Information Systems Analyst III – Geographic Information Systems

DEFINITION

Under direction of assigned supervisory and management personnel, performs a variety of professional level duties in the activities of Information Systems including computer applications, operating systems, databases, hardware, and department operations in support of the District's Geographic Information Systems (GIS) solutions; and to do related work as required.

Develops and deploys GIS mapping services and activities; trains and assists end users in using new and modified GIS systems capabilities; maintains and updates GIS related databases.

DISTINGUISHING CHARACTERISTICS

Under direction, this advanced level class provides a wide range of administrative and analytical computer support services, including troubleshooting, installation, maintenance, administrative and analytical support for the most complex District computer hardware, software, network systems and peripheral equipment. Incumbentsare required to have expertise in all procedures related to GIS solutions employed by the District.

EXAMPLES OF DUTIES

Typical duties may include but are not limited to the following:
- Develops, interprets complex GIS database models and templates for system users and operators. Writes, edits, installs, and verifies that programs are tested and debugged and provides desired results;
- Uses GIS software to make queries and perform informational analysis of location, relationships, trends, patterns, adjacency, containment, and proximity of complex features and data;
- Generates standard and custom products such as reports, maps, diagrams, databases, map services and data layers using GIS software;
- Presents information using appropriate cartographic and geographic visualization elements, including map projection, scale, color, shading, symbols, graphs, tables, overlays or other elements used for effectively presenting information; Attends business and community and public meetings regarding assigned projects;
- Assists as needed with GIS layer and asset updates;
- Coordinates GIS data sharing between departments, outside agencies and consultants;
- Assists users in resolving daily GIS related operational and/or technical problems;
- Administers GIS servers and workstations by instaling software and updates, maintaining and troubleshooting system access for security;Establishes and maintains reports against the District's application databases;
- Develops and maintains system and user documentation and procedures;

- Maintains records of all problems, solutions and resources used;
- Develops and maintains GIS standards;
- Follows applicable safety rules and regulations;
- Analyzes user requirements, designs and develops new solutions;
- Prepares reports and correspondence;
- Trains personnel in the use of GIS applications; explains technical information to non-technical system users, including assisting them in accessing and interpreting GIS information;
- Evaluates and recommends vendor products and determines compatibility with existing system; monitors changes in GIS technology and applications, recommends improvements and upgrades and implements changes after approval; evaluates and recommends acquisition of hardware and software as assigned;
- Consults with others to verify data accuracy and availability;
- Project management including lead direction of project or program staff and coordination with third-party GIS vendors when applicable;
- Upholds GIS application and data quality assurance;
- Follows and enforces systems and data security standards.

QUALIFICATIONS FOR EMPLOYMENT

Knowledge of:

- GIS software solutions;
- Principles and practices of GIS solutions;
- Complex map design;
- Advanced theories and applications of computer science;
- Advanced principles and practices used in Information Systems operations;
- Computer hardware and software components;
- Advanced methods and techniques used in the installation, trouble shooting, and maintenance of Information Systems hardware and software;
- Operational characteristics of a variety of computer platforms and operating systems;
- Computer systems technology and vocabulary;
- Proper spelling, grammar, punctuation and writing practices;
- Project management methods and techniques;
- Quality assurance principles and practices;
- Systems security principles and practices.

Ability to:

- Perform GIS analyses;
- Address GIS information requests and needs;
- Identify, evaluate and solve GIS problems;
- Understand District policies and procedures, and standards relevant to work performed;
- Manage complex systems implementation projects; independently organize work, set priorities, meet critical deadlines and follow-up on assignments;
- Provide technical support for the maintenance of GIS hardware and software;

- Detect, isolate, and help resolve complex application, operating system, database, or hardware problems;
- Analyze and assess the GIS technological needs of District departments; Recommend appropriate GIS technology to meet client needs; recommend, design and implement new, enhanced, or modified tools and applications;
- Work collaboratively with District staff to identify and implement GIS technology solutions for business process improvement and efficiencies; methods and techniques of system design, development and implementation;
- Generate a variety of maps, graphs, charts and exhibits;
- Understand and carry out oral and written instructions and keep accurate records;
- Communicate clearly and concisely, both orally and in writing; prepare clear and concise technical documentation, user procedures, reports of work and other written materials;
- Manage projects and train personnel on GIS concepts and user roles;
- Establish and maintain effective working relationships with those contacted in the course of work;
- Travel to off-site work locations and off-site meetings depending upon job assignment.

Training and Experience: Any combination equivalent to experience and education that could likely provide the required knowledge and abilities would be qualifying. A typical way to obtain the knowledge and abilities would be:

Graduation from college with a four-year degree in geographic information science, computer science or related field; and, three years of increasingly responsible experience in current GIS data analysis, data collection, and/or design and development of GIS systems and applications with three years of, providing support for computer applications, operating systems, hardware, databases, and end users.

OR

Graduation from college with a two-year degree in geographic information science, computer science or related field; and, Four years of increasingly responsible experience in current GIS data analysis, data collection, and/or design and development of GIS systems and applications with three years of providing support for computer applications, operating systems, hardware, databases, and end users.

OTHER REQUIREMENTS

- Per California Government Code, Title 1, Division 4, Chapter 8, Section 3100 "all public employees are hereby declared to be disaster service workers subject to such disaster service activities as may be assigned to them by their superiors or by law." (Ref: California Government Code, Title 1, Division 4, Chapter 8, Sections 3100 – 3109;
- Depending upon assignment, possession of a valid California driver's license issued by the State Department of Motor Vehicles and satisfactory driving record.

PHYSICAL DEMANDS AND WORKING CONDITIONS

During the course of performing job duties the employee will need the mobility to work in a standard office setting, operate equipment, which may include office and/or field equipment, or specialized instruments or tools requiring repetitive arm/hand movement and/or the coordinated movement of more than one limb simultaneously; enter and retrieve data from personal computers and terminals via keyboards which is often performed while sitting for extended periods of time. The employee frequently stands, walks, bends at neck and waists, twists at neck and waist, uses simple and power grasping with both hands, uses fine manipulation of both hands and fingers, and may require use of the arms above the shoulder, climb or balance; stoop, kneel or crouch. The employee may work at heights up to ten to twelve feet climbing ladders or stairs. The employee is occasionally required to lift and carry short distances objects such as reams of copier paper, office supplies, files, books, printed materials and other packages or equipment weighing up to 10 to 25 pounds, occasionally lift 50 pounds. This position requires that the employee demonstrate adequate hearing and speech to converse in person and over the telephone, and vision to read printed materials and use a computer screen.

The noise level in the work environment is quiet to moderate noise. The employee is exposed to potential electrical shock and works in and around areas with major amount of dust. The position may require the ability to work overtime and weekends as needed.

To be successful in this job, an individual must be able to satisfactorily perform each of the listed duties. These duties are representative of the knowledge, skill and/or ability required for the position. Reasonable accommodations may be made to enable individuals with disabilities to perform the duties and functions of the position. Requests for reasonable accommodation should be directed to the Human Resources Manager.

Established: October, 2024
Approved by: Human Resources Manager