

ENGINEERING ASSISTANT/GEOGRAPHIC INFORMATION SYSTEMS (GIS) SPECIALIST

DEFINITION

Under limited supervision, performs civil engineering work, and assist in the development and maintenance of the City Geographic Information System, custom GIS application development, database administration, Web mapping services and the design/management of the GIS GEO/SDE database.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the Community Services Director.

EXAMPLES OF ESSENTIAL FUNCTIONS - *Essential functions may include, but are not limited to, the following:*

Provides specifications for, configures, and administers GIS workstations, servers, and related hardware.

Installs, configures, upgrades, and administers local network equipment and PC software applications, GIS software, including ArcGIS License Manager, and standalone ArcView licensing.

Installs, tune, and administer Microsoft SQL Server and the ESRI SDE Geodatabase. Performs integrity and reliability tests of backup systems.

Codes, install, test, and administer custom GIS applications using VBA, Visual C++, Java or ArcXML.

Provides guidance and direction to less experienced GIS Analysts, programmers and users.

Provides staff assistance to the Citywide GIS Coordinator and participates in the Citywide GIS Working Group

Assists in providing help desk technical support.

Prepares plans, specifications and estimates for capital improvement projects.

Assists in Design and preparation of drawings and specifications for street, sewer, storm drain, and other engineering projects and manages the construction of the same.

Checks and analyzes survey, hydrographic, topographic and other field data.

Performs other related duties as assigned.

MINIMUM QUALIFICATIONS

Knowledge of:

Knowledge of writing and oral communication skills in English.

Knowledge of basic Civil Engineering principles.

Knowledge of environmental issues associated with projecting impacts and regulatory measures.

Knowledge of computers and computer-aided design and drafting (skilled in the use of AutoCAD or other design software).

Knowledge of design, coding, testing, and implementation of traditional, object-oriented and web-based GIS applications.

Ability to:

Ability to interact with the public while providing proper customer service.

Ability to interact with other divisions or section employees to obtain information necessary for design and project specifications.

Ability to prepare environmental impact reports.

Ability to calculate material-cost estimates.

Ability to read, write and comprehend directions in English.

Ability to develop necessary skills from on-the-job training and meet standards of performance for the classification by the end of the probationary period.

Ability to work with ITC staff to provide technical support and the GIS Coordinator to develop comprehensive GIS and database architecture design from concept to functional analysis, design, coding, and performance through testing and production of the system

Ability to effectively document application system phases (analysis, design, code, test, implementation and maintenance)

Ability to analyzes, document, and diagram current and future workflow processes for applications systems.

Experience:

Experience in design and implementation of GIS applications using ARC/INFO and ArcView.

Education:

Bachelor's degree or higher Geographical Information Systems (GIS), Civil Engineering, Geography or a related field plus 2 years experience or Associates/Technical Degree in related field plus 4 years experience working with ESRI GIS products, Microsoft SQL Server and Windows NT/2000/XP operating systems.

Substitution:

An equivalent combination of experience, education and/or training may substitute for the listed minimum requirements.

Additional Requirements:

Possession of a valid California driver's license.

TYPICAL WORKING CONDITIONS

Work typically is performed in a normal office environment. Occasionally work is performed outdoors, possibly exposing employee to traffic and construction hazards, adverse weather conditions, wetness and humidity, above-average noise, air contaminants, fumes and dust.

TYPICAL PHYSICAL REQUIREMENTS

Requires the ability to sit at desk for long periods of time and intermittently walk, stand, stoop, kneel, crouch and reach while performing office and field inspection duties; lift and/or move objects weighing up to 25 pounds; use hands to finger, handle or feel objects, tools, or controls. Must be able to maintain effective audio-visual discrimination and perception needed for making observations, communicating with others, reading and writing, and operating office equipment. Must be able to use a telephone to communicate verbally and a keyboard to communicate through written means, to review information and enter/retrieve data, to see and read characters on a computer screen.

This class specification lists the major duties and requirements of the job and is not all-inclusive. Incumbents may be expected to perform job-related duties other than those contained in this document.