



PROJECT

Built in 1965 of white precast concrete panels, the First National Bank of Mobile had a history of leaks and patchy repairs.

Spiderman (Scott Mulholland) calculated that it would cost \$700,000 just to cut out the sealant. He recommended a better idea – *Dow Corning*[®] 123 Silicone Seal.

PRODUCT

Dow Corning[®] 123 Silicone Seal
Dow Corning[®] 795 Silicone Building Sealant



AV05493

Spiderman's forensics lead to Dow Corning solution

He's a wall climber. He is a curtainwall consultant, past president of the Exterior Design Institute, a forensic expert on waterproofing failures, and a certified waterproofing contractor in his own right. But at heart, Spiderman Mulholland is a wall climber.

A life of foster homes, drugs and detention took a turn when Scott Mulholland joined the Marines and received specialized training in advanced rappelling, helicopter extractions, and skyrigging.

His experience in the Marines led to his career choice – climbing walls. Mulholland succeeded in building a maintenance service based on his unique ability to “crawl” over the vertical surfaces of buildings. The news media nicknamed him “Spiderman” for his creative means of scaling impossible structures with ropes, suction cups, PR-3 pulley rappel systems, specialized wall braces, and several wall walking systems he designed himself.

He adopted the name legally and called his family of companies Spiderman's Professional Services, Inc. Today they include waterproofing, restoration, construction, forensic/diagnostics, inspection and consulting. Perhaps Spiderman's biggest contribution to the waterproofing industry is his consulting and forensic investigation business, I.T.A. Systems. Because Spiderman can get to places no one else goes, he can inspect curtainwall features, including sealant joints, that no one else sees. That is precisely what happened at the First National Bank of Mobile.

The building had a history of leaks and patchy repairs, but Hurricanes Opal in 1995 and George in 1998 created major water intrusion. The insurance company brought in I.T.A. Systems to identify the entry points and specify a solution.

Rappelling down the building, Spiderman found that the sealant joints between the 9 by 12 foot precast panels had failed because they didn't have the elasticity to accommodate the panels' movement. In fact, past leaks had been repaired by applying new sealant over old until the joint was flush with the panel surface and had virtually no movement capability.



AV05494

Spiderman, attached to the building's roof by a 7,700 pound dynamic workload rope, uses an engineered decent system to stop and pose for a picture. Spiderman uses techniques like the Australian rappel demonstrated here to inspect building exteriors impossible to reach in more traditional ways. Spiderman has 22 years' experience and is a Certified Master Rappelist trained in the United States Marine Corps.

The First National Bank of Mobile is the tallest building in Mobile, Alabama.

DOW CORNING

An attempt was made to cut the old sealant out of the joints, but polyurethane, as thick as two-and-a-half inches in places, had hardened so much that it broke the blades of a caulk cutter operating at 120,000 rpm. Spiderman calculated that it would cost \$700,000 just to cut out the sealant.

He recommended a better idea – *Dow Corning*[®] 123 Silicone Seal, a preformed, ultra-low modulus silicone extrusion that is installed over the sealant joint, eliminating the need to cut out the failed material. John E. Toomey, III, president of the company that manages the building, John Toomey & Company, Inc., agreed to the idea.

Dow Corning[®] 795 Silicone Building Sealant was applied along both sides of the joint. Then the preformed extrusion was placed over the wet sealant beads and pushed into the sealant using a wooden roller. Spiderman says, “I love this system. You just seal down each side and wheel the *Dow Corning* 123 in place.” To achieve the best appearance and to completely encapsulate the extrusion, he also shot and tooled sealant at the ends of the silicone strips.

A standard white *Dow Corning* 123 Silicone Seal was used to match the white precast panels. The appearance of the building is much improved, since the old sealant was black. According to building engineer Bernard Pritchett, “You almost can’t tell it’s there – it looks good.”

Spiderman was able to do the job for about one-third of what it would have cost to cut out and replace the old sealant. But the real proof is in the performance. Did the building stop leaking? Spiderman says, “This shut down the leaks dramatically. Over the past ten years we’ve had 30-50 leak calls a year on this building. In the past year since the project was finished, we haven’t had a single one, thanks to the *Dow Corning* 123 system.”

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– Spiderman Mulholland
I.T.A. Systems

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Printed in USA

AGP5958

Form No. 62-1114-01

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