

ENGINEERING TECHNICIAN

DEFINITION

Under the general supervision of the District Engineer, performs routine field and office engineering work; conducts survey and, drafting, work; and performs other related duties as required.

CLASS CHARACTERISTICS

This position performs technical engineering work of average difficulty under the supervision of a registered engineer. The incumbent exercises some independence and action but works according to established procedures and guidelines. Work is reviewed for accuracy and completeness by registered staff. The incumbent generally assists in field survey work, but may serve as lead on routine survey tasks.

SUPERVISION RECEIVED AND EXERCISED

Supervised by: District Engineer

Exercises supervision over: no supervisory responsibility

ESSENTIAL DUTIES (*Duties may include, but are not limited to, the following*):

Prepares construction plans, drawings, sketches and maps for construction or modification of water and sewer facilities, water mains and sewer collection lines.

Plots right-of-way alignments showing profiles, contours and topographic features; prepares base maps.

Maintains and updates District's index maps, flat files and original drawings including, but limited to meter installations, pipe repair/replacements and leak repairs.

Performs field survey work using automatic survey and data collection equipment; performs special projects and/or collects field data; analyzes data and prepares report of findings.

Performs construction project inspections; inspects contractors work to ensure compliance with plans and specifications; completes daily inspection records and notifies contractor in writing of any deficiencies.

Prepares legal descriptions, and plans for right-of-way acquisitions; prepares easement, fee parcel and quitclaim documents; maintains right-of-way master lists and database; researches customer questions regarding right-of-way issues

Locates district facilities; researches maps and conducts field searches to locate lines, mains, and other underground facilities.

QUALIFICATIONS

DEMONSTRATED KNOWLEDGE OF AND PERFORMANCE IN THE FOLLOWING AREAS:

- Principles and practices of field survey work including automated survey and data collection equipment and software;
- Principles and techniques of drafting and map preparation using AutoCad and by hand;
- Principles and practices of construction inspection;
- Basic mathematics used in technical engineering;
- Safety problems and procedures;
- Procedures and practices of property description and title documentation and transfer;
- Methods, materials and equipment used in the construction, alteration and maintenance of water distribution and sewer line structures;
- Practices and methods of preparing plans, design and specifications for water distribution and sewage collection construction projects.

ABILITY TO:

- Interpret and understand construction drawings and maps;
- Prepare drawings from existing drawings and design notes and sketches;
- Communicate effectively both orally and in writing;
- Perform survey work including verification of lay out, elevations, line and grade;
- Use a variety of and engineering software applications;
- Create and maintain accurate records, databases, and files;
- Prepare engineering reports and records;
- Perform mathematical computations for design and right-of-way work;
- Establish and maintain effective relationships with other agencies, contractors, consultants, customers, and staff.

PHYSICAL AND SENSORY REQUIREMENTS

- Sufficient eyesight to read fine plans and standard text and data;
- Ability to speak and hear at normal conversational levels in person and over the telephone;
- Manual dexterity to write legibly and to use calculators, computer terminal, and field survey work and draw engineering documents by hand;
- Ability to lift and carry up to forty (40); ability to reach, bend, or crouch to conduct survey work or to use files and records;
- Ability to occasionally walk on uneven and slippery surfaces;
- Exposure to outdoors and high noise levels as created by large pumps;
- Ability to travel to different sites and locations.

TRAINING AND EXPERIENCE GUIDELINES

Any combination of training and experience, which demonstrates attainment of the required knowledge and ability to perform the required work (with reasonable accommodation, if needed), typically:

EDUCATION: Equivalent to graduation from high school with college level courses in drafting and engineering math.

EXPERIENCE: Two years experience in computer-aided drafting and engineering survey fieldwork.

CERTIFICATIONS, LICENSES, AND REGISTRATIONS

A valid California class C driver's license must be maintained at all times.