

SENIOR GIS (GEOGRAPHIC INFORMATION SYSTEM) TECHNICIAN

JOB DESCRIPTION

Classification Responsibilities A Senior GIS (Geographic Information System) Technician is responsible for developing, creating, and maintaining GIS databases, coverages, layers, and linkages to various databases. Duties may include: providing lead supervision and technical support to GIS Technicians and Technician Trainees; inputting and reviewing GIS data for completeness, accuracy, and neatness; applying GIS principles to support requests for routine spatial analysis and for mid-level database queries involving more complex logic, multiple criteria, and spatial relationships; creating map layouts and views of high difficulty and complexity; answering inquiries regarding map information; documenting procedures; conducting mapping research in the field and in the office to resolve conflicting information; researching and resolving citizen inquiries and complaints; and interpreting plans, plats, maps, and legal descriptions. This class performs related duties as required.

Distinguishing Features: This class is distinguished from the GIS Technician class by the lead supervisory responsibilities, performance of routine spatial analysis, providing mid-level database queries, and creating more advanced GIS mapping layouts/views of higher difficulty and complexity. This class is supervised by a GIS Supervisor, GIS Specialist, or administrative supervisor class depending on assignment. This class is FLSA non-exempt.

QUALIFICATIONS

Employee Values: All employees of the City of Mesa are expected to uphold and exhibit the City's shared employee values of Knowledge, Respect, and Integrity.

Minimum Qualifications Required. Any combination of training, education, and experience equivalent to graduation from an accredited college or university with an Associate's Degree, or equivalent coursework at a technical or vocational school, in GIS, Cartography, Geography, Civil Engineering, or Computer Science. A minimum of two years' experience working with GIS or related field. Some (6 months – 1 year) experience using Microsoft Office, ArcGIS Desktop, or AutoCAD.

Special Requirements. Must possess a valid Class D Arizona Driver's License by hire or promotion date (*by assignment*).

Substance Abuse Testing. None.

Preferred/Desirable Qualifications. Experience using ESRI ArcGIS Pro (Basic, Standard, and Advanced); ArcGIS Desktop Extensions (3D Analyst, Data Reviewer); ArcMap; ArcFM; and RouteSmart applications.

ESSENTIAL FUNCTIONS

One position may not include all the essential functions, knowledge, and abilities listed, nor do the listed examples include all the knowledge and abilities which may be found in positions of this classification.

Communication: Communicates with the general public, other City employees, or others in order to establish the specific needs of work requests and identify workflow problems. Prepares written documents with clearly organized thoughts and using proper sentence structure, punctuation, and grammar to document work completed, problems inputting data, and status reports. Graphically communicates through maps and other visual presentation formats. Presents facts clearly and accurately.

Manual/Physical: Distinguishes colors to input GIS data. Oversees the process to convert data into the City's GIS format. Operates a motor vehicle requiring a valid Class D Arizona Driver's License to make field inspections and field checks on completed work. Measures distances using a tape measure or calibrated instruments. Moves objects of up to 50 pounds or more such as: roll paper, paper cartons, digitizing tablets, etc., for distances of up to 150 feet. Ability to complete data entry, requiring continuous or repetitive arm-hand-eye movements, and remain in a sitting position for extended periods of time. Create charts, schedules, graphs, maps, presentation graphics, etc. Uses a variety of cleaning fluids, such as toners and clear dispersant, to clean equipment. Operates a variety of office equipment, such as a personal computer (PC), printer, etc., to enter data or information for studies, projects, and work assignments. Prepares reports, plans, and maps for distribution to consultants, contractors, and other City employees. Meets scheduling and attendance requirements.

Mental: Interprets work plans (examples: as-builts, construction plans, site plans, blueprints, etc.). Applies the techniques of drafting to produce neat, precise, and well-balanced maps/drawings. Prioritizes work assignments. Comprehends and makes inferences from written procedures and specifications. Conduct research to properly identify information from data and plans. Performs mathematical calculations; statistical computations; and applies fractions, percentages, ratios and proportions, algebra, geometric constructions, and the essentials of trigonometry. Learns to do the following: digitize data conversion; utilize data for map layout and plotting, and update maps as new information is obtained; operate a computer workstation for inputting data used to create maps; prepare map products on a computer workstation; identify and document problems; understand procedures, terminology, and the use of system menus and operational system panels; determine the accuracy of source information for building a map; perform detailed records research; apply research to ensure the precision, accuracy, and completion of GIS maps; create new mapping products and determine command sequence to quickly convey information; and becomes familiar with the procedures regarding input of GIS data standards.

Knowledge and Abilities:

Knowledge of:

GIS software, such as ArcGIS Pro, ArcMap, etc.;
cartography, advanced map symbol creation, and GIS terminology used in mapping;
spatial analysis and GIS database structures - domains, subtypes, and feature classes;
modern office practices, procedures, equipment, and supplies;
digitizing and data manipulation procedures for GIS; and
testing procedures, backup and recovery procedures, and security.

Ability to:

read, interpret and precisely enter GIS data based on coordinate geometry, legal descriptions, plans, sketches, verbal descriptions, and specifications;
prepare neat and precise maps from plans, sketches, verbal descriptions, and specifications;
act as a contributing member of a project team;
maintain a high level of attention to detail for quality control purposes;
become familiar with industry-specific terminology and symbology such as Fire Department, water and wastewater, or planning and zoning;
learn existing GIS systems and business functions for an assigned area;
study procedures and operational methods and make recommendations for improving efficiency and accuracy;
provide training to team members;
plan how to accomplish assigned tasks;
work with a team or individually to identify and prioritize tasks needed to accomplish a project;
establish and maintain effective working relationships with all City departments;
maintain and update GIS data and related databases using GIS and other software;
complete mapping tasks in a timely manner;
apply quality control/quality assurance standards and practices to GIS data;
complete routine spatial analysis and mid-level database queries;
demonstrate continuous effort to improve operations, decrease turnaround times, and streamline work processes; and
work cooperatively and jointly to provide seamless customer services.

The duties listed above are intended only as general illustrations of the various types of work that may be performed. Specific statements of duties not included does not exclude them from the position if the work is similar, related, or a logical assignment to the position. Job descriptions are subject to change by the City as the needs of the City and requirements of the job change.

Revised 12/25

BH/js/lv

CS4487.DOCX

EEO-Tech

JOB FCTN-INT

Non-DOT Safety and Security-N

CDL-N

RESP-N

PAY GRADE: 53

IND-8810

SWORN-No

Non-DOT Random-N

DOT-N

INCREMENTS 57-200