GEOGRAPHIC INFORMATION SYSTEMS COORDINATOR

Class specifications are only intended to present a descriptive summary of the range of duties and responsibilities associated with specified positions. Therefore, specifications may not include all duties performed by individuals within a classification. In addition, specifications are intended to outline the minimum qualifications necessary for entry into the class and do not necessarily convey the qualifications of incumbents within the position.

DEFINITION

Under the general direction of the Public Works Senior Management Analyst, the Geographic Information Systems (GIS) Coordinator plans, develops, and manages the use and operation of the City's enterprise GIS, including hardware, software, and databases; performs related work as required.

DISTINGUISHING CHARACTERISTICS:

The Geographic Information Systems Coordinator (GIS) is a distinct classification within the Public Works Department. Incumbents frequently work independently in planning, developing, and managing the use of GIS technology.

SUPERVISION RECEIVED/EXERCISED:

Receives general supervision from the Public Works Senior Management Analyst. May provide technical and functional direction to lower-level clerical staff.

ESSENTIAL FUNCTIONS *(Include, but are not limited to the following)*

- Responsible for the planning, development, implementation, use, training, and support of the City's GIS.
- Develop, maintain, and update GIS databases, layers, and related data.
- Incorporate as-build/record drawing information and other spatial revisions into the City's GIS.
- Produce GIS data-driven maps, reports, and visualizations for internal use and public distribution, as requested.
- Prepare and deliver periodic reports regarding the City's GIS.
- Coordinate with staff across departments to assess GIS needs and provide solutions.
- Coordinate with consultants for system architecture, framework administration, and cloud hosting support.
- Collaborate with contractors, the public, and external agencies on GIS-related projects, as requested.
- Assist with maintaining existing GIS integrations with other systems such as asset management/work order, permitting, and other public works databases.
- Facilitates the integration of all geographically referenced data throughout the City.
- Develop, implement, and maintain GIS policies, standards, procedures, and metadata documentation.
- Develop and maintain web maps and interactive mapping applications using ArcGIS Online or similar platforms in collaboration with end users throughout the City.
- Ensure data accuracy, consistency, and compliance with standards.

- Perform periodic QA/QC functions to ensure data accuracy.
- Stay current on GIS trends, tools, and best practices.
- Configure, deploy, and utilize field data collection tools.
- Prepare and conduct GIS related user training, as needed.
- Provide operational and technical support to end users utilizing GIS data.
- Evaluate and recommend new technologies or methods to improve efficiency and data accessibility.
- Coordinate with IT for server and network support related to the City's GIS environment.
- Respond to public records or data requests related to mapping and spatial data.

KNOWLEDGE/ABILITIES/SKILLS *(The following are a representative sample of the knowledge/abilities and skills necessary to perform essential duties of the position.)*

Knowledge of:

- Current principles, practices, procedures, techniques, scripting languages, controls, and capabilities of GIS, including spatial data analysis, data management, and map design using state-of-the-art mapping GIS software.

- Knowledge of principles of and analysis used in engineering, drafting, surveying, cartography, and photogrammetry, as they pertain to automated mapping and GIS.

- Knowledge of GPS data collection and mobile mapping tools. Techniques of geodetic control, topology, and topological data structures. Use and maintenance of large, enterprise GIS databases.

- Current practices, procedures, and techniques used for internal and external deployment of GIS data and web maps. Understanding of the capabilities and applications of computer-aided drafting and design (CAD) software, relational databases, computer networks, and APIs.

- Knowledge of current management and organizational principles and techniques including budgeting principles.

Ability to:

- Skilled in ESRI ArcGIS products, including ArcGIS Pro, ArcMap, ArcGIS Online, and ArcGIS Enterprise.

- Understanding of the following scripting languages: Python, SQL, Arcade. Proficient in handling and converting data between various formats (shapefiles, KML, GeoJSON, CAD, CSV, raster), and integrating GIS with external systems such as asset management/work order, permitting, and other public works databases.

- Strong analytical, communication, and project management skills.

- Ability to identify and anticipate issues and GIS applications of use and importance to the City.

- Work as a key team member with users and other staff in developing requirements and priorities on all aspects of the enterprise GIS.

- Develop and maintain effective working relationships with GIS users in other departments and agencies.

- Analyze problems requiring application of GIS theory, computer modeling or similar analysis.

- Analyze data, staff reports, and special projects.

- Develop and conduct analysis procedures, tests, and tools to validate program design and data accuracy.

- Identify and interpret technical information.

- Observe and problem-solve GIS related organizational and operational issues successfully.

- Ability to work independently and manage multiple tasks with limited supervision.

- Exercise sound, independent judgment within procedural guidelines.

Skill to:

- Operate desktop computer and standard office software to produce work products.

- Use specialized computer system application software.

- Communicate effectively both orally and in writing.

- Effectively present technical and conceptual ideas to a wide range of audiences.

- Manage disparate staff and projects throughout the City, effectively translating between staff in specialized disciplines.

- Provide budget-related data, as requested.

QUALIFICATIONS *(The following are a representative sample of qualifications necessary to perform the essential duties of the position.)*

Education and Experience:

Equivalent to graduation from a four-year college or university with major course work in management of information systems, GIS, computer science, mathematics, geography, urban planning, civil engineering, or a related field. Three to five years of increasingly responsible experience developing and managing enterprise geographic information systems and databases, preferably in a local government setting. Use of mapping/GIS software in a multi-disciplinary environment where applications include engineering, planning, public works, public safety, finance, economics, libraries, environmental science, drafting, surveying or cartography. Experience with geospatial data storage and editing using file and enterprise geodatabases; familiar with data versioning and schema design.

License:

Possession of, or ability to obtain, an appropriate, valid California driver's license.

SPECIAL REQUIREMENTS

Ability to maintain physical condition appropriate to the performance of assigned duties and responsibilities which may include sitting for extended periods of time; bend, kneel and twist while checking equipment; intermittently twist to reach equipment surrounding desk; perform simple grasping and fine manipulation; and operating assigned office equipment write or use a keyboard to perform assigned design and drafting duties; lift and carry weight of up to 50 pounds. Ability to communicate with others and to assimilate and understand information, in a manner consistent with the essential job functions. Ability to make sound decisions in a manner consistent with the essential job functions.