LOUVER COORDINATION MATRIX - REFERENCE ARCH SPECIFICATION AND SELECTIONS

EQUIPMENT	SERVICE	EXHAUST LOUVERS						INTAKE LOUVERS					
		TYPE	AIR VOLUME (CFM)	VELOCITY (FPM)	SQFT NFA	LOCATION	NOTES	TYPE	AIR VOLUME (CFM)	VELOCITY (FPM)	SQFT NFA	LOCATION	NOTES
GEF-A-X	GARAGE TOWER-A LVL-P2	EXHAUST	7800	750	10.4	A-B/4	3	INTAKE	7800	600	13.0	A-D/12	2, 6
GEF-B-X	GARAGE TOWER-B LVL-P1	EXHAUST	11,260	750	15.0	B-T/22	3	INTAKE	11260	500	22.5	B-L/18	2, 6
GEF-B-X	GARAGE TOWER-B LVL-P2	EXHAUST	15,000	750	20.0	B-T/22	3	INTAKE	15000	600	25.0	A-D/12	2, 6
EF-B-1-HOOD	KITCHEN B105 HOOD	EXHAUST	1,200	750	1.6	B-J/18	3	-	-	-	-	-	-
BEF-B-3,4,6	BOILER COMBUSTION AIR	-	-	-	-	-	-	INTAKE	13380	600	22.3	B-K/20	4
GEF-C-X	GARAGE TOWER-C LVL-P1	EXHAUST	5100	750	6.8	C-A/9	3	INTAKE	5100	500	10.2	C-C/10	2, 6
AHU-A-B-1	VENTILATION TOWER-A LVL-B	EXHAUST	1280	750	1.7	A-B/4	3	INTAKE	1500	600	2.5	A-I/12	4
AHU-A-1-1	VENTILATION TOWER-A LVL-1 DINNING	EXHAUST	2700	750	3.6	A-B/4	3	INTAKE	2700	600	4.5	Wal Louver	4
EF-A-1-1	KITCHEN PROOFER EXHAUST	EXHAUST	1050	750	1.4	A-B/4	3	-	-	-	-	-	-
AHU-A-B-2	VENTILATION TOWER-A LVL-1	EXHAUST	1760	750	2.3	A-B/4	3	INTAKE	2000	600	3.3	A-I/12	4
B-A-B-1, 2, 3	BOILER COMBUSTION AIR	-	-	-	-	-	-	INTAKE	1050	600	1.8	A-I/12	4
AHU-A-1-3	KITCHEN EXHAUST TOWER-A LVL-1	EXHAUST	6400	750	8.5	A-B/4	1	INTAKE	6400	600	10.7	A-A/4	4
AHU-B-1-1	VENTILATION TOWER-B LVL-B	EXHAUST	650	750	0.9	B-T/22	3	INTAKE	1525	600	2.5	B-U/20	4
AHU-P1-1	VENTILATION TOWER-B LVL-1	EXHAUST	2800	750	3.7	B-T/22	3	INTAKE	1600	600	2.7	B-U/20	4
AHU-L-1-1	VENTILATION MAIN LOBBY LVL-1	-	-	-	-	-	-	INTAKE	400	500	0.8	Wal Louver	4
AHU-C-1-1	VENTILATION TOWER-C LVL-1	EXHAUST	1030	750	1.4	C-A/9	3	INTAKE	1030	600	1.7	C-B/9	4
BEF-C-2	BOILER COMBUSTION AIR	-	-	-	-	-	-	INTAKE	1050	600	1.8	C-B/9	4
EF-TR-A-P2	TOWER-A TRASH ROOM	EXHAUST	550	750	0.7	A-B/4	3	-	-	-	-	-	-
SPF-B-P1-1	TOWER-B STAIR-06 PRESSURIZATION	-	-	-	-	-	-	INTAKE	4000	600	6.7	B-U/20	4
SPF-B-P1-2	TOWER-B STAIR-07 PRESSURIZATION	-	-	-	-	-	-	INTAKE	5000	600	8.3	B-U/20	4
SPF-B-P1-3	TOWER-B STAIR-08 PRESSURIZATION	-	-	-	-	-	-	INTAKE	7000	600	11.7	B-U/20	4
SPF-B-P1-4	TOWER-B STAIR-09 PRESSURIZATION	-	-	-	-	-	-	INTAKE	4000	600	6.7	B-U/20	4
GENERATOR	GENERATOR RADIATOR AIR	EXHAUST	27000	750	36.0	B-T/22	3	INTAKE	27000	600	45.0	B-U/20	4
GENERATOR	GENERATOR COMBUSTION FLUE	EXHAUST	5000	-	-	-	1	INTAKE	5000	600	8.3	B-U/20	4
BOILER FLUE	BOILER FLUE EXHAUST	EXHAUST	TBD	-	-	-	5	-	-	-	-	-	-

NOTES;
1. EXHAUST CLEARANCE PER IMC 506.3.13.3; 10 HORIZONTALLY FROM PARTS OF THE SAME OR CONTIGUOUS BUILDINGS, ADJACENT BUILDINGS AND ADJACENT PROPERTY LINES, 10 FEET ABOVE THE ADJOINING GRADE LEVEL. 10 FEET HORIZONTALLY FROM OR NOT LESS THAN 3 FEET ABOVE AIR INTAKE OPENINGS INTO ANY BUILDING. EXCEPTION: OUTLETS SHALL TERMINATE NOT LESS THAN 5 FEET HORIZONTALLY FROM PARTS OF THE SAME OR CONTIGUOUS BUILDING, AN ADJACENT BUILDING, ADJACENT PROPERTY LINE AND AIR INTAKE OPENINGS INTO A BUILDING WHERE AIR FROM THE EXHAUST OUTLET DISCHARGES AWAY FROM SUCH LOCATIONS.
2. PASSIVE MAKEUP AIR INTAKE CLEARANCE PER IMC 401.4 (1): 10 FEET FROM LOT LINES OR BUILDINGS ON THE SAME LOT
3. ENVIRONMENTAL AIR EXHAUST CLEARANCE PER IMC 501.3.1 (3): 3 FEET FROM PROPERTY LINES; 3 FEET FROM OPERABLE OPENINGS INTO BUILDINGS, AND 10 FEET FROM MECHANICAL AIR INTAKES.
4. MECHANICAL AIR INTAKE CLEARANCE PER IMC 401.4 (2): 10 FEET FROM LOT LINES OR BUILDINGS ON THE SAME LOT, 10 FEET HORIZONTALLY FROM ANY HAZARDOUS OR NOXIOUS CONTAMINANT SOURCE.
5. TERMINATION OF BOILER VENTS PER IMC 804 WITH POWER EXHAUSTERS SHALL BE LOCATED NOT LESS THAN 10-FT FROM THE LOT LINE OR FROM ADJ BUILDINGS AND EXHAUST SHALL BE LOCATED AWAY FROM BUILDINGS. HORIZONTAL TERMINATION: 1) ADJ TO WALKWAYS, TERMINATION OF MECHANICAL DRAFT SYSTEMS SHALL BE NOT LESS THAN 10-FT ABOVE LEVEL OF WALKWAY. 2) VENT SHALL TERMINATE AT LEAST 3-FT ABOVE ANY FORCED AIR INLET LOCATED WITHIN 10-FT. 3) VENTS SHALL TERMINATE AT LEAST 4-FT BELOW, 4-FT HORIZONTALLY FROM OR 1-FT ABOVE ANY DOOR, WINDOW OR GRAVITY AIR INLET INTO BUILDING. 4) VENT SHALL NOT BE LOCATED CLOSER THAN 3-FT TO AN INTERIOR CORNER FORMED BY TWO WALLS PERPENDICULAR TO EACH OTHER. 5) VENT SHALL NOT BE MOUNTED DIRECTLY ABOVE OR WITHIN 3-FT HORIZONTALLY FROM AN OIL TANK VENT OR GAS METER. 6) BOTTOM OF THE VENT TERMINATION SHALL BE LOCATED AT LEAST 12" ABOVE FINISHED GRADE. VERTICAL TERMINATION: 1) ADJ TO WALKWAYS, TERMINATION OF MECHANICAL DRAFT SYSTEMS SHALL BE NOT LESS THAN 10-FT ABOVE LEVEL OF WALKWAY. 2) VENT SHALL TERMINATE AT LEAST 3-FT ABOVE ANY FORCED AIR INLET LOCATED WITHIN 10-FT. 3) VENTS LOCATED BELOW AN ADJACENT ROOF STRUCTURE SHALL BE LOCATED NOT LESS THAN 3-FT FROM THE STRUCTURE. 4) VENTS SHALL TERMINATE AT LEAST 4-FT BELOW, 4-FT HORIZONTALLY FROM OR 1-FT ABOVE ANY DOOR, WINDOW OR GRAVITY AIR INLET INTO BUILDING. 5) VENT CAP SHALL BE INSTALLED TO PREVENT RAIN FROM ENTERING THE VENT SYSTEM AND 6) TERMINATION SHALL BE LOCATED NOT LESS THAN 3-FT HORIZONTALLY FROM ANY PORTION OF THE ROOF STRUCTURE.
6. ARCH SHALL PROVIDE PERF ROLL-UP DOOR FOR GARAGE INTAKE.

SNOW MELT HEADER

DESIGNATION	LOCATION / SERVICE	QUANTITY	FLOW GPM		LOOP			DESIGN SURFACE TEMP (°F)	FLUID TEMP. - LOOP		FLOOR TOTAL AREA (SQ FT)	TOTAL RADIANT LOAD (MBH)	NOTES
			TOTAL HEADER	PER LOOP	QTY. OF LOOPS	HEAD LOSS	TUBE TOTAL LENGTH (FT)		EWT (°F)	LWT (°F)			
SMH-SMA-1	POOLSIDE SIDEWALK	NOT USED											
SMH-SMA-2	POOL DECK	NOT USED											
SMH-SMA-3	ENTRY	NOT USED											
SMH-SMA-4	LOBBY ENTRY	NOT USED											
SMH-SMA-5	BACK ENTRY	NOT USED											
SMH-SMB-1	POOL DECK	NOT USED											
SMH-SMB-2	SIDEWALK	NOT USED											
SMH-SMB-3	DRIVEWAY	NOT USED											
SMH-SMC-1	SIDEWALK	NOT USED											
SMH-SMC-2	ENTRY	NOT USED											
SMH-AB-1	TOWER A LEVEL B WELL	NOT USED											
SMH-AP-1	TOWER A LEVEL P2 WELL	NOT USED											
SMH-AP-2	TOWER A LEVEL P2 WELL	NOT USED											
SMH-AP-3	TOWER A LEVEL P2 ENTRY WAY	NOT USED											
SMH-B1-1	TOWER B LVL 1 WELL	NOT USED											
SMH-B1-2	TOWER B LVL 1 WELL	NOT USED											
SMH-B1-3	TOWER B LVL 1 WELL	NOT USED											
SMH-CP-1	TOWER C LVL P1 WELL	NOT USED											
SMH-A-1	UNIT A / PLAN NORTH	NOT USED											
SMH-A-2	UNIT A / PLAN SOUTH	NOT USED											
SMH-B-1	UNIT B / PLAN NORTH	NOT USED											
SMH-B-2	UNIT B / PLAN SOUTH	NOT USED											
SMH-C-1	UNIT C	NOT USED											
SMH-D-1	UNIT D / PLAN NORTH	NOT USED											
SMH-D-2	UNIT D / PLAN SOUTH	NOT USED											
SMH-E-1	UNIT E	NOT USED											
SMH-F-1	UNIT F / PLAN WEST	NOT USED											
SMH-F-2	UNIT F / PLAN SOUTH	NOT USED											
SMH-G-1	UNIT G	NOT USED											
SMH-H-1	UNIT H / PLAN WEST	NOT USED											
SMH-H-2	UNIT H / PLAN NORTH	NOT USED											
SMH-I-1	UNIT I / PLAN NW	NOT USED											
SMH-I-2	UNIT I / PLAN NORTH CENTER	NOT USED											
SMH-I-3	UNIT I / PLAN NE	NOT USED											
SMH-I-4	UNIT I / PLAN SE	NOT USED											
SMH-I-5	UNIT I / PLAN SW	NOT USED											
SMH-J-1	UNIT J / PLAN NORTH	NOT USED											
SMH-J-2	UNIT J / PLAN WEST	NOT USED											
SMH-J-3	UNIT J / PLAN SOUTH	NOT USED											
SMH-K-1	UNIT K / PLAN NORTH	NOT USED											
SMH-K-2	UNIT K / PLAN SOUTH	NOT USED											
SMH-L-1	UNIT L / PLAN SOUTH	NOT USED											
SMH-M-1	UNIT M / PLAN SOUTH	NOT USED											
SMH-M-2	UNIT M / PLAN EAST	NOT USED											
SMH-N-1	UNIT N / PLAN NORTH	NOT USED											
SMH-N-2	UNIT N / PLAN WEST	NOT USED											
SMH-O-1	UNIT O / PLAN NORTH	NOT USED											
SMH-O-2	UNIT O / PLAN WEST	NOT USED											
SMH-P-1	UNIT P	NOT USED											

GENERAL NOTES:

NOTES:

SILENCERS - BLDGS A & B

DESIGNATION	SYSTEM	TYPE	DIMENSIONS			AIRFLOW, CFM	VELOCITY, FPM	IDEAL DP IN.W.G.	MAX.DP W/SYS EFF, IN.W.G.	MINIMUM DYNAMIC INSERTION LOSS, Db						BASIS OF DESIGN VIBRO-ACOUSTICS MODEL NUMBER	NOTES
			DUCT WIDTH, IN.	DUCT HEIGHT, IN.	LENGTH, IN.					OCTAVE BAND CENTER FREQUENCY, HZ							
										125	250	500	1000	2000	4000		
SA-A-R-1	BLDG-A-WEST-DISCHARGE	RD	86	84	36	43666	+870	0.13	0.26	8	14	17	19	17	14	RD-MLV-31425	
SA-A-R-2	BLDG-A-EAST-DISCHARGE	RD	86	84	36	87544	+1745	0.14	0.28	3	7	14	19	16	14	RD-HV-31425	
SA-B-R-1	BLDG-B-NORTH-DISCHARGE	RD	86	84	36	43666	+870	0.13	0.26	8	14	17	19	17	14	RD-MLV-31425	
SA-B-R-2	BLDG-B-SOUTH-DISCHARGE	RD	86	84	36	87544	+1745	0.14	0.28	3	7	14	19	16	14	RD-HV-31425	

GENERAL NOTES:
A. TYPE: R - RECTANGULAR D - DISSIPATIVE
B. VELOCITY IS SHOWN + (FORWARD FLOW) OR - (REVERSE FLOW) AS DEFINED BY ASTM E477-20.
C. IDEAL PRESSURE DROP AS DETERMINED PER ASTM E477-20 IN A NVLAP-ACCREDITED ACOUSTICAL LABORATORY.
D. PRESSURE DROP PER ASTM E477-20 PLUS SYSTEM EFFECTS FOR NEARBY DUCT ELEMENTS.
E. MINIMUM DYNAMIC INSERTION LOSS DETERMINED PER ASTM E477-20 IN A NVLAP-ACCREDITED ACOUSTICAL LABORATORY.
F. FOR NON-BASIS OF DESIGN PRODUCT SUPPLIED, CONTRACTOR IS FINANCIALLY RESPONSIBLE TO ENSURE NOISE CONTROL SOLUTION IS DELIVERED TO ACHIEVE SPECIFIED NC LEVEL IN SPACES.

SILENCERS - BLDG C

TAG NUMBER	SILENCER MODULE	EQUIPMENT SERVED	QUANTITY	SIZE (in)			AIRFLOW (CFM)	P.D. INCLUDING SYSTEM EFFECTS (in.wg)	PROJECT SOUND REQUIREMENT	MANUFACTURER	MODEL NUMBER	NOTES
				W	L	H						
SA-C-R-1	INTAKE SILENCER	ASHP-C-R-1	1	288	204	36	-95178	0.09	55 dBA ABOUT 7 FT TO THE CLOSEST PROPERTY LINE	VIBRO-ACOUSTICS	VA-AY29138	1,3,5,5,6
SA-C-R-2	DISCHARGE SILENCER	ASHP-C-R-1	1	198	86	96	95178	0.23				2,3,4,5,6
	PACKAGE OVERALL DIMENSION	ASHP-C-R-1	1	288	204	192	N/A	N/A				-

NOTES:
1. Rectangular Dissipative silencer integrated and to be installed on top of the pit wall(provided by others). Include 2" x 2" birdscreen at the inlet.
2. Rectangualr Dissipative silencer integrated and to be installed on top of the chiller with access doors. Include 2" x 2" birdscreen at the outlet.
3. Manufacturer must design self-supporting structural steel and withstand the seismic and wind load requirement. Manufacturer to provide calculations with PE stamp during the submittal process.
4. Alternate manufacturer must submit acoustical calculations with PE stamp to demonstrate that the silencers will result to dBA requirement as scheduled.
5. Alternate manufacturer must submit pressure drop calculations inlcuding system effects with PE stamp.
6. For non-basis of design product, contractor is financially responsible to meet the project sound requirement.

Reserved for permit stamp

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J	01/10/2025	ASI 6
2	5/31/2024	IFC 3

IFC Set 3 of 3
5/31/2024

MECHANICAL SCHEDULES

M0.07