



MARIN MUNICIPAL WATER DISTRICT

Senior Drafting Technician-CAD System Specialist

DEFINITION

Under direction, performs difficult engineering drafting in the preparation of contract drawings for system facilities; serves as the CAD system specialist working as a liaison with Information Technology department to assure a coordinated work effort with regard to the application, major construction projects; does field work in connection with location and design of water data storage and data sharing of the CAD system and does related work as required.

DISTINGUISHING CHARACTERISTICS

This single position classification combines performing the more difficult and complex engineering design drafting of major contract drawings with the responsibility for lead supervision of drafting staff and serving as the District's CAD systems application specialist with responsibility for the application (AutoCAD), CAD work processing and CAD drawing data management. The incumbent normally assigns, schedules and reviews the work of subordinates, reviews timesheets and trains personnel in drafting and the use of the CAD system. The incumbent may assume functional and administrative supervision over the Drafting Department in the absence of the supervisor.

EXAMPLES OF DUTIES

In the area of drafting:

- Prepares field sketches and layout drawings for District projects.
- Provides information for proposed construction projects.
- Works closely with engineering staff in the preparation of contract drawings and details for water facilities, including structural, mechanical and electrical design.
- Prepares a variety of charts, graphs, maps and tables for District reports and presentations.
- Reviews the work of and trains subordinate staff. May also assist in the preparation of employee performance evaluations.

In the area of AutoCAD:

- Assist CAD users in resolving daily operational and/or technical problems.
- Installing, maintaining, and configuring the CAD system including: CAD application and internal functions; user interface and menus; scripts and macros used to automate and streamline work; printing and plotting functions; and trouble shooting application related issues.
- Provide data management for the CAD System which includes: developing drawing standards, templates and processes; data transit and storage, including CAD document management (AutoManager) and drawing storage file system; development and maintain CAD library.
- Provide, coordinate and recommend appropriate training for CAD users.

QUALIFICATIONS FOR EMPLOYMENT

Knowledge of:

- Drafting principles and procedures, algebra, geometry and trigonometry.
- Property map descriptions and plotting.
- Mathematical procedures used in drafting.
- Engineering calculations, design criteria and field work.
- Construction practices and materials.
- CAD software commonly used in the design of water system and other types of construction projects.
- Theories and applications of computer science.
- Principles and practices used in CADD Systems operations.
- PC hardware and software components;
- Methods and techniques used in the installation, trouble shooting, and maintenance of CAD hardware and software.
- Operational characteristics of a variety of desktop computer platforms and operating systems.
- Expertise on CAD software and operating system hardware.
- Computer systems technology and vocabulary;
- Proper spelling, grammar, punctuation and writing practices.

Ability to:

- Perform complex and precise mapping and drafting work with a minimum of supervision and instruction;
- prepare construction drawings and maps from rough sketches and field notes;
- effectively use AutoCAD software and other drafting and mapping computer software packages;
- do engineering design work and the more difficult mathematical calculations;
- use engineering software to determine volumes and areas;
- prepare plots and descriptions of property;
- independently maintain a variety of engineering records and files;
- supervise and train others;
- deal effectively with those contacted in the course of work;
- understand and carry out written and oral instructions;
- provide technical support for the implementation and maintenance of CAD Systems hardware and software;
- respond to and identify user needs and help determine resolutions;
- detect, isolate, and help resolve application, operating system, database, or hardware problems related to CAD;
- recommend appropriate technology to meet needs of AutoCAD users;
- learn methods and techniques of system design, development and implementation;
- depending upon assignment, drive a vehicle;
- travel to alternative work locations and offsite meetings.

Training and Experience: Any combination equivalent to experience and education that could likely provide the required knowledge and abilities would be qualifying. A typical way to obtain the knowledge and abilities would be:

- Completion of the twelfth grade or its equivalent; and,

- Five years of increasingly responsible design and drafting experience with extensive experience using CAD systems.
- College level coursework in computer science or related field.
- Five years of providing support of CAD systems computer applications, operating systems, hardware, databases, and end user support.

OTHER REQUIREMENTS

- Per California Government Code, Title 1, Division 4, Chapter 8, Section 3100 “all public employees are hereby declared to be disaster service workers subject to such disaster service activities as may be assigned to them by their superiors or by law.”

LICENSES AND/OR CERTIFICATIONS

- Possession of or the ability to obtain an appropriate California driver's license issued by the State Department of Motor Vehicles and satisfactory driving record.

PHYSICAL DEMANDS AND WORKING CONDITIONS

During the course of performing job duties the employee will need the mobility to work in a standard office setting, operate equipment, which may include office and/or field equipment, or specialized instruments or tools requiring repetitive arm/hand movement and/or the coordinated movement of more than one limb simultaneously; enter and retrieve data from personal computers and terminals via keyboards which is often performed while sitting for extended periods of time. The employee frequently stands, walks, bends at neck and waists, twists at neck and waist, uses simple and power grasping with both hands, uses fine manipulation of both hands and fingers, and may require use of the arms above the shoulder, climb or balance; stoop, kneel or crouch. While working in the field the employee may walk on uneven or un-level ground surfaces such as hills, slopes, ditches or trenches, on or in tanks, and may work at heights up to ten to twelve feet climbing ladders or stairs. The employee is occasionally required to lift and carry short distances objects such as reams of copier paper, office supplies, files, books, printed materials and other packages or equipment weighing up to 50 pounds. This position requires that the employee demonstrate adequate hearing and speech to converse in person and over the telephone, and vision to read printed materials and use a computer screen.

The noise level in the work environment is quiet to moderate noise. The employee is exposed to outdoor temperature, humidity, wetness and dust. The position may require the ability to work overtime and weekends as needed.

Employees who drive on District business to carry out job-related duties must possess a California driver's license for the class of vehicle driven and meet automobile insurability requirements of the District including review of a recent DMV history. In order to drive and depending on assignment, individuals must be physically capable of operating the vehicles and equipment safely.

To be successful in this job, an individual must be able to satisfactorily perform each of the listed duties. These duties are representative of the knowledge, skill and/or ability required for the position. Reasonable accommodations may be made to enable individuals with disabilities to perform the duties and functions of the position. Requests for reasonable accommodation should be directed to the Human Resources Manager.

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Established: January 2001
Revised: August 2006
Approved by: Human Resources Manager