



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: August 25, 2016

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

The deadline for applicants to submit their names for consideration is **4:30 p.m.** on **Friday, September 9, 2016**. Applicants 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.

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.

CE V

Hydraulics Section Chief
Region 5/District 8/Program Development
Office of Highways Project Implementation
Collinsville

Attachments
41223

Technical Applications (PM 1080) **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, September 9, 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: 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 V	Salary Range:	\$6,315 - \$10,210
Position Title:	Hydraulics Section Chief	Union Position:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Position Number:	PW115-23-58-303-10-01	IPR#:	41223

Office/Central Bureau/District/Work Address:

Office of Highways Project Implementation/Region 5 / District 8 / Bureau of Program Development / 1102 Eastport Plaza Drive, Collinsville, IL

Description Of Duties:

This position is accountable for reviewing and developing adequate drainage systems for proposed highway construction in such a manner as to limit any adverse effects caused by the construction of the highways.

Special Qualifications:

Required:

- A current Illinois Professional Engineer license
- A valid driver's license

Desired:

- Nine years of experience in civil engineering of which at least five years should be in the specific area of highway engineering, three years of which should have been supervising engineering functions
- Extensive knowledge of the principles and practices of civil engineering
- Strong oral and/or written communication skills
- Ability to develop and maintain cooperative relationships with departmental staff

Shift/Remarks:

Typically 8:00 am - 4:30 pm / Monday - Friday

***THIS POSITION IS COVERED UNDER THE REVOLVING DOOR PROHIBITION (RDP) POLICY.**

**ILLINOIS DEPARTMENT OF TRANSPORTATION
POSITION DESCRIPTION**

DATE:	October 2015	POSITION:	Hydraulics Section Chief
APPROVED BY:	<u>Francis Opfer</u>	DEPARTMENT:	Dist. 8/Program Development Studies and Plans
CODE	PW115-23-58-303-10-01	REPORTS TO:	Studies & Plans Engineer

POSITION PURPOSE:

This position is accountable for reviewing and developing adequate drainage systems for proposed highway construction in such a manner as to limit any adverse effects caused by the construction of the highways.

DIMENSIONS:

Subordinate Personnel:	2 direct, 2 indirect
Number of Project Developments:	40 annually
Value of Projects:	\$35 Million

NATURE AND SCOPE:

This position reports to the Study and Plans Engineer as do three Project Engineers, Studies Engineer, Geometric Project Engineer, Environmental Manager, Survey Section Chief, and Secretary. Reporting to this position is the Hydraulic Engineer and Hydraulic Technician.

This position is accountable for developing and reviewing drainage systems of proposed highway facilities within a District that is both highly urbanized and rural in nature. District 8 has unique drainage problems due to its location, particularly covering areas known as the "American Bottoms" which receives waters and sediment from the bluff areas, blocking hydraulic capacities of drainage structures and channels. Drainage evaluation is not limited to typical highway systems but expanded into a complex system analysis. Extensive highway systems is subject to critical hydrologic and hydraulic evaluations often requiring design of retention basins, channel modifications, erosion protection, pumping stations, etc. This position is responsible for the proper sizing of bridges and culverts over waterways. This requires extensive knowledge of hydraulics and local conditions in order to develop adequate drainage systems that will not adversely affect downstream or upstream property owners. The incumbent is required to develop adequate justification and research that will provide sufficient creditability to local agencies and municipalities concerned with possible adverse effects to drainage systems in their area caused by proposed highway improvement. In addition, the Mississippi and Illinois River floodplains are controlled or monitored by at least nine different levee boards or concerned agencies, all of which require review and approval of our proposed projects. Hydrologic and hydraulic studies for all projects which are to qualify for federal aid or require federal action must include an evaluation of all encroachments into a 100 year frequency floodplain. Hydraulic Reports will include probable risk, floodplain environmental impacts, and possible measures to mitigate impacts. The incumbent must evaluate the impact of scour at all bridge crossing of a waterway.

The incumbent reviews proposed projects; requests adequate surveys relative to drainage; calculates design runoff, velocities, and hydraulic openings for proposed highway structures; prepares Hydraulic Reports; develops and reviews storm water systems for state highway systems; designs culverts, stilling basins, proper riprap to minimize erosion, and retention basins to control high water; reviews private commercial development plans that are adjacent to highways, which might affect the state's drainage system; maintains records of peak high water occurrences; obtains all necessary Corps of Engineers 404 permits; and provides hydraulic expertise for immediate solution to on-site drainage problems for the Bureau of Operation and Program Implementation. The incumbent will meet with other agencies and land owners to solve local drainage problems involving the Department. This requires the incumbent to explain complex drainage systems to local land owners in a way that is understood. Failure to convince local land owners of the Department's intent can often lead to a delay in the project. The incumbent performs all scour analysis for waterway crossings and must keep up to date on the changing scour analysis techniques. The greatest challenge facing the incumbent is the design of waterway crossings that meets the need of the Department, performs well hydraulically, while meeting the guidelines of various state and federal agencies.

The incumbent is considered the District expert in regard to hydraulics and drainage systems. Reviewing and understanding the work of consultants retained by the District is necessary as the incumbent is often required to explain the drainage system in the form of an expert witness in litigation involving the state. This requires a total understanding of the drainage system and the ability to communicate this knowledge in a concise and consistent manner. The incumbent is responsible to provide training relative to hydrology and hydraulics. Considerable amounts of review of research publications, special drainage reports and pertinent literature on products is required. This position is responsible to keep up-to-date on the latest drainage method developments. The incumbent represents the Department of Transportation at public meetings on drainage as well as meetings with levee districts and other agencies. The incumbent serves as the chairperson of a scour team whose function is to analyze all bridges over waterways for scour potential and recommend corrective measures, if necessary. The incumbent will review all new material for updating the Department's Drainage Manual.

In performing the functions of this position the incumbent utilizes the following staff: Hydraulic Engineer and Hydraulic Technician who perform such tasks as 404 permit applications, prepares Hydraulic Reports, reviews Drainage Studies, orders appropriate surveys, assists other personnel in the Department with drainage calculations, reviews the affect of proposed new commercial development on the State's drainage system, and responds to drainage inquiries by local land owners.

In performing the functions of this position the incumbent exercises total District authority in relation to hydraulics and drainage system and problems. Currently, the Hydraulics Section Chief is certified by the Hydraulics Unit of the Bureau of Bridges and Structures to do final approval of the hydraulic reports for all superstructure replacements and bridge widening and structure replacement for those structures not requiring a permit from the Division of Water Resources. The District Hydraulic Section Chief has the authority to perform final review of multiple cell box culverts. All decisions are based upon Illinois Department of Transportation Policies and Procedures, Federal Highway Administration guidelines, state-of-the-art knowledge of hydraulics, good engineering practices and judgment.

The Hydraulic Section Chief position is Districtwide, working harmoniously with the Bureau of Operations, Program Implementation, and Local Roads. Program Implementation drainage problems normally require immediate attention. In order to meet project schedules a close and personal coordination is maintained with the following agencies: Corps of Engineers, Federal Highway Administration, Illinois Environmental Protection Agency, U.S. Fish and Wildlife, U.S. Geological Survey, Division of Water Resources, Central Bridge Office, Central Office of Design and Environment, counties and cities, levee districts, consultants, and U.S. Coast Guard.

In performing the functions of this position the incumbent is evaluated according to his/her ability to supply the District and area with Hydraulic and drainage expertise in such a manner as to minimize adverse affect from highway or commercial development.

PRINCIPAL ACCOUNTABILITIES:

1. Responsible for timely completion of all assignments and the correlation of the work with other Departments and outside agencies.
2. Responsible for accuracy and conformance with State policies for hydraulic reports, and related work done by both the District personnel and consultants.
3. Responsible for training, motivating and evaluating all subordinate personnel and familiarizing other Department personnel with drainage practices and policies.
4. Responsible for providing District expertise to all internal and external sources relative to hydrology and hydraulics.
5. Responsible for obtaining all needed permits relative to the construction and maintenance of drainage facilities.
6. Responsible for maintaining a State of the Art knowledge on hydraulics and hydrology related to complex transportation systems.
7. Responsible for the administration of the hydraulic unit's performance evaluation process.
8. Responsible for the timely completion of permit applications and resolution of drainage complaints.
9. Performs duties in compliance with departmental safety rules. Performs all duties in a manner conducive to the fair and equitable treatment of all employees.
10. Performs other duties as assigned.