

## ENGINEERING SPECIALIST I, II

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### DEFINITION

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Performs technical and para-professional engineering duties in support of the City's Engineering program including survey, design drafting, project inspection, and related support services; and performs related duties as assigned.

### DISTINGUISHING CHARACTERISTICS

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*Engineering Specialist I*- this is the entry level class. Incumbents typically perform counter work, filing and retrieval of plans and maps, assist with surveying and perform routine drafting assignments.

*Engineering Specialist II*- This is the journey level class. Employees typically perform complex drafting assignments as well as other office and field engineering work.

### REPRESENTATIVE DUTIES

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*The duties listed below are examples of the work typically performed by employees in this class. An employee may not be assigned all duties listed and may be assigned duties which are not listed below. Marginal duties (shown in italics) are those which are **least** likely to be essential functions for any single position in this class.*

1. Assists public at the counter and over the phone; accepts permit applications and plans; provides information regarding property characteristics, department procedure, fee structure, ordinances, etc.
2. Maintains files, maps and electronic databases.
3. Uses computer and peripherals with CADD software to create drawings, construction plans, and record maps; updates drawings and maps based on field inspections information; creates locator maps for public use; creates maps and databases for geographic information system; and manually creates pencil and ink drawings as needed.
4. Checks plans prepared by: in-house staff, other agencies, contractors, and the public, for conformance codes, standards, current maps and/or plans, policies, engineering principles, and conditions for approval; and calculates fees.
5. Assists with field work such as surveying and traffic studies; performs survey calculations; sets stakes; may assist in or perform routine field design; makes recommendations regarding signals, signs, pedestrian crossings, and other traffic regulatory devices.
6. Assists with building and/or public works inspections and performs routine inspections independently.
7. *Provides vacation and temporary relief in similar occupational fields as necessary.*

### EMPLOYMENT STANDARDS

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#### Education and/or Experience

*Engineering Specialist I*- Completion of college coursework in civil engineering, mathematics and drafting, one year of experience using CADD software, or any combination of training and experience that provides the desired knowledge and abilities.

*Engineering Specialist II-* Three years of technical engineering-related experience which included, computerized drafting and/or survey, or any combination of training and experience that provides the desired knowledge and abilities.

Twelve units of postsecondary coursework in mathematics and/or technical engineering may substitute for one year of experience.

Additional experience may be credited toward necessary education.

**Knowledge of:**

*Both Classes-* drafting techniques; modern principles, practices, and standards of survey and civil engineering as applied to the level of assigned public works projects; elementary algebra and geometry; code requirements and legal implications as applied to the level and type of assigned engineering activity; computer word processing, spreadsheet and database programs.

*Engineering Specialist II-* land survey and drafting software applications; database management techniques; modern principles, practices, and standards of civil engineering design.

**Ability to:**

*Both Classes-* prepare and interpret maps, drawing, and engineering records; perform moderately difficult arithmetical/mathematical calculations; analyze public works plans and apply engineering principles at the level required by assignment; plan and complete work from written or verbal instruction, past practice, and/or standard procedures; use computer equipment and peripherals; establish and maintain cooperative working relationships.

*Engineering Specialist II-* work independently based on written or verbal instructions in the support of a professional engineer and/or in the functional supervision of others with minimal technical assistance; and apply sound judgments.

**Special Requirements**

Possession of or ability to obtain a valid California Driver's License.

**Physical Demands**

Sitting, standing, walking, some stooping and bending; dexterity and coordination to handle files and single pieces of paper; occasional lifting of objects up to 25 lbs. such as files, stacks of paper and other reference materials; moving from place to place within the office; some reaching for items below and above desk level; and strength, dexterity, coordination and vision to use a keyboard and video display terminal for long periods of time. *Occasional field work* may require lifting objects up to 50 lbs. and involve active physical work, but not prolonged heavy exertion. On feet most of time involving bending, stooping, squatting, twisting, reaching, and working on irregular surfaces.

**WORKING CONDITIONS**

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Environment is generally clean with limited exposure to conditions such as dust, fumes, odors, or high noise levels. A computer is used on a daily basis. Periodic contact with upset or angry individuals; and independent travel throughout the area is required.

Date Adopted: August 6, 1996

