

## CITY OF LAKE ELSINORE

### ENGINEERING TECHNICIAN

*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 general supervision, learns to perform and performs the full array of duties assigned to classes in the Engineering Technician series, including performing entry level professional civil engineering work involved in the design, mapping and construction of capital projects; assists in the preparation of engineering plans, maps and specifications; operates computer assisted drafting and GIS systems; demonstrates a full understanding of all applicable policies and engineering procedures associated with assigned duties; and performs other related duties as required.

#### **DISTINGUISHING CHARACTERISTICS:**

The **Engineering Technician** is the journey level class responsible for initial design, investigation, and cost estimates of public works projects under the supervision of professional civil engineers. Incumbents perform the full range of complex procedures in carrying out a variety of drafting, office and field engineering work, and meet the qualification standards for the class. Work in this class is distinguished from the next higher class of Senior Engineering Technician/GIS Administrator in that the latter performs the more complex duties and responsibilities.

#### **SUPERVISION RECEIVED/EXERCISED:**

General supervision is provided by the City Engineer/Engineering Manager. May exercise functional and technical supervision over lower level staff.

#### **ESSENTIAL FUNCTIONS:** *(include but are not limited to the following)*

- Performs the full array of duties assigned to an Engineering Technician, including design and preparation of specifications, mapping, and cost estimates of capital projects; performs Computer Aided Design drafting and computing operations in the preparation of a wide variety of engineering drawings and plans; performs mapping and indexing for the City's GIS systems.
- Demonstrates a full understanding of applicable policies and engineering procedures and work methods associated with assigned duties.
- Performs complex engineering calculations for storm water, and street systems, street alignments and asphalt thickness and base requirements, performs calculations for vertical and horizontal alignments; develops, modifies and maintains computer programs required to provide graphics, maps, overlays, and engineering drawings.
- Researches files for existing plans, profiles and maps for data for proposed projects.

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- Makes field checks of project sites as needed; performs title searches, researches right-of-way and easements based on legal descriptions.
- Interprets and drafts legal description drawings; prepares sketches of designs from instructions and design data; interprets and converts survey notes to various types of drawings.
- Establishes positive working relationships with representatives of community organizations, state/local agencies, City management and staff and the public.

### **PHYSICAL, MENTAL AND ENVIRONMENTAL WORKING CONDITIONS:**

Position requires prolonged sitting, standing, walking, reaching, twisting, turning, kneeling, bending, squatting, and stooping in the performance of daily activities. The position also requires grasping, repetitive hand movement, and fine coordination in preparing reports using a computer key board. Additionally, the position requires near and far vision in reading written reports and work related documents. Acute hearing is required when providing phone and personal service.

Some of these requirements may be accommodated for otherwise qualified individuals requiring and requesting such accommodations.

**QUALIFICATIONS:** *(The following are minimal qualifications necessary for entry into the classification.)*

#### **Education and/or Experience:**

Any combination of education and experience that has provided the knowledge, skills and abilities necessary for an **Engineering Technician**. A typical way of obtaining the required qualifications is to possess the equivalent of two years experience as an Engineering Technician and an associate of art's degree in drafting, pre-engineering, surveying or related field. Experience in engineering technician support may be substituted for education on a year-for-year basis.

#### **License/Certificate:**

Possession of, or ability to obtain a valid, class C California driver's license.

**KNOWLEDGE/ABILITIES/SKILLS:** *(The following are a representative sample of the KAS's necessary to perform essential duties of the position.)*

#### **Knowledge of:**

City engineering policies and procedures related to the construction, design and maintenance of municipal systems and facilities; City standards, standard drafting symbols, methods, practices, techniques, and instruments used in engineering and mapping; basic principles and practices of civil engineering; applicable federal, state and local laws, codes and regulations; operational characteristics of standard engineering equipment; modern office equipment, including computer hardware, software and applications; methods and techniques for basic report preparation and writing; methods and techniques for record keeping; proper English, spelling and grammar; complex principles of mathematics; occupational hazards and standard safety procedures.

**Ability to:**

Use computer aided drafting and design systems, databases, GIS systems and other programs related to engineering design; review plans and documents for conformance with regulations; prepare plans and specifications neatly and accurately; prepare and maintain accurate records and reports; understand, interpret and prepare legal descriptions, engineering reports and maps; work effectively with team members, contractors, and the general public; analyze a complex issue and develop and implement an appropriate response; prepare clear and concise technical reports; analyze and evaluate new and existing methods and standard operating procedures; apply applicable City codes and regulations; work independently; understand and follow instructions; communicate clearly and concisely, both orally and in writing; establish and maintain effective working relationships.

**Skill to:**

Operate various equipment and tools required to perform engineering technician work, including the operation of office computer equipment and a variety of software and applications, such as Computer Aided Design, blueprint and drafting machines.