

SUMMARY:

Montgomery County (MD) Public Schools

Montgomery County Public Schools (MCPS), located just outside Washington, D.C., in the state of Maryland, has about 139,000 enrolled students and 217 facilities, including 192 schools. *See* MCPS Schools at a Glance 2004-2005, at: <http://www.mcps.k12.md.us/departments/regulatoryaccountability/glance/currentyear/other.shtm#ct>. Over the last several years, MCPS has developed and begun to implement a robust green schools initiative, including a high performance design and construction component.

BACKGROUND

Building Program

The current MCPS Capital Improvement Plan (CIP) provides \$912.8 million toward construction and renovation expenditures for FY 2005 – 2010. The last five years of the six-year CIP includes construction of 22 addition projects for elementary, middle and high schools; the building or reopening of two high schools, two middle schools and six elementary schools; and core improvements at three high schools, two middle schools and one elementary school. *See* FY 2006 Educational Facilities Master Plan and the Amended FY 2005 – 2010 CIP, at: http://www.mcps.k12.md.us/departments/planning/PDF/MPFY2006_Introduction.pdf.

School District Support for High Performance Schools

MCPS has long focused on energy efficiency in school operations and maintenance. The district developed a program called School Eco-Response Teams, which was originated by the Superintendent and Board of Education, and managed by the district's facilities department. *See* Alliance to Save Energy, *et al.*, School Operations and Maintenance: Best Practices for Controlling Energy Costs (2004). In January 2003, the facilities department hired a Green Schools Program

Manager to oversee an expanded green school program (which became known as Green Schools Focus) to “promote sustainable behavior, techniques and methods of resource conservation and integrate these in all curricula, staff training and management.” *See* <http://www.mcps.k12.md.us/departments/facilities/greenschoolsfocus/>. The hiring of the Program Manager, an architect with a strong interest and expertise in sustainable design, has contributed greatly to the development of a comprehensive initiative that has integrated green building goals and strategies into the district's new construction and modernization program.

PROGRAM COMPONENTS

Program Planning

At the end of 2003, the facilities department developed a High Performance Facilities Management Plan. *See* MCPS, MCPS High Performance Facilities Management Plan (2003), at: <http://www.mcps.k12.md.us/departments/facilities/greenschoolsfocus/MCPS%20High%20Performance%20Building1.pdf> (hereafter “Management Plan”). Among other things, the Management Plan calls on the district to develop a High Performance Building Plan with five main components related to school design and construction: (1) a pilot project; (2) the incorporation of the LEED™ rating system in all new construction; (3) education on high performance building strategies; (4) applying the Energy Star rating system to school design; and (5) “green review” of school designs and of the qualifications of consultants. *Id.*

As a result, MCPS now creates an annual High Performance Green Building Plan. The plan for Fiscal Year 2005 includes 10 separate components, several of which are described below. *See* MCPS, FY 05 High Performance Green Building Plan for MCPS (Dec. 2004), at: <http://www.mcps.k12.md.us/departments/facilities/greenschoolsfocus/2004%20High%20Performance%20Green%20Building%20Plan%20for%20MCPS.pdf>.

Pilot Projects

MCPS hired a facilitator to hold a Green Design Charrette for its first Pilot Project (Northwest Elementary #7) in July 2003. About 75 people attended, primarily MCPS staff and outside design professionals.

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The session sought to introduce staff and consultants to green design principles, to establish and prioritize high performance benchmarks, and to influence design of the project. The school's design incorporates a range of strategies adapted from the LEED™ rating system – *e.g.*, low-emitting materials, daylighting, construction waste recycling, energy efficiency, commissioning and water use reduction. The school is registered for LEED™ certification and is scheduled to open in 2006.

In addition to this first pilot, the district has applied LEED™ criteria to three other new elementary school projects. The projects were funded prior to the development of the first MCPS High Performance Building Plan, and were not provided with any additional funding for green features. District officials note that a key to keeping the projects on budget was the early integration of sustainable design goals into the design process. *See* High Performance Green Building Plan.

Framework for High Performance Design

Development and Application of High Performance Design Criteria. MCPS has created its own checklist adapted from the LEED™ rating system, which is being given to project consultants at the outset of new construction or major renovation projects. The checklist indicates whether each design element should apply to all projects or whether application is site-specific, and for the latter category notes whether the element is likely or unlikely to be included. *See* High Performance Green Building Plan at 6-7. The Green Schools Focus program carries out a sustainable design review at each major milestone in the project development process, and that review is submitted to the design team and the MCPS project manager. *See* High Performance Green Building Plan. MCPS has not determined yet whether future projects will undergo formal LEED™ certification.

Revision of Existing Design Guidelines. The district's Management Plan also called for MCPS to revise its current specifications and standards to reflect LEED™ criteria. According to MCPS officials, the district is in the process of modifying its architectural design

guidelines to reflect sustainable design goals. The district is also planning to develop separately a Construction IAQ Management Plan and a Construction Waste Management Plan, and is also planning to review its HVAC and commissioning guidelines and its lighting standards. Other sustainable design strategies that have received attention under the Green Schools Focus program are the use of geothermal heat pump systems and consideration of environmental factors in facility siting.

Review of Consultant Qualifications

MCPS is adding sustainable design experience to the criteria used in Requests for Qualifications for consultants on new projects. The Green Schools Program Manager reviews this information once it is submitted to MCPS. *See* High Performance Green Building Plan.

Technical Resources and Training

The hiring of the Green Schools Focus Program Manager has greatly increased the capacity of the district to implement a comprehensive high performance schools initiative. Moreover, with money saved from energy efficiency improvements, the district is planning on increasing staff for the program. In addition, one of the program components is to provide project managers and other facilities staff with workshops and information on sustainable design, and the program aims to have all MCPS project managers receive LEED™ accreditation. According to officials, the program has formed a taskforce comprised of staff from different MCPS areas – energy, operations, indoor air quality, etc. – in order to maximize its effectiveness.