

David J. Miller, PE, SE

Senior Structural Engineer

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 Denver, CO

Professional Profile

Licensed Structural Engineer (SE) with over 7 years of experience specializing in the analysis and design of mid-rise commercial, residential, and industrial structures. Proven expertise in lateral force-resisting systems, post-tensioned concrete, and finite element modeling of complex structural connections. Adept at managing projects from conceptual design through construction administration, ensuring full compliance with current building codes (IBC/ASCE 7) and material standards.

Areas of Expertise

ANALYSIS & DESIGN	CODES & STANDARDS	SOFTWARE & TOOLS
• Finite Element Analysis (FEA) • Lateral Force Resisting (LFRS) • Post-Tensioned Concrete • Deep & Shallow Foundations	• IBC & ASCE 7 (Seismic/Wind) • ACI 318 (Concrete Design) • AISC 360 (Steel Design) • NDS (Wood) & TMS (Masonry)	• ETABS, SAP2000, SAFE • RISA-3D, Eneclac • Revit, AutoCAD • Mathcad, Bluebeam

Professional Experience

Senior Structural Engineer | **Meridian Structural Group** Oct 2022 – Present

Denver, CO

- Lead structural design for mid-rise building developments, managing client relationships and supervising junior engineers.
- Executed response spectrum seismic analysis for a 14-story buckling-restrained braced frame (BRBF) steel building, reducing structural steel tonnage by 12%.
- Modeled post-tensioned slab-to-column connections in SAFE, performing finite element analysis to design shear reinforcement and eliminate punching failures.

Structural Engineer II | **Vertex Engineering Consultants** Aug 2019 – Oct 2022

Denver, CO

- Performed structural design and lateral wind/seismic analysis for concrete and masonry structures valued up to \$45M.
- Designed moment-frame connections, composite steel decks, and timber trusses in accordance with AISC, ACI, and NDS design specifications.
- Coordinated closely with architects and MEP engineers to resolve structural spatial conflicts, reducing project RFIs by 20%.

Structural Design Engineer | **Synapse Design Lab** Jun 2017 – Jul 2019

Boston, MA

- Developed engineering calculations for gravity and lateral load-path structures under the supervision of a licensed SE.
- Generated detailed 3D building models in Revit to produce construction documents and coordination plans.

Selected Projects

- **The Meridian Tower (Denver, CO):** Lateral design of a 14-story steel-framed mixed-use building featuring composite frames and buckling-restrained braced frames (BRBFs).
- **Nexa Biotech Lab (Boulder, CO):** Designed steel support framing and vibration-isolated dynamic slabs using AISC Design Guide 11 to house sensitive diagnostic equipment.

Education & Credentials

Master of Science in Structural Engineering | University of Colorado Boulder 2017
Bachelor of Science in Civil Engineering | Colorado State University 2015
Licensure: Licensed Structural Engineer (SE, CO #58392) | Professional Engineer (PE, CO #47210)