

Groundbreaking Modular Classrooms for Harvard

Posted by Paul Dalton
Filed under: News | 0 Comment



A groundbreaking new modular classroom recently opened on Harvard's campus in Boston. Providing a healthy and pleasant indoor environment for the infant, toddlers, preschoolers and employees was of utmost importance to the project team, which included the Harvard Office of Work/Life, Harvard Faculty of Arts and Sciences, Triumph Modular, Anderson Anderson Architecture, and contributions from the Harvard Office for

Sustainability's Green Building Services team.

As Sarah Bennett-Astesano, Assistant Director of the Office of Work/Life noted, "Children's needs and environmental goals overlap. Air quality was a major concern for us as we considered using a modular building, as were the availability of natural light and operable windows. Other characteristics of 'green' buildings, including the ability to regulate the temperature in each class room, are also a good fit for child care."

In addition to operable windows, which provide the space with both daylight and natural ventilation, solar tube 'light tunnels' equipped with shades in the ceiling provide daylight in the center of the rooms. According to Bennett-Astesano, "Everyone's favorite feature of this building are the sun tunnels — skylight tubes with little reflectors through which you can see the sky in a kaleidoscope effect. These can be closed to help darken the room for nap time. They're quite beautiful to watch as they open and close."

Peter Anderson, a partner with his brother Mark in San Francisco-based Anderson Anderson Architecture, described the building as "an important step forward in sustainable design practices for temporary buildings, which are often experienced as a low-quality semi-disposable building type." Both brothers are graduates of Harvard's Graduate School of Design, and have created an international design practice focused on the use of highly sustainable prefabricated building systems. They were chosen for the childcare center project after publication of their award winning design for a zero-energy modular classroom prototype, which is commissioned by the State of Hawaii Department of Education as the model for next generation classrooms throughout the Hawaiian Islands.



Anderson went on to explain that "this building takes a very different approach from most temporary building installations—it is designed and built as a high quality permanent building, with the added benefit of being relocatable to adapt to different locations and different uses over its lifetime." A high-efficiency Bard mechanical system was selected to reduce sound transfer to facilitate learning, but also to reduce greenhouse gas emissions. Controls

are used to modulate both temperature and ventilation based on varying occupancy in each room. Occupancy sensors are used to turn off lights when no one is in the space. An efficient building envelope, including high-performance windows and Greenguard insulation, reduce heat loss, while a white roof reduces the urban heat island effect. Material selection was important to both indoor air quality and reducing the carbon footprint of the building. Low-emitting and non-toxic materials and finishes were used throughout the space. Wheat board, a rapidly renewable material made from waste products from commercial wheat farming, is used as wall-paneling. Many of the materials, such as the carpet tile, cabinets, ceilings, and linoleum flooring, have recycled content. Much of the wood is certified by the Forest Stewardship Council as coming from sustainably managed forests.

The project team found creating a green modular classroom to be very cost-effective. Cliff Cort, President of Triumph Modular observed, "I believe this project supports growing evidence that you do not always have to pay a premium for sustainability. It is my understanding that we competed and won against non-green options and best price was a critical factor." The building was constructed with eight 12' x 60' main modules and smaller modules that can be disassembled and reconstructed for future reuse. "This building was designed to be deconstructed and moved easily when required. It was also built to be flexible and can be reconfigured as classrooms, office space or used for other purposes. The use of permanent quality construction materials ensures that this building will stand the test of time," said Cort.

Click [here](#) for more pictures and info.

Cabins For Sale

Anti-Vandal
Classrooms
Containers
Jack Leg
Modular
News
Security Units
Toilet or Shower Block
Uncategorized
