

**Civil Engineer VI
Engineer of Concrete and Soils**

IPR Number:	43263	Union Position:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Position Number:	PW116-23-75-702-30-01	Shift:	8:00 am – 4:30 pm
Opening Date:	February 6, 2019		Monday – Friday
Closing Date:	February 21, 2019	Salary:	\$6,945 - \$8,983*

Office/Central Bureau/District/Work Address:

Office of Highways Project Implementation / Bureau of Materials / 126 E. Ash Street, Springfield, Illinois

Position Purpose:

This position is accountable for statewide policies, procedures, programs, and specifications for Portland cement concrete, Portland cement, and other cementitious materials, precast concrete products, precast prestressed concrete products, and roadway geotechnical engineering and construction.

Qualifications:

Position Requirements:

- Current registration as a Licensed Professional Engineer in the state of Illinois
- Valid driver's license
- Travel with overnight stays

Position Desirables:

- Ten years of experience in civil engineering of which at least 6 years should be in the specific area of highway engineering, 4 years of which should have been supervising engineering functions
 - Knowledge of concrete and soils materials; American Association of State Highway and Transportation Officials (AASHTO) and American Society for Testing and Materials (ASTM) standards; concrete production, testing and evaluation procedures; and soils production, testing, and evaluation procedures
 - Ability to make decisions on quality and durability of concrete and soils materials
 - Ability to maintain cooperative relationships with departmental and industry staff
 - Strong oral and written communication skills
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How to Apply/Remarks:

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 4:30 pm on the closing date listed above. Applications will not be accepted after this date and time. Applicants will be notified in writing to schedule interviews.

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

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 listed within the application will be considered for determining eligibility for this position.

This position is subject to the Revolving Door Prohibition (RDP) policy.

NOTE: A copy of each applicant's ACTIVE Illinois Professional Engineer License must accompany application for this position.

NOTE: 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.

*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.

**ILLINOIS DEPARTMENT OF TRANSPORTATION
POSITION DESCRIPTION**

DATE:	December 12, 2018	WORKING TITLE:	Engineer of Concrete and Soils
POSITION CLASSIFICATION:	Civil Engineer VI	OFFICE/BUREAU:	Office of Highways Project Implementation / Bureau of Materials
POSITION NUMBER:	PW116-23-75-702-30-01	REGION/DISTRICT:	N/A

Position Purpose

This position is accountable for statewide policies, procedures, programs, and specifications for Portland cement concrete, Portland cement, and other cementitious materials, precast concrete products, precast prestressed concrete products, and roadway geotechnical engineering and construction.

Dimensions

Number of staff reporting (direct):	3
Number of staff supervised (indirect):	16 – 20
Number of plants (producing concrete related products):	350+
Material contract value:	\$300 million

Nature and Scope

This position reports to the Engineer of Concrete, Soils, and Metals. Reporting to this position are the Concrete Technology Engineer, Geotechnical Engineer, and Concrete Products Engineer.

This position operates in a vigorous atmosphere requiring immediate response to current problems generated by economic limitations, evolving technology, priority changes, material availability, and environmental considerations. The responsibilities of this position include the daily management of pavement and structure mixture designs and earth structure designs. The incumbent, because of current circumstances and his/her unique location within the hierarchy of the department, is one of the lead persons in evaluating and implementing original procedures which have a profound effect upon the management of resources and the quality of new construction, reconstruction, and maintenance of our transportation system. S/He supervises investigations of mixtures and soil related products for the Illinois Highway Department Council and must be technically knowledgeable in order to gain the confidence of producers, suppliers, and the contracting industry to achieve acceptance of new concepts in the material application and utilization.

Typical problems include development, implementation, evaluation, and revisions of quality control (QC)/quality assurance (QA) and Performance Engineering Specifications that address the durability of pavements and structures; and review of the viability of recycling pavement and structural materials which will improve the economy of construction and conserve natural resources. Other typical problems include consideration of stabilization of earth structures with waste materials to improve pavement performance, assessment of the utilization of power plant flue precipitates in cement for pavements and structures which extends the supply of cement, and investigation of pozzolanic mixtures as pavement base courses which improves construction economy and conserves natural resources. A major challenge for one in this position is to provide the department with conceptual alternatives from which top management can select to remain responsive to public transportation demands and continue to maintain a high degree of favorable public relations.

The incumbent is responsible for the hiring of personnel and the assignment of responsibilities according to technical abilities and workloads. S/He supervises the development of mixture designs and special tests to determine the adequacy of material substitution and compatibility for standard commodities because of economy reasons and shortages. The incumbent is involved in the daily activities of specialists within the unit and provides a source of information to personnel within the department as well as providing consultation to those outside the department. The incumbent makes recommendations to the Engineer of Concrete, Soils, and Metals for purchasing of major equipment and testing units. S/He advises district personnel of the quality of proposed design mixtures and soil stability information, works with the bureaus on the quality of proposed design mixtures and soil stability information, and recommends revisions to specifications and special provisions. S/He consults with the University of Illinois specialist in the fields of geotechnical engineering and concrete materials.

The incumbent utilizes the following staff to accomplish the functions of the unit:

Concrete Technology Engineer who evaluates proposed changes in specifications, provides guidance in concrete technology, and operates a laboratory for investigations of new or problem materials, as well as maintaining quality assurance of presently used materials.

Geotechnical Engineer who provides technical assistance to district geotechnical engineers; provides nuclear density repair service, calibration, and training; and maintains a laboratory for soils and aggregate testing and a lab for nuclear gage repair and investigation.

Concrete Products Engineer who oversees the statewide QC/QA programs for precast concrete products and precast prestressed concrete products, as well as the cement and finely divided materials lab.

The incumbent is given latitude in accomplishing responsibilities. Problems of a unique or sensitive nature are referred to the supervisor with recommendations for resolution. S/He is constrained by departmental rules and regulations as well as any applicable state and federal guidelines.

In performing the functions of this position, the incumbent maintains internal contacts with district personnel, the Bureau of Construction, Bureau of Design and Environment, Bureau of Materials, and the Division of Aeronautics. External contacts include the Capital Development Board (CDB), Illinois Secretary of State, the Federal Highway Administration (FHWA), and the University of Illinois. Travels on an as-needed basis with overnight stays to perform the duties of this position.

The effectiveness of this position can be measured by his/her ability to provide timely and accurate consultations to top departmental managers and private organizations and to create staff stability that provides a cooperative working environment between the unit and other units of the department and private enterprise.

Principal Accountabilities

1. Provides conceptual alternatives for materials utilization from which top management can select to remain responsive to public transportation demands and maintain favorable public relations.
2. Develops correspondence and reports to assist the Engineer of Concrete, Soils, and Metals on notifying concerned people of the bureau's decisions and recommendations.
3. Plans and organizes unit work force to accomplish high priority tasks in a timely manner.
4. Develops and implements work plans to ensure materials acceptance programs meet the needs of suppliers and contractors while fulfilling oversight agreements with the FHWA.
5. Interacts with university researchers involved with the department's contract research program and pooled fund studies.

6. Reviews and recommends revisions to specifications, as well as to the policy manual for materials inspection, Design Manual, and course material for the department's Quality Management Training Program to accommodate the use of new materials, processes, and technologies.
7. Travels on an as-needed basis with overnight stays to perform the duties of this position.
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 assigned.

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

Position Classification	Position Number	Working Title	Authorized Identical
Civil Engineer V	PW115-23-75-702-32-01	Concrete Technology Engineer	1
Civil Engineer V	PW115-23-75-702-33-01	Geotechnical Engineer	1
Civil Engineer V	PW115-23-75-702-34-01	Concrete Products Engineer	1

Supervisor of this position

Immediate Supervisor Position Classification: Civil Engineer VII

Working Title: Engineer of Concrete, Soils and Metals

Position Number: PW117-23-75-702-00-01

Position Requirements


- Current registration as a Licensed Professional Engineer in the state of Illinois
- Valid driver's license
- Travel with overnight stays

Position Desirables

- Ten years of experience in civil engineering of which at least 6 years should be in the specific area of highway engineering, 4 years of which should have been supervising engineering functions
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Agency Approvals


Bureau Chief of Personnel Management


Secretary, Department of Transportation
By: Becky Koehler