July 2022
FLSA: Non-Exempt

ENGINEERING TECHNICIAN I/II

DEFINITION

Under immediate (Engineering Technician I) or general (Engineering Technician II) supervision, performs a variety of technical and administrative support duties requiring the application of procedural, program, and compliance knowledge in support of the Engineering Department; provides information related to water and sewer capacity; provides customer service and support to a variety of developers, contractors, consultants, business representatives, staff, and the general public; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives immediate (Engineering Technician I) to general (Engineering Technician II) supervision from assigned supervisory or management personnel. Exercises no direct supervision over staff.

CLASS CHARACTERISTICS

Engineering Technician I: This is the entry-level classification in the Engineering Technician series. Initially under close supervision, incumbents learn and perform routine engineering support duties. As experience is gained, assignments become more varied, complex, and difficult; close supervision and frequent review of work lessen as an incumbent demonstrates skill to perform the work independently. Positions at this level usually perform most of the duties required of the positions at the Engineering Technician II level but are not expected to function at the same skill level and usually exercise less independent discretion and judgment in matters related to work procedures and methods. Work is usually supervised while in progress and fits an established structure or pattern. Exceptions or changes in procedures are explained in detail as they arise.

Engineering Technician II: This is the fully qualified journey-level classification in the Engineering Technician series. Positions at this level are distinguished from the Engineering Technician I level by the performance of the full range of duties as assigned, working independently, and exercising judgment and initiative. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies of the work unit

Positions in the Engineering Technician class series are flexibly staffed; positions at the Engineering Technician II level are normally filled by advancement from the Engineering Technician I level; progression to the Engineering Technician II level is dependent on (i) management affirmation that the position is performing the full range of duties assigned to the classification; (ii) satisfactory work performance; (iii) the incumbent meeting the minimum qualifications for the classification including any licenses and certifications; and (iv) management approval for progression to the Engineering Technician II level.

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 where appropriate so qualified employees can perform the essential functions of the job.

Positions at the Engineering Technician I level may perform some of these duties and responsibilities in a learning capacity.

- Assists in the preparation of and/or interprets specifications, plans, sketches, layouts, graphic displays, exhibits, maps, and pertaining to the construction, maintenance, and operation of a variety of water, sewer, and recycled water facilities.
- Reviews water and sewer facilities plans for conformance with District standards.
- Reviews water line plans for line size, hydrant type and size, available water pressure, location of valves and fittings, and right-of-way required.
- Reviews existing utility plans for size of lines and elevations to ensure proper connections; reviews slopes and elevations for conformance with District requirements.
- Performs calculations of water and recycled water demands and sewage generation, hydraulics, and other engineering computations.
- Prepares and reviews easement drawings and legal descriptions.
- Prepares quantity and cost estimates.
- Reviews and evaluates studies, designs, reports, and records generated by other departments and outside entities; conducts research and data gathering of technical datasets, historic information, current projects, and related information to provide technical support and fulfill reporting requirements in response to requests from internal staff and external parties.
- Utilizes multiple software programs to generate a variety of special and recurring reports and to update and maintain a variety of system records, reports, and models.
- Assists with District regulatory compliance efforts including Fats, Oils, and Grease (FOG), notices to connect to sewer and water services, and fire hydrant flow pressures.
- Provides staff support for various District commissions, including reports, maps, exhibits, and presentations, as needed.
- Provides a variety of office and administrative support work for the Department.
- Observes and complies with District and mandated safety rules, regulations, and protocols.
- Performs other duties as assigned.

QUALIFICATIONS

Positions at the Engineering Technician I level may exercise some of these knowledge and abilities statements in a learning capacity.

Knowledge of:

- Basic procedures involved in design and construction engineering and specification development work.
- Plan check and review practices, and permit filing and approval procedures.
- Methods and techniques of using engineering plans and drawings to perform assigned duties.
- Methods and techniques of preparing engineering calculations and computations.
- Principles and practices of technical civil engineering drafting.
- Methods and techniques of preparing drawings, maps, charts, and related documents.
- Architectural and general drafting standards including manual drawing, ink, line work, and text lettering.
- Applicable federal, state, and local laws, codes, and regulations in assigned areas of responsibility.
- Recordkeeping principles and procedures.

- District and mandated safety rules, regulations, and protocols.
- 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:

- Prepare a variety of plans, specifications, maps, graphs, cost estimates, and technical engineering reports.
- Modify engineering drawings, topographic maps, improvement plans, and illustrative graphics.
- Perform responsible technical engineering support work with accuracy, speed, and minimal supervision.
- Read and interpret engineering plans, technical drawings, specifications, and subdivision maps.
- Perform standard engineering design under professional engineering supervision.
- Make mathematical calculations and accurate engineering computations and drawings.
- Use engineering, drafting, and surveying instruments and equipment.
- Prepare clear and concise reports, correspondence, policies, procedures, and other written materials.
- Understand and follow oral and written instructions.
- Maintain accurate files and records.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural guidelines.
- Independently organize work, set priorities, meet critical deadlines, and follow-up on assignments.
- 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:
- Engineering Technician I/II: Possession of a high school diploma or G.E.D. required, supplemented by college level coursework in civil engineering, drafting, mathematics, or a related field.

Experience:
- Engineering Technician I: One (1) year of experience in sub-professional engineering and/or surveying work.
- Engineering Technician II: Two (2) years of increasingly responsible experience performing non-professional engineering tasks.

Licenses and Certifications:

- Possession of a valid California Driver's License, to be maintained throughout employment.

PHYSICAL DEMANDS

When assigned to an office environment, must possess mobility to work in a standard office setting and use standard office equipment, including a computer; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone; ability to stand and walk between work areas may be 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.

When assigned to field inspection, must possess mobility to work in changing site conditions; possess the strength, stamina, and mobility to perform light to medium physical work; to sit, stand, and walk on level, uneven, or slippery surfaces; to reach, twist, turn, kneel, and bend, to climb and descend ladders; and to operate a motor vehicle and visit various District sites; vision to inspect site conditions and work in progress. The job involves fieldwork requiring frequent walking in operational areas to identify problems or hazards, with exposure to hazardous materials in some site locations. Employees must possess the ability to lift, carry, push, and pull materials and objects averaging a weight of 40 pounds, or heavier weights, in all cases with the use of proper equipment and/or assistance from other staff.

ENVIRONMENTAL CONDITIONS

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees also work in the field and are 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.