

White Mineral-Coated Roof Realizes Immediate Energy Savings

Spring Grove Area School District | PA

CHALLENGE

Strapped by budget constraints and concern over the declining economy, Mark Czapp, Director of Support Services at Spring Grove Area School District in southeastern Pennsylvania, was unsure how the district was going to replace a failing EPDM roof during a renovation of the district's middle school. Czapp knew replacing the roof was vital to the renovation and to creating a more energy efficient building, but felt the district's only option was to replace sections of the roof as funds became available.

SOLUTION

Marc Harder, a representative of The Garland Company, Inc.®, an Ohio-based high-performance roofing system manufacturer, recommended an alternative option that would provide a long-term solution and create the energy savings the district was hoping to achieve. "Although the district's first option (another EPDM roof) would have fixed the problem, it would have been temporary and likely cost them more over the life of the system. We knew they wouldn't want to go through this process again in 10 years, so we explained the Garland philosophy of modified bitumen, the longevity of the roof system and its cost effectiveness," Harder reports.

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Mark Czapp
Director of Support Services
Spring Grove Area School District

Crabtree, Rohrbaugh and Associates, a local, prominent architectural firm, was selected to guide the project. In an effort to increase efficiency and sustainability of the roof, architect, Christopher Barnett, worked with Harder to develop a solution that included replacing the rubber EPDM roof with a StressPly® Plus mineral-coated modified bitumen system and an ENERGY STAR® qualified Pyramic® coating.

The 143,000-square-foot building has a variety of slopes and roof levels, which required Harder and the contractor, Ream Roofing, to work together to develop solutions to meet the district's objectives. In the end, three systems were required for different portions of the roof. A self-adhered StressPly® Plus modified-bitumen system was used over the gymnasium's barrel roof; a cold-applied system was used on courtyard roofs; and hot-applied was used on the flat portions of the roof. Harder explains, "Ream Roofing was great about looking at different options and not forcing hot-applied systems in areas where it wasn't going to work. As the project progressed, we sat down and identified solutions we collectively thought were the best for those particular situations."

Following the completion of the project, Harder measured the temperature of the white, mineral-coated roof on an 85°F (29°C) day, compared to a neighboring building with a black EPDM roof. The middle school's newly replaced roof measured 99°F (37°C), while the EPDM roof measured approximately 150°F (65°C).

Czapp credited the success of the project to Harder and his dedication to ensuring the job was done correctly. "Garland has a great product, but it was Marc's dedication during and after the project that impressed the school district. Because we're using taxpayer dollars, we wanted to make sure we got a good roof that is going to hold up for 30 years, but at the same time is going to save us money. Garland is the first roofing company to have done that for us."

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Marc Harder

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EDUCATION



Project: Spring Grove Area School District
Location: Pennsylvania
Garland Rep: Marc Harder
Architect: Crabtree, Rohrbaugh and Associates
Contractor: Ream Roofing
Materials: Pyramic® StressPly® Plus