



Dow performance silicones

DOWSIL™ AllGuard silicone elastomeric coating enables cost-effective restoration of historic St. Louis building

CASE STUDY: ARCADE BUILDING



City and country

St. Louis, Missouri, USA

Products*

- DOWSIL™ AllGuard Silicone Elastomeric Coating
- DOWSIL™ AllGuard Primer
- DOWSIL™ construction sealants

Key participants

- PARIC Construcion
-Jason Szachnieski, Project manager
- James G. Staat Tuckpointing & Waterproofing Inc.
-Dan Staat, Project manager
- Dominion Development
- VL Goedecke
-Mike Rafferty, President

*Prior to February 2018, products listed were branded as Dow Corning.

Now home to luxury apartments and an assortment of businesses, the Arcade Building in St. Louis, Missouri, was constructed in the early 1900s. Listed on the National Register of Historic Places since 2003, the building has gothic revival architecture and features granite, terra cotta and glazed brick construction. Its current return to prominence, however, required an innovative solution to turn a potentially risky renovation into a cost effective undertaking.

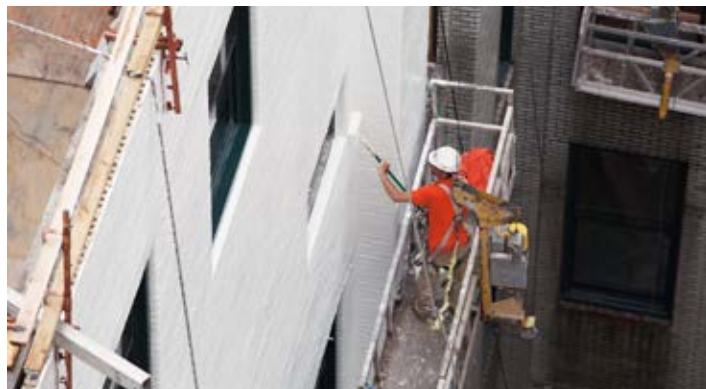
The challenge

Once an elegant and notable historic structure, the Arcade Building had suffered over the years from substantial decay caused by water infiltration. Its horseshoe-shaped courtyard, which was subject to intense rain exposure due to its design, was in especially poor condition. Glazed-brick surfaces had spalled in many places, and algae growth was extensive. The building's state of disrepair initially had convinced many potential developers that it would not be salvageable and should be torn down, so the owner was taking a chance when deciding to proceed with the restoration project. A group of 15 individual stakeholders and their 35 attorneys along with engineering firms in Chicago and St. Louis needed to be assured that the restoration project would not be a failure.

The Arcade Building features a wide variety of construction materials, including steel, terra cotta and flashing materials in addition to the white-glazed brick. Substantial expansion/contraction had taken its toll, creating additional challenges in the restoration.

Restoring the grandeur of the glazed-brick appearance would have been very costly if replacement and reglazing of the brick had been required. Fortunately, a durable and more cost-effective solution was available in a waterproofing coating from Dow.





“Not only did DOWSIL™ AllGuard Silicone Elastomeric Coating improve the waterproofing, it provided substantial cost-savings.”

-Dan Staat, Project manager
James G. Staat Tuckpointing & Waterproofing Inc.

The solution

Engineers initially desired an epoxy-based product to reglaze the exterior, but the project's tuckpointing contractor recommended DOWSIL™ AllGuard Silicone Elastomeric Coating.

“Having previously used [DOWSIL™] AllGuard Silicone Elastomeric Coating on a renovation, we were confident to recommend it for this project,” said Dan Staat, Project Manager for James G. Staat Tuckpointing & Waterproofing Inc. “The coating not only keeps the water out of the not-fully-tuckpointed brick, it improves the waterproofing of the white-glazed brick as well.”

DOWSIL™ AllGuard Silicone Elastomeric Coating was roller-applied to the 80,000- square foot facility using a two-coat application. Applied in swaths 30 to 40 feet tall at heights up to 300 feet in the air, installation of the DOWSIL™ AllGuard Silicone Elastomeric Coating took place over many days, but the product maintained a consistent look, showing no telltale aesthetic changes from the transition areas.

“Using [DOWSIL™] AllGuard Silicone Elastomeric Coating made a night-and-day difference,” said Jason Szachnieski, Project Manager at PARIC Construction. “It would have been a shame to replace the original brick because of isolated spalling. Using [DOWSIL™] AllGuard Coating enabled us to save costs and speed up the project schedule by eliminating the more intense job of removing and replacing all of the original bricks.”

Installation of the DOWSIL™ AllGuard Silicone Elastomeric Coating was quality-tested with repeated pull-testing, which indicated performance in excess of warranty requirements. Since the completion of the restoration, areas protected by DOWSIL™ AllGuard Silicone Elastomeric Coating have been free of water intrusion.

DOWSIL™ brand construction sealants were used for additional caulking needs, complementing the elastomeric coating with a complete silicone solution free from compatibility issues.

For more information

Learn more about Dow's full range of High Performance Building solutions, including service and support, at dow.com/construction.

Dow has sales offices, manufacturing sites and science and technology laboratories around the globe. Find local contact information at dow.com/contactus.



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