

System Ventilation Requirements (Imperial) - [ERV-1]													
AHU Location	Description	Vpz cfm	Ps People	Pz People	D Ps / Pz	Vou cfm	Vps cfm	Xs	Ev	Vot cfm	%OA Vot / Vps		
Alternative 2													
Zone	In-floor Radiant Heating & Cooling	2,888	211	211	1.00	2,291	2,888	0.793	1.000	2,291	79.3		
Zone	In-floor Radiant Heating & Cooling	2,888	211	211	1.00	2,291	2,888	0.793	1.000	2,291	79.3		
Ventilation Parameters													
Alternative 2													
System Zone Room	Rp cfm/p	Pz People	Ra cfm/ft <sup>2</sup>	Az ft	Vbz cfm	—Cooling— Ez cfm	—Heating— Voz cfm						
1.08 - Staff Room	5.00	6.00	0.06	299	48	1.00	48	1.00	48	1.00	48		
1.08A - Staff Room Storage	0.00	0.00	0.12	22	3	1.00	3	0.80	3	0.80	3		
Zone -001	5.00	6.00	0.06	321	51	1.00	51	1.00	51	1.00	51		
1.12 - Universal Washroom	0.00	0.00	0.00	513	0	1.00	0	1.00	0	1.00	0		
1.10 - Janitor Room	0.00	0.00	0.00	97	0	1.00	0	1.00	0	1.00	0		
1.13 - UTR Room	0.00	0.00	0.00	191	0	1.00	0	1.00	0	1.00	0		
1.09 - Staff UTR	0.00	0.00	0.00	194	0	1.00	0	1.00	0	1.00	0		
Zone -002	0.00	0.00	0.00	865	0	1.00	0	1.00	0	1.00	0		
1.04 - Library Services Workroom	5.00	4.00	0.06	523	51	1.00	51	1.00	51	1.00	51		
Zone -003	5.00	4.00	0.06	523	51	1.00	51	1.00	51	1.00	51		
1.22 - Branch Head Office	5.00	1.00	0.06	151	14	1.00	14	1.00	14	1.00	14		
Zone -004	5.00	1.00	0.06	151	14	1.00	14	1.00	14	1.00	14		
1.15 - Tutorial Room A	5.00	6.00	0.06	137	38	1.00	38	1.00	38	1.00	38		
Zone -005	5.00	6.00	0.06	137	38	1.00	38	1.00	38	1.00	38		
1.16 - Tutorial Room B	5.00	6.00	0.06	137	38	1.00	38	1.00	38	1.00	38		
Zone -006	5.00	6.00	0.06	137	38	1.00	38	1.00	38	1.00	38		
1.02 & 1.03 - Lib Services Area & Lobby	5.00	14.00	0.12	1,713	276	1.00	276	1.00	276	1.00	276		
1.11 - Universal W/R Corridor	0.00	0.00	0.06	70	4	1.00	4	1.00	4	1.00	4		
1.05 - Print/Copy Area	0.00	0.00	0.06	293	16	1.00	16	1.00	16	1.00	16		
Zone -007	5.00	14.00	0.12	2,545	295	1.00	295	1.00	295	1.00	295		
1.18 - Open Library (Interior)	5.00	30.00	0.12	4,286	664	1.00	664	1.00	664	1.00	664		
Zone -008	5.00	30.00	0.12	4,286	664	1.00	664	1.00	664	1.00	664		
1.17 - Childrens Area	5.00	34.00	0.12	1,254	320	1.00	320	1.00	320	1.00	320		
Zone -009	5.00	34.00	0.12	1,254	320	1.00	320	1.00	320	1.00	320		
1.18 - Open Library S Exterior Zone	5.00	44.00	0.12	1,138	357	1.00	357	1.00	357	1.00	357		
Zone -010	5.00	44.00	0.12	1,138	357	1.00	357	1.00	357	1.00	357		
1.19 - Living Room	5.00	7.00	0.12	439	86	1.00	86	1.00	86	1.00	86		
Zone -011	5.00	7.00	0.12	439	86	1.00	86	1.00	86	1.00	86		
1.20 - MPR Room	5.00	59.00	0.07	1,037	357	1.00	357	1.00	357	1.00	357		
Zone -012	5.00	59.00	0.07	1,037	357	1.00	357	1.00	357	1.00	357		
1.07 - Mechanical Room	0.00	0.00	0.00	235	0	1.00	0	1.00	0	1.00	0		
Zone -013	0.00	0.00	0.00	235	0	1.00	0	1.00	0	1.00	0		
1.06 - Electrical Room	0.00	0.00	0.00	121	0	1.00	0	1.00	0	1.00	0		
Zone -014	0.00	0.00	0.00	121	0	1.00	0	1.00	0	1.00	0		
1.14 - Vestibule B	0.00	0.00	0.00	72	0	1.00	0	1.00	0	1.00	0		
Zone -015	0.00	0.00	0.00	72	0	1.00	0	1.00	0	1.00	0		
1.01 - Vestibule A	0.00	0.00	0.00	122	0	1.00	0	1.00	0	1.00	0		
Zone -016	0.00	0.00	0.00	122	0	1.00	0	1.00	0	1.00	0		
In-floor Radiant Heating & Cooling	5.00	211.00	0.10	12,864	2,291	1.000	2,291	1.000	2,291	1.000	2,291		
Ventilation Calculations for Cooling Design													
System Zone Room	Box Type	Vpz cfm	Vfan cfm	Vdz cfm	Vpz-min cfm	Voz-cfg cfm	Zd	Ep	Er	Fa	Fb	Fc	Evz
Alternative 2													
1.08 - Staff Room	Single Fan CV	43	43	43	48	48	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.08A - Staff Room Storage	Single Fan CV	3	3	3	3	3	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
Zone -001	51	51	51	51	51	51	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.12 - Universal Washroom	Single Fan CV	189	189	189	189	0	0.000	1.000	-0.011	1.000	1.000	1.000	1.000 *
1.10 - Janitor Room	Single Fan CV	19	19	19	19	0	0.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.13 - UTR Room	Single Fan CV	35	35	35	35	0	0.000	1.000	-0.011	1.000	1.000	1.000	1.000 *
1.09 - Staff UTR	Single Fan CV	28	28	28	28	0	0.000	1.000	-0.011	1.000	1.000	1.000	1.000 *
Zone -002	272	272	272	272	272	272	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.04 - Library Services Workroom	Single Fan CV	51	51	51	51	51	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
Zone -003	51	51	51	51	51	51	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.22 - Branch Head Office	Single Fan CV	14	14	14	14	14	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
Zone -004	14	14	14	14	14	14	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.15 - Tutorial Room A	Single Fan CV	38	38	38	38	38	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
Zone -005	38	38	38	38	38	38	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.16 - Tutorial Room B	Single Fan CV	38	38	38	38	38	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
Zone -006	38	38	38	38	38	38	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.02 & 1.03 - Lib Services Area	Single Fan CV	276	276	276	276	276	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.11 - Universal W/R Corridor	Single Fan CV	4	4	4	4	4	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.05 - Print/Copy Area	Single Fan CV	16	16	16	16	16	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
Zone -007	295	295	295	295	295	295	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.18 - Open Library (Interior)	Single Fan CV	664	664	664	664	664	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
Zone -008	664	664	664	664	664	664	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.17 - Childrens Area	Single Fan CV	320	320	320	320	320	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
Zone -009	320	320	320	320	320	320	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.18 - Open Library S Exterior Zone	Single Fan CV	357	357	357	357	357	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
Zone -010	357	357	357	357	357	357	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.19 - Living Room	Single Fan CV	86	86	86	86	86	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
Zone -011	86	86	86	86	86	86	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.20 - MPR Room	Single Fan CV	357	357	357	357	357	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
Zone -012	357	357	357	357	357	357	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.07 - Mechanical Room	Single Fan CV	107	107	107	107	107	0.000	1.000	0.000	1.000	1.000	1.000	1.000 *
Zone -013	107	107	107	107	107	107	0.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.06 - Electrical Room	Single Fan CV	57	57	57	57	57	0.000	1.000	0.000	1.000	1.000	1.000	1.000 *
Zone -014	57	57	57	57	57	57	0.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.14 - Vestibule B	Single Fan CV	73	73	73	73	73	0.000	1.000	-0.011	1.000	1.000	1.000	1.000 *
Zone -015	73	73	73	73	73	73	0.000	1.000	-0.011	1.000	1.000	1.000	1.000 *
1.01 - Vestibule A	Single Fan CV	89	89	89	89	89	0.000	1.000	-0.011	1.000	1.000	1.000	1.000 *
Zone -016	89	89	89	89	89	89	0.000	1.000	-0.011	1.000	1.000	1.000	1.000 *
In-floor Radiant Heating & Cooling		2,888	2,888	2,888	2,888	2,291	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
Ventilation Calculations for Heating Design													
System Zone Room	Box Type	Vpz cfm	Vfan cfm	Vdz cfm	Vpz-min cfm	Voz-Htg cfm	Zd	Ep	Er	Fa	Fb	Fc	Evz
Alternative 2													
1.08 - Staff Room	Single Fan CV	43	43	43	48	48	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.08A - Staff Room Storage	Single Fan CV	3	3	3	3	3	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
Zone -001	51	51	51	51	51	51	1.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.12 - Universal Washroom	Single Fan CV	189	189	189	189	0	0.000	1.000	-0.011	1.000	1.000	1.000	1.000 *
1.10 - Janitor Room	Single Fan CV	19	19	19	19	0	0.000	1.000	0.000	1.000	1.000	1.000	1.000 *
1.13 - UTR Room	Single Fan CV	35	35	35	35	0	0.000	1.000	-0.011	1.000	1.000	1.000	1.000 *