



## PROJECT PROFILE

# Skinner Building

Exterior Envelope Investigation | Seattle, WA



### CLIENT

Unico Properties, Inc.

### BACKGROUND

The Skinner Building was constructed in 1926. The building occupies half of one city block in downtown Seattle. The north, west, and south elevations of the building are clad with sandstone. The flat ashlar panels were installed with the natural bedding planes oriented vertically, while the decorative sills and beltcourse units were installed with the natural bedding planes oriented horizontally. The perimeter sloped roofing is clay tile with an integral copper-lined gutter system.

The sandstone cladding on this downtown building was exhibiting severe deterioration. In urban environments, the natural weathering of sandstone is accelerated, which, in this case, resulted in face spalling of the ashlar units and deep cracks in the decorative sills and beltcourses. Additionally, water leakage was occurring at the top floor, below the integral roof gutters. The building owners needed a plan to repair and stabilize the sandstone cladding and address the gutter leakage.

### SOLUTION

WJE inspected the sandstone cladding to document existing conditions and to identify loose fragments for immediate removal. The work included laboratory testing of the stone composition to establish appropriate repair materials and methods. The conditions within the integral gutters were also documented. Based on experience with sandstone deterioration and our laboratory studies, we identified effective repair materials and methods for the deteriorated areas of sandstone. WJE also found that the leaks in the integral gutter system were due to joint failures in the copper liner, and that the failures occurred because the liner system lacked the ability to accommodate thermal movements. This meant that the gutter problems could be addressed by simply introducing expansion joints into the copper liners and then resoldering the joints that had failed.

