OCI Group

Zaid Abunemeh

P.Eng.

Structural Forensic Engineer

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Zaid is a licensed Professional Engineer based in Ontario. He is a graduate of Concordia University with a Bachelor of Engineering in Civil Infrastructure. He specializes in forensic structural investigations in the analysis, design, and restoration of structural systems across residential, commercial, and industrial structures. His work spans the design and analysis of wood, steel, and concrete structures, design of fire separations, code compliance reviews, and detailed structural assessments of environmental and structural failures. Zaid possesses sound and extensive knowledge in the National Building Code of Canada (NBCC) and Ontario Building Code (OBC).

EDUCATION

Concordia University
Bachelor of Engineering, Civil Engineering, Option Civil Infrastructure
Montreal, QC, Canada
2014 – 2018

PROFESSIONAL REGISTRATION & LICENSING

- Professional Engineers Ontario (PEO)

CERTIFICATIONS

- Working at Heights
- Next Generation Leadership program by BGR Coaching & Strategic Solutions

PROFESSIONAL EXPERIENCE

Structural Forensic Engineer
OCI Group (Formerly Origin and Cause Incorporated)
Burlington, Ontario
July 2025 – Present

Engineer in Training/Professional Engineer
T. Smith Engineering Inc.
Etobicoke, Ontario
April 2019 – July 2025

- Coordinated with clients, owners, contractors, project managers and building officials to facilitate projects being completed correctly and in a timely manner
- Produced structural and architectural permit drawings for the restoration of damaged structures, including complete demolition
- Designed wood, steel, and concrete structures in accordance with Parts 3&9 of the Ontario Building Code
- Trained a team of four EITs
- Introduce team members to the methodology of the insurance claims industry and provide them with an environment and the skills required to become project managers of their own projects
- Detailed concrete design and repairs using relevant standards and procedures to restore damaged concrete structures
- Prepared detailed structural analysis reports of structural and environmental

failures to determine the cause of loss
- Performed independent reviews of applicable codes and standards to determine code compliance of existing structures
- Worked with clients to establish scope and observed, measured, and recorded existing site conditions
- Used the obtained information to retrofit new structural systems to be implemented, including beam reinforcements, load-bearing walls alterations and roof extensions
- Conducted research and contacted vendors regarding materials and products to develop solutions for the repair of existing structures

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SKILLS & EXPERTISE

- Python and MATLAB programming
- Structural design and analysis using ETABS, SAP2000, SAFE, and S-Concrete
- Drafting and modelling with AutoCAD and Revit
- Design optimization and planning of concrete, steel, and wood structures
- Technical documentation and reporting using Microsoft Office and WoodWork

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ACADEMIC PROJECTS

Capstone Project

Concordia University
September 2017 – May 2018

- Played a vital role in a team of seven students across three specialties to design all the structural components as well as plan and cost of construction for the new pavilion of the Montreal Fine Arts Museum
- Defining project scope and adapting the architectural design to make it feasible while retaining the key aesthetic elements
- Design of Concrete Structures (A23.3-14) was used in conjunction with the NBCC 2010
- Designing the structural components such as slabs using SAFE software, beams, columns and shear walls using S-concrete as well as drafting plans and making 3D models using Revit and AutoCAD
- Designing the foundation plan using SAFE and hand calculations

- Finding academic resources and necessary material, managing deadlines and coordinating with management and environmental teams to ensure consistency and provide support when needed

Steel Design Project
Concordia University
January 2018 – May 2018

- Led a team of three students in the design of a five-storey steel building located in Ottawa, Ontario
- Load analysis for both gravity and lateral loads according to NBCC
- Designing the structural components such as decks, primary and secondary beams, columns and moment resisting frame according to (CSA S16-14) and using Etabs
- Drafting structural plans such as column schedule and beam framing plans using AutoCAD

Concrete Design Project
Concordia University
September 2017 – December 2017

- Individual project of a 11-story concrete building located in Montreal, Quebec
- Design Loads and combinations according to NBCC
- Design of two-way slab using hand calculation and SAFE software
- Design of beams, columns and shear walls using S-Concrete
- Drafting structural plans and 3D model using AutoCAD and Revit