PROJECT PROFILE

Anchor Testing to Meet ICC-ES Criteria

Mechanical and Adhesive Anchor Testing for Building Code Approval | Northbrook, IL

WJE was engaged to perform testing on post-installed mechanical and adhesive concrete anchoring systems in accordance with the applicable ICC-ES acceptance criteria.

CLIENT

Simpson Strong-Tie

BACKGROUND

The International Code Council (ICC) is responsible for producing the International Building Code (IBC) and the International Residential Code (IRC). The ICC-Evaluation Service (ICC-ES), a subsidiary of ICC, is a nonprofit, public-benefit corporation that performs technical evaluations of building products, components, methods, and materials. ICC-ES evaluation reports provide evidence that products and systems meet specific performance requirements of the building code. An accredited laboratory since 1992, WJE has tested a variety of materials following ICC-ES standards and criteria.

SOLUTION

WJE engineers and materials scientists performed a variety of tests in accordance with ICC-ES AC 193 and AC308:

- Reference tests to determine baseline performance values for reliability and service-condition
- Reliability tests used to establish anchor capabilities in the likely event of adverse installation procedures
- Service condition tests used to determine the performance of anchors under service conditions
- Spacing and edge distance tests
- Overhead and horizontal installation performance tests of adhesive anchors
- Performance of anchors in un-cracked and cracked concrete
- Repeated load tests

The results were tabulated in a product evaluation report published by ICC-ES and were used for the design of post-installed anchors in accordance with ACI 318, Appendix D.

WJE ENGINEERS ARCHITECTS MATERIALS SCIENTISTS