



# Illinois Department of Transportation

## Memorandum

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To: DEPUTY SECRETARIES, DIRECTORS AND BUREAU CHIEFS  
From: Dianna L. Taylor  
Bureau Chief of Personnel Management  
Subject: Technical Vacancy  
Date: August 9, 2017

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Attached are the Position Summary Sheet and Position Description for the vacant technical position listed below. Please post this vacancy announcement August 10, 2017 in the designated areas.

The deadline for applicants to submit their applications for consideration is **4:30 p.m. on Wednesday, August 23, 2017**. 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.

EE V

Lead Electrical Engineer  
Bureau of Design & Environment  
Office of Program Development  
Springfield

Attachments  
42024

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](mailto:DOT.CO.BPM.EmploymentApplications@Illinois.gov) by **Wednesday, August 23, 2017**, 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

<b>Classification:</b>	<b>Electrical Engineer V</b>	<b>Salary:</b>	<b>\$6,315 - \$8,263*</b>
<b>Position Title:</b>	<b>Lead Electrical Engineer</b>	<b>Union Position:</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Position Number:</b>	<b>PW155-23-65-309-30-01</b>	<b>IPR#:</b>	<b>42024</b>

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### Office/Central Bureau/District/Work Address:

Office of Program Development / Bureau of Design & Environment / 2300 S. Dirksen Parkway, Springfield, IL

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### Description Of Duties:

This position is accountable for engineering design; preparation of plans, contract documents and estimates; approval of material shop drawings; conducting field inspections; and review of consultant submittals associated with electrical, lighting and pump station (EL&P) installations for the Office of Program Development.

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### Special Qualifications:

#### Required:

- Current Illinois Professional Engineer license (electrical engineering)
- Valid driver's license
- Frequent statewide travel which may include overnight stays

#### Desired:

- Ten years of experience in the practice of electrical engineering, including three years of responsibility for supervising difficult engineering projects or important technical research
- Registration as a Lighting Certified Professional
- Thorough knowledge of modern methods and techniques as applied to the design, installation and maintenance of electrical systems and equipment
- Thorough knowledge of all local, state and national codes, standards and regulations, governing or applicable to design, construction and operation of electrical projects
- Strong oral and written communication skills

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### 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**

<b>DATE:</b>	May 1, 2017	<b>POSITION:</b>	Lead Electrical Engineer
<b>APPROVED BY:</b>	<i>Jack Elston</i>	<b>OFFICE/DIVISION:</b>	Office of Program Development Bureau of Design & Environment
<b>CODE:</b>	PW155-23-65-309-30-01	<b>REPORTS TO:</b>	Electrical & Mechanical Unit Chief

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***Position Purpose***

This position is accountable for engineering design; the preparation of plans, contract documents and estimates; the approval of material shop drawings; conducting field inspections; as well as the review of consultant submittals associated with electrical, lighting and pump station (EL&P) installations for the Office of Program Development.

***Dimensions***

Electrical Plan Design and Review:	25-30 Annually
Value of Electrical Plans:	\$15 M Annually
Material Reviews:	600 Items Annually
Field Inspections:	25-30 Annually

***Nature and Scope***

This position reports to the Electrical and Mechanical Unit Chief. Reporting to this position are the Electrical Lighting Specialist, Electrical Lighting Engineer and Electrical Engineer I.

This position operates in an environment of preparing designs, specifications and estimates for detailed highway lighting, electrical and pump station projects (exclusive of District 1). Roadway lighting design may include but is not limited to state and interstate highways, interchanges, local roads, intersections, sign lighting, navigation obstruction lighting, tunnels, bridges, weigh stations and rest area lighting. Pump station design is typically a building with all the enclosed facilities such as pumps, motors, piping and controls to protect the highway system from ground water and storm water runoff. Electrical design encompasses a variety of projects based on the needs of the Department. The position reviews designs, specifications and estimates prepared by consultants for all EL&P work (excluding traffic signals) contained in contracts let by the Department. Also required is the field inspection of projects under contract. The position is responsible to contribute to the development and update of electrical, pump station and lighting policy manuals, procedures, standards and Department memoranda.

Typical problems include the timely integration of EL&P plans, specifications, and estimates into general highway improvement plans for specific letting schedules, reviewing associated policies and recommending changes and additions, determining the appropriate material and equipment components to be used on installations, preparing specifications and contract documents and establishing priorities to meet project deadlines. The greatest challenge of this position is to design projects utilizing the latest technology while minimizing construction, maintenance and energy costs and still provide the required level of service and coordination of plans, specifications and estimates with associated contracts within a limited time frame dictated by letting schedules.

The incumbent is personally responsible for the design, or reviews the design performed by others, for the electrical and mechanical systems associated with pump stations. S/He also designs or reviews the designs of others for the illumination of highways, interchanges, intersections, rest areas, weigh stations, overhead signs, tunnels, and bridges (including navigations and aviations obstruction lights). S/He

prepares and updates special provisions, circuit diagrams, voltage drop calculations, luminaire performance tables, and other contract documents or reviews and updates those prepared by others. The estimates for all projects are either prepared or reviewed by the incumbent. Each project may require a field review by this position with district personnel prior to design and typically requires a final nighttime inspection and written report with comments and recommendations prior to final acceptance of all lighting projects let by the Department. This position is also responsible for the review of EL&P submittals for compliance with the contract for each project designed in-house or by consultants.

The incumbent accomplishes responsibilities through the following staff:

Electrical Lighting Specialist who is accountable for the design and review of electrical plans, specifications and estimates; the approval of electrical materials; and the field inspection of electrical installations for the Office of Program Development.

Electrical Lighting Engineer who is accountable for assisting with the electrical engineering design and review of plans, specifications and estimates; the approval of electrical materials; and the field inspection of electrical installations for the Office of Program Development.

Electrical Engineer I who is accountable for assisting with the electrical engineering design and review of simple plans, specifications and estimates; the approval of electrical materials; and the field inspection of electrical installations for the Office of Program Development.

Under the general direction of the Electrical and Mechanical Unit Chief, the incumbent is given wide latitude in the design and review of project plans, material reviews, and field inspections, referring unusual or difficult situations to his/her supervisor. S/He works within accepted engineering standards with respect to EL&P systems, is expected to exercise judgment in EL&P design and review, and makes timely and proper suggestions for modification and revisions to the plans, policies, and specifications. S/He makes a determination on a project by project basis as to whether the equipment components and materials identified in the design are appropriate for the contract and meet all pertinent codes and standards, pay item format and pricing.

Internally, this position has contact with the district offices and the central office bureaus. The incumbent advises and provides direction to personnel in the Districts and Central Bureau of Operations concerning issues associated with various EL&P systems. External contacts may include the Federal Highway Administration, consulting engineers, electrical contractors, electrical materials suppliers, manufacturers and utility companies.

The effectiveness of this position is measured by the timely completion of plans and contract documents, specifications, and estimates within a limited schedule, the accurate appraisal of EL&P materials for use on contracts, the timely, proper and accurate completion and appraisal of field inspections, and the harmonious relationship maintained with the many agencies and other organizations the position contacts.

### ***Principal Accountabilities***

1. Prepares plans, design calculations, specifications, contract documents, and estimates for electrical installations, pump stations, highway lighting, sign lighting, navigations obstruction lighting, tunnels, and other lighting projects.
2. Reviews and recommends plans, design calculations, specifications, contract documents, and estimates for all EL&P items contained in contracts let by the Department.
3. Reviews and recommends specific EL&P material items used in highway contracts.

4. Performs field reviews and final inspections of EL&P projects under contract.
5. Provides suggestions for modification and revisions to the plans, policies, and specifications used to develop EL&P plans and contract documents based on relevant codes and technology changes.
6. Advises various contractors, consultants, suppliers, and Departmental agencies on EL&P design under the direction of supervisor.
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.