Metal Retrofit Creates Slopes, Transforms School

Sierra Grande School | Blanca, Colorado

EDUCATION

CHALLENGE

For many small school districts across the country, funding for building repairs is often scarce. As a result, school administrators make temporary repairs until money becomes available for more permanent solutions. Administrators at Sierra Grande School in south central Colorado have been dealing with that scenario for the last decade. Several areas of the school's roof leaked, but without money to replace it, administrators were forced to "band-aid" the problems every year. "The water would just pond on the roof and create a mess. We were replacing a lot of ceiling tiles every year," explains Darren Edgar, the district's superintendent.

The school was originally built in 1956, but there have been several additions and renovations throughout the years to accommodate a growing student population. Challenged with a variety of roof sections and planes, the roof's low slope and its varied metal panel lengths further contributed to the leaking problems. Edgar knew the condition of the roof would only worsen with time and began searching for ways to fund the roof replacement the school desperately needed. The district applied for and received a state-funded grant that covered nearly 70 percent of the cost of a new roof, allowing them to move forward with the project.

> "CSHQA and Garland both did a great job of leading the process to successful completion."
>
> **Darren Edgar**
> District Superintendent
> Sierra Grande School

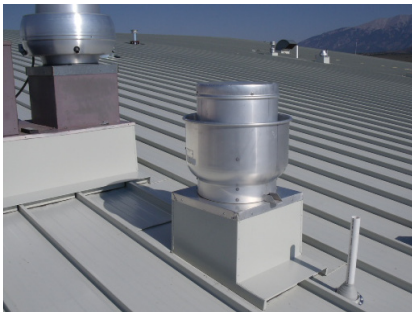
SOLUTION

CSHQA of Denver, Colorado, was retained to analyze the current conditions and problems, develop the design and prepare construction documents for the project. James Murray, AIA, the firm's area principal, was the project's architect of record. Murray determined that installing a standing seam metal system over the original roof with the use of a retrofit framing system was the best way to achieve their objective of increasing the slope of the roof and eliminating concerns of ponding water. "We were trying to determine how to best fix historical problems of the past, while providing the district with a low-maintenance product, still achieving a long-term watertight solution," reports Murray.

Based on the project's objectives, Jeff Ruden, local Garland representative, recommended the installation of Garland's R-Mer® Span structural standing seam roof system. The 24-gauge, 18-inch wide steel panels were installed on a framing system that increased the slope of the roof to 1½:12 and eliminated the various roof planes. To achieve watertight integrity, the 148-foot standing seam panels were roll-formed on site to create a continuous panel with no end laps. "Our ability to offer continuous panels provided the district with a watertight system and relief from the constant leaking they've dealt with for the last decade," explains Ruden. Metal wall panels were also installed on the building.

In addition to the metal roof and wall systems, Garland's StressPly® EUV FR Mineral modified bitumen roof system was installed on two other areas of the roof and then tied into the metal roof. Working with CSHQA, Ruden coordinated the installation of the metal and modified portions with Roofmasters Roofing and Sheet Metal, Inc. to ensure the project was completed on time and products were properly installed. The 72,000-square-foot project was completed in about three months. "Roofmasters did a phenomenal job of moving through the project quickly and efficiently," reports Murray.

Edgar was impressed with the successful outcome of the project, which he attributes to careful planning by CSHQA, Roofmasters and diligent supervision by Ruden. "This project, which is our first with Garland, went very well. CSHQA and Garland both did a great job of leading the process to successful completion," explains Edgar. The entire roof system, including the metal roofing panels, metal wall panels, and modified bitumen assembly is covered by a 30-year manufacturer's warranty.



Project:	Sierra Grande School
Location:	Blanca, CO
Garland Rep:	Jeff Ruden
Type of Project:	Metal Retrofit Modified Bitumen
Materials Used:	StressPly® EUV FR Mineral R-Mer® Span

GARLAND®
since 1895

Jeff Ruden
Phone: (303) 955-2912
E-Mail: jruden@garlandind.com