SOUTH COAST WATER DISTRICT

ELECTRICAL TECHNICIAN I/II

DEFINITION

Under direct or general supervision, performs a variety of semi-skilled and skilled electrician duties in the installation, maintenance, repair and extension of electrically controlled and/or operated equipment and of electrical wiring in District buildings, facilities, and grounds; assists in the maintenance and repair of the District’s SCADA system; provides technical support to other departments as needed; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives direct or general supervision from the Support Services Manager. No direct supervision of staff is exercised. May exercise technical and functional direction over lower-level staff.

CLASS CHARACTERISTICS

Electrical Technician I: This is the entry-level class in the electrical technician series. Initially, under direct supervision, incumbents assist in a wide variety of electrical maintenance work to ensure that the facilities and infrastructure of the District are maintained in a safe and effective working condition. As knowledge and experience are gained, the work becomes broader in scope, assignments are more varied and are performed under more general supervision. This class is alternately staffed with Electrical Technician II and incumbents may advance to the higher-level class after gaining the knowledge, skills and experience that meet the qualifications for and demonstrating the ability to perform the work of the higher-level class.

Electrical Technician II: This is the journey-level class in the electrical technician series. Incumbents perform the full range of electrical maintenance duties to ensure that the facilities and infrastructure of the District are maintained in a safe and effective working condition. Responsibilities include performing moderately complex and skilled electrical maintenance and repair operations, as well as to assist in the maintenance and repair of the District’s SCADA system. This class is distinguished from the Senior Electrical Technician in that the latter performs the most complex and responsible electrical maintenance tasks and is responsible for the design, implementation, installation, maintenance, and repair of the District’s SCADA systems.

EXAMPLES OF ESSENTIAL JOB FUNCTIONS

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

- Installs, maintains, and makes repairs to motors, lighting circuits, electrical control equipment, transformers, conduit and duct systems, and other types of electrical lighting and power equipment.
- Removes and replaces light fixtures; installs, maintains and adjusts lighting equipment, replacing burned lamps, defective wiring and damaged receptacles.
- Checks, installs, and repairs wiring to computer hubs, including wiring outlets for computer systems throughout the District.
- Designs or assists in the design of electrical lighting and control systems; provides input on recommendations for the most appropriate and cost effective course of action.
- Inspects and tests heating systems, repairs pneumatic, electric or electronic control systems.
- Overhauls pumps, motors, fans and related air handling and distribution equipment.
- Repairs thermostats, temperature control valves, damper operating devices, boiler controls, and safety devices.
- Repairs and maintains sewage pump controls, including checking and maintaining operation wires.
- Runs underground cables and strings overhead wires.
- Makes periodic checks on the operation of electrical equipment and locates and repairs defects.
Electrical Technician I/II

- Wires buildings and makes additions to existing wiring.
- Installs and repairs florescent, industrial and general lighting fixtures and connections.
- Installs and maintains electrically operated machinery in District-owned buildings.
- Repairs electrical appliances in various departments.
- Interprets electrical plans and specifications, and checks for conformity with codes, regulations, and safety orders.
- Lays out work, interprets and updates blueprints as necessary.
- May procure electrical parts and accessories as needed.
- Maintains logs and records of work performed and materials and equipment used.
- Informs supervisor of code violations or non-conforming conditions that may be hazardous.
- Performs other duties as assigned.

**QUALIFICATIONS**

**Knowledge of:**

- Principles, practices, tools and materials for maintaining and repairing electrical motors, lighting circuits, electrical control equipment, transformers, conduit and duct systems, and other types of electrical lighting and power equipment.
- Safety practices pertaining to work, including around high voltage and around hazardous chemicals.
- Tools, materials, and standard practices and procedures of the electrical trade.
- Building and electrical codes and regulations as they relate to the position, specifically National Electrical Code policies and procedures.
- Design, construction, installation, and maintenance of electrical apparatus and equipment.
- The proper operation of tools, materials, and equipment used in the electrical and electronic trades.
- The operation and minor maintenance of a variety of hand and power tools, vehicles and power equipment.
- Shop arithmetic.
- Basic traffic control procedures and traffic sign regulations.
- Safe work methods and safety practices pertaining to the work.
- Basic computer software related to work.
- English usage, spelling, vocabulary, grammar and punctuation.
- Techniques for providing a high level of customer service to public and District staff, in person and over the telephone.

**Ability to:**

- Perform a wide variety of skilled electrical tasks.
- Use electrical tools and equipment skillfully and safely.
- Read and follow plans, blueprints, and specifications for electrical work.
- Estimate the scope of each work assignment and secure the necessary tools and equipment to complete the assignment.
- Troubleshoot electrical and maintenance problems and determine materials and supplies required for repair.
- Use and maintain tools and equipment related to the work skillfully and safely.
- Make accurate arithmetic calculations.
- Maintain both manual and automated logs, records, reports and charts.
- Follow department policies and procedures related to assigned duties.
- Understand and follow oral and written instructions.
- Organize own work, set priorities and meet critical time deadlines.
- 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.
EXPERIENCE AND TRAINING GUIDELINES
Any combination of experience and training that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Experience:

Electrical Technician I: One (1) year of experience in installing, maintaining, inspecting and repairing standard electrical equipment.

Electrical Technician II: In addition to above, two (2) years of experience in installing, maintaining, inspecting and repairing standard electrical equipment.

Training:

Electrical Technician I & II: Equivalent to the completion of the twelfth (12th) grade.

License or Certificate:

➢ Valid California class C driver’s license with satisfactory driving record.

PHYSICAL DEMANDS

Must possess mobility to work in the field, in District buildings and facilities; strength, stamina and mobility to perform light to medium physical work, to work in confined spaces, around machines, to walk on uneven terrain, and to climb and descend ladders, and operate varied hand and power tools and construction equipment; vision to read printed materials and a computer screen; color vision to identify wires and cables; and hearing and speech to communicate in person and over the telephone or radio. The job involves fieldwork requiring frequent walking in operational areas to identify problems or hazards. Finger dexterity is needed to access, enter and retrieve data using a computer keyboard or calculator and to operate above-mentioned tools and equipment. Positions in this classification bend, stoop, kneel, reach and climb to perform work and inspect work sites. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 50 pounds and heavier weights with the use of proper equipment.

ENVIRONMENTAL ELEMENTS

Employees work indoors and outdoors, and may be exposed to cold and hot temperatures, inclement weather conditions, loud noise levels, 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, and contractors in interpreting and enforcing departmental policies and procedures.

WORKING CONDITIONS

Must be willing to work weekends, holidays, and off-hour shifts for emergency callback response.

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.