



Use: Commercial office

Size: 16,175 square feet

Certifications: WELL Gold; Fitwel 3 stars; LEED Platinum ID+C: Commercial Interiors v4

Key health and wellness features: Daylight/circadian lighting, ventilation/air quality, collaborative space, sit/stand desks, kitchen, material transparency, filtered water

Cost: WELL—\$0.25 per square foot; Fitwel—\$6,500; LEED—2 to 3 percent of development costs

Value added: Design testing, improved productivity, attitude, collaboration, and social cohesion

Arup Boston Office

The Boston office of the global design and consulting firm Arup is top-certified according to two health and wellness standards—WELL Gold and Fitwel 3-star rating—as well as LEED Platinum Interior Design and Construction (ID+C): Commercial Interiors v4 certification.

Arup had targeted WELL Silver and Fitwel 2-star certifications to create an environment where employees could thrive in its fit-out design for 16,175 square feet of office space at 60 State Street in downtown Boston. But the design team, excited about the healthy building challenge, surpassed its goals by meeting WELL Gold standards, as well as the Fitwel 3-star rating. With the help of building owner Oxford Properties Group, Arup was the first firm in New England to be awarded WELL certification, in June 2017. The firm qualified for Fitwel certification in October 2017 and LEED in May 2018.

In 2016, after Arup had outgrown its space in Cambridge, Massachusetts, the firm began planning for a new office in downtown Boston.

Health and Wellness Design

From the start, the design team worked with Arup staff to understand what they sought in the office environment. A series of all-staff lunchtime workshops indicated that staff wanted a layout with more open collaboration spaces, but also needed quiet spaces without distraction for focused work.

Design team members, including Boston-based Dyer Brown Architects and Corderman & Company Inc. as general contractor, were joined by Arup's consulting and engineering teams, who provided lighting design, acoustics, structural engineering, WELL consulting, and commissioning. The assessment involved a WELL-focused pre- and post-occupancy survey of all employees developed with in-house environmental psychologists and a custom-designed indoor environmental-quality sensor kit built by Arup programmers to stream real-time data.

The team wanted to achieve the highest LEED level for commercial interiors and create a work environment that encouraged health and wellness. Arup also wanted the office to serve as a living laboratory to test designs and quantify the impact of health and well-being strategies for clients. Arup registered for WELL certification, and then just as it was about to move into the new office space, Fitwel certification standards were released for private development, and the firm seized that opportunity also.

“Arup is focused on environmental and human health outcomes, and these certification programs resonated with Arup's core culture and values,” says Rebecca Hatchadorian, content expert for Arup's healthy building certification process. “We wanted to see how the rating systems differed, and we wanted to be able to show clients how we met the different standards.”

The office's open floor plan with many large windows allows every employee access to daylight and views. Active design principles and a variety of seating and standing arrangements, along with portable laptop computers, encourage movement around the space. Arup installed motorized sit/stand desks that are integral to the workspace for every employee, one of the factors that qualified the firm for the higher WELL Gold certification. But employees no longer have to work at their desks all day. They can meet in various meeting areas, including the kitchen, which also has window access and serves as a breakout space. The kitchen serves healthy snacks such as fresh fruit and breakfast on Fridays.

Arup's lighting team designed a circadian lighting system with controls that automatically adjust color and brightness to replicate the daylight cycle. A ventilation system optimizes air quality through filtration and



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Arup's healthy building space features open collaboration spaces for all-staff lunch workshops, as well as several quiet spaces for focused work.

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—Tim McCaul, Arup principal and Boston group leader

ventilation rates that respond to occupancy levels. The water filtration system reduces chlorine and improves drinking water taste and quality to promote hydration. The office has showers for people who run or bike to work. Restroom sinks are designed to keep people from bumping the basin and coming into contact with germs when they wash their hands.

Arup obtained building materials and furnishings for sustainability and healthfulness, with half having a Health Product Declaration (HPD).

Healthy Building Returns

“We believe that working in a healthy building relates to employee performance, recruitment, retention, reduced absenteeism, embodiment of brand, and company culture,” says Tim McCaul, Arup principal and Boston group leader.

The business case for Arup was that the firm received a WELL discount as an early adopter and paid 25 cents per square foot to meet the certification standard. Arup figures that WELL certification added a 0.5 percent premium to the project, which the firm thought would be recouped financially with at least a 0.5 percent improvement in productivity. Fitwel cost \$6,500 for certification, while meeting LEED criteria amounted to a premium of 2 to 3 percent of development costs.

Another important return has been improvement in the staff's emotional well-being and attitude toward work. Employees' pre-

certification. That was one of the project's biggest challenges, says Hatchadorian. “The WELL Building Standard and LEED v4 standard were both so new, and few projects were in compliance with the HPD requirements. It was hard at the time to find products with those declaration labels.” She says that more products are now available with transparency declarations, though the 50 percent threshold for a project is still a remarkable accomplishment.

and post-survey responses showed that 83 percent of staff thought that the new office supported creative thinking and collaboration, compared with 37 percent for the previous office. Over two-thirds (68 percent) said their productivity was positively influenced by environmental conditions in the areas of comfort, lighting, and air quality, compared with 8 percent for the previous office, and 43 percent said they felt healthier in the new office, compared with 2 percent for the previous office.

Additional benefits included the positive reaction of staff members who now bring more clients into the building, and requests by clients and other teams to have project meetings on site to enjoy the space. Arup is also seeing more collaboration around the lunch table now that the kitchen is a prime meeting space, which has encouraged cross-pollination of ideas and enhanced social cohesion among the staff.