



## ASSISTANT CIVIL ENGINEER

### Definition

Under general supervision, to perform professional engineering duties in connection with the planning, design, construction and maintenance of highways, bridges, land development and other public works projects.

### Typical Tasks

- Performs drafting, computing, research report writing, checking of plans, direction of field operations involved in the gathering and compiling of data for the planning, design, and construction of a variety of projects;
- Assists in the planning for and design of new or, improvements to, existing roads, structures, land development and other projects by preparing plans, profiles, cross sections, making quantity estimates, computing stresses and strains, and performing other professional engineering tasks;
- May direct a survey party when assigned a project;
- Prepares and reviews maps, right of way deeds and legal descriptions;
- May inspect the construction of projects;
- May make field tests and samples for laboratory tests of materials;
- Writes engineering specifications;
- Makes economic cost and quantity estimates;
- Checks plans for engineering accuracy and adequacy;
- Performs related work as required.

### Employment Standards

Graduation from an accredited college or university with major work in civil engineering **or** possession of a valid Engineer-In-Training Certificate, **and** two years of experience in professional civil engineering.

### Knowledge of:

- The principles and practices of civil engineering;
  - Principles of engineering design as related to public works projects;
  - Engineering mathematics and its application to engineering problems, stress analysis, mechanics, and properties of materials;
  - Construction methods and equipment, and inspection needed to review such work;
  - Engineering economics and real property descriptions;
  - Civil engineering drafting and mapping.
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**Ability to:**

- Perform professional engineering work of average scope in the planning and design of public works projects, and in special engineering studies and review;
- Prepare neat and accurate maps, drawings, notes and reports;
- Make difficult mathematical calculations;
- Establish and maintain cooperative working relationships with those contacted in the course of work.