Back to School RI: COVID-19 Facilities and Physical Plant Guidance to Reopen Rhode Island's Elementary and Secondary Schools

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Introduction

Since Governor Gina Raimondo and Commissioner Angélica Infante-Green announced that school buildings were closing in Rhode Island on March 13, 2020, the Rhode Island Department of Education (RIDE), along with the Rhode Island Department of Health (RIDOH) and community and school leaders have been preparing for the reopening of schools for the 2020-2021 school year. The core principles for this process have been providing the highest quality educational experiences for all children while implementing the best strategies to ensure the health and safety of our students and the entire educational community.

Understanding COVID-19 and related best practices is constantly evolving through better data, research, and examples from other countries. With that in mind, the State is committed to working with schools to ensure as many students and staff as possible are able to safely return to in-person learning at the beginning of the school year.

RIDE is providing this *Facilities and Physical Plant Guidance Document* to help school systems plan for reopening for the 2020-2021 school year. This guidance document provides information on the strategies and best practices that school systems will use to plan for reopening facilities.

This document is intended to complement guidance already available to school systems as they refine their plans in preparation for the school year. Additional guidance that should be used in conjunction with this document includes:

- o Back to School RI Guidance
- Back to School RI Framework
- Frequently Asked Questions (updated regularly)

The State is committed to providing local educational agencies (LEAs) with guidance and some of the generally applicable tools necessary to reopen safely. At the same time, the State recognizes that all school buildings are different, that some facilities have unique needs not covered by this or other guidance, and that the Legislature has vested the "entire care, control, and management of all public school interests of the several cities and towns . . . in the school committees of the several cities and towns." R.I. Gen. Laws § 16-2-9(a).

For help with general questions about the information in this guidance, please contact: info@ride.ri.gov.

Acknowledgements

We would like to acknowledge the continued collaboration of our intergovernmental partners at RIDOH, the Rhode Island National Guard, and the Rhode Island Department of Business Regulation. We are also grateful for the support and expertise of: Dr. Erin Bromage, University of Massachusetts-Dartmouth; Dr. Jeffrey Vincent, Center for Cities and Schools at the University of California, Berkeley and the National Academies of Sciences, Engineering, & Medicine; Opportunity Labs Foundation, Inc.; Results for America; and the Annenberg Institute at Brown University.



Facilities Planning Guiding Principles

In order to reopen school buildings, we remain committed to decision-making that is grounded in science, safety, transparency, equity, and the insight of diverse stakeholders and experts. To support all stakeholders in the planning, decision-making, and execution of facilities efforts, we recommend that the following organizing themes guide our collective actions:

- 1) Layer Defenses: We acknowledge that no one strategy will combat COVID-19 in reopening schools. But in a situation where there is no "zero risk" scenario, we do know that there are ways to reduce and mitigate risk in order to make schools safer. A layered defense strategy means implementing a number of different approaches for reducing the spread of the novel coronavirus at the same time. Best practices suggest that this strategy, based on community transmission levels, will help us mitigate and contain the spread of the novel coronavirus in our school communities.
- 2) Know Your Facilities: We know that each building and situation is unique. Conducting full audits of the mechanical systems, air filtration and ventilation, plumbing systems, and space availability will provide the information needed to identify gaps, remedies, and opportunities to make spaces safer for students, teachers, and staff for reopening.
- 3) Be Flexible: The scientific understanding of the novel coronavirus is changing rapidly. Identified approaches may need to change as more information becomes available, but should always be grounded in the data and public health information available.
- 4) Shared Responsibility: Reopening and maintaining safer schools effectively is an effort that requires shared responsibility among parents, teachers, students, administrators and staff; executive agencies and all three branches of State government; and the public and private sectors as a whole.

Mitigating Spread

To support facilities efforts in mitigating the spread of COVID-19, the *Back to School RI Guidance* and updated FAQs outline the following best practices. These recommendations will need to be supported by adjustments to how school facilities are used and how they operate. More details on implementation practices and considerations follow in this document.

Face Coverings

Face coverings play a critical role in mitigating risk related to COVID-19. As of July 29, 2020, the Governor, Commissioner, and RIDOH are requiring face coverings for all staff and students in the PK-12 setting, even when students are in stable groups and physically distanced (6+ feet apart).

Handwashing

Schools must ensure that employees, students, and visitors have access to soap and water¹, and hand sanitizer containing at least 60% alcohol at all times. Frequent handwashing should be

Figure 1. Source: CDC

 $^{{\}tt 1} \, \underline{\sf https://risos-apa-production-public.s3.amazonaws.com/DOH/DOH_3592.pdf}$





Stop the spread of germs that can make you and others sick!

Wash your hands often

Wear a cloth face cover

Cover your coughs and sneezes

practiced². Gloves are not required, except for custodial staff who are cleaning and in specific situations where more protective equipment is needed.

Physical Distancing

Maintaining physical distance is critical in reducing the transmission of the novel coronavirus. Schools should aim for a physical distance of 6 feet when feasible, even when in stable groups. When developing facility and operational protocols, it is important to understand how these requirements will affect space layouts and movement throughout the building.

Classroom Layout³: The spacing of desks/tables should be separated as much as possible. The largest classes should be held in the largest spaces. Schools should encourage converting non-traditional spaces into classrooms to create additional classroom spaces and encourage activities to be held outdoors whenever possible. When the use of a non-traditional space is contemplated, schools should consult with their local fire marshal to ensure compliance with the fire safety code.

Hallways: Minimizing hallway use and congestion will be an important step in maintaining physical distance. LEAs should include strategies such as staggered passing times or movement protocols such as one-way traffic in hallways. While lockers may be used, it is strongly recommended that students carry backpacks instead of using lockers when feasible.

Stable Groups

Stable groups help to mitigate the risk of spreading the novel coronavirus. It is still expected that individuals within stable groups maintain as much physical distance as possible. Students are required to maintain stable groups in elementary and middle school. Recognizing that it is more difficult to establish and maintain stable groups in a high school schedule, more than one approach is possible. If stable groups are not possible, high school students must maintain six feet of physical distance; please recall that the wearing of face masks is required, regardless of the maintenance of physical distancing.

Improving Air Circulation

Schools should work to increase outdoor air ventilation instead of using recirculated air, and increase air filtration as much as possible for the ventilation and filtration system⁴. As feasible, consider the use of outdoor spaces for classes, breaks, meals, and other activities. Some jurisdictions have considered tents, platforms, and other temporary structures in spaces adjacent to buildings, such as courtyards, play areas and parking lots; in considering this approach, please ensure that you consult with the appropriate municipal or state authorities in planning.

Preparing Buildings

Conducting full audits of the mechanical systems, air filtration and ventilation, and space availability will provide the information needed to identify gaps, remedies, and opportunities to make spaces safer for students, teachers, and staff for reopening.

⁴ LEAs may utilize additional resources as they make decisions to improve air quality, e.g., the University of Colorado-Boulder developed a <u>COVID-19 Aerosol Transmission Estimator</u>; Harvard University and the University of Colorado-Boulder developed a <u>Portable Air Cleaner Calculator for Schools</u>.





² https://www.cdc.gov/handwashing/when-how-handwashing.html. The CDC recommends key times to wash hands in order to prevent the spread of germs during the COVID-19 pandemic.

³ LEAs may utilize different tools to assess classroom capacity, e.g. <u>Identifying Usable Instructional Space Tool</u>, provided courtesy of District Management Group; or <u>Classroom Capacity Calculator</u>, provided courtesy of Cannon Design.



Audit all school buildings with a focus on:

- The size of each classroom
- Whether classrooms have access to outdoor air or a filtration system
- Non-traditional spaces available for learning (e.g., gym, lunch room, auditorium)
- What outdoor spaces are available (e.g., courtyards, playgrounds)
- Whether the ventilation system or HVAC (heating, ventilation, and air conditioning) system support upgraded filters
- How many classrooms are available
- Foot traffic flow and potential areas of congestion

Ventilation and HVAC Systems

Research continues to support that face coverings are one of the best defenses against the transmission of COVID-19 and other respiratory viruses⁵. To further mitigate airborne transmission, schools can improve the condition of indoor spaces by increasing outdoor air ventilation or filtering the air that recirculates within a room, a hallway, or a building. In addition to helping protect against COVID-19, improving building ventilation will improve student performance by reducing levels of carbon dioxide⁶. Each building will have different ventilation and HVAC systems and needs and will require a different approach or set of solutions based on mechanical capabilities, access to outdoor air, and ability to maintain distance within a space.

LEAs may need to consider contracting with experts to assess and assist with buildings that have facility-wide HVAC systems on how best to maximize those units. HVAC systems with a minimum of 4-6 Air Changes per Hour (ACH) based on square footage/volume of space, no less than 15 cubic feet of ventilation air per minute (cfm) per person, Minimum Efficiency Reporting Value 13 (MERV13) filters, and outside air would require no changes for use at standard classroom densities. HVAC systems with lower filtration ability will require an increase in the use of outside air or supplemental air filtration.

Key strategies to consider include:

- Increase outdoor air ventilation by bringing in more fresh outdoor air indoors
 - Example: Open windows, or as a short-term solution, mechanically ventilate using exhaust/box fans. When possible, orient window fans to create a flow of fresh air throughout the classroom, bringing fresh air in on one side and exhausting it to the outside on the other.
- Ensure ventilations systems are properly cleaned.
- *Filter indoor air* by increasing the level of the air filter to MERV13 or higher on recirculated air. Retests are recommended after filter upgrade due to potential impact on air exchange efficiency.
- *Inspect filters* to ensure that they are properly installed, fit correctly, and are changed based on manufacture's recommendation.
- Maintain indoor relative humidity between 40-60% by running HVAC systems for at least one hour before occupancy and for two hours after a space is no longer occupied.





⁵ https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover-guidance.html#recent-studies

⁶ https://iagscience.lbl.gov/vent-school

- Run HVAC systems for a minimum period of one week prior to reopening school with the use of outside air dampers.
- Supplement with air cleaning devices, including portable air cleaners with HEPA filters.
 Devices should be sized appropriately with space. This is especially helpful when there are no windows or when it is not possible to bring in outside air, e.g., during the winter or inclement weather.
 - o Portable air cleaners with HEPA filters can provide 4-6 ACH for a classroom at full capacity, based on square footage and volume of the space. Classrooms of reasonable size may require more than one unit in order to achieve 4-6 ACH.
- For facilities without HVAC capability, evaluate the options to open windows and doors safely as well as the feasibility of increasing outdoor air intake with box fans in windows.
 - Note that devices that simply recirculate the same indoor air without filtering it or replacing it with fresh air are not very effective at reducing airborne viruses present in the room (including most window air conditioning units, fans used in rooms with closed windows, and fan coils and radiators).

Classrooms that can only achieve minor filtration/ventilation should be de-densified in proportion to community mitigation or repurposed to serve low-density programs with the number of occupants aligned to appropriate airflow targets per person.

Indoor spaces without windows, adequate HVAC, filtered air, or other mitigation strategies to ensure adequate air circulation should not be used for instruction programs, and should only be used as may be appropriate for storage or similar uses.

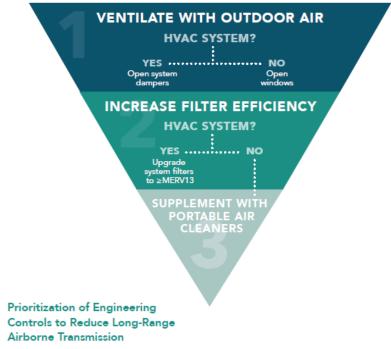


Figure 2. Source: Harvard Healthy Buildings Program





Water and Plumbing Systems

Facilities that have not been in use or experienced low use for extended periods of time are also susceptible to additional health threats such as mold or Legionella. Buildings should be assessed for mold and excessive moisture, and water systems flushed before returning to full use. LEAs may refer to CDC guidance for ensuring safety of building water systems and devices.⁷

Cleaning and Disinfecting

Consistent cleaning and disinfecting practices further help reduce the potential transmission of the novel coronavirus. Schools should adhere to CDC guidance for schools regarding the cleaning and disinfecting of all surfaces and spaces, and to the general CDC guidance on the process of cleaning, sanitizing, and disinfecting surfaces.

Surfaces that are frequently touched throughout the day should be cleaned, sanitized, and disinfected multiple times per day or, for shared objects, between use. Coronavirus can survive on hard surfaces from hours to days. As it is more difficult to clean, sanitize, and disinfect porous surfaces (e.g., soft or plush materials), schools are advised to avoid using these items. Examples include beanbag chairs and stuffed animals.

Disinfectants are strong chemicals, and accidental exposure to these toxins can cause significant harm. It is essential that when using disinfectants, school facilities staff follow the manufacturer's directions and keep the products out of reach of students.⁸

With the increased use of disinfectants to protect against COVID-19, it is even more important to ensure ventilation systems operate properly and are able to increase circulation of outdoor air as much as possible. Keep windows and doors open and use fans and other methods when possible.

A cleaning and disinfecting protocol and schedule should be developed that outlines what should occur daily: shared spaces and furniture; more frequently (3-4 times per day/between uses): high-touch surfaces (e.g., door handles, light switches, toilet seats, desks)

In the case of probable or confirmed cases of COVID-19 in school, schools should adhere to <u>CDC</u> guidance for Cleaning and Disinfection for Community Facilities:

At a school, daycare center, office, or other facility that does not house people overnight:

- Close off areas visited by the ill persons. Open outside doors and windows and use ventilating fans to increase air circulation in the area. Wait 24 hours or as long as practical before beginning cleaning and disinfection.
- Cleaning staff should clean and disinfect all areas such as offices, bathrooms, common areas, shared electronic equipment (like tablets, touch screens, keyboards) used by the ill persons, focusing especially on frequently touched surfaces.⁹

Handwashing and Hand Sanitizing Stations

Schools must ensure that employees, students, and visitors have access to soap and water and/or hand sanitizer containing at least 60% alcohol at all times. Frequent handwashing should be practiced and helps to reduce the spread of the novel coronavirus.¹⁰





⁷ https://www.cdc.gov/coronavirus/2019-ncov/php/building-water-system.html

^{8 &}lt;a href="https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2-covid-19">https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2-covid-19 - Products found on the EPA's List N should be used with careful attention paid to "contact time" to maximize disinfection effectiveness.

⁹ https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/cleaning-disinfection.html

¹⁰ https://www.cdc.gov/coronavirus/2019-ncov/hcp/hand-hygiene.html

Strategies to support increased hygiene protocols include ensuring that water systems are all fully operational and that soap supplies are replenished throughout the day as needed. Installation of non-touch fixtures may also minimize reliance on doors/handles or push plates. Additional steps would include providing handwashing or hand-sanitizing stations in the following common areas as needed, including:

- All entries and exits;
- In classrooms;
- In libraries and shared activity spaces;
- Next to meal distribution and consumption spaces.

COVID-19 Isolation Room

Each school is required to have a designated space for symptomatic students or staff, referred to as an isolation room. The isolation room(s) should be able to accommodate multiple symptomatic people with physical distancing. This room may be adjacent to the nurse's office, but should be separate and include:

- Consistent and continuous access to an adult with line of sight to the room; closed-circuit cameras are not a substitute for the presence of an adult.
- Maintenance of negative pressure.
- Dedicated HVAC system to maintain negative pressure.
 - In the absence of dedicated HVAC, a negative pressure space may be created using

 (a) exhaust fans vented outside; or (b) HEPA filters to either filter air in the room or vent HEPA exhaust into a different room.
- Adherence to CDC guidelines for supply air return air paths; do not mix isolation room air with any other spaces; directly exhaust isolation rooms.
- Adherence to design guidelines for location of outdoor air intakes and exhaust air from exhaust fans.

Compliance with State Codes

It is important to remember that all improvements and changes must meet the requirements of the State Building Code and the State Fire Safety Code. For questions regarding these codes, contact your local building official or fire marshal.

The following are some common issues that may require increased attention¹¹:

Building Systems Modifications

o Increases in electrical loads can cause challenges for older buildings. The increase in demand on these existing systems may lead to circuit overloads.

Placement and Storage of Flammable and Combustible Liquids

 The alcohol-based product in hand sanitizers is a Class I flammable liquid. Hand sanitizer dispensers shall be at least 48" apart. They should not be installed in corridors or exits, over electrical receptacles, or over carpeted floors. Dispensers may be installed over carpet in sprinklered rooms.

¹¹ https://www.nfpa.org/-/media/Files/Coronavirus/CoronavirusSchoolReopeningFactSheet.ashx







Storage of hand sanitizer is regulated by the fire safety code. When storage
quantities exceed five gallons of hand sanitizer per fire compartment, additional fire
protection requirements, such as flammable liquid storage cabinets, may be
required.

Use of Partitions

- Acrylic or Plexiglass partitions must have a flame spread rating of at least a Class C when installed in educational spaces, like classrooms. Corridors, lobbies, and large assembly areas need an A or a B rating. Class C would be allowable when the building is equipped with an approved sprinkler system.
- Barriers should not obstruct manual fire alarm boxes, sprinkler heads, or smoke or heat detectors.
- Any curtains or other loosely hanging material need to be tested and deemed compliant with the National Fire Protection Association (NFPA) 701 flame propagation test.

Egress Management & Drills

- Exits need to be kept accessible and not blocked or locked against egress. A clear width of at least six (6) feet must be maintained in all corridors.
- The conversion of a non-traditional space for classroom use may lead to egress issues that may require the installation of rescue windows.
- Stairway and other fire doors shall not be propped open. Classroom doors may be propped open when faculty and staff have been trained to close all doors in an emergency. Exit facilities should be checked daily to ensure they are accessible and in proper working condition.
- Fire Drills are required to be conducted each month, in addition to two evacuation and two lockdown drills. The fire alarm signal must be used to commence the drill and all persons must evacuate. Students can be physically distant in their pods once outside. Reentering the school at the completion of the drill may be staggered to maintain safe physical distancing in pods.





Appendices

Appendix I: Resources

American Society of Heating and Refrigeration Engineers (ASHRAE) - COVID-19 Resources.

<u>CDC's K-12 Schools Readiness and Planning Tool</u> – A planning tool for school administrators to assess general and daily/weekly readiness, with a check-list for facilities and supplies.

<u>CDC's Guidance for Reopening Buildings After Prolonged Shutdown or Reduced Operation</u> (May 7, 2020) – Provides guidance on steps to take to mitigate the threat of mold and Legionella in buildings following extended periods of low or no use.

<u>EPA's List N: Disinfectants for Use Against SARS-CoV-2 (COVID-19)</u> (August 20, 2020) – Listing of products that meet the EPA's criteria for use against SARS-CoV-2, the virus that causes COVID-19.

<u>Guidance on Using Heating, Ventilation, and Air Conditioning (HVAC) Systems During the COVID-19</u>
<u>Pandemic</u> (August 11, 2020) – General HVAC guidance issued through Reopening RI.

National Fire Protection Association Fact Sheet on Building and Life Safety Issues for Safely Reopening Schools – Provides tips for helping to maintain fire protection and life safety, enabling students, teachers, and other staff members to return to school under the safest possible conditions.

<u>Schools For Health: Risk Reduction Strategies for Reopening Schools</u> (June 2020) – Offers guidance regarding best practices regarding the general operations of buildings in an effort to reduce the risk of disease transmission, specifically novel coronavirus and the disease it causes, COVID-19.

Optional Tools for Identifying Classroom Capacity

- <u>Identifying Usable Instructional Space</u> an excel tool that uses LEA input in order to calculate the usable square footage in a given school building. Provided courtesy of District Management Group.
- <u>Classroom Capacity Calculator</u> a free parametric capacity model developed by school facility planning consultants. Provided courtesy of CannonDesign.

Optional Tools for Decision-Making Around Air Quality Improvements

- <u>COVID-19 Aerosol Transmission Estimator</u> a <u>pilot</u> tool developed at the University of Colorado-Boulder that calculates COVID-19 infection risk for a number of basic situations, including classrooms.
- <u>Portable Air Cleaner Calculator for Schools</u> a tool developed by Harvard T.H. Chan School of Health and University of Colorado Boulder, that offers guidance about best practices on the general selection of portable air cleaners in schools in an effort to reduce the risk of disease transmission, specifically the novel coronavirus and the disease it causes, COVID-19.





Appendices

Appendix II: Facilities & Maintenance Check-List

Adapted from CDC and Back to School RI Framework, in partnership with Opportunity Labs Foundation, Inc.

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Ш	Audit necessary materials and supply chain for cleaning and disinfection supplies to determine where additional supplies may be obtained if necessary. Obtain supplies including:
	 Obtain supplies including: soap hand sanitizer (≥ 60% alcohol) paper towels tissues cleaning and disinfection supplies (per EPA's "List N") cloth face coverings (as feasible) no-touch/foot pedal trash cans no-touch soap/hand sanitizer dispensers disposable food service items other:
	Audit any additional facilities that the LEA may have access to that could be utilized for learning.
	Alert school-based custodial and infection control staff of any changes in recommended cleaning
	guidelines issued by OSHA and CDC. It is expected that this guidance will be updated in real-time based on the status of community spread local geographies.
	Convene custodial and facilities staff to review and make actionable LEA guidance regarding cleaning and disinfection of areas such as the following: • buses or other transport vehicles
	 frequently touched surfaces (e.g., desks, door handles, railings)
	 communal spaces (e.g., restrooms)
	 shared objects (e.g., gym equipment, art supplies, games) other:
	Develop a protocol to ensure safe and correct selection, use, and storage of cleaners and disinfectants, including storing products securely away from students.
	Establish a pre-screening protocol for parents to use to identify students presenting a COVID-19 risk before they leave for school each day.

Before School Reopens

- \square Audit the entire school building with a focus on:
 - The size of each classroom
 - Whether classrooms have access to outdoor air or a filtration system
 - Additional spaces that are available for learning (e.g., gym, lunchroom, auditorium)
 - Close communal spaces or develop a plan for staggered use and cleaning and disinfecting.
 - What outdoor spaces are available (e.g., courtyards, playgrounds)
 - Whether the ventilation system or HVAC (heating, ventilation, and air conditioning) system supports upgraded filters
 - How many classrooms are available
 - Foot traffic flow and potential areas of congestion





Appendices

Appendix II: Facilities & Maintenance Check-List

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	Establish procedures for school entry and exit to limit the numbers of persons entering and exiting the
	building at the same time. Ensure ventilation systems operate properly. Air filters should be changed regularly. If using fans,
ш	make sure they do not blow from one person onto another.
	Develop protocol to increase circulation of outdoor air as much as possible throughout the school day
	(e.g., opening windows and doors when it is safe to do so).
	Ensure all water systems and features are safe to use after a prolonged facility shutdown.
	Post, disseminate, and encourage widely, through various methods of communication, signage about
	frequent handwashing, cough etiquette, and nose blowing.
	Install physical barriers, such as sneeze guards and partitions, in areas where it is difficult for individuals to remain at least 6 feet apart (e.g., reception desks).
	Provide physical guides, such as tape on floors and signs on walls, to promote social distancing.
	Space seating at least 6 feet apart (if possible) and turn desks to face in the same direction.
	Conduct and document a facility walkthrough between school leaders and/or principals and the
	custodial services team to ensure that the classrooms, common spaces, and the exterior are ready fo staff and students.
	Develop a protocol to monitor and ensure adequate supplies to minimize sharing of objects, or limit use to one group of students at a time, and clean and disinfect between use.
When S	Schools are Open and Operating
	Continue to refer to Back to School RI: Health and Safety Guidance to Reopen Rhode Island's
	Elementary and Secondary Schools and CDC guidance for health, safety, and cleaning procedures.
	Review updated plans and revise as needed.
IT School	ols are Instructed to Close:
	Activate school cleaning and disinfection protocols.
	Wear face masks and special respirators when performing cleaning duties.
When S	Schools Reopen:
	Maintain facilities for resumption of school operations.
	Conduct a facility walkthrough with your custodial services team to ensure that the classrooms, common spaces, and the exterior are ready for staff and students.



Appendices

Appendix III: Decision Tree for Assessing Ventilation Options

Do Buildings/Rooms have mechanical Do Buildings/Rooms NOT have HVAC ventilation systems (HVAC) with: systems, and • 4-6 Air Changes per Hour (ACH) Rely on natural ventilation; based on square footage/volume of Have sufficient power supply to accommodate mitigation efforts (fans, • 15 cubic feet of air per minute (cfm) portable units, etc.)? per person; MERV13 Filters; Access to outside air? **YES** NO NO Increase the use of outside air or No additional supplement by: changes □ Opening windows needed to ☐ Using box fans to circulate air use for classroom. Spaces without windows, unable to use fans, or used during the winter, supplement by: ☐ Using portable HEPA filters that provide 4-6 ACH based on square footage/volume of space If conditions above cannot be met: Rooms should have fewer occupants aligned to available ACH. If condition above cannot be met:

learning during COVID-19 community transmission.

In spaces that may have concentrated sources of virus transmission (COVID-19 isolation room and bathrooms), maintain negative pressure by:

- Operating additional exhaust fans
- Providing direct access to outdoor air or dedicated portable units



Rooms should be repurposed for storage and not utilized for