

MECHANICAL GENERAL NOTES

- A. THIS PROJECT WAS DESIGNED PER THE 2018 INTERNATIONAL MECHANICAL CODE AND ALL APPLICABLE LOCAL AMENDMENTS.
- B. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING THE TESTING, ADJUSTMENT AND BALANCING. SEE SHEET F2.0 FOR BALANCING CONTRACTOR'S CONTACT INFORMATION.
- C. ONCE POWER IS APPLIED TO THE ROOFTOP HVAC UNITS, AND THE HVAC TECHNICIAN HAS COMPLETED THE RTU STARTUP PROCEDURE, THE ROOFTOP UNITS WILL RUN IN A DEFAULT MODE FROM THE RETURN AIR SENSOR CONTROLLING A 74 DEGREE COOLING SETPOINT AND A 70 DEGREE HEATING SETPOINT WITH AN INTERMITTENT FAN.
- D. ALL SUPPLY AND RETURN AIR DUCTWORK SHALL BE ROUND OR RECTANGULAR/SQUARE AS SHOWN AND WHERE SPECIFIED. SUPPLY AND RETURN DUCT DUCT DROPS FROM THE RTU SHALL BE RECTANGULAR. HORIZONTAL SUPPLY AND RETURN TRUNK DUCTS AND BRANCHES CONCEALED ABOVE HUNG CEILING MAY BE ROUND. ALL ROUND ELBOWS SHALL BE LONG SWEEP ELBOWS. ALL RECTANGULAR/SQUARE ELBOWS SHALL HAVE TURNING VANES. INSTALL ALL DUCTWORK WITH THE MINIMUM NUMBER OF TURNS AND OFFSETS TO PERMIT MINIMUM STATIC PRESSURE RESISTANCE TO AIRFLOW. DUCTWORK INSTALLED WITH UNNECESSARY TURNS OR OFFSETS WILL BE CORRECTED AT NO COST TO PETSMA. RT.
- E. THE CONTRACTOR SHALL INSTALL THE SUPPLY DIFFUSER PACKAGE ON SALES FLOOR RTU'S SO THAT THE TOP OF THE DIFFUSER IS TIGHT TO THE BOTTOM OF THE ROOF STRUCTURE. SEE DETAIL ON SHEET M2.0.
- F. DURING BIDDING, THE HVAC SUB CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING LOCAL OFFICIALS AND DETERMINE IF THE NUMBER AND LOCATION OF SMOKE DETECTORS ARE IN COMPLIANCE WITH LOCAL CODES AND PRACTICES. IF THE NUMBER OR LOCATION OF THE SMOKE DETECTORS ARE NOT IN COMPLIANCE, THE HVAC SUB CONTRACTOR SHALL CONTACT THE TENANT FINISH ARCHITECT / ENGINEER IMMEDIATELY FOR DIRECTION. THE HVAC SUB CONTRACTOR SHALL BE RESPONSIBLE TO INCLUDE IN HIS BASE BID WORK THE COST TO REMOVE, RELOCATE, AND REWIRE THE SMOKE DETECTORS IN THE LOCATIONS AND ARRANGEMENTS ACCEPTABLE TO AND AS REQUIRED BY LOCAL CODES AND OFFICIALS.
- G. THE HVAC CONTRACTOR SHALL ENSURE THAT NO SENSOR OR THERMOSTAT IS INSTALLED DIRECTLY IN THE PATH OF ANY SUPPLY AIR GRILLE OR DIFFUSER.
- H. SUPPLY AND RETURN DROPS FROM THE RTU SHALL BE INSULATED WITH INTERNAL DUCT LINER PER THE SPECIFICATIONS. HORIZONTAL RECTANGULAR/SQUARE SUPPLY AND RETURN DUCTWORK EXPOSED TO THE CONDITIONED AREA SHALL BE INSULATED WITH INTERNAL DUCT LINER PER THE SPECIFICATIONS. ALL SUPPLY AND RETURN AIR DUCTWORK NOT EXPOSED TO THE CONDITIONED AREA (CONCEALED ABOVE HUNG CEILING) SHALL BE INSULATED WITH DUCT WRAP PER THE SPECIFICATIONS.
- I. ALL ROOF TOP UNITS ARE SUPPLIED WITH RETURN AIR DUCT SMOKE DETECTORS, PROVIDE REMOTE TEST STATIONS AND COORDINATE INSTALLATION AND WIRING CONNECTIONS WITH THE ELECTRICAL CONTRACTOR AND THE FIRE ALARM CONTRACTOR AS REQUIRED.
- J. CONSTRUCTION TRADES MUST USE THE ARCHITECTURAL PLANS FOR WORK INSTALLATION, THIS INCLUDES ALL APPLICABLE DETAILS, REFLECTED CEILING PLANS, AND INTERIOR ELEVATIONS.
- K. REFER TO THE PLUMBING DRAWINGS FOR ALL CONDENSATE DRAIN AND GAS PIPING REQUIREMENTS.

ROOFTOP UNIT SCHEDULE

MARK	MODEL #	NOMINAL TONS	FAN DATA				COOLING DATA				HEATING DATA		ELECTRICAL DATA				EER / IEER / SEER	HUMIDITROL	WEIG HT (LBS.)	AREA SERVED
			S.A. CFM	MIN. CFM	TOTAL CFM	H.P.	DRIVE KIT	TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)	ENTERING DB / WB	AMBIENT	GAS HTG. INPUT (MBH)	GAS HTG. OUTPUT (MBH)	VOLTAGE / PHASE / Hz	MCA	MOCP				
RTU-1	LG072H5EQ1G	6	2150	495	0.76	1.5	MSAV	69.1/72.6	50.1/53.5	80.0/67.0	95.0	81.0/108.0	66.0/87.0	460/3/60	15.0	20	12.2/17.0/-	NO	831	OFFICES / VESTIBULE
RTU-2	LG048H5EB1G	4	1750	400	0.70	1.0	ECM	47.7/50.4	34.5/37.2	80.0/67.0	95.0	53.0/65.0	43.0/52.0	460/3/60	13.0	15	12.8/-/17.0	YES	857	SALON
RTU-3	LG060H5EB1G	5	1850	425	0.79	1.5	MSAV	59.7/63.8	45.4/49.5	80.0/67.0	95.0	53.0/65.0	43.0/52.0	460/3/60	14.0	15	12.7/-/17.0	YES	858	BATHING / DRYING / RESTROOMS
RTU-4	LG120H5EM1G	10	4000	920	1.06	3.75	ECM	114.1/121.9	81.2/89.0	80.0/67.0	95.0	117.0/180.0	95.0/146.0	460/3/60	25.0	30	12.1/15.5/-	YES	1406	SALES AREA FRONT
RTU-5	LG060H5EB1G	5	2150	495	0.68	1.0	ECM	59.7/63.8	45.4/49.5	80.0/67.0	95.0	53.0/65.0	43.0/52.0	460/3/60	14.0	15	12.7/-/17.0	NO	831	ADOPTIONS / HOLDING
RTU-6	LG120H5EM1G	10	4000	920	1.01	3.75	ECM	114.1/121.9	81.2/89.0	80.0/67.0	95.0	117.0/180.0	95.0/146.0	460/3/60	25.0	30	12.1/15.5/-	NO	1386	SALES AREA LEFT REAR
RTU-7	LG120H5EM1G	10	4000	920	1.01	3.75	ECM	114.1/121.9	81.2/89.0	80.0/67.0	95.0	117.0/180.0	95.0/146.0	460/3/60	25.0	30	12.1/15.5/-	NO	1386	SALES AREA RIGHT REAR
RTU-8	LG072H5EQ1G	6	2400	550	0.73	1.5	MSAV	69.2/73.2	50.9/54.9	80.0/67.0	95.0	81.0/108.0	66.0/87.0	460/3/60	15.0	20	12.2/17.0/-	NO	850	RECEIVING
TOTAL			5,125				-3,950 EXHAUST AIR = +1175													

EQUIPMENT PROVIDED BY LENNOX NATIONAL ACCOUNTS, NO SUBSTITUTES ALLOWED. CONTACT LENNOX NATIONAL ACCOUNTS FOR PRICING OR SEE SHEET F2.0 FOR ADDITIONAL INFORMATION. JANE GUNTER PHONE: 1-877-487-6868 OR CONTACT ADRIAN SOSA PHONE: 1-948-439-7847, TECHNICAL SUPPORT: 1-800-367-6285, APPLICATION SUPPORT: 1-888-595-4982.

- ALL RTUS SHALL BE FURNISHED WITH FACTORY INSTALLED RETURN AIR SMOKE DETECTOR.
- FAN ADJUST FAN RPM TO PROVIDE AIR QUANTITIES AS SCHEDULED ABOVE.
- LENNOX WILL FURNISH CURBS PLUS DLPD 2010-10/12.5 DIFFUSER ASSEMBLY FOR RTU-4, 6, AND 7 AND CURBS PLUS DLPD 1806-5/6 DIFFUSER ASSEMBLY FOR RTU-8. SEE DETAIL 1/M2.0.
- ALL FANS THAT ARE BELT DRIVEN WILL RECEIVE BELT AND FREQUENCY DRIVE FOR MSAV BLOWER CONTROL.
- ALL RTUS TO BE FURNISHED WITH FIELD INSTALLED NON-FUSED DISCONNECT SWITCH.
- ALL RTUS TO BE FURNISHED WITH FIELD INSTALLED 120V GFCI CONVENIENCE OUTLET, FIELD WIRED.
- ALL RTUS TO BE FURNISHED WITH FACTORY INSTALLED VARIABLE FREQUENCY DRIVE FOR MSAV BLOWER CONTROL.
- ALL RTUS TO BE FURNISHED WITH FACTORY INSTALLED DRAIN PAN OVERFLOW SWITCH.
- ALL RTUS TO BE PROVIDED WITH FACTORY FURNISHED AND FIELD INSTALLED HAIL GUARDS.
- COORDINATE WITH PLUMBING DRAWINGS.
- ALL RTUS TO BE INSTALLED WITH FULL SIZE SUPPLY AND RETURN DROPS.
- ALL RTUS TO BE INSTALLED WITH HYBRID 1" ROOF CURBS.
- ALL RTUS WITH HUMIDITROL SHALL BE SUPPLIED WITH GLOBAL HUMIDITY/TEMPERATURE SENSOR LENNOX PART NUMBER (21W06).
- ALL RTUS WITHOUT HUMIDITROL SHALL BE SUPPLIED WITH TEMPERATURE SENSOR LENNOX PART NUMBER (94L60).
- ALL RTUS SHALL BE FURNISHED WITH FACTORY INSTALLED GLOBAL FILTERS AND BAROMETRIC RELIEF.
- ALL RTUS TO BE PROVIDED WITH LENNOX GASAL COATING ON EVAPORATOR AND CONDENSING COILS IN AREAS WITHIN 2 MILES OF BRACKISH WATER (FRESH WATER/SALT WATER MIX).

DESIGNER NOTE:
REVIEW FOR
VALUE OF SWITCH

HUMIDITY CONTROL

THE SALON (RTU-2), BATHING/DRYING (RTU-3) AND FRONT SALES AREA (RTU-4) ROOFTOP UNITS ARE PROVIDED WITH LENNOX HUMIDITROL DEHUMIDIFICATION SYSTEM. USING THE PRODIGY CONTROL SYSTEM, SET THE RELATIVE HUMIDITY AT 55% AND ENABLE THE HUMIDITROL TO RUN DURING OCCUPIED AND UNOCCUPIED HOURS. CONTACT LENNOX NATIONAL ACCOUNT TECHNICAL SUPPORT AT 1-800-367-6285 FOR ASSISTANCE WITH PROPER SETUP.

NOTE

TRADE MUST USE ARCHITECTURAL PLANS FOR WORK INSTALLATION. THIS INCLUDES ALL APPLICABLE DETAILS, REFLECTED CEILING PLANS, AND INTERIOR ELEVATIONS.

EXHAUST FAN SCHEDULE

MARK	MANUFACTURER	MODEL #	FAN DATA			VOLTAGE / PHASE	AREA SERVED	OPERATION
			CFM	EXT. S.P.	H.P. or KW	DRIVE PKG.		
EF-1	CAPTIVEAIRE	DR12HFA	500	0.50"	0.18	DIRECT	120 / 1	ASSOCIATES / COMPUTER/COPY
EF-2	CAPTIVEAIRE	DR50HFA	1850	0.50"	0.50	DIRECT	120 / 1	BATHING / DRYING
EF-3	CAPTIVEAIRE	DR50HFA	1300	0.50"	0.50	DIRECT	120 / 1	FISH EGG / ADOPTIONS / HOLDING
EF-4	CAPTIVEAIRE	DR12HFA	300	0.50"	0.18	DIRECT	120 / 1	RESTROOMS

- ALL CAPTIVEAIRE FANS SHALL BE PART OF THE LENNOX EQUIPMENT PACKAGE.
- OPTIONS: GRAVITY BACKDRAFT DAMPER (SLEEVE TYPE), BIRD SCREEN, CURB, EC MOTOR WITH POTENTIOMETER DIAL, AND UNIT MOUNTED DISCONNECT SWITCH.
- ROOF MOUNTED FAN PLACEMENT MUST BE AT LEAST 10'-0" FROM RTU OUTSIDE AIR HOOD, 5'-0" MINIMUM FROM PARAPET WALL TALLER THAN 42" ABOVE ROOF, AND 10'-0" MINIMUM FROM ROOF EDGE OR PARAPET LESS THAN 42" ABOVE ROOF.
- ALL FANS TO BE MONITORED BY EMS.

DESIGN CRITERIA
BUILDING ENVELOPE U-FACTORS
ROOF: 0.03 INSIDE DESIGN TEMP. SEE CHART ON SHEET M1.0 AT 50% R.H.
WALL: 0.09 FOR BOTH SUMMER AND WINTER
GLASS: 0.38 (ASSUMED SOUTH FACING FOR PROTOTYPE)
1" INSULATED LOW "E" GLASS IS TYPICAL. USE 1" INSULATED LOW "E" GLASS IN GEOGRAPHICAL LOCATIONS FACING BETWEEN SOUTH AND SOUTHWEST AND NORTHWEST (VERIFY WITH PETSMA. RT.).
WEATHER:
PROTOTYPE IS DESIGNED USING INDIANAPOLIS, IN WEATHER CONDITIONS OF THE 2018 ASHRAE WEATHER DATA: 1% COLUMN FOR COOLING, 99% COLUMN FOR HEATING.
HEATING:
INTERNAL LOADS:
GENERAL HEAT GAIN FROM PEOPLE - 250 BTU/H SENSIBLE, 200 BTU/H LATENT.
GENERAL HEAT GAIN FROM ANIMALS - 104.8 / 56.4 SM. DOGS 230.7 / 124.2 LG. DOGS
PEOPLE DENSITY - 1 PERSON PER 100 SQUARE FEET EXCEPT AS LISTED BELOW
LIGHTS: COUNT PER ELECTRICAL LIGHTING PLAN. VALUES AS PER LIGHT SCHEDULE.
EQUIPMENT - SEE LIST BELOW FOR VALUES USED PER ZONE.
VENTILATION - VALUES LISTED BELOW BASED ON 2018 IMC.

ZONE	PEOPLE	EQUIPMENT	VENTILATION (OUTDOOR AIR)	EXHAUST
SALES	-	3500 WATTS	7.5 / 0.12 PEOPLE / AREA CFM	-
TOILETS	-	50 CFM / WATER CLOSET/JURNAL	5.0 / 0.06 PEOPLE / AREA CFM	-
ASSOC. RESOURCE	8	2500 WATTS	7.5 / 0.18 PEOPLE / AREA CFM	0.9 CFM/SF
BATHING	4	400 WATTS	7.5 / 0.18 PEOPLE / AREA CFM	0.9 CFM/SF
DRYING	4	400 WATTS	7.5 / 0.18 PEOPLE / AREA CFM	0.9 CFM/SF
SALON	8	1250 WATTS	5.0 / 0.06 PEOPLE / AREA CFM	-
OFFICE	1	1200 WATTS	0.06 CFM/SF AREA CFM	-
VESTIBULE	-	2000 WATTS	20 CFM / PERSON	350 CFM
COMPUTER/COPY	2	-	5.0 / 0.06 PEOPLE / AREA CFM	-
VAULT	-	-	0.06 CFM / SQ. FT.	-
HALL	-	-	0.12 CFM / SQ. FT.	-
RECEIVING (STORAGE)	3	6750 WATTS	7.5 / 0.18 PEOPLE / AREA CFM	0.9 CFM/SF
HOLDING	-	-	7.5 / 0.18 PEOPLE / AREA CFM	0.9 CFM/SF
ISOLATION	-	-	12 CFM / SQ. FT.	-
FISH EQUIPMENT	-	2500 WATTS	7.5 / 0.18 PEOPLE / AREA CFM	0.9 CFM/SF
ADOPTIONS	2	-	7.5 / 0.18 PEOPLE / AREA CFM	0.9 CFM/SF

ANIMALS
LOAD CRITERIA
DOGS
LOAD (SENSIBLE / LATENT) PER DOG
BATHING/DRYING 32 15 SMALL (104.8 / 56.4) 10 LARGE (230.7 / 124.2)
SALON 8 2 SMALL (104.8 / 56.4) 6 LARGE (230.7 / 124.2)
CAT ADOPTION 8 5 (104.8 / 56.4)

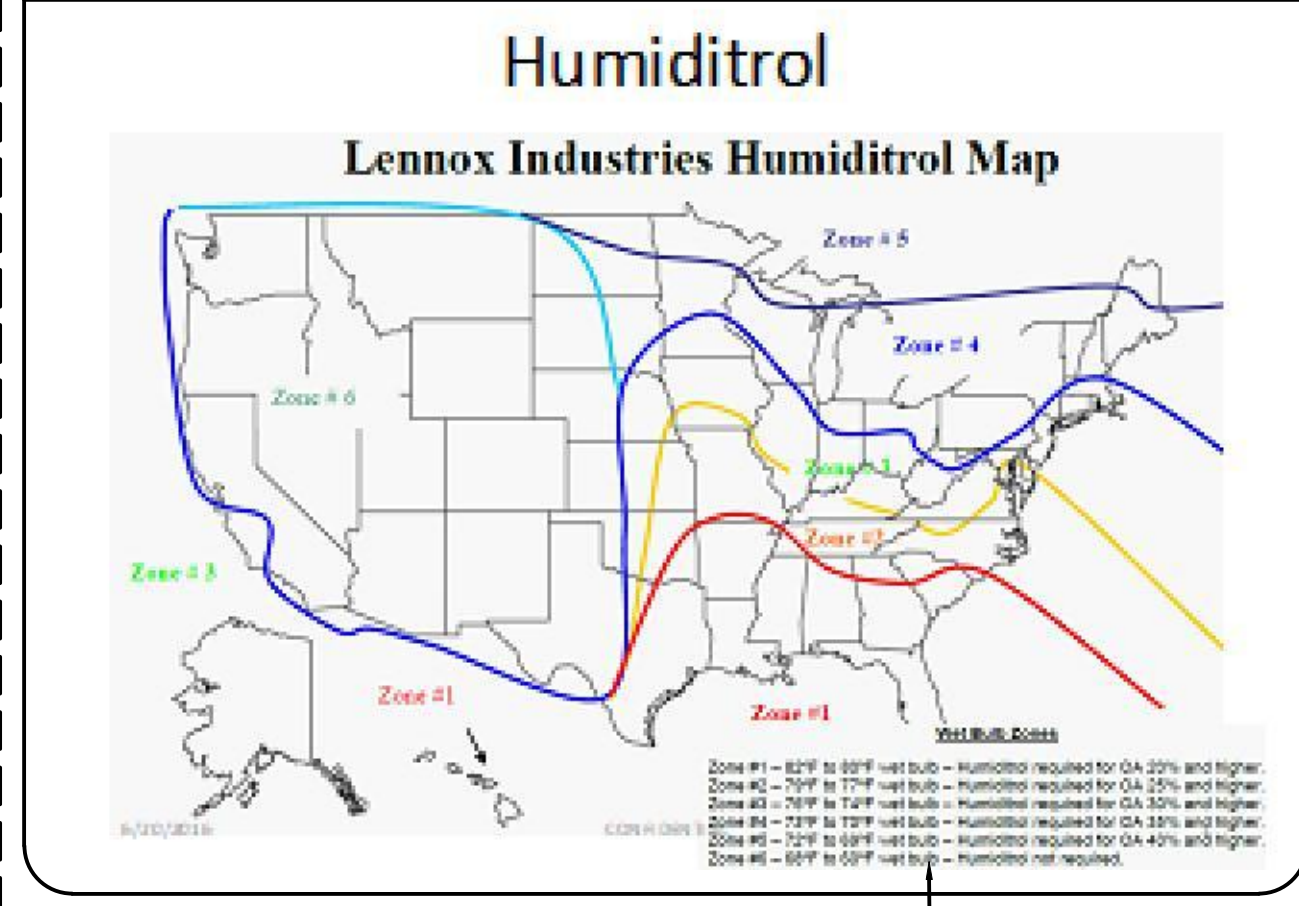
THESE VALUES ARE SUBJECT TO REVIEW AND REVISION, AND SHOULD BE MODIFIED AS REQUIRED FOR EACH PROJECT. IT IS THE RESPONSIBILITY OF THE DESIGNER TO CALCULATE THE HEAT GAIN/LOSSES FOR EACH PROJECT AND REVIEW EQUIPMENT SIZES. PET AREAS ARE REQUIRED BY CODE TO VENTILATE 1 CFM/SF.

SPECIFY SEISMIC RESTRAINT SYSTEMS FOR ALL PIPING, DUCTWORK AND EQUIPMENT AS REQUIRED IN ACCORDANCE WITH APPLICABLE CODES.

HVAC OPERATING TEMPERATURES

RTU #	STORE AREA	COOLING SETPOINTS		HEATING SETPOINTS	
		7 AM TO 9 PM	9 PM TO 7 AM	7 AM TO 9 PM	9 PM TO 7 AM
1	OFFICES / VESTIBULE	73°F	78°F	68°F	64°F
2	SALON	73°F	75°F	68°F	64°F
3	BATHING / DRYING / RESTROOMS	73°F	75°F	68°F	64°F
4, 6 & 7	SALES AREA	73°F	78°F	69°F	64°F
5	ADOPTIONS, FISH, HOLDING	73°F	75°F	68°F	64°F
8	STOCK ROOM	73°F	78°F	68°F	64°F

PETSMART HUMIDITROL MAP



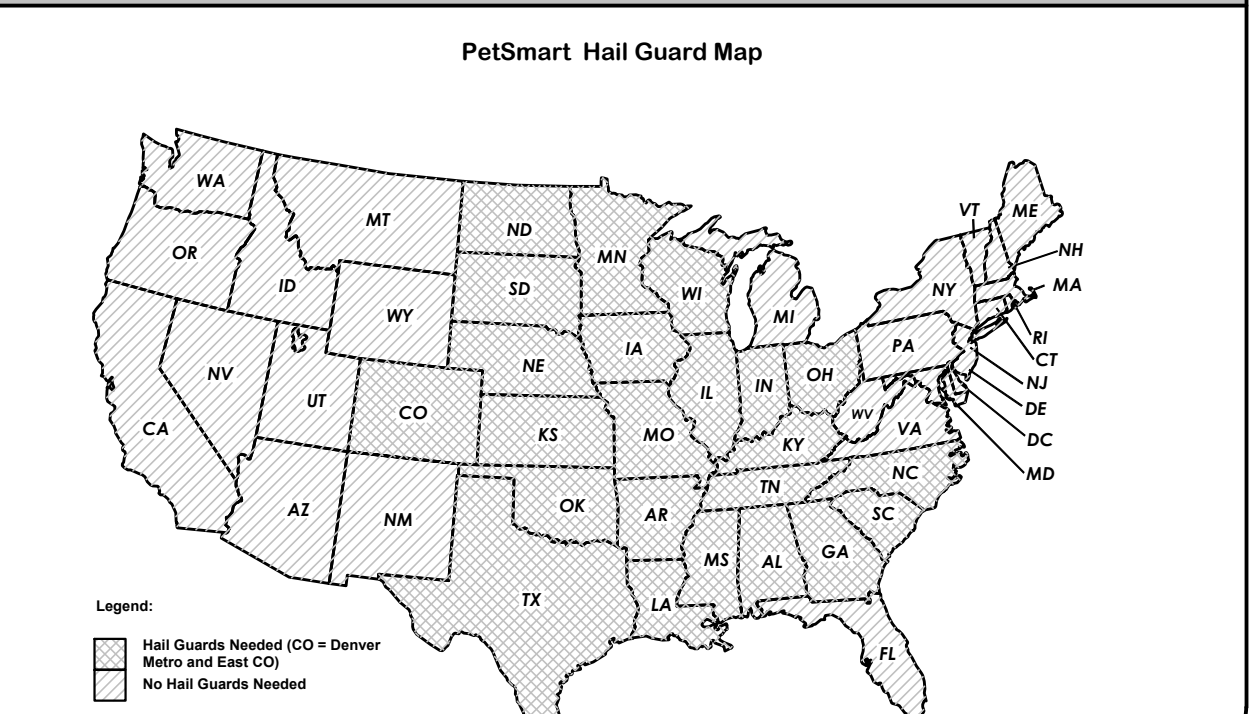
DESIGNER NOTE:
SHOW CAVD AREA. HIGH

DESIGNER NOTE:
REVIEW FOR HUMIDITROL MAP

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REVIEW FOR HUMIDITROL MAP

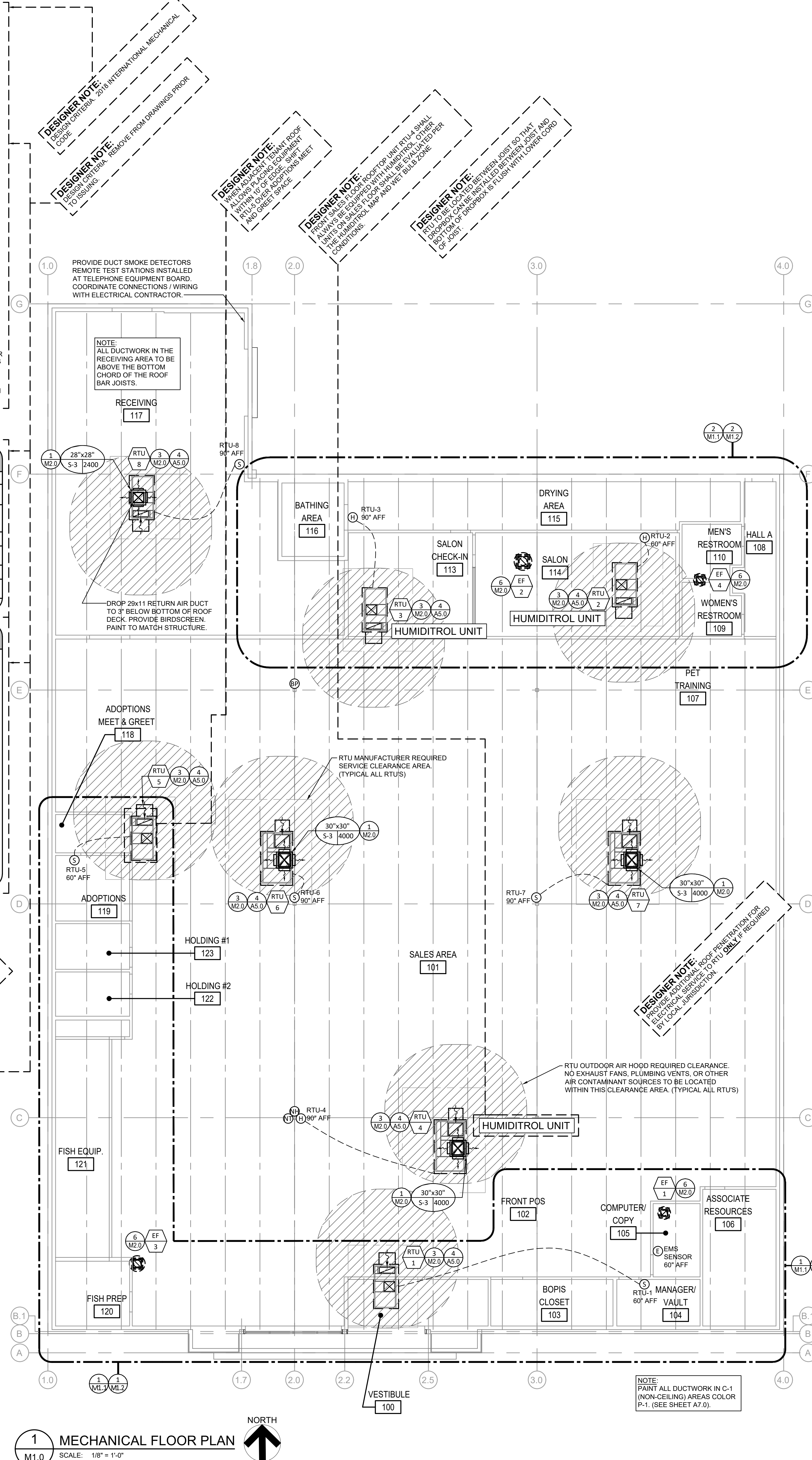
PETSMART HAIL GUARD MAP



MOTORIZED DAMPER SCHEDULE

MARK	MANUFACTURER	MODEL #	CFM	WATTS / VOLTAGE	AREA SERVED	OPERATION
MD-1	APRILAIRE	6608 (8" DIA. DAMPER)	60	125 @ 24 VAC	HOLDING ROOM	THERMOSTAT CONTROLLED
MD-2	APRILAIRE	6608 (8" DIA. DAMPER)	60	125 @ 24 VAC	HOLDING ROOM	THERMOSTAT CONTROLLED

- ALL MOTORIZED DAMPERS SHALL BE PART OF THE LENNOX EQUIPMENT PACKAGE.
- DAMPER SHALL BE DIRECTLY CONNECTED TO THE DIFFUSER NECK.
- FULLY INSULATE DIFFUSER AND DAMPER. SEE DETAIL ON SHEET M2.0.
- SEE WIRING DIAGRAM ON SHEET M2.0 FOR ADDITIONAL INFORMATION ABOUT CONTROLLING DAMPER AND HEATER.
- MECHANICAL CONTRACTOR SHALL PROVIDE A 24VAC TRANSFORMER, DUCT THERMOSTAT WITH TEMPERATURE PROBE AND TWO (2) CONTROL RELAYS FOR EACH DAMPER.



1 MECHANICAL FLOOR PLAN
SCALE: 1/8" = 1'-0"



19601 North 27th Avenue
Phoenix, Arizona 85027 - (623) 580-6100

16K 2025 US INSTRUCTION SET

FEBRUARY 12, 2025

ARCHITECT:

CONSULTANT:

BEAL:

CITY BEAL:

DISCLAIMER:

THIS DRAWING AND DESIGN IN COPYRIGHT PROTECTED WHICH SHALL NOT BE USED, REPRODUCED OR REVISED WITHOUT WRITTEN PERMISSION BY PETSMART. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND UTILITY LOCATIONS AND REPORT ALL ERRORS AND OMISSIONS PRIOR TO COMMENCING WORK. THIS DRAWING IS NOT TO BE SCALED.

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MECHANICAL

M1.0