



PROJECT PROFILE

Hult Center for the Performing Arts

Condition Survey, Leakage and Corrosion Investigation, and Repairs | Eugene, OR



CLIENT

City of Eugene Central Services

BACKGROUND

The Hult Center for the Performing Arts, designed by noted architect Norman Pfeiffer, was constructed in 1981. The building's distinctive design features have made it a notable structure in the City of Eugene. The building features a multi-peaked steep-sloped roof system over the lobby area clad with sheet-metal roofing and a glazed skylight system. These systems drain to membrane-lined gutters at the valleys. The exterior wall cladding at the multi-storied, exposed timber-framed atrium lobby area consists of an aluminum-framed curtain wall system infilled with several different glass products. The exterior walls at the assembly, orchestra, and service areas are constructed of exposed, reinforced concrete.

The iconic building had been experiencing water leakage from various areas of its roof, skylights, and curtain wall construction. The complexity of the structure resulted in building component interface challenges that led to water leakage into the high-profile lobby area. Numerous repair attempts by others to mitigate the water leakage were unsuccessful, and the leakage increased over time, affecting theater events. Additionally, some of the exterior surfaces of the standing-seam roof panels had discolored and appeared to be corroding.

SOLUTION

WJE performed a condition survey and several water leakage investigations to assess the leakage issues. Due to the unique conditions and difficulty in accessing the leakage areas, an innovative repair approach was developed that limited deconstruction of the skylights and metal-panel roof system. WJE designed and water tested mock-up repairs to verify their constructability and performance. Subsequently, WJE prepared construction documents and provided construction observation services for the valley gutter and transition flashing replacement, resealing of curtain wall perimeter joints, and repairs to the skylight framing systems utilizing pre-formed silicone tape.

A main challenge addressed by WJE was to integrate the repairs with modern materials in a manner that did not substantially detract from the overall aesthetic appearance of the building. WJE also investigated the discoloration and apparent corrosion of the building's metal roof panels. Laboratory analysis revealed that the observed staining was actually corrosion of airborne pollutants that accumulated over the service life of the structure, rather than corrosion of the metal panels themselves, and that the integrity of the metal panels was unaffected.

