

## LAND SURVEYING ASSISTANT

### DEFINITION

Operates levels, theodolites, electronic total station with data collectors, and other instruments in making land, topographic, and construction surveys.

### TYPICAL DUTIES

Operates levels, transits, and other instruments in measuring angles, distances, and elevations and in establishing bench marks, taking cross-sections, and setting grade and line stakes.  
Records temperatures and makes necessary corrections for the determination of precise linear measurements.  
Cares for, cleans, and makes field adjustments on the various instruments used.  
Performs preliminary work such as assembling, reviewing, and plotting data.  
Participates in job layouts in the field under the direction of a Survey Party Chief.  
Assumes responsibility for a surveying party in the absence of a Survey Party Chief.  
Keeps field notes and records and verifies field calculations.  
Performs related duties as assigned.

### DISTINGUISHING CHARACTERISTICS AMONG RELATED CLASSES

A Land Surveying Assistant performs skilled set-up and operation of levels, theodolites, electronic total station, and other field surveying equipment without detailed instructions.

A Survey Party Chief supervises and participates in the work of a field surveying party, usually composed of three or four persons.

A Land Surveying Aide assists in the routine nontechnical work of a survey party and operates surveying instruments for training or relief purposes with detailed instructions from a Land Surveying Assistant or Survey Party Chief.

### SUPERVISION

General supervision is received from a Survey Party Chief. Work direction is given to Land Surveying Aides.

### CLASS QUALIFICATIONS

#### Knowledge of:

Assembly, care, adjustment, and use of common types of surveying instruments and equipment  
Practices and procedures pertaining to land, topographic, and construction surveys  
Algebra, geometry, and trigonometry as applied to land surveying  
Surveying nomenclature and conventional symbols  
Electronic total station and data collection software  
CAD systems such as AutoDesk and Carlson

Ability to:

- Utilize an electronic total station with data collection capabilities to record topographic information and download to a Computer Aided Drafting (CAD) system
- Interpret civil engineering drawings
- Set up and operate surveying instruments accurately
- Make precise measurements with a surveying tape and correct them for temperature tension
- Make accurate mathematical calculations and elementary civil engineering sketches

Special Physical Requirements:

- Stamina to stand and walk for long periods of time
- Agility to climb ladders, walk on construction planks, and move safely in construction sites
- Strength to carry surveying equipment
- Visual acuity to see flags and markers and to read plans and maps

ENTRANCE QUALIFICATIONS

Education:

Graduation from high school or evidence of equivalent educational proficiency. Two years of civil engineering work, including one year of on-the-job field training or experience performing routine, nontechnical work in a surveying party; or twelve semester units or the equivalent number of quarter units in civil engineering courses from a recognized college or university with one year of on-the-job field training or with one year of experience performing routine, nontechnical work in a surveying party.

or

Graduation from a recognized college or university with a major in civil engineering including field surveying courses in both plane and route surveying.

Special:

- Possession of a Land Surveyor-in-Training Certificate, issued by the State Board of Registration for Professional Engineers and Land Surveyors, is desirable.
- A valid California Driver License.
- Use of an automobile.

The class description is not a complete statement of essential functions, responsibilities, or requirements. Entrance requirements are representative of the minimum level of knowledge, skill, and /or abilities. To the extent permitted by law, management retains the discretion to add or change typical duties of a position at any time, as long as such addition or change is reasonably related to existing duties.

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HV

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DN