



# **East Bridgewater School Committee:**

---

## **Comprehensive School District Feasibility Study**

### **7 Sustainable Design**



# Sustainable Design

Sustainable design is the means by which buildings and their support systems are designed in a manner that is respectful to the environment. As design professionals, we envision sustainable design as the ability to incorporate concepts and strategies in buildings that leave future generations with a high quality of life by reducing the impact of the built environment on the natural environment. Ai3 approaches the design of all our projects with this environmentally conscious vision.

We believe public schools can benefit from cost effective, environmentally conscious "green" design goals and concepts. Research has proven that school buildings designed with "high performance standards" can increase test scores, reduce operating costs, increase average daily attendance, increase employee satisfaction and retention, reduce liability exposure, and reduce environmental impacts.

## FUTURE FUNDING SOURCES

In June 2006, the newly established Massachusetts School Building Authority (MSBA) adopted the MA-CHPS High Performance Green School Guidelines. These guidelines can be viewed at <http://www.mass.gov/msba/Forms/MACHPSDraftGuidelines.pdf>. Energy efficient incentive points may be allocated to an approved project, in an amount up to 2%, by meeting the threshold established in the Green Schools Guidelines (Section 1.15, #3 Energy Efficiency). All future public school projects that are interested in receiving Energy Efficiency Incentive points (up to 2% additional funding from the MSBA), must adhere to the prerequisites and design practices outlined in the MA-CHPS Guidelines.

## EXISTING FUNDING SOURCES

Although the Massachusetts Technology Collaborative (MTC) Green School Initiative program- which provided funding for renewable energy and energy efficiency technologies for K-12 public school buildings is currently closed, the MTC is in the early stages of designing a new green schools program which is scheduled to come online in the summer of 2006. We believe the East Bridgewater School projects would be excellent candidates for this program.

Currently the MTC is currently funding two initiatives administered by the Renewable Energy Trust. The first initiative under the Green Buildings and Infrastructure department is the Small Renewable Initiative (SRI) and the second initiative is the Large Onsite Renewable Initiative (LORI). The SRI offers up to \$50,000 for projects for design & construction of renewable energy projects that are up to 10 kilowatts and located

at residential, commercial, industrial, institutional, and public facilities that will consume 90% or more of the renewable energy generated by the project on-site. The applicant and project site(s) must be a customer of a Massachusetts investor-owned electric distribution utility. The LORI Design & Construction Grants are calculated based on an Incentive Matrix. Design grants are capped at the lesser of \$75,000 or 75% of actual cost, and construction grants are capped at the lesser of \$500,000 or 75% of actual costs. Feasibility Grants are capped at \$40,000 with cost-share of at least 20% or \$5000, whichever is less.

LORI will accept grant applications for development of eligible renewable energy projects(s) with greater than 10 kilowatts of nameplate capacity that are located at commercial, industrial, institutional, and public facilities that will consume more than 50% of the renewable energy generated by the project on-site. The applicant and project site(s) must be a customer of a Massachusetts investor-owned electric distribution utility. The grant awards may be used to facilitate the installation of renewable energy projects on existing buildings (retrofits) or in conjunction with new construction/major renovation projects, including green buildings.

Local utility companies offer rebate incentives for energy efficient products such as lighting and lighting controls, boilers, exhaust hoods, occupancy sensors, dimming devices, and other products and techniques that save energy. Large renovation projects and new buildings would receive the most utility rebates by proceeding with a Full Custom Approach. This approach would require construction of detailed energy models to investigate equipment options and approaches in order to maximize energy efficiency. The Utility Company typically funds portions of these studies.