

Project Profile



Project

H.D. Woodson High School
Washington, D.C.

Owner

District of Columbia Public Schools

Roofing Contractor

CitiRoof Corporation
Columbia, Maryland

Vegetated Green Roof Contractor

Furbish Company
Brooklyn, Maryland

Architect

Cox Graae & Spack Architects
Washington, D.C.

Designer - Builder

HESS Construction + Engineering Services
Gaithersburg, Maryland

Roofing and Waterproofing Systems

Adhered EnergySmart Roof® using
60 mil Sarnafil® G410 membrane
in light gray color, and 80 mil
Sarnafil G476 waterproofing membrane

Project Size

118,500 square feet

Completed

August 2011

Combination White and Vegetated Roofs Give School High Marks in Sustainability

When you are building the first new high school in the District of Columbia's public school system in more than 30 years, you want to make sure you get it right. The 230,000 sq. ft. H.D. Woodson High School features a new swimming pool, a 1,000 person auditorium, and a flexible floor plan which allows classes to be combined when needed. It also incorporates many sustainable features that are expected to qualify it for the LEED® Gold certification. (It is currently certified for LEED Silver.)

"We wanted this building to be state of the art in many ways, including on the roof," said Derek Banocy, AIA and an associate at Cox Graae & Spack Architects of Washington, D.C. "We made part of the roof a light-color, reflective membrane to keep the building cooler, and another part a vegetated roof to reduce stormwater run-off." A major portion of the Sarnafil membrane used to cover the school roof surface contained 10 percent recycled content.

Banocy said that they chose the Sika Sarnafil roofing and waterproofing membranes because "they were just what we were

looking for. The roof membrane is reflective, and their heat-weldable seams appear to be very solid and impenetrable. Plus, working with the same manufacturer for both systems made a lot of sense."

A Strong Assembly

HESS Construction + Engineering Services of Gaithersburg, Maryland was selected to be the design-builder for the project, and CitiRoof Corporation of Columbia, Maryland was chosen to install the roof. "This was not your typical roof – in addition to having a vegetated green roof there were different membranes and types of fasteners, as well as different elevations," said Bobby Morrison, LEED AP and project manager at HESS. "CitiRoof was very knowledgeable about these things and had a very strong relationship with the suppliers. They gave us one less thing to worry about."

"We have a wonderful rapport with Sika Sarnafil and are proud to be one of their Elite contractors," remarked Lee Goldhammer, president of CitiRoof. "They have top-of-the-line products and we have a very good symbiotic relationship with them."

Michael Furbish, president of Furbish Company of Brooklyn, Maryland, the

Sika®

Sarnafil®

vegetated green roof contractor on the building, also has strong relationships with CitiRoof and Sika Sarnafil. "Sika Sarnafil is a great partner to work with and has a very good single-ply membrane," Furbish stated. "CitiRoof is one of the best roofers in the area, and we were delighted that they called upon us to install the green roof."

Working under a Deadline

One of the biggest challenges of the roof installation was the very tight timeframe. "We were on an accelerated schedule to get this roof done," Goldhammer explained. "And because it was the first new school in decades it was a high profile job, so we had a lot of people watching us, including politicians and school board members."

"We had to be sure that the kids would be in their seats in the new high school on August 22," Morrison added. "Typically high schools are built in 18-24 months, but in this case we had only 14 months."

Morrison credits teamwork as being "critical" to the success of the project. "We wanted to get the roof down and make the building watertight as soon as possible during a very bad winter, which is where having a roofing contractor who can react and respond to you is critical," he remarked. "CitiRoof did a great job with that and they were also a model contractor when it came to sharing resources, such as their crane. They realized that time is money and getting everything done on time is a win/win for everyone. If all roofers were like them my job would be a lot easier."

It was this professionalism that earned CitiRoof Corporation Third Place in Sika Sarnafil's 2011 Contractor Project of the Year competition, in the Waterproofing Category.

Once the building was watertight and the waterproofing membrane was installed, the next step was installing the vegetated green roof. "There were lots of different trades working on the roof, which made scheduling the green roof installation very difficult," Furbish



stated. Morrison added that much of the summer it was too hot to plant and establish the green roof, which also added delays.

Sika Sarnafil representatives played their part in keeping things on schedule. "The Sika Sarnafil technical people were right there with me the whole time, and were always very helpful," Goldhammer said. "And their shipping was outstanding and unbelievably fast — oftentimes product would be on the dock the next day."

Acing Tests from Mother Nature

While everyone breathed a sigh of relief when the school opened on time on August 22, 2011, that feeling was short-lived when an

unusual 5.8 magnitude earthquake rattled the D.C. area on August 23. "Parts of the school veneer fell out during the earthquake, but the roof did well," Banocy stated.

"Not only did we have the earthquake but two weeks later we had one of the worst periods of rainfall in recent history, with 12 or 13 inches of rain in a 72 hour period," Morrison explained. "Right off the bat this building was put through two significant tests, without issue or having to close. That's a real credit to all the contractors involved."

Vegetated roofs can absorb significant amounts of stormwater run-off and, according to Furbish, about 60 to 65 percent of the rainfall on this roof will remain

captured on the vegetated roof. Morrison said that even during the heavy rainfalls the vegetated roof and the three collection tanks tied into the system performed up to expectations.

Everyone involved with the project said they would use the Sika Sarnafil system again. "The system is great, the reputation is good, and the representatives are responsive," Morrison pointed out. "There's a lot of value in that."



Reflective energy efficient EnergySmart Roof and vegetated Sarnafil green roof being installed on H.D. Woodson High School.

Sika Sarnafil

A Division of Sika Corporation
100 Dan Road
Canton, MA 02021
Telephone: 800-451-2504
Fax: 781-828-5365
usa.sarnafil.sika.com

Sika Sarnafil

A Business Unit of Sika Canada Inc.
6915 Davand Drive
Mississauga, Ontario L5T 1L5
Telephone: 905-795-3177
Fax: 905-795-3192
can.sika.com

