SOUTH COAST WATER DISTRICT

PRINCIPAL ENGINEER - WATER SYSTEM (EX. C)

DEFINITION

This position is located in the Engineering Department and will serve as the Principal Engineer responsible for planning, design, and construction of the potable water system, including seawater/brackish water desalination and other potable water treatment projects. The incumbent confers with consultants, developers, contractors and representatives of other agencies regarding infrastructure development; administers professional services and construction contracts; provides professional assistance to the Chief Engineer; performs a variety of studies and prepares and presents staff reports; signs drawings, submits reports and performs similar work within state guidelines; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

This position reports to the Chief Engineer. May exercise general and/or direct supervision over assigned staff, including Senior Civil Engineers.

CLASS CHARACTERISTICS

This is an executive level, non-merit system, contract position. The title is Principal Engineer – Water System. This is the highest-level class in the professional engineering series with supervisory responsibility for an entire system in the engineering department, i.e., Potable Water System. Incumbents perform the most complex professional and technical work in water system planning and preparation of plans, specifications, designs, estimates, schedules, inspections and project management activities for construction or maintenance programs for Water Systems. This class is distinguished from the Chief Engineer in that the latter has overall responsibility for the Engineering Department in addition to handling the most complex and sensitive engineering projects. This class is distinguished from the Senior Civil Engineer position in that a Principal Engineer is responsible for an entire system, such as the Water System (absent the Joint Regional Water Supply System), and may supervise Senior Civil Engineers. The incumbent may also be assigned projects and duties in addition to the Water System to level workload within the Engineering Department as assigned and at the total discretion of the Chief Engineer.

The incumbent ensures that her/his activities are aligned with and support the South Coast Water District’s policies, mission, vision, core values, core strategies, and annual action items as well as performance measures.

EXAMPLES OF ESSENTIAL JOB FUNCTIONS

Duties may include, but are not limited to, the following:

- Manages, develops, and completes a wide variety of engineering projects and programs involving the Water System, among others.
- Participates in District long- and short-range capital improvement and preventive maintenance activities for the Water System. Works in collaboration with the Operations Superintendent, Water Production Manager, other Principal Engineers, and other District personnel in preparing the annual and long-term District Capital Improvement Program.
- Examines public and private engineering plans, subdivision maps, specifications, designs, cost estimates and legal descriptions for a variety of construction and maintenance and/or private development projects to ensure compliance with District engineering standards and specifications.
Review developer environmental documents and studies to ensure District’s regulations are clarified and understood.

Coordinates the acquisition of public right of ways for Water System capital improvement projects.

Overssees the Engineering Department’s review, processing, and approval of Water System land development projects and applications, including analysis that adequate water is available for new or redeveloped areas, preparation of engineering conditions of approval, plan checking, preparation of development agreements, review and approval of Water System plans as submitted by developers, computation and collection of fees, and coordination of developer reimbursements.

Performs engineering work for the more complex designs of Water System construction projects.

Performs or oversees complex Water System construction inspections to confirm contractual compliance with engineering and construction standards.

Supervises revisions and updates of all Water System maps utilizing record drawings on new projects and other sources.

Performs project management and administration of consultant and in-house capital improvement and other special projects; meets and confers with contractors, engineers, developers, architects, a variety of outside agencies, and the general public on development issues and acquiring information; ensures contractor compliance with District standards and specifications, time and budget estimates; analyzes and resolves complex problems that may arise; recommends and approves field changes.

Prepares punch lists and accurate “record drawings;” inspects the need for, prepares, and submits supportive data for change orders and progress payments with supervisor approval.

Assists in the development and implementation of goals, objectives, policies, standards and priorities within the Engineering Department.

Serves as subject matter expert in the District Water Systems for system hydraulic modeling and updating Infrastructure Master Plans, including management of the hydraulic model to simulate field conditions and identify further Water System improvements.

Overssees the planning, developing, implementing, and maintaining a computerized asset management program for the Water System.

Confers with property owners, developers, engineers, contractors, architects, and the general public concerning interpretation and application Engineering Department rules and procedures.

Overssees analysis of the District’s water supply and demand, projection of future demand and supply, analysis of impact of other agencies actions on the District’s water supply, and development of water supply projects.

Plans and oversees development of water supply plans including Urban Water Management Plans, Water Supply Assessments, and Water Supply Verification studies as required by the state.

Makes presentations to the public, Board of Directors and various other commissions.

Supervises the preparation and maintenance of Engineering Department Water System records, plans, maps, files and related materials.

Interprets and administers applicable ordinances relating to project requirements, prepares engineering reports, legal descriptions and project related correspondence, acts as project engineer when dealing with other departments, other jurisdictions and agencies and responds personally or in writing to questions related to projects and engineering policy.

Prepares contract specifications and requests for proposals for capital improvement projects; submits projects for competitive bids; analyzes bids and makes recommendations for acceptance.

Represents the Engineering Department at various City, County, and State commissions, boards, committees, and organizations on engineering matters, as directed.

Assists with the preparation of Water System infrastructure grant applications, and other special funding sources, and the implementation and administration of said grants, as directed.

Maintains and directs the maintenance of working and departmental automated and manual files.

Monitors changes in laws, regulations and technology that may affect departmental operations; implements policy and procedural changes after approval.

Performs related duties as assigned.
QUALIFICATIONS

Knowledge of:

- Principles, practices, procedures, and standards of civil engineering design and construction related to District projects and infrastructure development and maintenance.
- Principles of supervision, training, and performance evaluation.
- General design principles and construction techniques for the design and construction of various utilities projects, such as water and traffic control devices.
- Various municipal and engineering codes, manuals, and standards as well as Federal and State laws and programs related to the areas of work assignments.
- Principles and practices of complex project management and evaluation, including goal setting and the development of objectives, work planning and organization.
- Principles and practices of capital improvement cost estimation and contract administration.
- Computer applications related to the work, including computer-aided drafting concepts and applications.
- Recent developments, current literature and informational resources regarding municipal development and capital improvement projects.
- Procedures necessary in applying for regional, state, and federal grants.
- Complex construction project budgetary principles and practices.
- Practices of researching engineering and design issues, evaluating alternatives, making sound recommendations and preparing and presenting effective staff reports.
- Techniques for effectively representing the District in contacts with governmental agencies, community groups, various business, professional, educational and regulatory organizations and with property owners, developers, contractors and the public.
- Techniques for dealing effectively with the public, vendors, contractors and District staff, in person and over the telephone.
- Techniques for providing a high level of customer service to public and District staff, in person, and over the telephone.

Ability to:

- Make complex engineering computations and check, design and supervise the construction of a wide variety of water system projects.
- Research, design, prepare and evaluate plans, subdivision maps and specifications for accuracy and conformance with accepted engineering standards, compliance with appropriate laws, codes, regulations, and community needs.
- Examine public and private engineering plans, specifications, designs, cost estimates and legal descriptions for a variety of construction and maintenance projects.
- Develop and administer contracts for professional services and construction in a public agency setting.
- Conduct complex civil engineering research projects, evaluate alternatives, make sound recommendations and prepare effective technical staff reports.
- Manage capital improvement projects, contracts for water services and environmental studies.
- Interpret, apply, and explain complex laws, codes, regulations and ordinances.
- Effectively represent the department and the District in meetings with governmental agencies, community groups, various business, professional, and regulatory organizations and individuals.
- Direct and review the work of support staff on a project or day-to-day basis.
- Instruct staff in work procedures.
- Prepare clear and concise reports, correspondence, policies, procedures and other written materials.
- Make effective public presentations and conduct meetings.
- Maintain accurate records and files.
- Operate modern office equipment including computer equipment and specialized software applications programs.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.
- Establish and maintain effective working relationships with those contacted in the course of the work.

REQUIRED EXPERIENCE AND TRAINING: Ten (10) years of professional experience in design and construction and management of civil engineering projects, including three (3) years supervisory experience. A Bachelor’s of Science degree in Civil Engineering from an accredited college or university.

ADDITIONAL REQUIREMENTS: A current Professional Civil Engineer license from the State of California. Valid California class C driver’s license with satisfactory driving record.

PREFERENCES: Master’s of Science degree in civil engineering or related field. Possess a Certification in Project Management from the PMI or equivalent.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer; to inspect District development sites, to operate a motor vehicle and to visit various District and meeting sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person, before groups and over the telephone. This is partially a sedentary office classification; the job also involves field inspection work requiring frequent walking at inspection site areas to monitor performance and to identify problems or hazards; standing in work areas and walking between work areas may be required. Finger dexterity is needed to access, enter and retrieve data using a computer keyboard, typewriter keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 25 pounds.

ENVIRONMENTAL ELEMENTS

Employees partially work in an office environment with moderate noise levels and controlled temperature conditions, and partially in the field and may occasionally be exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, confining workspace, chemicals, mechanical and/or electrical hazards, and hazardous physical substances and fumes. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.

The specific statements shown in each section of this classification description are not intended to be all-inclusive. They represent the essential functions and minimum qualifications necessary to successfully perform the assigned functions. 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 essential functions of the job.