



PROJECT PROFILE

Church of the Saviour

Investigation of Water Infiltration and Repairs | Cleveland Heights, OH



CLIENT

Church of the Saviour,
United Methodist

BACKGROUND

The two-story Church of the Saviour was built in 1928 and designed by architect John Corbusier. The bell tower was built in the 1950s. The exterior walls of the original church consist of granite facing stone in a random ashlar pattern. The base of the walls, exterior trim, and coping caps consist of honed limestone. The windows in the sanctuary consist of stained glass set in Gothic stone bay arches along the north, west, and south facades. The roofing of the sanctuary consists of slate shingles installed over felt underlayment on wood decking. The roof is framed with trusses and purlins. The trusses are presumed to be steel-arched trusses that are encased in wood trim.

Internal box gutters along the north and south sides of the sanctuary originally consisted of tin gutter liners. In the past decade, several repairs had been made to the gutter liner and copings. Prior to WJE's involvement, chronic water leakage and plaster deterioration had been reported above the stained glass windows along the north and south walls of the sanctuary. WJE was asked to determine the cause(s) of the water related damage to the plaster.

SOLUTION

Through water infiltration testing of the masonry walls and internal box gutter, it was determined that the condition of the masonry mass wall mortar joints and the lack of water-tight terminations of the existing gutter liner largely contributed to water leakage into the sanctuary and damage to the interior plaster. As such, WJE recommended that the granite and limestone masonry walls be repointed and the internal box gutter replaced. WJE performed a petrographic analysis of the original mortar to repoint with a similar, more compatible mortar than what had been installed in a previous repointing.

WJE's repair design and construction phase services included repointing of the stone facade, replacing perimeter seals around the windows, new lead-coated copper built-in gutters, and slate roofing repairs at the sanctuary and bell tower. The Church received the Restoration of a Sacred Landmark Award from the Cleveland Restoration Society and AIA Cleveland in May 2015.

Following the repairs to the sanctuary, WJE served as the Church's building envelope consultant for various other unrelated problems for several years. In 2016, WJE completed a building envelope condition assessment and developed phased repair recommendations for the entire building, including the 2007 addition.

