GIS (GEOGRAPHIC INFORMATION SYSTEM) TECHNICIAN

JOB DESCRIPTION

Classification Responsibilities: A GIS (Geographic Information System) Technician is responsible for inputting, updating, and maintaining GIS databases, and coverages, layers, and linkages to various databases. Duties may include: preparing detailed maps using ESRI technologies (ArcGIS desktop) and/or AutoCAD software; inputting and reviewing GIS data for completeness, accuracy, and neatness; creating map layouts and views of moderate difficulty and complexity; conducting geoprocessing operations and database queries; performing digitizing; conducting mapping research in the field and in the office to resolve conflicting information; and interpreting plans, plats, and legal descriptions. This class performs related duties as required.

Distinguishing Features: The GIS Technician is distinguished from the GIS Technician Trainee class by the more complex work assignments performed. This class is supervised by a GIS Supervisor, GIS Specialist, or administrative supervisor class depending on assignment. Employees may progress to this class by noncompetitive promotion upon meeting the specific criteria-based promotion requirements. This class is FLSA nonexempt.

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.

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

Substance Abuse Testing. None.

Preferred/Desirable Qualifications. Experience using ESRI ArcGIS desktop (ArcInfo, ArcEditor, and ArcView), ArcFM, ArcGIS extensions, Azteca Cityworks, RouteSmart, MapInfo, Intergraph, AutoCAD, Microsoft Access, or Microsoft Excel.

ESSENTIAL FUNCTIONS

One position may not include all of 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, in order to document work completed, problems inputting data, and status reports.

Manual/Physical: Distinguishes colors to input GIS data. Operates a motor vehicle requiring a valid Class D Arizona Driver's License to make field inspections and field checks on completed work *(by assignment)*. Monitors terminal graphics and messages to determine compliance with digitizing procedures. 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. Creates 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, site plans, blueprints, etc.). Prioritizes work assignments. Comprehends and makes inferences from written procedures and specifications. Conducts 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 conversions; 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; conduct spatial analysis; perform database queries; 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 become familiar with the procedures regarding input of GIS data standards.

Knowledge and Abilities:

Knowledge of:

fundamental GIS concepts to formulate and prepare spatial analysis, drawings, maps, and plans;
cartography and the basic symbols and terminology used in mapping;
modern office practices, procedures, equipment, and supplies; and
maps, plans, databases, and records.

Ability to:

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;
maintain effective documentation and system backups of maps and data;
assist in providing data and maps for detailed operation analysis;
apply results of analysis to ensure accuracy and completion of map and related data profiles;
become familiar with industry-specific terminology and symbology such as fire, water, wastewater,

conduit/fiber, gas, storm drain, or planning and zoning;

learn the existing GIS system; and
establish and maintain effective working relationships with management, coworkers, and the general public.

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 do 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.