Freeman Kennedy Elementary School
Norfolk, Massachusetts

Photo Credit: Flansburgh Architects

General Information

Location: 70 Board Street. Norfolk, MA

Scope: 96,410 ft^2

Cost: ~$26 Million

Completion: August 2012

Enrollment: 575

Architect: Flansburgh Arichitects

Engineer: Garcia, Galsuka, Desusa; Boston Building Consultants; Nitsch Engineering

Funding/Grant:

- MA Clean Energy Center: $5,000;
- NSTAR Advance Building Program: $160,185

Certification: MA- CHPS (45 points)

Project Overview

The new Freeman Kennedy Elementary School serves 575 students in Grades 3 - 6. The building is flooded with controlled daylight. All 28 classroom spaces and the two-story library have exposed wood beam ceilings. The design employs warm colors, lots of exposed wood structure, and transparency to create an appropriately scaled, inviting learning environment for children. Educational spaces have ample views to outdoor open spaces.

The front courtyard provides a pleasing and open area for the public at the main entry to the school. Invoking images of old stone mill buildings and birch groves, the school is constructed of a rusticated CMU Stone Veneer; corrugated metal panel siding; a standing seam metal roof; aluminum battens, which reference the birch trees and serve as handrails for the courtyard; and perforated metal sun screens to minimize solar gain in the classroom.

A media center is located at the heart of the new school, bounded on three sides by two-story glazing with expansive views of the academic courtyard and park beyond. In addition to bringing natural daylight into the middle of the school, its central location and large amounts of exterior glass blurs the distinction between the exterior and interior environments.

50KW Solar Array helps achieve 45% reduction in net energy

Freeman Kennedy Elementary School

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The large volumes of the gymnasium and cafetorium anchor each side of the symmetrical floor plan, oriented opposite each other across a courtyard. The simple symmetrical plan allows for clear separation between community use and school use and is immediately understandable for first-time visitors and young children. Additionally, "Green" signage has been place throughout the school to highlight and explain to the building occupants its many "green" features. Combining planned community use with green signage helps impart sustainable design knowledge to the community.

Notable features include state-of-the-art HVAC, 50Kw photovoltaic panels on south-facing roof, sunshading, daylight and room occupancy sensors, and low-flow plumbing fixtures.

Nestled between the two classroom wings is an academic courtyard. This fenced-in area is used as an "outdoor classroom" and features student gardens, open patio space, clusters of shade trees, and a rain garden irrigated from roof run-off.

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Sustainable Design Elements

Energy

- 50Kw solar array
- Daylighting and occupancy sensors limit artificial lighting needs
- Kiosk allows real-time monitoring of energy production and use

Policy and Operations

- Comprehensive maintenance plan covering the electrical, mechanical, and plumbing systems
- Comprehensive recycling policy

Water

- Fixtures designed to reduce potable water by 20%

Materials

- Over 90% of non-hazardous construction debris was recycled or re-used

Acoustics

- State of the art HVAC system and classrooms design limits background noise levels to NC 35

This case study was prepared by NEEP with information provided by Flansburgh Architects. To learn more about this project, please contact Joanna Callas at JCallas@Flansburgh.com.

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