

Sure-Seal EPDM
Roofing Systems

Sure-Flex PVC
Roofing Systems

CASE STUDY

Carlisle EPDM and PVC Unite Atop Colorado's St. Mary's Hospital



JOB PROFILE

PROJECT LOCATIONS:

» Grand Junction, CO

CARLISLE APPLICATOR:

Douglass Colony Group

ROOFING SYSTEM:

Carlisle 60-mil Sure-Flex PVC
and Sure-Seal EPDM

When the Sisters of Charity in Leavenworth, CO founded St. Mary's Hospital in 1896 to serve the sick, it was a diminutive facility comprising little more than ten beds in four wood-framed walls. Over the years, this small hospital grew to serve the citizens of eastern Utah and western Colorado as the largest medical facility between the far more populous Salt Lake City, UT and Denver, CO. Its transition from a tiny clinic run by Roman Catholic nuns to a full-fledged hospital with more than 350 beds, 2,000 staff members and dozens of specialties has been gradual rather than explosive. Over the past few years, however, the hospital's Century Project has brought St. Mary's Hospital into its next phase of existence,



with the goal of expanding, renovating, and modernizing the facilities to meet a growing demand for high-quality healthcare in Colorado's western slope.

In January 2008, construction began on an ambitious new design that would eventually garner a LEED Gold certification: a full 12 stories were to be added to the existing five over the course of two years, with more than 100,000 square feet of new EPDM and PVC roofing applied to 20 separate decks. The combination of form and function was planned to include upwards of 8,800 custom-made, drydesign metal wall panels and radiused and straight composite metal panels for the various columns and beams lining the facility. An already difficult project was made even more formidable by the necessity of keeping it fully operational throughout the entire construction process. Every square inch of roofing material, every square foot of waterproofing, and each metal panel would need to be installed without compromising the dutiful doctors' work or the health of the facility's ailing occupants. The project required a roofing provider with a long history of dedicated service and quality performance to the region.

Pat Wolach, Executive Vice President and COO of Douglass Colony, knew that his company was up for the challenge. Since 1947, Douglass Colony Group has been a mainstay of the Rocky Mountain community, providing commercial roofing, metals, waterproofing, solar, steel



CASE STUDY

“It was great to be involved with a project so important to this community.” —Pat Wolach

trusses and roof garden systems. “A high-profile job like this requires a measure of expertise and diligence—not just anyone can tackle a project of this size,” said Wolach. “We’ve always enjoyed a good working relationship with the general contractor, FCI/McCarthy. They knew we could tackle the unique challenges that such an extensive project entails.”

The “unique challenges” were manifold. In addition to the number of separate decks that required coverage, the sheer bulk of materials necessary for the two-year project would present some unique storage issues. Because various parts of the facility were being constructed at different times coordinating the various details throughout the project was a matter of both thinking ahead and maintaining a level of flexibility. Throughout the build process, minimizing the impact to those who worked in the hospital—and those who required its lifesaving services—was of the utmost importance, thus necessitating swing stages that allowed access to work areas that were difficult to reach. Finally, all materials had to be appropriately secured within mere minutes whenever an alarm sounded alerting crews to the takeoff or landing of the hospital’s emergency helicopter.

Among the most important facets of a facility’s construction is the building envelope, which allows the inside of each and every room to remain safe for doctors and patients alike. St. Mary’s Hospital called for a fully adhered roofing system that would stand up to the rigors of Colorado’s harshest weather conditions. Douglass Colony determined that the best options for coverage would be Carlisle SynTec’s 60-mil PVC and EPDM membranes. Carlisle’s Sure-Seal EPDM single-ply membranes have been one of the commercial roofing industry’s top-performing materials for half a century, while its Sure-Flex PVC membranes offer excellent resistance to common rooftop problems including acids, chemicals and oils. Together, they would provide a high-quality roofing system covered by the peace of mind offered by Carlisle’s total system warranty. “Carlisle is a leader in the industry and we are well supported by our local representation,” said Wolach.



“Carlisle was the obvious choice because we could provide the owner with a complete warranty for the EPDM and PVC systems.”

Douglass Colony applied two 2.5-inch layers of Carlisle’s energy-efficient polyisocyanurate insulation to the roof decks, some fully tapered to allow for proper drainage, using Carlisle’s Fast™-100 adhesive. FAST 100 Adhesive is a two-component insulating polyurethane adhesive with low-rise, expanding characteristics designed to securely bond Carlisle’s FleeceBACK® membranes and insulations to a variety of substrates, including various structural decks and OSB coverboard. “The Fast-100 adhesive provided us with a 100-mph wind uplift warranty, which was crucial for the project,” said Wolach. 7/16" OSB coverboard was overlaid with Carlisle’s EPDM and PVC membranes, which were adhered using Carlisle’s bonding adhesive.

Various aesthetic improvements added to the facility’s design made the project especially unique. A sixth-floor roof deck had a prayer garden installed, complete with a visually-pleasing plaza

CASE STUDY



paver system. The custom composite metal wall panel system reflects the light differently depending on the time of day, lending the facility a sort of ethereal quality.

Throughout the two-year-long build, various setbacks and difficulties threatened to undermine Douglass Colony's progress, but to no avail. "Stocking and handling the materials throughout the installation process was a constant challenge," said Wolach. "We obviously had to keep everything secured to keep it from blowing off, but it was especially an issue when the helicopter took off. We'd only have five minutes to ensure everything was secured once the alarm sounded!" Moreover, the weather conditions ranged from one extreme to the next, with sub-freezing temperatures and heavy wind and snow in the winter hampering progress to record-breaking high temperatures in the summer beating down upon the roofing crews. Nevertheless, construction was completed on time and to the satisfaction of the many facility occupants who spend their days tending to the ailing of Grand Junction and surrounding regions.

What was once little more than a room to care for the sick has become a testament to the progress realized over the past 100 years—in terms of both medical science and construction. Over the past six years, the Century Project has seen the construction of a 12-story tower, 434,000 additional square feet, and several "shelled" floors that offer the ability to continue expanding as necessary. Douglass Colony is proud to have played a part in helping to transform a small hospital into a dynamic healthcare facility with the ability to adapt to the needs of its growing community.

"It was great to be involved with a project so important to this community," said Wolach. "This is a first-class hospital that's finally able to answer this community's growing needs. Just a short time ago, locals would have to go as far as Salt Lake City to get the care they needed—and today, they're able to seek that level of quality care at St. Mary's"