

Case study

Henry® Provides Building Envelope Systems® Solutions For Miami Beach Convention Center Renovation

Project planners turn to Henry® roofing, air barrier and waterproofing solutions

Project Background

Built in 1957 and expanded in 1989, the Miami Beach Convention Center (MBCC) has hosted many historic events, including several national party conventions and the 1964 World Heavyweight Championship boxing match in which Cassius Clay, later known as Muhammad Ali, defeated Sonny Liston.

To meet the demands of the 21st century, the MBCC committed to a \$615 million renovation and expansion. When complete in 2018, the 1.4 million-square foot LEED-certified facility will feature a 60,000-square foot grand ballroom, a 20,000-square foot glass rooftop ballroom, new technologically advanced meeting rooms and new indoor/outdoor public spaces.

Following extensive evaluation and testing, project planners selected Henry® Building Envelope Systems® solutions to restore part of the convention center's existing roof, serve as the building's air barrier and waterproofing systems, and provide gaskets for the underground water management system.

Roof restoration over replacement leads to significant savings

A key challenge MBCC project planners faced was the sheer size of the 600,000-square foot roof structure, most of which comprised the existing roof. Tearing off and replacing the existing roofing material would have required a major upgrade of the roof structure to comply with the latest, more stringent roof uplift requirements for South Florida's High-Velocity Hurricane Zone. According to Ned Kirschbaum of Fentress Architects, the architectural firm of record for the MBCC project, such an upgrade would have increased project costs considerably. Fortunately, Henry® was able to deliver a much more economical Miami-Dade County Approved roof restoration system solution that could be applied on top of the existing roof material.

"Using the Henry® Pro-Grade® Silicone roof coating system, comprised of Pro-Grade® 988 Silicone White Roof Coating and Pro-Grade® 294 Base Coat, resulted in significant savings in both cost and time," Kirschbaum said. "It enabled us to extend the life of the existing roof and avoid a significant incremental cost to the owner."

A key factor that favored the Pro-Grade® coating system was that it offered an integrated solution – one with compatible roof coatings, primers and mastics needed to address all of the existing roof conditions. "This helped minimize the need to do a lot of special detailing," Kirschbaum said. The roof coating system also provided the benefit of ponding water resistance.

Tim Eberly, President of Tecta America® Corp. of South Florida, the firm responsible for installing the roof restoration system, added: "With the Pro-Grade® Silicone roof coating system, we were able

to get the job done faster with one-quarter the manpower. Also, with the constant threat of rain in South Florida, the 15-minute dry time of the Pro-Grade® system allowed us to keep working despite chances of inclement weather."

Finally, Kirschbaum noted that the warranty options available on the Pro-Grade® Silicone roof coating system were an important factor in choosing Henry®. By choosing to restore the roof rather than replace it, the MBCC team was able to restore the roof to like-new conditions at less than half the cost of a complete rip and replace.

Project at a glance

Location: Miami, FL

Architect: Fentress Architects

General Contractor: Clark Construction

Installer: Tecta America Corp. of South Florida

Henry® system solutions featured

Roof system (restoration):

Pro-Grade® 988 Silicone White Roof Coating

Pro-Grade® 294 Base Coat and Sealer

Air Barrier system:

Air-Bloc® 31MR Fluid Applied Air and Water Barrier

Blueskin® SA Self-Adhered Water Resistive Air Barrier

Air-Bloc® LF Liquid-Applied Flashing

Waterproofing system:

Henry® 790-11 Hot Rubberized Asphalt

Underground water management system:

RAM-NEK® Gaskets

Henry® air barrier and waterproofing systems complete the building envelope system

With an effective solution in place to restore the structure's roof, project planners next turned to Henry® for air barrier and waterproofing solutions for the project's new construction.

With a complete air barrier product offering, Henry® was able to provide an integrated and compatible air barrier system consisting of Air-Bloc® 31MR for the primary air barrier membrane and Blueskin® SA and Air-Bloc® LF for the flashing details. A main factor in specifically selecting these two products was their ability to contribute towards an NFPA 285-compliant assembly. In addition, the high humidity that makes up the Miami climate played a role in selecting a vapor permeable membrane over an impermeable membrane. With a vapor permeable membrane, the building is able to better manage the internal humidity level in combination with the HVAC system.

In order to provide a durable, seamless waterproofing solution for the parking structure, which was constructed on the fourth and fifth floors of the building over occupied space, the MBCC team selected Henry® 790-11 Hot Rubberized Asphalt. The waterproofing system also consisted of insulation supplied by Henry®. By supplying the complete waterproofing system, Henry® was able to offer a single-source warranty that covered both the Henry® 790-11 Hot Rubberized Asphalt and the insulation.

Eberly remarked on the ease of application for the Henry® 790-11 Hot Rubberized Asphalt: "I really like it. It's bulletproof. There's not a lot of prep work. We had a seven-man crew and they installed approximately 8,000 to 9,000 square feet a day." He also remarked that the team was able to apply all plies in one day, significantly speeding installation.

In addition to providing the roofing, air barrier and waterproofing system, Henry® also provided RAM-NEK® Preformed Flexible Plastic Gaskets to seal concrete joints in the underground water management system.

"Henry® offers a full array of compatible products and accessories to provide a complete, integrated building envelope system. Sourcing the entire envelope system from a single manufacturer was a true benefit."

Ned Kirschbaum
— Fentress Architects

Support from a single source

"Henry® offers a full array of compatible products and accessories to provide a complete, integrated building envelope system," Kirschbaum said. "Sourcing the entire envelope system from a single manufacturer was a true benefit."

Kirschbaum explains that sourcing materials from multiple suppliers could have presented complex compatibility issues, ultimately affecting the project timeline. "For example, if you are using an air barrier from one supplier and a self-adhered flashing from another supplier, you may need to confirm that the adhesive on the flashing won't re-emulsify the weather resistive barrier."

Also, according to Enrique Desolo, Project Manager for Clark Construction, the general contractor for the MBCC project, a key advantage of working with Henry® solutions is the expertise, support and service behind each product.

"The communication and support from the Henry® representatives on the project was great," Desolo said. "They even followed up on questions about things that didn't involve Henry® products. It showed the company's commitment to making sure the entire installation was successful."

Desolo also pointed to the need for supplier flexibility: "The phasing of the MBCC project was a major challenge. We told our subcontractors and suppliers up front that we would need them to be very flexible. There were instances where we asked for help on short notice, and Henry® was very responsive."

Bringing it all together

Beyond its overall scale, the job required a complete building envelope system that would integrate seamlessly throughout the renovation and new construction phases – all while meeting the stringent Miami-Dade County regulations for hurricane resistance. Kirschbaum says the Henry® roofing, air barrier and waterproofing solutions enabled that complete building envelope system and met all of the competing challenges.

"Henry® is one of the premier building materials suppliers in the industry and we're always pleased to have them providing products for our signature projects," said Kirschbaum. "These projects are important investments for the communities we serve, so quality and longevity is an important part of what we look for in materials. Henry® delivers that."

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Printed in U.S.A. 145.3US.E405 (10/17)