

DC Public Schools (DCPS) is committed to reopening safely. Part of our reopening plan is ensuring school facilities are properly suited to welcome back students and staff. Review DCPS' full building readiness checklist at [dcpsreopenstrong.com/health/buildings/](https://dcpsreopenstrong.com/health/buildings/). HVAC and all other operational metrics will be reviewed by a site-based walkthrough team prior to opening.

### Why is DCPS investing in this work?

Healthy air quality is critical for the health of those who occupy a school building, and we are making improvements across all DCPS facilities. Transmission of COVID-19 through the air is sufficiently likely that airborne exposure to the virus should be controlled. Changes to building operations, including the operation of heating, ventilating, and air-conditioning systems, can reduce airborne exposures. Ventilation and filtration provided by heating, ventilating, and air-conditioning systems can reduce the airborne concentration of COVID-19 and thus the risk of transmission through the air.

### How does this help keep buildings safe?

DCPS will improve the air change rates and filtration provided by HVAC systems to **reduce any airborne concentrations of COVID-19** and related transmission risks in our learning environments.

All schools will receive **indoor air quality (IAQ) sensors** that monitor, in real time, particulate matter, temperature, carbon dioxide, volatile organic compounds, ozone, and carbon dioxide levels for measurement and verification purposes. While there is no air quality check for COVID-19, these monitors will help ensure that our systems are working properly and give us important information to help identify solutions if modifications are required.

The HVAC work is part of our comprehensive plan to keep children and adults safe in our school buildings, but it is not the only solution. Other health and safety measures, like social distancing, mask wearing, cohorting, and hygiene measures all contribute to a healthy environment.

### Where is it happening?

HVAC enhancements will be completed at **all 117 DCPS schools**. Elementary schools and PK-8 education campuses are being prioritized to support reopening for Term 2.

### Who is doing this work?

DCPS in coordination with the Department of General Services has taken on this initiative. The work is being carried out by numerous HVAC contractors under the guidance and direction of a licensed professional engineer (PE) and in accordance with recommendations provided by the **American Society of Heating and Air-Conditioning Engineers (ASHRAE)**.

A school-specific plan to meet the goals outlined by the assessments has been developed by the PE, [Raj Setty](#), a nationally recognized expert and team member of the Epidemic Task Force on the Schools Team at ASHRAE. He is a leader in the HVAC industry and on reopening schools safely, an [ASHRAE Instructor](#), and has presented on various national stages for the built environment. His children currently attend DCPS schools.

### What is an HVAC enhancement?

HVAC enhancements are designed to increase the air change rates and filtration. The work varies by system and includes modifications like increasing fresh air distribution through an existing Dedicated Outside Air System (DOAS) and installation of MERV-13/MERV-14 filters or placement High-Efficiency Particulate Air (HEPA) filters in high traffic areas and instructional spaces. In addition, no matter the system, **all classrooms across the DCPS portfolio will receive a portable HEPA filter.**

#### Schools that receive outside air from central HVAC systems

- ✓ Perform visual inspection of air distribution mechanisms in walls and ceilings.
- ✓ Confirm registers and diffusers are not blocked or closed.
- ✓ Evaluation of air handling equipment for proper operation.
- ✓ Energize all HVAC systems and confirm proper indoor air temperature and humidity.
- ✓ Disinfection and cleaning of air handling equipment.
- ✓ Review equipment control sequences to verify systems are operating in accordance with issued guidance and maintaining required ventilation, temperature, and humidity conditions to occupied areas.
- ✓ Integrate new sequences into existing controls to run systems before and after occupancy helping to flush zones, increasing filtration and dilution.
- ✓ Expansion of central HVAC equipment monitoring for real-time system health checks and critical alarming.
- ✓ When equipment parameters allow installation of higher rated air filters one to two weeks prior to reopening.
- ✓ Placement of a mobile HEPA filter in learning spaces

#### Schools without central HVAC systems

Schools without central air systems will receive portable medical-grade true **HEPA filters** to cover all instructional spaces and additional 10 units for other centralized and shared spaces such as lobbies and welcome centers, nurse suites, and the health isolation rooms. These are mobile units that will be placed in classrooms and run continuously to increase air changes in rooms and filter the air. True HEPA filters are proven to filter particulates down to 0.3 microns at a 99.99% efficiency. The units are rated and tested for spaces up to 1,000 sq. ft. (average classroom size is 700-800 sq. ft.) All of the HEPA filter units are equipped with a UVC light kit to provide an additional level of protection.

As shown in the image to the right, the HEPA filters are designed to bring in air from the room and put it through a 3-step filtration process.

1. Air goes through a preliminary filter to catch particulates.
2. Air goes through a UV light to treat and deactivate microorganisms and pathogens.
3. Finally, air passes through the HEPA filter, which captures small particulates at a 99.99% efficiency.

After the air has gone through those steps, it exits the unit as clean air.



### When will the work occur?

Work will be continuing through October and into early November at some elementary schools. If there are system challenges that cannot be addressed by November 9th, additional portable HEPA filters will be installed. DGS will also conduct ongoing monitoring and maintenance after the enhancements are complete.