CARLISLE SYNTEC SYSTEMS

# FleeceBACK® EPDM Roofing Systems

CASE STUDY

## Carlisle & Clarkson University: Whipping Students into Shape

According to the U.S. Department of Health and Human Services, evidence linking physical activity with improved academic performance and cognitive function continues to grow. In light of this, many universities are highlighting their fitness centers when recruiting new students and prioritizing the maintenance and enhancement of these facilities.

When Clarkson University staff realized that their Indoor Recreation Center was experiencing deterioration in its rooftop structure, they leapt into action. Completing this project as quickly as possible—to ensure that construction could be completed between the fall and spring semesters—and selecting products that enhanced the energy efficiency of the aging building were paramount to the management at Clarkson.

By May 2017, the Indoor Recreation Center was in need of a complete reroof, due to severe rooftop discoloration and multiple roof leaks throughout the facility. Clarkson University chose to work with LaBella Associates of Rochester, New York to design the new roofing system for this unique structure. One of the design challenges with this building was the structure of the rooftop itself, which was a 66,300-square-foot hyperbolic paraboloid.

## JOB PROFILE

**PROJECT LOCATION:**
Potsdam, NY

**SQUARE FOOTAGE:**
66,300 Hyperbolic Paraboloid

**ROOFING CONTRACTOR:**
RSI Roofing, Inc.

**PROJECT DURATION:**
3 Months

**ARCHITECT:**
LaBella Associates

**ROOFING SYSTEM:**
115-mil FleeceBACK® EPDM membrane fully adhered with FAST™ Adhesive

CLARKSON UNIVERSITY – POTSDAM, NY

Because of this unique structure, the rooftop material chosen for this re-roofing project needed to be flexible, while also being durable and energy-efficient to protect the building and those inside from the extreme northern winters. With all of these elements in mind, a one-of-a-kind roofing system manufactured by Carlisle SynTec Systems was chosen: Carlisle's FleeceBACK EPDM fully adhered roofing membrane.

The design team knew that Carlisle's FleeceBACK system would be able to provide the performance that Clarkson University needed for their recreation facility. Manufactured with a combination of Carlisle's Sure-Seal® EPDM membrane laminated to non-woven polyester fleece backing, FleeceBACK EPDM provides industry-leading toughness, durability, and resistance to hail damage. The dark color of this membrane also offers maximum energy efficiency in northern climates, reducing heat-related energy expenditure during the cold winter months.

An additional benefit to using the FleeceBACK membrane was that it could be fully adhered to the underlying insulation, which meant that there would be no unsightly metal fasteners protruding through the membrane and detracting from the rooftop's appearance. While the use of a fully adhered system improved the aesthetic appearance, it also increased the roofing system's wind uplift resistance due to the

> "...**FleeceBACK EPDM** provides industry-leading toughness, durability, and **resistance to hail damage.**"

strength of the adhesive and the reduced number of membrane seams present on the fully adhered system (as compared to a mechanically fastened system).

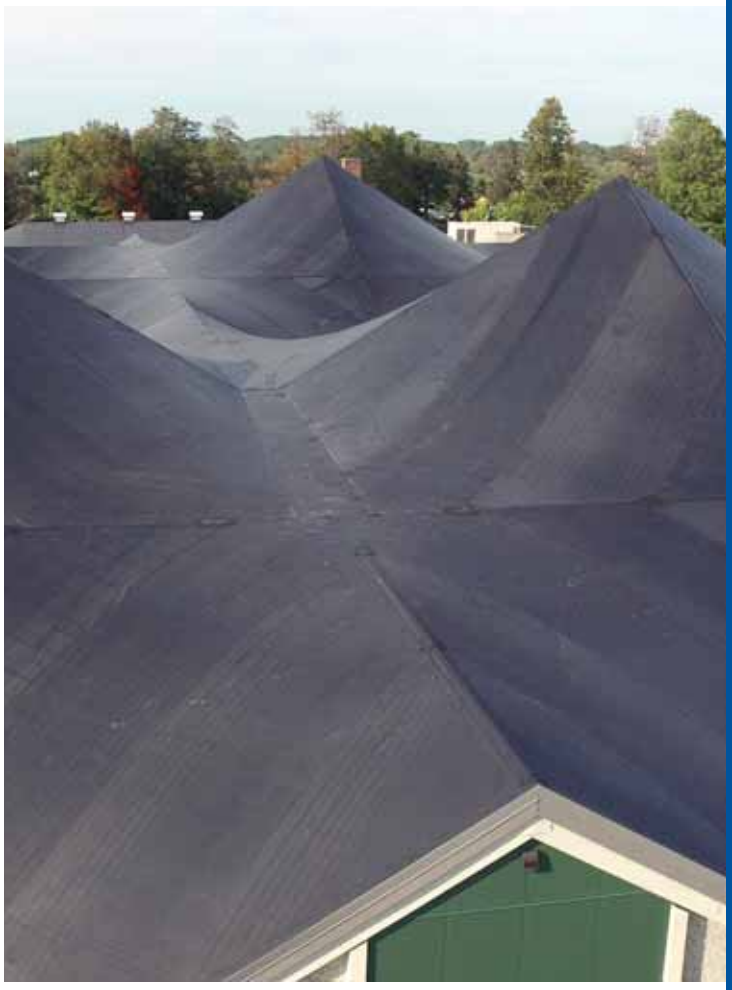
The first step in this installation was tearing off the existing roofing membrane and installing new perimeter wood blocking around the existing wood deck. The installation crew from RSI Roofing then installed Carlisle's 725TR vapor barrier directly to the wood deck using CCW-702 LV Primer.

The next step was to mechanically install two layers of 2.6-inch polyiso insulation, followed by a half-inch layer of Carlisle's SecurShield™ HD cover board, using metal fasteners and plates.

Finally, the rooftop was ready for the new membrane. The installation crew applied a full spray of Carlisle's FAST adhesive to the cover board, and then rolled out the 115-mil FleeceBACK EPDM membrane. The use of FAST adhesive added thermal efficiency to this already energy-efficient system for even greater environmental protection and reduced energy costs for Clarkson University. RSI used the Patriot Jr. machine to apply the FAST adhesive to increase productivity.

Once the membrane was in place, RSI added the finishing touch to this unique design by installation perimeter sheet metal with new gutters and downspouts. The entire rooftop installation took exactly three months and was completed in August 2017, just in time for returning students.

With a swimming pool; a full-service fitness center; an indoor track; a tennis field house; a full weight room; tennis, volleyball, racquetball, and basketball courts; and locker rooms with Jacuzzis and saunas, Clarkson University students will have no excuse not to be in the best shape of their lives during their college careers. And with a roofing installation crew that had more than thirty years of industry experience, and a unique fully adhered, durable, and energy-efficient roofing system, Clarkson University's Indoor Recreation Center will be standing under the harsh New York climate for years to come.



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