Structural Engineer

Annie Luu, Coffman Engineers

Place of Employment
Coffman Engineers, Spokane Office, Structural Department

Employer
Coffman Engineers

Type of Work
A structural engineer creates construction documents, performs calculations, writes reports and evaluations, and observes construction progress.

Typical Day
After meeting with the architect to coordinate the details of the structure, I analyze the configuration of the structure to make sure it is achievable. Once it is determined that the configuration of the structure is possible, I begin designing the different elements of the structure (i.e. beams, columns, walls, foundations, etc). My design gets translated into construction documents/drawings so that the contractor can use them to construct the structure.

What I Love About My Job
I deal with something different every day. Whether the job is small or large, each job is different and has its own challenges. I enjoy using my math skills every day to design the structures. It is also very rewarding to drive by a structure in town knowing that I helped to engineer it.

Career Pathway
I received my Bachelor of Science in Civil Engineering with a minor in Business Administration. I then received my MBA the following year. I had interned with a grain silo manufacturer during my junior and senior years of college and while obtaining my MBA. After graduation, I was fortunate enough to be hired by a structural consultant right out of school, and have been in the consulting industry since then.

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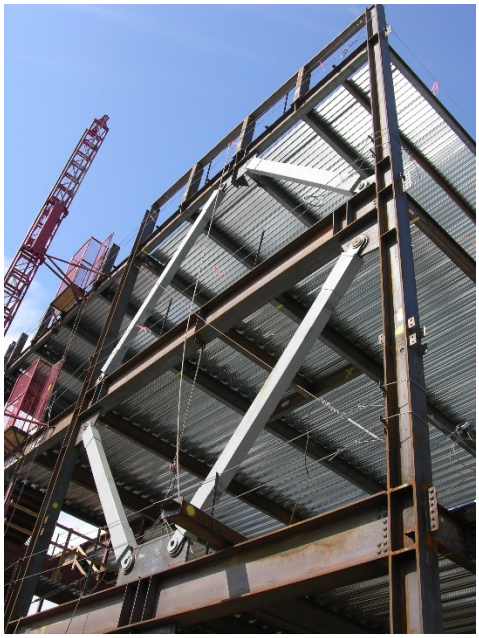
Most Important Skills Needed

Attention to detail. There are many components that go into a structure. As a structural engineer, I need to ensure that the structure is safe and durable, while still maintaining the architect's vision.

Analytical/math skills. In order to design the various elements of the building, there are a lot of mathematical equations that are used to determine the forces on an element and whether or not the element has the capacity to withstand these forces.

Science and Engineering Practices I Use

Statics/Dynamics
Mechanics of Materials
Foundation Design
Steel, concrete, masonry, and wood design



Technology and Equipment I Use

Structural analysis programs
(i.e. RISA, Enercalc, RAM Structural, etc.),
AutoCAD, Revit

Education Background Needed

A four-year degree from an accredited college/university is required to begin the Professional Engineer licensure process. You become an engineer-in-training (E.I.T.) after completing the Fundamentals of Engineering exam. Then, you work towards becoming a professional engineer (P.E.) by obtaining four years of qualifying engineering experience and passing the Principles and Practice of Engineering Exam. To become a structural engineer (S.E.) an additional three years of qualifying engineering experience and passing the Structural Engineering Exam is required.

Salary

Median Annual Wage: $75,000