



CLASSIFICATION NO. 650
Established: 8/25
FLSA: Non-Exempt
EEO: 3

GIS TECHNICIAN, SENIOR

CLASS CHARACTERISTICS

Under general direction, to coordinate large, multiple and/or complex GIS projects; to create, update, and maintain maps, layers, and data sources; to perform complex database design and analysis using multiple data sources; to utilize GIS and related systems to generate detailed reports in support of data sharing between other County Departments or outside organizations; and to do other work as required.

DISTINGUISHING CHARACTERISTICS

The GIS Technician, Senior is the advanced journey-level classification of the series that is responsible for acting as project coordinator over large and complex GIS projects, including GIS system and software upgrades. Incumbents are responsible for performing advanced GIS mapping and analysis duties in addition to developing, implementing and maintaining GIS data, preparing and producing maps and other graphic representations and performing advanced spatial analyses duties.

The GIS Technician series differs from the Engineering Technician series by the regular and continuous assignment of GIS mapping and related duties. The series is further distinguished from related Technology Services classifications by their use of, rather than programming support to, GIS software. The GIS Technician, Senior differs from the GIS Technician due to the former being assigned the most complex GIS assignments in addition to performing project coordination and/or lead work responsibilities. The Senior level is additionally responsible for acting as the primary liaison between other County Departments and external organizations on system, technical, and project inquiries.

TYPICAL TASKS

Duties may include but are not limited to the following:

1. Prepares, designs and produces a variety of complex maps and other graphic representations displaying layers and attribute data from the database, using cartographic techniques to represent spatial data; develops and maintains data layers, using GIS tools, CADD tools and relational databases; enters attribute data pertaining to specific features into a relational database; incorporates maps, charts, spreadsheet data and text into reports.
2. Performs GIS data maintenance, manipulation, analysis, extraction and generation assignments; performs data research, investigation and verification; creates and maintains files of digital pictures of assets for department use; digitizes various information; prepares projects and data for archival storage; performs record keeping and inventory; documents

and files data sources and map files for future reference.

3. Prepares, creates, maintains, and updates complex maps, drawings, plans, spreadsheets, data files, and documentation for a wide variety of uses; responds to emergency mapping and information requests; performs advanced spatial analysis including notifications, buffering, and zone consolidations; interprets detailed plans, photographs, maps, and legal descriptions; prepares and formats information for entry into the GIS database and enters data into system; codes and digitizes maps and geographical feature data into various GIS layers and posts map updates as required; performs quality control checks of own and others' work to ensure database integrity.
4. Consults with staff to assess scope of mapping requests; estimates time and resources needed to complete mapping services; researches and evaluates available data to develop project proposals; determines the most efficient methodology to complete requests and develops procedures and preliminary layouts accordingly; designs final map layouts and executes design drafts; communicates project information and requirements to consultants; reports project statuses and critical issues to management as necessary.
5. Participates in the specification, review, testing, and implementation of department software system upgrades and implementations; conducts analysis to determine changes in functionality between product versions and recommends necessary customizations; identifies technical issues or problems and works with functional and technical staff to recommend and implement solutions; performs aggregation, quality control, transformation, and import of external data into the enterprise database using spatial ETL tools and custom scripts.
6. Researches GIS and CAD techniques and makes recommendations to improve GIS processes, software, and methodologies; develops and conducts ongoing needs and skills assessments to improve customer experience; develops, coordinates, and presents training to enhance skill development and competency for department-specific system end users; creates and conducts presentations to management, workforce partners, and other stakeholders; acts as primary liaison to customers, Technology Service, stakeholders, and department staff to ensure technology solutions align with business requirements; services as a GIS data resource to department staff, customers and other government agencies.
7. Provides lead work direction to other technicians and support staff assigned to GIS work; develops, analyzes, and implements GIS workflows, processes, and procedures to increase functionality and efficiency; prioritizes, plans and schedules projects and processes; coordinates and reviews the work of project staff, including vendors, contractors, and employees.
8. Assists management in strategic planning by researching and recommending GIS technology enhancements, solutions, best practices, and overall business directions; assists management in drafting the scope, specifications, requirements, and design of technology strategic plans to align business and technical direction.

REQUIRED KNOWLEDGE AND SKILLS

Thorough knowledge of: Advanced geographic information system concepts, practices and techniques, including computer mapping and attribute data conversion, transfer, manipulation and analysis; GIS software, tools and applications; relational database concepts, methods and

practices; CADD software and hardware drafting media; terminology, methods and techniques used in engineering maps and records; advanced principles of data management and control; principles of geodatabase design, mapping and cartography; algebra, geometry and trigonometry as applied to engineering and mapping formulas; office methods and procedures; English grammar and composition; computer hardware and system software in supporting application systems; applicable federal, state and local statutes, regulations, rules and laws.

Working knowledge of: principles of management and organization design; principles of supervision; procedures and practices of project management and evaluation; principles and practices of integrated software application systems, data communications, systems analysis and design; methods of data generation, data collection, and database management principles and techniques.

Skill to: plan and coordinate the work of assigned staff, contractors, and vendors; perform difficult technical research and analyze complex GIS related problems evaluate alternatives, and recommend or adopt effective courses of action; utilize a variety of GIS software, computer-aided drafting, graphics and other applications to carry out assigned responsibilities; perform engineering computations and computer analyses; perform complex GIS analysis and mapping applications, map production; interpret maps, graphs, satellite and aerial images; read and interpret topographic, location, and property record maps; read and interpret utility layouts, design and construction drawings, illustrations, and other graphics; recognize and resolve discrepancies in attribute data; perform advanced spatial analyses and create data queries using a variety of data querying tools; use computers and computer software including word processing, spreadsheets, database design and management tools; develop and implement processes and procedures; operate effectively in a team environment; communicate technical concepts effectively, both orally and in writing; prepare clear and concise reports; understand and interpret pertinent policies, procedures, laws and regulations; establish and maintain effective working relationships with staff, the public, contractors and County personnel.

MINIMUM QUALIFICATIONS

Minimum qualifications are used as a guide for establishing the minimum experience, education, licensure, and/or certifications required for employment in the classification. The following minimum qualifications are established for this classification. Additional minimum qualifications and special conditions may apply to a specific position within this classification and will be stated on the job announcement.

Experience: A minimum of five (5) years of related experience that would provide the required knowledge and skills to perform the responsibilities of this position.

Licenses/Certifications: None required.

PRE-EMPLOYMENT REQUIREMENTS

Driving is required for County business to accomplish work. Incumbents must possess a valid driver's license, and possess and maintain an acceptable driving record throughout the course of employment.