

## GIS SPECIALIST

### **I. BASIC FUNCTIONS:**

The employee occupying the position of this class is responsible for creating, editing, and maintaining GIS data; producing maps, reports, illustrations, and charts of GIS data; supporting other Borough department staff to properly access, query, and analyze GIS data. The position inventories, archives, and provides documentation for an extensive library of GIS data, topographic and photographic imagery, and mapping products. This is a bargaining unit position.

### **II. DISTINGUISHING CHARACTERISTICS:**

The GIS Specialist is expected to prepare, maintain, and update official and specialized Borough cadastral drawings, cartographic products, and geospatial databases, which may represent land divisions, uses, and ownership; administrative boundaries; site addresses; natural resources boundaries; demographic; and other geographic data. The GIS Specialist assists and instructs Borough staff in the identification and utilization of GIS resources. Assignments are project-oriented and involve using standard and specialized GIS applications on personal computers and peripheral input/output devices. Work is predominantly performed with independence but will involve cooperative team oriented efforts for larger projects. The GIS Specialist is required to respond to natural disasters as part of the Incident Command System emergency response system.

#### **Supervision Received:**

Supervision is received from the GIS Supervisor who reviews work in relation to project requirements and analysis of results achieved.

#### **Supervision Exercised:**

Supervision is not a normal responsibility of this class, although the position will monitor and provide guidance and direction to project consultants, contractors, interns, or temporary staff involved with an assigned project.

#### **Working Conditions:**

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this position. Work is performed primarily in an office setting, but may involve work in outdoor conditions while collecting field data or when responding to disasters as part of the ICS emergency response system. The noise level in the work environment will normally be quiet to moderately noisy depending upon office equipment, telephones in use, and other employees/members of the public with business in the office.

### **III. REPRESENTATIVE EXAMPLES OF WORK:**

Creates, maintains, analyzes, and updates GIS data layers including but not limited to transportation, property use and occupation, emergency services, administrative boundaries, natural resources, and demographics.

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Performs document research, interprets and delineates land transactions and administrative boundaries using legal descriptions, deeds, and ordinances.

Develops scope of work & deadlines for assignments.

Conducts field inspections to verify, collect, and correct data using GPS equipment and software.

Builds data models to process data and perform complex spatial analysis of GIS data.

Develops and maintains documentation of standards, procedures, and FGDC-compliant metadata.

Performs quality control audits of Borough generated GIS spatial databases as well as those provided by outside sources.

Provides GIS related assistance during emergency situations that involves instituting procedures under the Incident Command System. Provides informational presentations to the Assembly and other organizations, schools, boards, and committees as requested.

Designs and creates computer generated drawings, maps, charts, graphs, and illustrations from Borough CAD and GIS geo-spatial data.

Responds to general public, business, and governmental agency inquires and requests with digital or plotted media of CAD/GIS products.

Stays abreast of changes in the field of GIS by attending workshops, seminars, classes and conferences; and through online classes, websites, and professional journals and memberships.

Provides ongoing training and technical support to others.

Acts as a liaison between GIS and other Borough departments/divisions by maintaining regular contact and providing suggestions and/or support for workflow and/or projects with GIS components. Provides regular updates to the Geographic Information Officer on liaison efforts.

Responsible for providing GIS related assistance during emergency situations under the Incident Command System.

Performs related work as required.

**IV. KNOWLEDGES, ABILITIES, AND SKILLS:**

Extensive knowledge of the application of cartography, geography, remote sensing, satellite imagery, and aerial photography for natural resource management.

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Knowledge of cadastral drafting and cartographic design principles, standards, methods and terminology.

Knowledge and experience in the administration of complex relational databases.

Knowledge of ERDAS Imagine software.

Knowledge of public land survey system and terminology, legal descriptions, coordinate geometry, aliquot parts, data collection, measurement equipment and computations.

Knowledge of projections, datums, and coordinate systems.

Knowledge of assessment, platting, planning, public works, and other state and local government procedures, practices, organization structures, and roles, as well as local standards applicable to CAD/GIS data used and maintained by the Borough.

Ability to convert existing data and develop new data in a Geodatabase format.

Ability to use geodatabase design methods to build, organize, manipulate, and maintain topological relational database structures.

Ability to design and develop GIS-generated reports, graphs, charts, and presentations.

Ability to interpret and manipulate topographic and photographic maps; rectify and geo-reference satellite imagery.

Ability to use GPS equipment to collect, differentially correct, and analyze coordinate data.

Ability to interpret cadastral surveys, subdivision plats, legal documents, and legal descriptions.

Ability to perform detailed and accurate data entry and updates to computer-assisted cadastral drafting files and GIS layers.

Ability to perform technical writing of procedures and other documentation.

Ability to communicate effectively both in writing and orally.

Ability to build, organize, manipulate, and maintain topological relational database structures.

Ability to collect, organize, and analyze demographic data for local, state, and federal agencies.

Ability to establish and maintain effective working relationships with business representatives, Borough employees, and members of the public.

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Skilled in operating ArcMap, ArcInfo, ArcView, and other related GIS software.

### V. GENERAL RECRUITING QUALIFICATIONS:

**Minimum:** Bachelor's degree, or equivalent, in Geographic Information Systems, geography, cartography or related discipline. Four (4) years of progressively responsible cadastral or mapping experience operating ArcMap, ArcInfo, ArcView and/or other ESRI GIS software. Geographic Information Systems Professional (GISP) certification preferred.

Incident Command System classes required within one (1) year of hire: ICS-100, IS-700.

Valid Alaska driver's license and a clear driving and criminal history records required.

### VI. ADDITIONAL INFORMATION:

#### **Tools and Equipment Used:**

Telephone, copier, fax machine, personal computer, GPS receivers, plotters, printers, digitizers, scanners, large format copiers, and other general office equipment. Motor vehicles.

#### **Physical Demands:**

The physical demands described are representative of those that must be met by the employee to successfully perform the essential functions of the position. Reasonable accommodation may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this position, the employee is frequently required to sit, talk, walk, hear and use hands to finger, handle, or feel keyboards, tools, controls, and/or machinery and to reach with hands and arms. The position requires the ability to kneel, stoop, bend, crouch, climb or crawl, and occasionally lift and/or move up to 40 pounds. The employee may be expected to work in inclement weather while performing field work or responding to emergencies. The employee is required to operate a motor vehicle.

Special vision abilities required by this job include close vision, distance vision, peripheral vision, depth perception, and the ability to adjust focus. Adequate vision to operate vehicles and equipment in the daylight and darkness and in all types of weather conditions. The employee will be expected to spend the majority of their time working with a computer and monitor.