INTRODUCING THE AIA's RE-OCCUPANCY ASSESSMENT TOOL

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SPEAKERS

ARUP

Chris Kiefer is a senior **logistics** consultant at **Arup** in San Francisco. Within Arup's Integrated Planning studio, Chris participates in mixed-use development projects around the Bay Area and California, where he develops innovative concepts for freight delivery and waste management at both the single-building scale and in master plans. Drawing upon his interdisciplinary background in architecture, landscape architecture, and planning, Chris also provides logistics peer review services during the design stages of **commercial** developments.

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SPEAKERS

Lester G. Meu, a practicing Architect for 40 years and President of George Meu Associates in Oakland California, has construction field review responsibilities for firm projects many in high seismic risk areas. Since the 1989 California Loma Prieta earthquake, he performs **post-earthquake** private sector reviews of commercial buildings and conducts ASTM **Property Condition Assessments**. Lester is a California Office of Emergency Services Post Disaster Safety Assessment Evaluator, both a Cal-OES SAP and National AIA **SAP Trainer**, and serves on the National AIA 2019 Disaster Assistance Committee. His SAP deployments span from Hurricane Katrina in 2005 to the more recent 2017 and 2018 Northern California Firestorms.

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COURSE DESCRIPTION

This webinar will introduce the Re-occupancy Assessment Tool, the AIA's recently published national guidance on how to reduce risk in while transitioning back to building re-occupancy after COVID-19 lockdowns. The purpose of this tool is to provide architects, private clients, and civic leaders a **general framework** of strategies for reoccupying buildings and businesses that are in the process of transitioning from being fully closed to fully open. The webinar is intended to familiarize local AIA members with the document's context, approach, organization, sources of information and highlight certain building interventions for discussion.

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POLL QUESTION

What is your primary reason for joining us today?

A. I’m eager to learn COVID-19 mitigation strategies.

B. How to help my firm and employees stay healthy through COVID-19

C. A client asked our firm to help them create a re-opening plan for their building

D. CEUs!

E. OTHER

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LEARNING OBJECTIVES

At the end of the this course, participants will be able to:

1. Describe the elements of the document and their value in **reducing risk** while operating a building during the transition phase

2. Enhance your understanding of current rapidly-changing guidance and best practices for mitigating the spread of COVID-19 while **transitioning** back to work

3. Learn a methodology for applying a **hierarchy** of controls intended to mitigate the spread of COVID-19 in buildings

4. Apply checklists from the AIA's Re-occupancy Assessment Tool to develop interventions to your buildings is **reduce** the spread of COVID-19

5. Discuss which aspects of COVID-19 interventions may **conflict** with other long-standing design aspirations

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Introducing the Re-occupancy Assessment Tool

- Part of recent AIA suite of COVID-19 resources
- Context for Re-occupancy Tool development
- New features since v1.0
- What is it exactly?
- General Conditions

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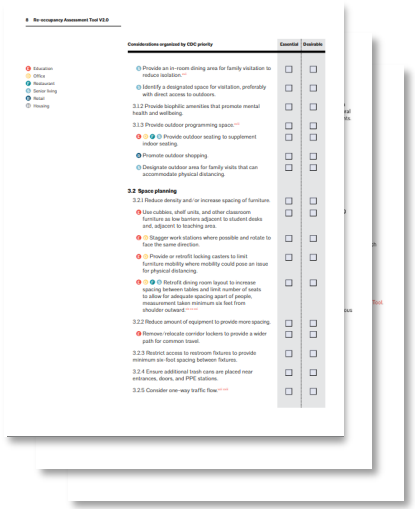
POLL QUESTION

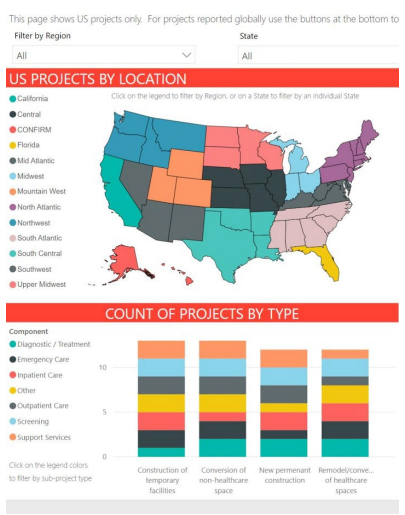
Which AIA COVID-19 resources are you familiar with?

A. COVID-19 emerging research and public health data: May 2020

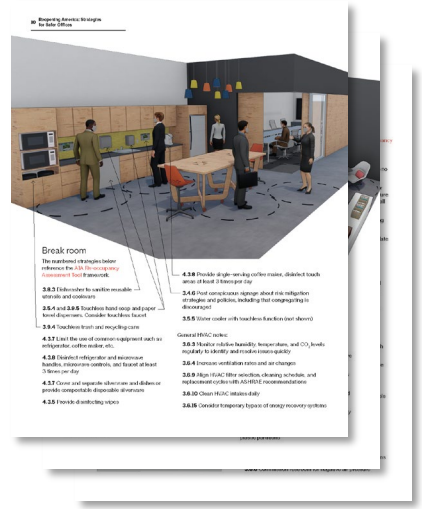
B. Risk Management Plan for Buildings



C. Re-occupancy Assessment Tool



D. Arch Map



E. Building type guidance reports

Download at: aia.org/safer-buildings

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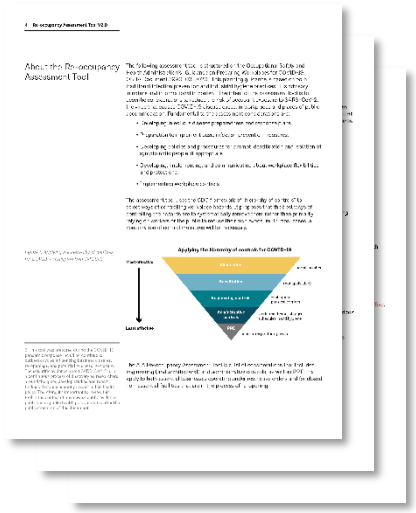
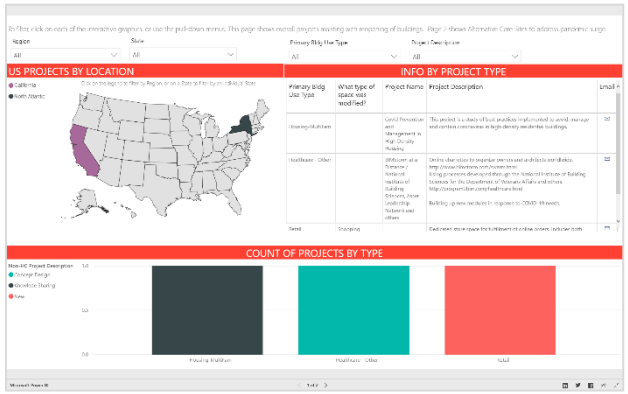
Suite of Recently Released AIA Resources for COVID-19

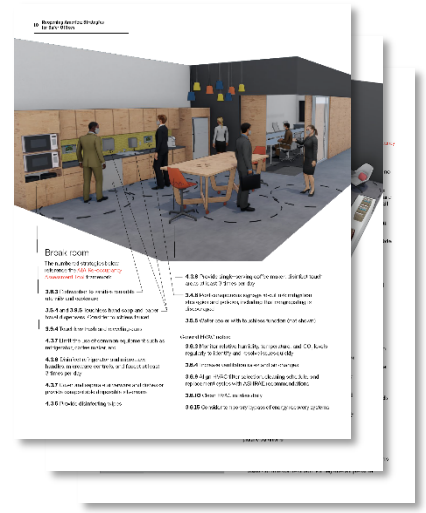
[Risk Management Plan]



[Re-occupancy Assessment Tool]★



[ArchMap]



[Building-type Guidance]

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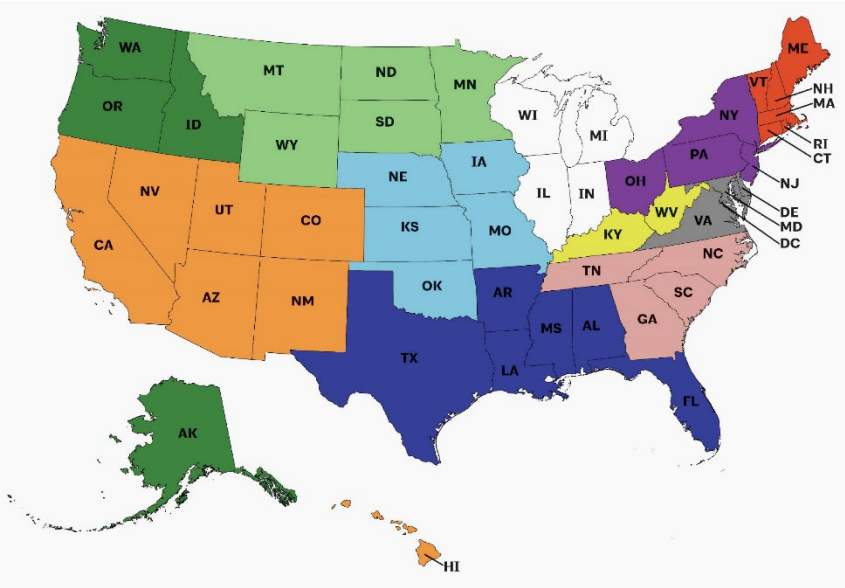
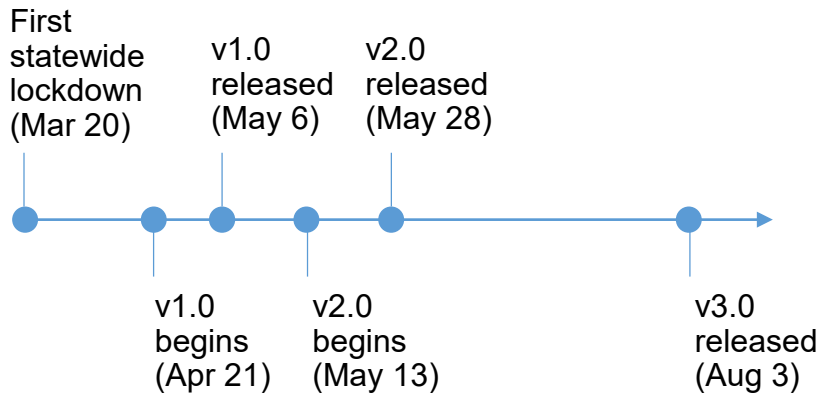
Context for the Re-occupancy Assessment Tool



National AIA Collaboration

AIA Disaster Assistance Committee



Timeline of Development

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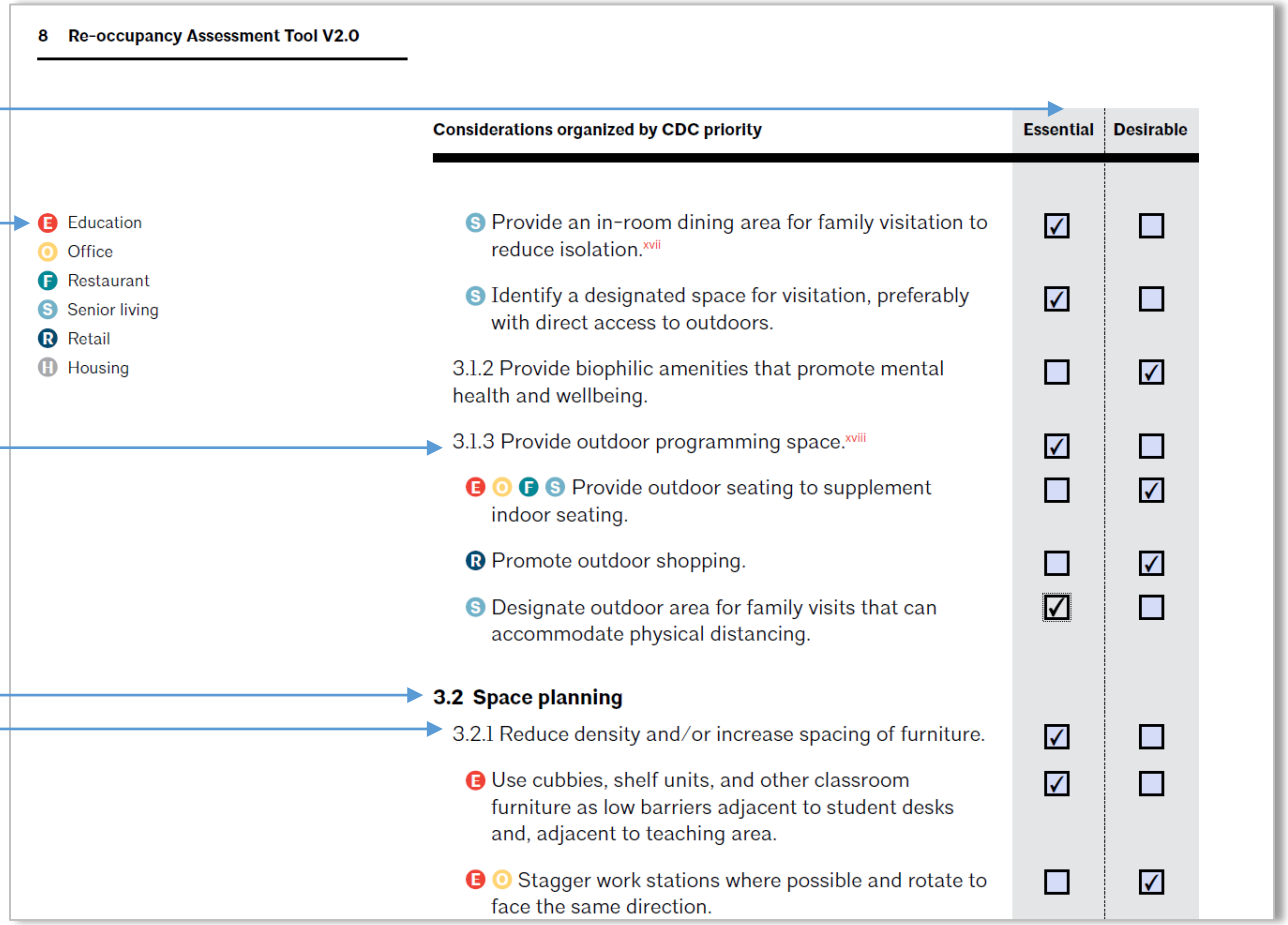
New features since v1.0

- Simplified checklist
- Distinctions among building types
- Clarified list of potential interventions
- Improved categorization
- Numbering for interoperability



8 Re-occupancy Assessment Tool V2.0

Education
Office
Restaurant
Senior living
Retail
Housing

Considerations organized by CDC priority	Essential	Desirable
Provide an in-room dining area for family visitation to reduce isolation.[xvii]	☑	☐
Identify a designated space for visitation, preferably with direct access to outdoors.	☑	☐
3.1.2 Provide biophilic amenities that promote mental health and wellbeing.	☐	☑
3.1.3 Provide outdoor programming space.[xviii]	☑	☐
Provide outdoor seating to supplement indoor seating.	☐	☑
Promote outdoor shopping.	☐	☑
Designate outdoor area for family visits that can accommodate physical distancing.	☑	☐
3.2 Space planning		
3.2.1 Reduce density and/or increase spacing of furniture.	☑	☐
Use cubbies, shelf units, and other classroom furniture as low barriers adjacent to student desks and, adjacent to teaching area.	☑	☐
Stagger work stations where possible and rotate to face the same direction.	☐	☑

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What is the Re-occupancy Assessment?

- Provides general f**ramework** for approaching clients, civic leaders
- Provides potential strategies for mitigating transmission
- Represents an architectural synthesis of specialist, authoritative guidance
  - ASHRAE, AIHA, CDC, OSHA, etc.
- **Coordinated** approach for buildings
- Begins with General Conditions

General conditions—baseline parameters

Key Parameters

- Goals
- Operating authority
- Facility authority
- Risk management
- Check for additional prerequisites specific to individual facility

	Yes	No
Goals Committed to creating a plan for the restart of businesses to restore the economy.	■	☐
Committed to mitigating the risk of spreading pathogens, including SARS-CoV-2, among the business workers and the general public.	■	☐
Operating authority Verify that the facility reopening orders come from the proper governing authorities.	■	☐
A protocol is in place to monitor the authority's changes to operational policies.[3]	■	☐
Facility authority Verify that the business has the legal authority to make physical alterations to the premises.	■	☐
Determine the Authority Having Jurisdiction (AHJ) requirements for permitting facility alterations.	■	☐
Risk management Comply with federal, state, and local laws including ADA, OSHA, and Department of Health regulations and requirements.[4]	■	☐
Evaluate the business's risk tolerance. For more on the risk management process, see AIA's Risk Management Plan for Buildings.	■	☐

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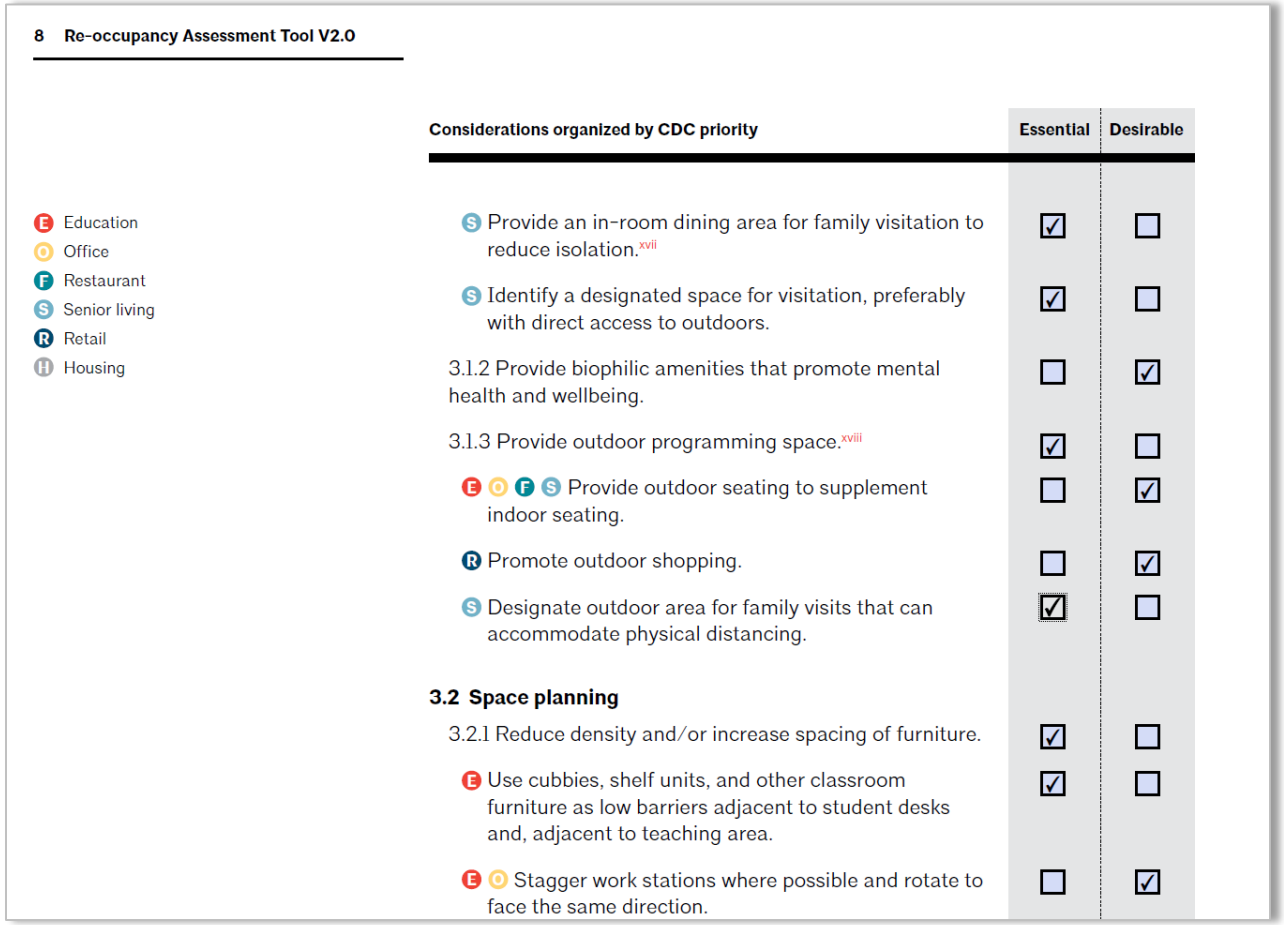
Checklist Format and Symbols

Page Components

- Options for selecting “Essential” or “Desirable”
  - Determined by **owner**
  - Project **specific**
- Considerations are general by default
  - Building-type specific guidance highlighted



8 Re-occupancy Assessment Tool V2.0

- (E) Education
- (O) Office
- (F) Restaurant
- (S) Senior living
- (R) Retail
- (H) Housing

Considerations organized by CDC priority	Essential	Desirable
(S) Provide an in-room dining area for family visitation to reduce isolation.[xvii]	☑	☐
(S) Identify a designated space for visitation, preferably with direct access to outdoors.	☑	☐
3.1.2 Provide biophilic amenities that promote mental health and wellbeing.	☐	☑
3.1.3 Provide outdoor programming space.[xviii]	☑	☐
(E) (O) (F) (S) Provide outdoor seating to supplement indoor seating.	☐	☑
(R) Promote outdoor shopping.	☐	☑
(S) Designate outdoor area for family visits that can accommodate physical distancing.	☑	☐
3.2 Space planning		
3.2.1 Reduce density and/or increase spacing of furniture.	☑	☐
(E) Use cubbies, shelf units, and other classroom furniture as low barriers adjacent to student desks and, adjacent to teaching area.	☑	☐
(E) (O) Stagger work stations where possible and rotate to face the same direction.	☐	☑

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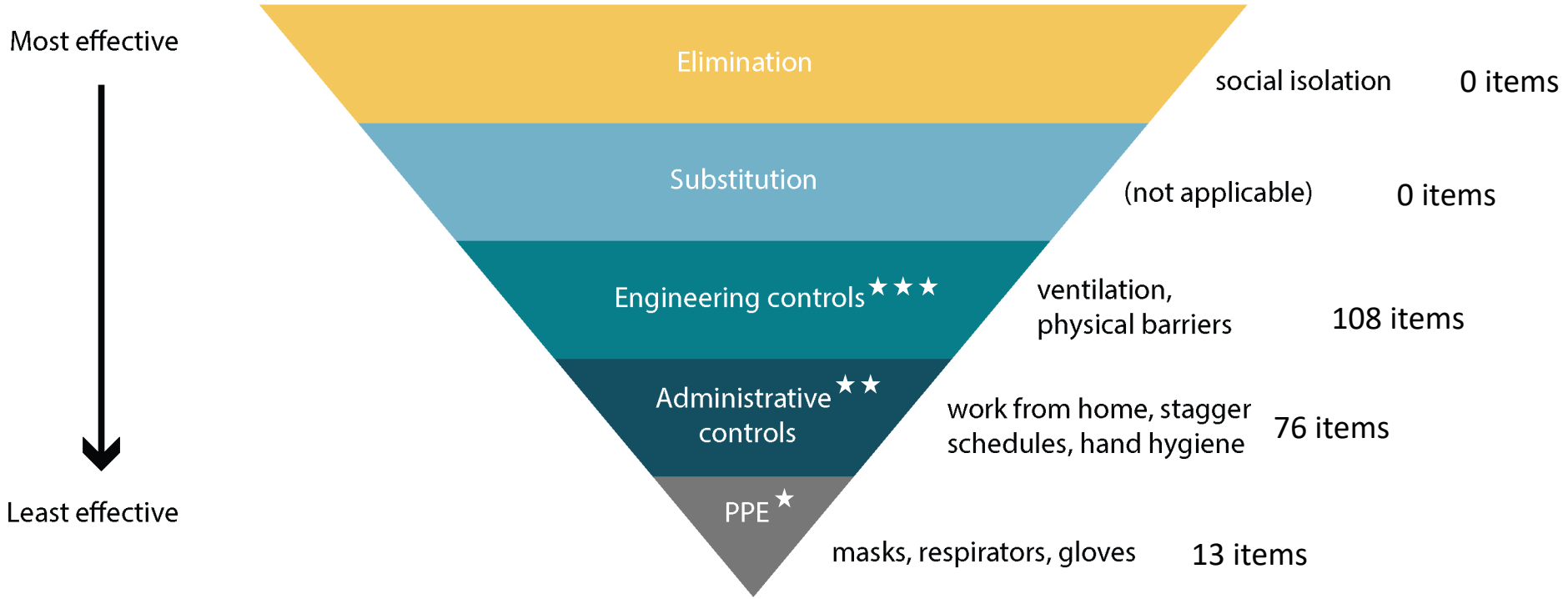
Applying CDC Hierarchy of Controls for COVID-19



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First Priority: Elimination

Institute social isolation.

Second Priority: Substitution

Replace the hazard.

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Third Priority: Architectural and Engineering Controls

3.1 Programming

3.2 Space planning

3.3 Non-structural partitions, openings

3.4 Signage

3.5 Plumbing and plumbing fixtures

3.6 Mechanical and passive ventilation

3.7 Electrical, lighting and communications

3.8 Appliances, equipment accessories

3.9 Finishes and furnishings

3.10 Site work

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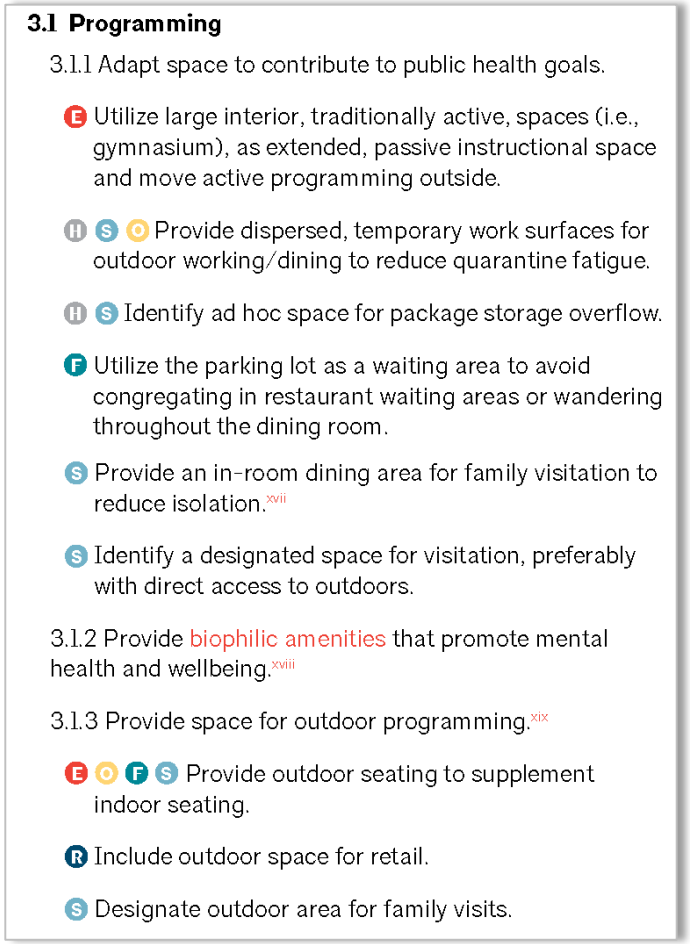
3.1 Programming

- 3.1.1 **Adapt** space to meet public health goals*
- 3.1.2 Provide biophilic amenities that promote mental health and wellbeing.
- 3.1.3 Provide **outdoor** programming.*



3.1 Programming

3.1.1 Adapt space to contribute to public health goals.

E Utilize large interior, traditionally active, spaces (i.e., gymnasium), as extended, passive instructional space and move active programming outside.

H S O Provide dispersed, temporary work surfaces for outdoor working/dining to reduce quarantine fatigue.

H S Identify ad hoc space for package storage overflow.

F Utilize the parking lot as a waiting area to avoid congregating in restaurant waiting areas or wandering throughout the dining room.

S Provide an in-room dining area for family visitation to reduce isolation.[xvii]

S Identify a designated space for visitation, preferably with direct access to outdoors.

3.1.2 Provide biophilic amenities that promote mental health and wellbeing.[xviii]

3.1.3 Provide space for outdoor programming.[xix]

E O F S Provide outdoor seating to supplement indoor seating.

R Include outdoor space for retail.

S Designate outdoor area for family visits.

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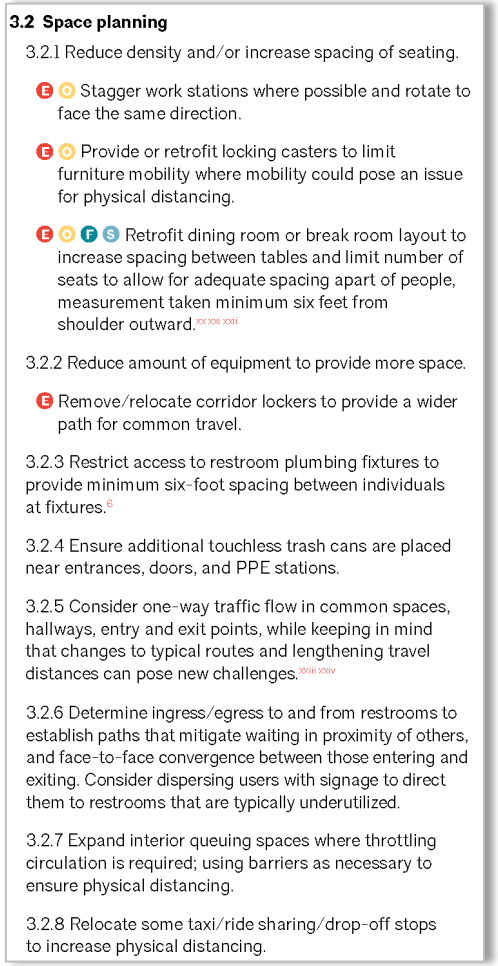
3.2 Space planning

- 3.2.1 Reduce **density** and/or increase spacing of seating.*
- 3.2.2 Reduce amount of equipment to provide more space.*
- 3.2.3 Restrict access to restroom fixtures to provide minimum six-foot spacing between individuals at fixtures.
- 3.2.4 Ensure additional touchless **trash cans** are placed near entrances, doors, and PPE stations.
- 3.2.5 Consider one-way traffic **flow**…
- 3.2.6 Determine ingress/egress to and from restrooms…
- 3.2.7 Expand interior **queuing** spaces where throttling circulation is required…
- 3.2.8 Relocate some taxi/ride sharing/drop-off stops to increase physical distancing.



3.2 Space planning

3.2.1 Reduce density and/or increase spacing of seating.

E O Stagger work stations where possible and rotate to face the same direction.

E O Provide or retrofit locking casters to limit furniture mobility where mobility could pose an issue for physical distancing.

E O F S Retrofit dining room or break room layout to increase spacing between tables and limit number of seats to allow for adequate spacing apart of people, measurement taken minimum six feet from shoulder outward.[xx xxi xxii]

3.2.2 Reduce amount of equipment to provide more space.

E Remove/relocate corridor lockers to provide a wider path for common travel.

3.2.3 Restrict access to restroom plumbing fixtures to provide minimum six-foot spacing between individuals at fixtures.[6]

3.2.4 Ensure additional touchless trash cans are placed near entrances, doors, and PPE stations.

3.2.5 Consider one-way traffic flow in common spaces, hallways, entry and exit points, while keeping in mind that changes to typical routes and lengthening travel distances can pose new challenges.[xxiii xxiv]

3.2.6 Determine ingress/egress to and from restrooms to establish paths that mitigate waiting in proximity of others, and face-to-face convergence between those entering and exiting. Consider dispersing users with signage to direct them to restrooms that are typically underutilized.

3.2.7 Expand interior queuing spaces where throttling circulation is required; using barriers as necessary to ensure physical distancing.

3.2.8 Relocate some taxi/ride sharing/drop-off stops to increase physical distancing.

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The numbered strategies below reference the AIA Re-occupancy Assessment Tool framework.

3.2.2 Remove non-essential furniture, equipment, and instructional materials to increase floor area and ease of cleaning

3.9.8 Enhance acoustic treatment so students can hear and be heard through masks (ceiling application in this example)

3.2.1 Stagger desks where possible and position to face the same direction

3.4.5 Map the floor surface to delineate circulation and/or furniture location

3.2.1 Provide or retrofit locking casters to limit furniture mobility where mobility could pose an issue for physical distancing

3.7.6 Provide conferencing and "shareware" software to facilitate remote learning

3.5.4 Provide touchless handwashing hygiene station near door

3.5.5 Provide touchless drinking water dispenser

3.4.2 Post hygiene, cleaning and sanitizing signage where staff and students can easily see it

3.2.4 Ensure additional touchless trash cans are placed near entrances

Single classroom (800 sq. ft.)

Pre-pandemic capacity 24 desks (33 sq. ft./student)
Pandemic capacity: 12 desks (66 sq. ft./student)

Image rendering by:
Jenine Kotob, AIA, | HORD COPLAN MACHT
Michelle Amt, AIA | VMDO Architects
Kelly Callahan, AIA | VMDO Architects
Sarah Lutze | VMDO Architects
Thomas Bates | VMDO Architects

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POLL QUESTION

What types of projects do you work on?

A. Commercial offices

B. Retail

C. K-12 Schools

D. Senior living communities

E. Multi-family housing

F. Other

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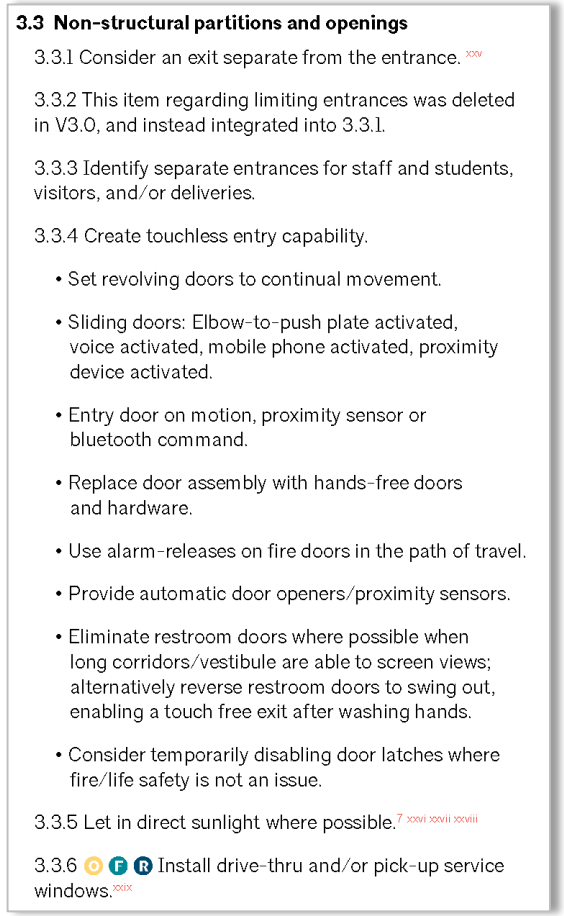
3.3 Non-structural partitions, openings

- 3.3.1 Consider an exit **separate** from the entrance.
- 3.3.2 [deleted]
- 3.3.3 Identify separate entrances for staff and students, visitors, and/or deliveries.
- 3.3.4 Create **touchless** entry capability.*
- 3.3.5 Let in direct sunlight where possible.
- 3.3.6 Install **drive-thru** and/or pick-up service windows.



3.3 Non-structural partitions and openings

3.3.1 Consider an exit separate from the entrance. [xxv]

3.3.2 This item regarding limiting entrances was deleted in V3.0, and instead integrated into 3.3.1.

3.3.3 Identify separate entrances for staff and students, visitors, and/or deliveries.

3.3.4 Create touchless entry capability.

- Set revolving doors to continual movement.
- Sliding doors: Elbow-to-push plate activated, voice activated, mobile phone activated, proximity device activated.
- Entry door on motion, proximity sensor or bluetooth command.
- Replace door assembly with hands-free doors and hardware.
- Use alarm-releases on fire doors in the path of travel.
- Provide automatic door openers/proximity sensors.
- Eliminate restroom doors where possible when long corridors/vestibule are able to screen views; alternatively reverse restroom doors to swing out, enabling a touch free exit after washing hands.
- Consider temporarily disabling door latches where fire/life safety is not an issue.

3.3.5 Let in direct sunlight where possible.[7] [xxvi] [xxvii] [xxviii]

3.3.6 O F R Install drive-thru and/or pick-up service windows.[xxix]

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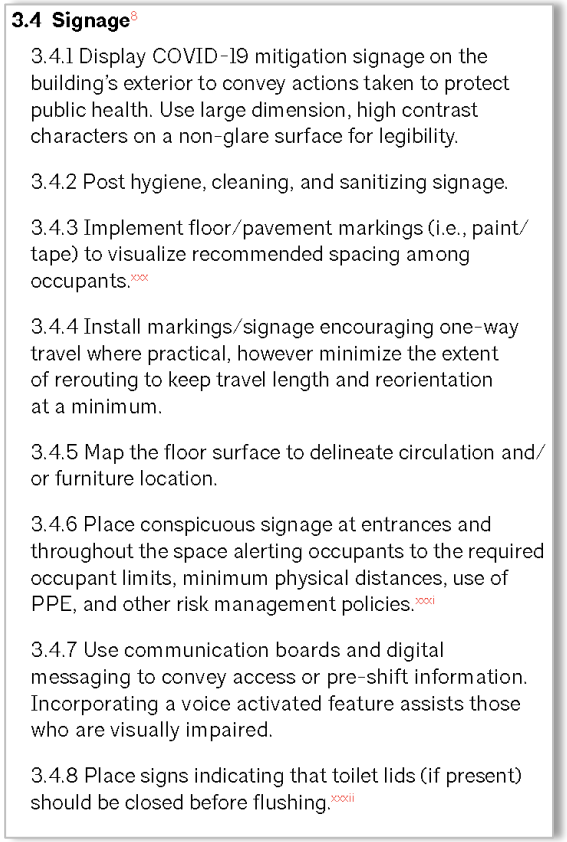
3.4 Signage

- 3.4.1 Display COVID-19 mitigation signage on the building's exterior to convey actions taken to protect public health…
- 3.4.2 Post **hygiene**, cleaning, and sanitizing signage.
- 3.4.3 Implement floor/pavement markings (i.e., paint/tape) to visualize recommended spacing among occupants.
- 3.4.4 Install markings/**signage** encouraging one-way travel where practical…
- 3.4.5 Map the floor surface to delineate circulation and/or furniture location.
- 3.4.6 Place conspicuous signage at entrances and throughout the space alerting occupants to the required occupant limits, minimum physical distances, use of PPE, and other risk management policies.
- 3.4.7 Use communication boards and **digital messaging** to convey pre-shift information…
- 3.4.8 Place signs indicating that toilet lids (if present) should be closed before flushing.



3.4 Signage[xx]

3.4.1 Display COVID-19 mitigation signage on the building's exterior to convey actions taken to protect public health. Use large dimension, high contrast characters on a non-glare surface for legibility.

3.4.2 Post hygiene, cleaning, and sanitizing signage.

3.4.3 Implement floor/pavement markings (i.e., paint/tape) to visualize recommended spacing among occupants.[xxx]

3.4.4 Install markings/signage encouraging one-way travel where practical, however minimize the extent of rerouting to keep travel length and reorientation at a minimum.

3.4.5 Map the floor surface to delineate circulation and/or furniture location.

3.4.6 Place conspicuous signage at entrances and throughout the space alerting occupants to the required occupant limits, minimum physical distances, use of PPE, and other risk management policies.[xxxi]

3.4.7 Use communication boards and digital messaging to convey access or pre-shift information. Incorporating a voice activated feature assists those who are visually impaired.

3.4.8 Place signs indicating that toilet lids (if present) should be closed before flushing.[xxxii]

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3.5 Plumbing and plumbing fixtures

- 3.5.1 Consider implementation of water management program for building operations.
- 3.5.2 For buildings experiencing extended closure, **flush** and test potable water systems.
- 3.5.3 Replace flush valves and faucets with hands-free devices.
- 3.5.4 Add **touchless** handwashing/hygiene stations…
- 3.5.5 Replace traditional drinking fountains with touchless type such as a bottle filling stations.
- 3.5.6 Install toilet **lids**.

3.5 Plumbing and plumbing fixtures

3.5.1 Consider implementation of water management program for building operations.[xxxiii]

3.5.2 For buildings experiencing extended closure, flush and test potable water systems.[xxxiv]

3.5.3 Replace flush valves and faucets with hands-free devices.

3.5.4 Add touchless handwashing/hygiene stations throughout, and especially in common spaces.

3.5.5 Replace traditional drinking fountains with touchless type such as a bottle filling station.

3.5.6 Install toilet lids.

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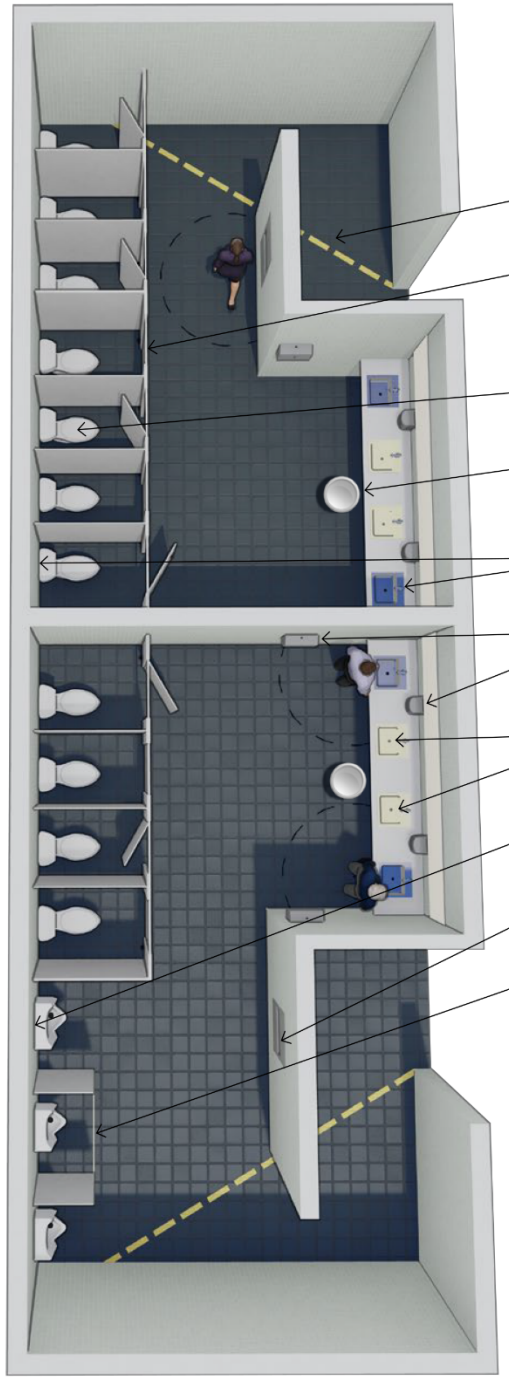

Image rendering by Allied8

Restroom

The numbered strategies below reference the AIA Re-occupancy Assessment Tool framework.

3.3.4 If possible, configure restroom entry to have no door (dashed line indicates sight line)

3.2.3 or **3.9.2** Lock every other restroom stall door to restrict access and ensure minimum six foot fixture spacing or replace or modify height of restroom stall enclosures

3.4.8 and **3.5.6** Install toilet lids and signs directing that lids must be closed before flushing

3.2.4 Additional touchless trash can to accommodate increased waste and enforce physical distancing between sinks

3.5.3 Replace flush valves and faucets with touchless devices

3.9.5 and **4.2.10** Provide touchless hand soap and paper towel dispensers, and remove or disconnect and restrict access to hand air dryers

3.2.3 Restrict access to lavatories as makes sense to ensure minimum six foot fixture spacing

3.5.3 Replace flush valves and faucets with touchless devices

3.9.4 Retrofit existing or install new touchless trash receptacles

3.2.3 Restrict access to every other urinal to ensure minimum six foot fixture spacing

General HVAC notes:

3.6.3 Monitor relative humidity, temperature and CO_2 levels regularly to identify and resolve issues quickly

3.6.4 Increase ventilation rates and air changes

3.6.9 Align HVAC filter selection, cleaning schedule and replacement cycles with ASHRAE recommendations

3.6.10 Clean HVAC intakes daily

3.6.15 Consider temporary bypass of energy recovery systems

3.6.6 Commission restroom for negative air pressure

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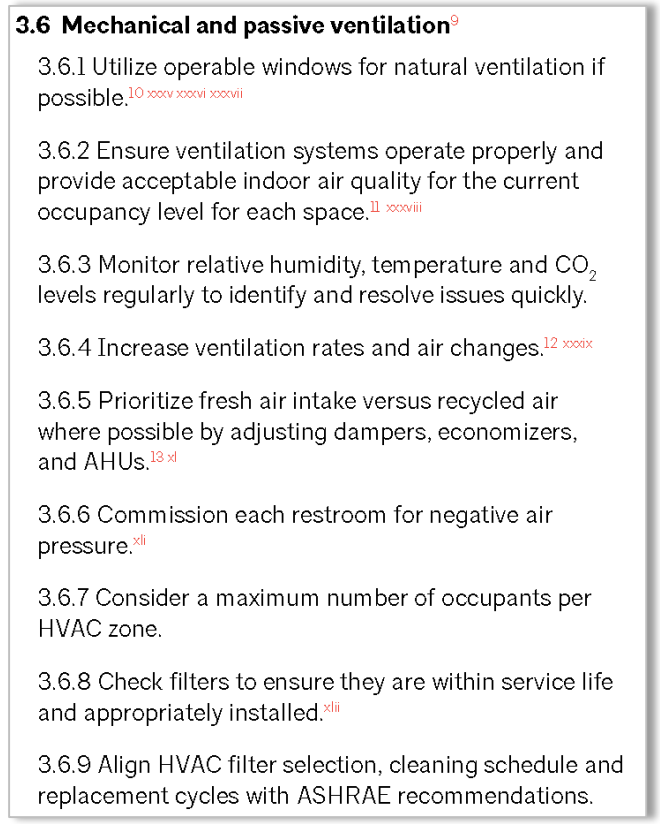
3.6 Mechanical and passive ventilation (a)

- 3.6.1 Utilize operable windows for **natural ventilation**…
- 3.6.2 Ensure ventilation systems operate properly and provide acceptable indoor air quality for the current occupancy level for each space.
- 3.6.3 Monitor relative humidity, temperature and **CO2** levels regularly to identify and resolve issues quickly.
- 3.6.4 Increase **ventilation** rates and air changes.
- 3.6.5 Prioritize mechanical fresh air intake versus recycled air where possible…
- 3.6.6 Commission each restroom for negative air pressure.
- 3.6.7 Consider a maximum number of occupants per HVAC zone.
- 3.6.8 Check filters to ensure they are within service life and appropriately installed.
- 3.6.9 Align HVAC filter selection, cleaning schedule and replacement cycles with **ASHRAE** recommendations.*



3.6 Mechanical and passive ventilation[9]

3.6.1 Utilize operable windows for natural ventilation if possible.[10] [xxxv] [xxxvi] [xxxvii]

3.6.2 Ensure ventilation systems operate properly and provide acceptable indoor air quality for the current occupancy level for each space.[11] [xxxviii]

3.6.3 Monitor relative humidity, temperature and CO_2 levels regularly to identify and resolve issues quickly.

3.6.4 Increase ventilation rates and air changes.[12] [xxxix]

3.6.5 Prioritize fresh air intake versus recycled air where possible by adjusting dampers, economizers, and AHUs.[13] [xl]

3.6.6 Commission each restroom for negative air pressure.[xli]

3.6.7 Consider a maximum number of occupants per HVAC zone.

3.6.8 Check filters to ensure they are within service life and appropriately installed.[xlii]

3.6.9 Align HVAC filter selection, cleaning schedule and replacement cycles with ASHRAE recommendations.

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3.6 Mechanical and passive ventilation (b)

- 3.6.10 Clean HVAC intakes daily.
- 3.6.11 **Flush** the building for two hours before occupancy in the morning and after occupancy in the afternoon/evening.
- 3.6.12 Monitor and maintain relative **humidity** levels, preferably to RH 40–60%.
- 3.6.13 Disable demand-controlled ventilation (DCV).
- 3.6.14 Consider the use of portable room air cleaners with HEPA filters.
- 3.6.15 Consider temporary bypass of energy recovery systems.

3.6.10 Clean HVAC intakes daily.[xlv]

3.6.11 Flush the building for two hours before occupancy in the morning and after occupancy in the afternoon/evening.[xlvi]

3.6.12 Monitor and maintain relative humidity levels, preferably to RH 40–60%.[15 xlvii xlviii]

3.6.13 Disable demand-controlled ventilation (DCV).[xlix l]

3.6.14 Consider the use of portable room air cleaners with HEPA filters. [li]

3.6.15 Consider temporary bypass of energy recovery systems.

AIA East Bay CONTINUING EDUCATION

3.6 Mechanical and passive ventilation (c)

- 3.6.16 If room fans are utilized, take steps to minimize air from fans blowing from one person directly at another individual.
- 3.6.17 Consider installing UV germicidal irradiation (**UVGI**) in mechanical ventilation paths…
- 3.6.18 Consider utilizing ultraviolet C (UVC) during non-occupied hours for sterilization
- 3.6.19 For larger buildings, check cooling and water tower condensate for bacterial growth.
- 3.6.20 Vent toilets separately where possible…

3.6.16 If room fans are utilized, take steps to minimize air from fans blowing from one person directly at another individual.[lii]

3.6.17 Consider installing UV germicidal irradiation (UVGI) in mechanical ventilation paths or in upper-room applications to indirectly treat air through convective air movement.[16]

3.6.18 Consider utilizing ultraviolet C (UVC) during non-occupied hours for sterilization.

3.6.19 For larger buildings, check cooling and water tower condensate for bacterial growth.[17]

3.6.20: Vent toilets separately where possible (e.g., turn exhaust fan on if vented directly outdoors and run fan continuously).[liii]

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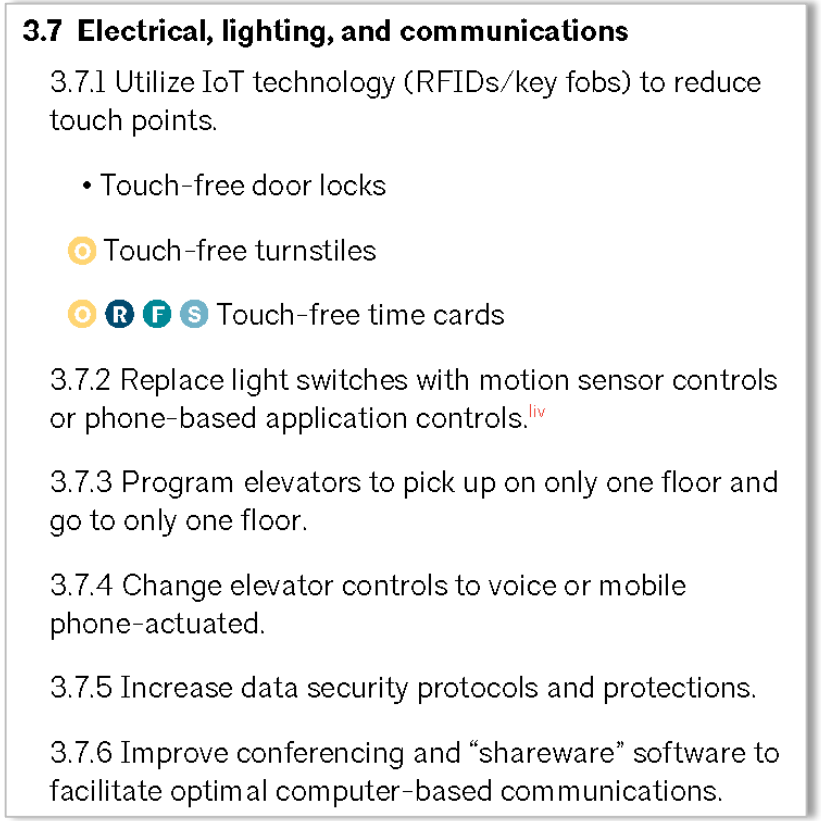
CONTINUING EDUCATION

3.7 Electrical, lighting and communications

- 3.7.1 Utilize IoT technology (RFIDs/key fobs) to reduce **touch** points.*
- 3.7.2 Replace light switches with motion **sensor** controls or phone-based application controls.
- 3.7.3 Program elevators to pick up on only one floor and go to only one floor.
- 3.7.4 Change elevator **controls** to voice or mobile phone-actuated.
- 3.7.5 Increase data security protocols and protections.
- 3.7.6 Improve conferencing and “shareware” software to facilitate optimal computer-based communications.



3.7 Electrical, lighting, and communications

3.7.1 Utilize IoT technology (RFIDs/key fobs) to reduce touch points.

- Touch-free door locks

O Touch-free turnstiles

O R F S Touch-free time cards

3.7.2 Replace light switches with motion sensor controls or phone-based application controls.[liv]

3.7.3 Program elevators to pick up on only one floor and go to only one floor.

3.7.4 Change elevator controls to voice or mobile phone-actuated.

3.7.5 Increase data security protocols and protections.

3.7.6 Improve conferencing and “shareware” software to facilitate optimal computer-based communications.

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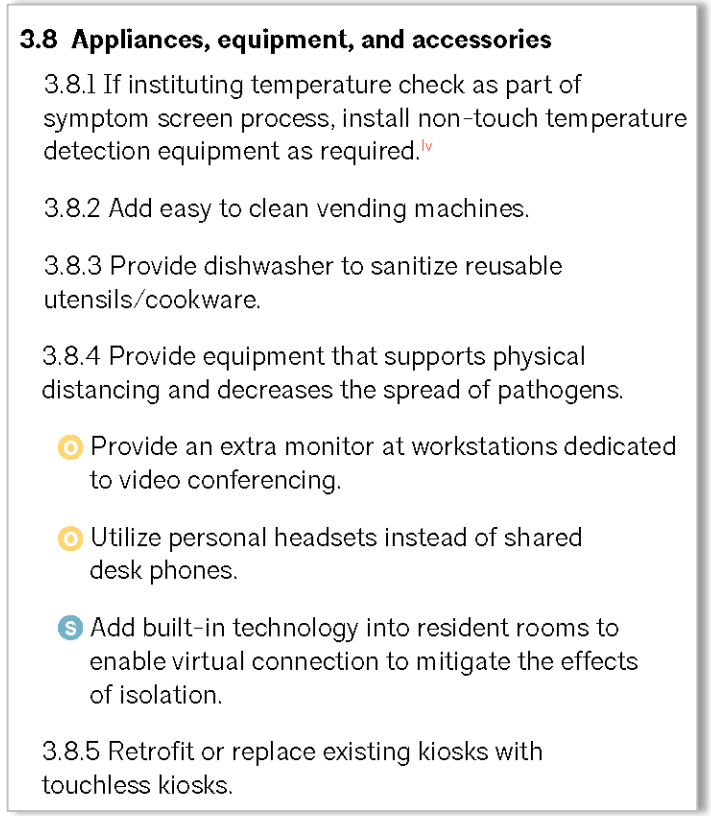
3.8 Appliances, equipment, accessories

- 3.8.1 If instituting temperature check as part of symptom screen process, install non-touch temperature detection equipment as required.
- 3.8.2 Add easy to clean vending machines.
- 3.8.3 Provide dishwasher to sanitize reusable utensils/cookware.
- 3.8.4 Provide equipment that supports physical **distancing** and decreases the spread of pathogens.*
- 3.8.5 Retrofit or replace existing kiosks with **touchless** kiosks.



3.8 Appliances, equipment, and accessories

3.8.1 If instituting temperature check as part of symptom screen process, install non-touch temperature detection equipment as required.[lv]

3.8.2 Add easy to clean vending machines.

3.8.3 Provide dishwasher to sanitize reusable utensils/cookware.

3.8.4 Provide equipment that supports physical distancing and decreases the spread of pathogens.

- O Provide an extra monitor at workstations dedicated to video conferencing.
- O Utilize personal headsets instead of shared desk phones.
- S Add built-in technology into resident rooms to enable virtual connection to mitigate the effects of isolation.

3.8.5 Retrofit or replace existing kiosks with touchless kiosks.

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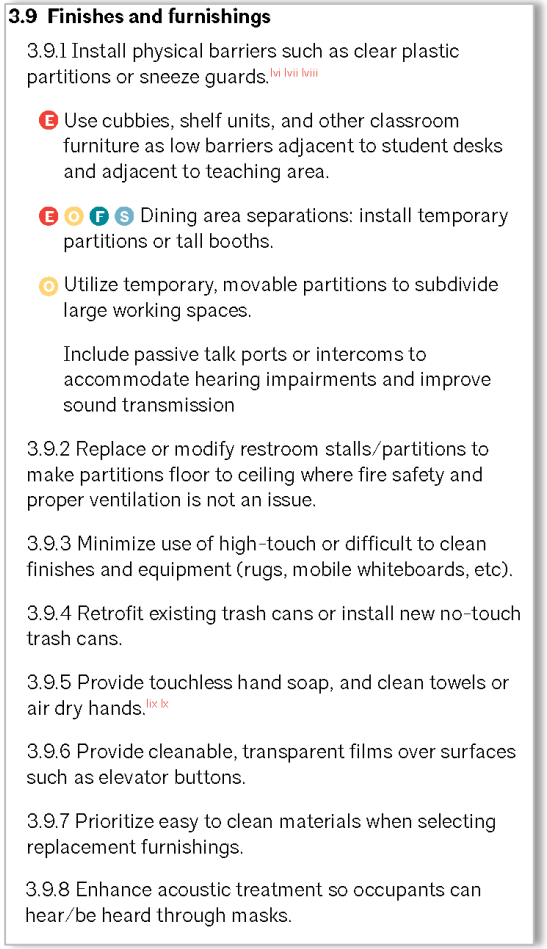
3.9 Finishes and furnishings

- 3.9.1 Install physical **barriers** such as clear plastic partitions or sneeze guards.*
- 3.9.2 Replace or modify restroom stalls/partitions to make **partitions** floor to ceiling…
- 3.9.3 Minimize use of high-touch or difficult to clean equipment (rugs, mobile whiteboards, etc.).
- 3.9.4 Retrofit existing trash cans or install new no-touch trash cans.
- 3.9.6 Provide cleanable, transparent films over surfaces such as elevator buttons.
- 3.9.7 Prioritize easy to clean materials when selecting replacement furnishings.
- 3.9.8 Enhance **acoustic** treatment so occupants can hear/be heard through masks.



3.9 Finishes and furnishings

3.9.1 Install physical barriers such as clear plastic partitions or sneeze guards.[lvi lvii lviii]

E Use cubbies, shelf units, and other classroom furniture as low barriers adjacent to student desks and adjacent to teaching area.

E O F S Dining area separations: install temporary partitions or tall booths.

O Utilize temporary, movable partitions to subdivide large working spaces.

Include passive talk ports or intercoms to accommodate hearing impairments and improve sound transmission

3.9.2 Replace or modify restroom stalls/partitions to make partitions floor to ceiling where fire safety and proper ventilation is not an issue.

3.9.3 Minimize use of high-touch or difficult to clean finishes and equipment (rugs, mobile whiteboards, etc).

3.9.4 Retrofit existing trash cans or install new no-touch trash cans.

3.9.5 Provide touchless hand soap, and clean towels or air dry hands.[lix lx]

3.9.6 Provide cleanable, transparent films over surfaces such as elevator buttons.

3.9.7 Prioritize easy to clean materials when selecting replacement furnishings.

3.9.8 Enhance acoustic treatment so occupants can hear/be heard through masks.

AIA East Bay CONTINUING EDUCATION

General HVAC notes:

3.6.3 Monitor relative humidity, temperature and CO_2 levels regularly to identify and resolve issues quickly

3.6.4 Increase ventilation rates and air changes

3.6.9 Align HVAC filter selection, cleaning schedule and replacement cycles with ASHRAE recommendations

3.6.10 Clean HVAC intakes daily

3.6.15 Consider temporary bypass of energy recovery systems

3.2.1 Reduce, change or re-arrange to provide more spacing, for example:

- Typical informal meeting table + chairs were replaced by chairs with attached tablets
- This area originally fit 12 workstations, now reduced to 9

3.2.1 Stagger workstations where possible and rotate to face the same direction

3.8.4 Provide an extra monitor for video ability without decreasing screen workspace

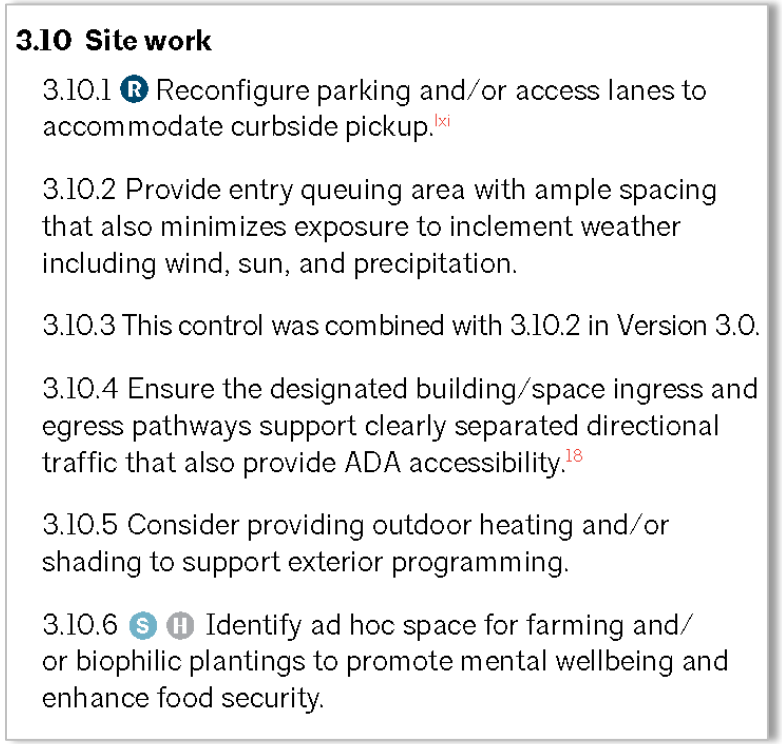
3.9.1 Install physical barriers such as clear plastic partitions

Open office

Image rendering by Allied8

3.10 Site work

- 3.10.1 Reconfigure parking and/or access lanes to accommodate curbside pickup.
- 3.10.2 Provide entry queuing ...that also minimizes exposure to inclement weather…
- 3.10.3 [deleted]
- 3.10.4 Ensure the designated building/space ingress and egress pathways support clearly separated directional traffic that also provide ADA **accessibility.**
- 3.10.5 Consider providing outdoor heating and/or shading to support exterior programming.
- 3.10.6 Identify ad hoc space for farming and/or biophilic plantings to promote mental wellbeing and enhance food security.



3.10 Site work

3.10.1 (R) Reconfigure parking and/or access lanes to accommodate curbside pickup.[lxi]

3.10.2 Provide entry queuing area with ample spacing that also minimizes exposure to inclement weather including wind, sun, and precipitation.

3.10.3 This control was combined with 3.10.2 in Version 3.0.

3.10.4 Ensure the designated building/space ingress and egress pathways support clearly separated directional traffic that also provide ADA accessibility.[18]

3.10.5 Consider providing outdoor heating and/or shading to support exterior programming.

3.10.6 (S) (H) Identify ad hoc space for farming and/or biophilic plantings to promote mental wellbeing and enhance food security.

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CONTINUING EDUCATION

3.4.1 Posted signage describing risk mitigation strategies and policies

4.4.3 Deliveries accepted only at loading doors

3.7.2 Replace light switches with motion sensor controls or phone-based app controls

3.3.1 Separate entry and exit doors provided for safety & efficiency. Consider adding touchless entry capability

General HVAC notes:

3.6.2 Ensure ventilation systems operate properly and provide acceptable indoor air quality for the current occupancy level

3.6.3 Monitor relative humidity

3.6.4 and **3.6.15** Increase ventilation rates and air changes; consider temporary bypass of energy recovery systems

3.6.10 Clean HVAC intakes daily

3.10.3 Permanent outdoor canopy for partially protected exterior queuing

3.3.5 Glazed storefront maximized to increase daylight

3.9.4 Utilize no-touch trash cans

3.10.1 Signage identifying reserved parking space for curbside pick-up

3.10.2 Restriped parking space to accommodate exterior queuing

3.6.2 Utilize touch-free time cards

Fourth Priority: Administrative Controls

4.1 Policies

4.2 Procedures to reduce spread of pathogens (human)

4.3 Procedures to reduce spread of pathogens (fomites)

4.4 Procedures to support physical distancing

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4.1 Policies

- 4.1.1 Develop an emergency communications **plan**…
- 4.1.2 Develop escalation procedure to report potential cases of COVID-19…
- 4.1.3 Identify necessary revisions to human resources policies.
- 4.1.4 Develop organizational policies to guide…when a person at the workplace is found to be COVID-19 positive.
- 4.1.5 Provide up-to-date education and **training** on COVID-19.
- 4.1.6 Identify and **accommodate** occupants in CDC-defined higher health risk categories.
- 4.1.7 Convey recommended guidance for ride-sharing services, delivery services, and taxi services that define cleanliness standards and protocols

4.1 Policies[19]

4.1.1 Develop an emergency communications plan as well as a pandemic and/or outbreak response plan.

4.1.2 Develop escalation procedure to report potential cases of COVID-19 to local health department.

4.1.3 Identify necessary revisions to human resources policies.[20]

4.1.4 Develop organizational policies to guide what happens if a person at the workplace is found to be COVID-19 positive.[21]

4.1.5 Provide up-to-date education and training on COVID-19.

4.1.6 Identify and accommodate occupants in CDC-defined higher health risk categories.

4.1.7 Convey recommended guidance for ride-sharing services, delivery services, and taxi services that define cleanliness standards and protocols.[22]

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4.2 Procedures to reduce the spread of pathogens (person-to-person) (a)

- 4.2.1 Establish a protocol…for symptomatic persons; including a **holding area** and procedure for safe transport…
- 4.2.2 [deleted]
- 4.2.3 After an employee is suspected or confirmed to have COVID-19, close off areas used for **prolonged** periods of time by the sick person. Preparedness planning should allow for alternate work areas for other employees. Conduct thorough cleaning of affected area per CDC guidelines.

4.2 Procedures to reduce the spread of pathogens (person-to-person)[23]

4.2.1 Establish a protocol and implementation plan for symptomatic persons; including a holding area and procedure for safe transport home or to medical care.[lxii]

4.2.2 This item regarding isolation was deleted in V2.1, and instead integrated into 4.2.1.

4.2.3 After an employee is suspected or confirmed to have COVID-19, close off areas used for prolonged periods of time by the sick person. Preparedness planning should allow for alternate work areas for other employees. Conduct thorough cleaning of affected area per CDC guidelines.[lxiii]

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4.2 Procedures to reduce the spread of pathogens (person-to-person) (b)

- 4.2.4 Establish procedures for returning to work after COVID-19 illness.
- 4.2.5 Institute **entrance symptom screening** on-site.
- 4.2.6 To maintain Title I ADA requirements and to prevent stigma and discrimination, make employee health screenings as private as possible.
- 4.2.7 Encourage self-monitoring for symptoms.
- 4.2.8 Encourage occupants to participate in **contact tracing** protocols.
- 4.2.9 Promote hand washing, personal hygiene, and respiratory etiquette…
- 4.2.10 [deleted]

4.2.4 Establish procedures for returning to work after COVID-19 illness.

4.2.5 Institute entrance symptom screening on-site.[24]

4.2.6 To maintain Title I ADA requirements and to prevent stigma and discrimination, make employee health screenings as private as possible.[lxiv] [lxv]

4.2.7 Encourage self-monitoring for symptoms.

4.2.8 Encourage occupants to participate in contact tracing protocols.

4.2.9 Promote hand washing, personal hygiene, and respiratory etiquette.[lxvi] Conversely, discourage handshaking or other close contact.

4.2.10 This note deleted. A previous version cited a reference to disconnecting hand dryers.

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4.2 Procedures to reduce the spread of pathogens (person-to-person) (c)

- 4.2.11 Provide alcohol-based hand rubs containing at least 60% alcohol disinfectants.
- 4.2.12 Provide tissues.
- 4.2.13 **Cohort** at risk individuals in the same area and/or during similar times of day.
- 4.2.14 Where interpersonal interaction is needed, group occupants into smaller cohorts within the same area, especially high risk individuals.*
- 4.2.15 Limit areas of **public visitation**.*
- 4.2.16 Establish an official guide of an approved protocol to manage occupant and visitor safety and provide related training.
- 4.2.17 Restrict permitted activities to reduce exposure risk.*

4.2.11 Provide alcohol-based hand rubs containing at least 60% alcohol disinfectants.[lxvii]

4.2.12 Provide tissues.

4.2.13 Cohort high risk individuals in the same area and/or during similar times of day.

4.2.14 Where interpersonal interaction is needed, group occupants into smaller, consistent cohorts within the same area, especially high risk individuals.[25] [lxviii]

4.2.15 Limit areas of public visitation.

4.2.16 Establish an official guide of an approved protocol to manage occupant and visitor safety and provide related training.

4.2.17 Restrict permitted activities to reduce exposure risk.

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The numbered strategies below reference the AIA Re-occupancy Assessment Tool framework.

3.6.3 & 3.6.8 Monitor relative humidity and check filters.

3.9.8 Enhance acoustic treatment so occupants can hear/be heard through masks.

3.5.4 & 3.9.5 Hand sanitizing station with touchless soap and paper towel dispenser (behind bar)

4.4.1 Designated bartender work area; alternatively, only serve prepared or bottled beverages

3.4.3 Bartender stationary spot

4.3.7 Menu on chalkboard on the wall and/or disposable menu and braille menu; alternatively, provide menu on reservation system

3.3.4 TV screens for facility safety reminders, program schedule and entertainment

4.2.14 Provide regular seating for couples and shared households if desired. Tables reserved for those not in the same household should provide additional distancing.

3.3.4 Sliding doors: Elbow-to-push plate activated

3.4.3 Implement floor markings to locate tables

3.2.2 Reduce amount of equipment to provide more spacing

3.6.2 Ensure ventilation systems operate properly and provide acceptable indoor quality for current occupancy

4.4.3 Reservations or seating assigned via app or reception desk to reduce interaction with the host, waiting, and overcrowding of bar area

3.2.1 Retrofit dining room layout to increase spacing between tables and limit number of seats to allow for adequate spacing between people; spacing is especially important because diners won't be able to eat and drink with a mask on.

Dining room

Image rendering by David Banta, AIA
Wiencek Associates

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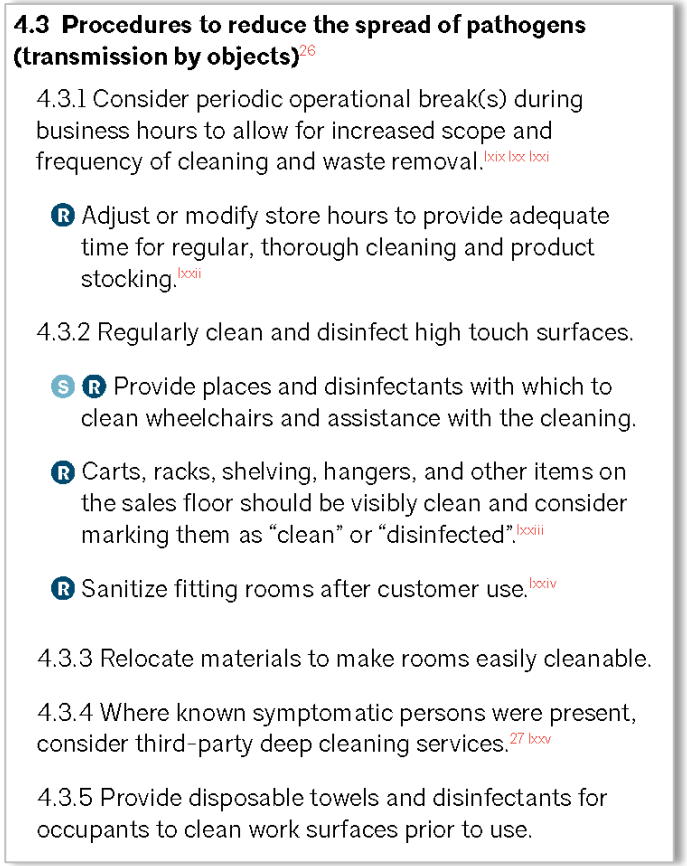
4.3 Procedures to reduce the spread of pathogens (fomites) (a)

- 4.3.1 Consider periodic **operational break(s)** during business hours to allow for increased scope and frequency of cleaning and waste removal.*
- 4.3.2 Regularly clean and disinfect high touch surfaces.*
- 4.3.3 Relocate materials to make rooms easily cleanable.
- 4.3.4 Where known symptomatic persons were present, consider third-party deep cleaning services.
- 4.3.5 Provide **disposable** towels and disinfectants for occupants to clean work surfaces prior to use.



4.3 Procedures to reduce the spread of pathogens (transmission by objects)[26]

4.3.1 Consider periodic operational break(s) during business hours to allow for increased scope and frequency of cleaning and waste removal.[lxix lxx lxxi]

R Adjust or modify store hours to provide adequate time for regular, thorough cleaning and product stocking.[lxxii]

4.3.2 Regularly clean and disinfect high touch surfaces.

S R Provide places and disinfectants with which to clean wheelchairs and assistance with the cleaning.

R Carts, racks, shelving, hangers, and other items on the sales floor should be visibly clean and consider marking them as "clean" or "disinfected".[lxxiii]

R Sanitize fitting rooms after customer use.[lxxiv]

4.3.3 Relocate materials to make rooms easily cleanable.

4.3.4 Where known symptomatic persons were present, consider third-party deep cleaning services.[27 lxxv]

4.3.5 Provide disposable towels and disinfectants for occupants to clean work surfaces prior to use.

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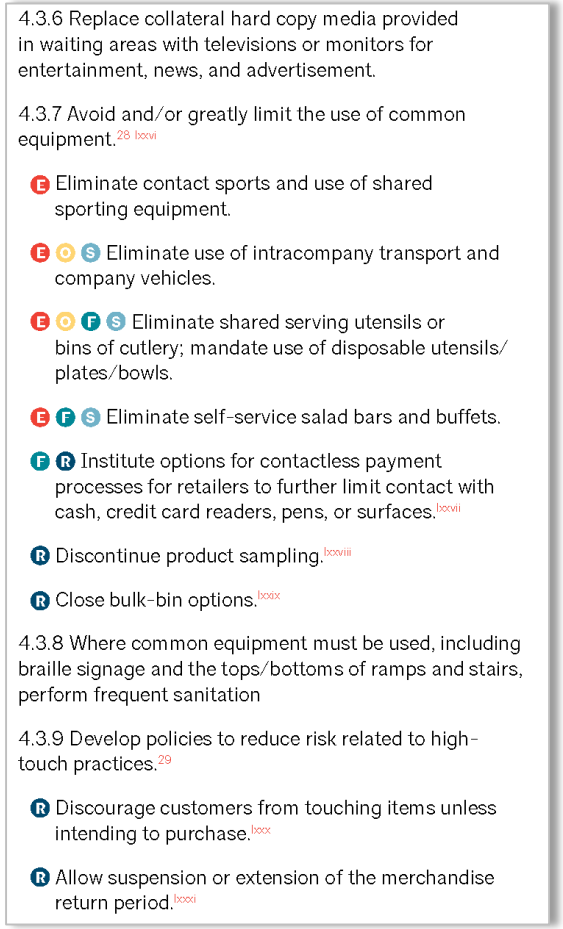
4.3 Procedures to reduce the spread of pathogens (fomites) (b)

- 4.3.6 Replace collateral hard copy media provided in waiting areas with televisions or monitors for entertainment, news, and advertisement.
- 4.3.7 Avoid and/or greatly limit the use of **common equipment**.*
- 4.3.8 Where common equipment must be used, including braille signage…perform frequent sanitation.
- 4.3.9 Develop policies to reduce risk related to high **touch** practices.*



4.3.6 Replace collateral hard copy media provided in waiting areas with televisions or monitors for entertainment, news, and advertisement.

4.3.7 Avoid and/or greatly limit the use of common equipment.[28] [lxxvi]

E Eliminate contact sports and use of shared sporting equipment.

E O S Eliminate use of intracompany transport and company vehicles.

E O F S Eliminate shared serving utensils or bins of cutlery; mandate use of disposable utensils/plates/bowls.

E F S Eliminate self-service salad bars and buffets.

F R Institute options for contactless payment processes for retailers to further limit contact with cash, credit card readers, pens, or surfaces.[lxxvii]

R Discontinue product sampling.[lxxviii]

R Close bulk-bin options.[lxxix]

4.3.8 Where common equipment must be used, including braille signage and the tops/bottoms of ramps and stairs, perform frequent sanitation

4.3.9 Develop policies to reduce risk related to high-touch practices.[29]

R Discourage customers from touching items unless intending to purchase.[lxxx]

R Allow suspension or extension of the merchandise return period.[lxxxi]

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3.8.3 Dishwasher to sanitize reusable utensils and cookware

3.5.4 and **3.9.5** Touchless hand soap and paper towel dispensers. Consider touchless faucet

3.9.4 Touchless trash and recycling cans

4.3.7 Limit the use of common equipment such as refrigerator, coffee maker, etc.

4.3.8 Disinfect refrigerator and microwave handles, microwave controls, and faucet at least 3 times per day

4.3.7 Cover and separate silverware and dishes or provide compostable disposable silverware

4.3.5 Provide disinfecting wipes

4.3.8 Provide single-serving coffee maker, disinfect touch areas at least 3 times per day

3.4.6 Post conspicuous signage about risk mitigation strategies and policies, including that congregating is discouraged

3.5.5 Water cooler with touchless function (not shown)

General HVAC notes:

3.6.3 Monitor relative humidity, temperature, and CO_2 levels regularly to identify and resolve issues quickly

3.6.4 Increase ventilation rates and air changes

3.6.9 Align HVAC filter selection, cleaning schedule, and replacement cycles with ASHRAE recommendations

3.6.10 Clean HVAC intakes daily

3.6.15 Consider temporary bypass of energy recovery systems

Break Room

Image rendering by Allied8

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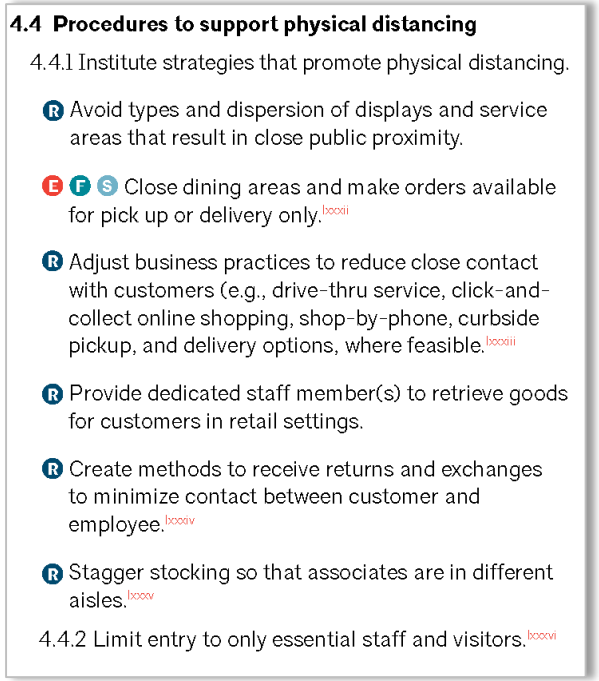
4.4 Procedures to support physical distancing (a)

- 4.4.1 Institute strategies that promote physical **distancing**.*
- 4.4.2 Limit entry to only **essential** staff and visitors.
- 4.4.3 Implement **occupancy-reduction** policies for all areas of the building; including but not limited to work areas, public waiting areas, break areas, and restrooms.*



4.4 Procedures to support physical distancing

4.4.1 Institute strategies that promote physical distancing.

R Avoid types and dispersion of displays and service areas that result in close public proximity.

E F S Close dining areas and make orders available for pick up or delivery only.[lxxxii]

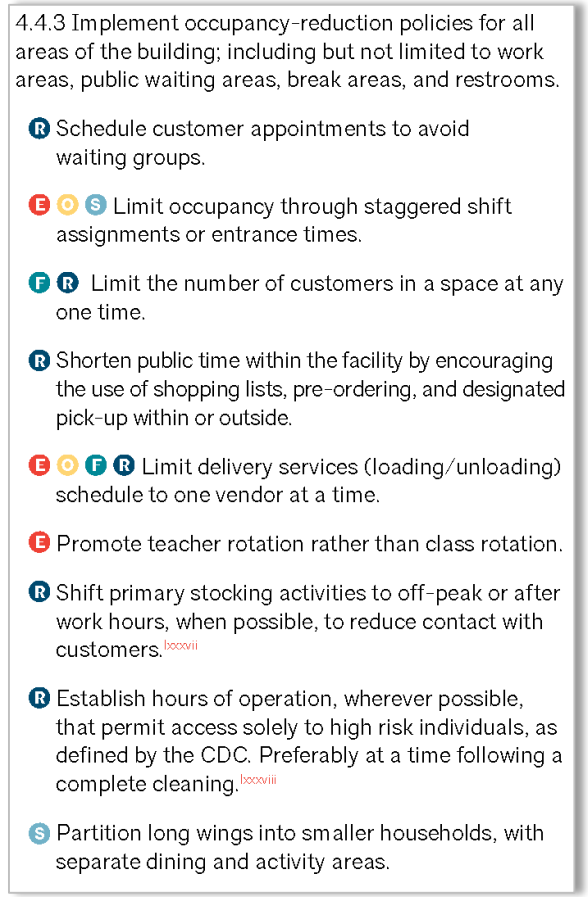
R Adjust business practices to reduce close contact with customers (e.g., drive-thru service, click-and-collect online shopping, shop-by-phone, curbside pickup, and delivery options, where feasible.[lxxxiii]

R Provide dedicated staff member(s) to retrieve goods for customers in retail settings.

R Create methods to receive returns and exchanges to minimize contact between customer and employee.[lxxxiv]

R Stagger stocking so that associates are in different aisles.[lxxxv]

4.4.2 Limit entry to only essential staff and visitors.[lxxxvi]



4.4.3 Implement occupancy-reduction policies for all areas of the building; including but not limited to work areas, public waiting areas, break areas, and restrooms.

R Schedule customer appointments to avoid waiting groups.

E O S Limit occupancy through staggered shift assignments or entrance times.

F R Limit the number of customers in a space at any one time.

R Shorten public time within the facility by encouraging the use of shopping lists, pre-ordering, and designated pick-up within or outside.

E O F R Limit delivery services (loading/unloading) schedule to one vendor at a time.

E Promote teacher rotation rather than class rotation.

R Shift primary stocking activities to off-peak or after work hours, when possible, to reduce contact with customers.[lxxxvii]

R Establish hours of operation, wherever possible, that permit access solely to high risk individuals, as defined by the CDC. Preferably at a time following a complete cleaning.[lxxxviii]

S Partition long wings into smaller households, with separate dining and activity areas.

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4.4 Procedures to support physical distancing (b)

- 4.4.4 Provide dedicated staff member(s) at building entrance to guide **queuing** of incoming occupants.
- 4.4.5 Design a process to ensure occupants stay distanced while waiting.*
- 4.4.6 Encourage walking, cycling, or other modes of personal **transportation** that do not promote close interaction with others as in mass public transit.

4.4.4 Provide dedicated staff member(s) at building entrance to guide queuing of incoming occupants.

4.4.5 Design a process to ensure occupants stay distanced while waiting.

R Manage the check-out line process to reduce COVID-19 transmission.

4.4.6 Encourage walking, cycling, or other modes of personal transportation that do not promote close interaction with others as in mass public transit.[lxxxix]

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POLL QUESTION

What COVID-19 work have you done?

A. Advised on Alternative Care Site selection and/or retrofit

B. Created a re-opening plan for a client

C. Provided space planning services to accommodate physical distancing guidelines

D. Retrofitted a building or space to increase health and wellbeing

E. Designed theoretical project on the future of pandemic design

F. Other

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Fifth Priority: Personal Protective Equipment (PPE)

5.1 PPE policies

5.2 PPE procedures

5.3 PPE

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5.1 PPE policies

- 5.1.1 Utilize CDC guidelines to identify when and what type of protection is to be used.
- 5.1.2 Regularly inspect, maintain, and replace supplies.
- 5.1.3 **Secure** necessary supplies and proper on-site storage facilities.
- 5.1.4 Limit access to supply storage spaces. **Centralize** distribution.

5.1 PPE policies

5.1.1 Utilize CDC guidelines to identify when and what type of protection is to be used.

5.1.2 Regularly inspect, maintain, and replace supplies.

5.1.3 Secure necessary supplies and proper on-site storage facilities.

5.1.4 Limit access to supply storage spaces. Centralize distribution.

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5.2 PPE procedures

- 5.2.1 Wear PPE based on hazard to worker.
- 5.2.2 **Train** workers on proper use of PPE.
- 5.2.3 Require hand washing/sanitizing before putting on gloves.
- 5.2.4 Ensure proper fit and periodically refit.

5.2 PPE procedures

5.2.1 Wear PPE based on hazard to worker.

5.2.2 Train workers on proper use of PPE.

5.2.3 Require hand washing/sanitizing before putting on gloves.

5.2.4 Ensure proper fit and periodically refit.

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5.3 PPE

- 5.3.1 Provide gloves.
- 5.3.2 Provide goggles.
- 5.3.3 Provide face shields.
- 5.3.4 Provide face masks or cloth face coverings.

5.3 PPE

5.3.1 Provide gloves.[xc]

5.3.2 Provide goggles.

5.3.3 Provide face shields.

5.3.4 Provide face masks or cloth face coverings.[xci]

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Appendix: Social Distancing Diagrams

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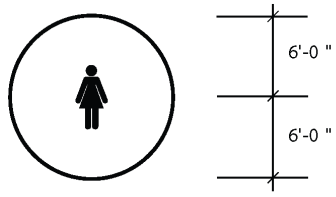
Clarifying Social Distancing Diagrams



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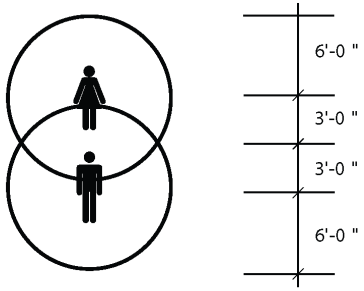

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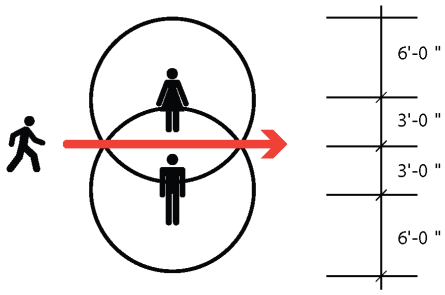

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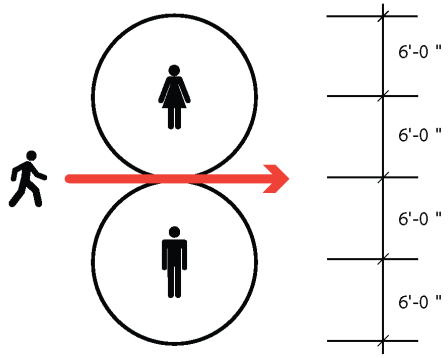

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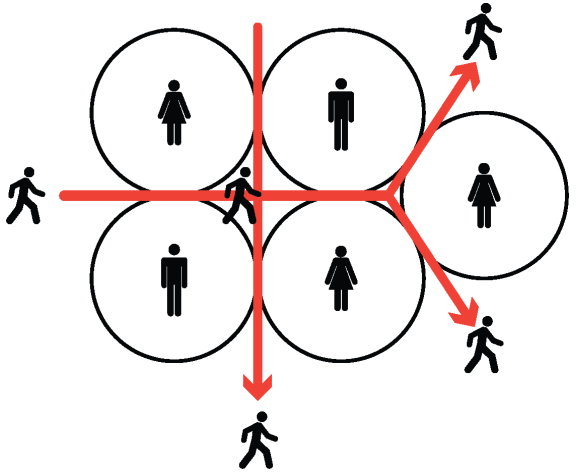

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Additional Discussion: Long-term Changes to Buildings

Lobbies

Office floors

Workstations

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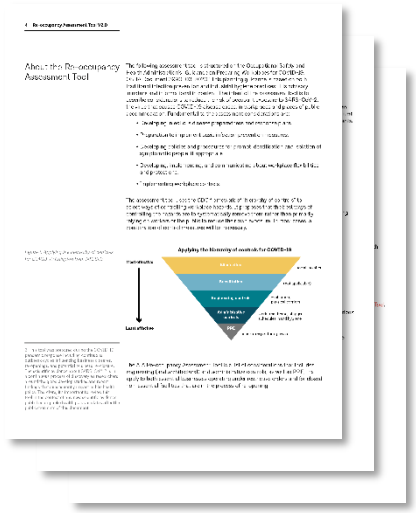
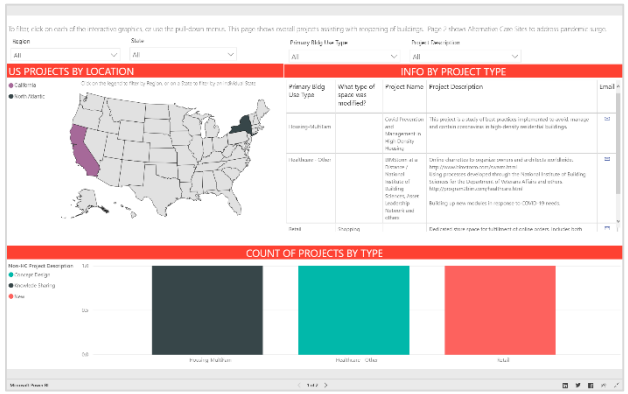
Suite of Recently Released AIA Resources for COVID-19

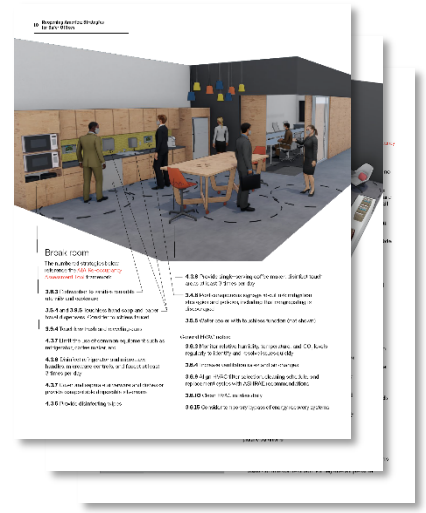
[Risk Management Plan]



[Re-occupancy Assessment Tool]



[ArchMap]



[Building-type Guidance]

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DISCUSSION / QUESTIONS?

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THIS CONCLUDES THE AMERICAN INSTITUTE OF ARCHITECTS CONTINUING EDUCATION SYSTEMS COURSE

Provider Name/Logo

ARUP

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