

THE CONTACTLESS



OFFICE

POWERING CHICAGO TO A BETTER WORKPLACE FOR ALL

[POWERINGCHICAGO.COM/CONTACTLESSOFFICE](https://poweringchicago.com/contactlessoffice)

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CHICAGO 

IBEW 134/NECA

WHY CONTACTLESS OFFICES?

On March 11, 2020, the first case of COVID-19 in a downtown Chicago office building was confirmed. In short order, offices throughout the city and in suburban Cook County closed their doors to prevent the spread of the virus, a statewide shelter in place order was issued, and the day-to-day professional experience for many Chicago-area residents changed drastically as remote work became the norm almost overnight. Months later, most companies in Chicagoland have yet to reopen their offices, and among those that have, very few employees have been allowed back.

This shift in the nature of work has had a significant impact on the commercial real estate market locally, quickly putting to a halt what had been a booming environment. And while many companies who have shifted to fully remote work models have reported being pleasantly surprised by productivity levels, safely returning to the workplace offers benefits that simply can't be matched while offices remain closed.

According to a Cushman & Wakefield [study](#) published June 23, 2020, personal connections and bonding are suffering as a result of remote work, particularly among younger employees. As the study states, "Even though employees report high levels of pride working for their companies and they like their company culture, it is hard to maintain a sense of personal connection and belonging to that culture when not nurtured and 'lived' in person." This could be one of the reasons just 12 percent of U.S. workers said they want to work from home full-time in a [Gensler survey](#) released in late May 2020.

Safely reopening offices throughout Chicagoland and bringing these employees back, however, requires a broad evaluation of how the workplace has traditionally been set up and a plan to modify the environment in ways that minimize the risk of COVID-19 transmission. In addition to minimizing risk, doing so will reassure those who are ready to return to the office that their health, safety and comfort are the highest priorities.

This can be accomplished both by reimagining the physical layout of office spaces to de-densify the work environment and create space between employees and by leveraging technology to reduce opportunities for virus transmission. Through automation, we can create a virtually touch-free experience from the moment an employee enters an office in the morning to the moment they exit at the end of the day, and Powering Chicago contractors have the skilled, trained union electricians and expertise to install these contactless technologies to power a safer workplace for all.

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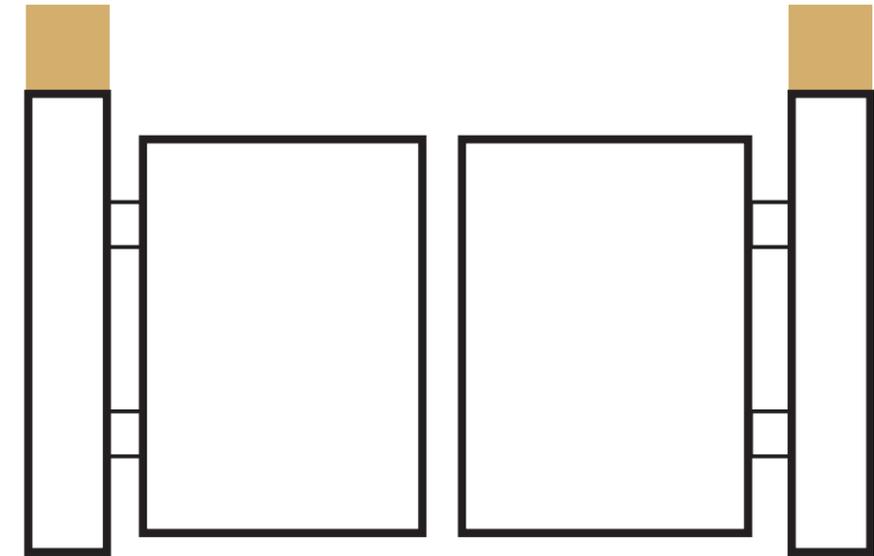
22-23

AUTOMATIC DOORS

Many newer buildings already make use of automatic doors. But for older offices, retrofitting automatic doors throughout the workplace is a straightforward project with the potential for big impact.

Implementation Considerations:

- In many cases when automatic doors are installed, modifications to the door jambs are minimal if they're required at all.
- The most common automatic door types available on the market (i.e., swinging, sliding and folding) provide flexibility when dealing with spatial limitations.
- Most automatic doors for commercial properties require a 120v power source, which Powering Chicago members can install easily if not already present.
- Once automatic doors are installed throughout commercial properties, centralized control systems make it possible to remotely control their use. While promoting social distancing and working to limit capacity in office spaces, this can be a significant advantage.



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“Door handles are a feature of many offices that most people have never thought about before, and for good reason. It’s simply not something that has ever needed to be considered. But now, as everyone is more conscious of what they touch than they’ve ever been before, eliminating them from offices and replacing them with automatic doors is a basic way to increase the level of comfort among employees when they return to the workplace.”

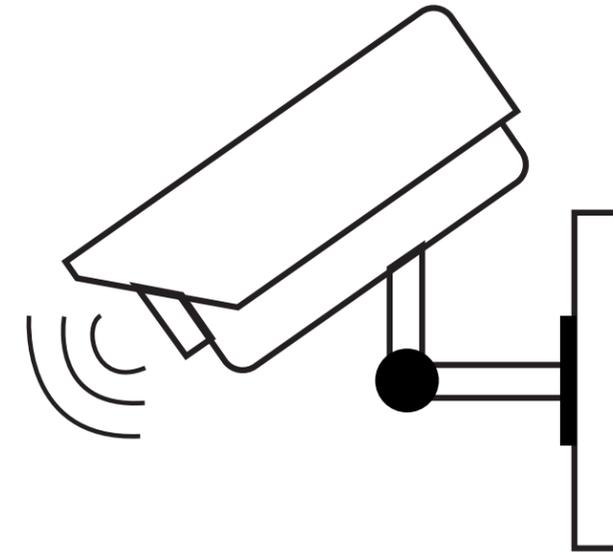
Jose Cruz, IBEW Local 134

THERMAL SCREENING SYSTEM

Thermal cameras can scan the body temperature of up to 30 people per second as they enter a building or in other strategic locations, creating a contactless first line of defense supported by CDC and FDA guidelines. Accurate to within half a degree Fahrenheit, the scanning system automatically alerts building staff if someone with an elevated body temperature is identified.

Implementation Considerations:

- Thermal cameras can be installed wherever they are needed in office settings and are linked to a centralized control system. Entrances are a common location, but end-users have the flexibility to determine where they will be most effective in their workplaces.
- Thermal cameras installed with the system passively take the temperature of every employee passing through designated areas, but alerts about elevated temperatures can be set at whatever threshold the building manager or employer designates. There is also an option for kiosks where those getting their temperature checked walk up to the camera for the reading.
- Taking it a step further, options are also available to monitor for the use of masks, triggering an alert when someone passes who does not have one on. For those not wearing one, an alert prompts the person to see an attendant who can promptly give them one before they travel elsewhere in the building.
- Installation, setup and training are provided by Powering Chicago contractors, ensuring the system can be used long-term with minimal ongoing maintenance needs. Truly a turnkey product.



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“There’s no quick fix for the COVID-19 pandemic, but technology like the thermal camera screening system the unionized electrical industry offers provides businesses with a tool that balances the need to continue operating with the need to protect their employees and customers from unnecessary risk. It’s just one example of how our expertise with leading-edge technologies can help Chicagoland safely return to work.”

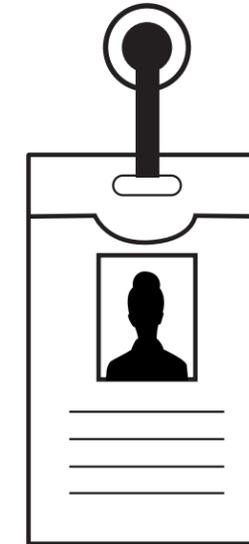
Eric Nixon, Maron Electric

SIGN-IN KIOSKS FOR VISITORS WITH MOBILE INTEGRATION

Passing an ID to a security guard upon entering a building creates an opportunity for hand-to-hand contact that is no longer necessary. Mobile-integrated digital kiosks placed in lobbies eliminate a potential risk without sacrificing safety and security.

Implementation Considerations:

- Implementing this solution requires little more than an investment in the digital kiosk, the software running on it and a power source.
- If the desired location does not have a power source within range, Powering Chicago contractors can quickly address the need.



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“Controlling access to offices has been a focus for building managers and tenants for quite a while as it relates to security concerns. Now, there’s an additional layer of consideration related to health as offices reopen. By installing kiosks that allow visitors to check in without touching anything but their own mobile devices, while also maintaining social distancing from others in the area, an opportunity for COVID-19 to spread is eliminated.”

Elbert Walters III, Powering Chicago

TOUCH-FREE BADGE SCANNERS FOR BUILDING AND OFFICE ACCESS

Restricting access to offices remains an important safety issue, but there's no need for employees to physically swipe an ID badge to gain access to the facility. Badge readers that require little more than hovering the ID over the sensor make sense in any workplace.

Implementation Considerations:

- In large office buildings, wired access control systems that are connected to a centralized power source may be a better option than wireless systems, as they make it possible to link badge readers throughout the building.



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“Badge readers that don’t require two surfaces to touch to grant facility access to employees are not new, but they are now necessary everywhere. There’s no reason not to have this technology installed in your office.”

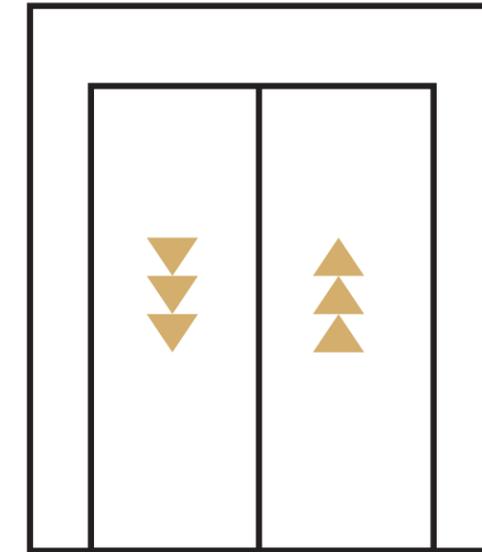
Don Finn, IBEW Local 134

TOUCH-FREE ELEVATOR CONTROLS

In large office buildings, countless people ride the elevator every day. Eliminating buttons to call the elevator and select a floor and replacing them with leading-edge technologies that deploy holograms, invisible sensor fields or simply pre-programmed fobs using RFID technology that don't require contact is a forward-thinking solution.

Implementation Considerations:

- Powering Chicago contractors have the expertise to install a range of technologies to eliminate the need to physically press buttons for elevators, ranging from relatively basic modifications to cutting-edge solutions.
- The technology that is best suited for each office should be determined by that office's specific needs.
- Powering Chicago's members can work with building owners, managers and tenants to determine what the best solution is for their unique situation.



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“Elevators in large office buildings pose unique challenges in the COVID-19 environment. Determining how to safely move the volume of people necessary as employees return to the office - even with staggered schedules - is going to be difficult. Retrofitting the elevators with controls that don't require touch, though, is a relatively basic modification to mitigate risk.”

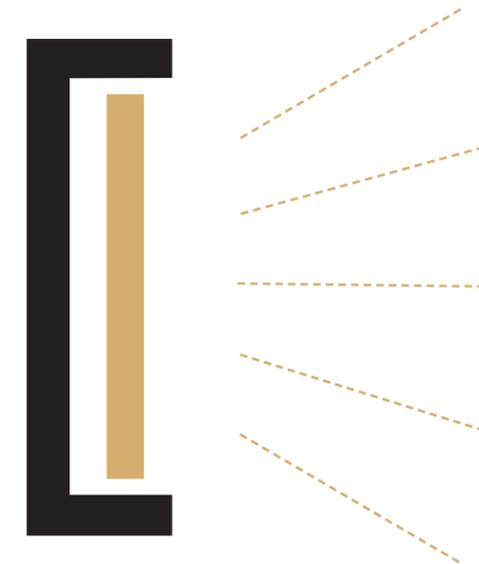
Mark Thomas, ECA Chicago

LIGHTING MODIFICATIONS

Light switches are a vector for germs in any location. Installing motion-activated lights or hands-free switches eliminates a common touchpoint in many workplaces. Powering Chicago contractors also have extensive experience installing specialized lighting that helps disinfect or sanitize surfaces. This includes germicidal ultraviolet (UV) lights (254 nm wavelength), which have the potential to destroy coronaviruses but can only operate when people are not present; far-UVC lights (222 nm wavelength), which a Columbia University study recently indicated can kill coronaviruses in airborne droplets while still being safe to use around people; and visible white lights (also called “near-UV;” 405nm wavelength), which can be used around people and are effective in suppressing a wide range of bacteria, molds and fungi, though not viruses like the one that causes COVID-19.

Implementation Considerations:

- Motion-activated lights or hands-free controls can be installed in virtually all locations needed
- UV lighting solutions can be installed as part of lighting fixtures, on push carts that can be moved around the office and in mobile units for increased flexibility of use. They can also be installed in the vents of HVAC systems to destroy coronaviruses as air is circulated through the building.
- When germicidal UV lighting (254 nm) is in use, the space **cannot be occupied** by employees and it may degrade surfaces over time. It is, however, effective in destroying coronaviruses when applied through short, periodic exposures. In most applications, it can also be used to disinfect air.
- Though recent research on far-UVC lighting (222nm) indicates that it can be used safely in the presence of people, this is still an emerging application. With the rapidly evolving nature of the pandemic and the sometimes shifting guidelines that have been implemented to combat the spread of COVID-19, **further study of the effects of far-UVC lighting would be prudent before it is widely applied in office settings.**
- Visible white lights (405 nm) are effective against pathogens in the air or those attached to surfaces and are currently considered safe for human exposure. But as mentioned in the description on this page, they do not destroy coronaviruses like the one that causes COVID-19.



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“One of the nice things about these lighting solutions is that there are fixed and portable options. So if you’re not looking to add additional light fixtures as you bring employees back to the office, you can still integrate UV light or a visible white light into a portable unit that the cleaning crew or designated trained personnel can utilize without having to physically touch the surface to clean it.”

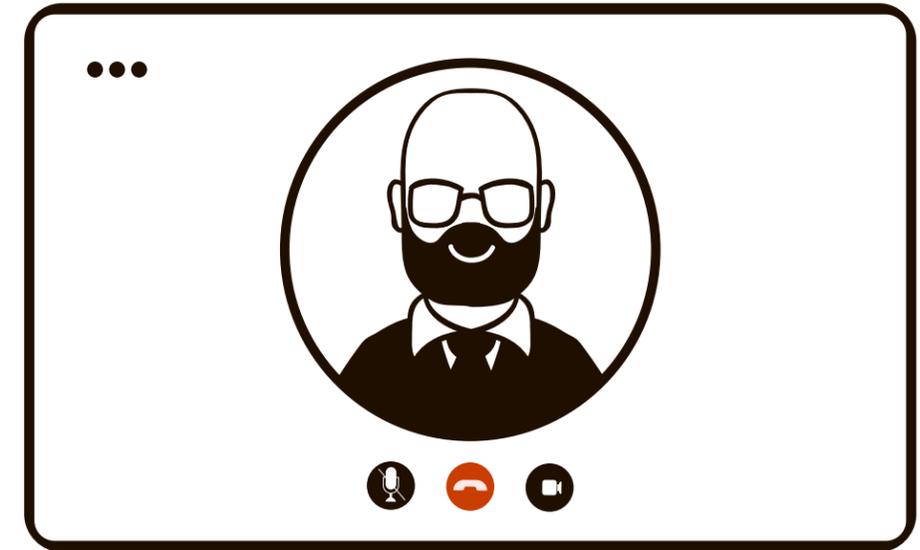
Duane Chenier, Maron Electric

A/V SOLUTIONS

Reopening workplaces at partial capacity will require split and staggered schedules that make team collaboration more difficult. While a laptop camera cut it while sheltering in place, professional-grade cameras and audio systems installed in offices increase efficiency and improve productivity, and can be controlled with mobile apps or personal laptops to eliminate shared touchpoints. A/V solutions can also be implemented to promote social distancing within offices, with occupancy sensors designed to limit crowding powered on and off with hands-free technology. Installing new monitors throughout the office can also reinforce the need to maintain distancing whenever possible by being placed in strategic locations and displaying information about areas of the office to avoid.

Implementation Considerations:

- Monitors that help manage how many people are occupying various areas of the office by displaying real-time information can be installed in strategic locations, needing only a power source and wireless connectivity (in some applications).



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“Rather than touching a control panel or remote control that everyone else in the office is using too, union electricians can route the control of A/V systems and other technologies to personal mobile devices or laptops to limit opportunities for virus transmission.”

Kevin A. Connolly, IBEW Local 134

TOUCH-FREE BATHROOMS

While the bathroom has never been the most germ-free environment, they're a significant hazard in workplaces that are reopened amidst the pandemic. Powering Chicago members can ensure that no bathroom surface needs to be touched after installing automatic faucets, toilets, paper towel dispensers and doors.

Implementation Considerations:

- Creating touch-free bathrooms may require Powering Chicago contractors to partner with union plumbers for certain installations.



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“There’s probably not any environment in the office that is going to cause as much discomfort for returning employees as the bathroom. Automatic fixtures are commonplace at most commercial properties, but in older buildings that lack them, it’s time to make a change.”

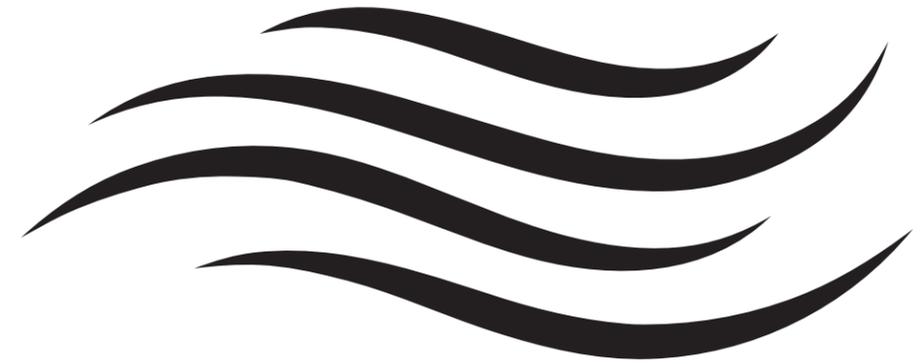
Mark Thomas, ECA Chicago

AIR FILTRATION/HVAC CONTROLS

According to the [CDC](#), employers can help reduce the risk of exposure to COVID-19 by increasing circulation of outdoor air as much as possible in enclosed spaces. And with the help of systems installed by Powering Chicago's members that integrate with HVAC units to automate the process to filter fresh air from outside into the building - typically overnight - this is a guideline that can be adhered to with little day-to-day maintenance.

Implementation Considerations:

- Ideal for large office buildings in which windows cannot be easily opened, if at all.
- According to the [U.S. Department of Homeland Security](#), coronavirus particles decay faster at a room temperature of 78 degrees Fahrenheit with a relative humidity of 50% than at lower temperatures and humidity.
- Germicidal ultraviolet (UV) lights can be placed in HVAC vents to disinfect air as it is circulated through the system. According to the same research from the Department of Homeland Security, when UV lights are implemented in the conditions described in the bullet point above, the virus [decays by 90%](#) in less than seven minutes.
- Air filters can also be installed in HVAC systems to trap virus particles, further reducing opportunities for infection.



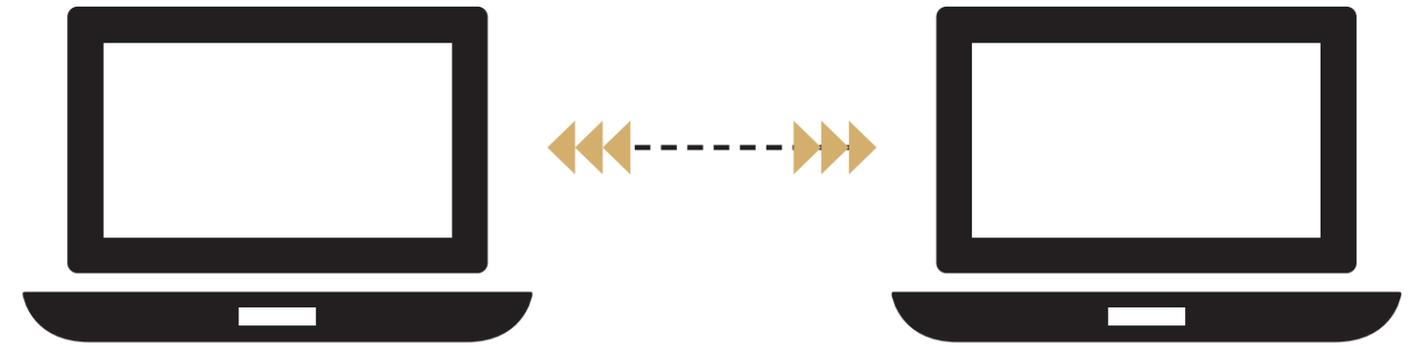
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“Allowing offices to reopen and getting to a point where employees are comfortable returning to them are two very different things. This application of technology is one way to increase everyone’s comfort level in the building about being in an enclosed space. The system we install automates the process to circulate and filter air through the building, taking the guesswork out of determining how HVAC systems should be controlled to draw in the appropriate amount of outside air to maintain conditions least suited for the virus to spread.”

Dave D’Amico, Integrated Control Technologies, LLC

WIRELESS CONNECTIVITY

Beyond making an office more marketable and tech friendly, wireless connectivity will allow tenants to more easily adjust their office layout and the location of workstations as needs evolve in the months ahead. With the ability to quickly reconfigure physical spaces without sacrificing productivity because of connectivity issues, wall-to-wall wireless and cellular connectivity through wifi or distributed antenna systems provides a level of flexibility in maintaining social distancing and limiting contact that could otherwise be difficult and costly to achieve.



Implementation Considerations:

- Prior to implementing this solution, a needs assessment should be completed that takes into consideration how the space is likely to need to be used on both a short- and long-term basis.
- Powering Chicago's contractors have extensive experience integrating technology like wireless connectivity into broader planning initiatives to ensure that customers' needs are met at the time of installation and well into the future.

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“Wireless connectivity was already becoming not just a nice to have, but a required component in the commercial real estate space. Some people go so far as to call it the fourth utility, along with water, power and gas. As office space needs evolve in response to the pandemic, having that flexibility from a technology connectivity perspective is really key to addressing the current situation and being prepared for what's to come.”

Thomas Pedernana, Malko Communication Services

As Chicagoland gets back to work in the months ahead, Powering Chicago's members are here to help. To discuss how power can transform your office and help your employees safely return to work, contact us today.

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