

Robert C. Kraus | Associate Principal



EDUCATION

- San Diego State University
 - Bachelor of Science, Civil Engineering, 2012
- University of California, Berkeley
 - Master of Science, Civil Engineering, 2017

PRACTICE AREAS

- Failure/Damage Investigations
- Litigation Consulting
- Seismic Retrofit and Assessment
- Structural Analysis/Computer Modeling
- Historic Preservation

REGISTRATIONS

- Civil Engineer in CA
- Structural Engineer in CA

PROFESSIONAL AFFILIATIONS

- Earthquake Engineering Research Institute (EERI)
- Structural Engineers Association of Northern California (SEAONC)

TECHNICAL COMMITTEES

- Structural Engineers Association of California (SEAOC) - Existing Buildings
- SEAONC - Existing Buildings, past chair

CONTACT

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EXPERIENCE

Robert Kraus specializes in the investigation and remediation of structural problems, damage, and failures. Since joining WJE in 2012, Mr. Kraus has conducted structural investigations, analyses, repairs, and strengthening of various structures ranging from historic buildings to modern, high-rise construction. He has assessed structures following earthquakes, windstorms, fires, landslides, ground movement, vehicle impacts, thermal loading, and dimensional changes, and he has investigated defects in both design and construction. Mr. Kraus has substantial expertise in structural behavior, field investigations, and building code interpretations, including litigation projects.

REPRESENTATIVE PROJECTS

Failure/Damage Investigations

- Solana Generation Station - Gila Bend, AZ: Evaluate wind damage and repairs to thousands of solar collector structures
- Steel Tunnel-Liner - Fremont, CA: Analysis of an 8.5-foot-diameter, thin-walled steel pipe that failed during construction
- Aircraft Hangar Door - Napa, CA: Structural modeling and analysis of steel door that collapsed during operation
- Dam Spillway Gate - Northern CA: Investigation of vibrations in newly installed, 35-foot-tall spillway tainter gates
- Early-1900s High-Rise - San Francisco, CA: Investigation and repair design of corrosion to historic, steel-framed building
- New Commercial Wharf - Long Beach, CA: Investigation and instrumentation of concrete piles failing under driving forces
- Distribution Center - Lodi, CA: Finite element modeling and retrofit design for bowing tilt-up concrete wall panels
- Heavy Timber Wharf - Los Angeles, CA: Assessment of fire damage to 1927 wharf
- Convention Center Dome - Honolulu, HI: Investigation of ubiquitous distress in glulam timber arches in long-span domed roof
- Commercial Office Building - Vernon, CA: Analysis and investigation of damage in wood bowstring roof trusses built circa 1920

Litigation Consulting

- Salesforce Transit Center - San Francisco, CA: Investigation of fractures and repairs of 8-foot-deep steel girders spanning roadways
- Salesforce Tower - San Francisco, CA: Investigation of defects in deep foundation elements of new high-rise building
- Harmon Tower - Las Vegas, NV: Investigation of alleged construction defects in newly built, reinforced-concrete, mixed-use tower
- Signature Cathedral - Northern CA: Investigation of design and construction defects in cathedral and support buildings
- Wilshire Vermont Station Apartments - Los Angeles, CA: Investigation of alleged defects in concrete podium and superstructure
- Historic Masonry Mid-Rise - Los Angeles, CA: Investigation of repairs and seismic retrofit to fire-damaged building built during the 1920s
- Large Apartment Complex - Los Angeles, CA: Investigation of structural damage to buildings built on concrete podium structures claimed to have deflected significantly
- Pacific Heights Residence - San Francisco, CA: Investigation of defective seismic upgrade and alterations in 1920s luxury home
- Residential Subdivisions - Northern CA: Investigation of alleged damage under wind loads as part of class action lawsuits

Seismic Retrofit and Assessment

- Post-Earthquake Damage Reconnaissance - Southern Türkiye: Field investigation of dozens of critical lifeline structures following 2023 M7.8 earthquake sequence
- Napa County Superior Court - Napa, CA: Damage assessment of historic masonry courthouse after 2014 Napa earthquake
- Crystal Cove Beach Cottages - Newport Beach, CA: Strengthening and rehabilitation of historic 1920s beachfront community
- Aircraft Maintenance Facility - San Francisco, CA: Seismic retrofit design for 15,000-square-foot steel structure for hazardous materials
- Confidential - Worldwide: Seismic evaluation of existing residential buildings of varied construction
- Historic Power Station - Oakland, CA: Seismic risk assessment and conceptual retrofit of 1880s building complex for adaptive reuse