

David Hanson

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Skills & Qualifications

- **Concrete design:** Mild steel reinforced and post-tensioned elevated slabs; columns; diaphragms; strut and tie modeling for transfer walls, column knuckles, and diaphragm collectors; shear walls; anchorages to concrete; foundation elements
- **Steel design:** Composite concrete on metal deck framing; connections; moment frames; braced frames
- **Software Experience:** RAM Concept; RAM Structural Systems; SAP2000; ETABS; Risa3D; SpColumn; ABAQUS; Python; Matlab; Revit; AutoCAD; Bluebeam Revu; Microsoft Excel/Office
- **Familiar Codes:** ACI 318, AISC, TMS 402, NDS, ASCE 7, IBC
- **Licensses/Certifications:** EIT certification, October 2014; California PE in progress (passed PE Civil Structural exam)

Experience

Magnusson Klemencic Associates

Design Engineer

Feb 2019 – Sept 2020

Ideal environment for fostering accelerated growth in design and project management skills. Regularly participated in in-house training classes, continuing education, and technical specialty groups for research and development. Notable project experience:

One Chicago Square – Chicago, IL

- Two-tower building on a shared podium with a tuned-sloshing damper occupying a full city block in Chicago. Designed post-tensioned slabs as the primary design engineer for the 50-story residential tower and provided mild slab design support for the adjacent 78-story tower.

Epic Medical Solutions | Mystery, Campus 5 – Verona, WI

- Designed the major gravity and lateral components of a 3-story steel office building. Architecture was under constant revisions based on evolving design vision. Navigated the changes with alacrity, collaborating to address problems and meet deadlines.
- Project located on an existing parking garage that was not originally designed for future development under the unique project footprint. Developed safe, constructible solutions for strengthening the existing parking garage under new building loads.

5th and Brazos – Austin, TX

- Worked as the primary point of contact for construction administration of a 32-story residential concrete building. Provided numerous post-install solutions for connections with unique geometric constraints.

4th and Brazos – Austin, TX

- Performed lateral analysis studies in ETABS to determine optimal shear wall design for schematic study an 80-story concrete residential building. Produced a somewhat unconventional but highly effective solution and proposed it to the project's Principle in Charge. It was ultimately decided to use one of the more conventional solutions due to architectural considerations.

PND Engineers, Inc.

Staff Engineer

2013 – 2015

Most notable experience involved on-site construction administration for two 2-3 week stints for the following project.

Baffinland Iron Mines Port Design

- Oversaw quality control as the single representative engineer on site for the completion of PND's Open Cell Sheet Pile® port structure. Coordinated with construction and surveying representatives to ensure conformance to dredging and scour rock placement tolerances, among other finalizing project details. Project costs totaled \$45 million.

Education

University of Washington, College of Engineering

Seattle, WA

Master of Science in Structural Engineering

Graduated December 2016

Bachelor of Science in Civil Engineering

Graduated June 2015

- Emphasis in earthquake analysis and design for concrete and steel building systems. Study ranging from linear-elastic to nonlinear-plastic analysis methods.
- Investigated vulnerabilities in an earthquake-catalyzed rock slope failure impacting residential homes in Christchurch, New Zealand. Included as co-author in proposal abstract submitted to the 2015 AGU Fall Meeting.

Full Time Training in Anaheim (FTTA)

Anaheim, CA

Living Stream Ministry

February 2017 – December 2018

A faith-based, post-graduate leadership development and outreach training program.

- Managed logistical operations of an international ministry center for 10 regional and international conferences over a period of two years ranging from several hundred to several thousand registrants.
- Accumulated over 1,000 hours of volunteer experience, coordinating closely with a 6-10 member team to conduct mentoring in stress management and general human development for community members in Anaheim, CA.