

WELL BUILDING STANDARD®

Holistic Design for Healthier People

90% of our life is spent indoors. The WELL Building Standard (WELL)®, delivered by the International WELL Building Institute (IWBI), is a performance-based measurement and certification program focused exclusively on the health and wellness of building occupants. Developed by scientists, physicians, designers, and industry professionals, WELL is comprised of seven core *Concepts*: Air, Water, Nourishment, Light, Fitness, Comfort and Mind¹. *Features* within each Concept address issues that impact the physical and mental well-being of occupants through design, operations and behavior. Projects can achieve Silver, Gold or Platinum certification. Although Alberta Infrastructure (AI) has yet to formally mandate WELL, it is encouraged as a *Deeper Greening* initiative (see *Design & Technology Series 10* for details), and is already being implemented in some AI projects.

Air

Outdoor air quality is diminishing due to traffic and industrial pollution. Similarly, building material off-gassing, indoor combustion, water leaks, and poor ventilation degrade indoor air quality. WELL incorporates air quality standards and best practices from the US Environmental Protection Agency, the World Health Organization, the American Society of Heating, Refrigerating and Air-Conditioning Engineers, and the Leadership in Energy and Environmental Design (LEED) program in order to promote clean indoor air and minimize indoor air pollution.

Examples: Air Filtration, Microbe and Mould Control, Operable Windows

Water

Clean, safe water is essential to life, however water can be contaminated by natural and manmade pollutants. Water quality standards are often applied across all uses of potable water, resulting in waste. WELL seeks to improve the quality and availability of clean drinking water, and to reduce water waste through the testing and the selection of filtration systems appropriate to their use.

Examples: Water Treatment/Testing, Drinking Water Promotion

Nourishment

This concept promotes the availability of fresh, healthy foods, limits unhealthy ingredients, and encourages better eating habits and food culture. Daily sugar and caloric intakes are at high and unhealthy levels. These contribute to obesity, cardiovascular disease, various cancers, and diabetes; yet poor food choices predominate most office vending machines or cafeterias. WELL responds through design strategies and policies that make healthy food available and more desirable than unhealthy options.

Examples: Fruits and Vegetables, Serving Sizes, Strategic Dining Design

Light

Current lighting codes and guidelines derive illumination levels from the typical lighting requirements of a particular activity in a given room. In addition to facilitating vision, light influences the human body by synchronizing physiological functions such as sleep, alertness, and digestion on roughly a 24-hour cycle (**circadian rhythm**). Because people spend most of their time indoors, poor lighting design can lead to a drift of the circadian cycle, especially if paired with inappropriate light exposure at night. WELL seeks to enhance indoor lighting to minimize circadian disruption, enhance productivity, improve sleep quality, and improve visual acuity.

Examples: Circadian Lighting, Automated Shading/Dimming, Daylight Modelling

Fitness

Transportation, modern conveniences, and sedentary jobs have created an environment



TD Centre 23rd Floor Renovation, Toronto, Ontario
Photo Credit: HOK

Case Study: TD Centre

In 2016, the 23rd floor of the TD Bank headquarters in Toronto became the world's first WELL v1 project, achieving Gold certification².

Over 60 WELL features were integrated into the interior renovation project, including optimized lighting, enhanced water filtration with water quality messaging, and the installation of carbon filtration equipment on the base building mechanical system.

Each employee was given an ergonomic assessment to determine specific physical needs, and ergonomic chairs and adjustable height desks provided. Flexible touchdown stations were located throughout the space and around the glazed office perimeter, offering light and views to occupants. A technology-free tranquility lounge was also included within the design to encourage employees to unplug and relax.

Healthy eating was promoted through a nourishment plan that regularly supplies fresh fruits and vegetables and provides comfortable social break areas.

The 23rd floor renovation served as a pilot project for a complete upgrade to the TD Centre - in 2017 the entire building achieved WELL Gold certification³.



CBRE Office, Vancouver, British Columbia
Photo credit: CBRE

in which 60% of people fail to achieve the minimum levels of recommended activity. While inactivity is a multi-faceted problem, one known factor is the built environment. Neighbourhood walkability, access to and use of mass transit, active transportation, availability of physical activity facilities near workplaces and homes, stair accessibility in buildings and active furnishings can improve the physical activity level of an individual. WELL supports urban planning and building design that deliberately encourages physical activity or discourages inactivity.

Examples: Active Transportation Support, Interior Fitness Circulation

Comfort

Noise is a leading source of discomfort, distraction and disruption within the workplace. Additionally, ergonomics and universal design play a significant role in mitigating physical and mental stress. Most of the adverse health effects related to ergonomics are seen in the musculoskeletal and nervous systems of the human body. Thermal comfort is another factor that affects how we experience the built environment. WELL aims to reduce the most common sources of physiological disruption, distraction and irritation, and to enhance acoustic, ergonomic, olfactory and thermal comfort. These prevent stress and injury and facilitate comfort, productivity and well-being.

Examples: Thermal and Olfactory Comfort, Accessible Design, Sound Barriers

Mind

Worldwide, over 8 million annual deaths are attributable to mental disorders. The Mind concept optimizes cognitive and emotional health through design, technology and treatment strategies. As the mind and body are inextricably linked, poor mental health can translate into poor physical health. Interventions to mediate stress include access to therapy, and policies that improve sleep hygiene and social engagement.

Examples: Organizational Transparency, Beauty and Design (I & II)

Innovation

The science of human health as it relates to the built environment is constantly evolving. To be awarded innovation credits, an element must surpass existing WELL features, be substantiated by existing research, and conform to applicable laws and best practices.

WELL v2

In June 2018 WELL v2 *Pilot* was launched. WELL v1 remains in effect; projects may register for either version. A transition period will be established once v2 is formally adopted⁵.

WELL & LEED

WELL complements the LEED rating system by addressing the health and wellness of building occupants. A number of LEED credits align either fully or partially with WELL features, including Thermal Comfort, Interior Lighting, and Indoor Air Quality, while Bicycle Facilities and Enhanced Commissioning provide opportunities for overlap. The IWBI has produced a Crosswalk Document that outlines the synergies between WELL and LEED BD +C, LEED ID +C, and LEED O+M⁶.

Information Sourced From:

1. <https://www.wellcertified.com/en>
2. <https://www.wellcertified.com/en/articles/how-td-bank-hq-achieved-well-certification>
3. <https://www.canadianarchitect.com/architecture/toronto-dominion-centre-well-building-standard/1003738641/>
4. <https://www.canadianinteriors.com/interior-design/cbre-well-gold-level/1003740636/>
5. <https://standard.wellcertified.com/well-crosswalks>
6. https://www.wellcertified.com/sites/default/files/resources/LEED_Well_2017Crosswalk_April17.pdf

Case Study: CBRE Office

In 2017, the office of commercial real estate firm CBRE became the first WELL Gold Certified project in Vancouver⁴. Over 100 wellness features are incorporated in the design, including:

- All employees sit within 7.6m of windows with views. Access to light and views contributes to improved mood, productivity, and sleep quality.
- Indoor air quality ranks in the top 1% of offices worldwide. Over 90% of employees report noticeably improved interior air quality.
- All workstations are equipped with sit-stand desks. 90% of employees reported increased energy as a result of less time spent in their chairs.
- A central internal stairway requires employees to take the stairs between floors, increasing physical activity.
- White noise generators dampen background noise, reducing stress and distraction for occupants.
- Filtered water is provided within 30m of all workstations.
- A central lunchroom promotes communal eating. Studies show that social eating inspires better food choices, while smaller lunchroom plates assist with portion control.