

2013 Exhibition of School Planning and Architecture

Spring Mills Primary School

Martinsburg, West Virginia
Berkeley County Schools

Spring Mills Primary School



Spring Mills Primary School



Community Environment

Spring Mills Primary School, funded by the School Building Authority of WV, was designated to become the SBA's first official "green" school, with a LEED Silver designation target. The school surpassed that goal by reaching the gold certification level.

While the building's exterior design follows with the preferred traditional theme of the other campus buildings, contained within the building are many unconventional features incorporated to conserve energy, natural resources and to enhance indoor environmental quality.

Spring Mills Educational Campus is located in the heart of a dense residential neighborhood, allowing easy access from the community. Many of these residents commute into nearby metropolitan areas such as Washington, DC, and is sensitive to the historic architecture of this region.



Learning Environment

An environmentally focused K-2 curriculum was developed for this school by a committee of educators. This curriculum includes topics that have been tied back into state Science Learning Outcomes. Curriculum topics include energy, recycling, composting, water, gardening, healthy atmospheres, wildlife / nature, and outdoor adventures.

Spring Mills Primary incorporates a geothermal heating and cooling system as an energy saving feature. In order to assist teachers in explaining this system to young students, a large mural was included in the dining room. This mural helps to describe both summertime and wintertime operation of the system to young students.



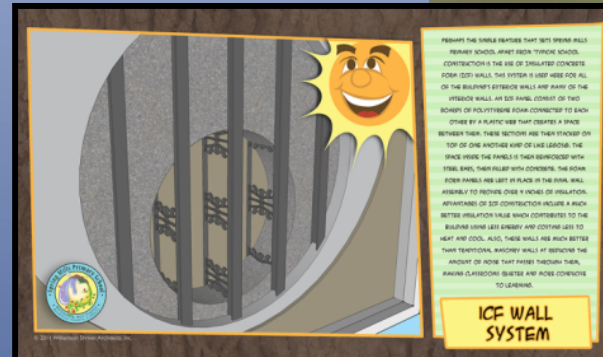
Dining Room Labyrinth - Spurred by learning concepts espoused by Marge McCarthy and her published guide "Kids on the Path", the Owner requested an indoor labyrinth in the dining room floor design. Among the perceived benefits of labyrinths in schools are the calming emotional effect that it can have on children.

Physical Environment

In order to enhance the learning opportunities for students, teachers, parents, and building visitors, a signage program highlighting 16 of the school's green features was developed by the architect

Due to its enhanced thermal insulation and acoustical properties, an ICF wall system was selected for the exterior and many interior walls. As this system is unfamiliar to many people, and since this system is all but invisible in the finished building, the architect designed a display that features and explains this wall system.

Natural day lighting in classrooms was the primary organizing criteria for the floor plan, with nearly all classroom windows facing north and south. To call attention to this orientation, a compass rose was incorporated into the floor near the main entrance to the building.



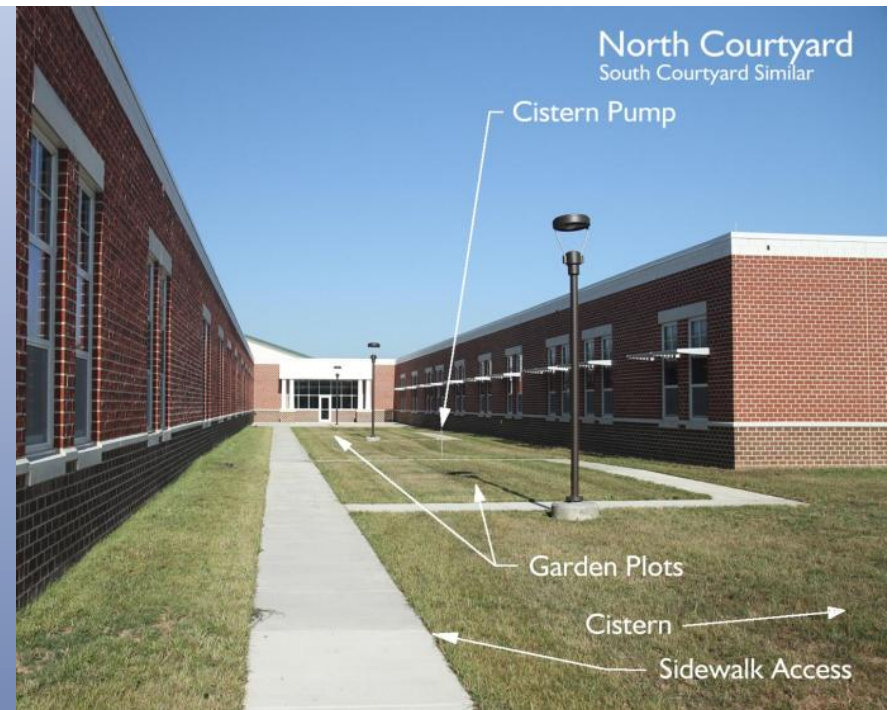
Physical Environment

Courtyard Gardens - As gardening is a component of the environmentally focused curriculum at Spring Mills Primary, garden plots were incorporated into the courtyard / light wells established by the school's rectilinear three-wing design. To minimize the amount of potable water needed for gardening projects, an underground rainwater collection cistern stores water from the roof drains of one of the three classroom wings. Pumps and faucets in each courtyard complete the system.

The Architect designed the building logo for the school, the design of which serves as a reminder of the environmentally responsive focus of the curriculum and building. A large three-dimensional version of this logo was placed in a prominent public location within the building.



Environmental features are marked with signs to help guide students to these learning areas.



Physical Environment

The floor plan of the building was largely derived by the desire to achieve day lighting opportunities in all classrooms, which studies show help improve student performance. Classroom orientation (due north or south), oversized windows with light shelves and sunscreens, high sloped ceilings, and light classroom wall colors, in conjunction with an electronic day lighting sensors all contribute to better natural lighting, and lighting energy savings.

Spring Mills Primary has a kitchen waste pulping system and decomposing unit that reduces the amount of food waste taken to landfills by 78% compared to other Berkeley County Elementary Schools. The remaining waste can be used as mulch or fertilizer for the school or community projects.



Planning Process

Beginning in the fall of 1998 the Berkeley County Board of Education appointed a 55 member countywide committee charged with the task of developing the county 2000-2010 Comprehensive Educational Facilities Plan (CEFP). This committee supported by Central Office Administrative Staff, Educational Consultant and Architect met for 18 months reviewing enrollments, existing schools, educational plans, grade configurations and community demographics. From this plan came the need for Spring Mills Primary School.

In October of 2007 Berkeley County Schools submitted a new Spring Mills Primary School as their School Building Authority of WV Needs Project, and in April 2008 was awarded grant for this project.

With an educational facilities plan and funding in place, the design and planning for the building could begin. Early on in this planning it was decided that this school would be the states first LEED Silver certified school.

During the planning stage, and through out design and construction, the superintendent and county staff worked with the architect making sure the design meet with current and future educational needs.



Planning Process

An important goal in this design is to develop a facility which will serve the lifelong learning needs of the community. The kitchen, cafeteria, Media Center and Gymnasium may be utilized after school hours by students, parents, clubs, business organizations, and other community groups. The design should limit access to the non-used areas by movement control devices while maintaining all applicable life safety codes. Additionally, support areas such as parking lots and public toilets should be provided within or near to the spaces subject to community use.

In August of 2011, after 18 months of construction, the building was completed. Shortly after completion came the news that the school had reached beyond the target of Silver to the level of LEED Gold Certification.

Spring Mills Primary School is a seamless combination of education, environmental protection, and community involvement, this was achieved through the careful planning of everyone involved.



Floor plan



Floor Plan

0' 50'

North

Exhibition of School Planning and Architecture

Project Data

Submitting Firm :	Williamson Shriver Architects, Inc.
Project Role	Architects
Project Contact	Gregory A. Williamson
Title	Principal Architect
Address	717 Bigley Ave.
City, State or Province, Country	Charleston, WV 25302, USA
Phone	304-345-1060

Joint Partner Firm:	Tower Engineering, Inc.
Project Role	Electrical and Mechanical Design
Project Contact	
Title	
Address	115 Evergreen Heights Drive, Suite 400
City, State or Province, Country	Pittsburgh, PA 15229
Phone	412-931-8888

Other Firm:	Fox & Associates
Project Role	Site & Civil Design
Project Contact	
Title	
Address	981 Mount Aetna Road
City, State or Province, Country	Hagerstown, MD 21740
Phone	301-733-8503

Construction Firm:	Warner Construction
Project Role	General Trades Contractor
Project Contact	
Title	
Address	50 Citizens Way Suite 201
City, State or Province, Country	Frederick, MD 21701
Phone	301.696.0530

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Project Details

Project Name	Spring Mills Primary School
City	Martinsburg
State	West Virginia
District Name	Berkeley
Supt/President	Manny P. Arvon II
Occupancy Date	August 2011
Grades Housed	K-2
Capacity(Students)	575
Site Size (acres)	7.65
Gross Area (sq. ft.)	63,380
Per Occupant(pupil)	110
gross/net please indicate	gross
Design and Build?	
If yes, Total Cost:	
Includes:	
If no,	
Site Development:	\$544,670
Building Construction:	\$9,549,683
Fixed Equipment:	\$539,124
Other:	\$220,000
Total:	\$10,853,477