GIS TECHNICIAN

CLASS CHARACTERISTICS

Under general direction, to create, update, and maintain maps, layers, and data sources; to conduct data management and data transformation tasks; to utilize GIS and related systems to generate detailed reports in support of department operations; and to do other work as required.

DISTINGUISHING CHARACTERISTICS

The GIS Technician is responsible for performing specialized and detailed GIS mapping and analysis duties. Incumbents develop, implement and maintain GIS data, prepare and produce maps and other graphic representations and perform spatial analyses.

The GIS Technician differs from the Engineering Technician series by the regular and continuous assignment of GIS mapping and related duties. The GIS Technician is distinguished from related Technology Services classifications by their use of, rather than programming support to, GIS software. It is also distinguished from the CADD System Specialist, which performs complex technical assignments related to Computer-Aided Design and Drafting (CADD) functions and participates in CADD system file management and configuration operations.

TYPICAL TASKS

Duties may include but are not limited to the following:

1. Prepares, designs and produces 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. Designs, creates, plans, maintains and updates maps, drawings, plans, spreadsheets, data files and documentation for a wide variety of purposes; responds to emergency mapping and information requests.

3. 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.

4. Performs detailed spatial analysis including notifications, buffering, and zone consolidations; interprets detailed plans, photographs, maps and legal descriptions.

5. Codes and digitizes maps and geographical feature data into various GIS layers and performs quality control checks of own and others' work to ensure database integrity.

6. Consults with staff to define requirements of mapping requests; researches and evaluates available data and proposes methods to be used; serves as a GIS data resource to department staff, customers and other government agencies.

7. Documents GIS workflows and processes to increase functionality and efficiency; assists in testing and troubleshooting GIS software and patches in coordination with department and County TS staff.

8. Provide technical research, writing, and editing skills to generate project summaries, draft documents, and conduct topic specific research.

9. Conducts site visits to verify and update data and resolve discrepancies.

<u>REQUIRED KNOWLEDGE AND SKILLS</u>

<u>Working knowledge of:</u> 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 and software applications; applicable federal, state and local statutes, regulations, rules and laws.

<u>Skill to:</u> 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 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 date; perform spatial analyses and create data queries using a variety of data querying tools; project management; process documentation; gathering, analyzing, and interpreting technical data to form accurate conclusions; use of computers and computer software including word processing, spreadsheets, database design and management tools; document programs 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.

Within Finance Department's Facilities Management Division, Incumbents are required to perform after-hours emergency response on a call-out basis

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 four (4) 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

Within Finance Department's Facilities Management Division, candidates must successfully pass a criminal history check which may include national or state fingerprint records check.

Driving may be necessary for County business. For position(s) with occasional/incidental driving, incumbents must possess a valid driver's license. Accommodation requests for an acceptable alternative method of transportation will be reviewed on an individual basis in compliance with State and Federal legislation. For position(s) with regular driving, incumbent(s) must also possess and maintain an acceptable driving record throughout the course of employment.

POST-EMPLOYMENT REQUIREMENTS

Within Finance Department's Facilities Management Division, candidates must possess CPR/First Aid/AED certification required within six (6) months of hire.

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