

# Missouri Department of Transportation Job Description

**Job Title:** Structural Specialist

**Title Code:** R03414

**Salary Grade:** 7

**Exemption Status:** Non-Exempt

**Supervisory Responsibilities:** Lead Worker Only

**District/Division:** Central Office – Bridge

**Effective Date:** 02-01-2025

**Replaces (Effective Date):** 07-01-2022

## **General Summary**

The structural specialist details preliminary and final bridge plans for complex bridge structures, performs analysis for standard vehicles and super load trucks to determine safe load capacities on state bridges, updates inventory data for all state bridges, performs layout for minor structures, and develops information for design manuals, computer manuals, and standard plans. Responsibilities are performed under moderate supervision.

## **Minimum/Required Qualifications**

- Two years of college or Associate's Degree: Drafting, Computer Aided Drafting, or related field.
- Six years of experience in structural detailing.

## **Special Working Conditions/Job Characteristics**

- A postsecondary degree is the best measure to ensure candidates possess required knowledge in computer aided drafting; trigonometry, geometry, and physics; statics and strength of materials; surveying concepts; material quantity calculations, takeoffs, and unit pricing; and dimensioning concepts.

## **Examples of Work**

1. Identifies bridges on given routes, inputs truck geometry in computer programs, evaluates structural analysis results, and provides restrictions for special permit or construction loadings.
2. Collects and inputs bridge information for the National Bridge Inventory.
3. Performs load-rating calculations to determine the maximum load capacity of state and non-state bridges.

4. Provides technical assistance in broad areas of structural detailing, developing new detailing standards for bridge plans; develops and makes revisions to the bridge manual, computer manuals, standard library, and plans.
5. Performs layout of geometrical dimensions for box culvert and retaining wall structures using information from district and preliminary design layout notes; assists with verification of geometrical problems or dimensions on plans from construction.
6. Details a complete set of preliminary or final bridge plans for more complex structures.
7. Prepares correspondence and exchanges information as a primary contact concerning bridge layout and rating; documents any problems or changes.
8. Conducts training for new technical personnel on detailing software, procedures and practices.
9. Performs lead worker responsibilities, which may include providing general instruction, assigning and reviewing work, coaching and training, providing guidance and instruction in the proper and most efficient methods of accomplishing tasks, and providing input to the direct supervisor on staffing decisions and performance management.
10. Performs other responsibilities as required or assigned.