

Project Profile



Project

Sandy Valley Elementary School
Magnolia, Ohio

Owner

Sandy Valley Local School District

Architect

MKC Associates, Inc.
New Philadelphia, Ohio

Construction Manager

Hammond Construction, Inc.
Canton, Ohio

Roofing Contractor

Meade Construction, Inc.
Fredericktown, Ohio

Roofing System

Décor Roof System, adhered, using custom colored lead grey, 60 mil Sarnafil® G410 membrane

Project Size

90,000 square feet

Completed

June 2008

Décor Roof Reflects School Pride at Sandy Valley Elementary School

When the Sandy Valley Local School District purchased a 56-acre site in Magnolia, Ohio, the plan was to use it for a new high school. However, it was later decided to add a new elementary school to the site as well, providing architects MKC Associates, Inc. of New Philadelphia, Ohio with a design challenge. How could they fit two schools on the same site and give each a prominent location and entrance? The solution: “curve both buildings so they create an impressive semi-circular ‘face’ to the public,” said Jack Pottmeyer, AIA, vice president of MKC Associates.

The roof of the elementary school proved to be another design challenge, as well. “The school district did not want a flat roof, whereas the Ohio School Facilities Commission did,” Pottmeyer explained. “A vaulted roof design was the perfect compromise, and would repeat the building’s curved form.”

“Not your Grandfather’s Roof”

This roofing solution would only be “perfect”, however, if it fit within the school district’s budget. “My team assiduously

researched various roofing solutions,” Pottmeyer stated. “First we looked at metal roofs, but it would’ve been too expensive to create the narrow pie shapes that would be needed where the curves intersect with the curving spine of the building.”

Pottmeyer remembered how MKC Associates had used the Sika Sarnafil Décor Roof System on another elementary school and thought, “That’s the look I want on this roof.” The Décor Roof System combines Sika Sarnafil’s G410 thermoplastic single-ply roofing membrane with Décor profiles and/or battens to give the appearance of a standing seam metal roof. “The heat-welded seams are leak-proof, and the PVC membrane is friendly to intricate detail work and easily resolved all the design challenges of this complicated roof,” Pottmeyer explained. “This roof has curves that are curving in three dimensions — this is not your grandfather’s roof.”

Installation a Learning Curve

As might be imagined, installation of the barrel and vaulted roofs on the school was not easy. Fortunately, Meade Construction, Inc. of Fredericktown, Ohio was up to the task.

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“There are seven different roofs on the school, and 90 percent of them are barrel roofs,” said Chris Mortimer, vice president at Meade Construction. “In addition, the main corridor of the building is curved on a radius, which made installation of the Décor battens extremely difficult. The roof arched both ways, so we had to cut and taper each sheet of membrane as it ran up to the ridge line so we would have even spacing of the battens on the seams.”

There were also two different substrates for the roof — metal on 80 percent of the roof and Tectum deck (which was used for soundproofing over areas like the gymnasium) on the other 20 percent, according to Mortimer. The decking was covered with a vapor barrier, then two layers of 1½ inch insulation, ¼ inch of gypsum roof board, and finally the lead grey colored membrane.

“This was a unique job because of all the arches, but we loved working with the Décor system,” Mortimer said. Pottmeyer added, “The different intersections of the curves would’ve been very difficult with a metal roof and would’ve had to be done on the ground. But with the Décor system you can unroll the membrane and if it overlaps that’s okay, making the difficult intersections pretty much a snap.”

There was also a lot of metal work involved with the roof, including snow guards, a continuous gutter system, coping caps, and fascia. “Meade Construction did a great job with the roof, including the metal work,” Bob McAuliffe, senior project manager at Hammond Construction, Inc. of Canton, Ohio said. “They also did a lot of work when the weather allowed and kept the project moving.”



Complex angles come together atop the Sandy Valley Elementary School. The custom-colored lead grey roof has drawn favorable reviews from the community, and other school districts have sent representatives to Magnolia to view the roof.

The aforementioned weather was another challenge. “We did the bulk of the roof installation during one of the snowiest winters in recent memory,” Mortimer stated. “We even had to keep the adhesive in a heated storage trailer to keep it warm.”

A Favorable Report

So far the Décor Roof System is getting glowing reports. “The Décor system is clearly a top-notch system and is the standard of the industry,” McAuliffe said. “There are other imitations out there, but this ‘metal appearance’ roof system is proven. And that’s important when you want your school buildings to last several generations.”

Sika Sarnafil’s Décor Roof System has been installed on hundreds of buildings around the world during the last ten years. It is the only roofing system of this type that includes warranty coverage for the system’s hot-

air welded ribs — these profiles and/or battens give the roof the metal appearance.

Pottmeyer is very pleased as well. “This roof met all the expectations of what we wanted the roof to be,” he stated. “The Décor system capped our vision for the Sandy Valley Elementary School like no other product could.” The roof also met the budget constraints of the project, and in fact, according to Pottmeyer, contributed to the project coming in under budget. “I would use the Décor Roof System again in a heartbeat,” he added.

“We have received a lot of comments from the community on how attractive the roof is,” said Rock VanFossen, assistant administrator in charge of new construction for Sandy Valley Local School District. “It is a very good looking building,” he added, pointing out that the lead grey roof color and the red brick of the building mimic the school’s colors.

Word of the roof’s appeal has spread to other school districts, and in fact, one neighboring school district recently came to Sandy Valley to look at the Décor system, Mortimer said. They must’ve liked what they saw, because Mortimer said that school district is now planning to install a Décor system on one of its schools.



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