



Illinois Department of Transportation

Memorandum

To: DEPUTY SECRETARIES, DIRECTORS AND BUREAU CHIEFS
From: Becky Koehler
Bureau Chief of Personnel Management
Subject: Technical Vacancy
Date: May 29, 2018

Attached are the Position Summary Sheet and Position Description for the vacant technical position listed below. Please post this vacancy announcement May 31, 2018 in the designated areas.

The deadline for applicants to submit their applications for consideration is **4:30 p.m. on Wednesday, June 13, 2018**. Applications will not be accepted after that time and date.

NOTE: A copy of each applicant's ACTIVE Illinois Professional Engineer License must accompany application for this position. Please be advised that if a high volume of applications are 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.

If you have any questions, please contact the Bureau of Personnel Management at 217/782-5594.

CE IV

Senior Repair Plans Engineer
Bureau of Bridges & Structures
Office of Highways Project Implementation
Springfield

Attachments
42851

Technical Applications [PM1080 rev 6/1/17](#)****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 **Wednesday, June 13, 2018**, 4:30 p.m. Please include address, daytime phone and position for which applying if not already listed on application. Applicants will be notified in writing to schedule interviews.

NOTE: A copy of each applicant's ACTIVE Illinois Professional Engineer License must accompany application for this position. Please be advised that if a high volume of applications are 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.



Illinois Department of Transportation

An Equal Opportunity Employer

Position Summary Sheet

Classification:	Civil Engineer IV	Salary:	\$5,800 - \$7,515*
Position Title:	Senior Repair Plans Engineer	Union Position:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Position Number:	PW114-23-75-906-21-01	IPR#:	42851

Office/Central Bureau/District/Work Address:

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

Description Of Duties:

This position is accountable for the structural analysis and design of bridge repair and rehabilitation projects of major magnitude and/or complexity; the review and approval of structural repair designs prepared by others; conducting structural inspections and investigations of deteriorated and damaged structures; and the preparation of emergency repair plans.

Special Qualifications:

Required:

- Current Illinois Professional Engineer license
- Occasional travel with overnight stays
- Valid driver's license

Desired:

- Six years of experience in civil engineering of which three years should be in structural engineering
- Current Illinois Structural Engineer license
- Thorough knowledge of the principles and practices of civil engineering with special emphasis on bridge design, construction, maintenance and inspection technology
- Ability to develop and maintain cooperative relationships with departmental staff, bridge office personnel, Repair Unit personnel and the public
- Strong oral and/or written communication skills

Shift/Remarks:

8:00 am – 4:30 pm / Monday – Friday

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

**Technical Application PM1080 (revised 6/1/17) is required. No previous version of the PM1080 will be accepted

**ILLINOIS DEPARTMENT OF TRANSPORTATION
POSITION DESCRIPTION**

DATE:	3-5-2018	POSITION:	Senior Repair Plans Engineer
APPROVED BY:	Timothy Armbrecht	OFFICE/DIVISION:	Office of Highways Project Implementation/Bureau of Bridges and Structures
CODE:	PW114-23-75-906-21-01	REPORTS TO:	Repair Plans Group Leader

Position Purpose

This position is accountable for the structural analysis and design of bridge repair and rehabilitation projects of major magnitude and/or complexity; the review and approval of structural repair designs prepared by others; conducting structural inspections and investigations of deteriorated and damaged structures; and the preparation of emergency repair plans.

Dimensions

Annual Projects:	75-120
Contract Value of Repairs:	\$2M to \$5M

Nature and Scope

This position reports to the Repair Plans Group Leader. No staff reports to this position.

The incumbent operates within an environment of ensuring that repairs to damaged or deteriorated structures are designed economically, are structurally sound and provide the traveling public with the least amount of inconvenience. Because a deteriorated structure may be load posted or closed until repairs are made, there is occasionally a strong push to complete proposed repairs in an expedited manner. He/she may be required to perform structural inspections and investigations of deteriorated or damaged structures and to prepare associated reports. The uniqueness of this position is the need to readily adapt to the "repair climate". The incumbent must possess the ability to coordinate ongoing rehabilitation projects with the sudden and unpredictable emergency repairs characteristic to this unit.

Typical problems encountered by the incumbent include the necessity to develop and maintain a comprehensive knowledge of advanced structural engineering theories and principles so that he/she is capable of designing unique and complex structural repairs. Repairs and retrofits designed by the incumbent are unique and the structure types are generally extremely large and complex. Such structures frequently span the major waterways of the state and often require innovative repair details. The resolution of structural problems by the incumbent requires bridge design experience, technical knowledge in fatigue and fracture mechanics, working knowledge of steel fabrication and construction practices, and good visualization capabilities. The greatest challenge faced by the incumbent is keeping abreast of the advancements in the various facets of bridge work through continued pursuance of information on bridge design, construction procedures, construction equipment, and fabrication and welding technology. The incumbent is also challenged to prepare or review emergency repair plans in the shortest possible time while ensuring structural integrity and safety to the travelling public.

The incumbent is personally responsible for evaluating structures with cracked welds or weldment details susceptible to cracking for the preparation of retrofit plans, the preparation of structural repair plans for structures damaged by vehicles or river traffic, and the review of repair or retrofit plans and documents prepared by other members of the squad, districts or consultants. He/she is also responsible for the design of detailed structural

repairs for deficiencies found during the annual state line joint maintenance inspections of border bridges and in-depth inspections of major structures within the state. The incumbent also reviews and recommends approval/disapproval of contractor proposals for structural techniques such as shoring, bracing, and jacking.

The incumbent is given wide latitude to act when performing the responsibilities assigned to this position but must refer to his/her superior for resolution of problems concerning deviations from departmental policies, specifications, and standards. The incumbent is guided by American Association of State Highway and Transportation Officials (AASHTO) specifications and interim specifications and departmental policies.

The incumbent has contact with the districts and/or consultants when investigating the extent of deterioration or damage to a bridge in the field and when designing or reviewing repair plans. He/she also has frequent contact with other units within the section and other sections within the bureau. Occasional travel with overnight stays is required of this position.

The effectiveness of this position can be measured by the technical expertise displayed by the incumbent in the analysis required for the completion of repair projects, the incumbent's ability to solve complex structural engineering problems, and by the timely completion of assigned projects.

Principal Accountabilities

1. Develops structural repairs for extremely complex structures which incorporate innovative repair procedures with current methods and technology.
2. Prepares emergency repair plans for structures damaged by vehicles or river traffic.
3. Reviews repair and retrofit details prepared by other engineers in the squad, by district personnel, or by consultants for completeness and structural adequacy.
4. Provides structural expertise on defects noted during the annual joint maintenance inspections of major structures over boundary rivers for corrective repairs.
5. Conducts special investigations concerning repair techniques, construction procedures, and design specifications.
6. Performs field investigations of damaged or deteriorated structures and recommends corrective actions.
7. Reviews and recommends approval/disapproval of contractor proposals for structural techniques such as shoring, bracing, and jacking.
8. Performs duties in compliance with departmental safety rules. Performs all duties in a manner conducive to the fair and equitable treatment of all employees.
9. Performs other duties as required or assigned.