



Illinois Department of Transportation

Memorandum

To: DIRECTORS, DEPUTY DIRECTORS, AND BUREAU CHIEFS
From: Dianna L. Taylor
Bureau Chief of Personnel Management
Subject: Technical Vacancy
Date: September 21, 2016

Attached are the Position Summary Sheet and Position Description for the vacant technical position listed below. Please post this vacancy announcement September 26, 2016 in the designated areas.

The deadline for applicants to submit their names for consideration is **4:30 p.m.** on **Friday, October 7, 2016**. Applicants will not be accepted after that time and date.

NOTE: Official college transcripts must be included with application. 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. Please include IPR number on the application. 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.

All applicants will receive a position description for the position they are applying for. If you have any questions, please contact Jennifer Sunderland or Denise Hamilton at 217/782-5594.

CET (1 pos)

Geotechnical Engineer Trainee
Bureau of Bridges and Structures
Office of Program Development
Springfield

Attachments
41308

*IDOT considers official college transcripts to be original embossed transcripts in a sealed envelope from the university/college or in PDF format sent from the university/college directly to the Bureau of Personnel Management.

Technical Applications (PM 1080 rev 9/19/16) **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 **Friday, October 7, 2016**, 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: Official college transcripts must be included with application. 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. Please include IPR number on the application. 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 Trainee	Salary Range:	\$4,275 - \$4,655
Position Title:	Geotechnical Engineer Trainee	Union Position:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Position Number:	PW110-23-65-905-30-01	IPR#:	41308

Office/Central Bureau/District/Work Address:

Office of Program Development/Bureau of Bridges and Structures/2300 South Dirksen Parkway, Springfield, IL

Description Of Duties:

This position provides structural engineers with geotechnical recommendations on simple projects so the most cost effective, safe and durable structure is constructed. This is accomplished by performing simple analyses to design or review and approves consultant designed foundations supporting bridges, retaining walls, culverts and other traffic structures. The incumbent provides foundation and geotechnical design parameters, plan modifications, and specification input to the structural engineer so contract documents do not create construction delays or contractor claims. In addition, this position assists districts, contractors, consultants, and in-house structural engineers in responding to or resolving soils related design and construction problems.

Special Qualifications:

Required:

- Bachelor of Science degree in Civil Engineering from an ABET accredited university prior to date of employment or must be a Licensed Engineer Intern in the State of Illinois (includes those expecting to graduate in winter 2016/spring 2017)
- Minimum 2.5 cumulative GPA in engineering related courses (If GPA is between 2.0–2.5, candidate must have passed the Fundamentals of Engineering Exam.)
- Official college transcripts must be included with application. (Official transcripts indicating graduation date for winter 2016/spring 2017 graduates must be provided at time of hire.)

Desired:

- Strong oral and written communication skills.

Shift/Remarks:

8:00 am – 4:30 pm / Monday – Friday

THIS IS AN ENTY LEVEL POSITION

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**ILLINOIS DEPARTMENT OF TRANSPORTATION
POSITION DESCRIPTION**

DATE:	8/18/2016	POSITION:	Geotechnical Engineer Trainee
APPROVED BY:	Carl Puzey	OFFICE/DIVISION:	Office of Program Development/Bureau of Bridges and Structures
CODE:	PW110-23-65-905-30-01	REPORTS TO:	Geotechnical Group Engineer

Position Purpose

This position provides structural engineers with geotechnical recommendations on simple projects so that the most cost effective, safe and durable structure is constructed. This is accomplished by performing simple analyses to design or review and approves consultant designed foundations supporting bridges, retaining walls, culverts and other traffic structures. The incumbent provides foundation and geotechnical design parameters, plan modifications, and specification input to the structural engineer so the contract documents do not create construction delays or contractor claims. In addition, this position assists the districts, contractors, consultants, and in-house structural engineers in responding to or resolving soils related design and construction problems.

Dimensions

Subordinate Personnel	0
Annual Projects	25 to 50
Contract Value:	\$75M

Nature and Scope

This position reports to the Geotechnical Group Engineer. There are no subordinates reporting to this position.

This position operates in an environment where multiple projects are assigned to the incumbent, the general review scope is provided and the incumbent is expected to work for the most part independently to provide competent recommendations to the Geotechnical Group Engineer by the requested completion date. The incumbent has broad latitude in utilizing judgment on how to complete assignments, as well as having the responsibility to seek input and concurrence from the Geotechnical Group Engineer when deviating from policy and resolving simple issues in order to maintain unit productivity. As part of the incumbent's duties he/she may be asked to perform geotechnical analyses on simple projects; this may involve working with consultants (both geotechnical and structural), as well as District and Bureau staff to ensure cost effective, safe, accurate geotechnical recommendations along with resolving problems, considering the site and subsurface design constraints.

The incumbent would prepare in-house Structure Geotechnical Reports (SGRs) on simple projects, review consultant-prepared SGRs, and communicate review comments to the consultants to ensure completeness of the SGR which is used in the development of the TSL plans, design computations, final contract plans, and construction specifications. The position is also responsible for making sure that the appropriate subsurface soils data has been gathered and is commensurate with the complexity of the projects. In addition, TSL plans, final plans, local agency designs, and construction submittals on simple projects are reviewed and recommendations are issued by the incumbent to address any geotechnical problems uncovered.

The recommendations made by the incumbent will be often related to a foundation, retaining wall, or site soils ability to carry design loads, the adequacy or development of plan details, and the review or writing of specifications. S/He is responsible for the analyses, design, or review of simple bridge foundations, earth retaining systems, ground modification, ground anchors, river cofferdams, temporary soil retention systems, as well as sign, light, and traffic structure foundations, construction control of pile driving, and drilled shaft installation. The incumbent may need to conduct field inspections to view and address geotechnical challenges in either the planning, design, or construction phases.

The incumbent is responsible for developing and maintaining a comprehensive knowledge of geotechnical engineering theories and practice so that s/he is capable of solving and reviewing somewhat unique and simple problems by utilizing advanced geotechnical analyses and procedures. As such they require innovative analyses and designs not normally required on more common projects. The greatest challenge faced by the incumbent is to be resourceful and apply the latest technological developments in geotechnical engineering to these simple departmental projects.

The incumbent must maintain a working knowledge of and be guided by the AASHTO design and construction specifications and applicable departmental policies. S/He maintains moderate contact with the Federal Highway Administration on foundation policies as well as technology transfer and occasional contact with university personnel involved in previous or current research to answer questions on geotechnical issues.

The effectiveness of this position is measured by the accuracy and expertise observed by the Geotechnical Group Engineer, the timeliness with which tasks are completed, and his/her ability to communicate simple issues with their supervisor, consultants and co-workers.

Principal Accountabilities

1. Prepares and/or review consultant Structure Geotechnical Reports on simple projects.
2. Reviews the foundations and geotechnical aspects of structural consultant and in-house Type Size & Location Plans for simple structures.
3. Reviews the foundations and geotechnical aspects of structural consultant and in-house Final Plans for simple structures.
4. Review simple construction submittals including cofferdams, seal coats, temporary soil retention systems, drilled shaft installation procedures, ground modification designs, tie-back anchor and micro-pile designs, value engineering, construction problems, MSE and soil nailed wall internal stability, noise wall foundations, and other less common requests.
5. Review simple Local Agency structure foundations and geotechnical reports as well as repair plans for foundations, slopes, and retaining walls.
6. Design simple shaft foundations for high mast light towers, overhead sign trusses, and traffic signal mast arms when standard design tables provided on the standard base sheets and manuals cannot be used.
7. Performs duties in compliance with departmental safety rules. Performs all duties in a manner conducive to the fair and equitable treatment of all employees.
8. Performs other duties as required or assigned.