



**Civil Engineer IV (1 position)
Senior Geotechnical Engineer**

IPR Number:	44291	Union Position:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Position Number:	PW114-23-75-905-30-01	Shift:	8:00 am – 4:30 pm Monday – Friday
Opening Date:	March 16, 2020		
Closing Date:	March 27, 2020	Salary:	\$5,920 – \$9,230*

Office/Central Bureau/District/Work Address:

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

Position Purpose:

This position is responsible for very complex foundations and soils analyses involved in the design of major structures; the review of analyses for projects prepared by consultants; the preparation of construction specifications and procedures; and the investigation, analysis and resolution of complex soils and foundation related construction problems.

Qualifications:

Position Requirements:

- Current registration as a licensed Professional Engineer in the State of Illinois
- Four years of experience in civil engineering
- Valid driver's license
- Occasional statewide travel with overnight stays

Position Desirables:

- Ability to develop and maintain cooperative relationships with departmental staff
- Strong oral and written communication skills

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 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

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

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

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.

Applicants will be notified in writing to schedule interviews.

*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:	February 16, 2020	WORKING TITLE:	Senior Geotechnical Engineer
POSITION CLASSIFICATION:	Civil Engineer IV	OFFICE/BUREAU:	Office of Highways Project Implementation / Bureau of Bridges and Structures
POSITION NUMBER:	PW114-23-75-905-30-01	REGION/DISTRICT:	n/a

Position Purpose

This position is responsible for very complex foundations and soils analyses involved in the design of major structures; the review of analyses for projects prepared by consultants; the preparation of construction specifications and procedures; and the investigation, analysis, and resolution of complex soils and foundation related construction problems.

Dimensions

Annual projects:	125 – 150
Contract value:	\$170 million

Nature and Scope

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

This position operates in an environment of performing the geotechnical studies necessary for the design and economic evaluation of very complex foundations and retaining wall systems in order to determine their compatibility to the geologic environment of the site and their suitability to carry the structural loads; the preparation or review of Structure Geotechnical Reports (SGRs) which summarize the findings of these studies and related foundation recommendations for use in preparation of the final plans for letting; the preparation of construction specifications and procedures for complex drilled shaft foundations and retaining wall systems as well as for advanced technology for pile driving control; the geotechnical analysis of cofferdams and other retaining structures for major river bridges; and the investigation, analysis, and solution to complicated soils and foundations related construction problems.

Typical problems faced by the incumbent include the necessity to continue to develop and maintain a comprehensive knowledge of geotechnical engineering theories and practices so s/he is capable of solving and reviewing unique and complex problems utilizing advanced geotechnical analyses and procedures. Foundations for structures or earth retaining systems designed or reviewed by the incumbent are unique and generally very complex. They are frequently located in complex geological settings and many times in major waterway crossings or adjacent to existing structures. As such, they require innovative analyses and designs not normally found in the more common settings. Analysis and design of such systems demand the resolution of difficult geotechnical engineering problems and can require the development of unusually sophisticated solutions. The greatest challenge faced by the incumbent is to be resourceful and to keep abreast of the latest technological developments in geotechnical engineering design and construction and to determine the potential applications to departmental projects.

The incumbent is personally responsible for making sure that the appropriate subsurface soils data has been gathered by others and is commensurate with the complexity of the project. S/He is responsible for the analyses, design, or review of complex bridge and traffic structure foundations and earth retention systems, such as anchored walls, mechanically stabilized earth walls, drilled shaft foundations, major river cofferdams, high mast light tower foundations, construction control of pile driving, and drilled shaft construction through the use of pile wave equation and pile driving analyzer, and the preparation of comprehensive specifications and special provisions to govern the contractors' activities in these areas. S/He is expected to resolve design disagreements with outside agencies and perform field inspections when they are necessary to solve geotechnically related problems.

This position is highly technical. The incumbent is guided by the American Association of State Highway Officials (AASHTO) specifications and applicable departmental policies. The incumbent has a broad latitude in pursuing her/his objective for completing assignments; however, s/he must refer to her/his supervisor problems concerning deviations from departmental policies, standards, and/or specifications.

The incumbent has frequent contacts with other units within the bureau. S/He has regular contacts with the districts and the central Bureaus of Construction and Materials to resolve data acquisition and construction issues. S/He maintains moderate contact with the Federal Highway Administration (FHWA) on foundation approvals and technology transfer. S/He has occasional contact with university personnel involved in previous or current pertinent research related to the department's projects and needs. Occasional statewide travel with overnight stays is required.

The effectiveness of this position is measured by the technical expertise displayed by the incumbent in the analysis and design required for the completion of projects and his/her ability to solve and communicate complex geotechnical engineering problems both in the office and in the field in a timely manner.

Principal Accountabilities

1. Prepares and/or reviews in-house prepared foundation and retaining wall plans as well as repair plans for failing foundations, walls, and slopes.
2. Prepares and reviews in-house SGRs.
3. Reviews, analyzes, and evaluates SGRs prepared by consultants.
4. Prepares and reviews very complex geotechnical designs for major structures.
5. Reviews, analyzes, and evaluates very complex geotechnical designs prepared by consultants.
6. Performs field investigations and analyses of very complex foundation problems for design or construction.
7. Monitors, reviews, or prepares feasibility studies of complex retaining wall systems.
8. Reviews and recommends approval of cofferdams and other soil retaining structures.
9. Prepares construction specifications and special provisions for geotechnical designs.
10. Performs duties in compliance with departmental safety rules. Performs all duties in a manner conducive to the fair and equitable treatment of all employees.
11. Performs other duties as assigned.

Subordinates of this position

Position Classification	Position Number	Working Title	Authorized Identical
n/a			

Supervisor of this position

Immediate Supervisor Position Classification: Civil Engineer V

Working Title: Foundations and Geotechnical Group Engineer

Position Number: PW115-23-75-905-30-01

Position Requirements

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Position Desirables

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Agency Approvals



Bureau Chief of Personnel Management



Secretary, Department of Transportation