

OLMSTED ENVIRONMENTAL SERVICES, INC.

1992 Route 9, Garrison NY 10524

phone 845 424 4077 • fax 845 424 3482 • email Olmsted.mac@me.com

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Report for: Margaret Sergent
Second Vice-President
Health and Safety Chairperson
30 North Union Street, Suite 301
Rochester, New York 14607

Email: mmsergent@rochesterteachers.com

Prepared by: Ed Olmsted, CIH, CSP

Subject: **Ventilation Screening**
Dr. Walter Cooper Academy School No.10 Rochester, NY
353 Congress Ave, Rochester, NY 14619

On Wednesday, January 27, 2021, Ed Olmsted and Margaret Sergent, representing the Rochester, NY Teachers Association (RTA) inspected representative classrooms at Dr. Walter Cooper Academy School No.10 at 353 Congress Ave, Rochester. The survey team also included a representative of the Rochester City School District (RCSD), Matthew Seeger, Schools Facilities Management.

The survey was done as part of the exposure control program for pandemic SARS-CoV-2. RCSD instituted many exposure control measures for the coming year including mandatory wearing of masks, distancing of occupants (reduced occupancy), enhanced cleaning, in-school COVID-19 testing, operating the ventilation systems with a maximum fraction of outside air, installation of ASHRAE MERV 13 filters, where the HVAC units can accommodate them, and the provision of air purifiers to all occupied spaces. Each school will have temperature screening upon entry and have a nurse's office. Students with symptoms or suspected of having COVID-19 will be isolated in an isolation room. More information on the RCSD reopening plans can be found on the [RCSD website](#).

The School No. 10 building is intended to be utilized in the Phase 2 February reopening for blended and in-school classes. This inspection was requested prior to the staff and students' return. The survey included the following:

1. A visual inspection of a number of representative classrooms;
2. A visual inspection of the building ventilation system(s); and
3. Taking airflow measurement at supply outlets, return/exhaust grilles and open windows using a TSI 9515 VelociCalc Air Velocity Meter (anemometer).

The findings include:

1. School No. 10 has a central heating and air conditioning ventilation system that serves all classrooms. In addition, there are operable windows for natural ventilation. There is also a perimeter steam heating system.
2. The central air handler units are located in mechanical rooms throughout the building. The units are hot deck / cold deck units that were rebuilt and appear to be in good condition and well-maintained. The air handler units are designed to provide a mixture of outside air and return air modulated by dampers. Each supply fan has an associated return fan. Mixed air is filtered through MERV 8 pre-filters and then MERV 13 filters and heated or cooled in fan coils in the unit. Filters with MERV-13 or higher ratings are recommended for HVAC systems due to their ability to filter smaller particles, including viruses.
3. From these air handler units, that tempered and filtered air is distributed via a system of ductwork. The ductwork then terminates in an occupiable space at square diffusers located on the ceiling. In addition, passive return grilles were also observed in classrooms usually also located on the ceiling.
4. All the above-mentioned components of the school's central mechanical ventilation systems were examined and found to be working.
5. Not all rooms could be inspected but a representative number was included in the inspection. These rooms included Rooms 109, 113, 116, 213, 220, 222, and 226. The supply outlets were screened with a thermal anemometer to determine whether supply air was discharging from the outlet. All rooms visited were found to have a good flow of ventilation air from the supply diffusers.
6. In room 226 the window was opened 2 inches and the flow of outside air measured at 200 cubic feet per minute. The air change rate was calculated at 2.2 air changes per hour.

CONCLUSIONS

Overall, the school's ventilation can help reduce the risk of exposure to SARs-CoV-2 and meets the published guidelines. The mechanical ventilation system is capable of providing a MERV 13 filtered mixture of outside air and return air. Most classrooms also have operable windows that can be used to provide natural ventilation. Where possible and if necessary, teachers can open two windows in each room to an opening of two inches. This will provide natural ventilation without causing the room to become cold and will provide 4 to 5 air changes per hour. Lastly, ensure other safety and health precautions, such as mask-wearing, social distancing, cleaning/sanitization, and routine handwashing, are also practiced to prevent the transmission of SARS-CoV-2.



MERV 8 pre-filters with MERV 13 box filter in air handler unit



Typical ventilation scheme with 6 supply outlets (blue arrows) and 1 return grille (orange arrow) located on the ceiling