



# VIEW*S* & VISIONS

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## The Future of Education, Today

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Dr. Mark A. Manchin is the executive director of the School Building Authority of West Virginia. He began working with the Authority in December 2006.

During his career, Dr. Manchin has served as a public school teacher in Greenbrier County, an adjunct professor of educational administration at the College of Graduate Studies and the coordinator of staff development and training for RESA III. Dr. Manchin also served in the West Virginia Legislature, where he was on the Senate Finance Committee, chaired the Sub-Committee for Tax and Revenue and served as vice-chair of the Senate Education Committee.

Dr. Manchin was named as the superintendent of schools for Webster County in 1996 and was appointed as superintendent of McDowell County by the State Board of Education in December 2001.

Dr. Manchin was born in Farmington, West Virginia, and completed his undergraduate studies at Fairmont State College, received a master's degree in educational administration at West Virginia University and was conferred with the Doctorate of Educational Administration from West Virginia University.

Since 1990, the School Building Authority of West Virginia (SBA) has dedicated \$1.7 billion to school construction projects across the state. What began as a product of the West Virginia Legislature nearly 25 years ago has become a vital piece of the education infrastructure that has brought the future to today's Mountain State students. Today, 75 percent of West Virginia's students attend classes in "futuristic," state-of-the-art and safer schools than they would have in 1990.

In fact, the school of the future is now! West Side Elementary School is currently under construction in Charleston, West Virginia (Kanawha County), and has been designated and designed as a "school of the future." This school will be the prototype for all new schools built in West Virginia.

This new school provides space for hands-on exploration, technology and small group projects and retains space for teacher-led instruction. Charleston-based ZMM Architects began by designing this building from the inside-out. ZMM's staff worked with Kanawha County Schools officials, SBA staff and community representatives to develop the school curriculum first, and then designed the

school to fit the needs of the curriculum. This enabled us to develop a model for the school's instructional areas, which would be both unique and innovative.

This model creates instructional space that mimics a museum. As when individuals enter a museum, students will be engaged in learning materials throughout the environment as they work on projects. Each instructional area also will have direct access to exterior instructional and recreational spaces. The use of educational technology for tomorrow's students is also being incorporated into this design and all future designs. In the past, the lack of adequate technology hindered efforts to develop student-centered instructional environments. Now, new schools will utilize wireless technology. New personal electronic devices will be used to allow teachers to advise students on their daily schedule, participate in online learning opportunities and will provide instructors with immediate feedback on progress, so they can adjust their efforts to meet the constantly changing needs of students.

In addition, new schools are being designed to function as educational tools. A new policy to jumpstart the process of designing "green," or high-performance, schools in West Virginia was



*An artist's rendering depicts the anticipated look of the new West Side Elementary School in Kanawha County, West Virginia when it is completed.*



*Spring Mills Primary School, in Berkeley County, West Virginia, was the first LEED school built by the School Building Authority of West Virginia. The school was awarded a LEED GOLD status.*

approved in 2008 by the SBA. Design professionals working on school construction projects are now required to incorporate the Leadership in Energy and Environmental Design (LEED) building system into new construction designs in order to provide high-performance school buildings. Students are learning about daylighting, capturing rainwater, efficient building envelopes (insulation), domestic solar hot water, efficient HVAC systems and recycling. This information will be relayed to students through the use of age-appropriate signage displayed through the school, as well as on a dashboard system display, which children will be able to view, that monitors the building's energy use.

Finally, and most importantly, future schools must be safer! With the recent spate of school shootings, now, more than ever students, parents and employees must feel secure in their buildings. Accordingly, the SBA requires new schools to be built with certain safety requirements that will keep any unwanted intruders out of the buildings until first responders can arrive. All new schools will be built with keyless entry technology, which requires those

designated to see an individual before allowing them entry to the building. New designs require schools to have a visual line of sight to the entire front entry, allowing office staff to see an individual approaching the school prior to allowing entry. Finally, all new schools will incorporate shatter-proof glass on the front entry and many ground floor windows. This glass is required to have the ability to withstand a shotgun blast and stay in place. This will keep any intruder at bay until first responders arrive.

While the type of educational environment described in this article is unique to West Virginia, it nevertheless is becoming reality with every new school being designed, built and opened. By re-evaluating the traditional classroom and school, methods of curriculum delivery and environmental and safety technologies, the School Building Authority is looking to develop a more personalized educational experience for tomorrow's students, today! W