

## **Job Description Engineering Technician**

**Job No. OP007**

**Salary Range: 41 Non-Exempt**

**Position Summary:**

Under direction of the Engineering Manager, the Engineering Technician is responsible to perform difficult and complex technical engineering support work in the design and construction of Agency structures and facilities; review consultant design plans, drawings and specifications; perform drafting, software management, and inspection for Agency projects; and perform related duties as assigned.

**Duties/Responsibilities:**

Typical duties include, but are not limited to the following:

- Prepare and review technical designs, maps, drawings, visual aids, and graphic presentation materials related to Agency facilities and projects.
- Performs reviews of completed design and drafting assignments for conformance with Agency guidelines and standards.
- Reviews and checks plans and specifications submitted by consultants for Agency design projects for conformance with Agency standards.
- Uses a variety of technical engineering software including computer aided design/drafting (CADD), produce and maintain maps via geographic information systems (GIS; maintain and make adjustments to the Agency's hydraulic model.
- Maintains, updates, upgrades, and supports the Agency's Geographic Information System(GIS) components and all related software management requirements.
- Attends engineering meetings and conferences.
- Uses basic engineering design concepts and drafting techniques.
- Prepares preliminary design and complete engineering construction drawings, including plans, profiles, elevations, contours, cross-sections, and detailed working drawings, maps and specifications for facilities.
- Prepares cost estimates and bid packages for capital improvement and construction projects and responds to inquiries.
- Performs fieldwork necessary to locate and plot service lines and facilities.
- Review completed projects and recommend the filing of completion notices.
- Performs calculations and plots profiles and topography for assigned projects.
- Plots easements for Agency rights of way.
- Transforms field and survey data into design elements.
- Identifies design problems and develops proposed resolutions.
- Assist in preparation in environmental CEQA documents for regulatory compliance and other various engineering reports.

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- Prepares reports and correspondence to consultants, surveyors, contractors, other utilities and agencies.
- Performs related duties as assigned.

**Qualifications:**

Any combination of education and experience that would likely provide the necessary knowledge and abilities is qualifying.

A typical way to obtain the knowledge and abilities would be:

Education:

Equivalent to a bachelor's degree from an accredited college with major course work in civil or mechanical engineering.

Experience:

A minimum of two years of experience in design, construction and operation of domestic/agricultural water systems.

Licensure/Certification:

Possession of a valid California driver's license is required.

Engineer-in-Training Certificate issued by the State of California, preferable.

**Knowledge of:**

- Engineering principles, practices, and methods.
- Hydraulics, hydrology, chemistry and thermodynamics.
- Construction practices, trades and materials.
- Project management and coordination.
- Contract administration practices and principles.
- Methods and techniques used in design and construction for planning, design, cost estimation, construction, installation, and inspection of wastewater collection, distribution, and treatment facilities.
- Federal, State, and local laws and regulations related to CEQA, water system design, construction, and plant operations.
- Engineering mathematics, economics, and statistical analysis.
- Safety standards and practices.
- Technical report writing.
- AutoCAD software and drafting media.
- Survey principles and practices.
- Principles, methods, instruments, and techniques used in engineering drafting.

**Ability to:**

- Establish and maintain cooperative working relationships with employees, other managers, the public, developers, other agencies, consultants and contractors.
- Interpret, implement and enforce Agency water and other state and local regulations.
- Prepare clear and concise engineering plans, technical reports, correspondence, presentations, and other administrative documents.
- Perform applicable engineering calculations accurately and rapidly.
- Manage projects through design and construction.
- Check plans and drawings for conformance with Agency specifications and standards.
- Provide clear verbal communications and make formal group/public presentations.
- Analyze engineering and operations problems, evaluate alternatives and provide options and recommendations that demonstrates technical, administrative and political considerations.
- Use a variety of software applications related to the occupation, including AutoCAD and Geographic Information System (GIS).
- Perform complex and precise drafting and mapping work.

**Physical Requirements:**

On a daily basis this position is required to walk, sit for extended periods, talk, hear, see both close and far and distinguish basic colors, and operate moving equipment.

The employee is regularly required to use hands to finger, handle, feel or operate objects, tools or controls; perform repetitive movements with hands, wrists or feet; and reach with hands and arms.

On a frequent basis, this position is required to stoop, kneel, crouch, reach with hands and arms, stand for long periods, and use fingers to grasp, or type. Work may be performed on slippery or uneven surfaces, or on ladders or scaffolding.

Employee must have the ability to wear a tight-fitting respirator. In accordance with Cal/OSHA regulations, when respirator use is required, employees are prohibited from having facial hair that comes between the sealing surface of the face-piece and the face or any condition that interferes with the face-piece seal or valve function.

This position is required to lift and carry 50 to 100 pounds, and to push or pull 30 pounds on an occasional basis.

This position is regularly exposed to wet, humid conditions, fumes, airborne particles and toxic or caustic chemicals, outdoor weather conditions, including extreme heat and cold, risk of electrical shock and radiation, and heavy vibration and loud or prolonged noise levels. The employee regularly works near moving mechanical equipment and heavy traffic, on ladders/scaffolding or in high, precarious places, and in confined spaces.