

### Andrew Shuck | Senior Associate



#### EDUCATION

- Stanford University
  - Master of Science, Structural Engineering and Geomechanics, 2010
- University of Virginia
  - Bachelor of Science, Civil Engineering, 2008

#### PRACTICE AREAS

- Earthquake Engineering
- Structural Analysis
- Failure Analysis
- Steel Structures
- Concrete Structures

#### REGISTRATIONS

- Civil Engineer in CA
- Structural Engineer in CA

#### PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers (ASCE)
- Engineering Earthquake Research Institute (EERI)
- Structural Engineers Association of Northern California (SEAONC)

#### TECHNICAL COMMITTEES

- ASCE 41 - Seismic Evaluation and Retrofit of Existing Buildings
- SEAONC Seismology Committee

#### CONTACT

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#### EXPERIENCE

Andrew Shuck has considerable experience in assessing building conditions; analyzing seismic and structural aspects of complex buildings and other structures; and designing unique repairs, retrofits, and components associated with diverse building construction. His projects generally involve existing buildings of various sizes ranging from single-story residential structures to multistory commercial buildings constructed of steel, concrete, unreinforced masonry, or a combination of such materials. Mr. Shuck's work also included multiple projects involving assessment of the applicability of building code requirements to different project conditions.

Prior to joining WJE in 2013, Mr. Shuck worked on several performance-based seismic evaluations and retrofit designs for the San Francisco office of Degenkolb Engineers.

#### REPRESENTATIVE PROJECTS

##### Earthquake Engineering

- National Cathedral - Washington, D.C.: Analysis and retrofit design of unreinforced masonry landmark damaged by 2011 Mineral, Virginia, earthquake
- County Hall of Justice and Jail Annex - Napa, CA: Evaluation of damage to three-story concrete and reinforced masonry building after the 2014 South Napa earthquake
- 235 Pine Street - San Francisco, CA: ASCE 41 Tier 2 evaluation of a steel-plate shear wall high-rise
- U.S. Department of State: Seismic evaluation of existing residential buildings in multiple countries

##### Structural Analysis

- Mixed-Use High-Rise - Las Vegas, NV: Nonlinear analyses of impacts from alleged construction defects on seismic performance of concrete building
- Optima Horizons - Evanston, IL: Nondestructive testing and structural analysis for punching shear in concrete slab at parking garage

- Foundry 31 - Berkeley, CA: Nonlinear time-history analysis of seismic performance of previously retrofitted non-ductile concrete building

##### Failure Analysis

- Industrial Storage Facility - Madera, CA: Investigation of failure at cluster of reinforced concrete silos
- Commercial Building - Fremont, CA: Investigation of fabrication defects and associated failure of long-span, glued laminated beam
- Warehouse - City of Commerce, CA: Evaluation of fractures in numerous wood trusses

##### Steel Structures

- Southland Mall - Hayward, CA: Design of new steel buildings for shopping mall renovation
- Commercial Building - Mumbai, India: Design and construction administration for structural steel repair of existing concrete building with extensive corrosion
- BART Airport Connector - Oakland, CA: Assessment of corrosion of bolts connecting steel trusses

##### Concrete Structures

- High-Rise Commercial Building - San Francisco, CA: Investigation of reinforced concrete, load-bearing foundation elements
- U.S. Department of State: Design of seismic retrofit scheme for nonductile concrete structure in overseas location
- Port Silo Repair - Buchanan, Liberia: Development of construction drawings for repair and reuse of reinforced concrete former iron ore silo and replacement of associated hopper
- Miller-Coors Headquarters - Milwaukee, WI: Design and construction observation for repair of post-tensioned slab at parking garage