

Seismic Engineering



- Seismic risk assessment
- Seismic performance evaluation
- Earthquake damage assessment
- Peer review of new design and retrofit design
- Seismic repair and retrofit design
- Development of seismic guidelines, manuals, and training
- Assessment and retrofit of nonstructural systems

Effective seismic evaluation and design require a practical understanding of earthquake motions and structure response. Having investigated the performance of structures during more than thirty earthquakes around the world, WJE engineers have an in-depth understanding of the seismic behavior of a wide range of structures as well as experience with performance-based designs that achieve the desired seismic response.

As leaders in the study of earthquake engineering, our experts have participated in the development of many of the earthquake engineering evaluation and analysis approaches currently in use and are regularly engaged to provide training on various aspects of seismic evaluation and design. Our strengthening designs have won numerous awards—particularly in the field of historic preservation—and WJE professionals are experts in seismic performance evaluations that go beyond standard practices and building code requirements.

WJE's expertise in seismic engineering and materials science is supported by substantial research and testing capability. Our cutting-edge, in-house laboratory facilities can accommodate virtually any construction-related research project, from evaluating the performance of full-size building elements to fatigue and fracture testing of individual structural components. WJE's solutions provide for safer structures, limit earthquake damage, and allow clients to quickly return their structures to regular service.





SERVICE PROFILE

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REPRESENTATIVE PROJECTS

- Alcatraz Barracks - San Francisco, CA: Schematic design and construction documents to stabilize and seismically strengthen Visitor Center
- Aloha Stadium - Honolulu, HI: Seismic assessment and strengthening
- Anna Head School for Girls - Berkeley, CA: Structural and seismic design for renovation of two buildings, including schematic design, design documents, and construction documents
- Congregation Sherith Israel - San Francisco, CA: Seismic assessment and strengthening
- Crystal Cove Historic District - Laguna Beach, CA: Structural assessment and seismic retrofit design
- Mauna Kea Beach Hotel - Kohala Coast, HI: Earthquake damage assessment and repair design
- Poplar Street Roadway Complex - East St. Louis, IL: Seismic retrofit of highway interchange bridges
- United States Department of State - Various Locations Worldwide: Earthquake damage assessments
- Volcano House - Hawaii Volcanoes National Park: Structural and seismic evaluation and retrofit
- Washington Monument - Washington, D.C.: Earthquake damage evaluation, repair design, and seismic assessment
- Wawona Hotel - Yosemite National Park, CA: Structural evaluation and seismic upgrade

