



# GETTING BACK TO BUSINESS

Comprehensive architecture, engineering, and facility management services for safer workplaces in a post-COVID world.

The rapid shutdown of many Canadian businesses due to COVID-19 has left many offices at a standstill. As the virus spread begins to slow down, we are faced with the challenge of restarting business while minimizing the risk and bringing a sense of comfort to customers and employees. With an overwhelming amount of information appearing daily, determining what changes need to be made for a safe return to work is a daunting task. Businesses will need a strategy to incorporate the “new normal” into their workplaces quickly and efficiently.

Returning to the workplace while avoiding a resurgence of COVID-19 will require careful consideration of what elements need to be addressed in your space, how these changes can be made affordably, and how to execute the changes in a timely manner before reopening.

## KEY SUCCESS FACTORS

COVID-19 spreads easily, making both open spaces with dense populations and small enclosed spaces with more than one occupant a considerable challenge. Implementation of the recommendations provided by the Public Health Agency of Canada will require building layouts that accommodate:



Physical distancing a minimum of 2m from others to avoid contact through airborne particles



Reduction in publicly touched surfaces to mitigate spread through physical contact



Improved office air quality to prevent the spread of infectious aerosols

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## OUR APPROACH

### STEP ONE: FACILITY REVIEW AND RECOMMENDATIONS

Our Asset and Facilities Management team specializes in building management planning. They understand that every facility is unique, and preparing for the return to public spaces in a pandemic situation requires detailed planning, while also balancing cost and risk. Our specialists cover the financial aspects of planning, as well as an engineering assessment covering operations planning for building occupancy limits, architectural measures for limiting contact, and mechanical measures for preventing viral spread.

### STEP TWO: DESIGNING CHANGES TO YOUR FACILITY

Incorporating new designs into an existing building is a delicate process, and it is important to have a team of professionals that consider all impacts of

each component during the design process. Our design will follow your lead based on decisions made in the first phase of the project. We will engage our architects and engineers to provide drawings and specifications and maintain an up-to-date cost estimate for the project. We will focus on short-term solutions first to help get you back to work, and long term solutions for permanent building changes.

### STEP THREE: DESIGN IMPLEMENTATION AND CONSTRUCTION

Our sister company, AEC Developments will work collaboratively with our architects and engineers in a design-build or Construction Management format to execute the work quickly and efficiently. Our experience in healthcare, municipal, commercial, educational and residential sectors gives us a strong understanding of building functionality and needs.

## LET'S GET IN TOUCH



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# GETTING BACK TO BUSINESS: **HEALTHY TRANSITION PROGRAM**

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**Comprehensive architecture, engineering, and facility management services for safer workplaces in a post-COVID world.**



# PREPARING YOUR BUSINESS FOR THE NEW NORMAL

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**The rapid shutdown of many Canadian businesses due to COVID-19 has left many business owners at a standstill. As the virus begins to slow, we are faced with the challenge of restarting business while minimizing risk to customers and employees.**

With an overwhelming amount of information appearing daily, determining what changes need to be made in our businesses for a safe return to work is a daunting task. Businesses are going to need a strategy to incorporate the “new normal” into workplaces quickly and efficiently. With proper planning, organization, and a multidisciplinary approach, we can help prepare your buildings for re-opening.

Returning to the workplace while avoiding a resurgence of COVID-19 will need careful consideration of your space focusing on the following:

- What elements need to be considered?
- How can these changes be made affordably?
- How can these changes be executed in a timely manner for re-opening?

## **The Challenge**

COVID-19 spreads easily, making both open spaces with dense populations and small enclosed spaces with more than one occupant a considerable challenge. Implementation of the recommendations provided by the Public Health Agency of Canada will require building layouts that accommodate:

- Physical distancing a minimum of 6ft from others to avoid contact through airborne particles.
- A reduction in publicly touched surfaces to mitigate spread through physical contact.
- Improved air quality, to prevent the spread of infectious aerosols.

Successful implementation of these measures will require professionals and contractors to work quickly and collaboratively towards re-openings in a matter of weeks.

## **Our Solution**

Planning the changes required to meet best practices will require an in-depth look at the building functionality and strategies for implementation within a short period of time. Our holistic planning will provide a straightforward path to completing your facility changes that will be easy to understand and action. Our Healthy Buildings team of planning, architecture, engineering and construction professionals will work with you to provide a turn-key solution in the following three steps:

1. Facility Review and Recommendations
2. Designing Changes for your Facility
3. Design Implementation and Construction





# FACILITY REVIEW AND RECOMMENDATIONS

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## 01

Our Asset and Facilities Management teams specialize in building management planning. They understand that every facility is unique in its application, and preparing for the return to public spaces in a pandemic situation requires detailed planning, while also balancing cost and risk. Our specialists cover the financial aspects of planning, as well as the engineering assessment, and focus on the following three elements in their facility review:

1. Operations planning for building occupancy limits
2. Architectural measures for physical distancing and limiting contact
3. Mechanical measures for the prevention of virus spread in workplaces

## **Planning your business operations for the new normal**

We understand every business is unique and will require careful detailed planning to enable as much business activity as possible while working within the COVID-19 precautions. Getting you back to everyday operations as much as possible will be the driving factor in the plan to return to business. Scheduling, minimizing onsite personnel, virtual appointments or curbside/in-car waiting with directed single entry should all remain in place to ease on-site requirements in the coming months. We will help you to build optimal operating procedures and use your functional standard as a basis for recommendations in changes to the building infrastructure.

## **Architectural Building Infrastructure Review**

In returning to the workplace, it is extremely important to establish a clear plan to ensure your building infrastructure is prepared for COVID-19 restrictions. Your business operations plan will shape the need for changes to your space and form the foundation from which we develop an implementation strategy focusing on physical separation, travel paths, high-risk spaces and building airflow.

### ***Physical Separation Measures***

Your workplace operations plan will determine the area required for each building occupant. We will carefully consider every existing area to make the best use of the space as it currently is, and recommend changes where required to facilitate appropriate layouts.

In high-risk healthcare settings, we will focus on the segregation of patients through a review of the existing partitions, as well as waiting room layouts. We will use as much of the existing layouts as possible and identify rooms that could become isolation rooms without undue costs.

### ***Building Travel Paths***

Paths of travel are critical to maintaining distance, and we will use your existing floor plan to identify areas of potential overlap, congestion and risk of contagion. We will use our in-house expertise in the medical, commercial, educational and industrial sectors to identify space limitations specific to your location.

### ***Building contact points and Sanitation***

Because physical contact is the primary way to contract COVID-19, the avoidance of commonly touched equipment and an increase in handwashing are two key factors in reducing the risk of becoming infected. We will review your building equipment and fixtures, making recommendations for a reduction in touchpoints throughout the building, including the removal or automation of doors, installing touchless fixtures and additional handwashing stations (where possible).

## Engineering Building Infrastructure Review

### *Building Air Systems*

Building air systems are typically designed to distribute air throughout the building in a cost-effective and efficient way. These systems can be designated for your building space alone or shared amongst tenants in a larger building. To date, there is a substantial degree of speculation regarding possible viral transmittal through shared air systems and a variety of treatment options are circulating the internet.

We will review your HVAC systems for proper maintenance and operations, as well as configuration for shared or individual use. Where the systems are shared, we will focus on zoning to avoid cross-contamination with other zones or occupancies and check the current filtration levels.

### *Building Access Control*

Access control is an important aid in the management of your space. Aside from the control of entry to areas of your facility, electronic access history and CCTV cameras can be leveraged to provide data about infected

people and their interactions. This data enables security departments and administrators to notify people who may have been in contact with the infected individual and take other mitigating actions to reduce exposure and maintain operations.

The building review will be summarized in a report with recommendations, sketches and high-level cost estimates to help in the selection of priority measures. We will work with you to convert these selections to a facility strategy for implementation.







# DESIGNING CHANGES **FOR YOUR FACILITY**

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## 02

Incorporating new designs in an existing building is a delicate process, and it is important to have a team of professionals that consider all impacts of each component of the building during the design process. Our design will follow your lead based on decisions made in the first phase of the project. We will engage our architects and

engineers as required to provide drawings and specifications and maintain an up-to-date cost estimate for the project as work proceeds. We will focus on short-term solutions first to help you to prepare your space quickly, and long term solutions for permanent building changes.

**“I just had the opportunity to see the newly created negative pressure room. I was completely blown away with how amazing it looks. What a tremendously effective design and professional job. I can’t believe how much has been accomplished in so short a time. Kudos to everyone involved.”**

*Dr. Tom Szakacs*

### **Architectural Designs**

Our architecture team has a long history of providing health care solutions in Ontario, ranging from rural community hospitals, large city hospitals, wellness centres, and long-term care facilities. Our architectural approach in preparation for COVID-19 will be based on practices followed in medical facilities focusing on the following :

- Path of travel for physical distancing throughout the space.
- Seating arrangements based on current recommendations for personal space.
- Seal partitions and doors wherever required to establish separation of spaces.
- Solid partitions for isolation where recommended.

We will produce drawings and specifications for new seating arrangements and travel, as well as architectural drawings for permanent special separations. Our goal is to prepare your space in a way that helps make occupants feel safe, while maintaining a collaborative, productive environment.



## Engineering Designs

Technology in mechanical systems can go a long way in improving the air quality in our buildings. New technology and system upgrades can allow us to take measures that help filter and destroy bacteria and viruses. Air distribution patterns, differential room pressurization, personalized ventilation, source capture ventilation, filtration (central or local), and controlling temperature and relative humidity are viable strategies in controlling virus spread. Our mechanical team will evaluate your existing system and building to determine the right approach for your space.

### ***Facility fresh air intake***

Airflow patterns and ventilations are pertinent considerations in the control of viruses through the air. We will review the current configuration, considering an increase in outside air to the space to dilute recirculated air in the space.

### ***Humidification***

Relative humidity of your space is an important factor in mitigating virus spread. Humidity levels are recommended to remain between 40-60% to reduce and restrict any virus movements. If the air we are breathing in is below 40%RH (relative humidity) over a prolonged period of time, our mucous membranes, which defend our bodies from viruses, dry out. This inhibits our ability to filter airborne infection. We will review humidifying equipment in the existing space and provide recommendations for the addition of humidity to the space.

### ***Air filtration and UV for air treatment***

The use of air filtration in HVAC systems can help reduce the concentration of airborne virus particles, reducing the transport of the virus from one area to another. We will evaluate the use of high-efficiency filters in your system and risks associated with pressure drop.

Germicidal UV technology has been used over many years for indoor disinfection in our hospitals, food processing and laboratories. We will review the airflow in your system to determine the effectiveness of this technology for your facility.

### ***Negative pressure rooms for high-risk areas***

A negative pressure room has a ventilation system that generates negative pressure to allow air to flow into the isolation room but not escape from the room. In healthcare environments, consider a negative pressure room with HEPA filter exhaust to protect staff outside of the room and other building occupants.

Our goal is to employ strategies to prevent virus spread in both the current pandemic and future epidemics through your HVAC system.



# DESIGN IMPLEMENTATION AND CONSTRUCTION

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## 03

Our sister company, AEC Developments can work collaboratively with our architects and engineers in a design-build or construction management format to execute the work quickly and efficiently as the design unfolds. Our experience in healthcare, municipal, commercial, educational and residential sectors gives us the understanding of building functionality and needs. With the urgent need to return to work, our team will focus on the following key elements to deliver your projects:

- Budgeting and costing throughout the project
- Schedule construction based on urgency and occupancy
- Collaborate with all parties to ensure your project is seamlessly delivered.

We believe that returning to your facilities in the right way is a critical step in keeping COVID-19 from re-emerging in our communities. We will work closely with your team to ensure the right changes are made for your space and that building preparations are achievable for your business.







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*Service inquiries:*

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