BOMA Canada: Prepare your building for back to work

BOMA Canada

GDI AINSWORTH MNP LLP CAPTIVATE REEF Genetec

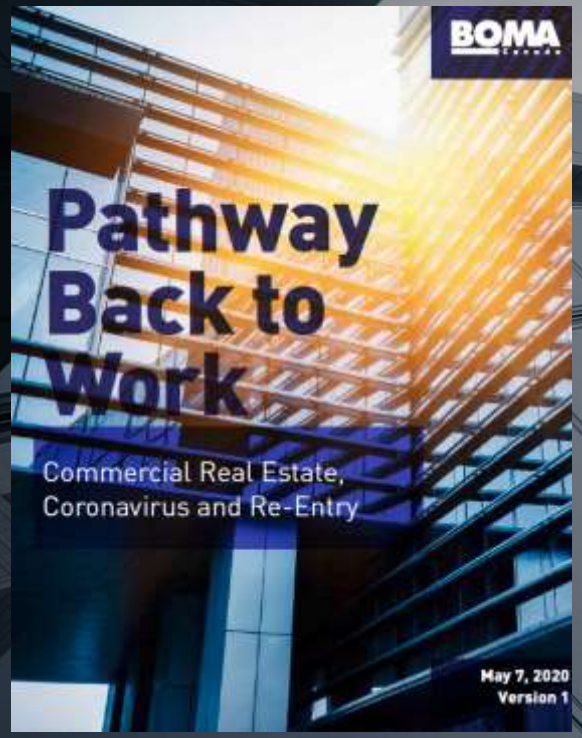
flo DCS Global Enterprise firstonsite Restoration Swiss Re Refined Data

Please contact relevant public health authorities for medical/public health advice. Neither BOMA Canada nor the individuals presenting herein are providing such advice.

Welcome from BOMA Canada

Benjamin Shinewald
President and CEO
BOMA Canada

Back to Work Guide



Download the Guide at bomacanada.ca/coronavirus

Thank you to our volunteers !

BOMA Canada Coronavirus Working Group

Anne Marie Guèvremont – Aeroterm
Bill Fender - FirstOnSite
Bob Riddell – Ivanhoe Cambridge
Brian Armsden – Public Services and Procurement Canada
Clayton Truax – Public Services and Procurement Canada
Craig Rudin – Superior Sany Solutions Ltd
Dawn Surette – Warrington PCI
Elizabeth Oughton - Manulife
Farid Malek - Choice REIT
Geneviève Delage – Ivanhoe Cambridge
Jean-Marc Rouleau – Cominar
Jeff Moffat - Public Services and Procurement Canada
Jim Mandeville - FirstOnSite
JP St-Amand - Minto
Kris Kolenc - REALPAC
Lawrence Lau – Colliers International
Louise Porthouse – Triovest
Marlene Farias - Triovest
Peter Halkias – Epic Investments
Randall Rothbart – Solomon Rothbart Tourgis Slodovnik LLP
Randy Burke – DCS Global
Rennie Kissoonsingh – GDI Ainsworth
Shane Belbin – Quadreal Property Group
Sonny Truong – LRI Engineering
Susan Bazak – Bazak Consulting
Trevor Cleveland – Colliers International
Vicki MacEwen - Public Services and Procurement Canada
Virginie Chane-Teng – Ivanhoe Cambridge
Benjamin Shinewald – BOMA Canada
Damian Stathonikos – BOMA British Columbia
Lloyd Suchet – BOMA Calgary
Michael Parker – Citrus Creative
Suhaila Cappuccino – BOMA Canada
Susan Allen – BOMA Toronto
Victoria Papp – BOMA Canada

BOMA Canada Return to Work Working Group

Chair: Geneviève Delage – Ivanhoe Cambridge
Anne Marie Guèvremont – Aeroterm
Bob Riddell – Ivanhoe Cambridge
Brian Armsden – Public Services and Procurement Canada
Clayton Truax – Public Services and Procurement Canada
Craig Rudin – Superior Sany Solutions Ltd.
Hugh Molyneux – Refined Data
Lisa Benini – Benini Consulting
Marie-Hélène Primeau - Premier Continuum Inc.
Neil Matthews – Oxford Property Group
Randall Rothbart – Solomon Rothbart Tourgis Slodovnik LLP
Steve Sorensen – Cadillac Fairview
Benjamin Shinewald – BOMA Canada
Suhaila Cappuccino – BOMA Canada
Susan Allen – BOMA Toronto

BOMA Canada Return to Work Sub-Committees

Building Operations

Chair: Steven Sorensen – Cadillac Fairview
Anne-Marie Guèvremont – Aeroterm
Brian Armsden – Public Services and Procurement
Canada Clayton Truax – Public Services and Procurement Canada
Farid Malek – Choice REIT
Joe Brown – KingSett Capital
Benjamin Shinewald – BOMA Canada
Linda Larsen - BOMA Canada
Susan Allen – BOMA Toronto

Vendors/Supplies & Cleaning

Chair: Craig Rudin – Superior Sany Solutions Ltd
Jarrett Rose – Citron Hygiene
Mike Lefebvre – BentallGreenOak
Randy Burke – DCS Global
Stephen Nicoletti – Manulife
Steve Horwood – GDI Ainsworth
Hazel Sutton – BOMA Canada

Culture, Etiquette & Social Comfort

Chair: Geneviève Delage – Ivanhoe Cambridge
Ajay Dullabh – BentallGreenOak
David Manzano – Scotiabank
Giselle Gagnon – Leapfrog Consulting
Lindsay Holstein – BentallGreenOak
Scot Adams – Colliers International
Mike Parker – Citrus Creative
Suhaila Cappuccino – BOMA Canada

Human Resources

Chair: Louise Porthouse – Triovest
Jon Douglas – Menkes
More individuals will be joining this committee soon

Thank you to our Front-Line Workers !

Building Operations

Farid Malek
AVP Technical Operations and Capital Projects
Choice Properties REIT

Building Operations – Areas to Consider

- Thermal scanning
- Elevators, escalators & staircases
- Lobby control & people management
- Masks/PPE
- Fire Drills
- Water Systems

Building Operations – Areas to Consider

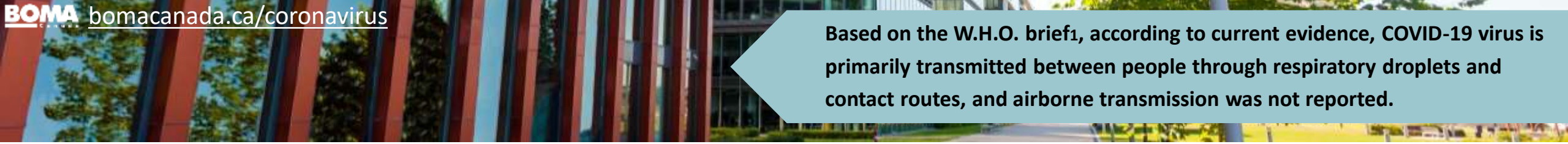
- Washrooms
- Food Court
- Deliveries Including Food deliveries
- Loading Dock/Parking Lot
- General Amenities

Vendor and Supplies

Craig Rudin
CEO
Superior Sany Solutions LTD

COVID-19 Heightened Sensitivity around Personal Hygiene, Cleaning and Disinfection

	Personal Hygiene	PPE	Signage & Communication	Facility Cleaning
New Behaviours	• ↑ hand hygiene • ↑ sanitizing • Cleaner workspaces • Social distancing	• Wearing of face masks • Wearing gloves in public spaces	• Traffic flow / Social distancing • Cleaning Validation	• Continuous high touch point sanitization • Enhanced cleaning scope • Periodic disinfection
Supply Chain Requirements	• Hand sanitizing stations • Surface sanitizing solutions • Touchless solutions: – Faucets – Hand soap dispensers – Hand drying – Door opening – Flushing	• Provide PPE • Mask & glove disposal solutions • Dispensers / Vending and cost control of PPE	• More visible cleaners during the daytime • Confirmation or signalling that an area has been cleaned • Digital communication displays • Crowd / traffic control markers & solutions	• Disinfectants and PPE equipment • Install QA program with verification tools • Higher quality cleaning personnel and training programs
Things to Think About	✓ Budgeting $ ✓ Bulk hand sanitizer with dispensing ✓ Trade off's on touchless solutions based on risk profiles ✓ Establish longer term pricing and supplier agreements	✓ Budgeting $ ✓ Implement waste stream protocol for masks / gloves ✓ Install vending solutions for PPE ✓ Establish longer term pricing and supplier agreements	✓ Budgeting $ ✓ Invest in digital messaging solutions ✓ Post dashboards and data relating to cleaning verification ✓ Visual markers of cleaning validation in personal workspaces ✓ On going communication campaign – enhanced standards and validation results	✓ Budgeting $ ✓ Utilize a risk assessment tool to prescribe ↑ frequencies by area ✓ Develop an enhanced scope of work and communicate to all stakeholders ✓ Invest in quality assurance solution, ✓ Create dashboards and data based verification messaging



BOMA bomacanada.ca/coronavirus

Based on the W.H.O. brief[1], according to current evidence, COVID-19 virus is primarily transmitted between people through respiratory droplets and contact routes, and airborne transmission was not reported.

HVAC Insight – COVID-19

	Ventilation	Filtration	Temperature/Humidity

On Startup	• Increase fresh air make up level to a maximum extent possible for 24 hours prior to the re-entry of the building
	• Confirm the building is operating under positive pressure
	• Review all outstanding repair recommendation
	• Ensure your system capability and control strategy s aligned with occupancy plan
		• MERV 8 filter is currently the minimum standard. MERV13+ is recommended for effectively capturing air bourn viruses based on ASHRAE
		• Check the specification of ventilation unit for use of highest rating filter possible. Area impacted may include,
		  • Static pressure in the system
		  • Reduced supply air flow
		• Add additional differential pressure sensors or make sure existing differential pressure across filter is operating properly
		• Review with operation, contractors and engineers to increase supply air flow to compensate for higher efficiency filter.
			• *In theory, the optimal environment to reduce the survival of airborne influenza virus may be above 30°C (86°F) at 50%RH, but it is not practical in general occupied environment.*
			• *Please review links provided below this table for more detail information.*
			• Understanding your current operation setup. (i.e. do you have (de)-humidification system?)
			• Verify existing humidity system & control is working properly

Ongoing Occupancy	• Use demand ventilation with caution • Consult with engineers and contractors in the use of occupancy data to establish appropriate ventilation strategy • Identify areas of poor ventilation or inappropriate pressure • Review and adapt new Building Automation sequence of operation as required • Larger & heavier droplets and particulates do not normally ***circulate back within*** the HVAC system • However, if present in an occupied space, the supply air stream from the diffusers may push these larger/heavier droplets beyond the recommend social distancing space. (See study by WHO) • Consult with your operations and contractor/engineers for further system review	• Continuing verification that filter selection meets operation requirement • Modify filter change schedule as required • Maintain extra stock on site. • Stock up additional PPE on site for protection of workers changing filters	• Multiple sources sight an optimal operating humidity level between 35 - 55%RH. • Pay close attention to the operating performance as occupancy and ambient condition change • Continue with regular review to understand your system's capability and attaining to the best operating result

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HVAC Insight – COVID-19

	Ventilation	Filtration	Temperature/Humidity
Maintenance Consideration	• Complete manufacturer's recommended spring start-up • As addition health precaution, clean cooling tower components, and review water treatment operation, • Clean all evaporator coils. • Conduct periodic visual inspection of the system to ensure cleanliness	• Ensure the proper fit of filters (minimize blowby)	• Enforce the proper maintenance and service routine based on manufacturer's recommendation on your (de)humidification systems.
Notes	• If applicable, make sure your BAS data and capability is leveraged to inform decision making and maximize performance • Increase ventilation will increase energy cost, consult with engineers to understand the impact. • Increase ventilation will increase system run-time and component wear/tear	• Not all same MERV filters are constructed equally. Speak with your contractors about the quality of the product. • Consult with your operations, contractors and engineers for the applicability of air purification of using UV-A/B/C	• Maintaining comfortable environment on hot & humid days will be a challenge as you increase outside air intake.

1. W.H.O., March 2020, https://www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations
2. ASHRAE, April 2020, ASHRAE Position Document on Airborne Infectious Diseases
3. ASHRAE, April 2020, ASHRAE Epidemic Task Force – Filtration & Disinfection

HVAC Insight – COVID-19

MERV Rating	Trap particles size 0.03 to 1 microns	Trap particles size 1 to 3 microns	Trap particles size 3 to 10 microns	Typical Application	Notes/ASHRAE Standards
MERV 1 - 4	N/A	N/A	< 20%	Fiberglass/Aluminum Mesh filter for Pollen, Dust Mites, Spray Paint, Carpet Fibres	
MERV 5	N/A	N/A	20% - 35%	Cheap Disposable Filters for Mold Spores, Cooling Dusts, Hair Spray, Furniture Polish	
MERV 6	N/A	N/A	35% - 50%		Minimum ASHRAE Standard for Commercial Application (62.1)
MERV 7	N/A	N/A	50% - 70%		
MERV 8	N/A	N/A	> 70%		Minimum ASHRAE Standard for High Performance Green Building Standard (189.1)
MERV 9	N/A	< 50%	> 85%	Better Box Filters for Lead Dust, Flour, Auto Fumes, Welding Fumes	
MERV 10	N/A	50% - 65%	> 85%		
MERV 11	N/A	65% - 80%	> 85%		Minimum ASHRAE Standard when atmospheric particulate matter is less than 2.5 micrometers, a.k.a. PM2.5 (62.1)
MERV 12	N/A	> 80%	> 90%		
MERV 13	< 75%	> 90%	> 90%	Commercial Grade Filters for Bacteria, Smoke, Sneezes	
MERV 14	75% - 85%	> 90%	> 90%		
MERV 15	85% - 95%	> 90%	> 90%		
MERV 16	> 95%	> 95%	> 95%		
MERV 17	99.97%	N/A	N/A	HEPA & ULPA for Viruses, Carbone Dust	
MERV 18	99.997%	N/A	N/A		
MERV 19	99.9997%	N/A	N/A		
MERV 20	99.99997%	N/A	N/A		

Tenant & Building Communication

Geneviève Delage
Manager, Business Continuity
Ivanhoé Cambridge

Goals

- Address the **key areas of concern** to provide best practices and guidance on communication for landlords and building managers
- Build **trust** and **confidence**
- Create a “property culture” and **enhance desired behaviors** from tenants and visitors

Before coming to the property

Coordinate with tenants to minimize lobby bottlenecks

- Communicate new elevator capacity
- Be transparent on #/hour
- Ask their collaboration to reduce lineups by staggering arrivals and departures

Ask tenants what their re-entry plans are

- To better plan opening hours, HVAC, lights etc.
- To have a better idea of tenants' expectations from their landlords / building managers

Before coming to the property

Remind your employees and visitors to stay home if they have any of the following symptoms:

fever
tiredness
dry cough
aches and pains
nasal congestion
runny nose
sore throat
diarrhea

Employees and visitors should self-isolate for 14 days if they:

- Have any COVID-19 symptoms
- Have recently returned to Canada
- Have recently come in contact with someone with COVID-19

Ivanhoé Cambridge

Communicate what to expect when tenants arrive at the property

Building operations

What's new

What's changed

Upcoming changes

Cleaning

Changes in cleaning schedules (day/night)

Frequency

Areas

Social distancing

Elevator capacity

Staircases

Lobby and common areas

Restrooms

Signage

Where will it be

How you will accommodate visually impaired people

Signage to consider

- Building status (open / closed)
- Closed entrances / doors
- Visitors
- Screening signage
- Educational posters
- Expected behaviour (masks, etc.)
- Self-sanitation
- Cleaning
- PPE disposal
- Building operating hours & amenities
- Closed areas
- Social distancing : floor decals, lineups, number of people in elevators
- Bathroom stalls

Question & Answer

Please use the Q/A box functionality on the webinar

Follow the conversation

@BOMA_CAN
@BOMA_BEST

BOMA Canada,
Benjamin Shinewald

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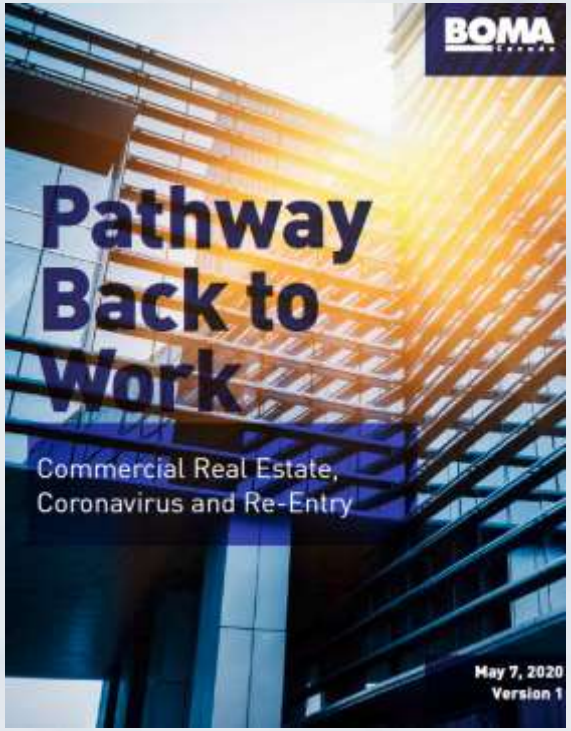
DON'T MISS!
BOMA Canada: How secure is your commercial property?
Thursday, May 28th, 2020 2:00 p.m. – 3:00 p.m.



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