

Summary of Duties : Sets up and operates engineer's transit and level, theodolites, depth recorders, electronic distance measuring devices and other survey instruments to secure data pertaining to lines, corners, elevations, grades, curves, alignments, and positions; makes field notes, sketches, and computations; and does related work.

Distinguishing Features : The responsibilities of a Land Surveying Assistant are the efficient and accurate use of engineering survey instruments, recording of field notes, and making of computations. The work involves an understanding of the use of survey instruments and of the duties of other members of the survey party. The work differs from that of a Field Engineering Aide in that it entails the use of not only the less complex equipment such as chains, tapes, and rods used by the Aide, but also of all instruments used in survey work. A Land Surveying Assistant may perform office work connected with surveying which requires a knowledge of, and experience in, making surveys. Supervision is usually immediately available from a Survey Party Chief.

Examples of Duties : Sets up and operates survey instruments as a member of a survey party; uses transits, theodolites, depth recorders, and levels in determining lines, corners, elevations, grades, curves, alignment, angles, and distances; keeps field notes of readings and observations; assists the Survey Party Chief in making calculations and in checking plans and legal descriptions; calculates temperature corrections, reduces slope distances, and computes stadia distances; determines distances, directions, and elevations from a known point and records observations on the plane table sheet; may operate electronic instruments such as tellurometers, fathometers and electrotapes or optical-electronic measuring instruments such as geodimeters;

Cleans and adjusts transits, levels, and other survey instruments; indexes and files survey notes, maps, plans, and field books; and assembles field books, maps and plans for use of survey parties; occasionally acts for the Survey Party Chief; and may occasionally be assigned to other duties for training purposes or to meet technological changes or emergencies.

Qualifications : A good knowledge of the purpose, capabilities and procedures for setting up, making adjustments to and taking measurements with various surveying instruments; a good knowledge of Public Land Surveys procedures and techniques, principles and practices for conducting various surveys; a good knowledge of safety rules and regulations related to surveying; a working knowledge of the abbreviations and symbols commonly used in survey documents and notes; a working knowledge of algebra and plane, solid and analytic geometry and plane trigonometry as used to take known data and solve for unknown data; a working knowledge of the procedures for calculating curves, volumes, areas, traverses, corrections and adjustments;

ability to visualize spatial relationships; ability to apply and convert between various systems of measurement used in survey related data; and the ability to set up, adjust and take measurements with one of several types of theodolites commonly used in City surveying operations.

Requirements:

1. Graduation from a recognized college or university with a degree in engineering or surveying and one year of experience as a member of a field survey party or field crew; or
2. Four years of experience as a member of a field survey party in a class at the level of Field Engineering Aide; or
3. Two years of experience as a member of a field survey party in a class at the level of Field Engineering Aide and possession of a valid Land Surveyor in Training (LSIT) certificate issued by the State of California.
4. Satisfactory completion of eight courses in engineering and/or surveying may be substituted for one year of the experience in Requirements #2 or #3.

License : A valid California driver's license is required.

Physical Requirements : Strength to perform average lifting up to 35 pounds and occasionally over 70 pounds; body agility and equilibrium involved in activities such as climbing and balancing under precarious conditions; good speaking and hearing ability and good eyesight.

Persons with medical limitations may, with reasonable accommodations, be capable of performing the duties of some of the positions in this class. Such determination must be made on an individual basis in light of the person's limitations, the requirements of the position, and the appointing authority's ability to effect reasonable accommodations to the limitations.

As provided in Civil Service Commission Rule 2.5 and Section 4.55 of the Administrative Code, this specification is descriptive, explanatory and not restrictive. It is not intended to declare what the duties and responsibilities of any position shall be.