

Job Title: TECHNICAL MANAGER IV - GIS MAPPING SPECIALIST II - IPR#44541

Agency : Department of Transportation

Closing Date/Time: 06/28/2022

Salary: \$5,120 - \$9,155 Monthly

Job Type: Salaried Full Time

County: Sangamon

Number of Vacancies: 2

Plan/BU: NR916 - Protech Teamsters

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 GIS Mapping Specialists.

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 performs geographic information systems (GIS) program activities on complex or long-running projects utilizing geographic information technology to produce maps and conduct spatial analysis, creates and maintains spatial datasets, writes queries, and develops tools to meet the needs of end users. This position produces specialty maps, updates production map series, and oversees that the publication of the Illinois Official Highway Map is completed in a timely and accurate manner. This position functions as a team leader and project manager for less experienced GIS mapping specialists, develops standards and procedures for the Illinois Department of Transportation's (IDOT's) production maps, and provides technical assistance in the development of intranet and internet mapping technology.

Value of work supervised: \$300,000 - \$500,000

Value of plant and equipment: \$250,000 - \$300,000

This position reports to the Mapping and Information Systems Unit Manager. There are no subordinates reporting to this position.

This position is responsible for the preparation of effective and efficient visualization of geospatial information through cartographic work and various mapping projects in visual aid preparation. S/He utilizes GIS to perform activities on more complex or long-running projects utilizing geographic information technology to produce maps and spatial analysis. Innovation experience, training, and overall knowledge of transportation modes and supplemental GIS data, mapping, and graphics provides the incumbent with a cross section of all phases of map and graphic productions. This position functions as a team leader and project manager for less experienced GIS mapping specialists, develops standards and procedures for IDOT's production maps, and provides technical assistance in the development of intranet and internet mapping technology. This position requires the ability to problem solve and work independently or as a team member to research, select, and evaluate map source data for use in the preparation of maps. Meticulous attention to detail is important when completing these assignments.

One challenge of this position is the ability to develop GIS applications which solve complex technical problems without delay to users and not compromising the cartographic work, accuracy, relevancy, and usefulness for its intended purpose. Typical problems include ensuring that the work performed is accurate and current, and the timeliness, neatness, and adherence to cartographic standards in the preparation and editing of transportation maps, graphics, and special maps is maintained. Other problems are ensuring that production levels are geared to meet planning and schedule needs; the setting of priorities for cartographic, map, or graphic tasks within the

(Job Responsibilities continued)

assigned work are based on user needs; and ongoing software upgrades are reviewed and considered for use in existing and new projects.

The incumbent creates and maintains spatial datasets of Illinois information or obtains data and formats for use within the department, validates data for accuracy and completeness, develops and documents procedures, and develops data dictionaries and metadata documents to accompany spatial data created. The incumbent completes mapping requests, recommends procedural changes, and reports cartographic and mapping difficulties. Through knowledge of cartographic standards and software requirements, the incumbent creates products that utilize cartographic and mapping software to complete projects while maintaining quality standards. The incumbent oversees the creation and publication of the Illinois Official Highway Map. S/He prepares requisitions and detailed specifications for commercial printing on products when needed and furnishes procedures for contract bidding to private printing companies. The incumbent finalizes renderings and ensures necessary changes or corrections meet departmental cartographic standards. The incumbent furnishes technical assistance in mapping or graphic development as to scale, size, quality, and the required information or data needed to complete an effectively designed cartographic project. The incumbent provides support to departmental staff for special map requests and various graphic projects. The incumbent generates maps, prepares prints, completes display mountings, coordinates placement of maps on the department website, and furnishes technical assistance for replies to correspondence dealing with highways and other departmental areas. The incumbent is responsible for research, analysis, development, technical support, and maintenance of GIS processing systems used within the IDOT.

The incumbent functions as a team leader, providing work leadership, guidance, training, and directions to less experienced GIS mapping specialists in the preparation of maps. S/He assists the Mapping and Information Systems Unit Chief in the control and projected use of resources and makes recommendations on unit assignments. The incumbent provides department liaison capacity between bureau, district, management staff, application

software vendors, printing vendors, and information technology (IT) staff of other state agencies and government entities. The incumbent participates in training to attain a greater degree of expertise in mapping, spatial analysis, and computer skills which includes, but is not limited to, online training, on-the-job training, classroom training, conferences, meetings, and workgroups.

(Job Responsibilities continued)

The incumbent is given general latitude to perform the responsibilities of the position. S/He performs within the constraints of departmental policies and procedures. Matters of a unique nature will be referred to the Mapping and Information Systems Unit Manager for guidance with recommendations for resolution.

The incumbent's internal contacts are department-wide. External contacts include application software vendors, printing vendors, IT staff of other state agencies and government entities, and the general public when warranted for mapping projects. Occasional statewide travel with overnight stays is required.

The effectiveness of this position is measured by the timeliness, accuracy, and relevancy of the cartographic mapping, graphic work, and technical and policy recommendations which will enable the department to carry out its responsibilities in a timely and cost-effective manner to meet departmental goals. Additionally, effectiveness will be measured by the productivity, standards and procedures implemented, and the increased level of skill displayed with GIS and graphics.

Principal Accountabilities

1. Researches the geospatial relationships between various departmental spatial datasets and resolves issues encountered when mapping data quality is compromised.
2. Performs GIS program activities on complex or long-running projects, coordinates digitizing activities to meet needs of IDOT and all other entities, and develops geospatial datasets when needed.
3. Acts as a technical advisor to department staff and other agencies on questions or problems that may arise in reference to statistical mapping.
4. Develops standards and procedures for GIS; instructs Mapping and Graphics Sub-unit staff regarding new GIS software; provides interpretation of data backup procedures, digitizing, map creation, formulating metadata standards for completion of special data and projects; and provides clear, concise maps showing complex relationships for departmental use.
5. Functions as a team leader, providing work leadership, guidance, training, and directions to less experienced GIS mapping specialists in the preparation of maps; assists the Mapping and Information Systems Unit Chief in the control and projected use of resources; and makes recommendations on unit assignments.
6. Based on user requirements, performs and/or coordinates the design, development, and maintenance of spatial data to perform complex spatial routines and to generate additional data which is integrated into a geographic dataset using GIS software and displays results on maps, graphs, or reports.
7. Oversees the creation and publication of the Illinois Official Highway Map and ensures it is completed in a timely and accurate manner.
8. Prints maps to fulfill departmental and general public requests while utilizing GIS and graphics software to prepare cartographic products and visual aids.
9. Prepares requisitions and detailed specifications for commercial printing on products when needed and furnishes procedures for contract bidding to private printing companies.
10. Independently pursues knowledge with the software technology utilized in the cartography profession to complete mapping projects and to gain a greater degree of expertise in mapping, spatial analysis, and computer skills.
11. Performs duties in compliance with departmental safety rules. Performs all duties in a manner conducive to the fair and equitable treatment of all employees.
12. Performs other duties as assigned.

Qualifications

Position Requirements

- Education/Experience
 - Completion of a bachelor's degree majoring in cartography, computer science, information technology, information systems, or GIS PLUS two years of experience in cartography or GIS in the delineation of highway maps, Environmental Systems Research Institute's (ESRI) ArcGIS software, creating and maintaining spatial datasets and geodatabases, analyzing geographic relationships among varying types of data, or a combination thereof; OR
 - Eight years of experience in cartography or GIS in the delineation of highway maps, ESRI's ArcGIS software, creating and maintaining spatial datasets and geodatabases, analyzing geographic relationships among varying types of data, or a combination thereof
- Valid driver's license
- Occasional statewide travel with overnight stays

Position Desirables

- Working knowledge of SharePoint, Access, Excel, Office 365, PowerPoint, Adobe Illustrator, Photoshop, Acrobat, One Drive, OneNote, and Visio
- Familiarity with spatial datasets and geodatabases
- Ability to analyze geographic relationships among varying types of data
- Familiarity with multiple programming languages such as Python, JavaScript, VBScript, Structured Query Language (SQL), and Arcade
- Strong communication skills
- Strong attention to detail

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 Planning & Programming/Bureau of Planning

Agency Contact: DOT.CO.BPM.EmploymentApplications@Illinois.gov

Job Family: 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