

Job Title: CIVIL ENGINEER TRAINEE - ASSISTANT STRUCTURAL DESIGN AND REVIEW TRAINEE - IPR#45358

Agency: Department of Transportation

Closing Date/Time: 11/29/2021

Salary: \$4,365 - \$4,785 Monthly

Job Type: Salaried Full Time

County: Sangamon

Number of Vacancies: 5

Plan/BU: NR916

DO NOT APPLY ONLINE

****DO NOT CLICK THE APPLY BUTTON****

HOW TO APPLY:

Technical Applications PM1080 (rev 8/21/21) must be received by the Bureau of Personnel Management, Room 113, 2300 South Dirksen Parkway, Springfield, IL 62764 (Fax# 217/557-3134) or emailed to DOT.CO.BPM.EmploymentApplications@Illinois.gov by the closing date listed above. The previous application form revised 3/8/21 will be accepted until October 2, 2021. Please visit <https://idot.illinois.gov/about-idot/employment-opportunities/employment/index> to download the Technical Application PM1080.

Unofficial college transcripts must be included with application. Official college transcripts must be submitted upon date of employment. Applicants possessing an Engineer Intern License must also include a copy with application. Applicants not submitting these documents by the posting deadline will not be considered for employment.

In an attempt to fill the posted positions, IDOT will contact applicants during the posting period to schedule interviews. All postings will result in three interview pools, with application cut off dates of: September 27, 2021, October 27, 2021 and November 29, 2021. Those applicants that have been deemed qualified and have submitted a completed application with all required attachments will be invited to interview accordingly based on the date their application documents are received.

Please indicate IPR#45358 on the Technical Application PM1080.

Agency Mission Statement

The Illinois Department of Transportation is seeking to hire Assistant Structural Design and Review Trainees.

The IDOT team works diligently to provide safe, cost-effective transportation for Illinois in ways that enhance quality of life, promote economic prosperity and protect our environment. We are problem solvers and leaders, constantly searching for innovations and improvements in support of our commitment to providing the best multimodal transportation system for Illinois.

Our team fosters a culture of inclusivity. We value diversity and hold ourselves to the highest ethical standards as we work together for a common purpose. Team members frequently collaborate with colleagues and others outside the department to best meet customer needs.

Employees enjoy excellent benefits, including health, vision and dental insurance; a retirement plan and deferred compensation options; state holidays and other time off; tuition reimbursement; flexible schedules; and pre-tax benefit programs. The department also offers extensive training and career advancement opportunities.

We invite qualified applicants to apply to become part of our team. We are confident that you will take pride in serving Illinois and its residents and visitors.

Job Responsibilities

This position assists in the structural analysis and detailed design required in the production of structural contract plans utilized in the construction of simple bridge and traffic structures and for the review of simple construction shoring, bracing, and temporary structure designs prepared by contractors. Work may also include preparation of bridge repair plans, load ratings, and bridge standards.

This position reports to the Structural Design and Review Group Engineer. No subordinates report to this position.

This position operates in an environment of performing the structural analysis and design for simple structures while exercising sound engineering judgment and displaying knowledge of structural engineering theory. The incumbent also reviews, analyzes, and recommends approval/disapproval of shoring, bracing, and temporary structure designs submitted by contractors.

Typical problems faced by the incumbent include the resolution of simple engineering problems and the utilization of learned structural theory to practical applications in structural design. The greatest challenge faced by the incumbent is utilizing technical knowledge to design and analyze simple types of structures which incorporate all departmental design policies, are cost effective, and are structurally sound.

The incumbent is personally responsible for determining the various types of loads which will be applied to structures including the dead loads, live loads, truck impacts, truck braking and centrifugal forces, wind loads, thermal forces, earth pressures, buoyancies, shrinking loads, ice pressures, and earthquake forces. The incumbent calculates internal forces including the moments, shears, and axial loads of each individual structural member. S/He determines the size of structural members, performs fatigue analysis, and calculates deflections. S/He prepares design details, unique design notes, geometry, and quantity calculations. S/He also directs and approves the preparation of final design plans. The incumbent assists in field investigations to evaluate structural problems and reviews designs prepared by others to ensure completeness and structural adequacy.

The incumbent must refer to the Structural Design and Review Group Engineer for guidance in design methods, accepted design details, policies, specifications, and procedures. The incumbent is guided by American Association of State Highway Officials (AASHTO) specifications and current interim specifications and applicable departmental policies.

The incumbent has contact with all sections within the Bureau of Bridges and Structures. Occasional travel is required.

The effectiveness of this position can be measured by the structural and analytical expertise displayed in the analysis and design of projects, the incumbent's ability to solve structural engineering problems in the office and in the field, and by the timely completion of assigned projects.

Principal Accountabilities

1. Develops and analyzes simple structure designs which incorporate current methods and technology.
2. Performs design computations required in the preparation and review of structural contract plans.
3. Reviews structure designs prepared by others for completeness and structural adequacy.
4. Reviews and recommends approval/disapproval of contractor proposals for shoring, bracing, and temporary structures.
5. Assists in performing field investigations.
6. Performs duties in compliance with departmental safety rules. Performs all duties in a manner conducive to the fair and equitable treatment of all employees.
7. Performs other duties as assigned.

Qualifications

Position Requirements

- Completion of a bachelor's degree in engineering from an ABET accredited college OR a master's degree in engineering OR a current Engineer Intern License in the state of Illinois (includes those expecting to graduate in fall 2021 or spring 2022)
- Minimum 2.5 cumulative GPA in engineering related courses (If 2.0-2.5 GPA, candidate must have passed the Fundamentals of Engineering exam.)
- Valid driver's license

- Occasional statewide travel which may include overnight stays

Position Desirables

- Working knowledge of the routine practices of civil engineering
- Working knowledge of mathematics as applied to engineering activities
- Ability to make relatively difficult technical computations and estimates
- Strong oral and written communication skills

Work Hours: 8:00 AM to 4:30 PM Monday-Friday

Work Location: Springfield - 2300 S Dirksen Pkwy

Office: Office of Highways Project Implementation/Bureau of Bridges and Structures

Agency Contact: DOT.CO.BPM.EmploymentApplications@Illinois.gov

Job Function: Transportation

Collective Bargaining Agreement language applies to this requisition

We are currently transitioning our application process away from paper process to an electronic application process. This position has not been transitioned please follow the directions below when applying to this position.

Please visit the IDOT website at <http://www.idot.illinois.gov/about-idot/employment-opportunities/employment/index> to obtain the required bid forms and application forms.