

CARMICHAEL WATER DISTRICT
Classification Specification

Job Class: Engineer Series (Assistant Engineer, Associate Civil Engineer, & Senior Civil Engineer)
FLSA Status: Engineer in Training: Non-Exempt
Assistant Engineer: Non-Exempt
Associate Civil Engineer: Exempt
Senior Civil Engineer: Exempt
Supervisor: Engineering Manager
Effective Date: November 15, 2022

Description

Under supervision, Engineers perform a variety of difficult and complex engineering work related to location, design, inspection and construction of District infrastructure and facilities functions and programs of the District.

Distinguishing Characteristics

Engineer in Training: This is the entry level class in the Engineer Series. Engineers at this level are required to be knowledgeable of engineering principles and procedures related to the assigned areas of responsibility and perform a full range of duties under supervision. Distinguished from other classes within the series by the possession of required education, certification, and by the knowledge and ability to perform the full range of duties assigned.

Assistant Engineer: This is the mid-level class in the Engineer Series. Engineers at this level are required to be fully trained and knowledgeable in all procedures related to assigned areas of responsibility and perform a full range of duties at a high level of independence. Distinguished from other classes within the series by the possession of required education, certification, and by the knowledge and ability to perform the full range of duties assigned. May exercise project/assignment related supervision of technical, and clerical personnel assignment responsibilities.

Associate Civil Engineer: This is the journey level class in the Engineer Series. Engineers at this level are required to be highly trained and knowledgeable in all procedures related to assigned areas of responsibility and perform a full range of duties at a high level of independence. Distinguished from other classes within the series by the possession of required education, Professional Engineer certification, complexity of duties assigned, and by the knowledge and ability to perform the full range of duties at an advanced and independent level. May exercise direct supervision over technical, and clerical personnel.

Senior Civil Engineer: This is the senior level class in the Engineer Series. Engineers at this level are required to be professionally trained and knowledgeable in all procedures related to assigned areas of responsibility and perform a full range of duties. Distinguished from other classes within the series by the possession of required education, professional certification, complexity of duties assigned, and five years' experience at the Associate Civil Engineer level or equivalent experience. This level recognizes positions that provide direct supervision to employees within a work section and/or assumes substantive and significant programmatic responsibility in a defined area or specialty. This job class also provides high level engineering support to the assigned Department. Exercises direct supervision over supervisory, professional, technical, and clerical personnel.

Engineers may be advanced provided they meet the required education, experience, and minimum qualifications for the job class as described in the Engineer Series job description.

Supervision Received and Exercised

Engineer in Training: Receives immediate supervision from the Engineering Manager or District designated representative and may receive technical and functional direction from other journey or senior level staff.

Assistant Engineer: Receives immediate supervision from the Engineering Manager or District designated representative and may receive technical and functional direction from other journey or senior level staff. If authorized by direct supervisor, may exercise project/assignment related direction over less knowledgeable or experienced departmental staff.

Associate Civil Engineer: Receives immediate supervision from the Engineering Manager or District designated representative and may receive technical and functional direction from other senior or management level staff. May exercise technical and functional direction over less knowledgeable or experienced departmental staff.

Senior Civil Engineer: Receives immediate supervision from the Engineering Manager or District designated representative and may receive direction from other management staff. Exercises technical and functional direction over less knowledgeable or experienced departmental staff.

Essential Duties and Responsibilities

The following duties are typical for this classification. Depending upon the assignment, the employee may not perform all of the listed duties and/or may be required to perform additional or different duties from those set forth below to address business needs and changing business practices. Management retains the right to add, remove, or change duties at any time.

Organize and prioritize assigned workload in order to complete assigned activities and projects.

Operation and Maintenance of Engineering Programs (Department): Oversee and/or perform departmental activities including but not limited to the following.

District Projects:

- Perform technical and/or professional engineering work including planning, designing, and implementing measures specific to the District's capital improvement program.
- Review and prepare revisions to construction plans submitted by consulting engineers for District infrastructure, facilities, and other capital improvement projects (i.e.: pipelines, groundwater and surface water production and treatment facilities and District office and corporation yard facilities).
- Responsible for construction inspection of assigned District capital improvement projects (i.e.: methods, materials, workmanship, compliance with plans and specifications, etc.).
- Develop and recommend revisions to plans and specifications to meet field conditions for projects under construction.
- Coordinate County review of District projects and plans and obtain necessary permits.
- Review, approve, and record easement documents submitted by outside parties.
- Perform project and construction management.

New Construction:

- Review, process, and approve plans and maps (District's plan check and review process) for public and private development and infrastructure projects (i.e.: Sacramento County projects, developers, new construction, demo, remodel, etc.).
- Prepare statements and oversee collection of fees associated with construction of private developments.
- Monitor and oversee new construction activity for compliance with approved plans, specifications and standards.
- Update and manage the Districts GIS and hydraulic models.

Operations:

- Manage outside vendors/consultants for department business operations
- Prepare correspondence related to department functions.
- Coordinate, attend, and participate in project meetings.
- Analyze information and evaluate results to choose the best solution and solve problems.
- Direct or participate in surveying to lay out installations and establish reference points, grades, and elevations to guide construction.
- Read and interpret specifications, bid documents, contract and program documents.
- Analyze survey reports, maps, drawings, blueprints, aerial photography, and other topographical or geologic data to plan projects.
- Coordinate data gathering inspections and provide assistance to other District personnel.

- Prepare, process and maintain regular departmental activity (i.e.: daily, weekly, monthly, quarterly, annually, etc.) and departmental records and database.
- Ensure all work performed is completed to District standards.

Planning:

- Achieve efficiency through proper planning, organization, scheduling, and direction of program activities, resources, and projects.
- Evaluate and recommend improvements to increase efficiency.
- Prepare complex engineering studies, technical reports, documents, and correspondence.
- Coordinate projects with other District departments, outside agencies, consultants, and developers.
- Develop and draft improvement plans, standards, technical specification and contracts for District capital improvement projects.
- Participate in development of Master Plan updates.
- Research, collect, organize and analyze data.

Staffing and Training:

- Attend, support and participate in training, meetings, seminars, demonstrations, events and conventions as required.
- Participate in committees and regional groups (i.e.: Safety or Star Committee, JPIA, etc.).

Policy:

- Comply with all District policies and procedures (i.e.: Policy Manual, Rules and Regulations Manual, Emergency Response Plan, IIPP, etc.).

Compliance:

- Participate and comply with safety programs and procedures for employees.
- Monitor local, state and federal construction and safety regulations to ensure compliance.
- Comply with District, local, state and federal regulations; and prepare a variety of related reports.
- Complete data requests, regulatory filings, and annual reports as required.
- Perform quality control on daily paperwork, reports (i.e.: monthly, quarterly, annually, etc.) and departmental records and database to ensure compliance.
- Work with consultants on any regulatory/compliance requirements, documents, and reports.
- Maintain accurate records and files.

Programs, Projects and Bids:

- Prepare necessary reports, RFPs, bids, and specifications for new equipment, materials, contracts, services, and assigned projects.
- Participate in development, preparation, review and distribution of construction bid documents and bid process.
- Document and maintain complete and accurate process, procedures, files and records for all projects and programs.
- Prepare and maintain department files (i.e.: construction projects, programs, grants, agreements and contracts).

Budget:

- Participate in the development and administration of annual and long-term capital improvement budget.
- Authorize project payments according to contract terms and conditions.
- Prepare preliminary and final quantity and cost estimates.
- Develop reports on issues related to completion of projects within time and cost requirements.

Customer Service:

- Investigate departmental calls, complaints and claims and take necessary corrective action.
- Provide excellent timely customer service.
- Provide Board and staff with support/information on issues of interest to the public or media.

- Assist other staff regarding customer service for District customers as necessary.

Additional Essential Duties and Responsibilities for the Associate Civil Engineer

- Design in-house small projects (i.e.: pipeline, paving, HVAC, pump replacement, chlorination, disinfection systems, etc.).
- Prepare, develop, and review advanced studies, reports, technical memorandums, planning documents, and compliance documents.

Additional Essential Duties and Responsibilities for the Senior Civil Engineer

- Design of more complex in-house projects (i.e.: PRV stations, booster pump stations, interties, filtration systems, etc).
- Prepare, develop, and review of highly technical studies, reports, technical memorandums, planning documents, and compliance documents.
- Provide oversight of assigned staff from other departments as assigned by the General Manager in absence of other supervisory staff.
- Approve plans and planning documents for the District.

Qualifications

Engineer in Training

Engineers in this class must possess knowledge and abilities identified below:

Knowledge of:

- Principles, methods, techniques, objectives and practices of engineering programs and functions (e.g.: new construction, inspection, modeling, mapping, GIS, etc.).
- Principles, methods, techniques, practices, and objectives used in operations and maintenance of water distribution system operations and maintenance processes.
- Principles, methods, techniques, practices, and objectives used in operations and maintenance of water treatment and production facilities.
- Principles and practices of project and construction management.
- Principles and practices of GIS, cartography and engineering drafting including map projections and scales.
- Read and interpret piping and distribution diagrams, blue prints and maps.
- Microsoft Suite, Automated drafting and mapping tools, applications and programs (e.g.: AutoCAD software, ESRI-based GIS software, modeling software, etc.).
- Methods, tools, and equipment (e.g.: GPS, etc.).
- Planning and organizing.
- General office procedures including telephone, filing, typing.
- Operation of standard office equipment, personal computer and software applications for word processing, graphic presentations, spreadsheets, and other job-related software.
- Principles of mathematics and statistical analysis.
- Principles and practices of recordkeeping.
- Standard safety practices and programs.
- Federal, state, county, local, and District regulatory compliance.
- Principles and practices of effective oral and written communication.
- Principles and practices of lead supervision.
- Research and report writing.
- Budget development and fiscal controls.
- Customer service.
- Conflict resolution.

Ability to:

- Diagnose mapping operational problems and correct or provide recommendations.

- Visualize spatial relationships.
- Read and interpret surveys, legal descriptions, maps, and aerial photographs.
- Oversee and manage projects.
- Plan, organize, manage, coordinate, and direct the District's engineering programs and functions.
- Perform mathematical computations and estimates.
- Provide technical assistance in the implementation of the department's programs.
- Skillfully use necessary equipment.
- Perform light to moderate physical labor requiring strength, dexterity and agility.
- Work independently, demonstrating initiative and independent thinking.
- Effectively lead and train less qualified personnel.
- Perform duties in a professional manner and work well with others or in a team setting.
- Follow both oral and written instructions.
- Operate a motor vehicle.
- Adhere to safe work practices.
- Exercise good judgment.
- Effectively manage time and workload to maximize productivity.
- Manage multiple projects simultaneously.
- Gather, analyze, and organize data, maintain accurate records, and prepare reports.
- Develop and control budgets.
- Analyze situations and make sound recommendations in support of District goals.
- Communicate effectively both orally and in writing with the Board of Directors, District management, co-workers, and the public in one-to-one and group settings.
- Understand, interpret, explain, and apply laws, rules, regulations and ordinances relating to District activities.
- Effectively represent the District in a positive and professional manner at all times with the public, community groups, contractors, and other organizations.
- Respond to public, vendor, and co-worker requests in a timely, tactful, courteous and effective manner.
- Establish and maintain cooperative working relationships.
- Operate a variety of standard office equipment, telephone, electronic devices (i.e. laptop, smart phones, tablet, etc.), personal computer and software applications for word processing, graphic presentations, spreadsheets, and other job-related software (i.e.: AutoCAD software, ESRI-based GIS software, modeling software, etc.).
- Maintain regular attendance and adherence to prescribed work schedule to conduct job responsibilities.
- Change working hours or work overtime including nights and/or weekends.

Assistant Engineer

Engineers in this class must possess knowledge and abilities surpassing that of the Engineer in Training.

Associate Civil Engineer

Engineers in this class must possess advanced knowledge and abilities surpassing that of the Assistant Engineer.

Senior Civil Engineer

Engineers in this class must possess supervisory and highly technical knowledge and abilities surpassing that of the Associate Civil Engineer.

Physical Requirements

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.*

- Travel occasionally by airplane conducting District business.
- Travel regularly by vehicle for District related duties and activities.
- Communicate orally and in writing with District management, co-workers, and the public in one-to-one and group settings.

- Vision and hearing within normal ranges with or without correction.
- Regularly use telephone for communications.
- Regularly use electronic devices.
- Work in a field environment doing the following physical activities:
 - Regularly: sit, fine manipulation, and ride in a vehicle.
 - Frequently: walk, stand, squat, climb, bend, stoop, twist, repetitive use of hands, grasp, push, pull, reach above and below shoulder level, lift and carry up to 60 lbs., operate equipment and hand tools, and operate vehicle.
 - Differentiate between and perceive color, sound, smell, taste, texture and form.
- Regularly work in an office environment: at a desk/table for an extended period of time, sit or stand for extended time periods, ability to bend (neck and waist), squat, climb, stoop, kneel, crawl, twist, grasp, fine manipulation, push, pull, reach, lift carry and move objects up to 25 pounds such as storage boxes, large binders, books, and small office equipment.

Environmental and Working Conditions

The environmental and working conditions herein are representative of those an employee encounters while performing the essential functions of this job. *Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

- The performance of this position regularly requires exposure to job site, distribution and production areas with:
 - Field visits requiring the operation of a motor vehicle.
 - Exposure to environmental conditions:
 - Chemicals/Caustics, confined space, heights, allergenic plants/materials.
 - Dusts/mists/fumes/smoke/gases, wet damp surfaces, extreme heat/cold, inclement weather, noise.
 - Work on various types of terrain and footing which may be slippery or uneven.
 - Work around moving objects or vehicles.
- Certain areas require the use of personal protective and safety equipment (i.e. hard hats, safety vest, steel toed boots, safety glasses, hearing protection, etc.).
- Frequently work indoors in ambient room temperatures and lighting and be around office equipment as found in a typical office environment.

Education, Experience, and Certification

Required:

- Equivalent to a Bachelor's Degree in Engineering from an accredited college or university.

Engineer in Training:

- This is an entry level position, no experience is required.

Assistant Engineer:

- One (1) full-time year of increasingly responsible technical and/or engineering experience.
- Possession of Engineering in Training Certification.

Associate Civil Engineer:

- Two (2) full-time years of increasingly responsible experience performing professional civil engineering.

Senior Civil Engineer:

- Seven (7) full-time years of increasingly responsible experience performing professional civil engineering including five (5) full-time years equivalent to the Carmichael Water District Associate Civil Engineer.

Desirable:

Any equivalent combination of education and experience which provides the knowledge and abilities necessary to perform the work – for example:

- Master's Degree in engineering from an accredited college or university.
- Project management experience.
- Construction management experience.
- Public agency experience.

Licenses

Required:

- Possess and maintain a valid State of California Class C driver's license.
- Proof of good driving record as evidenced by freedom from multiple or serious traffic violations or accidents for at least two years duration.

Engineer in Training:

- Possession of Engineering in Training Certification within 18 months of date of hire.

Assistant Engineer:

- Possession of Engineering in Training Certification.

Associate/Senior Civil Engineer:

- Possess and maintain a valid State of California Professional Engineer License.

License and Certification Maintenance: Employee is responsible to complete the designated number of contact hours (i.e.: continuing education and/or training requirements) and licensing requirements to maintain all required licenses and certifications as a condition of continued employment.

NOTE: The specific statements shown in each section of this job description are not intended to be all-inclusive. They represent typical elements and criteria that are performed by most incumbents, but other related duties may be performed. Not all duties listed are necessarily performed by each individual.