

## CLASSIFICATION SPECIFICATION



**CLASSIFICATION:** Engineering Technician I/II  
**ALLOCATION:** Community Development & Services Agency  
**FLSA STATUS:** Non-exempt  
**UNION AFFILIATION:** YCEA

**ESTABLISHED:** October 2003  
**REVISED:** December 2014

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### **JOB SUMMARY:**

Performs responsible sub-professional office and field work in support of County engineering activities including surveying, drafting, traffic data collection, public works inspection, permit issuance, map review; performs related work as assigned. Positions in this class are flexibly staffed and are normally filled by advancement from the I level if incumbents have met the minimum qualifications and have demonstrated the ability to perform the responsibilities required at the higher performance level.

Engineering Technician I is the entry-level class in this series. Initially under close supervision, incumbents perform the less skilled work while learning County and departmental procedures and becoming familiar with a variety of sub-professional engineering/surveying technical support work. As experience is gained, duties become more diversified and are performed under general supervision. This class is alternately staffed with Engineering Technician II; incumbents may advance to the higher level after gaining experience and demonstrating proficiency, which meet the qualifications for the higher level.

Engineering Technician II is the journey level in this series, fully competent to independently perform the full range of technical engineering/surveying support duties. The work includes both office and field duties, including expertise in drafting, surveying, map checking, basic design and/or public works inspection. Incumbents shall have knowledge of engineering/surveying concepts, construction inspection, terminology, and mathematics.

### **CLASS CHARACTERISTICS:**

This position reports directly to a Public Works Project Manager and may receive lead direction from Associate Civil Engineer. This class is distinguished from the Assistant Engineer in that the latter provides higher level assistance to management staff or higher level engineers in the areas of research, data collection, project administration, preparation of reports and preparation of engineering plans and specifications.

### **EXAMPLES OF DUTIES:**

#### **Essential**

- Provides information to the public and other governmental agencies associated with County procedures and regulations, which require the interpretation of policies and procedures, related to plan requirements, property ownership and facility locations; obtains and distributes copies of maps, land descriptions and similar information.
- Reviews a variety of plans and designs to ensure conformance with codes and regulations; reviews engineering drawings and specifications to verify calculations, quantities, accuracy and completeness.
- Reviews deeds, easements, records, documents and other survey data pertinent to a mapping or survey analysis project.
- Prepares and reviews specifications and bid documents for County projects; may perform standard design work under the direction of an engineer.
- Performs a variety of computer-aided and manual drafting tasks to update and maintain County base maps and GIS based maps; reviews County base maps for accuracy and completeness.
- Inspects public works construction and County infrastructure such as roads, bridges and related projects performed by private contractors and County crews.
- Works on a survey party on specified County projects; performs field surveys; sets up equipment to make field measurements; may reduce field notes and makes related office computations.
- Collects and maintains records of traffic counts and similar data by placing traffic counters in the field and collecting and recording information.
- Prepares issues and processes encroachment permits and parade permits for work and/or events in the County right-of-way; maintains clean and orderly records of said permits.

- Process, issue, and maintain records for transportation permits.
- Makes a variety of computations in an office, laboratory or field setting; enters data into an automated system and produces reports, drawings or statistical summaries.
- Checks various survey maps for mathematical accuracy, closures, area, survey consistency, boundary and legal conformity; adjusts data to align with record information; prepare County Surveyor maps.
- Prepares a variety of written materials such as bid abstracts, correspondence and reports; drafts legal boundary descriptions and other written materials required for office survey activities.
- Performs basic materials tests or takes and transports samples for testing by a contract laboratory.
- Maintains accurate records and files; develops and updates permanent files for County retention.

**Important:**

- Uses specialized equipment to develop and produce copies of maps, drawings and blueprints; uses specialized surveying instruments and field measuring devices.

**EMPLOYMENT STANDARDS:**

**Knowledge of:**

**Engineering Technician I:**

- Engineering or surveying mathematics through trigonometry.
- Principles and practices of engineering drafting.
- Safety principles, practices and equipment related to the work.
- Standard office practices and procedures, including filing and the operation of standard office equipment.
- Techniques for dealing with the public, in person and over the telephone.
- Drafting practices and equipment.
- Basic engineering, surveying and public works inspection terminology and concepts.
- Record keeping principles and practices.

**Engineering Technician II (in addition to the above):**

- Concepts, practices and equipment for drafting, surveying, map checking, basic design, and/or construction inspection.
- Prepare and review of engineering plans and survey maps.
- Applicable laws, codes and regulations.

**Skill in:**

**Engineering Technician I:**

- Interpreting, applying and explaining applicable codes and regulations.
- Making accurate engineering or surveying calculations.
- Reading and interpreting a variety of plans, specifications, maps, descriptions and other technical documents.
- Maintaining accurate records of work performed.
- Performing basic drafting and mapping work.
- Performing basic field data collection and inspection work.
- Establishing and maintaining effective working relationships with those contacted in the course of the work.

**Engineering Technician II (in addition to the above):**

- Performing skilled field and office engineering or surveying support work.
- Performing independent research; collect and summarize information for the department.
- Using the office and field tools and equipment routinely used by the Public Works Department.
- Using initiative and independent judgment within established procedural guidelines.

**Ability to:**

**Engineering Technician I:**

- Listen carefully to what other people are saying, take time to understand the points being made, and ask questions as appropriate for clarification.
- Deal tactfully and effectively with the public, regulatory agencies and policy-making bodies, developers, engineering firms and contractors, and others contacted in the course of the work.

- Organize, plan and prioritize work, developing specific goals and plans to accomplish your work in a timely manner as established by regulations and local policy.
- Pay attention to detail and be thorough in completing work tasks.
- Communicate clearly and concisely, both orally and in writing.

**Engineering Technician II (in addition to the above):**

- On a continuous basis, know and understand all aspects of the job; intermittently analyze work papers, reports and special projects; identify and interpret technical and numerical information; and observe and problem solve operational situations, technical policies and procedures.

**Physical Demands:** The physical demands and work environment described here are representative of those that must be met by an employee to successfully perform the essential function of the job, with or without accommodation. Prospective employees must complete a pre-employment medical exam (Occupational Group III) which will measure the ability to:

- See well enough to read fine print and view a computer screen for long periods of time; speak and hear well enough to understand, respond, and communicate clearly in person and on the telephone; independent body mobility sufficient to stand, sit, walk, stoop and bend to access the work environment and a standard office environment; manual dexterity and sufficient use of hands, arms and shoulders to repetitively operate a keyboard and to write.
- Strength and stamina to walk for long periods of time and conduct field inspections and investigations.
- Perform physical activities that require considerable use of arms and legs and moving your whole body, such as climbing, lifting, walking, stooping, kneeling, crouching and crawling.
- Mobility to drive a motor vehicle to visit field sites.

Accommodation may be made for some of these physical demands for otherwise qualified individuals who require and request such accommodation.

**Work Environment:**

- Generally a typical office environment.
- Position may work with exposure to heavy traffic, hazardous terrain, chemicals, and various weather conditions (sometimes extreme).

**QUALIFICATIONS:**

The minimum and preferred requirements are listed below. While the following requirements outline the minimum qualifications, Human Resources reserves the right to select applicants for further consideration who demonstrate the best qualifications match for the job. Meeting the minimum qualifications does not guarantee further participation in selection procedures.

**Licenses and Certification:**

- The ability to obtain a valid California Class C driver's license within ten (10) days of employment; maintain throughout employment.

**Special Requirements:**

- Must successfully complete an extensive and thorough background investigation which includes Live Scan fingerprinting prior to hire.
- Will be required to perform disaster service activities pursuant to Government Code 3100-3109.

**Education and Experience:**

**ENGINEERING TECHNICIAN I:**

**MINIMUM:** At least one year of related college level course work (30 semester units) with a minimum of math through trigonometry and two years of progressively related experience in engineering, drafting, construction, surveying, CAD and/or GIS.

Candidates with strong experience who lack the education are encouraged to apply.

**PREFERRED:** In addition to the minimum requirements, a total of two years (60 semester units) of related college level course work and two additional years of progressively related experience in engineering, drafting, construction, surveying, CAD and/or GIS.

**ENGINEERING TECHNICIAN II:**

**MINIMUM:** Two years of related college level course work (60 semester units) with a minimum of math through trigonometry and three years of progressively related experience in engineering, drafting, construction, surveying CAD/GIS with at least one year of experience at a level equivalent to the County's class of Engineering Technician I.

Candidates with strong experience who lack the education are encouraged to apply.

**PREFERRED:** In addition to the minimum, Bachelor's degree from an accredited college in an appropriate engineering discipline or related field and additional years of progressively related experience with at least one year of experience at a level equivalent to the County's class of Engineering Tech I.

**This class specification lists the major duties and requirements of the job. Incumbent may be expected to perform job-related duties other than those contained in this document.**

Public Works Approval: Mike Lee  
Date:

EEOC: C  
WC: 9410

Human Resources Approval: Tiffany Manuel  
Date:

Signature: \_\_\_\_\_

Signature: \_\_\_\_\_