

CAD/GIS SUPERVISORDefinition:

Under supervision to do skilled delineating work involved in the maintaining of maps, drawings, tracings, charts and graphs. Performs a variety of surveying duties, drafting, calculating and minor engineering related to the design of water systems and preparation of construction drawings using AutoCAD; to create and maintain assigned aspects of the Geographic Information System (GIS) database; to analyze GIS data and information and to generate maps and reports as requested. Supervises other CAD/GIS staff and coordinates mapping information for the Agency.

Distinguishing Characteristics:

This is a single position non-exempt class that provides supervision and training to other positions in the drafting series and coordinates the Agency efforts on the maintenance and updating of maps and drawings. Most of the work is performed inside in an office setting but occasionally requires fieldwork traversing uneven ground using survey equipment and global positioning system equipment. Work may also require the use of photographic equipment. Duties require the ability to accurately distinguish colors, close and distant focus of vision, attention to detail and finger dexterity; occasional operation of a motor vehicle, occasional work outside in inclement weather, occasional lifting and carrying of up to 50 lbs., and occasional climbing, stooping, bending, kneeling, reaching, walking and standing plus regular sitting for long periods and frequent use of a personal computer.

Examples of Duties:

- responsible for updating maps including making field checks when necessary;
- develops, updates, interprets and transposes a variety of maps and drawings;
- oversees the drafting and updating of standard construction details;
- participate in the design and management of databases associated with the GIS base mapping and subsequent map layers;
- modify GIS basic programming as necessary to accommodate user's needs and verify accuracy of digitized data using source material to ensure the quality of computer automated projects;
- prepare and digitize maps and/or geographic feature data into GIS computer data base, following pre-established procedures and sequences, to update and create data layers within the system;
- determine and execute the appropriate sequence of processing tasks in order to appropriately complete a GIS automation assignment;
- coordinate with other agencies regarding GIS datasets;
- may consult maps and data of other entities incident to the present and planned Agency system;

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- interprets legal descriptions of property, metes and bounds, easements and right of ways;
- prepares budget estimates for new equipment and equipment maintenance;
- orders required supplies;
- interprets contour maps and assessor's maps;
- may perform surveying duties, including operation of level, taking field notes, measurements and staking;
- performs computations and drafting work to reduce field notes for the posting of as-builts and preparation of construction plans, profiles and details;
- maintains files of maps, reference drawings and other records;
- prepares special project graphics;
- coordinates the electronic submittal of drawings and maps;
- operates and maintains copying machine, computer, plotter and various office and field equipment including global positioning system equipment;
- coordinates and supervises the work of Agency CAD/GIS personnel;
- update and develop Agency GIS applications;
- performs other related duties as required.

Qualifications:

Knowledge of:

- nomenclature, symbols, methods, practices, techniques and instruments used in drafting and mapping work;
- surveying principles;
- principles, procedures, techniques, nomenclature, and operation of GIS workstations;
- techniques of digitizing, drafting and automated mapping;
- principles of supervision;
- modern office procedures;
- principles of Geographical Information systems (GIS) and global position systems (GPS);
- computer aided drafting systems (AutoCAD in particular);
- map projections and scales.

Ability to:

- on a continuous basis, know and understand all aspects of the job;
- intermittently analyze work papers, reports and special projects;
- identify and interpret technical and numerical information;

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- observe drafting and mapping activities and problem solve when appropriate;
- understand, interpret and explain department policies and procedures;
- adapt to new and complex computer software;
- sit at a drafting table or computer station;
- intermittently stand at counter for long periods of time;
- twist and reach office equipment;
- use keyboard to operate design and mapping software;
- visually differentiate between colors on land use maps;
- regularly lift weight of 15 pounds or less; and lift weight up to 50 pounds;
- Stoop, bend and traverse uneven terrain;
- Ability to walk long distances;
- Ability to work outside;
- Twist to reach equipment surrounding desk;
- perform simple and power grasping, pushing, pulling and fine manipulation; see and hear with
- sufficient acuity to successfully perform all aspects of the job;
- use telephone and write or use a keyboard to communicate through written means;
- may lift computers and related equipment;
- stand, walk, bend, stoop, twist, kneel and lift.
- Work independently and as a cooperative, contributing member of a team;
- Design and develop sequential processing of tasks and perform spatial analysis;
- Manage multiple projects and priorities;
- use drafting instruments and global position system equipment;
- utilize computers, perform technical research in GIS;
- produce maps which satisfy departmental user requirements;
- operate GIS workstations and related peripherals perform digitizing and drafting using GIS software and digitizing equipment;
- develop and maintain user documentation;
- troubleshoot and perform routine maintenance on GIS workstations and related peripherals
- use basic surveying instruments, interpret maps, read and interpret legal descriptions and construction plans;
- make mathematical computations of advanced difficulty;
- Plan, organize, coordinate and prioritize work for self and others

Education/Experience:

Sufficient education, training and experience to demonstrate the knowledge, skills and abilities listed above. These would normally be acquired by graduation from a junior

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college with major studies in drafting, cartography, GIS surveying and engineering technology or a related field. Must have completed college-level courses and/or professional training seminars in GIS applications. CAD/GIS supervisory experience is preferred. Related job experience may be substituted for graduation with a minimum of six (6) years.

License/Certificates:

Must possess and maintain a valid California driver's license with an acceptable driving record.