.

GRILLE SIZING SCHEDULE



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05/08/2024

DFW
DALLAS FORT-WORTH INTERNATIONAL AIRPORT

Bugatti Bar & Taverna

2040 N. International Parkway
Space ID: A-2-048C-A01
DFW Airport, TX 75261

REVISIONS

No.	Date

SHEET TITLE
MECHANICAL LAYOUT

05/08/2024

SHEET NO:
M1.2