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Designed-to-Engage...Made-to-Last



Breathe Better – **Live Longer**



As we continue to work on sustainable design projects and reduce the carbon footprint by repurposing existing buildings, we need to be sure our focus on energy doesn't ignore that most buildings are for people; and that health and wellness must be considered equally important.

During the 1970s energy crisis, a lot of indoor air quality problems were created as buildings that originally relied on uncontrolled outside air infiltration were thermally upgraded. For example, problems arose when, in an effort to save energy, operable windows were fixed shut without incorporating mechanical ventilation systems to bring in outdoor air. Inadequate ventilation can result from poorly placed air supply and return vents within each space are blocked or placed in such a way that outdoor air does not actually reach the breathing zone of building occupants. As architects, we can't rely on mechanical engineers to properly design HVAC systems in a vacuum. Collaboration among the entire AE team and the client with a holistic understanding of each project is critical to creating healthful spaces. Several well-identified illnesses, such as Legionnaires' disease, asthma, hypersensitivity pneumonitis, and humidifier fever, have been directly traced to specific building problems, sometimes called building-related illnesses. As many are hyper-sensitive to the potential exposure to germs and viruses, we decided a few solutions might be in order.

Treating all aspects of design with an *above-code* mindset, we provide a path to successful projects that result in healthier environments. And coincidently, the question often asked after basic building considerations, remains, "How can we make our inside atmosphere healthy for our team?" Glad people ask! We think AIR, LIGHT, and SOUND need special attention, and as such, we intend to highlight each topic over our next three newsletters beginning with AIR.

While BELL concentrates on commercial rehabilitations and historic preservation, we realize that many of you reading our newsletters like to apply our ideas to your small offices or homes. Therefore, please click on our links for deep dives on research/recommendations that might fit those situations. Now on to air quality - from the dangerous to the simply annoying things like smells. What can you do? Or is it, what should WE do?

We can go beyond simply bringing in outside air. Let's start with measurements. To determine how our design intent results in healthy indoor air quality for occupants, we measure. At BELL, data drives our understanding and becomes evidence for performance metrics. Even our business cards have an accurate usable scale.



Certainly, we have all experienced enough cautionary $\underline{\text{air quality index days}}$ to realize that indoor air must be a priority for our long-term health. We use **AWAIR air quality monitors** as a simple measurement that you can put in your home or office. With these devices, you can track air quality in real-time like levels of **VOCs**, **CO2**, and **particle pollution**. Once you've tracked the data, you can make informed choices for indoor air quality improvement. For instance you might change your air filters more often, which would increase filtering effectiveness. High-efficiency air (HEPA) filters capture articles. including dust, pollen, and some mold spores. (Caution: Be careful not to increase the type of filter you're currently instructed to use as you could damage your handler). Some air purifiers use other types of filters or technologies to clean the air. For example, some use ultraviolet (UV) germicidal irradiation, in which UV lamps target airborne viruses, bacteria, and fungal spores. Your contractor can install UV lights in your supply ducts, which will reduce high particulate matter. Please click this link for the UV light we installed in our ductwork. Other air purifiers use activated carbon filters that capture molecules that cause odors. Click here for a few suggestions for small offices and homes. Over the last 24 years, we've been fortunate to have developed long-term relationships with consulting engineers and specialists who have similar values and goals towards air quality. They provide us with the support to enhance our wide range of clients, be it government institutions, commercial properties, and multiple non-profits

One more thing. We want to **thank you** for your response to our newsletters. Many of you have commented on how helpful they have been, and our team appreciates your feedback. We hope the next three will get passed along to friends, family, and your team.

Cheers.

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Healthy Buildings: How Indoor Spaces Can Make You Sick — Or Keep You Well

By Joseph G. Allen, John D. Macomber

A revised and updated edition of the landmark work the *New York Times* hailed as "a call to action for every developer, building owner, shareholder, chief executive, manager, teacher, worker and parent to start demanding healthy buildings with cleaner indoor air."

For too long we've designed buildings that haven't focused on the people inside—their health, their ability to work effectively, and what that

means for the bottom line. An authoritative introduction to a movement whose vital importance is now all too clear, *Healthy Buildings* breaks down the science and makes a compelling business case for creating healthier offices, schools, and homes.

As the COVID-19 crisis brought into sharp focus, indoor spaces can make you sick—or keep you healthy. Fortunately, we now have the know-how and technology to keep people safe indoors. But there is more to securing your office, school, or home than wiping down surfaces. Levels of carbon dioxide, particulates, humidity, pollution, and a toxic soup of volatile organic compounds from everyday products can influence our health in ways people aren't always aware of.

This landmark book, revised and updated with the latest research since the COVID-19 pandemic, lays out a compelling case for more environmentally friendly and less toxic offices, schools, and homes. It features a concise explanation of disease transmission indoors, and provides tips for making buildings the first line of defense. Joe Allen and John Macomber dispel the myth that we can't have both energy-efficient buildings and good indoor air quality. We can—and must—have both. At the center of the great convergence of green, smart, and safe buildings, healthy buildings are vital to the push for more sustainable urbanization that will shape our future.

Source: Harvard University Press

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24 Years!

Thank You to Everyone who has Helped BELL Architects Along the Way!







We are proud to celebrate 24 years of preserving history and shaping the future! From timeless heritage to visionary spaces, our journey reflects our unwavering commitment to honoring the past while creating a vibrant community for generations to come. Here's to our office's remarkable transformation - a testament to our dedication to historic, sustainable architecture. We look forward to a future full of creating spaces that inspire!

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Sustainable Design | Historic Preservation | Master-Planning Adaptive Reuse | Education | Recreation | Housing DC CBE# LSZXR37245052024

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