



AARON LAROSCHE, PH.D., P.E., S.E. SENIOR ENGINEER

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PRACTICE AREAS

- Evaluation of Existing Structures
- Failure Investigation
- Litigation Support
- Structural Load Testing
- Repair and Strengthening
- Nondestructive Testing

REGISTRATIONS

- Professional Engineer: TX, CO, SC
- Structural Engineer: AZ

AWARDS

- Texas Water Safari Finisher 2019

PROFESSIONAL ACTIVITIES

- American Concrete Institute
 - *ACI 437-S Strength Evaluation CODE
 - *ACI 437 Strength Evaluation
 - ACI 437 OA Test Database
 - ACI 562 OC Repair Code - Evaluation
 - *ACI 562 OG Repair Code - Design
 - ACI 563 OK External Reinforcement
 - ACI 563 OQ Post Tensioned Concrete
 - ACI 123 Research and Developments
 - *Indicates leadership position

EDUCATION

Arizona State University
BS Civil Engineering, 2008

University of South Carolina
MS Civil Engineering, 2011

University of South Carolina
PhD Civil Engineering, 2012

EXPERIENCE

Aaron prides himself on being direct and providing clients with technical expertise, clarity, and integrity. With more than ten years in the industry, Aaron has a wide range of experience, including investigation of structural failures, evaluation of existing structures, structural load testing, structural concrete repair, nondestructive testing, and structural instrumentation and monitoring.

REPRESENTATIVE PROJECTS

Davenport 360 - Developed a finite element model to assess punching shear distress and large deflections resulting from construction operations. Developed repairs to address distress and led load test of repaired structure.

Mirabella ASU - Performed a field investigation and condition assessment using nondestructive testing after blowouts of monostrand PT anchorages were observed. Developed testing protocol and metallurgic evaluations of proprietary anchor system.

Convention Center - Performed condition assessment for strength and large-scale vibrations of large span steel-framed structure. Developed repairs to address existing deficiencies and mitigate future vibrations

Cable Stay Bridges - Led investigations to evaluate dynamic properties of stay cables at two long-span cable stay bridges. Designed retrofit of cable stays with a damper.

Nuclear Facility - Led analysis efforts to determine the causes leading to a collapse of a temporary crane structure. Performed nonlinear, large displacement analyses.

Pioneer Square Historic Structures - Developed and implemented a monitoring plan used to evaluate long-term movement of historic masonry and timber structures.

Global Scholars Hall - Used analytical and numerical methods to evaluate long-term deflections of the multi-story residential structure. Developed repairs to address punching shear deficiencies.

Post-Tensioned Lift Slab Structure - Performed evaluation of an eight-story post-tensioned lift slab building using both nondestructive and destructive means, including invasive probes, half-cell potential, and surface penetrating radar.