

# SarnaProof

## PROJECT PROFILE

Dia:Beacon (museum)



### Project

Dia:Beacon (museum)  
Beacon, NY

### Owner

Dia Art Foundation

### Architect

Open Office  
New York, NY

### Roofing Contractor

Pfister Roofing  
Paterson, NJ

### Roofing System

Sarnafil EnergySmart Roof,  
60-mil G410 adhered

### Project Size

218,436 sq. ft.

### Completed

May 2003

### The Making of a Museum

On the banks of the Hudson River, sat an old, abandoned factory. Built by Nabisco in 1929, then sold to International Paper in 1996, the building was a model of early twentieth-century industrial architecture, with a broad grid of supporting columns inside and over 34,000 square feet of sawtooth skylights on the roof.

The building sat empty for a number of years, until, in May of 2000, International Paper donated it to Dia Art Foundation, one of the world's preeminent contemporary art institutions. Dia set out to turn the old factory into a world-class art museum, with the goal of displaying the Foundation's collection of works dating from the 1960s to the present.

With a wide-open interior, high ceilings and an abundance of natural light, the building was particularly suited for contemporary art, which, because of its character or scale, cannot easily be accommodated by conventional museums. Dia:Beacon would include works from such renowned artists as Andy Warhol, Richard Serra and Walter De Maria.

### The Right Roof System Was Critical

The Foundation realized the building required extensive renovations. The roof, especially, needed special attention. Vegetation was growing out of the drains and crevices, and the old coal tar pitch roof was in terrible shape, with sections of the structural lightweight concrete roof deck completely destroyed.

The architectural firm of Open Office, headquartered in New York City, knew the roof and the skylights were critical to the renovations. "Here we had this amazing factory building with 190,000 square feet of skylit space," said Lyn Rice, Partner at Open Office. "When we shopped around for a roof, we absolutely needed a material that was durable and could be flexible enough to work around all the sawtooth skylights. We also wanted a light-colored product that would save on energy costs – but our primary objective was to find a roofing material that would most effectively reflect the light off the back of the skylights and into the interior space."

## Sarnafil Comes to the Forefront

Several roofing systems were considered. Although some were immediately eliminated due to cold weather application restrictions, it wasn't until Joel Silverman, Dia's independent construction consultant, got involved that Sarnafil was brought into the picture.

Silverman had recently supervised the building of a casino for Carl Icahn in Las Vegas that used a Sarnafil roof. He was impressed by the Sarnafil membrane and liked its reflectiveness. To confirm his preference for Sarnafil, Silverman contacted an acquaintance at Brookfield Financial Properties, a major New York City-based owner and property manager. Brookfield had developed several properties in New York, Boston and Toronto with Sarnafil roofs, and gave the company high marks for product and technical support.

## Roof Poses Many Challenges

Enter the team of Sarnafil and Pfister Roofing, faced with a very big challenge. "This was not an ordinary roofing job," said Dieter Pfisterer, CEO at Pfister Roofing, a Sarnafil approved Elite level applicator. "There were so many details on the roof that we developed custom drawings – and actual mock-ups – in our shop and brought them to our first meeting with the owners and architects."

One of the main challenges on the roof was the skylights. The roof held hundreds of sawtooth skylights with roof sections jutting up and out at close to a 45 degree angle to the flat roof and connected at the highest point to a window pane that stood nearly perpendicular to the flat roof. Each sawtooth roof section extends 15 feet above the roof and is spaced 18 inches apart, giving the contractors a challenging space in which to work. The window panes were old and brittle, and subject to hairline cracks at the slightest movement or vibration, so extra care needed to be taken when installing the roofing system and custom flashings.

In addition, the roof was covered with HVAC equipment and thousands of feet of elevated duct work that penetrated the roof vertically and horizontally, in all different angles, making waterproofing difficult.



Photo: Michael Govan. ©Dia Art Foundation.

## Installation Success

After clearing and planing the existing coal tar pitch roof and replacing the damaged roof decks, Pfister Roofing adhered a layer of Sarnatherm polyisocyanurate insulation, then began installing the roofing membrane. To provide extra waterproofing protection, Sarnafil membrane was adhered to many walls that would normally require stucco or siding, and was used as flashing on the skylight sidewalls and other penetrations, parapet walls and elevator shafts.

The Sarnafil membrane, which was adhered to the insulation in the small valleys between the skylights and on the back of the sawtooth roofs, allowed the light to bounce off the skylights and up against the ceiling panels inside the building, producing an interesting and beautiful light in the museum space below.



John Chamberlain, *The Privet*, 1997.  
Photo: Nic Tenwiggenhorn. ©Dia Art Foundation.

## A Roof as a Work of Art

Sarnafil and Pfister Roofing proved to be the perfect solution, according to Dia:Beacon's Director of Operations, James Schaeufele. "Pfister Roofing performed great during the whole project. And the roof turned out fantastic," he said. "It took a lot of abuse by other trades during construction yet it turned out to be a roof that is durable and easily repaired."

He adds, "We like that it's white and reflective, which will help with the cooling loads in the summer. It was also important that we had the reflective abilities on the sawtooths because it's all northern light that bounces in. We're very happy with it."

The architect was also impressed. "I'm a believer in Sarnafil," said Rice. "It's a great product and I think for Dia it was a perfect match. The roof is important because Dia:Beacon was conceived as a daylight-only museum, so it doesn't rely on artificial light. It relies solely on natural light. In this case, Sarnafil is the system that everyone could agree on, from the most aesthetically minded to the most pragmatic. When the needs of those two polar ends are satisfied, it's a very good place to be."

For more information on how you can have a cost-effective Sarnafil roofing or waterproofing system on your institutional, industrial or commercial building, contact Sarnafil today.  
1-800-451-2504 • Fax: 1-781-828-5365 • e-mail: [webmaster@sarnafilus.com](mailto:webmaster@sarnafilus.com) • [www.sarnafilus.com](http://www.sarnafilus.com)  
100 Dan Road, Canton, MA 02021

  
Sarnafil Division