ENGINEERING ASSISTANT I/II

This class specification indicates, in general terms, the type and level of work performed as well as the responsibilities of employees in this classification. The job functions described are not to be interpreted as being all-inclusive to any specific employee.

DEFINITION

Under direct or general supervision or direction, performs a variety of paraprofessional engineering duties including drafting, construction design, calculations, and project costing; maintains and coordinates the materials and services of the engineering library; provides information and assistance to contractors, developers, engineers, and the general public on the District’s engineering services and activities; and performs a variety of technical tasks relative to assigned area of responsibility.

SUPERVISION RECEIVED AND EXERCISED

Receives direct or general supervision or direction from the assigned supervisory and/or managerial staff. Exercises no direct supervision of staff.

CLASS CHARACTERISTICS

Engineering Assistant I – This classification is the first of three (3) levels within the engineering paraprofessional job series. Incumbents perform non-complex assignments under immediate supervision. Work is reviewed regularly for overall accuracy, completeness and application of principles.

Engineering Assistant II – This classification is the second of three (3) levels within the engineering paraprofessional job series. Incumbents perform varied and somewhat difficult assignments under general supervision. Work is reviewed at consistent intervals for overall accuracy, completeness and soundness of technical judgment. Incumbents may review work of less experienced Engineering Assistants.

EXAMPLES OF ESSENTIAL JOB FUNCTIONS (Illustrative only)

The following essential job functions are typical for this classification. Incumbents may not perform all of the listed job functions and/or may be required to perform additional or different job functions from those set forth below to address business needs and changing business practices.

➢ Coordinates the submittal review process between contractors and District staff; reviews submittals to determine accuracy in relationship to project specifications and plans; consolidates feedback from District staff for review by project engineer; distributes copies of reviewed submittals and feedback to District staff and returns to contractor as either approved or requiring resubmittal.
➢ Ensures established safety precautions are adhered to, corrects unsafe work conditions/practices, and/or reports unsafe work conditions/practices to assigned supervisory or managerial staff.
➢ Consolidates changes made on blueprints by consultants, engineers and inspectors with contractor’s as-built drawings to draft final record drawings on a wide variety of wastewater treatment facility construction projects using drafting tools, supplies and equipment, and computer software packages; conducts field visits to confirm finished construction configuration; performs routine engineering, topographic and mathematical calculations; makes appropriate notes of sizes, diameters, locations and other significant information and returns to project engineer.
➢ Assists in identifying equipment needs by researching submittals and as-built plans; receives and distributes operations and maintenance manuals after construction has been completed; may receive materials from contractor and coordinate testing between appropriate staff.

➢ Reviews change order requests to determine the accuracy of rates, material costs and equipment rental rates; submits final data to engineer for approval.

➢ Participates in bidding process on miscellaneous projects by compiling and sending out request for proposals, inspecting work progress, reviewing completed projects with engineers and approving payments.

➢ Locates pipe locations in the field and on plans and enters into computer drafting/design software; develops traffic control plans.

➢ Prepares maps, graphs, charts, report covers and other visual aides for permanent documentation or meeting display using hand-drawn, typewritten, lettering machines, press-on applications or other resources to draw or sketch assigned projects; updates electrical nomenclature on electrical drawings.

➢ Assists the public, contractors and staff by researching and answering construction engineering related questions; issues connection permits and receives fees.

➢ Works with other water agencies, regulatory agencies and other divisions within the District to gather information for the completion of wastewater management or project studies; obtains permits.

➢ Drafts engineering drawings of proposed wastewater treatment facility construction projects from engineer’s design drawings, including structures and notations; reviews maps and blueprints to determine utility locations, elevations and other related information.

➢ Assists at the front counter providing information and answering questions regarding permits, annexations and utilities.

➢ Maintains engineering library and sewer atlas; arranges shop drawings; completes record drawings.

➢ Performs routine tasks such as mailing and delivering plans and specifications, copying, answering telephones and maintaining files.

➢ Performs related duties as assigned.

QUALIFICATIONS

Knowledge of:

➢ Basic design and construction practices and methods of underground facilities and related infrastructure.

➢ Principles and practices of technical civil engineering drafting and surveying support.

➢ Modern office practices, methods, and computer equipment and applications related to the work including word processing, database, spreadsheet, computer aided drafting, and internet software.

➢ Principles and procedures of record keeping and reporting.

➢ Technical engineering mathematics.

➢ Mechanical and computer drafting techniques.

➢ Basic principles of landscape architecture and traffic control.

➢ Methods, techniques, materials, equipment, and tools used in engineering and drafting.

➢ Applicable Federal, State, and local laws, codes, and regulations, including administrative and department policies and procedures.

➢ English usage, grammar, spelling, vocabulary, and punctuation.

➢ Principles and practices of customer service and techniques for effectively communicating with the public, vendors, contractors, and District staff.

Ability to:

➢ Draft design drawings from blueprints or engineers’ drawings using drafting equipment, tools, supplies and software packages or by freehand.

➢ Perform responsible technical engineering support work with accuracy, speed, and minimal supervision.
➢ Read and prepare maps, plans, graphs, and charts.
➢ Identify and classify pipes and other pertinent construction materials.
➢ Use and understand alpha and numeric codes.
➢ Learn and utilize computerized drafting, design, project management, and records software.
➢ Recognize electrical color codes.
➢ Make mathematical calculations and accurate engineering computations and drawings.
➢ Communicate effectively with the public.
➢ Understand and follow oral and written instructions.
➢ Organize own work, set priorities, and meet critical time deadlines.
➢ Work independently in the absence of supervision.
➢ Utilize a computer, relevant software applications and/or other equipment.
➢ Operate a motor vehicle to travel to various District sites, projects and/or meetings.
➢ Adhere to safe work practices and procedures in the workplace.
➢ Effectively communicate in person, over the telephone, and in writing.
➢ Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.
➢ Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Employment Standards:
Any combination of education and experience that provides the required knowledge, skills, and abilities may be qualifying as determined by OCSD.

**Engineering Assistant I**

1. High school diploma or G.E.D., supplemented by specialized training or coursework in engineering technology, computer drafting, or a related field; AND
2. One (1) year of work experience in drafting or paraprofessional construction engineering work, design drawings of construction projects, or drafting from blueprints or engineers’ drawings using drafting equipment, tools, and/or software packages.

**Licenses and/or Certifications:**
➢ Valid California Class C Driver’s License.

**Engineering Assistant II**

1. High school diploma or G.E.D., supplemented by 60 semester units from a college or university accredited by the U.S. Department of Education, with major coursework in engineering technology, computer drafting, or a related field; AND
2. Three (3) years of work experience in technical engineering work at a level comparable to an Engineering Assistant I with the District.

**Licenses and/or Certifications:**
➢ Valid California Class C Driver’s License.

**Disaster Service Workers:**
All Orange County Sanitation District employees are designated Disaster Service Workers through state law (California Government Code Section 3100-3109). Employment with the Orange County Sanitation District requires the affirmation of a loyalty oath to this effect. Employees are required to complete all related training as assigned, and to return to work as ordered in the event of an emergency.
**PHYSICAL DEMANDS**

Must possess mobility to work in a standard office setting and use standard office equipment including a computer, and to inspect District engineering and construction sites; ability to operate a motor vehicle to travel to various District sites, projects and/or meetings; 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, although the job involves field inspection work requiring frequent walking at inspection sites to monitor performance and to identify problems or hazards; standing in work areas and walking between work areas is required. Finger dexterity is needed to access, enter, and retrieve data using a computer 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 10 pounds, or heavier weights with the use of proper equipment.

**ENVIRONMENTAL ELEMENTS**

Employees work in an office environment with moderate noise levels and controlled temperature conditions; but may occasionally work in the field and be exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, 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.