

Going Up: The Challenge of Reopening Shared Office Buildings in a COVID-19 World

By Rebekah Paxton

Many office buildings throughout the state opened on May 25 in accordance with Governor Charlie Baker announcement in *Reopening Massachusetts*¹, with the City of Boston following suit on June 1. As businesses reopen across many industries according to the detailed requirements provided in the report, employers in office buildings face unique challenges in bringing employees back safely into physical workplaces, especially in the areas of elevator operations and building entry and exit.

According to a CBS I-Team report on elevator safety in 2019, there were 40,568 registered elevators in Massachusetts.² In Boston's Financial District and Back Bay, many offices are located in high-rise buildings. Across the state, employees returning to work in shared office buildings may find it difficult to maintain federal and state social distancing guidance.

Challenges Faced

As countries and states have set out plans to reopen their economies, there is lingering concern about operating efficiently while maintaining required social distancing in shared office spaces, common hallways, stairwells, and elevators. If a limited number of people will be allowed in building lobbies and elevators due to the six-feet-apart advisory from the Centers for Disease Control and Prevention, there will be an inevitable slowdown in moving people through buildings and to their respective offices. Even if buildings set up measures to keep employees the recommended six feet apart and practice required hygiene protocols, how do safety measures affect employees' efficiency for their in-office "commutes" from office entry to desks?

In one London skyscraper, building managers have engineered a system for employees to move with maximum efficiency within the building. At One Canada Square, which has 50 floors and a whopping 32 elevators to access them, building managers instituted designated doorless entry and exit, PPE-equipped staff to operate elevators, and an estimated four-to-six-person limited occupancy per elevator. Building management estimates they can move up to 7,500 people per hour, which they believe will cover their anticipated volume of tenants and guests.³

In comparison, the following table details several of the tallest buildings in Boston, which provide offices to hundreds of thousands of employees, and the number of elevators servicing their many floors. A similarly sized office building with 52 floors, the Prudential Tower in Boston's Back Bay, has just over half the elevator capacity of One Canada Square in London. Many other, larger Boston buildings have similar, much more limited capacity.



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Building Name	Number of Floors	Number of Elevators
Prudential Tower ⁴	52	18
One International Place ⁵	46	21
One Post Office Square ⁶	40	21
Sixty State Street ⁷	38	12

While these elevator banks may have been sufficient prior to COVID-19 restrictions, social distancing and other requirements may create bottlenecks of employees waiting for elevators. In many buildings, stairwells may be an option for some, if they are designated as going up or down, but it will be challenging for even the most able-bodied to climb 30, 40, 50 (and beyond) flights of stairs each day. Between crowding of employees waiting for elevators at peak hours, increased traffic in stairwells and hallways, and time spent accessing office buildings, plans must be in place to control employee flow.

State Government Guidance: Some General Principles

While some states have included recommendations in reopening plans to keep employees safe in office buildings, some companies located in high rises are also setting standards for safe and efficient workplace re-entry.

For instance, the City of New York provided guidance as early as April 9 on building management, prior to any talk of reopening.⁸ This guidance places responsibility on building owners and managers to conduct frequent disinfecting procedures on commonly touched surfaces, including lobby areas and elevator buttons, as well as on individuals and staff to frequently engage in hygiene practices like hand washing and use of hand sanitizer.

However, in terms of recommending a specific capacity of elevators during the time of COVID-19, the NYC guidance falls short. Instead, the guidance suggests that workers “consider riding the elevator with their own party, taking the stairs, or waiting for the next elevator.” While this self-selecting approach may be more feasible in residential buildings, where peak elevator demand is not as great as in commercial buildings, high-rise offices more often include people who do not know each other and people who may be under time constraints to get to their respective floors. The state of Connecticut provided one further recommendation, in addition to guidance that is similar to what NYC offered, calling on building owners to appoint elevator attendants to direct employees and operate elevators to reduce contact with surfaces.⁹

Massachusetts state guidelines have provided some key details about the use of elevators when returning to offices.¹⁰ First, all office spaces permitted to open (May 25 for offices across

Massachusetts excluding Boston, and June 1 for Boston) can only have 25 percent of their maximum occupancy in the workplace at one time. The requirement limits the number of people entering office buildings and minimizes back-ups in hallways, stairwells, and elevator banks. In its recommendations specific to general office buildings, the guidance states that building managers should establish one-way hallways. With respect to elevators, the document advises that managers and employees should “minimize use of confined spaces (i.e. elevators) by more than one individual at a time”, and all should wear face coverings in such situations.

The guidelines give more general advice to companies to minimize the number of employees entering physical workspaces, including encouraging companies to offer staggered scheduling of employees who must be in the office, as well as staggering break times. California’s state guidelines also include designating specific entry and exit points of large buildings to control flows of employees to stairwells and elevators.¹¹

Company Solutions: Practical Applications

As states and cities create economic reopening plans, the private sector is also working to find commonsense approaches to building management in the era of COVID-19. The following are a sample of individual company responses.

Qualtrics, which has 25 offices across the U.S., has announced that it will work to identify volunteers to take stairwells instead of elevators to reach their workspaces.¹² Squarespace, Inc., headquartered in NYC, is limiting elevator usage to one employee at a time in some of its office buildings.¹³ Interpublic, also based in NYC, has proposed taping off socially distanced blocks on elevators to show employees how many people are safe to ride. This policy would allow more than one person per elevator ride, but also signal to riders that if there are no empty blocks on board, they will have to wait for the next available car.¹⁴ However, the company’s senior director of crisis management said that this policy would still translate to “two-to-three hours” to get all agency employees to their desks at one Interpublic location.

In addition to restricting boarding on office building elevators, some company solutions include minimizing constant contact with commonly used surfaces. JPMorgan Chase & Co. was reportedly considering stationing attendants to operate elevators and protecting them with PPE.¹⁵ Goldman Sachs proposed re-thinking entry and exit points and introducing more contactless options for getting into elevators and offices.¹⁶

As Salesforce prepared to open its offices in Seoul, South Korea, the company instituted a more automated, contactless approach to have employees reach their offices in an efficient manner. Using a suite of Salesforce-designed applications, all

employees must track their temperature, self-test results, and contacts daily. To return to a physical office, employees are required to check in before arriving to work, using a similar application. This check-in process is complete when the employee receives a ticket and window of time to ride an elevator to the necessary floor.¹⁷

Some companies have developed applications that could solve some concerns related to crowd control in high-rise office buildings. Otis, a London-based elevator and lift products innovation company, has developed “eCall,” a new app that allows users to call elevators using their smartphones.¹⁸ At the very least, technologies like this reduce contact with commonly touched surfaces, and allow individuals to call an elevator as they approach a building to avoid lingering in lobbies. This technology, possibly when paired with queuing technology, could allow employees to wait in line and call elevators to their respective floors while waiting in their cars or outside the lobby or office building altogether. QLess, an app developer headquartered in California, provides apps that allow for such remote line formation, which “disperse crowded lobbies by allowing customers to get in line from home, their vehicle, or work. They are given their wait time via SMS or app and told when to arrive in the lobby.”¹⁹

Recommendations for Companies Returning to Physical Workspaces

There are widespread examples of companies’ attempts to put social distancing recommendations into practice, especially as it relates to large-scale office reopening. However, these necessary precautions may result in vast inefficiencies that reduce the productivity of workers who enter physical workplaces, and require thorough planning and innovation to ensure employees can return to office buildings safely and efficiently.

According to ADA-compliant dimensions of elevators provided by the U.S. Access Board, it can be estimated that at very least, two individuals could ride in an elevator together and maintain a six-foot berth, especially if standing in opposite corners of the elevator car.²⁰ Based on this assumption, to minimize crowd-forming around elevator banks in large areas, the following recommendations include guidance provided by the Building Owners and Managers Association (BOMA)²¹ and other elevator-related adaptations that companies and buildings should consider:

1. Limit the number of employees, guests, and visitors to each office daily to minimize crowd flow²²
2. Frequently sanitize common areas like lobbies, security areas, and elevator banks²³
3. Promote individual hygiene practices, including hand sanitation and washing, perhaps by making sanitizer, wipes, disposable towels, and other materials available²⁴

4. Require face coverings in stairwells, hallways, and elevators²⁵
5. Consider limiting [elevator] riders to four—one in each corner.²⁶ In its “Return to Workplace Framework for Commercial Spaces”, the City of Boston officially recommended that elevator capacity should be limited to no more than four individuals at a time.²⁷
6. Place markers for social distancing in lines that will form around security and elevators²⁸
7. Designate specific elevators for traffic going up and traffic coming down²⁹
8. Program “up” elevators to return directly to the ground floor to minimize loading times³⁰
9. Explore programming capabilities to send elevator passengers directly to their respective destinations once four employees have boarded the elevator cab.
10. Designate sets of elevators to carry passengers to and from different floor groups to minimize waiting times at peak hours
11. Designate directional hallways and stairwells, and disinfect frequently³¹

In addition to these recommendations adopted from the BOMA guidance related to COVID-19, using third-party technologies to ease the rush on elevators should also be an important consideration as office buildings and companies begin their reopening of physical workplaces:

12. Explore capabilities of elevator systems that can be called via app, like the Otis elevator systems, instead of pushing buttons to reduce contact with commonly touched surfaces and congregations in lobbies and hallways for those entering and exiting offices
13. Utilize remote line formation technologies, like those in smartphone apps or elevator passes like those used in Salesforce’s Seoul office, to collect data on how many employees are reporting to offices and when, provide them with individual elevator ride times, and allow them to wait for their designated time at home, on transportation, or outside lobby areas.

To reduce risk for those who must return to a physical workplace to perform their jobs, and limit the inefficiencies created by long lines and climbing many flights of stairs, employees who are able to maintain productivity while working at home should continue to do so. Along these lines, companies should seek to maximize employee safety by implementing flexible in-office days and staggered scheduling for those that may need to access physical offices.

Endnotes

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