

Project Profile



Project

University of
Northern Iowa — McLeod Center
Cedar Falls, IA

Owner

University of Northern Iowa

Architect

HLKB Architecture
Des Moines, IA

Waterproofing Contractor

D. C. Taylor Co.
Cedar Rapids, IA

Waterproofing Systems

Loose Laid System, using 80 mil, G476
membrane

Project Size

25,000 square feet

Completed

September 2006

Sika Sarnafil Waterproofing Proves to be a Good Sport at UNI's McLeod Center Plaza

As the new home to the University of Northern Iowa's (UNI) men's and women's basketball and volleyball teams — as well as a performance venue for concerts, wrestling and other events — the McLeod Center is host to over 370,000 visitors per year. Many of these visitors travel across the McLeod Center Plaza that connects the Center with the UNI-Dome football coliseum, which means they are also walking over locker rooms and storage facilities underneath the plaza. In order to prevent water from entering those areas, it was vital that the waterproofing membrane installed underneath the plaza was a proven player.

"The underground area has storage rooms, lockers and other areas that need to be kept dry," stated Rob Whitehead, senior architect at HLKB Architecture of Des Moines, IA. "That's why our first requirement in a waterproofing system was performance. We also had some complicated situations that required a top-end product, and Sika Sarnafil's waterproofing system was on that very short list."

"Fortunately, D. C. Taylor Co. and the Sika Sarnafil waterproofing system got the job," Whitehead stated. "I was pleased about that because the Sika Sarnafil people were very smart and timely — responding promptly to my requests — and that makes a big difference."

John Mirchich, associate director, construction administration at UNI, was also happy that D. C. Taylor Co.'s proposal including the Sarnafil® membrane was selected. "We had D. C. Taylor Co. install Sarnafil roofing membrane on a portion of the UNI-Dome four or five years ago, and it has worked out very well," he said.

A Helpful Assist

One of the complicated situations that Whitehead referred to earlier involved the addition of a two-story Hall of Fame on the plaza. "Originally this was going to be one big, flat plaza, 100 feet by 250 feet," Whitehead said. "But then we added this *Hall of Fame* glass walkway, which bisected the plaza into two smaller plazas. This change in design meant we had to add a curb around the walkway."

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In addition, there were large ceremonial steps that went 12 feet up above the plaza level into the concourse level of the arena and the ticket offices underneath, and these steps had to be tied into the rest of the plaza. Fortunately, Sika Sarnafil representatives were “incredibly valuable” in working out some of these details, Whitehead said.

“They know their product better than anyone, so we worked very closely with them in working out many construction details,” he explained. “When you find someone willing to sit down and explain things to you, you tend to want to work with them more and more. I really appreciated their willingness to put forth that kind of effort — it helped us achieve what we were after.”

A Full Court Installation

D. C. Taylor Co., a commercial and industrial contractor headquartered in Cedar Rapids, Iowa, faced many challenges during the installation, including dealing with many different trades while working under a tight time deadline.

“We were working with glazers, sheet metal workers, carpenters, and some structural workers who had to walk across our waterproofing installation in order to enter the building,” said Mike Stickney, regional manager at D. C. Taylor Co. “We had to constantly coordinate our efforts with them to make sure our quality workmanship wasn’t compromised.”

The installation began with D. C. Taylor Co. installing two layers of two-inch Sarnatherm extruded polystyrene insulation, loosely laid in place over a tapered/sloped concrete substrate. This was topped with Sarnafil NWP felt, and then the orange, 80 mil G476 membrane was loosely laid in place with all seams hot-air welded.

On curbing, curtain walls, and areas adjacent to the walkway, G459 membrane



Sika Sarnafil's waterproofing membrane installed on the University of Northern Iowa's McLeod Center Plaza.

was set into Sarnacol 2165 grid adhesive. The G476 field membrane was then welded to the G459 for a watertight application. A full-time monitor observed 48-hour flood tests and checked all seams for G455 watertight integrity. Sarnafil G455 protection membrane was then loosely laid in place. Another subcontractor then installed the pavers.

The perimeter of the plaza was unusual because it contained 320 locking pins that had to be set in Sika Sarnafil grid adhesive and flashed with membrane. These locking pins were used to lock in the pavers.

Perhaps the biggest challenge, however, was making sure the large stairways on each side of the plaza leading into the McLeod Center were watertight. “The walls on each side of the steps left a huge gap, where water could easily enter, and which we identified as serious leak hazards.” Stickney explained. “To solve this, D. C. Taylor Co. worked with a Sika Sarnafil representative to design special interlocking metal waterways made of Sarnaclad metal. These waterways serve as a custom termination point for the Sarnafil membrane, providing a watertight seal.” Paver steps were then installed over the waterproofing membrane.

“Water testing for the stairs wasn’t an easy

process,” Whitehead said. “D. C. Taylor Co. did a great job with it.”

It was this attention to detail and quality workmanship that earned D. C. Taylor Co. second place in Sika Sarnafil's 2006 Waterproofing Project of the Year competition.

Hall of Fame-Worthy Results

The Sika Sarnafil waterproofing system installed safely and professionally by D. C. Taylor Co. is scoring big for the McLeod Center Plaza. “We had a winter full of snow and ice, but there haven’t been any leaks,” said Whitehead. “This was my first experience with Sika Sarnafil, and it was a good one, which is why I would specify the waterproofing system again.”

Mirchich said he would also use the waterproofing system for another plaza. “Sika Sarnafil is a good company to deal with and have a good quality product. I’m happy with the outcome.”

“Overall the project went very well, and I’m pleased with the Sarnafil waterproofing membrane,” Stickney said. “D. C. Taylor Co. is proud to be part of this project, and of our work with Sika Sarnafil.”

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