

Project Profile



Project

The Shops at Prudential Center
Boston, MA

Owner

Boston Properties

Roofing Consultant

Facility Engineering Associates
Boston, MA

Roofing Contractor

Commonwealth Building
Systems, LLC
Rockland, MA

Roofing System

Adhered system using lead
grey (roof) and tan (vertical
EFS replacement) 60 mil
Sarnafil® G410 membrane, and light
grey walkway protection pads

Project Size

136,000 square feet

Completed

September 2007

Luxury Shops Select Sika Sarnafil Roofing Systems for Quality

The Shops at Prudential Center is connected to the 52-story Boston landmark Prudential Tower, several hotels, and a convention center, and so is a favorite destination for tourists, business professionals, and Boston residents alike. The 23-acre retail complex also features 75 upscale stores and restaurants — including Saks Fifth Avenue, Lord & Taylor and Talbots — that are known for excellence and quality. Therefore, it is not surprising that when the original roofs of the commercial center started to fail, owners Boston Properties decided to replace them with Sika Sarnafil roofing systems.

The original ballasted roof, a mechanically attached and fully adhered EPDM roofing system over The Shops, had started to fail sometime in 2006. “It leaked during almost every rain storm,” according to Dan Hulverson, a principal owner at Commonwealth Building Systems (CBS) of Rockland, MA.

Since 2005, CBS had been called upon by Boston Properties to maintain the roofs, and the annual cost to provide this service had escalated to the point where it was more cost-effective to replace them.

Facilities Engineering Associates (FEA) of Boston had worked closely with CBS and Boston Properties on maintaining the original roofs at The Shops at the Prudential Center, and so were asked to help in the decision-making process of selecting a new roof.

“We worked closely with FEA and Boston Properties to develop a feasible plan for this enormous undertaking while developing a durable roof design that would service the facility over the long-term,” Hulverson explained.

A High Quality Solution

Jim Justus, a partner with Facilities Engineering Associates, said that they looked at many different roofing systems, including a BUR and EPDM, before selecting the Sika Sarnafil vinyl system.

“There were several reasons we chose the Sika Sarnafil system,” Justus stated. “First, we’ve had good experience with Sika Sarnafil in the 10 years we’ve been working with them. They produce a good product and we’ve never had any callbacks on any of their roofs. Second, their pricing was similar to EPDM. In addition, they were able to provide an extended warranty for 20 years.”

Another significant advantage of the Sika Sarnafil vinyl system — because it is

Sika®

Sarnafil®

a thermoplastic roofing membrane, its seams are hot-air-welded, which means the seams are literally fused together to form a monolithic continuous sheet. "We are a big fan of heat-welded seams, and knew with the Sika Sarnafil system we would end up with one solid piece of roof because of the seams," Justus explained. "Whereas with glued seams, like those used in EPDM systems, the adhesive fails after a period of time."

Finally, the Sika Sarnafil membrane was available in a variety of colors, including lead grey – an important consideration for this highly visible roof.

Setting the Stage for Success

One of the biggest challenges in installing the roof was transporting all of the materials to and from the job site. Some areas of the roof were as far as 1,000 feet from the lay down area, and the worksite itself is located in one of Boston's busiest commercial areas. To address these issues, CBS created five different staging areas, and used powered buggies, special ramps, and bridges to move ballast, debris and new materials to and from the work site.

It was also crucial that the 60,000 daily visitors to the Prudential Center not be inconvenienced in any way during the roof installation. In order to minimize noise, CBS adhered the new roof insulation with Sika Sarnafil's low-rise foam adhesive instead of with mechanical fasteners. A layer of moisture-resistant gypsum board was incorporated as a cover board to offer superior resistance to rooftop foot traffic. Foot traffic resistance was particularly important to the roof design because there are frequent and continuous rooftop maintenance and equipment modifications being undertaken to accommodate the varied tenants of the retail shop.

Innovative Problem Solving

In addition to the lead grey roofing membrane, more than 3,000 square feet of tan membrane was applied vertically



Color was a consideration when selecting a roof for The Shops at Prudential Place due to the high visibility the roof received from the surrounding high rise buildings and towers.

to replace some failing low-rise exterior insulated finish system (EIFS). "The original design documents called for extensive EIFS finish system repair and reconstruction, but we suggested using Sika Sarnafil membrane in a custom tan color in a vertical application that would closely match the existing EIFS," Hulverson explained.

"Using the Sika Sarnafil membrane on the walls where the EIFS was failing not only gave the walls better waterproofing, but it also enabled the transition between the walls and the roof to be hot-air welded together, providing continuous waterproofing," said Justus. This also meant the roof system warranty could be extended to include the Sika Sarnafil on the walls.

Snow slide-off from sloped glazing systems and projections on the facades of the adjacent high rises were another concern. "The original roof used interlocking pavers, which became damaged and displaced as a result of the snow slide impact," Hulverson stated. "To avoid this damage in the future we used 7,500 linear feet of light grey Sika Sarnafil walkway protection treads."

CBS also recycled the insulation that was removed during the reroofing process. "Recycling not only benefits the environment, but it can also be less disruptive than

disposal," said Hulverson. "Neatly stacked insulation takes up less space than haphazardly loaded debris, which meant fewer loads and less disruption."

As a result of its problem solving and attention to detail on this project, CBS won Third Place in Sika Sarnafil's 2007 Project of the Year low slope category. "We're very proud of the work done by our crew and foreman Matt Aldoupolis," Hulverson said.

Satisfied Customers

The time saved using Sika Sarnafil on the walls, coupled with Commonwealth Building System's efficient material and debris handling methods, allowed for a portion of the work to be completed a year earlier than originally anticipated, no doubt delighting the building owner and its tenants. "Commonwealth Building Systems performed well and were very cooperative," Justus stated. "Everything is in good shape and we would definitely use Sika Sarnafil again. In fact, we typically specify Sika Sarnafil for almost every roofing project we handle."

And as any business owner at the Shops at Prudential Center knows, satisfied, repeat customers are the key to success.

Sika Sarnafil

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