



CLASSIFICATION NO. 304  
Revised: 2/80, 11/90, 7/20, 3/23  
FLSA: Non-Exempt  
EEO: 3

## **ENGINEERING TECHNICIAN 3**

### **CLASS CHARACTERISTICS**

Under direction, to perform a variety of complex technical engineering duties in the field or office; to lead the work of lower level technicians on designated assignments; to lead or coordinate a process or specific on-going program; and to do other work as required.

### **DISTINGUISHING CHARACTERISTICS**

The Engineering Technician series is primarily oriented to performing technical engineering and surveying functions to assist in the design, construction and maintenance of public works projects such as roads, bridges, traffic control, street lighting, land monuments, storm drains, sanitary sewer systems and treatment facilities. Positions in this series work under the supervision or direction of an advanced level technician, supervisor, or Professional Engineer, or Professional Land Surveyor. Individual assignments generally require engineering knowledge and skills gained through work experience or training programs.

This series is distinguished from professional engineering or land surveying classifications which require professional certification, registration or licensure, as well as broad general professional knowledge of engineering or surveying principles and practices applicable to a variety of complex projects or areas.

The Engineering Technician 3 is the advanced journey-level in the series. Incumbents generally have independent responsibility for assigned work, may lead or coordinate a process or specific on-going program, and may lead the work of lower level technicians on various projects. A supervisor, Professional Engineer, Professional Land Surveyor, or higher level technician is available for consultation, significant problem solving, and review of completed projects.

This classification is distinguished from the lower level Engineering Technician 2 which works with less independence and has limited lead responsibilities. It also differs from the higher-level Engineering Technician 4 which manages capital projects, performs the most complex technical duties under the responsible charge of a Professional Engineer, or works as a Land Survey Intern (LSI) under the responsible charge of a licensed Professional Land Surveyor. It is also distinguished from the CADD System Specialist, which performs complex technical assignments related to Computer-Aided Design and Drafting (CADD) functions and participates in CADD system file management and configuration operations.

### **TYPICAL TASKS**

Duties may include but are not limited to the following:

1. Under the responsible charge of a Professional Land Surveyor, performs land surveys; may lead the work of and train lower level technicians in the survey of existing and proposed

roads, bridges, traffic control and drainage structures; determines field control techniques for property boundary surveys; measures angles and elevations; assembles survey information including computations, maps, property descriptions and specifications to determine project or program requirements; operates or instructs in the operation of survey instruments and electronic data collection equipment; investigates and researches the recovery of obscured or lost original land corners.

2. Schedules, coordinates, and reviews work of assigned drafting staff; performs complex technical computer-aided design work; performs records research, advanced geometric computations, triangulations and adjustments; prepares survey data for electronic data processing; verifies completion and accuracy of plat maps for new subdivisions, annexations, easements, or changes in boundaries or facilities for local improvement districts.
3. Performs lead technical inspection work; may lead the work of and train lower level technicians in the construction inspection of grading, utilities, surfacing, paving, drainage installations, bridges and other structures; computes bid quantities, writes specifications and estimates costs; reviews contracts of outside contractors.
4. Performs construction and development plan reviews for constructability and consistency with County standards and specifications.
5. Reviews records of survey, plats, property descriptions and exhibits, and site design plans for completeness, accuracy, and compliance to rules and regulations.
6. Assembles project or program records, including computations, maps, legal property descriptions, and specifications; keeps detailed records for maintaining and perpetuating legal land documents; writes and reviews legal descriptions for rights-of-way, easements, annexations, and subdivisions.
7. Leads the processes for compiling, coordinating, and organizing traffic counts, traffic data, and transportation complaints, including managing consultant and service contracts.
8. Under the responsible charge of a Professional Engineer, participates in the design and preparation of plans and specifications for public works projects.

### **REQUIRED KNOWLEDGE AND SKILLS**

Thorough knowledge of: Principles and practices of land surveying, including operation of survey instruments; engineering plans, specifications and mathematics; computer-aided drafting techniques.

Working knowledge of: Practices of civil engineering design; methods and procedures of testing of roads, bridges, drainage structures and related construction materials; basic hydrology; principles of traffic and engineering and conveyances; applicable laws, rules, regulations and ordinances; technical report writing; principles of lead work supervision; computer software relating to engineering drafting and designing; English grammar and composition.

Skill to: Communicate effectively, both orally and in writing; make complex mathematical calculations with speed and accuracy using fundamentals of algebra, geometry and trigonometry; prepare detailed and precise construction drawings; conduct complex title and

property ownership research; prepare and interpret complex legal descriptions and other legal documents; supervise or execute computer applications in drafting, designing and engineering data collection; lead, train and review the work of lower level technicians; establish and maintain effective working relationships with subordinates, the public, contractors and County personnel.

### **WORKING CONDITIONS**

Field activities include moderately strenuous physical work, and incumbents may encounter adverse environmental conditions, such as inclement weather and traffic hazards.

Within Department of Transportation and Development (DTD) County Surveyor's Office – Public Land Corner, duties in the field require frequent walking, stepping, squatting, kneeling, bending, twisting, digging, swinging, balancing, grasping, fine motor control, and the ability to lift and carry up to 90 pounds, including carrying 60 pounds on one shoulder. Duties also involve frequent exposure to slippery and/or uneven surfaces including steep terrain, loud noises, vibration, exhaust fumes and dust, and adverse weather conditions.

Within some DTD Divisions (specific workgroups), duties require frequent standing, walking, squatting, bending, kneeling, reaching, digging, balancing, fine motor control, and the ability to lift and carry up to 60 pounds, push 50 pounds, and pull 70 pounds. Duties also involve frequent exposure to loud noises, vibration, slippery and/or uneven surfaces, exhaust fumes and dust, oil and chemicals, traffic hazards, and adverse weather conditions.

### **MINIMUM QUALIFICATIONS**

Minimum qualifications are used as a guide for establishing the minimum experience, education, licensure, and/or certifications required for employment in the classification. The following minimum qualifications are established for this classification. Additional minimum qualifications and special conditions may apply to a specific position within this classification and will be stated on the job announcement.

**Experience:** A minimum of two (2) years of related experience that would provide the required knowledge and skills to perform the responsibilities of this position.

**Licenses/Certifications:** None required.

### **PRE-EMPLOYMENT REQUIREMENTS**

Some positions must successfully pass a criminal history check which may include national or state fingerprint records check.

Driving may be necessary for County business. For position(s) with occasional/incidental driving, incumbents must possess a valid driver's license. Accommodation requests for an acceptable alternative method of transportation will be reviewed on an individual basis in compliance with State and Federal legislation. For position(s) with regular driving, incumbent(s) must also possess and maintain an acceptable driving record throughout the course of employment.

Within some DTD Divisions (specific workgroups) and DTD's County Surveyor's Office – Public Land Corner, employment is contingent upon passing a post-offer physical assessment.

Accommodation requests will be reviewed on an individual basis in compliance with State and Federal legislation.