

Building Envelope Forensic Evaluation

CTLGroup provides building envelope investigation, evaluation, remediation, and litigation support services, which include identifying areas of thermal bridging or defective thermal insulation using infrared thermography, analyzing thermal mass effects of concrete and masonry, construction document review and analysis, and providing repair options when feasible and replacement options when necessary.

Our forensic services include condition and damage assessments, failure root-cause determinations, non-destructive testing and evaluations, litigation support, and laboratory testing of construction materials. Our firm has extensive experience investigating distress and structural failure in all types of buildings and structures, structural components, and materials, including pavements, industrial facilities, pipelines, tunnels, bridges, as well as foundations and retaining structures.

Water Infiltration & Condensation Issues

Building design and construction defects resulting in water damage requires investigation by professionals with expertise in building enclosures. CTLGroup's experts can identify the defects causing water damage using forensic techniques including:

Field water penetration testing

- Roof and wall investigative openings
- Analysis of building wall components for

- condensation potential using WUFI and THERM
- Laboratory testing to determine water vapor transmission of materials

Air Barrier

Proper air barrier installation can save energy and prevent future moisture issues. Air barriers in properly designed building envelopes are required by standard building codes and municipalities. CTLGroup's air barrier services include:

Blower-door testing

- Air-barrier repair solutions

Building Envelope Commissioning Issues

CTLGroup can also assist in issues related to commissioned building envelope defects and commissioning standard of care.

- Development of specialized mixtures, placement techniques + quality control criteria (aggregate, cement, pigments)
- Repair, renovation and preservation options, plans + construction observation

