

Missouri Department of Transportation Job Description

Job Title: Structural Designer

Title Code: R05834

Salary Grade: 7

Exemption Status: Non-Exempt

Supervisory Responsibilities: None

District/Division: Central Office - Bridge

Effective Date: 06-01-2025

Replaces (Effective Date): 08-01-2024

General Summary

The structural designer is responsible for making structural design computations, analysis, drawings, and sketches for the design of transportation related structures, such as routine bridges, retaining walls, and box culverts. Responsibilities are performed under moderate supervision.

Minimum/Required Qualifications

- Bachelor's degree in civil or structural engineering from an ABET-accredited college or university curriculum.

Special Working Conditions/Job Characteristics

- A postsecondary degree is the best measure to ensure candidates possess required engineering knowledge, including in applied physics and mathematics, drafting, engineering processes and procedures, project management, industry ethical standards, and analyzing and modeling data.

Examples of Work

1. Performs structural design computations and analysis and sketches of routine bridges, retaining walls, and box culverts.
2. Performs structural evaluations for special permit or construction loadings.
3. Performs supporting calculations, reviews history files and updates manuals to keep engineering library updated.
4. Creates sketches by hand or using computer aided drafting and design applications to illustrate the structure design.
5. Rates bridges for load capacities and the federal bridge inventory as required by state statutes and national standards.

6. Attends project meetings and consults/advises all parties involved including department personnel, city, county, state, federal personnel and private consultants.
7. Evaluates and utilizes engineering software and develops comprehensive spreadsheets.
8. Performs other responsibilities as required or assigned.