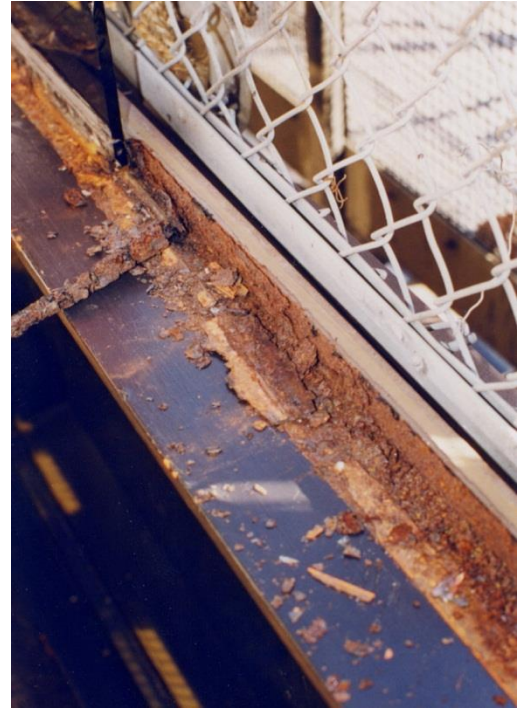




PROJECT PROFILE

Daley Center

Investigation of Glass Breakage | Chicago, IL



CLIENT

MB Real Estate/Public Building Commission for the City of Chicago

BACKGROUND

The Daley Center is a 632-foot, thirty-story steel panel clad building in downtown Chicago. This local landmark is graced with a world famous Picasso sculpture in its plaza. Both the building and sculpture are clad with weathering steel that develops a distinctive dark brown patina with age.

Weathering steel was introduced to the building market in the 1950s as a maintenance-free cladding. Corrosion of the weathering steel panels has since been found to occur unabated when the surface of the steel is not allowed to dry out. Over the years, the building's large annealed glass window panels experienced breakage. Thermal loads and/or metal to glass contact were also suspected as possible causes. WJE was retained to determine the cause of the glass failures and to provide repair recommendations to prevent further deterioration.



SOLUTION

WJE engineers performed an investigation of the building facade and the glass breakage condition. The engineers assessed the root cause of failure to be corrosion of the weathering steel cladding panels and determined the specific cause of glass breakage to be a result of corrosion byproducts swelling into the glass pocket and contacting the glass. WJE recommended the development of plans to reduce water ingress into the window frame, thereby retarding the corrosion effect and its tendency to cause glass breakage. WJE provided consulting services to building management to ensure the success of repairs.