



# SIKA AT WORK

## SAN DIEGO COUNTY OPERATIONS CENTER - CAMPUS CENTER SAN DIEGO, CALIFORNIA

GREEN ROOF SYSTEM USING 80 MIL Sarnafil® G 410 MEMBRANE IN TAN,  
AND 80 MIL AND 120 MIL SELF-ADHERED Sarnafil®  
WATERPROOFING MEMBRANE

**Sarnafil**

**BUILDING TRUST**



# SARNAFIL WATERPROOFING SYSTEMS CREATE CAMPUS CENTER OASIS

The Campus Center Building at the new San Diego County Operations Center is designed to be a symbol of sustainability. This meeting area and food service facility features a rooftop terrace, a vegetated green roof and photovoltaic solar panel arrays on trellises, which also serve as shade producers. It is no surprise that this building is also LEED® Platinum certified.

The Campus Center is surrounded by four buildings and is part of the County Operations Center, a new 1.2 million-square-foot complex of government office buildings, laboratories and a parking structure. The Campus Center is designed to be an area where workers and visitors can meet, eat a meal or just enjoy the fresh air. The one-story building houses the Chamber, a large assembly room, the Commons, a commercial kitchen and indoor and outdoor dining areas.

As Brian Knochenhauer, developer at Lowe Enterprises of San Diego, stated, "The County Operations Center demonstrates the County's commitment to a sustainable and well-designed government campus that provides long-term value to the many users of the campus."

## BUILDING ON HISTORY

Deciding which roofing and waterproofing systems to use on this very visible and energy-efficient structure was an easy decision for Jeff Redlitz, project manager at the Department of General Services for the County of San Diego. When he was hired by the county, one of his first charges was to select a roof standard for the larger buildings owned by the County of San Diego.

"We researched roofing manufacturers, did walkthroughs on numerous roof sites, did field tests on single ply and BUR systems,

worked with a waterproofing consultant and in the end decided on the Sarnafil system," he explained. "The County of San Diego owns 700 pieces of real estate in geographic areas ranging from the coast to mountains to the desert, and we needed a roofing system that would withstand all of these climates and which could also be easily repaired."

Brian Schmitt, construction manager at RJC Architects, Inc., in San Diego, agreed with Redlitz's recommendation. "We've used Sarnafil roofing systems for years and find it to be a good product for this local climate," he remarked.

## A MULTI-LEVELLED INSTALLATION

The installation of the Campus Center roof involved many different roof levels and roofing substrates. There was a second floor terrace area that required a waterproofing membrane and full pedestal paver system, two sloped garden roof areas and roofing systems on the rooftop mechanical enclosure, as well as the elevator tower and lobby.

Eberhard Benton Roofing of San Diego faced many challenges during the installation. One was passing all the requirements of the owner's insurance.

"There was a huge focus on safety. The city of San Diego had a full-time safety supervisor at this site. On-the-spot drug testing was performed on all people that came to the site. We all wondered just how much the safety requirements would impact the job costs in terms of labor and our safety manager's time," stated Duke Choi, project manager at Eberhard Benton Roofing. "We had purchased a vast inventory of safety equipment just prior to this job and it looked

## PROJECT

San Diego County Operations Center  
San Diego, California

## OWNER

County of San Diego

## ROOFING CONTRACTOR

Eberhard Benton Roofing  
San Diego, California

## ARCHITECT

RJC Architects, Inc.  
San Diego, California

## DEVELOPER

Lowe Enterprises Real Estate Group - West  
San Diego, California

## WATERPROOFING SYSTEM

Adhered EnergySmart Roof® using  
80 mil Sarnafil G 410 membrane in Tan,  
and 80 mil and 120 mil self-adhered  
Sarnafil waterproofing membranes

## PROJECT SIZE

12,250 square feet

## COMPLETED

July, 2012





like we were going to get a chance to try it out. The safety rails we set up around the perimeter of every deck worked out so well that the safety inspector asked if they could use the rails for other trades when we were finished with them."

One major challenge was with the green roof. "A metal subcontractor was supposed to create a smooth transition with metal crickets, but they were not able to get them right at all four locations. At those locations, there was a step down from the sloped metal deck to the concrete substrate," Choi explained.

Eberhard Benton Roofing solved the problem by adding custom field-fabricated 25 PSI extruded polystyrene and gypsum board adhered with Sarnacol® 2163 adhesive at the step-down areas, creating smooth transitions. Then they installed a full pedestal paver system to provide smooth walkways.

"We also found out that the stairs weren't at the height we expected, so we had to remove and create a transition with custom tapered insulation. The pavers had to be flush within a quarter of an inch for everything to be ADA compliant," stated Jim Lifgren, vice president and general manager at Eberhard Benton Roofing.

The roof used an Electronic Field Vector Mapping® (EFVM) system – a leak detection system that uses low voltage electricity to identify breaches on the roof. "This is the first time we've used it in San Diego, and it was quite impressive," Lifgren said. "Concrete decks hold the water until it finds a hole through the concrete, like at drains or vent pipes. This pinpoints the location of the leak."

"It was essential to have good communications with all the other trades during the roof installation, so we had lots of meetings," Lifgren added. "There were different specs and waterproofing systems using special PSI values which took extra time to produce and if materials were delayed we had to work around certain areas and jump from one deck to another."

Sika Roofing representatives also provided technical support during the installation. "Our rep was very helpful – he was onsite at the beginning of the project and then during the many technical issues that arose, and with the EFVM installation," Lifgren said. "They did numerous site visits and were great to work with."

"Sika technical representatives reviewed the system during installation and upon completion," stated Knochenhauer. "They also provided support to the architect during the design process."

The work of Eberhard Benton Roofing also received note. "This installation had a lot of interesting flashing details and lots of penetrations due to skylights, solar tubes, irrigation lines and roof vents," explained Schmitt. "However, there have been no problems thanks to the work of Eberhard Benton Roofing."

It was this professionalism and attention to detail that earned Eberhard Benton Roofing third place in the Waterproofing Category of Sika Sarnafil's 2012 Project of the Year competition.

### THE WAY OF THE FUTURE

The Campus Center roof continues to live up to expectations. "We went through some very rainy periods, giving the roof nature's own water test, but I recently went up to look at the roof and it looked perfect," Lifgren remarked.

"Like our other Sika roofs, this roof is performing well," Redlitz said. "I've installed over half a million square feet of Sarnafil over the past 17 years and will continue to do so."

Added Schmitt, "I certainly would use the Sarnafil system again. I think it is a great product for this climate."



# SAN DIEGO COUNTY OPERATIONS 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**

