PROJECT PROFILE

Longworth House Office Building

Investigation of Terrazzo Distress | Washington, D.C.

Soon after installation, cracking, delamination, and curling of the epoxy terrazzo was noted, posing potential tripping hazards. WJE was retained to investigate the cause(s) of the distress in the epoxy terrazzo and provide conceptual recommendations for remedial options.

CLIENT

Akerman Senterfitt LLP
on behalf of the
Architect of the Capitol

BACKGROUND

The Longworth House Office Building was constructed in 1933 and provides office space for members of the House of Representatives and their staff. The building has a trapezoidal shape in plan and consists of a reinforced concrete structural system. At the basement floor north and west corridors, a cementitious terrazzo floor system was originally placed onto a cast-in-place concrete topping slab. The basement floor east and south corridors were essentially exposed concrete slabs. As part of a recent renovation, new epoxy terrazzo was installed over existing conditions in the basement corridors.

SOLUTION

Prior to performing a field investigation, WJE performed a review of documents pertaining to the original terrazzo as well as the recent installation of the epoxy terrazzo overlay. WJE's field investigation included a comprehensive visual and delamination survey of the terrazzo. Based on the information gained from the field investigation, numerous core samples of the new and existing terrazzo assembly were extracted and examined petrographically.

WJE's investigation indicated that the primary causes of the observed epoxy terrazzo distress included inadequate surface preparation of the substrates, improper placement of the new brass divider strips, and interaction between the new and existing brass divider strips. Recommended remediation actions included the replacement of delaminated and curled portions of the epoxy terrazzo (subject to aesthetic acceptability). Cracks without associated delaminations could remain in-place if aesthetically acceptable.

WJE ENGINEERS ARCHITECTS MATERIALS SCIENTISTS