Job Title: ELECTRICAL ENGINEER V - LEAD
ELECTRICAL ENGINEER - IPR#45416

Agency: Department of Transportation
Closing Date/Time: 07/15/2022
Salary: $6,445 - $10,210 Monthly
Job Type: Salaried Full Time
County: Sangamon
Number of Vacancies: 1
Plan/BU: NR916 - Protech Teamsters

*This position is covered by the Revolving Door Prohibition Policy.

This position is a union position; therefore, provisions of the relevant collective bargaining agreement/labor contract apply to the filling of this position.

All applicants who want to be considered for this position MUST apply electronically through the illinois.jobs2web.com website. State of Illinois employees should click the link near the top left to apply through the SuccessFactors employee career portal.

Applications submitted via email or any paper manner (mail, fax, hand delivery) will not be considered.

Agency Mission Statement
The Illinois Department of Transportation is seeking to hire a Lead Electrical Engineer.

The IDOT team works diligently to provide safe, cost-effective transportation for Illinois in ways that enhance quality of life, promote economic prosperity and protect our environment. We are problem solvers and leaders, constantly searching for innovations and improvements in support of our commitment to providing the best multimodal transportation system for Illinois.

Our team fosters a culture of inclusivity. We value diversity and hold ourselves to the highest ethical standards as we work together for a common purpose. Team members frequently collaborate with colleagues and others outside the department to best meet customer needs.

Employees enjoy excellent benefits, including health, vision and dental insurance; a retirement plan and deferred compensation options; state holidays and other time off; tuition reimbursement; flexible schedules; and pre-tax benefit programs. The department also offers extensive training and career advancement opportunities.

We invite qualified applicants to apply to become part of our team. We are confident that you will take pride in serving Illinois and its residents and visitors.

Job Responsibilities
This position is accountable for preparing plans, contract documents, estimates, and engineering design; approving material shop drawings; and conducting field inspections. This position reviews consultant submittals associated with electrical, lighting, and pump station (EL&P) installations for the Office of Highways Project Implementation (OHPI).

Annual electrical plan design and review: 25-30
Annual value of electrical plans: $15 million
Annual material reviews: 600 items
Annual field inspections: 25-30
This position reports to the Electrical and Mechanical Unit Chief. There are no subordinates reporting to this position.

This position operates in an environment of preparing designs, specifications, and estimates for detailed highway EL&P 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 (including roundabouts), sign lighting, obstruction warning lighting, tunnels, bridges, weigh stations, and rest areas. 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.

Typical problems include the timely integration of EL&P plans, specifications, and estimates into general highway improvement plans for specific letting schedules. Other problems include reviewing associated policies and recommending changes and additions, determining the appropriate material and equipment components to be used on installations, preparing special provisions 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 providing the required level of service and coordination of plans, special provisions, and estimates of material and cost with associated contracts. This must be completed within a limited time frame that is dictated by letting schedules.

The incumbent is personally responsible for the design or review of the design performed by others for the electrical and mechanical systems associated with pump stations. The incumbent designs or reviews the designs of others for the illumination of highways, interchanges, intersections (including roundabouts), rest areas, weigh stations, overhead signs, tunnels, and bridges (including obstruction warning luminaires). The incumbent 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 incumbent performs field inspections of projects under contract. The incumbent contributes to the development and update of electrical, pump station, and lighting policy manuals, procedures, standards, and department memoranda.

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. The incumbent refers unusual or difficult situations to the Electrical and Mechanical Unit Chief. The incumbent works within accepted engineering standards with respect to EL&P systems, exercises judgment in EL&P design and review, and makes timely and proper suggestions for modification and revisions to the plans, policies, and specifications. The incumbent decides 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, the incumbent has contact with the district office and central office bureau personnel. The incumbent advises and provides direction to personnel in the district offices 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. Frequent statewide travel with overnight stays is required.

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 relationships maintained with the many agencies and other organizations the incumbent contacts.

**Principal Accountabilities**
1. Prepares plans, design calculations, special provisions, contract documents, and estimates for electrical installations, pump stations, highway lighting, sign lighting, navigation 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 recommendations for modification and revisions to the plans, policies, and special provisions 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 the Electrical and Mechanical Unit Chief.
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 assigned.

Qualifications

**Position Requirements**

- Current registration as a licensed Professional Engineer in the state of Illinois
- Ten years of related experience in the practice of electrical engineering with responsibility for supervising difficult engineering projects or important technical research
- Valid driver’s license
- Frequent statewide travel with overnight stays

**Position Desirables**

- 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/national codes, standards, and regulations governing or applicable to the design, construction, and operation of electrical projects
- Strong oral and written communication skills

**Work Hours:** 8:00 A.M. - 4:30 P.M. Monday-Friday
**Work Location:** 2300 S Dirksen Pkwy Springfield, IL 62764-0001
**Office:** Office of Highways Project Implementation/Bureau of Design and Environment
**Agency Contact:** DOT.CO.BPM.EmploymentApplications@Illinois.gov
**Job Function:** Transportation

**APPLICATION INSTRUCTIONS**

Use the “Apply” button at the top right or bottom right of this posting to begin the application process. If you are not already signed in, you will be prompted to do so.

State employees should sign in to the career portal for State of Illinois employees — a link is available at the top left of the Illinois.jobs2web.com homepage in the blue ribbon.

Non-State employees should log in on the using the “View Profile” link in the top right of the Illinois.jobs2web.com homepage in the blue ribbon. If you have never before signed in, you will be prompted to create an account.

If you have questions about how to apply, please see the following resources:

State employees: Log in to the career portal for State employees and review the Internal Candidate Application Job Aid.
Non-State employees: on Illinois.jobs2web.com — click “Application Procedures” in the footer of every page of the website.

The main form of communication will be through email. Please check your “junk mail”, “spam”, or “other” folder for communication(s) regarding any submitted application(s). You may receive emails from the following addresses:
- donotreply@SIL-P1.ns2cloud.com
- systems@SIL-P1.ns2cloud.com