

**Civil Engineer Trainee (4 Positions)  
Assistant Structural Design and Review Trainee**

<b>IPR Number:</b>	<b>44224</b>	<b>Union Position:</b>	<input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b>
<b>Position Number:</b>	<b>PW110-23-75-904-10-01</b>	<b>Shift:</b>	<b>8:00 am – 4:30 pm Monday – Friday</b>
<b>Opening Date:</b>	<b>January 27, 2020</b>	<b>Anticipated</b>	
<b>Closing Date:</b>	<b>April 24, 2020</b>	<b>Starting Salary:</b>	<b>\$4,275 – \$4,655 *</b>

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**Office/Central Bureau/District/Work Address:**

Office of Highways Project Implementation / Bureau of Bridges and Structures / 2300 South Dirksen Parkway, Springfield, IL

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**Position Purpose:**

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.

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**Qualifications:**

**Position Requirements:**

- Completion of a master's or bachelor's degree in engineering from an ABET accredited college OR a current Engineer Intern License in the state of Illinois (includes those expecting to graduate in the spring of 2020)
- Minimum 2.5 cumulative GPA in engineering related courses (If 2.0-2.5 GPA, candidate must have passed the Fundamentals of Engineering exam)
- Occasional travel is required
- Valid driver's license

**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
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**How to Apply/Remarks:**

Technical Applications PM1080 (rev 8/23/19) 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](mailto:DOT.CO.BPM.EmploymentApplications@Illinois.gov) by 4:30 pm on the closing date listed above. Applications will not be accepted after this date and time.

**Agency Contact:** Bureau of Personnel Management, 217/782-5594

**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.**

To be considered for a permanent position within IDOT, you must either be a US citizen or a non-citizen with permanent work authorization.

Only education/coursework and experience listed within the application will be considered for determining eligibility for this position.

Please be advised that if a high volume of applications is received, the applications may be screened to establish a smaller pool of applicants for interview. The screening will be based on the information contained in the application.

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: February 26, 2020, March 26, 2020 and April 24, 2020. 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.

\*Individual salary offers are computed based on an applicant's qualifications and experience relative to the posted title as well as internal equity of staff in the organizational unit.

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**ILLINOIS DEPARTMENT OF TRANSPORTATION  
POSITION DESCRIPTION**

<b>DATE:</b>	January 15, 2019	<b>WORKING TITLE:</b>	Assistant Structural Design and Review Trainee
<b>POSITION CLASSIFICATION:</b>	Civil Engineer Trainee	<b>OFFICE/BUREAU:</b>	Office of Highways Project Implementation / Bureau of Bridges and Structures
<b>POSITION NUMBER:</b>	PW110-23-75-904-10-01	<b>REGION/DISTRICT:</b>	n/a

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***Position Purpose***

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.

***Dimensions***

Annual projects: 3  
Contract value: \$1,500,000

***Nature and Scope***

This position reports to the Structural Design and Review Group Engineer. There are no subordinates reporting 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 supervisor 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. 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.

**Subordinates of this position** (if applicable, list subordinate information in the chart below)

Position Classification	Position Number	Working Title	Authorized Identical
n/a			

**Supervisor of this position**

Immediate Supervisor Position Classification: Civil Engineer V

Working Title: Structural Design and Review Group Engineer

Position Number: PW115-23-75-904-10-01

**Position Requirements**

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- Minimum 2.5 cumulative GPA in engineering related courses (If 2.0-2.5 GPA, candidate must have passed Fundamentals of Engineering Exam)
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**Position Desirables**

- Working knowledge of the routine practices of civil engineering
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**Agency Approvals**

  
Bureau Chief of Personnel Management

  
Secretary, Department of Transportation