



# SIKA AT WORK

## NATIONAL HURRICANE CENTER MIAMI, FLORIDA

ADHERED ROOF SYSTEM USING  
60 MIL Sarnafil® G 410 EnergySmart Roof® MEMBRANE IN WHITE

**Sarnafil**

**BUILDING TRUST**



# SARNAFIL ROOF PROTECTS MIAMI'S NATIONAL HURRICANE CENTER

As catastrophic hurricanes like Harvey, Irma, Maria and, most recently, Florence have shown, the National Oceanic and Atmospheric Administration's (NOAA) National Hurricane Center plays a critical role in protecting Americans by forecasting and tracking these massive storm systems. This Miami-based facility has to be functional at all times, even during a Category 5 hurricane. So when the building needed to replace its failing roof, it was crucial that the new roof be storm-proof and installed without disrupting the Center's operations.

"The National Hurricane Center is a mission-critical facility for the NOAA, so the roof has to be able to withstand hurricanes and comply with the Miami-Dade High Velocity Hazard Zone code," said Ceferino (Rino) Balatbat of Rino F. Balatbat Architects of Federal Way, Washington. Balatbat suggested that the existing built-up roof (BUR) be replaced with the Sarnafil PVC membrane. "I like the flexibility of the membrane compared to a BUR, plus I have been using the Sarnafil system since the early 1980s and have had good experience with it," he explained. Balatbat also liked how the light color of the Sarnafil membrane reflects the sun's heat, keeping the building interior cooler and therefore reducing energy costs – an important consideration in Florida.

Another advantage is that Sika Roofing manufactures and sells roofing products for the whole building envelope, according to Matt Cooper, project manager for Advanced Roofing, Inc. (ARI) of Fort Lauderdale, the roofing contractor on the project.

"Using Sarnafil's PVC roof system, along with Sika's SikaQuick Smooth Finish Mortar and Sikaguard waterproofing solutions on the rooftop walls, allowed the building owner to get warranties from a single manufacturer," Cooper stated. "This would not have been possible using a manufacturer that only makes roofing products."

## A DELUGE OF CHALLENGES

ARI faced several daunting challenges when installing the new roof, which was actually a two-roof system involving an SBS modified torched-down vapor retarder used as a temporary roof system with the separate Sarnafil system applied on top. Both systems had to be completed on a compressed work schedule, since the NOAA wanted the project to be completed in time for hurricane season. To accomplish this, ARI used two work crews for a portion of the roofing project. Lightning protection, metal, fall protection and waterproofing activities were done simultaneously to accelerate the project.

Additionally, the general contractor, Venergy Group of Fort Pierce, Florida, brought in an HVAC contractor to replace the rooftop units. "We discovered that the HVAC coils had to be replaced, which was not included in the original scope of work," said Josh White, project manager at Venergy Group. "This slowed things down a bit, and this section of roof became the last phase of the project. When the coils were finally replaced, ARI had to remove the old roof and install the new roof in just a few days."

Satellites on the roof – which could not be taken offline – posed another problem. "When we did the walk-through before the job, we saw that the satellites – which were added after the existing roof systems – were never flashed correctly, so water was going through penetrations in the roof into a mechanical room," Cooper stated. "It was surprising to see so much of that part of the roof was soaked."

"Working around the satellites was very intricate," White commented. "There were very big I-beam stands holding thousands of pounds of satellites and antennae, and at some points there were only six inches between the stands and the roof."

## PROJECT

National Hurricane Center  
Miami, Florida

## OWNER

The National Oceanic and Atmospheric  
Administration (NOAA)

## ROOFING CONTRACTOR

Advanced Roofing, Inc.  
Fort Lauderdale, Florida

## ARCHITECT

Rino F. Balatbat Architects, LLC  
Federal Way, Washington

## GENERAL CONTRACTOR

Venergy Group, LLC  
Fort Pierce, Florida

## ROOFING SYSTEM

Adhered Roof System using 60 mil Sarnafil  
G 410 EnergySmart Roof membrane in White

## PROJECT SIZE

24,700 square feet

## COMPLETED

July 2016





Fortunately, ARI was able to successfully work around these challenges and complete the roof on time. “ARI did a good job and were very knowledgeable,” Balatbat said.

White concurred. “It was obvious ARI is a very experienced contractor,” he stated. It was this professionalism that earned ARI third place in the Low Slope Category of Sika Roofing’s 2016 Project of the Year competition.

Cooper credits some of the success of the job to the Sika Roofing representatives on the project. “The technical representatives were there quite often and the sales representative helped us at the beginning of the project,” he stated. “All the reps are really great about being available.”

#### **TESTED BY MOTHER NATURE**

As if on cue, weeks after the roof of the National Hurricane Center was completed, Hurricane Matthew slammed into Florida. Although the Category 5 hurricane had weakened to a tropical storm by the time it reached Miami, it was still a good indicator of the new roof’s performance. “Matthew was a good test for us, and the roof came through the storm with no damage,” White remarked.

“This roof is a Cadillac system with superior wind uplift,” Cooper said. “The roof is going nowhere. Even Irma, a Category 4 hurricane that made landfall in Florida in September of 2017, couldn’t put a dent in the new Sarnafil system despite carrying sustained winds of up to 112 miles per hour.”

Proof positive that with the new Sarnafil roof successfully installed, the National Hurricane Center will be able to weather even the worst storm.



# NATIONAL HURRICANE CENTER



## WHO WE ARE

The commercial roofing industry has relied on thermoplastic single-ply membranes from Sika for more than 50 years to achieve sustainable roofing and waterproofing solutions.

Sika is a globally active specialty chemicals company. Sika supplies the building and construction industry as well as manufacturing industries (automotive, bus, truck, rail, solar and wind power plants, facades). Sika is a leader in processing materials used in sealing, bonding, damping, reinforcing and protecting load-bearing structures. Sika's product lines feature high-quality concrete admixtures, specialty mortars, sealants and adhesives, damping and reinforcing materials, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems.

Our most current General Sales Conditions shall apply.  
Please consult the Product Data Sheet prior to any use and processing.  
ISO 14001: 2004-Compliant



ENERGY STAR® for roofing products is only valid in the United States  
ENERGY STAR is a trademark of the U.S. EPA.  
LEED® is a trademark of the U.S. Green Building Council.  
Green Globes® is a trademark of the Green Building Initiative

**SIKA CORPORATION • ROOFING**  
100 Dan Road • Canton, MA 02021 • USA  
Tel: 781-828-5400 • Fax: 781-828-5365  
usa.sarnafil.sika.com

**Sarnafil**

**BUILDING TRUST**

