ANN ARBOR PUBLIC SCHOOLS
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AAPS Ventilation Study Overview

In accordance with AAPS' commitment to health and safety for students and staff, we are preparing our classrooms and buildings across the district for a COVID-informed return to in-person learning. To that end, and concurrent with robust building preparation work in accordance with CDC guidelines and other resources, the AAPS has completed a number of steps to improve indoor air quality, including:

Building Controls Programming, Filter Replacements and HVAC Systems Commissioning

- Programmed a new sequence of operations for the HVAC controls system (Enhanced Indoor Air Quality Mode (EIAQ)) to provide increased ventilation, intake of outside air, and filtration above our typical operating mode, and well beyond code minimum.
- Replaced all filters and increased their density as much as the equipment will allow
- Commissioned all HVAC units (approximately 1,000) including opening the unit, cleaning everything, and verifying the proper operation of items like dampers and actuators.

Room by Room Ventilation Rate Study and Mitigation Actions

- The district has commissioned Fishbeck, a professional engineering firm, to conduct a detailed room-by-room ventilation study for all AAPS buildings. The deliverables of this study include floor plans indicating air changes per hour (ACH) levels by room as well as a summary in the form of an Excel chart. Air changes per hour (ACH) is a measure of how many times the air in a room is replaced, by either outside air or recirculated filtered air, within one hour.
- The Harvard School of Public Health sets ACH levels of five (5) and above to have excellent ventilation.
- Those spaces that fall below 5 ACH will be provided portable air cleaners and/or fans to provide additional air changes to raise the ACH above 5.

Below you will find the results of the ventilation engineering study conducted at your school. The report documents existing ventilation rates in Air Changes per Hour (ACH) as well as any mitigation actions that will be completed prior to a return to in-person instruction.

SCARLETT MIDDLE SCHOOL

Equipment	Space	Area (ft2)	Ceiling Height (ft)	Supply Air Flow (cfm)	Supply Air Changes per Hour (ACH)	Supply Air Changes per Hour (ACH) with Corrective Actions
AHU-A1	Overall System	3,575	9	3400	***6.3***	6.3
AHU-A2	Overall System	4,400	9	7700	***11.7***	11.7
AHU-A2	A206 (typical)	290	9	275	***6.3***	6.3
AHU-A2	A223 (typical)	315	10	500	***9.5***	9.5
AHU-A2	A219 (typical)	140	9	275	***13.1***	13.1
AHU-A2	B220 (typical)	681	9	1400	***13.7***	13.7
AHU-A2	B219 (typical)	427	9	750	***11.7***	11.7
MZAHU-1 (F1)	Music	7,500	10	15000	***12.0***	12.0
MZAHU-6 (F6)	HOME EC/142/143	7,800	12	7850	***5.1***	5.1
AHU-F2	Aux. Gym (North)	3,800	15	4000	***4.2***	**5.0**
AHU-F3	Aux. Gym (South)	3,800	15	4000	***4.2***	**5.0**
AHU-F7	Lobby	2,400	10	5500	***13.8***	13.8
AHU-8	Ventilation 201-205/ 226-228	4,850	10	13200	***16.3***	16.3
AHU-F9	Main Gym	7,000	27	22207	***7.0***	7.0
RTU-G1	Teacher Planning G106	1,241	10	1200	***6.1***	6.1
RTU-G2	Long Distance Learning G110	1,545	14	1800	***5.0***	5.0
RTU-D1	Cafeteria	8,762	16	25400	***10.9***	10.9
AHU-E1	Locker Rooms	5,500	8	4100	***5.6***	5.6
AHU-S3	House Fan	17,700	10	36235	***12.3***	12.3
AHU-S1	Pool	4,050	20	13600	***10.1***	10.1

Corrective Action(s)

AHU-F2	Aux. Gym (North)	3,800	15	4,000	***4.2***
Add (3) 300 CFM Goodyear Portable Air Cleaners		3,800	15	4,900	**5.0**
AHU-F3	Aux. Gym (South)	3,800	15	4000	***4.2***
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