

Customer

The Air Rights Center is a mixed-use building in the heart of Bethesda, Md., and includes 712,000 square feet of office space spread across its three towers—East, West and North—connected on the first level by a retail promenade.

Challenge

The owners of the Air Rights Center needed to address a water infiltration problem in the West Tower and wanted to restore the façade of all three towers.

Solution

The contractor recommended using SilPruf sealant and SilShield coating to effectively address the water infiltration problem and refresh the façade in the West Tower. Pleased with the outcome, the building owner decided to restore the façade of the East and North Towers.

Results

The combination of SilPruf sealant and SilShield coating provided a durable, waterproof solution that also enhanced the appearance of the façades. In addition, SilShield coating improved the weather resistance of the overall structure by sealing smaller hairline cracks and small holes in the pre-cast concrete façade.

The Air Rights Center is a mixed-use building in the heart of Bethesda, Md., and includes 712,000 square feet of office space spread across its three towers—East, West and North—connected on the first level by a retail promenade. In tune with the architectural style of the locality, the towers' façade is composed of pre-cast concrete and glass. The construction of the three towers was completed in 1964, 1976 and 1980, respectively.

Providing a Watertight Seal in the West Tower

In 2002, the owners of the Air Rights Center hired a local contractor to create a remedial solution that would address a water infiltration problem in the West Tower and revitalize the appearance of the façade.

Polyurethane was originally used, but due to its short-term life span, a decision was made to remove the old polyurethane sealant and re-caulk the joints with a silicone sealant, which can provide a long-lasting, watertight seal. Specifically, the contractor recommended using GE SilPruf* SCS2000 sealant and SilShield* SEC2400 coating to effectively address the water infiltration problem and refresh the façade.

The Air Rights Building, Bethesda, MD.



SilPruf is a single-component, medium-modulus, neutral-cure silicone sealant that can be used on a wide variety of materials in new or remedial applications. Its easy tooling, longer working time and color matching availability make SilPruf sealant a great candidate for remedial applications. When cured properly, SilPruf sealant exhibits excellent long-term resistance to natural weathering, including ultraviolet radiation, high and low temperatures, and rain and snow, with little change in elasticity.

After re-caulking with SilPruf sealant, the water and weather resistance capabilities of the West Tower's façade were further enhanced by the application of SilShield coating. Custom-made, limestone-colored SilShield coating was used, which provides excellent ultraviolet and fade resistance. A primerless elastomeric single-component silicone coating material, SilShield not only can provide the desired aesthetic, but also helps to improve the weather resistance of the overall structure by sealing smaller hairline cracks and small holes in the pre-cast concrete façade.



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Case Study

"GE silicone sealants and adhesives have provided excellent performance benefits."

Mark Leeman, P.E.

Facility Engineering Associates

In addition to their excellent performance benefits, GE silicone products offer system compatibility. GE's weatherproofing, structural glazing and insulating glass products are fully compatible with each other. When used together, GE silicone adhesives and sealants can provide excellent sealing performance, durability and long-lasting weatherability.

Technical Services: 1-800-255-8886

Customer Service: 1-877-943-7325

Restoring the Façade in the East & North Towers

Pleased with the outcome, the building owner decided to restore the façade of both the East and North Towers. Facility Engineering Associates, hired by the owner as the preferred consulting company, conducted tests to assess the cause of limited and irregular entry of water in the North Tower and ruled out any issues with the pre-cast concrete. However, as part of his recommendations, Mark Leeman, P.E., an associate with Facility Engineering Associates, suggested coating the North Tower's façade with SilShield coating to enhance the appearance of the façade.

After a periodic evaluation of the property's East Tower building, Leeman recommended wet sealing of the windows and re-caulking the perimeter around the windows—using SilPruf sealant—to help prevent the spalling of the pre-cast concrete. "GE silicone sealants and adhesives have provided excellent performance benefits," said Leeman, who has extensive experience with GE silicone products in prior projects.



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CDS:Case SCS2000/SEC2400