

## CLASS SPECIFICATION



<b>CLASS:</b>	Associate Civil Engineer	<b>ESTABLISHED:</b>	Prior 1985
<b>ALLOCATION:</b>	Community Development & Services Agency	<b>REVISED:</b>	February 2011
<b>FLSA STATUS:</b>	Non-Exempt		
<b>UNION AFFILIATION:</b>	YCEA		

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### **JOB SUMMARY:**

Under general direction, perform professional engineer work and prepare civil design plans for various Public Works projects; independently conduct engineering feasibility cost, research and design studies and construction project work; analyses for varied department and agency projects and functions; signing off designs and as-built changes related to roads, bridges, culverts and other County infrastructure and perform related duties as assigned.

This is the advanced-journey level in the civil engineer series.

### **CLASS CHARACTERISTICS:**

This position reports directly to Assistant Public Works Director. This class is distinguished from Assistant Public Works Director in that the latter directs the day-to-day activities and operations of the Public Works Department and assists the Public Works Director with policy development, program and project planning and budget development and administration.

### **EXAMPLES OF DUTIES:**

#### **Essential:**

- Authorize specific engineering designs in area of professional expertise; review and accept plans and as-built changes required during construction.
- Review and check structural designs, calculations, contractors' shop drawings, and engineering drawings for construction, repair and maintenance projects; review proposed projects to ensure compliance with regulatory requirements.
- Design, prepare and evaluate preliminary and final plans and specifications for a variety of roads, bridges, public works, and County building and facility design, maintenance and retrofitting projects.
- Conduct research studies and prepare reports and recommendations regarding traffic, roadways, bridges, parks and other public facilities, and a variety of engineering-related community service needs.
- Perform field inspections and testing of various projects; coordinate activities with field staff, contractors and other agencies.
- Provide engineering design and code information; ensure that designs meet accepted industry and legal standards.
- Provide responsive, accurate, and high quality professional engineering consultation to other engineers, architects, contractors, other public agencies and other county departments to resolve problems and coordinate project activities; may represent the department to commissions, boards and regulatory agencies.
- Coordinate and perform traffic studies and topographic surveys; analyze survey reports, maps, drawings, blueprints, aerial photography, and other topographical or geological data to plan projects.
- Prepare or present public reports on topics such as bid proposals, engineering designs and technical reports, environmental impact statements, property and right-of-way descriptions, and various other department related activities.
- Prepare agreements and contracts for approval by department management.
- Procure appropriate permits, clearance and approval from other agencies; request proposals and prepare consultant agreements for special studies; direct staff members in preliminary engineering, construction inspection, and materials testing on construction jobs.
- Prepare engineering documents including, structural drawings, contract proposals, material lists, reinforcements, structural specifications, maps, plans, charts or diagrams for a wide variety of road, bridge, park and structures projects.
- Assist in developing and administering professional services or construction project contracts.
- Use computers and software programs for various technical modeling, calculation, database, mapping, computer-aided drafting and similar engineering applications.
- Perform complex engineering activities and calculations related to design, construction and project

management, including reports, records and correspondence.

- Act as engineering project manager; direct project inspections and monitor progress; coordinate project activities and mediate problems.
- Prepare or oversee the preparation of a variety of engineering and administrative reports, including analytical reports, computations, texts, graphical data presentations, drawings, conclusions, recommendations and correspondence; direct the preparation of and prepare maps, plans and graphic materials.
- Select and use computer software to develop engineering and mathematical analysis of design problems in hydraulics and hydrology, drainage and control facilities, earthwork and grading, highway and bridge design, traffic control and operations.

**Important:**

- Comply with all County equipment and safety policies and procedures, and California Occupational Safety and Health Administration (CalOSHA) rules and regulations.
- May direct the work of professional and paraprofessional staff in the planning, design, surveying and construction of assigned public works projects, including roads, bridges, parks, rights of way, drainage systems, traffic signals and related structures.
- Use standard office equipment, including a computer, in the course of the work.
- Drive a motor vehicle to attend meetings and inspect project sites.

**EMPLOYMENT STANDARDS:**

**Knowledge of:**

- Engineering objectives, principles, procedures, standards, practices and information sources.
- Statistical analysis and mathematical concepts related to the engineering process.
- Construction materials and equipment used in the building of highways, drainage and control facilities, and other structures.
- Road, bridge, facility, building and public works projects design, maintenance and construction principles.
- Traffic control and operations.
- Principles and practices of materials and soils analysis and materials testing.
- Safety principles and practices related to the work, including Occupational Safety and Health rules and regulations.
- Applicable laws, codes, and regulations such as State, Federal and local statutes, ordinances, policies, standards, and practices pertaining to civil engineering.
- County ordinances related to grading, drainage, street improvements, subdivisions, and land use regulations.
- Storm water pollution prevention best management practices.
- Basic surveying principles and practices.
- Project design; management principles and techniques.
- Terminology, symbols, methods, techniques and instruments used in engineering graphics and drafting.
- Computer software applications, including word processing, spreadsheets, AutoCad, graphics, databases and project scheduling and management.
- Techniques for working successfully with other employees in a lead capacity.
- Principles and practices of technical and functional supervision and training.
- Record-keeping principles and practices.

**Skill in:**

- Researching, analyzing and summarizing engineering data both manually and with computer applications.
- Applying modern engineering techniques to solve a variety of engineering problems.
- Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Interpreting maps, plans and specifications, graphs and statistical data.
- Making complex engineering calculations quickly and accurately.
- Understanding and applying federal, state and local laws, regulations, policies, procedures and standards pertaining to engineering and construction.
- Performing technical, detailed engineering design, computer modeling and related project development.
- Serving as the on-site project administrator for a variety of engineering field projects.

- Evaluating the work of contractors and consultants for compliance with project plans, specifications and applicable laws, ordinances and policies.
- Assessing, prioritizing multiple tasks, projects and demands.
- Data collection and analysis; and conducting impact analysis and making appropriate recommendations.
- Preparing clear, concise and complete technical documents, reports, correspondence and other written materials.
- Exercising sound independent judgment within established procedural guidelines.
- Working without close supervision in standard work situations.
- Representing the County or agency effectively in meetings with developers, contractors, representatives of business, community and professional groups and the public.
- Dealing successfully with a variety of individuals from various socioeconomic, ethnic and cultural backgrounds.
- Effectively using tact, patience, courtesy, discretion and prudence in dealing with those contacted in the course of the work.
- Planning, directing and reviewing the work of others on a project or day-to-day basis.

**Ability to:**

- Give full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate and not interrupting at inappropriate times.
- Analyze and interpret complex data and reports and reach sound conclusions.
- Deal tactfully and effectively with the public, regulatory agencies and policy-making bodies, developers, engineering firms and contractors, and others contacted in the course of the work.
- On a continuous basis, know and understand all aspects of the job; intermittently analyze work papers, reports and special projects; identify and interpret technical and numerical information; observe and problem solve operational situations, technical policies and procedures.
- Organize, plan and prioritize work, developing specific goals and plans to accomplish your work in a timely manner as established by regulations and local policy.
- Pay attention to detail and be thorough in completing work tasks.
- Communicate clearly and concisely, both orally and in writing.

**Physical Demands:** The physical demands and work environment described here are representative of those that must be met by an employee to successfully perform the essential function of the job, with or without accommodation. Prospective employees must complete a pre-employment medical exam (Occupational Group IV) which will measure the ability to:

- See well enough to read fine print and view a computer screen for prolonged periods of time; speak and hear well enough to understand, respond, and communicate clearly in person and on the telephone; independent body mobility sufficient to stand, sit, walk, stoop and bend to access the work environment and a standard office environment; manual dexterity and sufficient use of hands, arms and shoulders to repetitively operate a keyboard and to write; and the ability to sit or walk for prolonged periods of time.
- Mobility to work in a typical office setting, use standard office equipment, and to inspect construction sites involving trenches, embankments and uneven terrain.
- Drive a motor vehicle in order to attend meetings and inspection sites.

Accommodation may be made for some of these physical demands for otherwise qualified individuals who require and request such accommodation.

**Work Environment:**

- Generally a typical office environment.
- Work with exposure to potential hazards at various construction sites.
- May be exposed to dangerous machinery, potential physical harm, hazardous chemicals, and extreme weather conditions.

**QUALIFICATIONS:**

The minimum and preferred requirements are listed below. While the following requirements outline the minimum qualifications, Human Resources reserves the right to select applicants for further consideration who demonstrate the best qualifications match for the job. Meeting the minimum qualifications does not guarantee further participation in selection procedures.

**Licenses and Certification:**

- The ability to obtain a valid California Class C driver’s license within ten (10) days of employment; maintain valid California Class C driver’s license.
- Possess registration as a Civil Engineer in the State of California.

**Special Requirements:**

- Must successfully complete an extensive and thorough background investigation which includes Live Scan fingerprinting prior to hire.
- Must file statements of economic interest with the Yuba County Clerk/Recorder.
- Will be required to perform disaster service activities pursuant to Government Code 3100-3109.

**Education and Experience:**

**MINIMUM:** Bachelor’s degree from an accredited college or university in Civil Engineering, Surveying or a closely related field and two years professional engineering experience.

**PREFERRED:** In addition to the minimum, a Master’s degree in Civil Engineering and three years of civil engineering experience in a public agency setting.

**This class specification lists the major duties and requirements of the job. Incumbent may be expected to perform job-related duties other than those contained in this document.**

Public Works Approval: Mike Lee  
Date:

EEOC: B  
WC: 9410

Human Resources Approval: Iva Seaberg  
Date:

Signature: \_\_\_\_\_

Signature: \_\_\_\_\_