



**CASE STUDY
RECLADDING
ENTERGY
BY STONEPLY**

RECLADDING A NATIONAL HISTORIC REGISTER PROPERTY WITH STONEPLY

Cladding brings strength, light weight and historical integrity to office building.

Summary: StonePly Aluminum Honeycomb cladding panels replace failing marble slab cladding on a historical register property.

The Historic Preservation Alliance of Arkansas recently honored Entergy for its preservation of the Arkansas Power and Light building in Little Rock. This “International Style” office building was built some 52 years ago using marble slab cladding. When it was built the building was heralded for its sleek lines and modern appearance.

THE CHALLENGE

Over time, the solid marble cladding from the 50's had begun to deteriorate and bow. What the original architect had not considered was tendency of slab marble to bowing. The problem with the 1 ½" thick solid marble cladding slabs is the calcite that they are made of. When the marble warms in the sun, the calcite crystals expand and contract at different rates along different internal axis. Over time, the combination of bowing and weathering weakened the marble cladding panels.

THE SOLUTION

With the panels posing a real hazard, Entergy contacted Cromwell Architects and Engineers. Because of the weight of thick stone slabs there was concern with how the older building could support them. Then they found StonePly. The StonePly panels gave Entergy the ability to keep the original stone finish and style, while simplifying replacement and reducing the weight on the historic structure. With StonePly the rigid aluminum honeycomb composite keeps the stone panels straight and stable.



EXTENSIVELY TESTED AND PROVEN

To ensure that there would be no problems with the new cladding, the StonePly panels were rigorously tested by WJE (Wiss, Janney, Elstner Associates) of Chicago. The panels were subjected to testing for freeze thaw resistance, acid rain, bond strength, flexural and other properties. The StonePly performed extremely well. In a review of the testing results, Michael Stenstrom of SSI stated "SSI is very comfortable with stating that these panels exceed any building code requirements for bond strength, tensile strength, flexural strength, or horizontal shear strength".

RESTORING THE ORIGINAL APPEARANCE

To keep the original marble appearance, StonePly obtained the marble from the same quarry the original marble slabs had come from. StonePly then cut the blocks into slabs. Aluminum honeycomb was bonded to each slab. The slabs were then sliced and polished to produce thin 1/4" thick sheets of the marble permanently bonded to the super strong aluminum honeycomb backing. This allowed the new cladding to be installed quickly, minimized the load on the structure and created a panel that was 90 times stronger in impact resistance than the original stone slabs. The office remained open and in operation while the recladding took place.

THE AWARD WINNING RESULTS

The new panels were light enough to minimize the load on the historic structure and, thanks to the aluminum honeycomb backing, were easily and quickly installed. The office now stands restored to its former glory and stronger than it was before. Thanks to StonePly, the building kept its material integrity, is no longer in danger and maintains a National Historic Register Listing.

STONEPLY

real stone real strong real thin

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