

TREMCO'S LEAK FREE BUILDING ENVELOPE SOLUTIONS PROJECT PROFILE

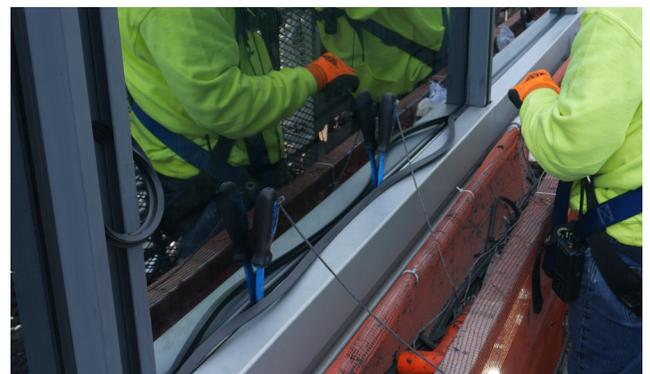
Bank of America Plaza, Dallas, Texas

CHALLENGE

The Bank of America high-rise building was constructed in 1985 and is the tallest structure in the Dallas-Fortworth metropolitan area. Standing at 72 stories, proactive maintenance for this Class AA office building is a must. In 2010, Curtain Wall Design & Consulting (CDC) detected some deterioration of the original neoprene window gaskets, which were leaving a dusty residue on the side of the building. They designed a 5-year plan to complete repairs on all 18,000 panes of glass.

The existing glazing system included a neoprene compressible pre-set sponge on the exterior side of the glass and a dense wedge on the interior side. Initially a wet-seal repair was recommended, but there was a big caveat. The team predicted that some of the insulated glass units (IGUs) would need replaced in the near future, which would necessitate accessing the exterior of the building to remove the sealant and the existing glass, only to have the sealant applied a second time when the IGUs were later replaced.

To avoid this duplication of work and additional staging expense, CDC opted for a full gasket replacement, which would allow any future glass replacement to be done from the interior. However, existing conditions posed challenges to this approach. The original windows were installed with the perpendicular darts of the exterior pre-set sponge gaskets already engaged with the metal of the glazing system. Thus, replacing them without removing the glass, which would disrupt the occupants, seemed near impossible. Assuming applicators could manage to install the gaskets from the exterior, a typical stout dense wedge gasket would also risk glass breakage.

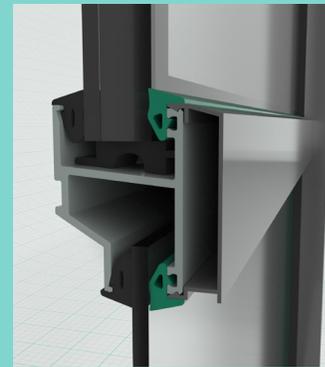
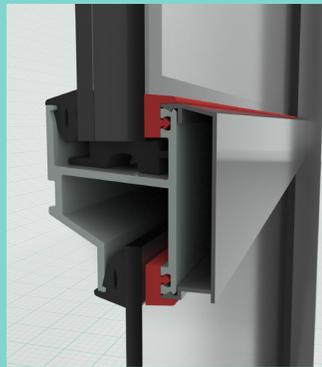


SOLUTION

Upon further investigation, it was discovered that Tremco had manufactured the original neoprene gaskets, which had lasted over 35 years. “That’s almost unheard of in the Texas heat!” said Billy Rowland, senior chief engineer for the Bank of America Tower. This provided the reassurance that Tremco’s proposed silicone solution would offer the high-performance and longevity that was needed.



Tremco’s design engineering team searched their archives and found the initial gasket dimensions, which saved significant time and minimized trial and error in the design of the new silicone wedge gaskets. Tremco’s unique Poly-Wej design was customized for this project with a larger relief hole and angular length which accommodated the other glazing components.



The original gasket design (left) would have been difficult to reinstall without removing the glass. Tremco’s customized Poly-Wej design (right) enabled exterior replacement with ease.

Calvin Carter, vice president of Sunbelt Waterproofing & Restoration, explained that the new gasket was even “easier to install than I think the original gasket ever would’ve been.” The design also made it feasible to conduct the replacement from the exterior, minimizing occupant disruption. The gasket compresses and can handle a greater range of tolerances than typical curtainwall wedge gaskets.

Ultimately, the silicone wedge gaskets with Tremco’s Spectrem 2 silicone sealant offered a less intrusive and higher-performing solution than a wet-seal repair with customizations that another manufacturer would have struggled to create.

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