MECHANICAL VENTILATION SCHEDULE

ROOM	OCCUPANY CLASSIFICATION	FLOOR AREA (FT^2)	ROOM VOLUME (FT^3)	OCCUPANT LOAD (OCCUPANT/1,000 FT^2)	# OF OCCUPANTS	REQUIRED CFM/OCCUPANT	REQUIRED CFM/FT^2	BREATHING ZONE OUTDOOR AIRFLOW (CFM)	ZONE DISTRIBUTION EFFECTIVENESS		TOTAL ROOM OUTDOOR AIR REQUIRED (CFM)		ACTUAL ROOM OUTDOOR AIRFLOW RATE (CFM)		TOTAL SUPPLY AIRFLOW (CFM)		AIR CHANGE RATE (ACH)	
									COOLING	HEATING	COOLING	HEATING	COOLING	HEATING	COOLING	HEATING	COOLING	HEATING
BAND ROOM 101	MUSIC/THEATER/DANCE	1102	12122	35	39	10	0.06	452	0.9	0.9	502	502	505	505	1500	1500	7.4	7.4
CHORUS 103	MUSIC/THEATER/DANCE	947	10417	35	33	10	0.06	388	0.9	0.9	431	431	435	435	1250	1250	7.2	7.2
WEIGHT ROOM 105	WEIGHT ROOM	388	4268	10	4	20	0.06	101	0.9	0.9	112	112	115	115	750	750	10.5	10.5
OFFICE 106	OFFICE SPACES	347	3817	5	2	5	0.06	29	0.9	0.9	33	33	35	35	750	750	11.8	11.8
SHOP 107	WOOD/METAL SHOPS	1790	19690	20	36	10	0.18	680	0.9	0.9	756	756	760	760	2500	2500	7.6	7.6
SHOP 108	WOOD/METAL SHOPS	1786	19646	20	36	10	0.18	679	0.9	0.9	754	754	755	755	2500	2500	7.6	7.6
CLASSROOM 112	CLASSROOMS (AGE 9 PLUS)	833	9163	35	29	10	0.12	392	0.9	0.9	435	435	440	440	1250	1250	8.2	8.2
CLASSROOM 113	CLASSROOMS (AGE 9 PLUS)	837	9207	35	29	10	0.12	393	0.9	0.9	437	437	440	440	1500	1500	9.8	9.8
RES 114	CLASSROOMS (AGE 9 PLUS)	833	9163	35	29	10	0.12	392	0.9	0.9	435	435	440	440	1250	1250	8.2	8.2
CLASSROOM 115	CLASSROOMS (AGE 9 PLUS)	858	9438	35	30	10	0.12	403	0.9	0.9	448	448	450	450	1500	1500	9.5	9.5
SPECIAL ED 116	CLASSROOMS (AGE 9 PLUS)	835	9185	35	29	10	0.12	392	0.9	0.9	436	436	440	440	1250	1250	8.2	8.2
CLASSROOM 117	CLASSROOMS (AGE 9 PLUS)	845	9295	35	30	10	0.12	397	0.9	0.9	441	441	445	445	1500	1500	9.7	
SPECIAL ED 118	CLASSROOMS (AGE 9 PLUS)	840	9240	35	29	10	0.12	395	0.9	0.9	439	439	440	440	1250	1250	8.1	8.1
OFFICE 121	OFFICE SPACES	504	5544	5	3	5	0.06	43	0.9	0.9	48	48	50	50	750	750	8.1	8.1
NURSE 122	OFFICE SPACES	584	6424	5	3	5	0.06	50	0.9	0.9	55	55	60	60	1000	1000	9.3	9.3
LOUNGE 123	OFFICE SPACES	806	8866	5	4	5	0.06	69	0.9	0.9	76	76	80	80	750	750	5.1	5.1
CLASSROM 124	CLASSROOMS (AGE 9 PLUS)	579	6369	35	20	10	0.12	272	0.9	0.9	302	302	305	305	750	750	7.1	7.1
CLASSROOM 125	CLASSROOMS (AGE 9 PLUS)	807	8877	35	28	10	0.12	379	0.9	0.9	421	421	425	425	1250	1250	8.4	8.4
CLASSROOM 127	CLASSROOMS (AGE 9 PLUS)	783	8613	35	27	10	0.12	368	0.9	0.9	409	409	410	410	1250	1250	8.7	8.7
CLASSROOM 129	CLASSROOMS (AGE 9 PLUS)	812	8932	35	28	10	0.12	382	0.9	0.9	424	424	425	425	1250	1250	8.4	8.4
CLASSROOM 130	CLASSROOMS (AGE 9 PLUS)	811	8921	35	28	10	0.12	381	0.9	0.9	424	424	425	425	1250	1250	8.4	8.4
CLASSROOM 132	CLASSROOMS (AGE 9 PLUS)	812	8932	35	28	10	0.12	382	0.9	0.9	424	424	425	425	1250	1250	8.4	8.4
CLASSROOM 133	CLASSROOMS (AGE 9 PLUS)	815	8965	35	29	10	0.12	383	0.9	0.9	426	426	430	430	1500	1500	10.0	10.0
CLASSROOM 134	CLASSROOMS (AGE 9 PLUS)	812	8932	35	28	10	0.12	382	0.9	0.9	424	424	425	425	1250	1250	8.4	8.4
CLASSROOM 135	CLASSROOMS (AGE 9 PLUS)	815	8965	35	29	10	0.12	383	0.9	0.9	426	426	430	430	1500	1500	10.0	10.0
CLASSROOM 136	CLASSROOMS (AGE 9 PLUS)	812	8932	35	28	10	0.12	382	0.9	0.9	424	424	425	425	1000	1000	6.7	6.7
CLASSROOM 137	CLASSROOMS (AGE 9 PLUS)	815	8965	35	29	10	0.12	383	0.9	0.9	426	426	430	430	1500	1500	10.0	10.0
ART ROOM 138	CLASSROOMS (AGE 9 PLUS)	482	5302	35	17	10	0.12	227	0.9	0.9	252	252	255	255	1000	1000	11.3	11.3
STORAGE 138A	CLASSROOMS (AGE 9 PLUS)	512	5632	35	18	10	0.12	241	0.9	0.9	267	267	270	270	750	750	8.0	8.0
ART ROOM 139	CLASSROOMS (AGE 9 PLUS)	892	9812	35	31	10	0.12	419	0.9	0.9	466	466	470	470	1250	1250	7.6	7.6
ART ROOM 140	CLASSROOMS (AGE 9 PLUS)	846	9306	35	30	10	0.12	398	0.9	0.9	442	442	445	445	1000	1000	6.4	6.4
CLASSROOM 141	CLASSROOMS (AGE 9 PLUS)	830	9130	35	29	10	0.12	390	0.9	0.9	433	433	435	435	1000	1000	6.6	6.6
SCIENCE 142	CLASSROOMS (AGE 9 PLUS)	894	9834	35	31	10	0.12	420	0.9	0.9	467	467	470	470	1250	1250	7.6	7.6
SCIENCE 144	CLASSROOMS (AGE 9 PLUS)	785	8635	35	27	10	0.12	369	0.9	0.9	410	410	410	410	1000	1000	6.9	6.9
LIBRARY 145	LIBRARIES	1948	21428	10	19	5	0.12	331	0.9	0.9	368	368	370	370	1500	1500	4.2	4.2
HOME EC 146	CLASSROOMS (AGE 9 PLUS)	786	8646	35	28	10	0.12	369	0.9	0.9	410	410	415	415	1250	1250	8.7	8.7
CLASSROOM 148	CLASSROOMS (AGE 9 PLUS)	552	6072	35	19	10	0.12	259	0.9	0.9	288	288	290	290	1000	1000	9.9	9.9
HOME EC 150	CLASSROOMS (AGE 9 PLUS)	797	8767	35	28	10	0.12	375	0.9	0.9	416	416	420	420	1000	1000	6.8	6.8
CLASSROOM 151	CLASSROOMS (AGE 9 PLUS)	566	6226	35	20	10	0.12	266	0.9	0.9	296	296	300	300	1000	1000	9.6	9.6
OFFICE 152	OFFICE SPACES	235	2585	5	1	5	0.06	20	0.9	0.9	22	22	25	25	750	750	17.4	17.4
WORK ROOM 153	CLASSROOMS (AGE 9 PLUS)	515	5665	35	18	10	0.12	242	0.9	0.9	269	269	270	270	750	750	7.9	7.9
CLASSROOM 154	CLASSROOMS (AGE 9 PLUS)	623	6853	35	22	10	0.12	293	0.9	0.9	325	325	330	330	1000	1000	8.8	8.8
CLASSROOM 202	CLASSROOMS (AGE 9 PLUS)	827	9097	35	29	10	0.12	389	0.9	0.9	432	432	435	435	1250	1250	8.2	8.2
CLASSROOM 203	CLASSROOMS (AGE 9 PLUS)	789	8679	35	28	10	0.12	371	0.9	0.9	412	412	415	415	1500	1500	10.4	10.4
COMPUTER ROOM 204	COMPUTER LAB	791	8701	25	20	10	0.12	293	0.9	0.9	325	325	330	330	750	750	5.2	5.2
OFFICE 205	OFFICE SPACES	289	3179	5	1	5	0.06	25	0.9	0.9	27	27	30	30	750	750	14.2	14.2
COMPUTER ROOM 206	COMPUTER LAB	791	8701	25	20	10	0.12	293	0.9	0.9	325	325	330	330	750	750	5.2	5.2
CLASSROOM 207	CLASSROOMS (AGE 9 PLUS)	783	8613	35	27	10	0.12	368	0.9	0.9	409	409	410	410	1500	1500	10.4	10.4
BIOLOGY 208	CLASSROOMS (AGE 9 PLUS)	930	10230	35	33	10	0.12	437	0.9	0.9	486	486	490	490	1500	1500	8.8	8.8
CLASSROOM 209	CLASSROOMS (AGE 9 PLUS)	792	8712	35	28	10	0.12	372	0.9	0.9	414	414	415	415	1500	1500	10.3	10.3
GENERAL SCIENCE 210	CLASSROOMS (AGE 9 PLUS)	802	8822	35	28	10	0.12	377	0.9	0.9	419	419	420	420	1000	1000	6.8	6.8
CLASSROOM 211	CLASSROOMS (AGE 9 PLUS)	783	8613	35	27	10	0.12	368	0.9	0.9	409	409	410	410	1500	1500	10.4	10.4
GENERAL SCIENCE 212	CLASSROOMS (AGE 9 PLUS)	929	10219	35	33	10	0.12	437	0.9	0.9	485	485	490	490	1250	1250	7.3	7.3
CLASSROOM 213	CLASSROOMS (AGE 9 PLUS)	798	8778	35	28	10	0.12	375	0.9	0.9	417	417	420	420	1500	1500	10.3	7.3
GYMNASIUM 160	GYM, STADIUM, ARENA (PLAY AREA)	7283	80113	7	51	20	0.18	2331	0.8	0.8	2913	2913	2915	2915	7050	7050	5.3	10.3

GYMNASIUM ROOF TOP HEAT PUMP UNITS

UNIT #	AREA SERVED	CAPACITY									AIRFLOW						COOLING					HEATING		ELECTRIC RESISTANCE HEATING		FILTER			WEIGHT (WITHOUT CURB)	ELECTRICAL			BASIS OF DESIGN
		NOMINAL CAPACITY (TONS)	REFRIG-ERANT	TOTAL COOLING CAPACITY (MBH)	HEATING CAPACITY	BACKUP ELECTRIC HEATING CAPACITY (KW)	MINIMUM ISMRE (DEHUM-DIFICATION MODE)	MINIMUM SEER	MINIMUM IEER	CONDENSER EAT (°F DB)	SPEED CONTROL	TOTAL SUPPLY AIRFLOW (CFM)	MIN. OUTSIDE AIR (CFM)	ESP (IN WC)	EXHAUST AIR (CFM)	ESP (IN WC)	EAT (°F DB)	EAT (°F WB)	LAT (°F DB)	LAT (°F WB)	MAX. FACE VELOCITY (FPM)	EAT (°F DB)	LAT (°F DB)	CAPACITY (BTU/H)	CAPACITY (KW)	SUPPLY PRE-FILTER MERV	SUPPLY FINAL FILTER MERV	RETURN FILTER MERV	LBS	MCA	MAX FUSE SIZE	VOLT/PH/HZ	
RTU-1	GYMNASIUM	12	R-410A	132.1	166.0	60	5.2	10.4	11.4	95	CONSTANT	3525	1460	1.5	1460	1.5	78.0	67.0	55.0	55.0	500	46.2	90.0	166000	60	8	13	8	3231	63.3	80	208/3/60	TRANE HORIZON (OAD/N REV6 - OADG/OANG)
RTU-2	GYMNASIUM	12	R-410A	132.1	166.0	60	5.2	10.4	11.4	95	CONSTANT	3525	1460	1.5	1460	1.5	78.0	67.0	56.0	56.0	500	46.2	90.0	166000	60	8	13	8	3231	63.3	80	208/3/60	TRANE HORIZON (OAD/N REV6 - OADG/OANG)

DEDICATED OUTSIDE AIR SYSTEM SCHEDULE NOTES:
1. PROVIDE A DISCONNECT SWITCH AND POWERED CONVENIENCE OUTLET WITH SINGLE POINT POWER CONNECTION.
2. PROVIDE A FULLY PROGRAMMABLE CONTROLLER WITH GRAPHICAL USER INTERFACE.
3. PROVIDE HOT GAS REHEAT.
4. PROVIDE VIBRATION ISOLATORS AND POSITIVELY FASTEN UNIT TO DUNNAGE PER DETAIL 9/M501.
5. PROVIDE ENERGY RECOVERY WHEEL.
6. PROVIDE HEAT PUMP HEATING WITH ELECTRIC RESISTANCE BACKUP HEAT. SIZE THE ELECTRIC HEAT ASSUMING AN ENERGY WHEEL EFFICIENCY OF 50%.

No.	Date	Revisions
REV 3	09-14-23	BIDDING DOCUMENTS
REV 2	06-09-23	SED ADDENDUM #1
REV 1	12-28-22	BIDDING DOCUMENTS

REG. EXP. DATE: 04-30-24

Drawn by AMW
Checked by PV
Project No. 42052
Scale AS NOTED
Date 7/29/22

Mechanical & Electrical Engineer: GREENMAN PEDERSEN, INC 2 M. DONOVAN BOULEVARD SUITE 302 SUFFERN, NY 10901

Structural Engineer: GREENMAN PEDERSEN, INC 2 M. DONOVAN BOULEVARD SUITE 302 SUFFERN, NY 10901

UNIVENT REPLACEMENT AT FARLEY ELEMENTARY SCHOOL
SED # 50-02-01-06-0-003-011
COUNTY OF ROCKLAND

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Drawing Title
MECHANICAL SCHEDULES - 1

Drawing No.
FES-M-002