

SENIOR ENGINEER

DEFINITION

Under general direction, assumes responsibility for professional engineering activities related to the planning, design, construction, and commissioning of water and wastewater capital improvement projects and/or private development projects; manages capital projects and/or development projects through all phases of the project management life cycle and/or manages wastewater systems engineering and compliance programs; researches complex engineering problems, conducts technical studies, and recommends operational, compliance, and/or policy solutions; plans, schedules, assigns, reviews, and supervises the work of staff engaged in engineering activities; ensures assigned projects and programs comply with applicable codes and regulations and District policies, procedures, and standards; and performs related duties as assigned.

SUPERVISION RECEIVED AND EXERCISED

Receives general direction assigned management personnel. Exercises direct supervision over professional and technical staff.

CLASS CHARACTERISTICS

This is the advanced journey-level classification in the Engineer series responsible for supervising assigned staff and performing the most complex work in assigned area of responsibility. Incumbents regularly work on tasks which are varied and complex, requiring considerable discretion and independent judgment. Positions rely on experience and judgment to perform complex engineering and project/program management functions. Completed work is reviewed only from an overall standpoint in terms of feasibility, compatibility with other work, or effectiveness in meeting requirements or expected results. This class is distinguished from the Principal Civil Engineer in that the latter is responsible for managing the most complex engineering projects and programs, including large infrastructure projects with multiple sub-projects and/or multi-disciplinary programs, and serving as an expert internal consultant to management in assigned area(s) of responsibility.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the typical functions of the job.

- Manages assigned capital improvement projects or development projects through all phases including planning, design, construction and implementation, and close-out; leads project teams, consultants, and/or contractors in the execution of projects; develops or reviews and approves work plans including, scope of work, budget, schedules, legal documents, and baseline and/or service requirements; ensures project compliance with District safety requirements.
- Directs and oversees the procurement process of contractors and consultants; prepares Invitation for Bid, Requests for Proposals, bid analysis, and evaluation documents; reviews proposals and provides recommendations for selection; verifies compliance with applicable codes, regulations, and/or funding agreements; prepares, negotiates, and manages contracts; directs, reviews, and reports on the work performed by consultants and/or contractors.

- Develops and monitors project budgets and schedules; reviews invoices to ensure compliance with contract and scope of work; manages requests for changes in scope of work for design; prepares contract addendums when needed; oversees the issuance and collection of capacity fees, reimbursements and credits.
- Oversees the review of, comments on, and approves engineering studies and analyses, plans, specifications, technical memorandums, and/or reports submitted for correct concept, engineering principles, and economic design for capital improvement or private development projects; reviews construction phase submittals; provides comments and makes corrections to drawings; reviews and approves project alternatives considering financial, operational, maintenance, property/right-of-way, and constructability factors; communicates with contractors and responds to requests for information.
- Oversees and conducts engineering studies, investigations, and analyses; researches, collects, and analyzes engineering data and evaluates results to determine project-specific facility requirements and parameters; prepares various engineering and/or compliance reports and engineering designs, specifications, drawings, sketches, and other supporting documentation for assigned projects/programs.
- Reviews plants, pump stations, and collection system processes; coordinates operational and/or maintenance activities to optimize water and wastewater systems processes; inspects, diagnoses, and develops corrective action plans to address operation and maintenance problems.
- Coordinates regulatory, environmental, and/or construction permit and right-of-way activities and processes with other District staff and outside agencies.
- Assumes responsibility for ensuring operational and administrative completion before the transferring of projects from the construction phase to operation and maintenance status; participates in examinations and field reviews of existing features with Operations and Maintenance; advises management on design deficiencies noted during both construction and operation phases and makes design recommendations.
- Ensures established District standards, policies, and procedures, and engineering best practices are consistently applied; analyzes, interprets, and explains regulations and policies related to area(s) of assignment; researches and tracks legislative and regulatory developments; recommends, and upon approval, implements operational, compliance, and/or policy solutions.
- Provides leadership and guidance to others on assigned programs and/or projects; as a program and/or project leader, may direct, assign, train, supervise, and evaluate the work of assigned staff, including inspection staff and contractors; determines work priorities; oversees quality and quantity of work performed and ensures adherence to established procedures by instructing employees accordingly; is a resource to employees by possessing specialized skills; and develops and implements work improvements.
- Represents the District to regulatory agencies, the public, community interest groups, and contractors or consultants; attends and leads a variety of meetings; represents the District at meetings and participates on a variety of committees; prepares and provides information for meetings including agendas, minutes, Board reports, presentations, and exhibits.
- Reviews District documents on a regular basis to simplify and modify documents including standard design criteria, standard specifications, standard drawings, and standard contract documents.
- Responds to technical customer service issues in person or on the telephone; explains projects and procedures, interprets codes, and coordinates with outside agencies, contractors, consultants, committees, and others.
- Performs related duties as assigned.

QUALIFICATIONS

Knowledge of:

- Applicable federal, state, and local laws, codes, and ordinances relevant to the area(s) of responsibility.
- Advanced principles and practices of civil engineering with emphasis on the design and construction of water and wastewater facilities.
- Principles and practices of project and construction management including budget and contract management.
- Principles and techniques of conducting complex engineering studies, evaluating alternatives, making sound recommendations, and preparing and presenting effective and technical engineering and regulatory reports.
- Advanced principles and practices of process, mechanical, electrical, control, and instrumentation design and construction in water and wastewater facilities.
- Principles of engineering economics and their practical application to construction, water supply, and wastewater and/or water treatment projects.
- Operations and regulatory requirements of water and wastewater management systems.
- Principles and practices of employee supervision, including work planning, assignment, review and evaluation, discipline, and the training of staff in work procedures.
- Principles and techniques for working with groups and fostering effective team interaction to ensure teamwork is conducted smoothly.
- Recent developments, current literature, and sources of information related to innovation and trends in civil engineering and design, construction, and maintenance of water and wastewater facilities.
- Principles and practices of business correspondence and technical report preparation.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.
- The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.
- Modern equipment and communication tools used for business functions and program, project, and task coordination, including computers and software programs relevant to work performed.

Ability to:

- Manage assigned engineering projects with internal and external agencies and individuals.
- Supervise and perform a variety of professional-level engineering work in the planning, design, and construction of capital improvement and development projects.
- Develop and implement work plans and effectively manage engineering projects, project teams, and consultants/contractors.
- Gather, analyze, and compile data and prepare a variety of designs, plans, details, estimates, and specifications for construction, operation, and maintenance of capital improvement and/or development projects.
- Plan and conduct effective engineering analyses, modeling, and studies.
- Identify problems, research and analyze relevant information, and develop and present recommendations and justification for solutions.
- Understand, interpret, and apply all pertinent laws, codes, regulations, policies and procedures, and standards relevant to work performed.
- Prepare clear, concise, and accurate reports, contracts, drawings, maps, notes, correspondence, and other written materials.

- Effectively represent the District in meetings with governmental agencies, community groups, and various businesses, professional, and regulatory organizations, and in meetings with individuals.
- Make accurate mathematical and statistical computations.
- Establish and maintain a variety of filing, record keeping, and tracking systems.
- Independently organize work, set priorities, meet critical deadlines and follow-up on assignments.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural guidelines.
- Effectively use computer systems, software applications relevant to work performed, and modern business equipment to perform a variety of work tasks.
- Communicate clearly and concisely, both orally and in writing, using appropriate English grammar and syntax.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Education:

Equivalent to a bachelor's degree from an accredited college or university in civil, mechanical, or environmental engineering or a related field.

Experience:

- Five (5) years of increasingly responsible and diversified engineering experience including water and wastewater planning, water and sewer utility engineering design and construction, and project management experience.

Licenses and Certifications:

- Possession of a valid California Class C driver's license, to be maintained throughout employment.
- Possession of a valid Registration as a Professional Engineer (P.E.) in the State of California.

PHYSICAL DEMANDS AND WORKING ENVIRONMENT

The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.

ENVIRONMENT

Standard office setting; some exposure to temperature variations, noise, fumes, toxic agents, dust, and traffic hazards may occur while at construction sites.

PHYSICAL

- Level One

Incumbents require sufficient mobility to work in an office setting; stand or sit for prolonged periods of time; push, pull, lift, and/or carry light amounts of weight; bend, stoop, and kneel; operate office equipment including use of a computer keyboard; ability to verbally communicate to exchange information.

VISION

See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents; and to operate assigned equipment.

HEARING

Hear in the normal audio range with or without correction.