

## Case Study



### Overview

#### Site Details

- New construction
- Completed September 2010
- School
- 93,833 square feet
- Located in New Bedford, Massachusetts

#### Savings Numbers

The *New Construction Guide* is a nationally recognized resource bringing together 50 criteria defining high performance in building envelope, lighting, HVAC, power systems and controls.

This easy-to-use guide helps building design and construction professionals exceed state and national energy standards such as ASHRAE 90.1-2007 by up to 40%.

### ABRAHAM LINCOLN ELEMENTARY SCHOOL

In September 2010, the Abraham Lincoln Elementary School opened its new green building, ready to accommodate 600 students. This new building includes masonry and steel construction, a 3,300 square foot state-of-the-art library and media center, a 5,700 square foot gymnasium, an auditorium and a 383-seat cafeteria. The school's original 60,000 square foot building (located next door) was demolished and replaced with a synthetic turf playing field, resilient track and parking lot. The facility contains high efficiency systems and meets or exceeds all requirements of the Massachusetts Collaborative for High Performance Schools. The designers of the school worked with the NSTAR to follow the Advanced Buildings® *Core Performance Guide*.

#### Technologies and Design Strategies:

**Lighting and Controls.** Installed 49 controls and 279 daylight dimming system fixtures, along with energy efficient lighting. Classrooms are designed with access to views and natural daylighting.

**HVAC.** Installed two HVAC Dual Enthalpy Controls. The majority of the classrooms are designed without air conditioning.

**Enhanced Strategies.** Integrated a subsurface filtration system to reduce the amount of rainwater flowing into the sewer system. Installed a reflective roof with 80kwh Photovoltaic (PV) system. Highly efficient mechanical, electrical, and plumbing systems exceed the Massachusetts Building Energy code by 30%.

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“This project proves that while there are many costs that government incur that are beyond our ability to control, with just a little bit of effort, we can sharply reduce the cost of heat and electricity that we consume.”

-New Bedford Mayor Jon Mitchell

### *Project Team*

#### **Owner Representative**

Larry Oliveira  
New Bedford, Massachusetts

#### **Architect**

Mount Vernon Group Architects  
New Bedford, Massachusetts

#### **Mechanical & Electrical Engineer**

Garcia Galuska & Desousa  
Dartmouth, Massachusetts

#### **Site Engineer**

Andelman and Lelek Engineering  
Norwood, Massachusetts

#### **Sponsor Utility**

NSTAR  
www.nstar.com

### *About Advanced Buildings*

Advanced Buildings offers a direct path to high energy performance in new commercial building projects. An Advanced Buildings designation represents a best-in-class building that adds value and stands out for its energy efficiency and healthy environments. In addition to the *New Construction Guide*, Advanced Buildings offers a suite of tools and resources that help design teams achieve superior energy efficiency.

Advanced Buildings is developed and managed by New Buildings Institute with support from utility and public benefits organizations as well as foundation funding.

### *New Buildings Institute*

New Buildings Institute (NBI) is a nonprofit organization working collaboratively with commercial building professionals and the energy industry to improve the energy performance of commercial buildings.

**For more information about Advanced Buildings *New Construction Guide*, visit: [www.advancedbuildings.net](http://www.advancedbuildings.net)**

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