

## MEMORANDUM

**TO:** Board of Directors, Massachusetts School Building Authority  
**FROM:** John K. McCarthy, Executive Director  
**DATE:** March 19, 2014  
**RE:** Update on Sustainable Building Design Guidelines and Policy Recommendations

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In order to keep current with updated sustainability standards and energy conservation codes, the Massachusetts School Building Authority (the “MSBA”) has performed an initial evaluation of current practices associated with its Sustainable Building Design Guidelines. This memorandum provides a summary of the efforts to date and makes recommendations for related policy updates that will affect all new construction and major renovation and addition core projects submitting for Preferred Schematic approval on or after the July 30, 2014 MSBA Board meeting.

### Current Practices

Since its formation, the MSBA has been a strong supporter of “Green” sustainable building design for all MSBA-funded public K-12 school buildings in Massachusetts. The MSBA continues its evaluation of policy to ensure that our schools are designed, built and operated in ways that promote sustainability and cost-effective operation, with an emphasis on energy efficiencies. The MSBA has recognized the importance of sustainable design and environmental issues in its regulations, including 963 CMR 2.04 *General Site and School Construction Standards*, which includes sustainability criteria for all MSBA-funded projects. As further demonstration of our commitment to sustainable buildings, the MSBA fully funds commissioning of school buildings in order to maximize energy efficiency, promote ease of maintenance and enhance quality construction. In addition, the MSBA requires compliance with the Massachusetts State Building Code “Stretch Energy Code” for all building systems replaced under the MSBA repair program.

From the outset, the MSBA has offered additional reimbursement or incentive points for projects that achieved a certain level of points using the 2006 version of Massachusetts Collaborative for High Performance Schools (“MA-CHPS”) *Massachusetts High Performance Green Schools Guidelines* as administered by the Collaborative for High Performance Schools (“CHPS”) organization. The MSBA further developed the Sustainable Building Design Guidelines in March 2010 by establishing a minimum standard for all core projects using either the 2009 MA-CHPS or 2009 LEED-S criteria. MSBA guidelines include provisions that award a school district an additional 2% of a project’s eligible costs if the project achieves higher levels of sustainability under these criteria. As of the January 2014 Board meeting, more than 100 core projects have registered with either CHPS or USGBC, with 20 projects completed. The total additional reimbursement from MSBA through this program to date is \$84.5 million, averaging \$964 thousand per project. Since the 2009 versions of MA-CHPS and LEED-S criteria have been available for use, 36 MSBA core projects have registered with LEED-S and 28 projects have registered with MA-CHPS.

## **Discussion**

CHPS and USGBC have anticipated phasing in compliance with revised criteria associated with the new 2012 International Energy Conservation Code (“IECC”) which is also used in the updated Massachusetts State Building Code. Potential updates to the Massachusetts “Stretch Energy Code” may also be forthcoming. These upcoming revisions establish levels of efficiency and sustainability well above current standards for the building code, 2009 MA-CHPS and 2009 LEED-S criteria. Similar to the process used in 2009, the MSBA has reevaluated its sustainable policy to ensure that MSBA-funded school designs are in compliance with the current building program and current sustainability criteria. With assistance from one of its consultants, MSBA staff have taken this opportunity to assess these changes by performing the following tasks:

- Review the new 2012 IECC including comparisons to the previous 2009 version.
- Review updates to the new LEED-S Version 4 (“V4”).
- Review the proposed CHPS Core Criteria and comparisons to the current 2009 MA-CHPS.
- Compare these various criteria to ensure that the MSBA is utilizing the most appropriate methods possible for the design and construction of sustainable school buildings.
- Recommend any updates or additional minimum standards for all projects and update requirements for additional reimbursement for Districts that elect to achieve higher levels of sustainability.

## **Outcome**

The MSBA has completed its comparison of these design criteria to the extent possible although updates to the MA-CHPS guidelines by CHPS is delayed and the Massachusetts Department of Energy Resources is still reviewing the MA “Stretch Energy Code”. Because revisions to the State Energy Conservation Code and LEED-S are on schedule and will be implemented in July 2014, staff recommends adoption of the revised LEED-S criteria as its only sustainable criteria until such time that the other updates are final and can be incorporated into MSBA guidelines. Upon completion of these criteria, the MSBA will complete this review process and will make final recommendations at the January 2015 Board meeting for implementation in March 2015.

## **Recommendation**

After concluding the review process outlined in this memo, and in order to achieve the goals described above, MSBA staff recommends for all new construction and major renovation / addition core projects submitting for Preferred Schematic approval on or after the July 30, 2014 MSBA Board meeting, that all projects must comply with one of the two following options:

- Using LEED-S V4, for no additional reimbursement, achieve a minimum of Certified / 40 points.
- OR;*
- Using LEED-S V4, for 2% additional reimbursement points, achieve a minimum of Silver / 50 points, including a minimum of 6 points in EA Credit #2.

The requirement to comply with the current policy remains in effect for all core projects that submit for Preferred Schematic approval on or before the June 4, 2014 MSBA Board meeting. Under this updated policy, projects that submit for Preferred Schematic approval after the June 4, 2014 MSBA Board meeting will register with USGBC LEED-S version 4 in order to meet those goals.

## MSBA Sustainable Schools Policy\*

### Minimum Requirements

Current Policy	Proposed Policy
Using 2009 MA-CHPS, for no additional reimbursement, achieve a level of Verified / 40 points for new construction, 35 points for renovation, <i>OR</i> ; Using 2009 LEED-S, for no additional reimbursement, achieve a level of Certified / 40 points, including a minimum of 5 points in EA Credit #1.	Using LEED-S V4, for no additional reimbursement, achieve a minimum of Certified / 40 points.

### Additional Reimbursement

Current Policy	Proposed Policy
Using 2009 MA-CHPS, for 2% additional reimbursement, achieve a level of Leader / 50 points for new construction, 45 points for renovation, <i>OR</i> ; Using 2009 LEED-S, for 2% additional reimbursement, achieve a level of Silver / 50 points, including a minimum of 5 points in EA Credit #1.	Using LEED-S V4, for 2% additional reimbursement, achieve a minimum of Silver / 50 points, including a minimum of 6 points in EA Credit #2.

\*in addition to 963 CMR, 2.04 General Site and School Construction Standards

The MSBA will continue to monitor advancements in the industry and the effectiveness of MSBA policy to support the sustainable qualities of the schools in Massachusetts.