

ELECTRICAL TECHNICIAN I

SUMMARY

Under direct or general supervision of the Maintenance Supervisor performs a variety of routine to complex duties, skilled electrical work in the installation, maintenance, inspection, testing, troubleshooting, design, and repair of a variety of electrical, electronic, and telemetry equipment and systems as found in the Stockton East Water District water treatment plant, water supply system, buildings, and related facilities.

EXAMPLES OF DUTIES

The duties listed below are illustrative only and are not meant to be a complete, exhaustive listing of all of the duties and responsibilities of the Electrical Technician classification:

Technician Duties:

- Inspects, maintains, repairs, installs, and tests a variety of electrical systems associated with low to high voltage, such as electrical circuits, transformers, switches, lighting fixtures, motor starters, electro-magnetic relays, voltage regulators, motors, generators, outlets, control panels, electrical components of telemetering systems, and communication networks.
- Analyzes equipment failures and makes recommendations for improving the reliability of equipment and systems.
- Performs troubleshooting and diagnostic work on a variety of electrical and solid-state electronic-based equipment such as variable frequency and variable speed drives, protective relays with digital metering, and automatic transfer switches; performs basic troubleshooting, maintenance, and installations of programmable logic controllers (PLC's), including uploading programs and changing setpoints.
- Installs, maintains, and repairs various control and instrumentation devices such as electric actuators, flow meters, pressure sensors, and Differential Pressure cells.
- Performs periodic preventive maintenance of all process instruments, analytical instruments, telemetry equipment, and control systems equipment.
- Operates and maintains computer-based electrical diagnostics and power monitoring systems; opens and closes breakers; researches trends and captures power usage.
- Makes preliminary estimates of labor, materials, and supplies required to perform specific assignments; obtains quotes from material vendors and recommends specific suppliers based on pricing and availability of materials.
- Enters data into computer-based work management systems (CMMS).
- Reviews and comments on capital improvement project drawings and submittals; provides technical input in the design of new facilities and structures; inspects work performed by contractors and outside agencies to ensure proper electrical code compliance and performance.
- Performs other duties as assigned.

Typical Physical Activities:

- Operates District vehicles for District purposes.
- Carries, pushes, pulls, reaches, and lifts equipment weighing up to 50 lbs.
- Stoops, kneels, crouches, crawls and climbs during vehicle and equipment maintenance and repair work.
- Communicates orally with individuals and/or groups of District staff.
- Regularly uses a telephone for ordering parts and coordinating work.
- Exposure to dust, lubricants, cleaning solutions, and chemicals.
- Hearing and vision within normal ranges with or without correction.
- Stands and walks for extended periods.

EMPLOYMENT STANDARDS**Knowledge of:**

- Electrical theory and the methods, tools, equipment, and materials used in the electrical trade and their applications
- Understanding of the NEC, NFPA 70E, Cal/OSHA, and other applicable regulations, codes, and standards.
- Safety practices, installation techniques, and the hazards involved in working with the full spectrum of voltages ranging from 12 volts DC to 12,000 volts AC.
- Instrumentation and process control loops.

Ability to:

- Use and wear safety equipment, protective gear, and respirators.
- Recognize, diagnose and repair electrical and instrumentation problems with electrical and instrumentation systems and equipment.
- Plan, layout, and perform difficult electrical and instrumentation work involving the maintenance, repair, and installation of various electrical and instrumentation equipment types.
- Read, interpret, and prepare electrical diagrams, loop diagrams, specifications, and list material requirements.
- Establish and maintain cooperative working relationships with co-workers, outside agencies, and the public.

Foundational abilities:

- Must possess good verbal and written communication skills, including writing reports and developing written Standard Operating Procedures, and maintaining detailed records.
- Communicates well with individuals and/or groups of District staff.
- Must be computer literate. Possess experience with Microsoft Word, Excel, and Outlook
- Respond to emergency call-outs on nights, weekends, and holidays. Work overtime as needed.

Environmental factors:

- Exposure to the sun: 50% to 100% spent outside a building and exposed to the sun.
- Work above floor level: Some work done on ladders other surfaces from 4 to 12 feet above the ground.
- High Temp: Some work time spent in temperatures between 80 to 90 degrees.
- Humidity: Occasional work in areas with unusually high humidity.
- Wetness: Occasional work time getting part of the body and /or clothing wet.
- Noise: Some work time spent in areas with a noise level requiring the use of hearing protection.
- Slippery Surfaces: Occasional work on unusually slippery surfaces.
- Oil: Some parts of the body in contact with oil or grease occasionally.
- Dust: Works in or around areas with minor amounts of dust.
- Occasional irregular or extended work hours.
- Occasional Permit Required Confined Space Entry Work.

DESIRABLE QUALIFICATIONS

Any combination of education and experience that would likely provide the necessary knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

- Possession of an International Society of Automation (ISA) Certified Control System Technician (CCST) Level I certification.
- Possession of a California Water Environment Association (CWEA) Electrical/Instrumentation Grade I or II certification.

License/Certificate/Registration/Experience Requirement:

- Driver's License: Possession of a valid California (Class "C") Driver's License may be required at the time of appointment. Failure to obtain or maintain such required license(s) may be cause for disciplinary action. Individuals who do not meet this requirement due to a physical disability will be considered for accommodation on a case-by-case basis.
- Possession and proof of a driving record free of multiple or serious traffic violations or accidents for two (2) consecutive years.
- High School Diploma or equivalent.
- Completion of electrical apprentice training.
- Two (2) years of journeyman-level work experience in at least one of the following areas: Industrial Electrician, Instrumentation Technician, and device control.

The specific statements in each section of this job description are not intended to be all-inclusive. They represent typical elements that are necessary to successfully perform the job.