

**COUNTY OF SOLANO**  
**CIVIL ENGINEER (ENTRY)**

**Rev. 04/06**

**DEFINITION**

Performs civil engineering work in development, design and construction of civil and/or traffic engineering projects.

**CLASS CHARACTERISTICS**

This is entry level within the professional Civil Engineer series level engineering using judgment and initiative to perform common engineering projects. The amount of supervision received and complexity of assigned projects varies with experience. As experience is acquired, the employee is expected to receive only occasional instruction or assistance as new or unusual situations arise. This class is distinguished from Civil Engineer by the performance of the more routine professional tasks and duties assigned to positions within this series. Positions assigned to this level are not expected to function at the same knowledge level and exercise less independent discretion and judgment in matters related to work procedures and methods.

**SUPERVISION RECEIVED AND EXERCISED**

Receives general supervision from the Engineering Services Supervisor.

May provide technical assistance to newly hired engineers and technical level engineering staff.

**EXAMPLES OF DUTIES** –*Duties may include but are not limited to the following:*

Designs or assists in the design of projects such as roads, drainage structures and buildings; prepares or assists in preparing construction plans, contract specifications and cost estimates, insuring conformity to state, federal and local requirements.

Inspects or assists in the inspection of construction of subdivisions, private roads and projects awarded to contractors or County crews.

Checks plans and design calculations for conformance to applicable codes, standards and engineering design principles; recommends acceptance or rejection of subdivision plans and confers with supervisors regarding County project plans.

Analyzes survey information for certain County, federal and state projects; prepares project proposals, specifications and instructions for project contractors.

Assists in and learns to apply principles of specialized professional engineering activity such as traffic, hydraulic and/or utilities design and construction.

Maintains professional knowledge in applicable areas and keeps abreast of changes in job-related rules, statutes, laws and new business trends; makes recommendations for the implementation of changes; reads and interprets professional literature; attends training programs, workshops and seminars as appropriate.

### **JOB RELATED AND ESSENTIAL QUALIFICATIONS**

#### **Knowledge of:**

Modern principles and practices in civil engineering and surveying.

Mathematics, physics and chemistry as applied to civil engineering.

Strength, properties and uses of engineering construction materials.

Practices, methods and equipment used in construction, hydraulics and hydrology.

Working knowledge of methods and procedures in describing real property.

#### **Skill to:**

Operate office equipment including a personal computer, copy and fax machines and printers.

Drive a motor vehicle.

#### **Ability to:**

Ability to prepare complete designs of or common road and flood control structures with skill and accuracy.

Do accurate drafting work from field notes and other data.

Multi-task a variety of assignments, ensuring that timelines are met.

Utilize computer aided drafting and engineering design software.

Perform work with increasing independence and judgment as experience is gained.

Draw detailed plans and write sections of specifications.

Inspect road, flood control and storm drainage, and related construction in the field and ability to prepare technical reports.

Develop and implement operational procedures.

Research regulations, procedures and/or technical reference materials.

## **EXPERIENCE AND EDUCATION/TRAINING**

### **Experience:**

No experience required.

### **Education/Training:**

Bachelor's degree from an accredited college or university in Civil Engineering is required.

## **SPECIAL REQUIREMENTS**

Possession of or ability to obtain a valid Class C California driver's license is required.

Possession of Engineer-in-Training Certification or a Registered Civil Engineer license in the State of California is required.

Incumbents of this class will demonstrate necessary knowledge and abilities to be promoted to Civil Engineer within 4 years.

**Incumbents shall obtain Registration as a Civil Engineer in the State of California within 4 years from the date of employment.**

## **SUPPLEMENTAL INFORMATION**

Independent travel is required.

The title of this class is used to promote consistency in the County Classification/Pay Plans; the concept of this class is a combination of what is known in the engineering profession as Junior Civil Engineer.

## **ADA COMPLIANCE**

**Physical Ability:** Tasks require the ability to exert moderate, though not constant physical effort, typically involving some combination of climbing and balancing, stooping, kneeling, crouching, and crawling, and which may involve some lifting, carrying, pushing and/or pulling of objects and materials of moderate weight (12-20 pounds).

**Sensory Requirements:** Requires the ability to recognize and identify similarities and differences

between shade, degree or value of colors, shapes, sounds, forms, textures or physical appearance associated with job-related objects, materials, tasks or people; some tasks require the ability to speak in a clear and audible manner.

**Environmental Factors:** Requires the ability to work under conditions where exposure to environmental factors poses a risk of minor injury or illness.

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**Yolanda Irigon**  
**Director of Human Resources**

**Established Date:** October 1986  
**CSC Date:** April 12, 2006  
**BOS Date:** June 30, 2003