

GAS PIPING SPECIFICATION:

SECTION 1 - PIPING SYSTEMS

1.0 GENERAL

- PROVIDE ISOLATION VALVES AT MAIN BRANCH CONNECTIONS, EQUIPMENT, AND AT BOTTOM OF RISERS WHERE THEY ORIGINATE FROM A CONTINUOUS MAIN AND RISE TO A FLOOR OR FLOORS ABOVE.
- SIZE REDUCTIONS SHALL BE MADE BY ECCENTRIC REDUCERS WITH FLAT SIDE ON TOP WHERE SPECIFIED. NO BUSHINGS FOR PIPE REDUCTIONS PERMITTED.
- PROVIDE DIELECTRIC UNION AT ALL CONNECTIONS OF DISSIMILAR METALS.
- PROPERLY SEAL ALL PIPE PENETRATIONS THROUGH WALLS, ROOFS, FLOORS, OR CEILINGS.
- ELBOWS ARE TO BE LONG RADIUS; FIELD FABRICATED FITTINGS ARE NOT ACCEPTABLE.
- BRANCH CONNECTIONS TO MAIN MAY BE SADDLE-TYPE, FORGED STEEL WELDED FITTING.
- ALL PIPING TAKE-OFFS FOR NATURAL GAS SHALL BE MADE FROM THE SIDE OR TOP OF PIPING. "BULLHEAD" TEE ARE PROHIBITED.
- VISUALLY INSPECT ALL PIPING, VALVES AND JOINTS PRIOR TO INSULATING, ENCLOSING, BURYING, OR OTHERWISE CONCEALING.

1.1 PIPE HANGERS AND SUPPORTS

- PIPE SHALL BE SUPPORTED BY SPLIT RING ADJUSTABLE TYPE, CLEVIS HANGER, TRAPEZE (MULTIPIPE RACK) OR OTHER APPROVED HANGERS, OR ROOF SUPPORTS.
- BRACKETS OR CLAMPS MAY BE USED WHERE PIPE RUNS ALONG WALLS, COLUMNS OR CEILINGS, BUT MUST ALLOW FOR EXPANSION AND CONTRACTION.
- RADIAL SUPPORTS SHALL BE RIGID TYPE. IF WALL BRACKETS OR LONGITUDINAL SUPPORTS ARE USED ON STRAIGHT LENGTHS OVER 20 FEET LONG, THEY SHALL BE OF THE FLEXIBLE TYPE TO PROVIDE FOR THERMAL EXPANSION AND CONTRACTION.
- HANGERS AND SUPPORTS SHALL BE PLACED WITHIN 1 FOOT FROM EACH CHANGE IN DIRECTION AND WITHIN 3 FEET OF THE END OF EACH RUNOUT OR AS DEFINED BY PIPE STRESS ANALYSIS OR PIPE EXPANSION ANALYSIS AS PART OF A DELEGATED DESIGN.
- PIPING AT ALL EQUIPMENT AND CONTROL VALVES SHALL BE SUPPORTED TO PREVENT STRAINS OR DISTORTIONS IN THE CONNECTED EQUIPMENT AND CONTROL VALVES.
- MAXIMUM ALLOWABLE HANGER ROD LOADING AND SPACING FOR PIPING SYSTEMS ARE SHOWN BELOW. CHECK LOCAL CODES TO DETERMINE IF A DIFFERENT SPACING IS REQUIRED. CLOSER HANGER SPACING MAY BE REQUIRED DUE TO ADDITIONAL VALVES AND FITTINGS

1.2 NATURAL GAS SYSTEM

- NATURAL GAS PIPING SHALL COMPLY WITH THE INTERNATIONAL FUEL GAS CODE AND NFPA 54 AND LOCAL CODE/AMENDMENTS.
- VALVES, UNIONS AND CLOSE NIPPLES SHALL NOT BE INSTALLED IN ANY CONCEALED SPACE.

DUCTWORK AND DUCT INSULATION SCHEDULE

SYSTEM	FUNCTION	LOCATION	SHAPE	DUCT PRESS. CLASS [IN WG]	OPERATING PRESS. [IN WG]	MATERIAL	TYPE	R-VALUE	TYPE	FINISH	MINIMUM R-VALUE	NOTES
MAU SUPPLY AIR	SA	WAREHOUSE	RECT.	2	1	G-90	N/A	N/A	N/A	N/A	N/A	1

- NOTES:**
- EXPPOSED DUCTWORK TO BE GASKETED SPIRAL OR TDC, SUITABLE FOR PAINTING. PAINTING BY OTHERS

GENERAL REMARKS APPLICABLE TO ALL DUCT SYSTEMS:

- ALL DUCTWORK SHALL BE HUNG WITH GALVANIZED STRAP, GRIPPLE OR TRAPEZE.
- DUCT SIZES INDICATED ON DRAWINGS ARE SHEET METAL SIZE AND INCLUDE LINER SPECIFIED.
- ALL DUCTWORK, INSULATION, AND MATERIALS IN PLENUMS MUST MEET ASTM E84 FLAME/SMOKE RATING OF 25/50.
- ALL DUCTWORK SHALL BE SEALED TO CLASS A REQUIREMENTS.
- DUCT GAUGE SHALL BE PER SMACNA STANDARD FOR PRESSURE CLASS INDICATED, UNLESS NOTED OTHERWISE, AND SHALL BE NO LESS THAN 26 GAUGE

PIPE AND PIPE INSULATION SCHEDULE

SYSTEM ABBREV	SYSTEM	LOCATION	OPERATING TEMP [°F]	OPERATING G. PRESS. [PSIG]	PIPE SIZE	PIPE TYPE/SCHEDULE	MATERIAL	JOINING METHOD	INSULATION TYPE	JACKET	THICKNESS [IN]	PRESSURE TEST PROCEDURE TEST TYPE	NOTES
G	NATURAL GAS	ABOVE GRADE	N/A	1	1/2" THRU 2"	SCH 40	CARBON STEEL	150# MALLEABLE IRON NPT	N/A	N/A	N/A	P.1	
		ABOVE GRADE	N/A	1	1/2" THRU 4"	SCH 40	CARBON STEEL	COLD PRESS MECHANICAL	N/A	N/A	N/A	P.1	1
		ABOVE GRADE	N/A	1	2 1/2" AND UP	STD WEIGHT	CARBON STEEL	BUTT WELDED	N/A	N/A	N/A	P.1	

- PIPE PRESSURE TEST:**
- P.1 PNEUMATICALLY TEST PER ASME B31.1 & B31.3. MINIMUM HOLD OF 60 PSI.

NOTES:

- FITTINGS EQUAL TO VIEGA MEGAPRESS/PROPRESS

GENERAL REMARKS APPLICABLE TO ALL PIPE SYSTEMS:

- PROVIDE IDENTIFICATION LABELS ON ALL ABOVE FLOOR AND ABOVE GRADE PIPING.
- WHERE REQUIRED, PAINTING OF PIPE SYSTEMS SHALL BE BY GC/OTHERS.
- ALL PIPES, INSULATION, AND MATERIALS IN PLENUMS MUST MEET ASTM E84 FLAME/SMOKE RATING OF 25/50.

MAKE-UP AIR UNIT - 100% OUTDOOR AIR SPACE HEAT AND VENTILATION

- DESCRIPTION:**
EACH 100% OUTDOOR AIR MAKE-UP AIR UNIT (MAU) WILL BE PROVIDED FROM THE FACTORY WITH AN INTEGRAL CONTROL CENTER THAT INCLUDES A NON-FUSED DISCONNECT, 24VAC TRANSFORMER, INLET DAMPER WITH END SWITCHES, THERMAL STRIP, FREEZE PROTECTION, AND FAN STARTER. THE TWO POSITION OUTDOOR AIR DAMPER WILL OPERATE BETWEEN OPEN AND CLOSED.
- CONTROL:**
THE SPACE TEMPERATURE AND UNIT MODE WILL BE DETERMINED FROM THE REMOTE PANEL THAT IS SUPPLIED WITH THE MAKE-UP AIR UNIT AND MOUNTED IN THE SPACE. THE OCCUPIED MODE SHALL BE DETERMINED BY AN OCCUPANCY SCHEDULE SET IN CONTROLLER.
- CONTINUOUS (OCCUPIED) MODE:**
 - BURNER CONTROL:**
THE BURNER WILL BE ENERGIZED AND DE-ENERGIZED PER THE FOLLOWING:
 - SPACE TEMPERATURE SATISFIED AND $QAT < 65°F$ - BURNER ENERGIZED + MINIMUM FIRE
 - SPACE TEMPERATURE < SPACE SETPOINT (ADJ) AND $QAT < 65°F$ = MAX FIRE
 - $QAT > 65°F$ - BURNER DE-ENERGIZED.
 - SUPPLY FAN CONTROL:**
THE SUPPLY FAN WILL BE RUNNING CONTINUOUSLY.
- AUTO (UNOCCUPIED) MODE:**
 - BURNER CONTROL:**
THE BURNER WILL BE ENERGIZED AND DE-ENERGIZED PER THE FOLLOWING:
 - SPACE TEMPERATURE < SPACE SETPOINT (ADJ) AND $QAT < 65°F$ - BURNER ENERGIZED + MAX FIRE
 - SPACE TEMPERATURE SATISFIED - BURNER DE-ENERGIZED
 - FAN CONTROL:**
THE FAN WILL BE ENERGIZED BASED ON A CALL FOR HEAT AND DE-ENERGIZED ONCE SPACE TEMPERATURE IS SATISFIED.
- EXPECTED FAILURE OPERATIONS:**
 - SHOULD ANY OF THE FOLLOWING OCCUR, A FAILURE SHALL BE SENSED BY THE UNIT CONTROLLER AND A VISUAL ALARM WILL BE INDICATED ON THE REMOTE PANEL.
 - IF DISCHARGE AIR TEMPERATURE (DAT) FALL BELOW THE LOW TEMPERATURE LIMIT, THE FAN WILL BE DISABLED AND THE "LOW TEMP ALARM" WILL BE ISSUED
 - UPON A LOSS OF GAS PRESSURE, THE BURNER SHALL BE LOCKED OUT AND A "FLAME FAILURE ALARM" SHALL BE ISSUED
 - UPON A LOSS OF AIRFLOW, THE BURNER SHALL BE LOCKED OUT AND THE AIRFLOW PROVING LIGHT WILL BE DE-ENERGIZED

ELECTRICAL, MECHANICAL, AND ELECTRIC FIRE PUMP ROOM HEAT AND VENTILATION

- DESCRIPTION:**
EACH SYSTEM SHALL CONSIST OF A VENTILATION EXHAUST FAN WITH COOLING-ONLY LINE VOLTAGE THERMOSTAT, LOUVER DAMPER WITH 120V FACTORY-PROVIDED ACTUATOR, AND ELECTRIC UNIT HEATER WITH UNIT-MOUNTED THERMOSTAT. THE LOUVER SHALL BE SPRING-CLOSED/POWER-OPEN TO FAIL CLOSED UPON A LOSS OF POWER.
- LOUVER:**
THE 120V LOUVER DAMPER SHALL BE INTERLOCKED TO OPEN THE LOUVER DAMPER WHEN THE EXHAUST FAN IS ENERGIZED AND CLOSE THE LOUVER DAMPER WHEN THE EXHAUST FAN IS DE-ENERGIZED. INTERLOCK BY THE E.C.
- EXHAUST FAN:** THE EXHAUST FAN SHALL BE CONTROLLED BY A SPACE MOUNTED COOL-ONLY LINE VOLTAGE THERMOSTAT. THE THERMOSTAT WILL ENERGIZE AND DE-ENERGIZE THE EXHAUST FAN TO MAINTAIN A MAXIMUM TEMPERATURE OF 90°F (ADJ) IN THE ROOM. THE EXHAUST FAN SHALL BE INTERLOCKED TO OPEN THE LOUVER DAMPER WHEN THE EXHAUST FAN IS ENERGIZED AND CLOSE THE LOUVER DAMPER WHEN THE EXHAUST FAN IS DE-ENERGIZED.
- HEATING:**
THE ELECTRIC UNIT HEATER SHALL BE CONTROLLED BY A HEAT-ONLY UNIT-MOUNTED THERMOSTAT. THE THERMOSTAT WILL ENERGIZE AND DE-ENERGIZE THE ELECTRIC UNIT HEATER TO MAINTAIN A MINIMUM TEMPERATURE OF 50°F (ADJ) IN THE ROOM.

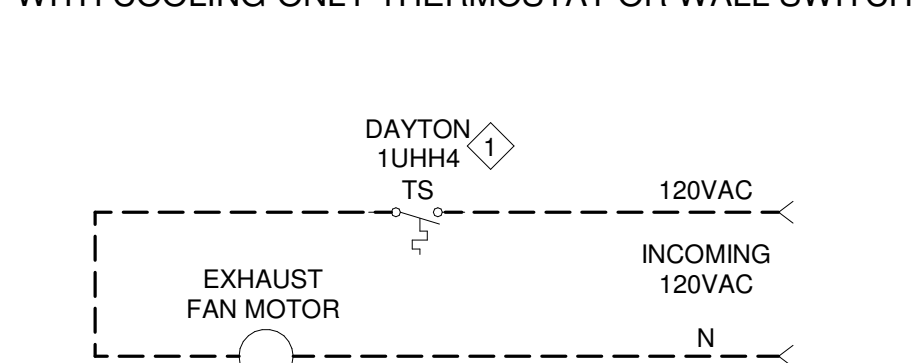
WAREHOUSE VENTILATION EXHAUST FAN AND LOUVER

- DESCRIPTION:**
EACH SYSTEM SHALL CONSIST OF A VENTILATION EXHAUST FAN WITH MOTOR STARTER AND LOUVER DAMPER(S) WITH 120V FACTORY-PROVIDED ACTUATOR. EACH LOUVER SHALL BE SPRING-CLOSED/POWER-OPEN TO FAIL CLOSED UPON A LOSS OF POWER.
- CONTROL:**
THE VENTILATION EXHAUST FAN SHALL BE CONTROLLED BY A MOTOR STARTER, A MANUALLY-ACTUATED SWITCH SHALL BE PROVIDED TO ENERGIZE AND DE-ENERGIZE THE VENTILATION FAN. THE VENTILATION FAN SHALL BE INTERLOCKED WITH ONE OR MORE INTAKE LOUVER DAMPERS, SUCH THAT THE INTAKE LOUVER DAMPERS SHALL OPEN WHEN THE VENTILATION FAN IS ENERGIZED AND THE INTAKE LOUVER DAMPERS SHALL CLOSE WHEN THE VENTILATION FAN IS DE-ENERGIZED. REFER TO THE EQUIPMENT SCHEDULES FOR FAN AND LOUVER INTERLOCK COMBINATIONS.

NOMINAL TUBING SIZE	ROD DIAMETER (IN)	MAXIMUM SPACING (FT)
1/2"	3/8"	6'-0"
3/4" - 1"	3/8"	8'-0"
1-1/4" - 2"	3/8"	10'-0"
2-1/2" - 3"	1/2"	10'-0"
4"	5/8"	10'-0"
6"	3/4"	10'-0"
8"-12"	7/8"	10'-0"

ROD DIA. (IN)	3/8	1/2	5/8	3/4	7/8	1	1-1/8	1-1/4
MAX. LOAD	610	1130	1810	2710	3770	4960	6230	8000

120V EXHAUST FAN WITH COOLING-ONLY THERMOSTAT OR WALL SWITCH



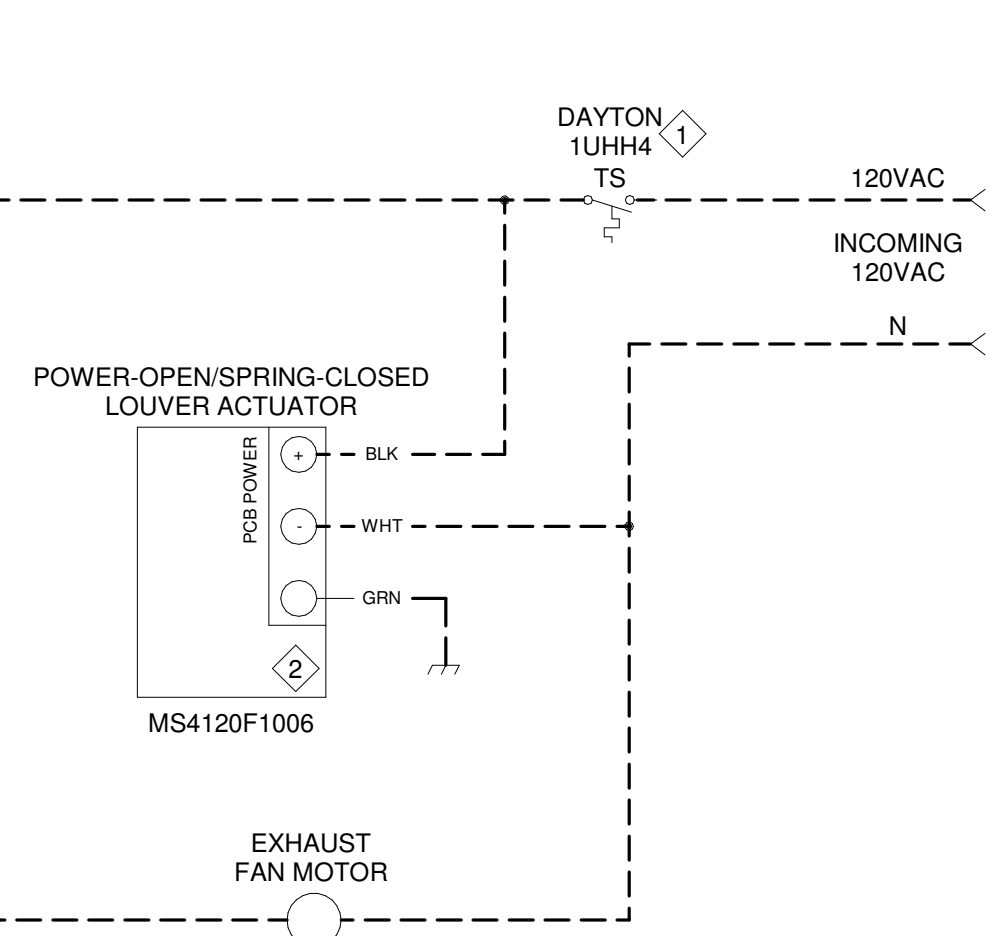
KEYED NOTES:

- FURNISHED BY M.C., INSTALLED BY E.C.

QTY	TAG	MANUFACTURER	PART NUMBER	DESCRIPTION
1	TS	DAYTON	1UH44	LINE VOLT MECHANICAL TSTAT FOR COOLING, 120 TO 277VAC

1 WIRING - 120V EF WITH THERMOSTAT NTS

120V EXHAUST FAN AND LOUVER INTERLOCK WITH COOLING-ONLY THERMOSTAT



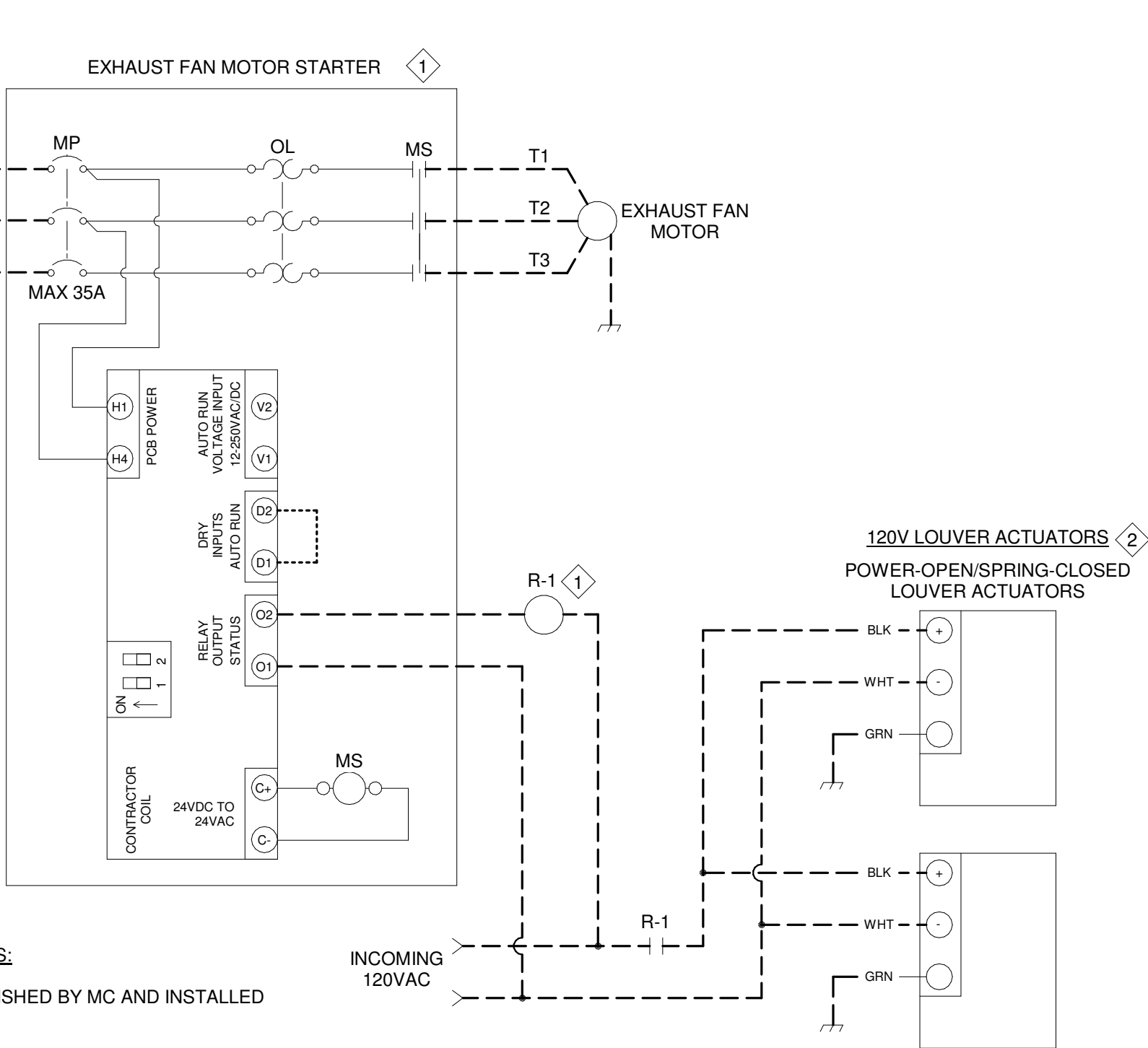
KEYED NOTES:

- FURNISHED BY M.C., INSTALLED BY E.C.
- FACTORY-INSTALLED ON LOUVER

QTY	TAG	MANUFACTURER	PART NUMBER	DESCRIPTION
1	TS	DAYTON	1UH44	LINE VOLT MECHANICAL TSTAT FOR COOLING, 120 TO 277VAC
1		HONEYWELL	MS4120F1006	FAST-ACTING, TWO POSITION ACTUATOR, 175LB-IN. SPRING RETURN BY ORIENTATION, 120VAC

2 WIRING - 120V EF & LOUVER NTS

460V EXHAUST FAN AND PAIRED 120V LOUVER INTERLOCK



KEYED NOTES:

- FURNISHED BY MC AND INSTALLED BY EC

- FACTORY INSTALLED ON LOUVER. REFER TO PLANS FOR QUANTITY OF INTERLOCKED LOUVERS AND REFER TO EQUIPMENT SCHEDULES FOR QUANTITY OF ACTUATORS PER LOUVER.

QTY	TAG	MANUFACTURER	PART NUMBER	DESCRIPTION
1	R-1	FRANKLIN CONTROLS	SA	MOTOR STARTER STANDARD CONTROL, NEMA 1 ENCLOSURE WITH LOCKABLE DOOR, 3 PHASE, 200-600V, 1-25HP
1	R-1	RIB	RIBUC	ENCLOSED RELAY 10A SPOT RELAY WITH 10-30VACDC-120VAC
		RUSKIN	RUS-1120 OR RUS-1200	FAST-ACTING, TWO POSITION ACTUATOR, 175LB-IN. SPRING RETURN BY ORIENTATION, 120VAC

3 WIRING - 460V EF & PAIRED LOUVER NTS

DIRECT FIRED MAKE-UP AIR UNIT SCHEDULE

PLAN MARK	MANUFACTURER	MODEL	LOCATION	SUPPLY FAN					OUTDOOR AIRFLOW [CFM]	NATURAL GAS HEATING				ELECTRICAL			WEIGHT [LBS]	NOTES	
				AIRFLOW [CFM]	ESP [IN WC]	HP	BHP	QTY		EDB [°F]	LDB [°F]	INPUT [MBH]	OUTPUT [MBH]	INLET PRESSURE RANGE [IN WC]	VOLTS/PH	MCA			MOCP
MAU-1	CAPTIVEAIRE	A4-D-1000-30D	WAREHOUSE	9,200	0.15	5.0	3.1	1	9,200	12.0	100.0	842.0	775.0	7-14	460/3	13.5	20	2,000.0	1,2,3,4,5,6,7,8,9,10,11
MAU-2	CAPTIVEAIRE	A4-D-1000-30D	WAREHOUSE	9,200	0.15	5.0	3.1	1	9,200	12.0	100.0	842.0	775.0	7-14	460/3	13.5	20	2,000.0	1,2,3,4,5,6,7,8,9,10,11
MAU-3	CAPTIVEAIRE	A4-D-1000-30D	WAREHOUSE	9,200	0.15	5.0	3.1	1	9,200	12.0	100.0	842.0	775.0	7-14	460/3	13.5	20	2,000.0	1,2,3,4,5,6,7,8,9,10,11
MAU-4	CAPTIVEAIRE	A4-D-1000-30D	WAREHOUSE	9,200	0.15	5.0	3.1	1	9,200	12.0	100.0	842.0	775.0	7-14	460/3	13.5	20	2,000.0	1,2,3,4,5,6,7,8,9,10,11
MAU-5	CAPTIVEAIRE	A4-D-1000-30D	WAREHOUSE	9,200	0.15	5.0	3.1	1	9,200	12.0	100.0	842.0	775.0	7-14	460/3	13.5	20	2,000.0	1,2,3,4,5,6,7,8,9,10,11
MAU-6	CAPTIVEAIRE	A4-D-1000-30D	WAREHOUSE	9,200	0.15	5.0	3.1	1	9,200	12.0	100.0	842.0	775.0	7-14	460/3	13.5	20	2,000.0	1,2,3,4,5,6,7,8,9,10,11
MAU-7	CAPTIVEAIRE	A4-D-1000-30D	WAREHOUSE	9,200	0.15	5.0	3.1	1	9,200	12.0	100.0	842.0	775.0	7-14	460/3	13.5	20	2,000.0	1,2,3,4,5,6,7,8,9,10,11
MAU-8	CAPTIVEAIRE	A4-D-1000-30D	WAREHOUSE	9,200	0.15	5.0	3.1	1	9,200	12.0	100.0	842.0	775.0	7-14	460/3	13.5	20	2,000.0	1,2,3,4,5,6,7,8,9,10,11

GENERAL REMARKS:

- EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS AND DUCT MOUNTED COILS
- MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC
- MAU SHALL NOT BE STARTED OR OPERATED WITHOUT THE REQUIRED FILTERS INSTALLED
- PURCHASED BY NDBS

NOTES:

- FURNISHED WITH 24" TALL FULL PERIMETER, INSULATED SLOPED CURB, AND DUCT HANGERS
- FACTORY MOUNTED INLET DAMPER
- FACTORY MOUNTED AND WIRED, NON-FUSED DISCONNECT SWITCH
- FURNISHED WITH WEATHERHOOD WITH E2 WASHABLE FILTERS
- FACTORY MOUNTED AND WIRED FREEZES/STAT
- FURNISHED WITH 3-WAY DIFFUSER, FIELD INSTALLED BY MC
- FURNISHED WITH CONTROL PANEL, INSTALLED AND WIRED BY EC
- FACTORY INSTALLED SINGLE POINT POWER CONNECTION
- INSTALLED WITH NIGHT SETBACK FEATURE ON CONTROLLER
- FACTORY INSTALLED AND WIRED 120V GFCI SERVICE OUTLET
- FACTORY MOUNTED AND WIRED VFD FOR SUPPLY FAN MOTOR

LOUVER SCHEDULE

PLAN MARK	MANUFACTURER	MODEL	LOCATION	USE (INTAKE / EXHAUST)	AIRFLOW [CFM]	FACE VELOCITY [FPM]	WATER PENETRATION VELOCITY [FPM]	FREE AREA [%]	PD [IN WC]	WIDTH [IN]	HEIGHT [IN]	DEPTH [IN]	ACTUATOR		INTERLOCKED WITH	SECTIONS			NOTES
													VOLT/PH	FAIL POS.		QTY	WIDTH [IN]	HEIGHT [IN]	
L-1	RUSKIN	ELM6DW	WAREHOUSE	INTAKE	31,650	831	1,157.0	56%	0.11	96.0	102.0	6.0	120/1	CLOSED	EF-1	2	48.0	102.0	1,2,3,4,5,6
L-2	RUSKIN	ELM6DW	WAREHOUSE	INTAKE	31,650	831	1,157.0	56%	0.11	96.0	102.0	6.0	120/1	CLOSED	EF-2	2	48.0	102.0	1,2,3,4,5,6
L-3	RUSKIN	ELM6DW	WAREHOUSE	INTAKE	31,650	831	1,157.0	56%	0.11	96.0	102.0	6.0	120/1	CLOSED	EF-3	2	48.0	102.0	1,2,3,4,5,6
L-4	RUSKIN	ELM6DW	WAREHOUSE	INTAKE	31,650	831	1,157.0	56%	0.11	96.0	102.0	6.0	120/1	CLOSED	EF-4	2	48.0	102.0	1,2,3,4,5,6
L-5	RUSKIN	ELM6DW	WAREHOUSE	INTAKE	31,650	831	1,157.0	56%	0.11	96.0	102.0	6.0	120/1	CLOSED	EF-1	2	48.0	102.0	1,2,3,4,5,6
L-6	RUSKIN	ELM6DW	WAREHOUSE	INTAKE	31,650	831	1,157.0	56%	0.11	96.0	102.0	6.0	120/1	CLOSED	EF-2	2	48.0	102.0	1,2,3,4,5,6
L-7	RUSKIN	ELM6DW	WAREHOUSE	INTAKE	31,650	831	1,157.0	56%	0.11	96.0	102.0	6.0	120/1	CLOSED	EF-3	2	48.0	102.0	1,2,3,4,5,6
L-8	RUSKIN	ELM6DW	WAREHOUSE	INTAKE	31,650	831	1,157.0	56%	0.11	96.0	102.0	6.0	120/1	CLOSED	EF-4	2	48.0	102.0	1,2,3,4,5,6
L-9	RUSKIN	ELM6DW	FIRE PUMP ROOM	INTAKE	2,000	571	1,157.0	56%	0.11	30.0	30.0	6.0	120/1	CLOSED	EF-5	1	30.0	30.0	1,2,3,4,5,6

GENERAL REMARKS:

- LOUVERS WILL SHIP 1/4" UNDERSIZED
- PURCHASED BY NDBS

NOTES:

- FACTORY PAINTED KYNAR FINISH, COORDINATE FINAL COLOR WITH GC/OOWNER
- CHANNEL FRAME CONSTRUCTION
- LOUVER IS DRAINABLE AND INCLUDES GUTTERS AND WEEPS
- FURNISHED WITH MESH ALUMINUM BIRDSCREEN FOR INTAKE
- FURNISHED WITH BLADE AND JAMB SEALS
- FURNISHED WITH EXTENDED SILLS

EXHAUST FAN SCHEDULE

PLAN MARK	MANUFACTURER	MODEL	LOCATION	TYPE	AIRFLOW [CFM]	FAN RPM	ESP [IN WC]	HP	BHP	DRIVE TYPE	CONTROL / SWITCH BY	ELECTRICAL		WEIGHT [LBS]	NOTES
												VOLTS/PH	FLA		
EF-1	COOK	60 LXULMO	WAREHOUSE	UPBLAST	63,300	543	0.125	15.0	15.0	BELT	MOTOR STARTER	460/3	21	1750	1,2,6,7,8
EF-2	COOK	60 LXULMO	WAREHOUSE	UPBLAST	63,300	543	0.125	15.0	15.0	BELT	MOTOR STARTER	460/3	21	1750	1,2,6,7,8
EF-3	COOK	60 LXULMO	WAREHOUSE	UPBLAST	63,300	543	0.125	15.0	15.0	BELT	MOTOR STARTER	460/3	21	1750	1,2,6,7,8
EF-4	COOK	60 LXULMO	WAREHOUSE	UPBLAST	63,300	543	0.125	15.0	15.0	BELT	MOTOR STARTER	460/3	21	1750	1,2,6,7,8
EF-5	COOK	ACE-D 135	FIRE PUMP ROOM	DOWNBLAST	2,000	1,377	0.15	1/2	0.29	DIRECT	LINE VOLT T-T-STAT	120/1	9.8	100	1,2,3,4,5,6,7,8
EF-6	COOK	SON-D 120	ELECTRICAL ROOM	INLINE	1,000	1,081	0.15	1/6	0.088	DIRECT	LINE VOLT T-T-STAT	120/1	4.4	85	1,2,4,5,7,8