

**ENGINEERING TECHNICIAN**

**DEFINITION:**

To perform a variety of paraprofessional office and field engineering work including drafting, minor design work, engineering records preparation and maintenance and operation of equipment and instruments; may work as survey crew member in support of surveying and other civil and traffic engineering functions.

**SUPERVISION RECEIVED:**

General supervision is provided by higher level technical and professional engineers.

**EXAMPLES OF DUTIES:**

1. Performs non-routine drafting assignments which require application of standardized drawing techniques.
2. Prepares accurate drawings from design notes, sketches and field survey notes.
3. Makes traffic counts and prepares simple diagrams of intersections showing sight distances and traffic flow.
4. Makes speed surveys, polls motorists and pedestrians, and prepares diagrams of accident frequencies.
5. Makes computations to determine quantities and costs.
6. Performs complex mathematical calculations by using accepted formulas, manuals and equipment.
7. Reads and interprets maps and other engineering records and prepares legal descriptions of property.
8. Corrects and re-designs construction plans for street improvements, utility installations, drainage and material quantities by using appropriate calculations, computations and engineering data and by consulting with engineers.
9. Performs survey office work using drafting tools while employing mathematical and engineering data to prepare information for use by survey field crews, construction crews and construction inspectors.

**EXAMPLES OF DUTIES (continued):**

10. Interprets information from survey field work for use in mapping, designing construction plans, analyzing earthquake fault monitoring data and updating survey records.
11. Performs various duties associated with land surveying including using measuring tapes and level rods to assist in determining lines, angles, points, elevations and distances.
12. Performs various record keeping and file maintenance duties such as recording instrument readings in field survey notes, maintaining office files of notes, control data, monument records, surveyors maps, and construction drawings.
13. Computes horizontal and vertical curves.
14. Calculates distances, earth work quantities, fees and charges.
15. Performs plan checking by comparing drawings of proposed improvements against drawings which illustrates established engineering standards applicable to various projects.

**QUALIFICATIONS:**

Knowledge, Abilities and Skills:

- A. Knowledge of algebra, geometry and trigonometry.
- B. Knowledge of drafting including maps, renderings, view graphs, cross-sections and plan and profiles.
- C. Ability to perform basic engineering and surveying calculations.
- D. Ability to interpret construction drawings, field survey notes, deeds, maps and other legal descriptions and to extract pertinent information.
- E. Ability to maintain neat and accurate records.
- F. Ability to understand and carry out oral and written instructions.
- G. Ability to communicate effectively orally and in writing.

Knowledge, Abilities and Skills (continued):

- H. Ability to establish and maintain cooperative and effective relationships with those contacted in the course of work.
- I. Ability to visualize the practical application of designs.
- J. Ability to cope with extensive public contact.
- K. Ability to draft engineering plans from rough layouts.

**EXPERIENCE AND EDUCATION:**

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:

Experience:

Two years of experience in engineering drafting and calculations.

Education:

Equivalent to completion of the twelfth grade including or supplemented by courses in algebra, geometry, trigonometry and drafting.

License:

Possession of a valid Class C California Driver's License.

**PROBATIONARY PERIOD:** Six Months.

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AAP GROUP: 5

FPPC STATUS: Non-Designated

FLSA STATUS: Non-Exempt