Thompson Elementary School
Arlington, Massachusetts

Photo Credit: HMFH Architects, Inc.

General Information

Scope: 57,600 ft^2

Cost: $20,596,010

Completion: 2013

Enrollment: 380 Students grades K-5

Funding/Grant: MSBA Grant for 52% of Cost

Certifications:
-ENERGY STAR Certified (Score of 89)
-MA-CHPS "Verified Leader" Certified

Project Overview

The Thompson Elementary School in Arlington, Massachusetts opened in September 2013 to accommodate 380 students grades K through 5. The new school replaced the existing 1950's school on its 3-acre property with three street frontages and the fourth edge abutting town play fields in a residential neighborhood. The 57,000 square-foot facility was designed to meet the Massachusetts Coalition for High Performance Schools (MA-CHPS) standards, a state-adopted program that ensures healthy school environments through the construction of high performance school buildings that minimize energy and water usage while sourcing sustainable building materials.

Project Team

Owner's Project Manager: PMA Consultants, LLC

Architect: HMFH Architects, Inc.

Engineer: G-G-D Consulting Engineers

MASSACHUSETTS COLLABORATIVE FOR HIGH PERFORMANCE SCHOOLS
CHPS
Better buildings. Better students.

A CHPS Verified Leader

CHPS Verified Leader certification provides a high level of recognition for school projects that perform well beyond minimum CHPS eligibility requirements. CHPS Verified Leader projects are CHPS Verified and have inspirational designs that incorporate their high performance features into architectural expression. These schools are an image of environmental and social responsibility, and must be balanced in providing benefits to the environment, student health and student performance. In Massachusetts, schools must achieve at least 50 points in the CHPS certification process to reach this level.

Thompson Elementary is the second school in Massachusetts to have achieved this recognition.

Thompson Elementary School

Arlington, MA

Sustainable Design Elements

This project earned 2 CHPS points for sourcing a portion of the building materials from within 500 miles. Most of the wood used in the construction of the project was FSC (Forest Stewardship Council) certified and 8 major building materials met the recycled content criteria.

The school meets the enhanced acoustical performance criteria, providing a sonically optimal learning environment. The building has ducted returns, enhanced filtration, and a post-construction Indoor Air Quality (IAQ) program was completed.

The school participates in an indoor environmental quality plan that helps coordinate the on-going maintenance of the facility. The district administration uses benchmarking to track the building's energy usage.

The old school was drafty with single pane windows and gaps in the exterior walls. It had minimal connection to the outdoors. The new building was designed to maximize natural lighting, views of nature, and access to the outdoors.

Site

- This project reuses the site of the old school and due to its central location, the building footprint was minimized, and bike storage is provided with minimized parking.

Materials

- Aside from sourcing many local and recycled materials, the project received 3 points for using advanced low-emitting materials.

Energy

- The school maximizes the use of natural daylight to reduce lighting costs.
- The project was designed to meet the CHPS superior energy performance criteria
- The building has minimized air conditioning, and has an energy management system.
- Sub-metering provides granular data on energy usage in the building.

This case study was prepared by NEEP with information provided by HMFH Architects, Inc. To learn more about this project, please contact Lori Cowles, AIA, HMFH Architects, Inc., 617 844-2141.

For more information about High Performance schools, please contact Carolyn Goldthwaite, NEEP Senior Program Manager, High Performance Buildings at Cgoldthwaite@neep.org or 781-860-9177 ext. 119