

*Code: 2312*

*Title: CIVIL ENGINEERING ASSISTANT*

**SUMMARY:** Performs pre-registration civil engineering work in the field and office.

**DUTIES/RESPONSIBILITIES:** (Work assignments may vary depending on the department's needs and will be communicated to the applicant or incumbent by the supervisor)

Prepares or reviews a wide variety of scale, detailed and contract drawings and designs from sketches, computations and field notes;  
Prepares or reviews drawings and plans of streets, highways, sewers, bridges and similar structures;  
Prepares or reviews detailed drawings of roadways, sidewalks, beams, columns, caissons and other facilities;  
Prepares or reviews layouts and plot contours, grades and cross-sections from field survey notes and draft-related contract plans;  
Conducts research and prepares or reviews designs pertaining to traffic engineering and transportation planning;  
Gathers and compiles data and prepares or reviews designs, plans, details, estimates, reports and specifications for the construction, alteration and maintenance of a variety of civil engineering projects;  
Prepares or reviews plans, profiles and cross-sections, makes quantity estimates, establishes tentative grade, computes stationing and traverses and checks plans for clearance with existing and proposed improvements and substructures in connection with street design;  
Reviews tentative line and grade, computes quantities, determines drainage area, computes run-off velocity and quantity of flow, designs/reviews catch basins following design standards and checks plans for clearance of substructures and existing or proposed improvements in connection with the design of storm drains and sanitary sewers;  
Prepares records and various reports required for engineering assignments;  
May lead the work of technical engineering personnel;  
May perform more difficult or complex materials testing and train others in testing procedures.

**KNOWLEDGE & SKILLS:**

Knowledge of:

- theory and practice of civil engineering planning, design, construction and surveying;
- materials testing in both field and laboratory.

Skills:

- use of surveying and drawing instruments and in the application of engineering theory to practical field and office problems;
- preparing and checking designs, details, estimates, plans and specifications of engineering projects.

**MINIMUM QUALIFICATIONS:**

**EITHER:**

(1) A Bachelor's degree from an accredited college or university with a major in civil engineering.

**OR:**

(2) Four years of pre-registration civil engineering experience.

(Certification as an Engineer-in-training in the State of Arizona may substitute for the aforementioned experience)

**OR:**

(3) A Bachelor's degree from an accredited college or university with a major in a related engineering field, such as, but not limited to: mechanical, electrical, or chemical engineering, or in a physical or biological science and one year of pre-registration civil engineering experience.

**OR:**

(4) Four years of experience with Pima County leading and participating in technical engineering work.

**OTHER REQUIREMENTS:**

Licenses and Certificates: A valid Arizona class D operator license may be required for some positions at the time of appointment.

Physical/Sensory Requirements: Physical and sensory abilities will be determined by position.

This class specification is intended to indicate the basic nature of positions allocated to the class and examples of typical duties that may be assigned. It does not imply that all positions within the class perform all of the duties listed, nor does it necessarily list all possible duties that may be assigned.

Pima County

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